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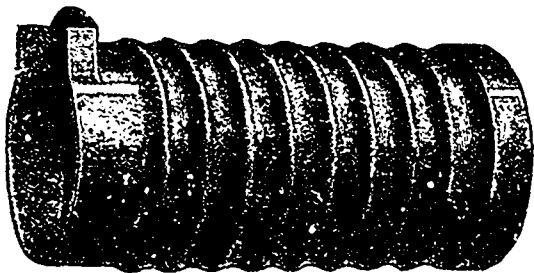
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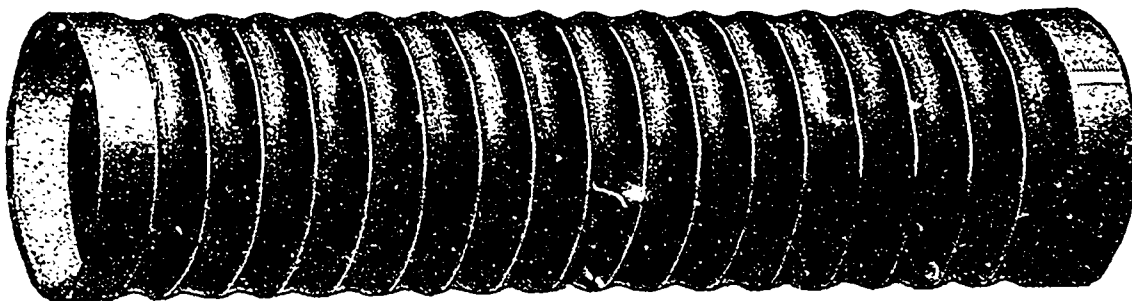


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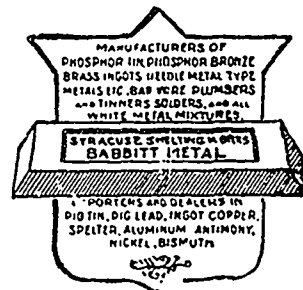
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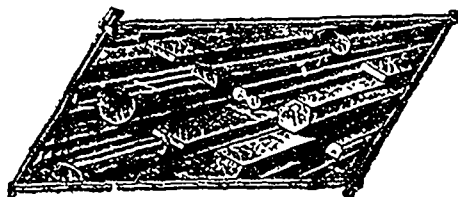
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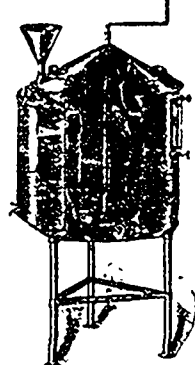
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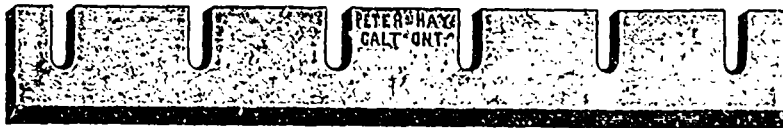
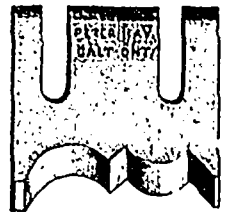
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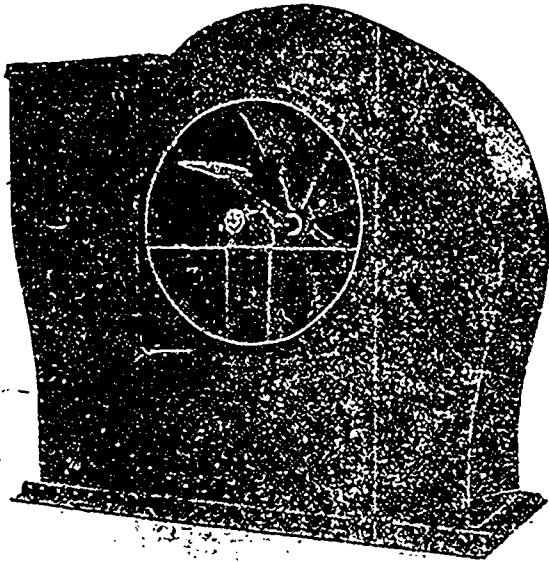
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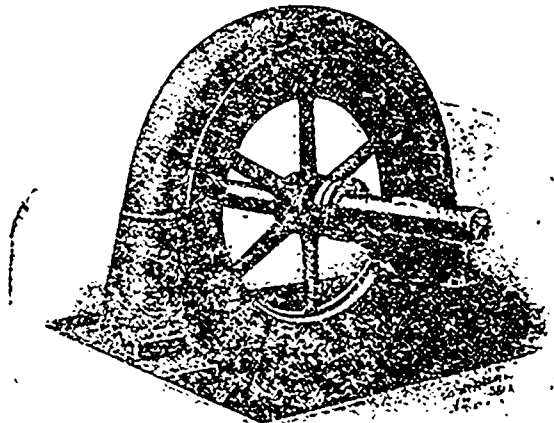
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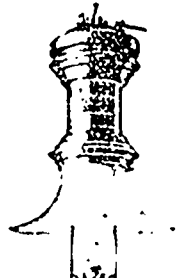
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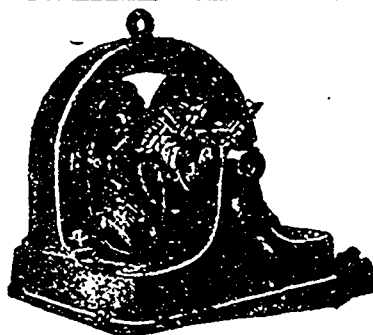
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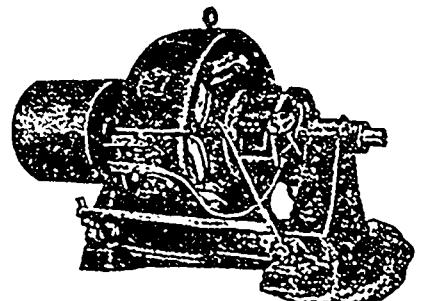
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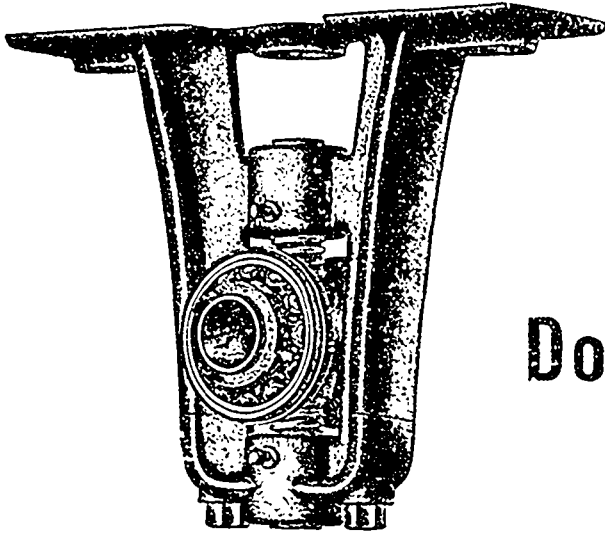
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The average cost of steam power is \$50 per h.p. per year.
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Classified Index Page 37

Index to Advertisers Page 45

ANOTHER TARIFF EDITION OF THE CANADIAN MANUFACTURER.

Another tariff edition of *THE CANADIAN MANUFACTURER* is being prepared, and will be published immediately after the Dominion Parliament takes final action regarding the Canadian tariff.

The issue of *THE CANADIAN MANUFACTURER* of November 7, 1894, contained complete reproductions of the then recently enacted tariffs of Canada and the United States, which was the first time in the history of journalism in either country, that two such important documents were ever published under one cover of a trade journal.

Important changes having been made in the tariffs of both these countries in the meantime, and to meet a general demand for information, the issue of *THE CANADIAN MANUFACTURER* of August 6, 1897, contained complete reproductions not only of the Canadian and United States tariffs, but also those of Great Britain and Newfoundland; and in the same issue was also published the full text of the British Merchandise Marks Act; and no more important papers bearing upon the commercial industries of the countries named were ever produced under one cover.

After the publication of these tariffs in 1897 very important political changes occurred in both Canada and the United States, one of the most noticeable of which was the adoption by Canada of a tariff preference in favor of Great Britain, and in the issue of *THE CANADIAN MANUFACTURER*, of July 6, 1900, was published complete reproductions of the Canadian tariff, including the Act providing for tariff preference in favor of British goods, the United States tariff, the British tariff, and the Newfoundland tariff. The value of the publication was generously appreciated by all into whose hands it came.

The rapid growth and development of Canada, and the changing conditions which presented themselves demanded yet another tariff edition, in response to which *THE CANADIAN MANUFACTURER* of September, 4, 1903, contained complete and accurate reproductions of the Canadian tariff, the United States tariff, the British tariff,

Another Tariff Edition.

As soon as the proposed revision of the tariff has been made and adopted by the Dominion Parliament, thus becoming the law of the land, a full and absolutely correct reproduction of it copied from the official document, will be published in the *Canadian Manufacturer*. It is impossible at this time to say just when that event will occur, probably about the latter part of next year. In the same special edition will be published in full, as heretofore, the tariff of the United States, both under the one cover, a convenience which will be fully recognized by our readers.

the Australian tariff, and the South African tariff, and there are thousands of offices of manufacturing, commercial and industrial concerns, banks, chambers of commerce, Boards of Trade, etc., in Canada, United States, Great Britain, and other countries in which are yet conspicuously displayed copies of that edition.

It is authoritatively announced that further and exceedingly important changes are to be made in the Canadian tariff; the changes which have already been made in the last three years in the tariffs of Australia and of South Africa, and the rapidly increasing export trade with those countries, call for full and up-to-date information, and it is therefore the intention of the publishers of *THE CANADIAN MANUFACTURER*, in accordance with the precedents already established, to publish, as stated, another tariff edition which will contain complete reproductions of the tariffs of Canada, United States, Great Britain, Australia and South Africa.

THE FORESTRY CONVENTION.

It is expected that there will be a very large attendance at the forestry convention to be held at Ottawa, January 10, 11 and 12, under the auspices of the Canadian Forestry Association, of which his Excellency the Governor-General is honorary president and Sir Wilfrid Laurier, president. The latter some time ago issued a letter to the public, calling attention to the conference and the necessity for it. In part the letter says:

"Canada possesses one of the largest areas of virgin forest of any country in the world, and is ranked by European experts first, or among the first, of the important sources of the world's timber supply for the future. The preservation of the streams in perennial and constant flow, which is largely controlled by the forests on the watersheds, will have an important influence on the industrial and agricultural development of the Dominion. The expansion of our electrical and mechanical industries will be regulated to a great extent by water, which forms the greatest source of power in all countries, and some of our Western districts are dependent on irrigation to insure the success of agricultural operations.

"In all the older provinces the clearing of the soil has been carried to such an extent that the ill-effects on the water supply and on agriculture are clearly marked, while on the Western prairies the need of sheltering trees for houses and fields is seriously felt by the settlers. The early construction of the Transcontinental Railway, and of other railways, through our northern forested districts and the consequent opening of those districts to general traffic will increase the danger from fire, which has already been a most active agent of destruction.

"These conditions are not new; they have from time to time received public attention, and during the session just closed Parliament authorized the summoning of a convention for the more thorough discussion of the same."

The subjects to be considered at the convention will be discussed under the following divisions:—The nation and the forest, forestry in relation to agriculture and irrigation, the forest and the lumber and pulp industries, the relation of our forests to our other industries; railways, water-powers, mining, building trades, woodworking manufactures, scientific forestry and forestry education.

Forest conservation excites a great deal of earnest attention in the United States. President Roosevelt, when in North Carolina in October, in a public address said in part:

"I want to say a word to you on a special subject in which all the country is concerned. The preservation of the forests is vital to the welfare of every country. China and the Mediterranean countries offer examples of the terrible effect of deforestation upon the physical geography and therefore ultimately upon the national well-being of the nations.

"One of the most obvious duties which our generation owes to the generations that are to come after us, is to preserve the existing forests. The prime difference between civilized and uncivilized peoples is that in civilized peoples each generation works not only for its own well-being, but for the well-being of the generations yet unborn, and if we permit the natural resources of this land to be destroyed so that we hand over to our children a heritage diminished in value, we thereby prove our unfitness to stand in the forefront of civilized peoples. One of the greatest of these heritages is our forest wealth. It is the upper altitudes of the forested mountains that are most valuable to the nation as a whole, especially because of their effects upon the water supply. Neither state nor nation can afford to turn these mountains over to the unrestrained greed of those who would exploit them at the expense of the future. We cannot afford to wait longer before assuming control, in the interest of the public, of these forests: for if we do wait, the vested interests of private parties in them may become so strongly entrenched that it may be a most serious as well as a most expensive task to oust them.

"If the eastern states are wise, then from the Bay of Fundy to the gulf we will see within the next few years a policy set on foot similar to that so fortunately carried out in the high Sierras of the West by the national government. All the higher Appalachians should be reserved either by the state or by the nation. I much prefer that they should be put under national control, but it is a mere truism to say that they will not be reserved either by the states or by the nation unless you people of the South show a strong interest therein.

"Such reserves would be a paying investment, not only in protection to many interests, but in dollars and cents to the government. The importance to the southern people of protecting the southern mountain forests is obvious.

These forests are the best defense against the floods which, in the recent past, have, during a single twelve-month, destroyed property officially valued at nearly twice what it would cost to buy the southern Appalachian Reserve.

"The maintenance of your water powers is not less important than the prevention of floods, because if they are injured your manufacturing interests will suffer with them."

INDIFFERENCE OF MANUFACTURERS.

Instructions were recently sent by the American State Department to Consul R. P. Skinner, of Marseille, France, at the request of a representative association of manufacturers for a report upon "Manufacturers' Indifference to Foreign Trade." A report made by the consul deals with the question in terms that are quite pungent, and which contains advice based on his experience that will be valuable to individual manufacturers who are striving to secure sales of their products in foreign countries. The following paragraphs are taken from Consul Skinner's report:

"This association sends out to consular officers and others classified lists of members, and urges foreign inquirers to enter into correspondence therewith, but if I supply twenty addresses in a given line to a foreign correspondent, I am surprised if I hear that one-half have given themselves the trouble to reply at all, while the other half, with a few exceptions, lay down conditions utterly discouraging to the foreign inquirer. It is, of course, true that the number of American firms patiently working up their over-sea business is increasing very rapidly, but not so rapidly as to prevent me from saying that the difficulty with our foreign trade is quite as much to find American firms willing to sell as to find foreign firms willing to buy. Let me cite only the cotton-goods trade: Every list of American manufacturers in my possession contains a large number of cotton-goods producers. It is fairly to be presumed, in view of these advertisements, that they are seeking new business. I have sent these names to buyers of cotton fabrics in France, Morocco, Tripoli, Tunis, Abyssinia, and Persia, and I have yet to hear of one manufacturer who has been willing to engage in actual business relations. The firm of Mohamedally & Co., of Harrar, Ethiopia, has been at work for over eighteen months trying to buy cotton goods direct for cash in the United States, and has at last succeeded in making a start, and that start through a commission house in New York.

"We want favorable treatment as regards tariffs. We want better banking and freight facilities; we want every advantage possessed by our competitors, but we can overcome every disadvantage and still fail to increase measurably our exports of manufactured goods if the manufacturers thereof cannot be found willing to sell. The firms who are succeeding in the export business are principally those who sell almost from factory to consumer. They have their own agencies and their own methods, but the general attitude of American manufacturers and their army of general sales agents, agent brokers, foreign commission buyers, with their cash-over-the-counter and

you-pay-the-freight terms, savors still very much of the circumlocution office, and how not to do it."

"The radical defect in this and in every other discussion of foreign trade is its too general point of view. I am not much in favor of essays and speeches upon this topic, and I am really optimistic as to our future. What is needed at this time is to arouse the interest of the individual manufacturer to the point of looking into the question for himself; and he cannot do this better than by coming abroad personally, carefully avoiding Paris and the delightful watering places, and working as energetically as a commercial traveller on a commission basis to secure orders. A few months of such contact with foreign conditions will demonstrate at a small expense, and more effectively than by means of correspondence, his ability to satisfy foreign requirements to meet competitive terms, and whether his particular factory will be best served by establishing a direct sales agency, or by securing alliances with existing foreign firms."

BRITISH AND AMERICAN TIN PLATES IN CANADA.

In commenting on the tin plate situation the London Iron and Coal Trades Review says:

"The British tin plate trade, apart from the loss of so much of the American demand as has been effected by a prohibitory tariff, remains practically as invulnerable as ever it was. The total tin plate exports of Great Britain are still close on 400,000 tons a year. The total export of all the other countries of the world, the United States included, is less than 20,000 tons. One phase of the tin plate trade that is difficult to be understood is that of the imports into Canada. The Canadian market for British tin plates has not much improved of late years, although in view of the enormous extent of the tinned salmon trade and other branches of food and fruit supply we should expect it to increase materially. The total British exports of tin plate to Canada in 1904 were more than 6,000 tons under the exports of the previous year. This does not entirely correspond with the increased exports of tin plates by the United States in the same year, but there was a material advance of such exports in that year, and it is an easy thing to correlate the two facts. Indeed the American trade returns show that Canada did take a considerably larger quantity of American tin plates in 1904 than in the previous year. This would be a simple problem enough if the prices quoted in the two cases were approximately the same, but the official records of values show that the American prices, in 1904 at all events, were materially higher than the British. We are, therefore, driven to the conclusion that the American plates were taken because of the convenience of the source of supply and by means of the peculiar contracts made by American firms."

[NOTE.—The total value of all tin plates and sheets imported into Canada in the fiscal year 1904 was \$1,461,811, against \$1,751,507 in 1905, an increase of \$289,696. Our imports from Great Britain in 1904 were valued at \$1,215,700 against \$1,206,906 in 1905, a decrease of

\$8,794. Our imports from the United States were \$246,111 in 1904, and \$544,601 in 1905, an increase of \$298,490, or considerably more than 100 per cent.—
EDITOR.]

CANADIAN RAILWAY IMPROVEMENTS.

The investigations now in progress by the Tariff Commission in order to ascertain the feeling of the country with regard to a thorough revision of the tariff on imports at the next session of the Canadian Parliament are creating a renewed interest in the subject, and the next few months will undoubtedly witness a vigorous campaign for increased protective duties. A feature of the situation, which will exercise an important influence, is the vastly increased present and prospective demand for iron and steel manufactures, which is being largely supplied by importation. As has been previously pointed out the principal factor for some years to come in the conditions of the trade is the enormous development and extension of the Canadian railroad system. The following is an approximate detailed statement of the extensions now undertaken which have to be completed in from three to five years from date. Grading contracts have already been let covering about 75 per cent. of the total mileage of 7,240 miles, and the remainder will be put under contract so soon as the surveys are completed.

CANADIAN PACIFIC.

	Miles.	Cost.
Toronto to Sudbury	250	\$7,000,000
Fort William to Winnipeg, double track	425	8,000,000
Guelph to Goderich..	80	2,000,000
Midland to Peterboro'	130	5,000,000
Battleford Branch.	225	5,000,000
Pleasant Hill Branch..	210	4,200,000
Lacombe Branch...	110	2,200,000
Wetaskawin Branch.	114	2,250,000
Extension of Branch Lines..	300	6,000,000

CANADIAN NORTHERN.

To Edmonton, Main Line	550	11,000,000
Extension of branches building.	330	7,000,000
Regina Branch	200	4,000,000
Parry Sound to North Bay	200	7,000,000

GRAND TRUNK PACIFIC.

Lake Superior Division.	220	6,600,000
Prairie Division	1,000	20,000,000
Mountain Pacific Division	700	25,000,000
Main Line, East	1,800	50,000,000

GRAND TRUNK.

Double tracking.	200	4,000,000
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NORTHERN PACIFIC.

Vancouver & Eastern...	300	9,000,000
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TORONTO TO NIAGARA (ELECTRIC).

Double track.. . . .	100	4,000,000
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Total 7,240 \$182,250,000

The standard 80 lb rail will be put down on these roads, and it is estimated that a total approximating 1,200,000 tons will be needed for this work during the next four years, together with 400,000 tons of small sections for car and locomotive building, switches, trestles, and

bridges. The cost of equipping the lines when built is placed at \$75,000,000, which, with the cost of road construction, makes a grand total of ove. \$250,000,000. During the coming year Canadian railways will require over 100,000 tons of bridge material for renewing and strengthening bridges. The requirements of the Grand Trunk Railway alone for this purpose will amount to 30,000 tons.

The trade and navigation returns, covering the fiscal year ended June 30, show the extent of the importations of small steel, which has to be brought in in the face of a duty of from \$7 to \$10 per ton. The imports for the year of bar iron and steel, comprising only rounds, squares and flats, amounted to 32,375 tons, valued at \$1,024,256, on which duties amounting to \$202,634 were exacted. Fish plates were brought in to the extent of nearly 7,000 tons under a duty of \$8 per ton, the value of the goods being \$208,246. There are several small plate mills in Canada manufacturing butt-welded pipe up to two inches in diameter. All the skelp for this industry is imported to the amount of 19,147 tons, valued at \$557,944. Railroad spikes pay a duty of \$10 per ton, and nearly 25,000 tons came from abroad, costing \$97,221, with duties amounting to \$24,839.

Canada has no tin-plate industry as yet, though several projects to establish this branch of manufacture have been set on foot. Last year the importations in this line amounted, roughly speaking, to 250,000 boxes, including black plate produced at a tin-plate mill, valued at \$2,879,600. To supply this demand here would require a 20-mill plant and give employment to 2,000 men.

These considerations, coupled with the certainty of a vastly increased market as the result of railway construction, the rapid settlement of the West and the general industrial expansion are bringing the tariff question prominently to the front, and if conditions remain unchanged, the next few years will see a very large proportion of the money so lavishly expended on railroad and other construction work sent out of the country for the purchase of materials.

THE UNIONS ARE RESPONSIBLE.

After much litigation in the courts of Ontario in the action of the Metallic Roofing Co., of Toronto, against Local Union No. 30, Amalgamated Sheet Metal Workers International Association, et al, a jury in the Civil Assize Court, Toronto, presided over by Justice McMahon, last week rendered a verdict in favor of the plaintiffs for \$7,500 damages and costs.

The decision is of more than ordinary import. It creates a precedent and marks the conclusion of an argument which had its commencement in the spring of 1902, and has since wended its way through a variety of legal ways and by-ways. The verdict means that officers of a local union are responsible for the actions of its members, and that the general labor body is responsible for the action of one of its parts.

The trouble started through the company, after negotiations, refusing to sign an agreement making theirs a union shop. A strike was called and J. S. Chapman, corres-

ponding secretary of the Sheet Metal Workers' Local Union, sent letters to sheet metal contractors, saying that "on, or after August 20, your men absolutely refuse to handle any product of the Metallic Roofing Co., of Toronto, as they are an unfair firm to organized labor." After a time two of the strikers went back to work. They were followed up by the union, and one of them fined \$15.

The company also had to take back goods which union men refused to handle. A suit for boycott was instituted. The trouble was to find the responsible parties. The case went to the divisional court and to the court of appeal, which said the parties to sue were: "Local Union No. 30, Amalgamated Sheet Metal Workers' International Association and the Amalgamated Sheet Metal Workers' International Association, and William Jose, Richard Russell, S. Cox, W. C. Brake, J. S. Chapman, J. H. Kennedy, J. S. Annable and all other persons constituting the said Local Union No. 30, Amalgamated Sheet Metal Workers' International Association."

The Metallic Roofing Co. brought the case before Judge MacMahon, of the civil jury assizes, under the order of the court of appeal, and sued for (1) The sum of \$10,000 as damages; (2) an injunction restraining the unions from interfering with their business; (3) the costs of the action.

In charging the jury the judge warned them against being actuated by prejudice; said that the company was justified in refusing to discharge non-union employees; that the men were at liberty to strike, but that the union was not to be allowed to coerce men to quit work.

Following are the questions submitted to the jury, and the answers:

(1) Were the workmen of the plaintiff company wrongfully and maliciously coerced to leave their employment by the defendants or any of them?

A.—Yes.

(2) If you answer the above question in the affirmative, state which of the defendants induced them.

A.—By motion of Local Union No. 30, and endorsed by the International Association, the parent society.

(3) Did the defendants conspire by threats or intimidation to induce the plaintiffs' customers, who would otherwise have dealt with the plaintiffs, to refrain from dealing with them, and they in consequence refrained?

A.—Yes.

(4) Did any of the plaintiffs, workmen, who were members of the union, vote for the resolution to call out the union workmen from plaintiffs' shops?

A.—We cannot tell from the evidence.

(5) If you answer in the affirmative, can you say how many of them voted for such resolution?

A.—Cannot answer.

(6) If you find the plaintiffs are entitled to recover damages by reason of the defendants' acts, at what sum do you assess such damages?

A.—\$7,500.

EDITORIAL NOTES.

Tin plate users on the Pacific Coast, principally salmon canners, are threatened with the possibility of having to

pay in future a higher price for the article because an eastern Canadian firm intends to start manufacturing, and is now moving for a protective tariff. At present there is no duty on tin plate entering Canada. It comes principally from Wales, but recently imports from the United States have become fairly heavy. Should the eastern Canadian manufacturing firm be successful in its efforts to secure the imposition of an import duty, says the Victoria, B.C., Colonist, salmon canners in British Columbia fear that they would have to pay more for their tin plate. Not a canner admits that he would use the Canadian-made article. They all state that they would have to import their tin plate, for the reason that they secure it from manufacturers who have spent centuries in perfecting their product, and it is not to be expected that the Canadian tin plate would equal that of Wales in quality. As the canners must have the best tin, they say they would have to import.

A conundrum for the Toronto Globe:—The imports of tin plates and sheets into Canada from Great Britain (free trade) in 1905 were valued at \$8,794 less than in 1904, while our imports from the United States (high protection) in 1905 were valued at \$298,490 more than in 1904. No Canadian duty is imposed upon the article, yet under free trade Britain, our Mother Country, there was a decided falling off in the tin plate trade, while our trade with the United States, where ultra protection prevails, increased more than 100 per cent.

The Trade Press List, of Boston, Mass., has published a special directory number, in which is given a list of trade publications of all countries, classified according to the different trades and specialties which they represent—about three hundred of them—the number of publications being legion—more or less. Canada is represented in the classification as follows:—Advertising and printing; architectural, contracting and lumber; agricultural; farm implements; finance, insurance and real estate; dental, medical and pharmaceutical; stenography and typewriting; mining; newspaper directories; trade and technical; clothing, dry goods, fabrics and fashions; groceries and general merchandising; tobacco, wine and spirits; books, stationary, paper and pulp; hardware, electricity, engineering and machinery; municipal; transportation. There are quite a number of journals enumerated under some of these headings that properly belong under "trade and technical," and if the adjustment were made the classification would show the existence of 66 such trade journals in Canada, and 55 journals under all other classifications, the total, according to the Trade Press List being 121.

An exposition of motive power machinery pumps, presses and machinery for use in the smaller industries is to be held in Santiago, Chili, next summer, under the auspices of the "Improvements in Industries Association," in which the leading houses of Chili and Peru are

interested, and which is also actively supported by the Chilean government. The exposition will comprehend every kind of machinery, apparatus and process showing the latest advantages of generation and application of motive power: the industrial use of alcohol, pumps and presses. The exposition will be open during the first fifteen days of next December, and will last two months. Intending exhibitors can obtain further information from W. Sierra, exposition delegate in the United States, P.O. Box 207, Dayton, Ohio.

In view of the Congress of Chambers of Commerce of the Empire, to be held in London in June, 1906, it has been decided to hold a conference of Canadian Boards of Trade in Montreal early next spring. Circulars are now being sent to all the Boards of Trade throughout Canada, and it is proposed that the various resolutions to be submitted to the London Congress shall first be considered at the Montreal meeting.

The official figures just compiled by the Department of Trade and Commerce at Ottawa shows that for the fiscal year ended June 30 last, Canada expended \$1,015,800 in mail subsidies and steamship subventions.

Some of the larger amounts under this head have been in round numbers as follows:

Services between:	
Canada and Great Britain	\$328,000
Canada and Australia	194,000
Canada and South Africa	146,000
Canada, China and Japan	73,000
Canada, British West Indies and Demerara	65,700
Total	\$806,700

The balance, or about \$209,100, has been made up by inter-provincial services. The British government pays the same amount as Canada toward maintaining the services to China and Japan and the British West Indies.

The St. Thomas, Ont., Times says: "The idea of a 'Made in St. Thomas' Exhibition should not be allowed to die out. Probably right in the city there are hundreds of people who do not know the variety of articles made here."

These exhibitions now in vogue in many Canadian towns, like that of St. Thomas, are excellent in their way, but it is remarkable that the manufacturers who are located in them depend upon local exhibitions to advertise their products. If, as The Times suggests, there are hundreds of people residing in these towns who do not know the variety of articles made there, how can the manufacturers expect that their products should be known outside the walls of their factories. Why don't they advertise?

The population of New York City as recently counted by the State enumerator is 4,014,304. The population of the entire State is given as 8,066,672 people.

MACHINERY AND ENGINEERING.

INDUSTRIAL HAMILTON.

Hamilton, familiarly known as the Birmingham of Canada, is attracting an ever increasing amount of attention from Canadian and American manufacturers as a location for their factories. This is due to the many advantages the city possesses as a centre where industries may be operated under favorable and economic conditions, and the record of the last few years shows how many manufacturers, in different branches of trade, have seen the benefit of locating there. The absence of the usual smoke stack from most of the works is noticeable. Electricity is the chief motive power. The Hamilton Cataract Light, Power & Traction Co. develops electrical power at De-Cow Falls, thirty-five miles southeast of the city, bringing it at a high voltage to sub-stations in Hamilton, where it is stepped down and distributed to the various industrial establishments at a cost to the consumer of \$22.50 per horse-power per annum for a twenty-four hours service; thus solving the problem of cheap power and light.

The advantageous geographical situation of Hamilton, and its excellent shipping facilities by both water and rail, are other attractions. Situated at the head of Lake Ontario, with a waterway stretching westward to the North-West Provinces, and to the east to the markets of Europe, and railway facilities provided by the Grand Trunk Railway, the Canadian Pacific Railway, the Toronto, Hamilton & Buffalo, the Michigan Central, the New York Central, and the Lehigh Valley Railroad, Hamilton's position could scarcely be bettered. When to these advantages are added cheap building sites, a large labor market to draw from, and an enlightened policy on the part of the municipality, which offers liberal inducements to manufacturers

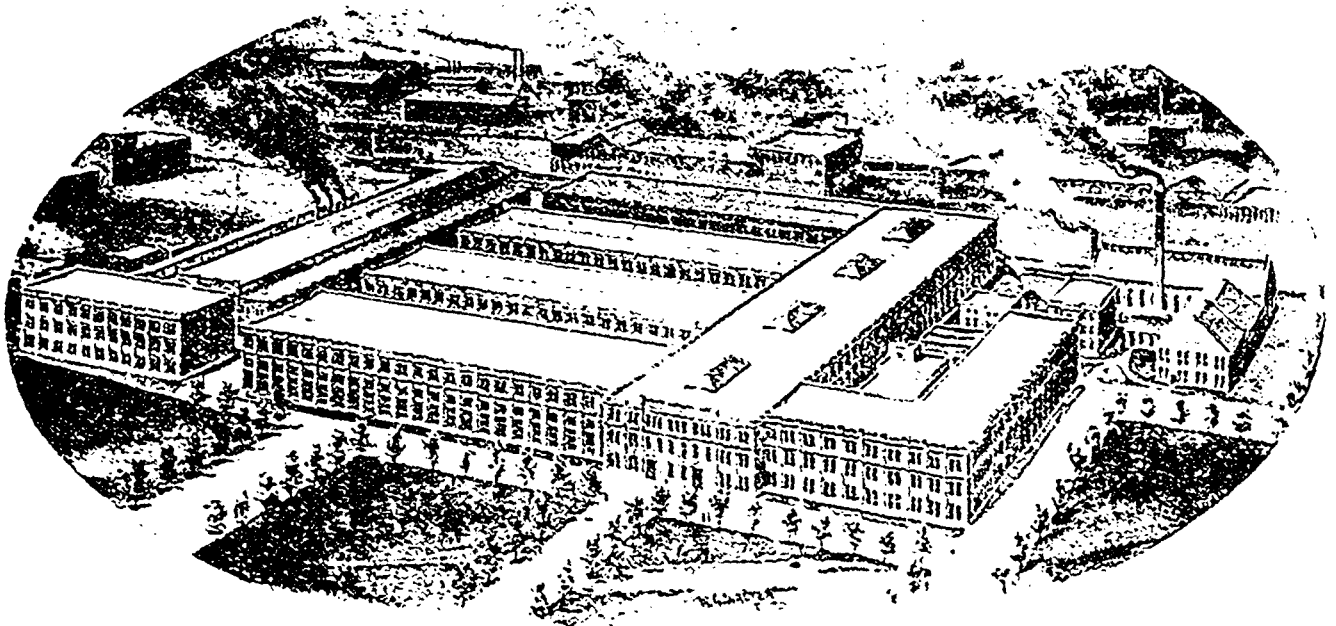
to locate there, it is easy to see why the industrial growth of the city has been so rapid.

Most of the new plants are in the Annex, situated between the lake and Barton Street, and are reached by several lines of street cars. Here are the immense works of the

International Harvester Co., employing 2,000 hands, the Hamilton Steel & Iron Co.'s blast furnace and rolling mills, and the Canadian Westinghouse Co.'s large shops. There are also the largest and most imposing, but the multiplicity of smaller plants representing nearly every branch of industry is a striking



S. D. BIDART, Mayor of Hamilton.



PLANT OF CANADIAN WESTINGHOUSE CO.

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feature. Among these are the Canadian Shovel Co., who are at present installing their machinery and expect to be in a position to handle orders shortly; the Canadian Drawn Steel Co., recently established and full of work; and adjoining them the concrete block and frame building of the Canada Steel Goods Co., which is now being rushed to completion; the Dominion Belting Co., whose cotton stitched belting is known all over Canada; the Imperial Cotton Co.'s model factory; the Frost Wire Fence Co.; the Petrie Mfg. Co., makers of cream separators; F. W. Bird & Son, from East Walpole, Mass., makers of paper roofing and paper products, whose factory is in course of erection; the Norton Canning Co., who have recently built an addition to their large factory; the Otis-Fensom Elevator Co., who have doubled the size of their building and erected a steel tower for testing their elevators before shipment, and who also have in course of erection a large fireproof building of reinforced concrete for the storage of their valuable patterns. Further up town is the model plant of the Union Drawn Steel Co., who are turning out their well-known lines of cold rolled shafting and steel sections for the Canadian trade; the Good Roads Ma-

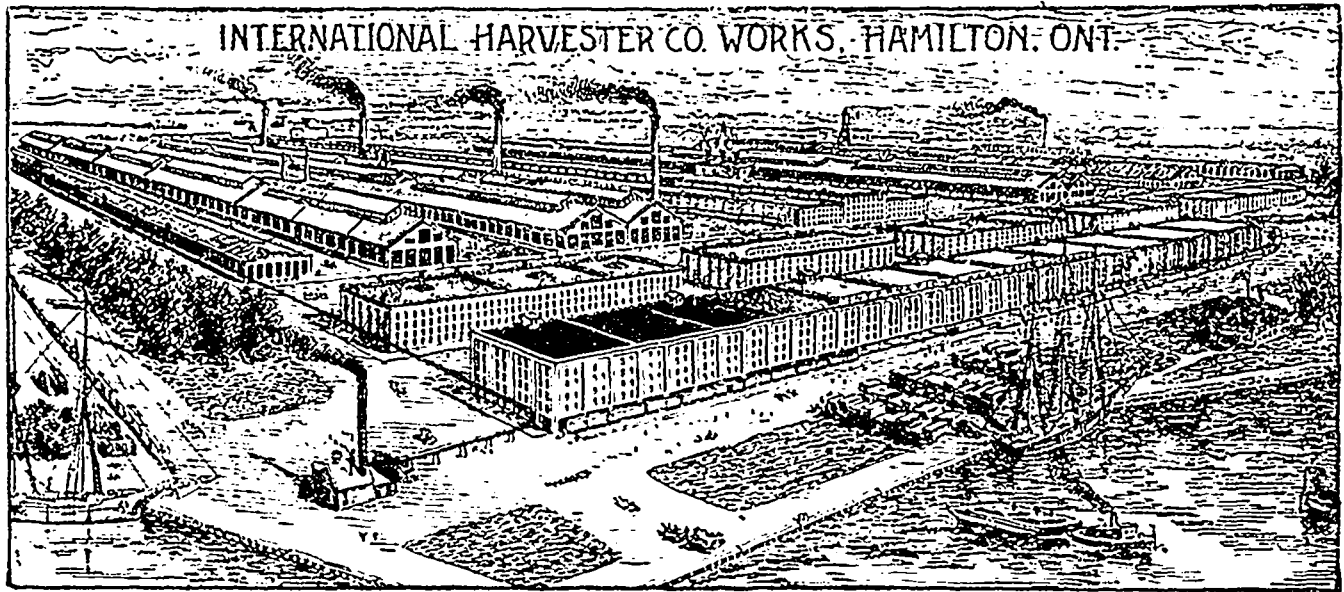


Mr. JOHN T. HALL, Assessment Commissioner, Hamilton, Ont.

chinery Co.; the Smart-Turner Machine Co.; the Sawyer-Massey Co.; the Hamilton Motor Works; the Gurney Scale Co.; the Canadian Corundum Wheel Co., and the Hart Emery Wheel Co., who have recently combined; the Garlock Packing Co.; the Toronto & Hamilton Electric Co.; B. Greening Wire Co.; Hamilton Brass Mfg. Co., and many others both large and small.

The London Machine Tool Co. have recently purchased six acres of land in the Annex and will erect suitable premises in which to conduct their business, which will be removed from London, and numerous industrial concerns are negotiating for factory sites. Mr. John T. Hall, assessment commissioner of the municipality, in whose hands are these negotiations for new industries, is one of the busiest men in Hamilton, but finds time to show the various locations and their advantages to prospective locators.

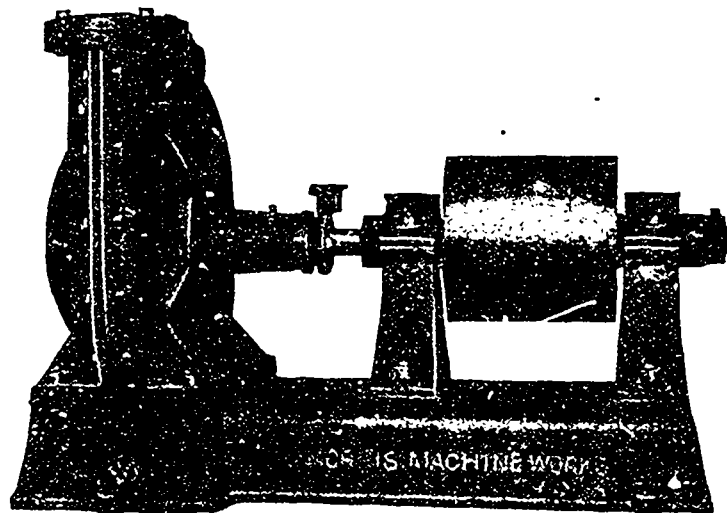
It may be interesting to note that a large percentage of the recent industries located there are branches of American concerns or are operated with American capital. Prophecy is proverbially unchancy, but the prophet who foretells an immense and ever increasing industrial expansion in Hamilton is taking but small risks.



STANDARD HORIZONTAL PUMP.

The Standard horizontal pump herewith illustrated, is of a type most extensively used for a great variety of purposes. In its construction it is exceedingly strong and solid. It has large diameter shaft running in long bearings lined with best babbitt metal. The pulley is large. The hub bearing is long and fitted with proper packing gland. All parts are accurately machine-fitted. The pump shown is right hand.

These pumps, which are manufactured by the Morris Machine Works, Baldwinsville, N.Y. are made for all services and in some 23 sizes, with discharge opening from 1 1/2 inches to 48 inches diameter. When required these pumps are equipped with suction primer, which consists of a large check valve and a hand pump which draw from below and delivers above.



STANDARD HORIZONTAL PUMP.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

CAPTAINS OF INDUSTRY.

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

The Rideau Mfg. Co., Ottawa, will erect a four story factory for the manufacture of ladies' clothing, etc. The firm have recently established an office in Winnipeg, Man.

The sawmill of the Keewatin Lumbering & Mfg. Co., Keewatin, Ont., was destroyed by fire October 23. Loss about \$60,000.

Application will be made for an act to incorporate the Buffalo, Niagara & Toronto Railway Co., with power to construct, equip and operate a line of railway from Niagara-on-the-Lake, Ont., to Port Colborne, Ont.

Messrs. Ainslie Bros. struck a good flow of oil, recently, at a depth of 1,230 feet on their Oriet lease near Comber, Ont.

At a meeting of the business men of Tilsonburg, Ont., and a number of farmers of the country south of the town, the first steps were taken towards organizing a co-operative association to build a telephone line from Tilsonburg to the fair grounds in Houghton township.

The Mathews Steamship Co., Toronto, have asked for tenders for two vessels to be built in the Old Country for the Montreal and Fort William route.

Edward Gurney, Esq., Toronto, will build a three story residence, 250x140 feet, the building to be of cut grey stone.

The Grand Trunk Railway Co. will erect a depot and hotel combined in Ottawa.

It is stated that a new opera house will be built in Toronto by E. D. Stair and A. J. Small.

Thomas McGill, Esq., Kearney, Ont., is contemplating the organization of a company with a capital of \$40,000 in Cornwall, Ont., for the manufacture of chairs, etc.

The Galt Knitting Co., Galt, Ont., are erecting a large concrete addition to their works, the Woodruff Robins Co., Galt, Ont., having the contract.

The ratepayers of Galt, Ont., will vote on November 9, on a by-law to give inducements to the Jackson Wagon Co., St. George, Ont., to locate there.

A company has been formed in London, Ont., with J. M. McEvoy, as solicitor, for the purpose of generating power. The site of the prospective power plant is on the Thames river, about eight miles from London. It is the intention of the company to furnish both light and power.

The Dickson Co., Peterborough, Ont., will erect a large planing mill at that place for the manufacture of sash, doors, blinds, interior fittings, etc.

The Canadian General Electric Co., Toronto, have purchased property in Peterborough, Ont., at a cost of about \$20,000 and will extend their works there.

The Canadian National Exposition Board, at a meeting held in Toronto, recently, decided to submit plans for the Process and Implement Buildings to the Board of Control. The walls of the building will be either of brick or concrete blocked off in imitation

stone, the roofs of either steel or wood trestles with metal coverings.

Mr. F. H. McGuigan, manager of the Grand Trunk Railway, states that the company are working at the problem of securing an electrical locomotive strong enough to draw 850 tons through the Sarma tunnel. Until this is solved the company will not make a change from steam. At present the heaviest electrical locomotives pull loads of 500 tons.

The ratepayers of Barrie, Ont., have voted favorably on a by-law to grant a bonus of \$5,000 to the Spencers' Industrial Co., manufacturers of sundries for grocers and hardware dealers.

The estimated cost of a system of surface drainage in Brantford, Ont., is \$200,000.

Messrs. Sullivan & Langdon, Kingston, Ont., have received the contract for the addition to the Toronto Armories, the price being \$225,000.

The Toronto Railway Co., Toronto, have purchased 2,000 tons of steel rails from the Lorraine Steel Co., Pittsburg, Pa. The rails average ninety pounds to a foot in weight, and are each sixty feet in length.

The ratepayers of Port Arthur, Ont., have voted favorably on by-laws as follows: extension of water system, \$112,000; extension of sewerage system, \$111,000; new fire hall, \$10,000, and extension of municipal telephone system, \$18,000.

The opera house at Neepawa, Ont., collapsed October 19, entailing a loss of about \$5,000.

The directors of the Street Railway Co., London, Ont., will expend a large sum in completely renovating the entire system.

M. E. Vanzant, Limited, Toronto, have been incorporated with a capital of \$10,000, to manufacture drugs, chemicals, etc. The provisional directors include Elias Vanzant, M. E. Vanzant and L. C. Todd, Toronto.

The Niagara Engine Works Co., Niagara-on-the-Lake, Ont., have been incorporated with a capital of \$50,000, to manufacture gas and gasoline engines, etc. The provisional directors include E. R. Lundy, H. M. Robinson, Niagara Falls, Ont., and J. A. Keyes, St. Catharines, Ont.

The Empire Lumber Co. will erect a large sawmill at Latchford Ont.

A large new bank building will be erected in Toronto by the Molsons Bank of Canada.

The Long Lake Lumber Co., Toronto, have been incorporated with a capital of \$40,000, to manufacture, lumber, timber, etc. The provisional directors include Alexander Mills, W. E. Raney, Toronto, and H. E. Hurlburt, Novar, Ont.

The Superior Portland Cement Co. have changed the head office of the company from Toronto to Orangeville, Ont., and have, by supplementary letters patent, extended their power to manufacture Portland and other cement; barrels, boxes, bags, etc.; to build telegraph and telephone lines, and to generate electricity for light, heat and power.

The A. S. Galoska Co., Cobalt, Ont., have been incorporated with a capital of \$40,000, to manufacture and deal in merchandise. The provisional directors include A. S. Galoska, Andrew Glendinning, Cobalt, and A. N. Morgan, New Liskeard, Ont.

D. B. Martin, Limited, Toronto, have been incorporated with a capital of \$200,000 to construct and operate abattoir and cold storage plants. The provisional directors include Robert McKay, Andrew Dods and A. E. Lyon, Toronto.

The Triple Link Mining & Development Co., New Liskeard, Ont., have been incorporated with a capital of \$40,000, to carry on a mining, milling and reduction business. The provisional directors include W. V. Cragg, I. E. Liddle, and J. I. Dixon, Toronto.

The Peterborough Sandstone Brick Co., Peterborough, Ont., have been incorporated with a capital of \$50,000, to manufacture bricks, etc. The provisional directors include J. J. English, Robert Harstow and J. J. Hartley, Peterborough.

The Electric Meter & Stamping Co. Toronto, have been incorporated with a capital of \$200,000, to manufacture electrical supplies, meters, etc. The provisional directors include William Bullock, Anthony Krone and John Creighton, Toronto.

The Haldimand Natural Gas Co., Dunnville, Ont., have been incorporated with a capital of \$40,000, to supply natural gas for the purposes of power, heat and light. The provisional directors include R. A. Harrison, F. J. Ramsay and F. R. Lalor, Dunnville.

The J. P. Lawrason Co., Milton, Ont. have been incorporated with a capital of \$50,000, to manufacture patent medicines. The provisional directors include J. W. McKinney, Milton, J. P. Lawrason, Toronto, and Neil McMillan, Napanee, Ont.

The Standard Ideal Co., Port Hope, Ont., have been incorporated with a capital of \$500,000, to manufacture enamelled ware, etc. The provisional directors include H. T. Bush, A. E. Pipher, Port Hope, and A. C. Donald, Toronto.

The Windsor Supply Co., Windsor, Ont., have been incorporated with a capital of \$10,000, to manufacture and deal in merchandise. The provisional directors include A. T. Curran, and Daniel Anderson, Windsor.

The Imperial Silver Mining Co., New Liskeard, Ont., have been incorporated with a capital of \$250,000, to carry on a mining, milling and reduction business. The provisional directors include Murdoch McLeod, W. E. Kerr, and W. J. Middleton, New Liskeard.

The Silver Hill Mining Co., Mattawa, Ont., have been incorporated with a capital of \$50,000, to carry on a mining, milling and reduction business. The provisional directors include L. H. Timmins, F. A. Ribout and E. R. Legg, Mattawa.

The Waltham Cabinet Co., Toronto, have been incorporated with a capital of \$40,000 to manufacture cabinets, shop fittings, etc. The provisional directors include John Morrison, Frank Shapter and R. H. Clark, Toronto.

The Majestic Oil Co., Toronto, have been incorporated with a capital of \$100,000, to carry on a mining, milling and reduction business. The provisional directors include

J. T. Mullaney, G. L. Lovejoy, Buffalo, N.Y., and T. H. Graham, Toronto.

The Opemican River Improvement Co., Hawkesbury, Ont., have been incorporated with a capital of \$35,000. The provisional directors include W. C. Edwards, Rockland, Ont., H. K. Egan, and R. G. C. Edwards, Ottawa.

The Ruethel Mining Co., Windsor, Ont., have been incorporated with a capital of \$250,000, to carry on a mining, milling and reduction business. The provisional directors include W. A. Thorpe, H. C. Rees and G. J. Munsell, Detroit, Mich.

The Thorn Plumbing Co., Toronto, have been incorporated with a capital of \$20,000. The provisional directors include J. H. Thorn, F. W. Jenkins, Toronto, and A. J. La Fay, Peterborough, Ont.

The Red Deer Mill & Elevator Co. have placed their order with the Stratford Mill Building Co., Stratford, Ont., for the complete equipment for their 150-barrel mill at Red Deer, Alberta. The building is now under construction, and the machinery will be shipped during November. It will be one of the best equipped and most modern mills in the West.

The Union Bank of Canada have opened three new branches in Ontario, one at Font-hill, one at Plantagenet, and one at Fenwick.

The steamer Turbinia, of the Toronto-Hamilton route, has left for Halifax, N.S., whence she will sail for the West Indies to be engaged for the winter in the trade between Jamaica, Cuba and other islands.

The Donnelly Wrecking Co., Kingston, Ont., have raised the hull of the propeller, Melbourne, which was burned a few weeks ago. The machinery and boiler are in very good condition.

The Stanley Gun Club, Toronto, have rented property on the Kingston Road, and will erect a club house immediately.

The Colonial Cordage Co., Toronto, have been incorporated with a capital of \$50,000, to manufacture rope, cordage, etc. The incorporators include J. R. Converse, J. W. Weldon and S. J. LeHuray, Montreal.

The tug Lakefield, owned by Morin & Grey, Lakefield, Ont., was burnt to the water's edge, October 29. Loss about \$3,000.

Fort Frances, Ont., will have a system of sewerage installed under the direction of John Galt, C.E., Toronto.

The Banwell-Hoxie Wire Fence Co., Canadian branch of the McGregor-Banwell Co., of Adrian, Mich., will locate in Hamilton, Ont., with a capital of \$100,000.

The Stratford Mill Building Co., Stratford, Ont., have secured the order from the Western Canada Flour Mills Co., for about ten carloads of mill machinery for their St. Boniface, Man., mill, consisting of purifiers, reels, dust collectors, flour packers, cleaning machinery, etc.

The N. L. Piper Railway Supply Co., Toronto, have secured the agency lately held by John T. Webster, Toronto, for the line of oil cans manufactured by Joseph Kay & Sons, Limited, Leeds, England. These cans are made by a patent process and are sold all over the Empire. In August, 1905, the British Admiralty ordered 10,000 of these cans for use on the ships of the navy and in the dockyards.

The White Silver Co., Toronto, have been incorporated with a capital of \$100,000, to carry on a mining, milling and reduction business. The provisional directors include W. F. White, New York City, E. C. Hargrave, Bay City, Mich., and W. H. Wallbridge, Toronto.

The Economy Powder Co., Ottawa, have been incorporated with a capital of \$10,000, to manufacture explosives. The provisional directors include J. T. Embree, Reading, Pa., J. R. G. Wyld, and P. L. Neame, Ottawa.

Mr. Richard D. Kimball, Boston, Mass., one of the greatest experts on ventilation in the United States, has been brought to Ottawa by the Public Works Department, for the purpose of reporting upon the ventilation of the House of Commons.

The Alexandra Oil & Development Co., Toronto, have been incorporated with a capital of \$100,000, to carry on a mining, milling and reduction business. The provisional directors include A. R. Boswell, and H. W. Edgar, Toronto.

The Baynes Carriage Co., Hamilton, Ont., have been incorporated with a capital of \$250,000, to manufacture carriages, vehicles, etc. The provisional directors include J. B. Baynes, Buffalo, N.Y., C. T. Grantham, P. D. Crerar and P. A. Kompass, Hamilton.

The Liskeard Brick, Coal & Lumber Co., Toronto, have been incorporated with a capital of \$40,000, to manufacture brick-earth, bricks, tiles, lumber and coal. The provisional directors include M. R. Jennings, J. H. Woods, and H. J. Martin, Toronto.

The Alberta Portland Cement Co., Toronto, have been incorporated with a capital of \$1,000,000, to manufacture concrete, marble, sandstone, bricks, tiles, etc. The charter members include E. T. Malone, J. W. Mitchell, and J. A. Fraser, Toronto.

The corporate name of the Dunlop Tire Co., Toronto, has been changed to the Dunlop Tire & Rubber Goods Co.

The Chester Silver Mining Co., New Liskeard, Ont., have been incorporated with a capital of \$25,000, to carry on a mining, milling and reduction business. The provisional directors include C. E. Binkley, J. A. Pritchard and A. V. Summers, New Liskeard.

The Niagara, St. Catharines & Toronto Railway Co. are building an extension of their line from Falls View to Montrose, Ont.

The Lake Superior Corporation, Sault Ste. Marie, Ont., have booked orders for steel rails sufficient to keep their mills running full capacity well into 1906.

The chairman of the Board of Control, Toronto, will receive tenders up to November 7, for additions and alterations to the high level pumping station, the following work being required, steel and iron work, galvanized iron work, etc.

The Victory Opera House, Sarnia, Ont., was destroyed by fire, October 29. Loss about \$1,000.

The Ontario Portland Cement Co., Brantford, Ont., are making very large shipments of cement from their works at Blue Lake, near Paris, Ont. It is said there is an exceedingly heavy demand just now, as many Canadian dealers who have been using American cements have been disappointed in not having their orders filled by American

companies lately, on account of the great scarcity of cars in the United States. The Brantford company have been able to give prompt shipment.

The Polson Iron Works Co., Toronto, recently launched the hydraulic suction dredge, "Northumberland," which is capable of dredging in forty feet of water. Her general dimensions are as follows:—Length, 147 feet; beam, 44 feet; depth, 9 feet at side; draft, 5 feet. The main pump is driven by a direct acting, inverted, triple, compound, three crank, surface condensing engine, with cylinders 22x14 and 36x21 inch stroke, and steam is furnished by two Clyde boilers, 12 feet diameter, 12½ feet long, built for a working pressure of 160 pounds per square inch. The auxiliary machinery consists of three powerful hoisting and swinging engines, and two steam capstans. The hull is controlled by three walking spuds. The spuds are of British Columbia pine 36 inch square, 65 feet long. The suction pipe, discharge pipe, and booms are all of steel. The cutter head is a large steel casting driven by independent engines at the head of the suction pipe. The dredged material will be conveyed by triple, cylindrical pontoons (the two outer cylinders acting as floats) from the discharge in the end of hull to the point of dump.

The Peterborough Cereal Co., Peterborough, Ont., have awarded the contracts for the work on the oatmeal building and elevator they will erect.

The Peterborough Canoe Co., Peterborough, Ont., will erect an addition to their plant, three stories high, 125x25 feet, and will cost about \$4,000.

Messrs. William R. Perrin & Co., Toronto, inform us that they are selling the Vim leather packing in Ontario, and they claim that it is as good as anything on the market.

The premises of the Petrolea Packing Co., Petrolea, Ont., were destroyed by fire, October 31. Loss about \$125,000.

The Standard Paper Co. are negotiating with the town of Cannington, Ont., for the establishment of a paper mill in the town. The company ask a right of way, a cash bonus of \$10,000 to build an electric railway for their own and public uses, into a marsh in the township of Brock. On their part the company will undertake to build a paper mill in the town that will employ steadily from forty to fifty men. W. G. A. Lambe, Toronto, is president of the company, and T. W. Kneeland, secretary-treasurer. It is the purpose to make cardboard from the marsh peat.

It is announced that the Pratt & Whitney Co., of Hartford, Conn., have purchased a plant in Dundas, Ont., for the manufacture of a full line of small tools—taps, reamers, milling cutters, punches, dies, etc. The building is a modern structure, and the power plant is in place. The plant will also include a department for manufacturing a full line of twist drills. The location of the factory is near that of the John Bertram & Sons Co. which was recently purchased by the Niles-Bement-Pond Co.

The annual meeting of the Consumers' Gas Co. was held in Toronto, October 30. The statement presented showed that the total receipts from gas rentals have exceeded one million dollars, being \$1,006,421.46, an

increase of \$100,562.83 over the previous year. The statistics for the past three years show:

	Street lamps.	Meters.	Gas rentals.
1905.....	1,002	39,711	\$1,006,421
1904.....	984	36,428	905,858
1903.....	944	33,677	\$55,522

The net income from operations was \$412,252, compared with \$268,348 in 1904, an increase of \$143,904. Interest on debentures brought in \$3,941, making a total revenue of \$416,193. Dividends absorbed \$219,927, an increase of \$28,776; \$170,891 was transferred to renewal fund, and \$20,459 profit carried to reserve fund. The output of gas for the past year amounted to 1,374,114,000 cubic feet, being 141,153,000 over that of the previous year. During the year nearly 15 miles of new mains have been laid, making the total mileage 302, and 3,406 new services have been put in. The 3,000,000 cubic feet gasholder, it is expected, will be finished before the winter sets in, and will afford ample storage room for the rapidly increasing production of gas.

A company has been formed in London, Ont., in which Dr. McWilliams, of Thamesford, Ont., is interested, and have purchased an expensive and complex peat pressing machine and intend to start operations immediately.

The water commissioners, London, Ont., have asked the council for \$250,000 for improvements to the waterworks system.

The Beck Lumber Co., Penetanguishene, Ont., are considering erecting a sawmill at Fort Francis, Ont.

P. Downham, Esq., Chatham, Ont., will build a creamery at that place.

The council of Perth, Ont., have passed a by-law providing \$20,000 for improvements to the sewerage system.

Messrs. Bickford & Mackay will erect a knitting mill at Dundas, Ont.

A number of steamers and barges will be kept busy for the next month carrying sugar beets from Ontario ports to the beet sugar factory at Marine City, Mich. In all upwards of 20,000 tons will be shipped out of western Ontario. Ten thousand tons will be taken from Chatham, 5,000 from Courtright and 5,000 from Amherstburg.

Staunton's, Limited, Toronto, paper manufacturers, will erect an addition to their plant, to cost about \$40,000.

The Board of Control, Toronto, have granted a permit to the International Gas Appliance Co., Toronto, to erect a two story factory.

The earnings of the Toronto Railway Co. for the month of October reached a total of \$230,385, as against \$202,344 for October, 1904, an increase of \$28,041.

The Dominion Linen Thread Mills are removing their factory from Bracebridge, Ont., to Stratford, Ont., in consideration of the financial recognition which the latter town has offered, and in consideration of which the company guarantee to employ not less than 50 people the first year. A factory building, 250x85 feet, constructed of reinforced concrete is nearing completion.

The Whyte Packing Co., Stratford, Ont., who now have accommodation for slaughtering about 4,000 hogs per week, are building an addition to their works at that place,

100x50 feet, to meet the increased requirements of their business.

The corporation of the town of Stratford, Ont., have recently expended \$125,000 in putting down brick streets and cement sidewalks, notwithstanding the strike of workmen in the Grand Trunk Railway shops there, which is now happily ended. The strike involved a shrinkage of about \$500 per day in wages.

Canada is likely to have another new and important industry at a very early date. A meeting of capitalists, some of whom are British was held in Toronto a few days ago and a decision arrived at to form a company for the manufacture of soda ash and similar products. At present about \$4,000,000 worth of these products are imported, and as Canada possesses the two chief factors in its production, salt and lime, it is believed the articles can be successfully and economically manufactured here. It is understood that options on salt wells and limestone properties have been secured and that an abundant supply of the raw material, both lying close together, will be obtainable. The organization of the company is in a very forward condition, and the directorate will include several well-known Canadian capitalists as well as those from Britain and the United States.

The Quebec Transport Co., City of Quebec, have been incorporated with a capital of \$100,000, to carry on a business of transportation in cold storage, etc. The charter members include Thomas Harling, J. G. Scott, and J. T. Ross, Quebec City.

The Meyer-Thomas Co., Montreal, have been incorporated with a capital of \$100,000, to manufacture boxes, packages, etc. The charter members include N. A. Meyer, Granby, Que., J. W. Thomas, and A. H. Duff, Montreal.

The Dominion Engineering & Construction Co., Montreal, have been incorporated with a capital of \$100,000, to carry on a business of general contractors and builders, etc. The charter members include V. E. Mitchell, J. W. Weldon and S. J. Le Huray, Montreal.

It is stated that the new fire station and fire alarm headquarters in Montreal will cost about \$100,000.

The Quebec Iron Ore Co., Quebec City, have been incorporated with a capital of \$500,000, to carry on a mining and reduction business. The charter members include L. W. Just, Nordin, N.B., H. C. Bosse, and J. I. Lavery, Quebec City.

La Compagnie des Laboratoires S. Lachance, Montreal, have been incorporated with a capital of \$100,000, to manufacture pharmaceutical specialties, drugs, medicines, etc. The incorporators include Seraphim Lachance, H. A. A. Brault and Arthur Gagnon, Montreal.

The Mexican Light & Power Co., Montreal, will increase their capital stock to the sum of \$16,000,000.

The Hill Electric Switch Co., Montreal, have increased their capital stock to the sum of \$45,000.

The box factory of J. P. Abel, St. Louis, Que., was destroyed by fire, recently.

Messrs. Dussault & Power, Levis, Que., contractors, have secured the contract to erect a steam power plant for the Levis waterworks, the price being \$10,500.

The Northern Electric Mfg. Co., Montreal, will erect a factory there to cost about \$120,000.

Work has been commenced on the new armory of the 5th Royal Scots, Montreal, the cost of which will be about \$75,000.

The Dominion Iron & Steel Co., Sydney, N.S., have commenced rolling steel rails for the Intercolonial Railway Co.

Fire broke out in the oil rooms of the Imperial Government stores department on George's Island, near Halifax, N.S., October 26. Loss about \$10,000.

The Dominion Iron & Steel Co., Sydney, N.S., will charter a vessel with a carrying capacity of 7,000 tons of ore for the trade from Wabana, N.S.

The Power Co., Hampton, N.B., have been incorporated with a capital of \$20,000, to manufacture gas engines, etc. The promoters include F. W. Wedderburn, Hampton, N.B., J. E. March and A. E. Emery, St. John, N.B.

The Capewell Horse Nail Co., Hartford, Conn., have acquired control of the Maritime Nail Works, St. John, N.B.

The head office of the Grand Trunk Pacific Railway for New Brunswick will be moved from Fredericton to St. John.

The Miramichi Lumber Co. have been organized in Maine for the purpose of cutting and handling sawed lumber and pulp wood in New Brunswick. A number of Bangor men are interested. The company have completed negotiations for the purchase of the Richards property in the valley of the Miramichi River, consisting of between 300,000 and 400,000 acres of timber land in the Miramichi Valley, two saw mills at Chatham, N.B., and a site on which a cutting-up mill for the manufacture of pulp wood will be erected. The company plan to cut about 20,000,000 feet of timber the coming winter for the use of their mills next season, and about 400 men will probably be employed. The mills are operated by steam power and saw about six months in the year, beginning about May 1. The annual output of the sawmills of the company is about 20,000,000 feet of English deals. Practically all of this lumber is shipped to England from St. John or other Canadian ports. The mills employ about 65 men and have unexcelled facilities for shipping their output. The cutting-up mill for the manufacture of pulp wood will probably have an annual output of 15,000,000 or 20,000,000 feet, which will bring the total annual output of the plant up to nearly 40,000,000 feet. It is not decided yet whether this pulp wood will be manufactured in New Brunswick or shipped to the United States.

The Orpheum Co. will erect a vaudeville theatre in Winnipeg, Man., to cost about \$200,000.

The Grand Trunk Pacific Railway Co. and the Canadian Northern Railway Co. will erect a new union depot in Winnipeg, Man., at a cost of about \$4,000,000.

The civic gangs and concrete mixers have been placed at the disposal of the Toronto contractors to enable them to hurry the new reservoir to completion at the Winnipeg, Man., waterworks, as the civic water supply must be supplemented at the earliest possible date. A fourth well will also be sunk, at a cost of \$50,000.

The Speer-Stevenson Drug Co., Winnipeg, Man., have been incorporated with a capital of \$100,000, to manufacture druggists' supplies and proprietary medicines, etc. The incorporators include W. H. Speer, Shoal Lake, Man., V. W. Johnston and Edward Stevenson, Winnipeg.

W. C. Wilcox, Limited, Winnipeg, Man., have been incorporated with a capital of \$200,000, to manufacture boilers, engines, etc. The incorporators include W. C. Wilcox, G. A. Metcalfe and W. H. Meneray, Winnipeg.

The Smith Grain Co., Winnipeg, Man., have been incorporated with a capital of \$40,000, to erect mills, elevators, etc. The charter members include M. K. Smith, Winnipeg, Man., A. M. Eklund, Williams, Minn., and J. K. Gray, Northcote, Minn.

The Canadian General Electric Co., and Canada Foundry Co., Toronto, will erect a three-story warehouse, 140x40 feet, in Winnipeg, Man.

A new grain exchange building will be erected in Winnipeg, Man. I. M. Ross, D. E. Sprague, C. J. Gago were among those appointed a committee to enquire into suitable designs.

The ratepayers of Winnipeg, Man., will vote on a by-law to raise \$150,000 to aid the General Hospital.

The J. C. Graham Lumber Co., Winnipeg, Man., will erect a large warehouse at that place.

The Canadian General Electric Co., Toronto, have received the contract to supply the city of Winnipeg, Man., with an electrical generator to cost \$27,900.

The Gartshore-Thomson Pipe & Foundry Co., Hamilton, Ont., have received the contract from the city of Winnipeg, Man., to supply cast iron pipes, etc.

The city of Winnipeg, Man., have accepted the tender of R. D. Wood & Co., to supply a turbine pump for \$10,600.

The Jones & Moore Electric Co., Winnipeg, Man., have been incorporated with a capital of \$75,000, to manufacture electrical machinery and supplies. The provisional directors include J. W. Jones, Toronto, J. C. Kavanagh and G. J. Hicks, Winnipeg, Man.

The ratepayers of Pilot Mound, Man., have voted favorably on a by-law to provide \$14,000 for a new school.

The Builders' Equipment Co., Winnipeg, Man., have been incorporated with a capital of \$120,000, to manufacture builders' supplies, etc. The provisional directors include A. R. Bredin, L. C. Hazlett and J. A. Tanner, Winnipeg.

The council of Swan Lake, Man., are offering a bonus of \$6,000, to anyone who will build a flour mill there.

The Rathwell Farmers' Elevator Co., Rathwell, Man., have been incorporated with a capital of \$20,000, to erect an elevator at that place.

The ratepayers of Winnipeg, Man., will vote on a by-law to raise money to build a municipal gas plant, to cost about \$600,000.

The Canadian Metal Co., Frank, Alta., will double their smelter, the main building of which will be 670 feet long.

The Winnipeg Rubber Co., Winnipeg, Man., will erect a warehouse at Calgary, Alta.

Hon. W. F. Finlay, Medicine Hat, Alta., will receive tenders for a steel traffic bridge to be built across the river there.

The Alberta Milling Co., Edmonton, Alta., will erect another elevator near their mill.

The Alberta Pacific Elevator Co. have bought out the Farmers' Elevator Co., at Carstairs, Alta.

The Canadian Pacific Railway Co. will build a new depot at Wetaskawin, Alta., at a cost of about \$25,000.

A steel bridge will be built to span the Saskatchewan river between Edmonton, Alta., and Stratheona.

Messrs. Weibe & Rompel, Laugham, Sask., are erecting a flour mill there with a capacity of 125 barrels per day.

J. J. Slater, Esq., will erect a grist mill at Lloydminster, Sask.

The Western Milling Co., Calgary, Alta., will erect a grain storage tank which will have a capacity of 200,000 bushels.

The Braekman-Ker Milling Co. are erecting an \$5,000 bushel grain elevator storage tank at Stratheona, Alta.

J. A. Mitchell, Pakan, Alta., has purchased the plant of the Victoria Milling Co., at that place.

The Carberry flour mill, Winnipeg, Man., has been sold to a syndicate of American capitalists, represented by I. B. Howard, Minneapolis, Minn. The purchasers will establish several mills throughout the West, and will manufacture for the export trade.

The sawmill at Cariboo Crossing, owned by P. A. Muns, Victoria, B.C., was destroyed by fire recently. Loss about \$6,000.

The Johnston Transfer & Fuel Co. have been incorporated at Victoria, B.C., with a capital of \$25,000, to carry on a business of contractors, warehousemen, etc., and to manufacture vehicles of any kind, etc.

The Boicoin-Miller Co., have been incorporated at Victoria, B.C., with a capital of \$50,000, to acquire business of Chilliwick Shingle Co., Harrison Station, B.C., and to manufacture timber, lumber, etc.

The Independent Asphalt Paving Co. have been incorporated with a capital of \$25,000, at Victoria, B.C., to manufacture natural and artificial stone, concrete, cement, etc.

The B.C. Bedding & Upholstering Co., have been incorporated at Victoria, B.C., with a capital of \$30,000, to manufacture mattresses, furniture, etc.

The Revelstoke Lumber Co., Revelstoke, B.C., will rebuild the Eddy sawmill which was destroyed by fire. The new mill will have a capacity of 65,000 feet.

The Nickel Plate gold mine in the Similkameen district, B.C., will soon increase their slime and concentration tank and next summer will increase their 40-stamp mill. The company are handling from 125 to 130 tons of ore daily. The stamp mill saves about 50 per cent. of the values of the ore, and the concentrates are shipped to the Everett smelter.

The Ladysmith Lumber Co., Ladysmith, B.C., will install new boilers, improved saws, etc., which will double the capacity of the mill.

The Board of Trade of Victoria, B.C., are desirous of having a new bridge to connect Vancouver Island and the mainland, the

estimated cost of which would be about \$20,000,000.

A syndicate from St. Paul, Minn., have purchased 43,000 acres of lumber lands on Vancouver Island, B.C., and will erect a large sawmill there.

The Consolidated Cariboo Hydraulic Co., Victoria, B.C., have been purchased by the Guggenheim, John Hays Hammond and Myers interest of New York, for \$1,000,000.

The Canadian Reduction Works at Trail, B.C., are now treating fifty tons of lead per day and 50,000 ounces of silver per week.

The owners of the Sullivan mine in Kootenay, B.C., are considering the proposition of enlarging the smelter to a capacity which will enable it to treat not only all the company's ore, but also that of other mines in the same district.

The shingle mill of the Fraser River Lumber Co., New Westminster, B.C., was destroyed by fire recently. Loss about \$12,500.

R. W. Douglas, of the Blanchard Lumber Co., Boston, Mass., has placed an order, if the terms can be accepted, for 400 cars of shingles, 300 for the Blanchard Company, and 100 for the Boston Shingle Co. These shingles are to supply the place of the inferior product of Maine and New Brunswick. The number of shingles wanted is 80,000,000, and the total output for the province for last year was only 100,000,000.

The Dominion Copper Co. have been considering the advisability of operating their present smelter at Boundary Falls, B.C. The company will install a larger and more modern compressor plant, which will be driven by electricity.

The British Columbia Copper Co., operating the smelter at Greenwood, B.C., have been gradually extending their sphere of operations this year, now having properties working near Princeton, near Hedley, and at Chesaw, Washington, in addition to the Mother Lode, itself a large shipper for years. Lately, however, the company have taken a bond on a property called the Napoleon, located at Boyd's, a little station six miles from Marcus, Washington.

The Vancouver Portland Cement Co., Vancouver, B.C., will double the capacity of their works, so the output will be 1,200 barrels per day.

W. H. Moore, New Westminster, B.C., is contemplating building an electric railway from Thompson River to Spencer's Bridge, a distance of 100 miles.

Plans are being prepared by Frank Knott, Esq., for a new city hall to be erected in Phoenix, B.C., at a cost of \$4,000.

J. Hanbury, Esq., Brandon, Man., has purchased the plant of the British Columbia Box & Lumber Co., Vancouver, B.C., and will erect a flour mill and grain elevator there.

The Beaver Valley Oil Co., Vancouver, B.C., have been incorporated with a capital of \$100,000, to operate Cariboo oil lands. The provisional directors include A. P. Anan, A. D. Walker and R. A. Corbett, Vancouver.

The mayor of Vancouver, B.C., has suggested improvements to the waterworks system at a cost of about \$500,000.

Two public school buildings will be erected in Vancouver, B.C.

The ratepayers of Fernie, B.C., will vote on a by-law to provide \$40,000 for a sewerage system.

J. P. Smith, Esq., will erect a factory in Vancouver, B.C., for the manufacture of mining machinery.

ELECTRICITY.

Electrical machinery and appliances of all kinds, electrical power plants and other progress in the electrical industries will be noted here.

The Fort Wayne & Wabash Valley traction line, operating 80 miles of interurban road, have offered to furnish power to run the machinery on farms. Gasoline and steam engines are used extensively by farmers, but corn shelling, feed cutting and other work is done by hand, and the company propose to furnish dynamos and build a line for a distance of one mile on each side of the track at cost. If the farmers will agree to pay a reasonable sum per year for the current the company expect to build up a big demand for power in a field without electric service. Farmers generally favor the project.

A MUNICIPAL LIGHTING PLANT.

Mayor McClellan, of New York, has formally opened the municipal electric lighting plant designed to light the Williamsburg bridge, crossing the East River, and connecting the city of New York and Williamsburg.

The plant is operated in connection with a rubbish incinerator recently constructed by the street cleaning department. The operation of the two plants, it is estimated, will bring about a saving of \$12,000 a year to the department and a large saving in the expense of lighting the bridge. There are 175 arc lamps on the bridge.

The construction of the plants is the first step in a direction which will be followed further in New York, and, it is believed, in other cities. The general business purpose is utilization of value previously thrown away in waste, but it is also a step toward improved sanitation.

Previously it has cost the city 30 cents a yard to remove from the piers all its rubbish; that is, all the waste with the exception of ashes and garbage. The rubbish is very light, consisting principally of paper, boxes and worn-out furniture. It now serves as fuel for the boilers of the electric lighting plant, and there are operated three dynamos, two of a normal capacity of 100 kilowatts each, and one of 50. With this cheap fuel the cost of lighting the bridge, which is at present \$80 a day, will be reduced by at least 50 per cent.

NO MORE ELECTRIC FRANCHISES.

The following resolutions were passed by the International Waterways Commission at their last meeting in Buffalo, N.Y., and copies have been sent to Hon. C. S. Hyman, Minister of Public Works, Ottawa, and Hon. Mr. Taft, Secretary of State for War, Washington, D.C. The first resolution deals with Niagara Falls, and urges the cessation of any further rights to develop power either on the United States or the Canadian side until the

commission are able to report on the effect of the present power development schemes.

"Resolved, that this commission recommends to the Governments of the United States and Canada that such steps as they may regard as necessary be taken to prevent any corporate rights or franchises being granted or renewed by either Federal, State or Provincial authority for the use of the waters of the Niagara River for power or other purposes until this commission is able to collect the information necessary to enable it to report fully upon the conditions and uses of these waters to the respective Governments of the United States and Canada. (Signed) J. P. Mabee, Chairman Canadian section; O. H. Ernst, Chairman American section."

"Resolved, that in the opinion of this commission no further rights of franchises should be granted or conferred regarding the uses or diversions of the water flowing out of Lake Superior by either the Government of the United States or Canada until all data and information are in the hands of the commission that may be necessary to enable it to make suggestions for regulating the excess of these waters, or that if such rights or privileges be granted they be subject to any regulations that may be adopted by both Governments. (Signed) O. H. Ernst, Chairman American section; J. P. Mabee, Chairman Canadian section."

The Canadian commission expect to have in their possession in a few days the report of Monsignore Laflamme as to results from a geological point of view. The second resolution asks that no fresh permits be granted for power development at Sault Ste. Marie pending the adoption by the commission of regulations to control the supply of water taken from Lake Superior for power purposes. The commission have drafted a set of regulations for keeping the mean level of the water of Lake Superior at a certain figure, and providing for the construction of compensation works. Copies of these regulations have been submitted to the power companies and the different navigation interests affected, and they will be asked to state how they regard the propositions at a meeting to be held in Buffalo on November 10. The final meeting for the adoption of regulations to govern the diversion of water at Sault Ste. Marie will be held in Ottawa.

HEALY FALLS POWER.

A large deputation, representing the various municipalities in the United Counties of Northumberland and Durham, Ont., waited upon Premier Whitney this week in connection with the application of the Healy Falls Power Co. They asked that in any lease that may be granted for developing the power, which is estimated at between five and six thousand horse, a clause be inserted that it shall be used entirely within the counties named. The government owns lands adjacent to the water power, and the deputation endorsed the application of the company with the restriction named, providing fair terms are obtained.

Some years ago the power was used in connection with the lumbering interests, but the land having been cleared of timber there is practically none developed there now. Campbellford is the nearest town to the power, but it would also be available for Port

Hope, Cobourg and Colborne, all within the counties mentioned. In Cobourg and Colborne all the power used for electric lighting and manufacturing is now obtained by steam.

FUEL.

For names of fuel dealers see "Coal and Coke" in Classified Index.

The fuel supply question is a most important one to Canadian manufacturers. The information published in this department will keep the readers posted on sources of production.

At a session of the Tariff Commission held in Victoria, B.C., in October, Mr. Thomas R. Stockett, of the Western Fuel Co., Nanaimo, B.C., large operators in coal, asked for the re-enactment of the duty on crude oil. The reason he gave was that crude oil from California was being produced and sold very cheaply, in fact, sold at the well at ten to fifteen cents per barrel, that it was replacing coal in California, formerly an important market for Vancouver Island coal, the oil being sold extensively in British Columbia. "It is," Mr. Stockett said, "a serious menace to the coal industry." It was bad enough to have their California market cut off, but it was far worse to have the oil come in and cut off the market at our very doors. It was sold at 45 to 60 cents per barrel at San Francisco, and four barrels equalled a ton of coal for fuel purposes. Mr. Stockett said it was a low grade of oil, incapable of being refined. Mr. Patterson suggested that possibly a tariff distinction might be made between this oil and other crude oil which is refined. Mr. Fielding pointed out the boon it was to all manufacturers to have cheap fuel, and suggested there would not be much enthusiasm in the east for the re-enactment of the coal oil duty. He also figured out that the old duty of two and one-half cents a gallon would be equivalent to about 170 per cent. protection on this class of oil. Mr. Stockett declared for free trade in coal, and looked for the enlargement of his market if that were secured. He also requested that safety mining lamps be admitted free, they being made only in Germany. Mr. Patterson thought they could be made in Canada.

NEW COAL DOCKS AT PORT ARTHUR.

The Barnett & Record Co., who have the contracts for the immense dock of the Pittsburg Coal Co., and the Atikokan Iron Co., at Port Arthur, Ont., are pushing work and the first cargoes of coal will be unloaded in a few weeks. It was the hope of the Pittsburg Coal Co. to receive 1,000,000 tons of coal there this fall, but it will be next year before anything like such a quantity can be taken care of. This company have the contract for all fuel for the Canadian Northern Railway system. The road did receive its coal direct by boat from Nova Scotia, unloading on the Kaministiquia river at Fort Williams, but this coal did not prove satisfactory. All contracts were given the Pittsburg company for an enormous amount of coal through a series of years.

The dock that is being built will cover 1,200 feet of frontage and will extend 2,500 feet back to shore, and will be filled solid. Train after train is now at work filling it solid with sand, while the front is being built

of cribbing. The property of the Atikokan Iron Co. joins on the west, and is the same depth and 650 feet frontage. On this the furnace, coke ovens and other constructions will be erected. The furnace will be ready next fall. It is now proposed to erect a second furnace at once, and this may be commenced in the spring. The ovens will be connected with the coal dock of the Pittsburgh company, who are to supply the fuel for coking by automatic overhead bridges.

The government breakwater, running along in front of Port Arthur, is to be extended 1,500 feet in front of these properties, toward the mouth of the Kam river. Coal dock and furnace plants lie between the river and the immense elevators of the Canadian Northern road.

PUBLICATIONS.

The publishers of *The Canadian Manufacturer* solicit in advance, if possible, catalogues, circulars, and other industrial publications issued by manufacturers. We wish to review such literature, and bring the principal points to the attention of our readers.

The National Electric Co., Milwaukee, Wis., have sent us their Bulletin No. 35S, which has reference to the belt-driven alternating current generators manufactured by them. The pamphlet is fully illustrated, showing in detail the different parts of the machine.

The Burt Mfg. Co., Akron, Ohio, have issued a catalogue illustrating and describing the Cross, American and Warden oil filters; the American oil filtering system and the Burt and Standard exhaust heads. The illustrations are particularly good and show every detail of the various apparatus described. Much valuable information in reference to the filtering of oils is given, making the catalogue of particular interest to anyone using oil for lubricating purposes.

The Detroit Lubricator Co., Detroit, Mich., are sending out a catalogue of sight-feed lubricators, brass and glass oilers, pressure oilers, automobile pumps, compression cocks, water-gages, etc.

The Cleveland Pneumatic Tool Co., Cleveland, Ohio, have issued their catalogue "F" which is printed on fine paper and describes the "Cleveland" chipping and riveting hammers, drills, Bowes patent hose couplings and other pneumatic appliances.

The Mason Regulator Co., 158 Summer Street, Boston, Mass., have issued a catalogue describing the various styles of reducing valves made by them, together with full information for the successful operation of same, illustrated by half-tone engravings.

The Star Corundum Wheel Co., Detroit, Mich., send us a 4-page folder descriptive of their best lines of emery and corundum wheels, emery wheel machinery, emery specialties, novelties, etc., made by them. Their emery wheels, Adamite wheels and corundum wheels are made in all sizes up to 60-inch diameter; and their specialties include about every article used in tool-sharpening processes.

The Cincinnati Time Recorder Co., Cincinnati, Ohio, send us a circular regarding time keeping for employees in factories, etc.

The recorder is described as a clock combined with a printing mechanism whereby employes register for themselves their coming to and going from work. The registration involves one simple act on the part of the employee, and gives a complete and accurate record of his or her time. The company make two styles of time recorder, the "Cincinnati," for 30 or more employees, and a lower-priced one, the "Reliance," for from 5 to 25 employees.

The Westinghouse Machine Co., East Pittsburgh, Pa., and Hamilton, Canada, have sent us a small folder having reference to Westinghouse storage batteries for railway signal service. While the folder is but a small one, and devoted chiefly to illustrations, it is practically the first on this subject to be issued by the Westinghouse Machine Co., and serves as an announcement of this new and important branch of their business.

"Results" is the title of a brochure sent us by the Chapman Double Ball Bearing Co., Toronto, which contains a large number of photographic reprints of letters received from prominent manufacturing and industrial concerns, whose works have been equipped with double ball bearings. Some of the letters are from Sylvester Mfg. Co., Lindsay, Ont.; Williams Piano Co., Oshawa, Ont.; Alabastine Co., Paris, Ont.; Beardmore Belting Co., Toronto, Electric Engineering Co., Montreal; Davis Leather Co., Newmarket, Ont.; Dominion Linen Mills, Toronto; Flavelle Milling Co., Lindsay, Ont.; Barrie Carriage Co., Barrie, Ont.; McLaughlin Carriage Co., Oshawa, Ont.; Graham Nail Works, Toronto; Metallic Roofing Co., Toronto, and many others.

The Jeffrey Mfg. Co., Columbus, Ohio, have sent us their Bulletin No. 10, which is illustrative and descriptive of the Jeffrey mining machinery made by them. In addition to the text describing their electric mine locomotives are some handsome half tone pictures of such machinery now in active use, including ten-ton locomotive of the Pittsburgh Gas Coal Co.; Upsin Coal Mining Co.; 26-ton tandem electric locomotive of United States Coal & Coke Co.; five-ton single end control locomotive of Illinois Tunnel Co.; 10-ton centre control locomotive of Pinnacle Coal & Coke Co.; 15-ton centre control locomotive of the Tennessee Coal, Iron & Railway Co.; 12-ton single end control outside wheel locomotive of Campbell's Creek Coal Co.; 10-ton double end control outside wheel locomotive of Fork Ridge Coal & Coke Co.; 20-ton double end control inside wheel locomotive of Pittsburgh & Buffalo Co.; 15-ton single end control locomotive of Carnegie Coal Co. and others, also views of important component parts, mechanisms and appliances in connection with electric railroading.

The Mines Branch of the Dominion Department of the Interior, of which Dr. Eugene Haanel is superintendent, have sent us two brochures just issued by the Department, "Mica; its Occurrence, Exploitation and Uses," and "Asbestos, its Occurrence, Exploitation and Uses," both by Fritz Cirkel, Esq., M.E., of Montreal. Mr. Cirkel was instructed by Dr. Haanel to proceed to the productive mica fields and asbestos regions of the Dominion, and collect data and general information regarding the occurrence, mining and preparation for the market of these valuable minerals; and in these two

books we have the result of his investigations. The work was thoroughly performed, and the reports constitute a most valuable addition to the mineral history of Canada.

The Wellman-Seaver-Morgan Co., Cleveland, Ohio, have sent us their Section "E" catalogue relating to cranes. This concern are builders of high efficiency cranes of both standard and special types, and make a specialty of special cranes and cranes for extra heavy duty. Among the many styles they build are electric overhead travelling cranes; ladle and hot metal cranes; bucket handling cranes for ore, coal, crushed limestone, sand, and other loose materials; coke handling cranes; gantry and yard cranes, etc. The catalogue is printed on heavy book paper, abundantly illustrated.

"Westinghouse Rotary Converters, Their Characteristics and Construction, with Instructions for their Erection, Operation and Care" is the title of special publication No. 7038, sent us by the Westinghouse Electric & Mfg Co., Pittsburgh, Pa., and Hamilton, Ont. The rotary converter is a connecting link between alternating and direct current systems, combining in the armature and field winding of a single machine the functions performed by the two machines of a motor generator. The book tells all about these converters, illustrated profusely throughout.

"The Polariscope in the Chemical Laboratory; an Introduction to Polarimetry and Related Methods" by George W. Rolfe, A.M., instructor in sugar analysis in the Massachusetts Institute of Technology, Morang & Co., Toronto, price \$1.90 net. The immense importance of the sugar industry in world economics has forced the development of the polariscope into a sugar-testing instrument of high efficiency. The application of this useful laboratory tool is described, with many illustrations, in this nicely bound in cloth handbook.

Messrs. F. Reddaway & Co., Pendleton, Manchester, England, engineers and contractors for elevating and conveying machinery, have sent us a 40-page circular fully illustrated, descriptive of belt conveyors and conveying belts, manufactured by them. The book is by Mr. Frank Reddaway, and covers all the points embraced in the subject. Conspicuous among the many advantageous features of the belt conveyor, says Mr. Reddaway, is the small amount of driving power required. Further, the upkeep cost of the belt conveyer is less, and generally the initial cost of the installation is lower than other forms of conveyer. Weighing machines have now been designed to work in conjunction with the Reddaway conveyor, which automatically records and registers the amount of materials carried. The "Camel" rubber conveying belt, made by Messrs. Reddaway is specially adapted for use in the conveying machinery made by them. Those who may be interested in this method of moving different kinds of materials would do well to write to Messrs. Reddaway for further information. The Canadian office of the company is at 771 Craig Street, Montreal.

"Air Cooled Duntley Electric Drills" is the title of a brochure sent us by the Chicago Pneumatic Tool Co., Chicago, Ill. It is special circular No. 52, and which relates to the specialty made by that company indicated by the title.

PERSONALS.

Mr. Jonathan Ellis, of Port Dover, Ont., one of the oldest captains of Canadian Industry, died suddenly in that town on October 22, aged about 60 years. For many years he was identified with the knitting and textile industries both in Canada and the United States.

Senator G. T. Fulford, of Brockville, Ont., died in Newton, Mass., October 15, as a result of injuries received in an automobile accident a few days before. Mr. Fulford acquired great wealth chiefly in the manufacture of patent medicines in Brockville and elsewhere.

The directors of the Dominion Iron & Steel Co. tendered Mr. Frederic Nichols, the retiring first vice-president, a dinner at the St. James Club, Montreal, on the occasion of the recent annual meeting, at which a magnificent silver bowl, of massive proportions, and a loving cup were presented, in recognition of the valuable services to the company performed by Mr. Nichols during his three years of office.

Mr. F. P. Jones, who has been connected with the Dominion Iron & Steel Co., for the past five years, chiefly in the capacity of selling agent, has been appointed general manager, vice Mr. Graham Fraser, resigned.

Mr. Edward A. Creevey, of Bridgeport, Conn., has been appointed United States consul at Yarmouth, N.S.

At the annual meeting of the shareholders of the Dominion Iron & Steel Co., held in Montreal, October 18, the following Board of

Directors were elected for the ensuing year:—Messrs. R. B. Angus, Hon. Geo. A. Cox, H. F. Dimock, Hon. L. J. Forget, Hon. Robert Mackay, Hon. D. McKeen, Wm. McMaster, F. S. Pearson, Col. H. M. Pellatt, J. H. Plummer, Frederic Nichols, W. B. Ross, Elias Rogers, Sir W. C. Van Horne, H. M. Whitney and E. R. Wood. Mr. J. H. Plummer was re-elected president.

Mr. George W. Gouinlock has been appointed architect of the new Live Stock Arena and Process Building at the Toronto Exhibition Grounds.

Mr. R. H. Campbell, of the Interior Department, secretary of the Canadian Forestry Association, has been appointed chief clerk in the timber and mines branch, vice G. N. Ryley, who has joined the staff of the Grand Trunk Pacific Railway Co.

Mr. J. S. Larke, the Canadian Trade Commissioner to Australia, left Canada for his post on November 1.

At the annual meeting of the Laurentide Paper Co., held recently in Montreal, the principal item of business was the election of a board of directors. The poll resulted as follows:—President, Sir William Van Horne, directors, General Russell A. Alger, Detroit; Messrs. R. B. Angus, James Ross, C. F. Smith, C. R. Hosmer and Ed. Hanson, Montreal.

The Canadian Association of Stationary Engineers celebrated in Toronto its eighteenth anniversary, October 25. A banquet was served and during the evening there were interesting addresses and other entertaining features.

During the past two months the Westinghouse Machine Co., East Pittsburg, Pa., have booked many orders from foreign countries. Some of the important steam engine orders were as follows:—One 16 inch and 34x16 inch Marine type vertical cross compound engine for the Kure Arsenal, Japan, four 16 inch and 34x16 inch Marine type and two 8½x8 inch standard steam engines for the Tehuantepec Railway of Mexico, one 11 inch and 19x11 inch compound steam engine for the Furukawa Western Bureau, Japan, one 13½x12 standard steam engine for the Hokkaido Tanko Railway Co., of Japan; two 10 inch and 18x10 inch compound steam engines for the Kuskku Railway, of Japan, one 14 inch and 2½x14 inch compound steam engine for the Imperial Printing Office of Japan; one 9 inch and 15x9 inch compound steam engine for Graham Bros., Stockholm, Sweden; one 18x16 inch compound steam engine for the Rio de Janeiro Tramway Light & Power Co., of Brazil, and one 18x16 inch standard steam engine for the Santa Cecilia Sugar Co. of Cuba.

The Australian Comptroller of Trade has notified the Canadian Department of Trade and Commerce that inland freight is added to the value for duty purposes only in the case of goods subject to an ad valorem duty. Goods entering at specific duties are exempt from the regulation. Last year less than one-half of the Canadian imports into Australia were subject to an ad valorem duty. It is argued, therefore, that the new Australian customs regulation will not affect Canada very seriously.

TO THE VARNISH BUYER

the most serious considerations are quality, reliability and uniformity, and these qualifications are of special importance to the dealer who is trying to build up a permanent varnish trade.

Berry Brothers' label or brand may be safely relied upon as ensuring the above conditions.

Our Varnishes are the safest goods to handle and the surest and most reliable goods to use.

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PATENTS.

Messrs. Marion & Marion, patent attorneys, Montreal and Washington, D.C., have obtained the following Canadian patents:—F. W. Hews, London, England, machine for casting types; Paul Mourisse, Lille, France, steam boiler; Henri Rich, Paris, France, mixed gas producer; W. A. Baldwin, Smith's Falls, Ont., improvements in draft appliance; F. de J. Clere, Wellington, New Zealand, reversible window sashes; J. M. H. Marlow, Edinburgh, Scotland, manufacture of tiles, bricks, etc.; Edmond Lamoureux, Montreal, Que., shuttle, J. A. Staples, Newburgh, N.Y., valves for water supply tanks and regulating means therefor; G. C. Schmidt, Gothenburg, Sweden, appliance for raising and lowering ship's boats; S. C. Davidson, Belfast, Ireland, centrifugal fans or pumps; Messrs. Fodor & de Szemere, Vienna, Austria, railway car couplings; Count H. M. Delamarre, Paris, France, incandescent gas lamp; Messrs. C. A. Holt & O. W. Hult, Stockholm, Sweden, blade liners for centrifugal liquid separators; Robert Gass, Shubenacadie, N.S., improvements in railway cars; Albert Bellamy, Fort William, Ont., rail chair; Charles Luyers, Vilvorde, Belgium, brake apparatus for railway vehicles; George Kron, Copenhagen, Denmark, apparatus for impregnating and dyeing wood; Chas. Smith-Van Acker, Eclooo, Belgium, carving machines; C. B. Herrmann, Gravenhage, Denmark, method of producing stereotype plates for printing purposes; G. E. Gjuke, Trelleborg, Sweden, hydraulic rock drills; Henri Harmet, Saint-Etienne (loire) France, compressing steel in conical moulds; W. H. Freemantle, Smith's

Falls, Ont., nut locking device for railway cars; Frank Huber, French River, Ont., wrench, C. E. Shedrick, Sherbrooke, Que., electric controller.

Messrs. Fetherstonhaugh & Co., patent solicitors, Toronto, Ottawa, and Washington, D.C., send us the following list of patents recently granted Canadian inventors:—H. C. Quin, Toronto, air brake system for street railways; W. H. Scott, Oshawa, Ont., gram car doors; E. S. Braund, Brantford, Ont., vehicle jacks; T. Allatt, Toronto, automatic belt shifting devices, P. Trotter, Toronto, automatic extension tables, P. R. Bradley, Copper Cliff, Ont.; tapping jackets for blast furnace settling wells or for hearths; F. Terreault, Labelle, Que., process of annealing and tempering iron, C. F. Ramsay, Brantford, Ont., collapsible boxes, M. H. Le Hane, Hamilton, Ont., moulds for cement concrete blocks; W. Groth & G. W. Groth, Guelph, Ont., pipe lap welding apparatus; C. Doskosiors, Louisville, Que., self closing paper bag machines; A. Thurber, Longueuil, Que., mechanism for operating doors and sashes and shutters; W. P. Alsip, Winnipeg, Man., brick conveyers; G. F. Everton and R. Dowsell, Vancouver, B.C., air excavating conveyor bucket; A. Fairgrieve, Toronto ceiling and floor plates; H. Thomas and F. Day, Rat Portage, Ont., grain and coal doors for box cars; J. McMahon, Enderby, B.C., pipe and nut wrenches; A. H. Johnston, E. Hewitt, Vancouver, B.C., excavating conveyor buckets; J. H. Drinkwater, Winchester, Ont., ballast trimmers; A. M. Stark, Toronto, communicating electric systems; R. H. Casswell, Vancouver, B.C., centrifugal swings.

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The experiments in the use of oil fuel by the British navy have been so successful that the Admiralty have ordered the conversion of the wharves at Turnchapel, Plymouth, into a great storage depot for oil.

An English contemporary, the Cotton Factory Times, speaking of an excellent English exhibit at Liege, says.—“We are pleased to notice that at the important industrial exhibition now being held at Liege, in Belgium, Messrs. Wilson Bros. Bobbin Co., Ltd., of Garston, near Liverpool, have been awarded a ‘diplome d'honneur’ for bobbins and shuttles, and a gold medal for chemical products of the utilization of waste. We may point out that the former award takes precedence of the gold medal, and is only inferior to the ‘grand prix,’ which, we understand, is only awarded in very special cases.” The bobbins alluded to are well known in Canada where they are in general use in many of our textile establishments.

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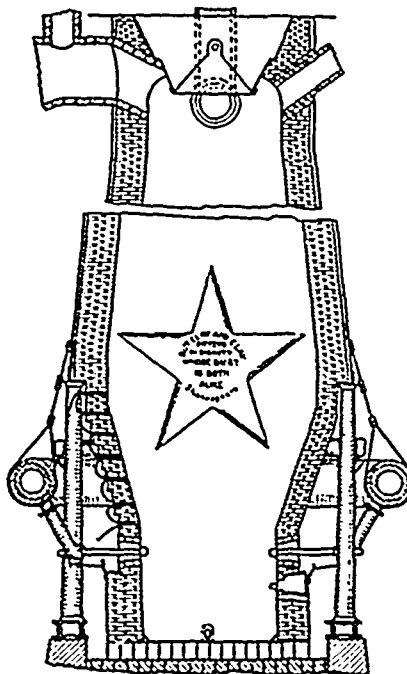
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LUMBER INDUSTRY IN BRITISH COLUMBIA.

Next to the extensive mineral lands of this province, the most important of British Columbia's natural resources is her immense timber reserve, which, although curtailed somewhat by the great forest fires that have raged in the interior during hot and dry summers is still vast in extent. An official estimate places the acreage of timber in British Columbia at the present time at 182,750,000 acres. As the great timber belts of the continent are being gradually taken up, the attention of lumbermen has of late been drawn particularly towards this province, and especially during the past two years, when vast tracts have been acquired by American syndicates, which are rapidly becoming the largest holders of timber lands in Vancouver Island and also on the mainland of British Columbia.

A valuable circular in regard to the timber cut of the province has just been issued by the department of lands and works, which gives the following results.—To 1871, 250,000,000 feet; from 1871 to 1888, 595,000,000 feet; from 1888 to 1904, inclusive, 2,569,262 feet, or, in the aggregate, 3,414,759,262 feet, besides that cut from private and Dominion Government lands.

The lumber cut of 1904 in this province, according to the report of the department of lands and works, aggregated 325,271,568 feet, cut off 703,433 acres under lease from the provincial government; and in addition to this there was cut on Dominion lands 22,760,222 feet, making a total of 348,031,790 feet.

The cargo shipments from British Columbia to foreign ports were in 1903 as follows.—Lumber, 52,263,105; lath, 1,676,270. In

1904 the shipments fell off in consequence of strong American competition, and were as follows:—Lumber, 38,220,148; lath, 1,306,569. This falling off in the shipments of lumber is claimed, as stated, to be due to American competition, and strenuous efforts have been made to induce the Dominion Government to put a duty of \$2.00 per 1,000 on rough lumber imported from the United States, but so far without success, and no hopes are now entertained by the lumber dealers that such import duty will be exacted.

The provincial government's revenue from timber for the year ended June 30, 1905, was \$150,000 more than estimated, exceeding \$400,000; this, notwithstanding nearly three-fifths of the revenue accrued from licenses to cut timber upon lands owned by the crown. Recently the provincial government have become more drastic in their regulations, and have issued a stringent order prohibiting the export of logs cut by hand loggers from crown lands in the province. The penalty imposed by the order is that all logs attempted to be exported under such conditions are to be seized. There are now about 400 hand loggers along the coast, men who take out licenses at \$10 each, and who have carried on work on sidehills near the water, so that their logs may be marketed without the use of expensive logging outfits. Heretofore one man has had as many licenses as he wished. In this way well-to-do loggers have carried on an extensive business. One lumberman in Vancouver had no less than 60 licenses, from which he made exports to the United States. This order has created a great deal of opposition, and lumbermen are proposing to take it to the courts.

It is estimated that the total capital invested in lumbering is \$4,250,000, represented by mills, logging plants, logging railways,

tugboats, etc., exclusive of the value of lands purchased and leased as timber limits, which would total near \$1,500,000 additional. There are 100 sawmills in the province, large and small, with an annual output running between 300,000,000 and 350,000,000 feet. The acreage of timber under lease is about 2,000 square miles, and the total area of forest and woodland is estimated by the Dominion Statistician at 235,554 square miles, or 182,754,560 acres, but much of it is covered with small trees only fit for fuel and local lumber, which would not be considered as "timber" by the loggers.

The Savage Mountain Fire Brick Co., Frostburg, Md., recently opened a new mine of fire clay at an expense of about \$10,000. The yard capacity of the plant has also been increased by one-third. This was rendered necessary by the quantity of orders received as the plant has been taxed to its utmost capacity for some time past. The company's brick for rolling mills have stood the best tests in the last forty-one years, and have acquired a wide reputation throughout the country. The plant was established in 1864. Charles C. Gorsuch is the president of the company.

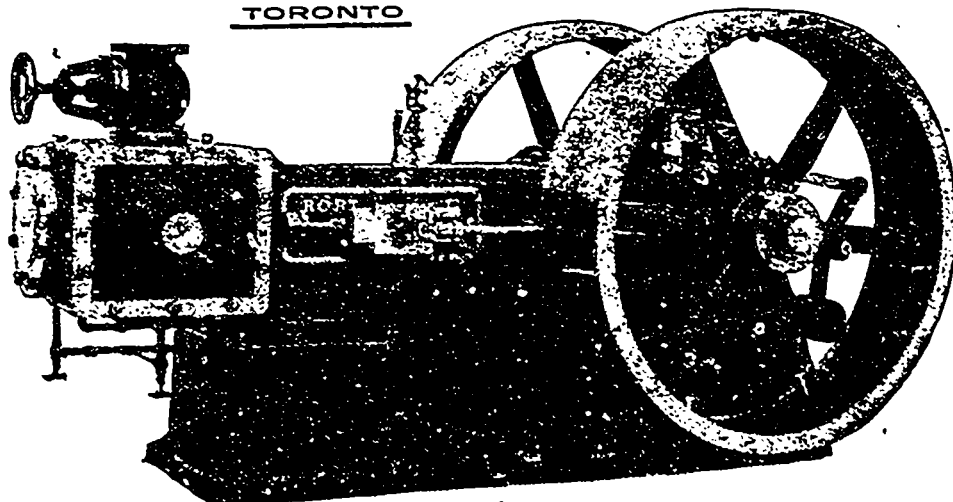
The Pennsylvania Railroad Co. have very recently placed an order with the Westinghouse Machine Co., Pittsburg, Pa., for six 132x26 inch grate and four 100x20 inch grate Roney mechanical stokers to extend their already large equipment at Altoona, Pa. Two new boiler plants were erected at Altoona only a few years ago for supplying steam power at the Altoona shops. These plants were both equipped throughout with Roney mechanical stokers, and are thoroughly representative of the highest development of modern boiler plant construction.

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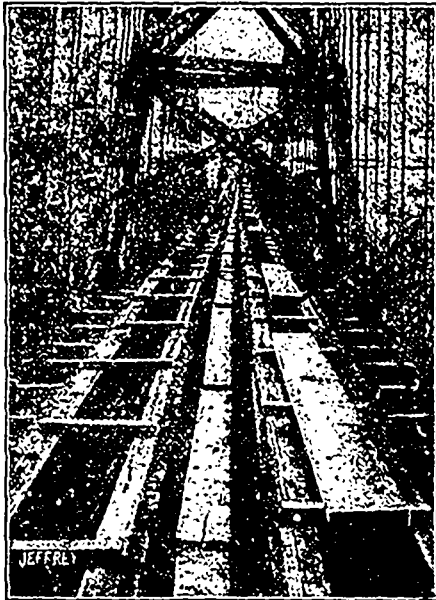
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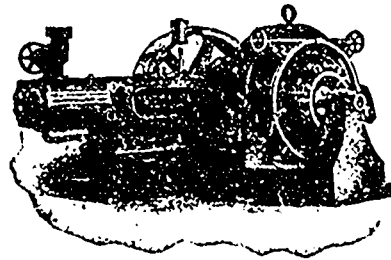


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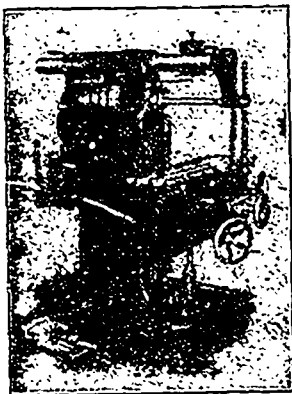
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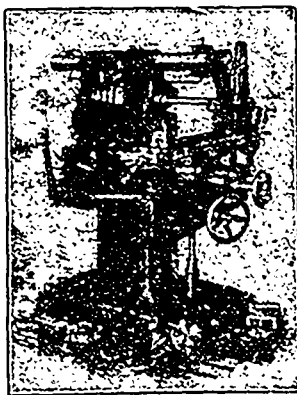
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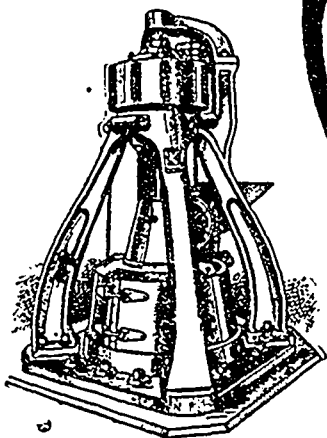
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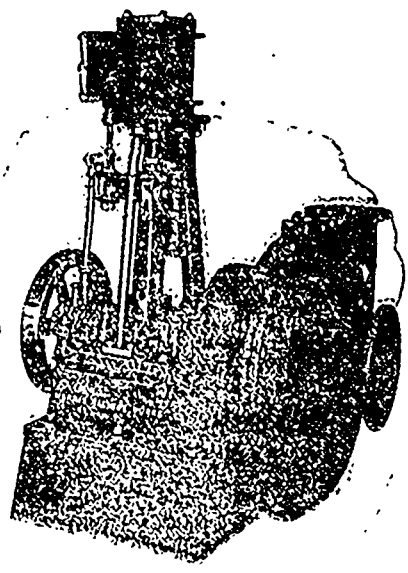
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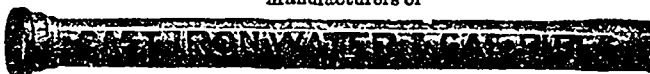
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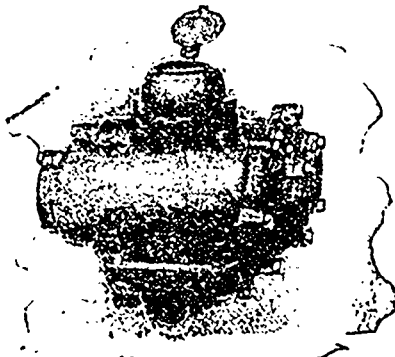
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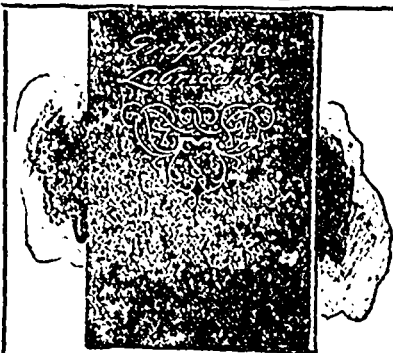
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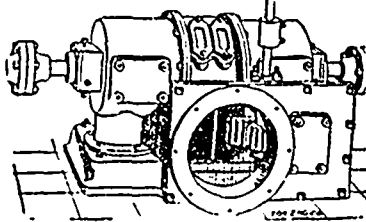
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CLASSIFIED INDEX.

Abrasives

Chas. A. R. Machinery Co., Toronto

Acids

Canada Chemical Co., London, Ont.
 Canada Chemical Co. of Canada, Montreal.

Air Compressors

Chalmers-Bullock, Limited, Montreal.
 Ocean Steam Pump Co., Battle Creek, Mich.
 Canada Foundry Co., Toronto.
 Nathan Rand Drill Co., Sherbrooke, Que.
 Matt. R. B., Brooklyn, N.Y.
 King Bros., Montreal.
 Schutte & Koerting Co., Philadelphia, Pa.

Alum

Canada Chemical Co. of Canada, Montreal.

Aluminum

Western Aluminum Co., Pittsburg, Pa.
 Bruce Smelting Works, Montreal.

Angles, Beams and Girders

Fuller Co., Cleveland, Ohio.
 Canada Foundry Co., Toronto.
 Chas. F. H. & Co., Montreal.
 Scotia Steel & Coal Co., New Glasgow, N.S.

Aniline Colors and Dyewood Extracts

W. T. & Co., Montreal.
 Messer, Mond & Co., Norwich, England.
 Canada Chemical Mfg. Co., London, Ont.
 Aniline Color Co., New York City.
 Aniline & Extract Co., New York City.
 Arthur, Cornellio & Co., Montreal.
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Annealing Muffles and Furnaces (Wire)

A. C. & Co., Montreal.
 Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Antimony

Bruce Smelting Works, Montreal.

Anvils and Vises

Chas. F. H. & Co., Montreal.
 A. C. & Co., Montreal.

Architects

Grady, R. J., Toronto.
 Grady, R. J., Toronto.
 C. H., Ottawa.

Automatic Gear Cutting Machines

Wheeler-Brainard Milling Machine Co., Hyde Park, Mass.

Axles

Chas. F. H. & Co., Montreal.
 Scotia Steel & Coal Co., New Glasgow, N.S.

Babbitt Metal

H. W., Toronto.
 Bruce Smelting Works, Montreal.

Banks

Bank of Hamilton, Hamilton, Ont.

Bar Iron and Steel

Fuller Co., Cleveland, Ohio.
 Chas. F. H. & Co., Montreal.
 A. C. & Co., Montreal.
 Rolling Mills, London, Ont.
 Drawn Steel Co., Hamilton, Ont.

Belt Dressing

J. C. Belting Co., Montreal and Toronto.
 H. W., Toronto.
 & Haworth, Montreal and Toronto.
 Chas. A. R. Machinery Co., Toronto.

Belt Fasteners

Bel Co., Waterbury, Conn.
 D. K., Montreal and Toronto.
 J. C. Belting Co., Montreal and Toronto.
 H. W., Toronto.
 & Haworth, Montreal and Toronto.
 Chas. A. R. Machinery Co., Toronto.

Belting (Cotton)

Belting Co., Hamilton, Ont.
 D. K., Montreal and Toronto.
 J. C. Belting Co., Montreal and Toronto.
 H. W., Toronto.
 F. & Co., Manchester, England.
 & Haworth, Montreal and Toronto.

Belting (Leather)

Belting Co., Montreal.
 D. K., Montreal and Toronto.
 J. C. Belting Co., Montreal and Toronto.
 H. W., Toronto.
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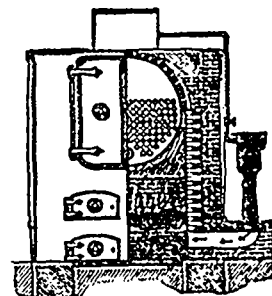
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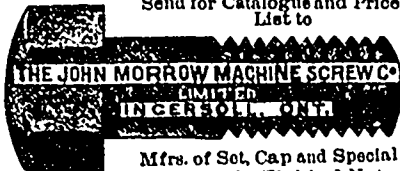
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 WATSON JACK & COMPANY, Bell Telephone Bldg., Montreal
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CLASSIFIED INDEX.

(CONTINUED).

Belting (Rubber)

Gutta Percha & Rubber Mfg. Co., Toronto.
McLaren, D. K., Montreal and Toronto.
McLaren, J. C., Belting Co., Montreal.
Petrie, H. W., Toronto.
Sadler & Haworth, Montreal and Toronto.

Belting and Supplies

Bristol Co., Waterbury, Conn.
Dominion Belting Co., Hamilton, Ont.
Gutta Percha & Rubber Mfg. Co., Toronto.
Jeffrey Mfg. Co., Columbus, Ohio.
Montreal Belting Co., Montreal.
McLaren, D. K., Montreal and Toronto.
McLaren, J. C., Belting Co., Montreal and Toronto.
Petrie, H. W., Toronto.
Reddaway, F. & Co., Manchester, England.
Sadler & Haworth, Montreal and Toronto.
Williams, A. R. Machinery Co., Toronto.

Blast Furnace Brick

Dunbar Fire Brick Co., Pittsburgh, Pa.
Hamilton Facing Mill Co., Hamilton, Ont.
Harbison-Walker Refractories Co., Pittsburgh, Pa.
Pennsylvania Fire Brick Co., Lock Haven, Pa.
Queen's Run Fire Brick Co., Lock Haven, Pa.
Reese-Hammond Fire Brick Co., Bolivar, Pa.
Stowe-Fuller Co., Cleveland, Ohio.

Blowers

Schutte & Koerting Co., Philadelphia, Pa.
Sheldon & Sheldon, Galt, Ont.
Sturtevant, B. F. Co., Boston, Mass.

Boiler Compounds

Canada Chemical Mfg. Co., London, Ont.

Boiler Inspection

Boiler Inspection & Insurance Co., Toronto.
Canadian Casualty & Boiler Insurance Co., Toronto.

BOILERS (See Engines and Boilers)

Bolts and Nuts

London Rolling Mills, London, Ont.
Morrow John Machine Screw Co., Ingersoll, Ont.

Brass Founders

Hamilton Brass Mfg. Co., Hamilton, Ont.
Penberthy Injector Co., Windsor, Ont.

Brick and Bricklaying Machinery

Allis-Chalmers-Bullock, Limited, Montreal.

Brick Drying Machinery

Sheldon & Sheldon, Galt, Ont.

Building and Paving Brick

Dunbar Fire Brick Co., Pittsburgh, Pa.
Hamilton Facing Mill Co., Hamilton, Ont.
Harbison-Walker Refractories Co., Pittsburgh, Pa.
Pennsylvania Fire Brick Co., Lock Haven, Pa.
Queen's Run Fire Brick Co., Lock Haven, Pa.
Reese-Hammond Fire Brick Co., Bolivar, Pa.
Stowe-Fuller Co., Cleveland, Ohio.

Building Iron and Steel

Bourne-Fuller Co., Cleveland, Ohio.
Canada Foundry Co., Toronto.
Expanded Metal & Fireproofing Co., Toronto.

Builders' Materials

Albert Mfg. Co., Hillsboro, Ont.
Canada Foundry Co., Toronto.
Conduits Company, Limited, Toronto.
Expanded Metal & Fireproofing Co., Toronto.
Gartshore, John J., Toronto.
Hopkins, F. H. & Co., Montreal.
Otis-Fensom Elevator Co., Toronto.
Sheldon & Sheldon, Galt, Ont.

Cables

Dominion Wire Rope Co., Montreal.
Greening, B. Wire Co., Hamilton, Ont.
Phillips, Eugene F. Electrical Works, Montreal.

Canada Plates

Leslie, A. C. & Co., Montreal.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.

Canoes

Peterborough Canoe Co., Peterborough, Ont.

Caps

McCullough-Dalzell Crucible Co., Pittsburg, Pa.

Card Clothing

McLaren, D. K., Montreal and Toronto.
McLaren, J. C., Belting Co., Montreal and Toronto.

Cast Iron Pipe

Canada Foundry Co., Toronto.
Montreal Pipe Foundry Co., Montreal.
McDougall, John, Caledonian Iron Works Co., Montreal.

Castings (Grey Iron, Malleable Iron and Brass)
International Harvester Co., Hamilton, Ont.
Jencks Machine Co., Sherbrooke, Que.
Kerr Engine Co., Walkerville, Ont.
McDougall, John, Caledonian Iron Works Co., Montreal.

Cement Machinery

Allis-Chalmers-Bullock, Limited, Montreal.
Bradley Pulverizer Co., Boston, Mass.
McDougall, John, Caledonian Iron Works Co., Montreal.

Centrifugal Pumping Machinery

Morris Machine Works, Baldwinsville, N.Y.

Chain Making Machinery

(Welded Coil Chain)
Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Channels

Bourne-Fuller Co., Cleveland, Ohio.
Canada Foundry Co., Toronto.
Leslie, A. C. & Co., Montreal.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.

Charcoal Pig Iron

Canada Iron Furnace Co., Montreal.
McDougall, John, Caledonian Iron Works Co., Montreal.

Chemicals

Canada Chemical Co., London, Ont.
Nichols Chemical Co. of Canada, Montreal.

Chemists

Archbold, Dr. Geo., Prescott, Ont.
Heys, Thomas & Son, Toronto.

Clay Working Machinery

Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Coal and Coke

Bourne-Fuller Co., Cleveland, Ohio.
Ferguson, J. D., Hamilton, Ont.
Milnes, James H. & Co., Toronto.
Myles' Thos. Sons, Hamilton, Ont.
Old Colony Coal & Coke Co., Pittsburgh, Pa.
Shawmut Coal & Coke Co., St. Mary's, Pa.
Wick, H. K. & Co., Buffalo, N.Y.
Wilson, H. T. Coal Co., Detroit, Mich.

Coal Cutting Machines

Allis-Chalmers-Bullock, Limited, Montreal.
Canadian Rand Drill Co., Sherbrooke, Que.
Jeffrey Mfg. Co., Columbus, Ohio.

Coal Tipples

Jeffrey Mfg. Co., Columbus, Ohio.
Jencks Machine Co., Sherbrooke, Que.

Coil Chains

Greening, B. Wire Co., Hamilton, Ont.
Leslie, A. C. & Co., Montreal.

Coke Oven Brick

Dunbar Fire Brick Co., Pittsburgh, Pa.
Stowe-Fuller Co., Cleveland, Ohio.

Collection Agency

Petrie, H. D., Hamilton, Ont.

Concrete Mixers

Hopkins, F. H. & Co., Montreal.

Conduits (Interior)

Conduits Company, Limited, Toronto.

Contractors' Machinery

Allis-Chalmers-Bullock, Limited, Montreal.
Gartshore, John J., Toronto.
Hopkins, F. H. & Co., Montreal.
Jencks Machine Co., Sherbrooke, Que.
McDougall, John, Caledonian Iron Works Co., Montreal.
Schutte & Koerting Co., Philadelphia, Pa.

Contractors' Plants

Allis-Chalmers-Bullock, Limited, Montreal.
Hopkins, F. H. & Co., Montreal.
Jencks Machine Co., Sherbrooke, Que.
Petrie, H. W., Toronto.
Von der Osten, E. & Co., Toronto.
Williams A. R. Machinery Co., Toronto.

Conveying Machinery

Allis-Chalmers-Bullock, Limited, Montreal.
Babcock & Wilcox, Limited, Montreal.
Canada Foundry Co., Toronto.
Jeffrey Mfg. Co., Columbus, Ohio.
Link-Belt Engineering Co., Philadelphia, Pa.
McDougall, John, Caledonian Iron Works Co., Montreal.
Perrin, William R. & Co., Limited, Toronto.

Copper Materials

Greening, B. Wire Co., Hamilton, Ont.
Phillips, Eugene F. Electrical Works, Montreal.
Syracuse Smelting Works, Montreal.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

CLASSIFIED INDEX.

(CONTINUED).

Cotton Banding and Rope

McLaren, J. C. Belting Co., Montreal.

Covers

McCullough-Dalzell Crucible Co., Pittsburg, Pa.
Pittsburg Crucible Works, Pittsburg, Pa.

Crayons

Lowell Crayon Co., Lowell, Mass.
McLaren, J. C. Belting Co., Montreal.

Crucibles

Dixon, Joseph, Crucible Co., Jersey City, N.J.
McCullough-Dalzell Crucible Co., Pittsburg, Pa.
Pittsburg Crucible Works, Pittsburg, Pa.
Syracuse Smelting Works, Montreal.

Crucible Caps

McCullough-Dalzell Crucible Co., Pittsburg, Pa.
Pittsburg Crucible Works, Pittsburg, Pa.

Crucible Covers

McCullough-Dalzell Crucible Co., Pittsburg, Pa.
Pittsburg Crucible Works, Pittsburg, Pa.

Cutter Grinding Machines

Becker-Brainard Milling Machine Co., Hydo Park, Mass.

Deep Well Engines

American Steam Pump Co., Battle Creek, Mich.

Detective Agency

Dewar Detective Agency, St. Louis, Mo.

Dies (Socket, Sewer Pipe and Tile)

Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Directories

Kelly's Directories, Limited, Toronto

Draw Benches (Wire)

Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Dredgers

Allis-Chalmers-Bullock, Limited, Montreal.

Drilling and Fishing Tools

National Supply Co., Leamington, Ont.
Oil Well Supply Co., Pittsburgh, Pa.

Drilling Machines (Portable)

National Supply Co., Leamington, Ont.
Oil Well Supply Co., Pittsburgh, Pa.

Drills

Allis-Chalmers-Bullock, Limited, Montreal.
Barnes, B. F. Co., Rockford, Ill.
Canadian Westinghouse Co., Ltd., Hamilton, Ont.
Petrie, H. W., Toronto.

Drills (Pneumatic and Rock)

Allis-Chalmers-Bullock, Limited, Montreal.
Canadian Rock Drill Co., Sherbrooke, Que.
Jeffrey Mfg. Co., Columbus, Ohio.

Drop Forgings

Globe Machine & Stamping Co., Cleveland, Ohio.

Drop Forging Dies

Globe Machine & Stamping Co., Cleveland, Ohio.

Dry Kiln Apparatus

Sheldon & Sheldon, Galt, Ont.
Sturtevant, B. F. Co., Boston, Mass.

Dust and Shavings Separators

Sheldon & Sheldon, Galt, Ont.
Sturtevant, B. F. Co., Boston, Mass.

Dye Stuffs and Chemicals

Benson, W. T. & Co., Montreal.
Brunner, Mond & Co., Northwich, England.
Cassell Chemical Mfg. Co., London, Ont.
Cassell Color Co., New York City.
Cazy Aniline & Extract Co., New York City.
McArthur, Cornelle & Co., Montreal.
Nehol Chemical Co. of Canada, Montreal.
Winn & Holland, Montreal.

DYNAMOS (See Motors and Dynamos)

Electric Meters and Transformers

Allis-Chalmers-Bullock, Limited, Montreal.
Packard Electric Co., St. Catharines, Ont.

Electric Mine Locomotives

Canadian General Electric Co., Toronto.
Canadian Westinghouse Co., Ltd., Hamilton, Ont.
Jeffrey Mfg. Co., Columbus, Ohio.

Electrical Repairs

Keystone Engineering Co., Toronto.

Electrical Supplies

Allis-Chalmers-Bullock, Limited, Montreal.
Bristol Co., Waterbury, Conn.
Canadian General Electric Co., Toronto.
Canadian Westinghouse Co., Ltd., Hamilton, Ont.
Electrical Construction Co., London, Ont.

Forman, John, Montreal.
Jones & Moore Electric Co., Toronto.
Keystone Engineering Co., Toronto.
Packard Electric Co., St. Catharines, Ont.
Toronto & Hamilton Electric Co., Hamilton, Ont.
United Electric Co., Toronto.
Worth & Martin Toronto.

Elevators and Conveyors

Allis-Chalmers-Bullock, Limited, Montreal.
Darling Bros., Montreal.
Jeffrey Mfg. Co., Columbus, Ohio.
Jonckes Machine Co., Sherbrooke, Que.
Link-Belt Engineering Co., Philadelphia, Pa.
Otis-Fensom Elevator Co., Toronto.

Elevator Insurance

Canadian Casualty & Boiler Insurance Co., Toronto.

Emery and Emery Wheels

Forman, John, Montreal.
Petrie, H. W., Toronto.

Engineers (Chemical)

Heys, Thomas & Son, Toronto.
Hunt, Robert W. & Co., Chicago, Ill.

Engineers (Civil)

Parke, R. J., Toronto.
Vogel, C. H., Ottawa.

Engineers (Consulting)

Aitken, K. L., Toronto.
Canadian White Co., Montreal.
Electrical Construction Co., London, Ont.
Fensom, C. J., Toronto.
Hunt, Robert W. & Co., Chicago, Ill.
Keystone Engineering Co., Toronto, Ont.
Marion & Marion, Montreal.
Parke, R. J., Toronto.
Perrin, William R. & Co., Limited, Toronto
Vogel, C. H., Ottawa.
Von der Osten, E. & Co., Toronto.

Engineers (Contracting)

Armstrong, Herbert J., Toronto.
Babcock & Wilcox, Limited, Montreal.
Canada Foundry Co., Toronto.
Canadian White Co., Montreal.
Darling Bros., Montreal.
Electrical Construction Co., London, Ont.
Fensom, C. J., Toronto.
Keystone Engineering Co., Toronto.
McDougall, John, Caledonian Iron Works Co., Montreal.
Robb Engineering Co., Amherst, N.S.

Engineers (Electrical)

Aitken, K. L., Toronto.
Allis-Chalmers-Bullock, Limited, Montreal.
Canadian General Electric Co., Ltd., Toronto
Canadian Westinghouse Co. Ltd., Hamilton, Ont.
Canadian White Co., Montreal.
Crocker-Wheeler Co., St. Catharines, Ont.
Electrical Construction Co., London, Ont.
Fensom, C. J., Toronto.
Jones & Moore Electric Co., Toronto.
Keystone Engineering Co., Toronto.
Marion & Marion, Montreal.
Toronto & Hamilton Electric Co., Hamilton Ont.
United Electric Co., Toronto
Worth & Martin, Toronto.

Engineers (Mechanical)

Allis-Chalmers-Bullock, Limited, Montreal.
Armstrong, Herbert J., Toronto.
Babcock & Wilcox, Limited, Montreal.
Darling Bros., Montreal.
Electrical Construction Co., London, Ont.
Fensom, C. J., Toronto.
Gearing, H., Toronto
McDougall, John, Caledonian Iron Works Co., Montreal.
Hunt, Robert W. & Co., Chicago, Ill.
Kerr Engine Co., Walkerville, Ont.
Marion & Marion, Montreal.
Robb Engineering Co., Amherst, N.S.
Sheldon & Sheldon, Galt, Ont.

Engineers (Mill and Hydraulic)

Fensom, C. J., Toronto.
Hawksworth, Alfred, & Sons Co., Montreal.
Vogel, C. H., Ottawa.

Engineers (Mining)

Heys, Thomas & Son, Toronto.
Mills, S. D., Toronto.

Engineers (Municipal)

Von der Osten, E. & Co., Toronto.

Engineers and Contractors

Canadian White Co., Montreal.
Jeffrey Mfg. Co., Columbus, Ohio.
Jonckes Machine Co., Sherbrooke, Que.

Engines and Boilers

Allis-Chalmers-Bullock, Limited, Montreal.
Babcock & Wilcox, Limited, Montreal.
Canada Foundry Co., Toronto.
Corbett, R. B., Brooklyn, N.Y.



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CLASSIFIED INDEX.

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Goldie & McCulloch Co., Galt, Ont.
Hamilton, Wm. Mfg. Co., Peterborough, Ont.
Hopkins, F. H. & Co., Montreal
Jenckes Machine Co., Sherbrooke, Que.
Morris Machine Works, Baldwinsville, N.Y.
McDougall, John, Caledonian Iron Works Co., Mont-
real.

National Supply Co., Leamington, Ont.
Oil Well Supply Co., Pittsburgh, Pa.
Petrie, H. W., Toronto.
Robb Engineering Co., Amherst, N.S.
Sheldon & Sheldon, Galt, Ont.
Sturtevant, B. F. Co., Boston, Mass.
Williams, A. R. Machinery Co., Toronto.

Engravers

Canadian Manufacturer, Toronto.
Jones, J. L. Engraving Co., Toronto.

Exhaust Fans

Sheldon & Sheldon, Galt, Ont.
Sturtevant, B. F. Co., Boston, Mass.

Exhaust Heads

Darling Bros., Montreal.
Sheldon & Sheldon, Galt, Ont.
Sturtevant, B. F. Co., Hyde Park, Mass.

Exhausters

Schutte & Koerting Co., Philadelphia, Pa.
Sturtevant, B. F. Co., Hyde Park, Mass.

Explorer and Geologist

Evaus, Horace F., Ashcroft, B.C.

Factory Sites

(See Factory Locations, page 34.)
Board of Trade, Orillia, Ont.
Central Ontario Power Co., Peterboro, Ont.
Hutchinson, S. M., Paisley, Ont.

Feed Water Heaters

Babcock & Wilcox, Limited, Montreal.
Darling Bros., Montreal.
McDougall, John, Caledonian Iron Works Co., Mont-
real.
Robb Engineering Co., Amherst, N.S.
Schutte & Koerting Co., Philadelphia, Pa.

Files

Spence, R. & Co., Hamilton, Ont.

Fillet (Pattern)

McLaren, J. C. Belting Co., Montreal.
Sadler & Haworth, Montreal and Toronto.

Filters (Oil)

Babcock & Wilcox, Limited, Montreal.
Darling Bros., Montreal.
McDougall, John, Caledonian Iron Works Co., Mont-
real.
Perrin, William R. & Co., Limited, Toronto.

Filters and Filtering Systems (Water)

Babcock & Wilcox, Limited, Montreal.
Jenckes Machine Co., Sherbrooke, Que.
McDougall, John, Caledonian Iron Works Co., Mont-
real.

Financial

Bradstreet's, New York City.
Dun, R. G. & Co., Toronto.
Neff & Postlethwaite, Toronto.
Petrie, H. D., Hamilton, Ont.

Fire Brick and Clay

Dunbar Fire Brick Co., Pittsburgh, Pa.
Hamilton Facing Mill Co., Hamilton, Ont.
Harbison-Walker Refractories Co., Pittsburgh, Pa.
Pennsylvania Fire Brick Co., Lock Haven, Pa.
Queen's Run Fire Brick Co., Lock Haven, Pa.
Reese-Hammond Fire Brick Co., Boliver, Pa.
Stowe-Fuller Co., Cleveland, Ohio.

Fire Escapes

Darling Bros., Montreal.

Fire Insurance

Inter-Insurers of America, New York City

Flour Mill Machinery

Allis-Chambers-Bullock, Limited, Montreal
Goldie & McCulloch Co., Galt, Ont.

Forges and Blowers

Canada Foundry Co., Toronto.
Sheldon & Sheldon, Galt, Ont.
Sturtevant, B. F. Co., Boston, Mass.

Founders

Canada Foundry Co., Toronto.
Goldie & McCulloch Co., Galt, Ont.
Hamilton, Wm. Mfg. Co., Peterborough, Ont.
Jenckes Machine Co., Sherbrooke, Que.
McDougall, John, Caledonian Iron Works Co., Mont-
real.
Robb Engineering Co., Amherst, N.S.

Foundry Facings and Supplies

Hamilton Facing Mill Co., Hamilton, Ont.

Fuel Economizers

Babcock & Wilcox, Limited, Montreal.
Schutte & Koerting Co., Philadelphia, Pa.
Sturtevant, B. F. Co., Hyde Park, Mass.

Furniture (Lodge, Opera and School
Canadian Office & School Furniture Co., Presburg, Pa.)
Galvanizing

Ontario Wind Engine & Pump Co., Toronto

Galvanizing and Tinning Machinery and
Furnaces (Wire)

Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio

Gas and Gasoline Engines

Goldie & McCulloch Co., Galt, Ont.
Morrison, T. A. & Co., Montreal.

Gauges (Recording Pressure

Bristol Co., Waterbury, Conn.

Gauges (Steam)

Penberthy Injector Co., Windsor, Ont.
Petrie, H. W., Toronto.
Williams, A. R. Machinery Co., Toronto

Gauges (Water)

Babcock & Wilcox, Limited, Montreal.
Penberthy Injector Co., Windsor, Ont.

Generating Sets

Sturtevant, B. F. Co., Hyde Park, Mass.

Generators

Allis-Chambers-Bullock, Limited, Montreal
Canadian General Electric Co., Toronto
Canadian Westinghouse Co., Ltd., Hamilton, Ont.
Electrical Construction Co., London, Ont.
Forinan, John, Montreal.
Jeffrey Mfg. Co., Columbus, Ohio.
Jones & Moore Electric Co., Toronto
Phillips, Eugene F., Electrical Works, Montreal
Toronto & Hamilton Electric Co., Hamilton, Ont.

Gloves, Mittens and Moccasins

Storey, W. H. & Son, Acton, Ont.

Glue Heaters

Advance Machinery Co., Toledo, Ohio.

Glue Room Equipment

Advance Machinery Co., Toledo, Ohio.

Government Notices

Factory Inspectors,
Minister of Agriculture.

Graphite

Dixon, Jos. Crucible Co., Jersey City, N.J.
McCullough-Danzell Crucible Co., Pittsburg, Pa.
Pittsburg Crucible Works, Pittsburg, Pa.

Grease Cups

Penberthy Injector Co., Windsor, Ont.

Hardware

Butterfield & Co., Rock Island, Que.
Gartshore, John J., Toronto.
Globe Machine & Stamping Co., Cleveland, Ohio.
Hopkins, F. H. & Co., Montreal.
Morrow, John, Machine Screw Co., Ingersoll, Ont.

Heating and Ventilating Apparatus

Darling Bros., Montreal.
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Sturtevant, B. F. Co., Boston, Mass.

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Jenckes Machine Co., Sherbrooke, Que.

Hoists (Chain and Pneumatic

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Hopkins, F. H. & Co., Montreal.

Hose (Fire and Pneumatic

Gutta Percha & Rubber Mfg. Co., Toronto.
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Sadler & Haworth, Montreal and Toronto.

Hotel

Gallatin Hotel, New York City.

Hydrants

Kerr Engine Co., Walkerville, Ont.
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real.

Hydraulic Accumulators

Jenckes Machine Co., Sherbrooke, Que.
McDougall, John, Caledonian Iron Works Co., Mont-
real.

Hydraulic Leather

McLaren, J. C. Belting Co., Montreal.
Sadler & Haworth, Montreal and Toronto.

Hydraulic Machinery

Canada Foundry Co., Toronto.
Darling Bros., Montreal.
Hamilton, Wm. Mfg. Co., Peterborough, Ont.
Jenckes Machine Co., Sherbrooke, Que.
McDougall, John, Caledonian Iron Works Co., Mont-
real.

Perrin, William R. & Co., Limited, Toronto.
Petrie, H. W., Toronto.

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

Industrial Plants

Von der Osten, E. & Co., Toronto.

CLASSIFIED INDEX.

(CONTINUED).

Insulated Wires and Cables

Philips, Eugene F., Electrical Works, Montreal.

Insurance

Water-Insurers of America, New York City.

Iron and Steel Specialties

Armstrong Mfg. Co., Bridgeport, Conn.
 Barnes-Fuller Co., Cleveland, Ohio.
 Canada Foundry Co., Toronto.
 Leslie, A. C. & Co., Montreal.
 London Rolling Mill Co., London, Ont.
 Wrought, John, Limited, Bristol, England and Montreal.
 Nova Scotia Steel & Coal Co., New Glasgow, N.S.
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 Union Drawn Steel Co., Hamilton, Ont.

Injectors

Canada Foundry Co., Toronto.
 Hamilton Brass Mfg. Co., Hamilton, Ont.
 Penberthy Injector Co., Windsor, Ont.
 Schutte & Koerting Co., Philadelphia, Pa.
 Williams, A. R. Machinery Co., Toronto

Iron and Steel Inspection

Hunt, R. W. & Co., Chicago, Ill.

Lamps—Electric

Allis-Chalmers-Bullock, Limited, Montreal.
 Canadian General Electric Co., Toronto.
 Canadian Westinghouse Co., Ltd., Hamilton, Ont.
 Forman, John, Montreal.
 Packard Electric Co., St. Catharines, Ont.
 Sylvania Incandescent Lamp Co., Toronto and St. Catharines, Ont.

Lathes

Barnes, B. F. Co., Rockford, Ill.
 Petrie, H. W., Toronto.
 Williams, A. R. Machinery Co., Toronto.

Lathes (Wood-working)

Golke & McCulloch Co., Galt, Ont.
 Petrie, H. W., Toronto.
 Williams, A. R. Machinery Co., Toronto.

Loom Reeds

McLaren, J. C., Belting Co., Montreal.

Lubricators

Penberthy Injector Co., Windsor, Ont.

Machinists

Golke & McCulloch Co., Galt, Ont.
 Ebb Engineering Co., Amherst, N.S.
 Keith & Martin, Toronto.

Machinists' Supplies

Armstrong Mfg. Co., Bridgeport, Conn.
 Butterfield & Co., Rock Island, Que.
 Golke & McCulloch Co., Galt, Ont.
 Gutta Percha & Rubber Mfg. Co., Toronto
 Hopkins, F. H. & Co., Montreal.
 Jeffrey Mfg. Co., Columbus, Ohio.
 Kerow, John, Machine Screw Co., Ingersoll, Ont.
 Petrie, H. W., Toronto.
 Keith & Martin, Toronto.

Machine Tools

Barnes, B. F. Co., Rockford, Ill.
 Becker-Brainard Milling Machine Co., Hyde Park, Mass.
 Darling Bros., Montreal.
 Petrie, H. W., Toronto.

Malleable Castings

International Harvester Co., Hamilton, Ont.
 Smith's Falls Malleable Castings Co., Smith's Falls, Ont.

Marine and Stationary Engines and

Bollers

Allis-Chalmers-Bullock, Limited, Montreal.
 Quebec Machine Co., Sherbrooke, Que.

Mechanical Draft

Barnes & Wilcox, Limited, Montreal.
 Schutte & Sheldon, Galt, Ont.
 Williams, B. F. Co., Boston, Mass.

Metal Stamping

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Metallurgists

Mills, S. D., Toronto.

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 Becker-Brainard Milling Machine Co., Hyde Park, Mass.
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 Galt-shore, John J., Toronto
 Golke & McCulloch Co., Galt, Ont.
 Gutta Percha & Rubber Mfg. Co., Toronto
 Hamilton Brass Mfg. Co., Hamilton, Ont.
 Hamilton, Wm. Mfg. Co., Peterborough, Ont.
 Hawksworth, Alfred & Sons Co., Montreal
 Hay, Peter Knife Co., Galt, Ont.
 Hopkins, F. H. & Co., Montreal.
 Jeffrey Mfg. Co., Columbus, Ohio.
 Jencks Machine Co., Sherbrooke, Que.
 Morrow, John, Machine Screw Co., Ingersoll, Ont.
 McDougall, John, Caledonian Iron Works Co., Montreal.
 McLaren, D. K., Montreal and Toronto
 McLaren, J. C. Belting Co., Montreal.
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 Reddaway, F. & Co., Manchester, England
 Robb Engineering Co., Amherst, N.S.
 Snence, R. & Co., Hamilton, Ont.
 Wilson, J. C. & Co., Glenora, Ont.

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Becker-Brainard Milling Machine Co., Hyde Park, Mass.

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Allis-Chalmers-Bullock, Limited, Montreal.
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 Hopkins, F. H. & Co., Montreal.
 Jeffrey Mfg. Co., Columbus, Ohio.
 Jencks Machine Co., Sherbrooke, Que.
 Link-Belt Engineering Co., Philadelphia, Pa.
 McDougall, John, Caledonian Iron Works Co., Montreal.
 Perrin, William R. & Co., Limited, Toronto.
 Petrie, H. W., Toronto.
 Schutte & Koerting Co., Philadelphia, Pa.
 Williams, A. R. Machinery Co., Toronto

Motors and Dynamos

Allis-Chalmers-Bullock, Limited, Montreal.
 Canadian General Electric Co., Toronto.
 Canadian Westinghouse Co., Ltd., Hamilton, Ont.
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 Electrical Construction Co., London, Ont.
 Forman, John, Montreal.
 Jeffrey Mfg. Co., Columbus, Ohio.
 Jones & Moore Electric Co., Toronto.
 Keystone Engineering Co., Toronto.
 Petrie, H. W., Toronto.
 Sturtevant, R. F. Co., Hyde Park, Mass.
 Toronto & Hamilton Electric Co., Hamilton, Ont.
 United Electric Co., Toronto.

Moulding Sand

Hamilton Facing Mills Co., Hamilton, Ont.

Nickel

Canadian Copper Co., New York, N.Y.
 Orford Copper Co., New York, N.Y.

Novelty Manufacturers

Worth & Martin, Toronto.

Nozzles

McCullough-Dalzell Crucible Co., Pittsburg, Pa.
 Pittsburg Crucible Works, Pittsburg, Pa.

Office and Bank Fittings

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

Oils and Lubricants

Dixon, Jas. Crucible Co., Jersey City, N.J.
 Imperial Oil Co. Petroleum, Ont.
 Queen City Oil Co., Toronto.

Oil Cloth

Dominion Oil Cloth Co., Montreal.

Oil Cups

Penberthy Injector Co., Windsor, Ont.

Oil Well Supplies

National Supply Co., Leamington, Ont.
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(CONTINUED).

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Patents

Budden, Hanbury A., Montreal
Petherstonhaugh & Co., Toronto
Marion & Maron, Montreal.

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Globe Machine & Stamping Co., Cleveland, Ohio.
Greening, B. Wire Co., Hamilton, Ont.

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Canadian Casualty & Boiler Insurance Co., Toronto.

Phosphorizers

McCullough-Dalzell Crucible Co., Pittsburg, Pa.
Pittsburg Crucible Works, Pittsburg, Pa.

Pig Iron

Bourne-Fuller Co., Cleveland, Ohio.
Canada Iron Furnace Co., Montreal.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.
Syracuse Smelting Works, Montreal.

Pipe Line Supplies

National Supply Co., Leamington, Ont.
Oil Well Supply Co., Pittsburgh, Pa.

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Babeock & Wilcox, Limited, Montreal.
McDougall, John, Caledonian Iron Works Co., Montreal.

Pipe Threading Machines

Armstrong Mfg. Co., Bridgeport, Conn.
Butterfield & Co., Rock Island, Que.
Petrie, H. W., Toronto.

Pipes and Tubes

Bourne-Fuller Co., Cleveland, Ohio.
Canada Foundry Co., Toronto.
Corbett, R. B., Brooklyn, N.Y.
Montreal Pipe Foundry Co., Montreal.
National Supply Co., Leamington, Ont.
Oil Well Supply Co., Pittsburgh, Pa.

Plaster

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

Plates

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

Plumbago

Hamilton Facing Mills Co., Hamilton, Ont.
McCullough-Dalzell Crucible Co., Pittsburg, Pa.
Pittsburg Crucible Works, Pittsburg, Pa.

Pneumatic Tools

Allis-Chalmers-Bullock, Limited, Montreal.
Canadian Rand Drill Co., Sherbrooke, Que.

Pointer Rolls (For Rods and Wire)

Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Power Plants—Equipments

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Armstrong, Herbert J., Toronto.
Babeock & Wilcox, Limited, Montreal.
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Canadian Westinghouse Co., Ltd., Hamilton, Ont.
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Darling Bros., Montreal.
Electrical Construction Co., London, Ont.
Goldie & McCulloch, Galt, Ont.
Gutta Percha & Rubber Mfg. Co., Toronto.
Hamilton, Wm. Mfg. Co., Peterborough, Ont.
Jeffrey Mfg. Co., Columbus, Ohio.
Jones & Moore Electric Co., Toronto.
Keystone Engineering Co., Toronto.
McDougall, John, Caledonian Iron Works Co., Montreal.

Packard Electric Co., St. Catharines, Ont.
Perrin, Wm. R. & Co., Limited, Toronto.
Petrie, H. W., Toronto.
Phillips, Eugene F., Electrical Works, Montreal.
Robb Engineering Co., Amherst, N.S.
Sturtevant, R. F. Co., Boston, Mass.
Toronto & Hamilton Electric Co., Hamilton, Ont.
United Electric Co., Toronto.
Wilson, J. C. & Co., Glenora, Ont.

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Hamilton, Wm. Mfg. Co., Peterborough, Ont.
Jeffrey Mfg. Co., Columbus, Ohio.
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Petrie, H. W., Toronto.
Wilson, J. C. & Co., Glenora, Ont.

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Downie Pump Co., Downieville, Pa.
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Petrie, H. W., Toronto.
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CLASSIFIED INDEX.

(CONTINUED).

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 Machine & Stamping Co., Cleveland, Ohio.

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 Hamilton, Wm. Mfg. Co., Peterborough, Ont.
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 J. C. & Co., Glenora, Ont.

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 Bourne-Fuller Co., Cleveland, Ohio.
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 Leslie, A. C. & Co., Montreal.

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

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 Gutta Percha & Rubber Mfg. Co., Toronto.

Varnishes
 Berry Bros., Walkerville, Ont.

Ventilators
 Darling Bros., Montreal.
 Sheldon & Sheldon, Galt, Ont.
 Sturtevant, B. F. Co., Boston, Mass.

Wagon and Carriage Wood Work
 Hore, F. W. & Son, Hamilton, Ont.

Washers or Hollinders (Cleaning Rubber)
 Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Watchman's Clocks
 Eco Magneto Clock Co., Boston, Mass.

Water Power Development
 Vogel, C. H., Ottawa.

Water Purifying Chemicals
 Canada Chemical Mfg. Co., London, Ont.

Windmills
 Ontario Wind Engine & Pump Co., Toronto.

Wire Mill Supplies
 Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio.

Wire and Wire Rope
 Dominion Wire Rope Co., Montreal.
 Greening, B. Wire Co., Hamilton, Ont.
 Leslie, A. C. & Co., Montreal.
 Phillips, Eugene F. Electrical Works, Montreal

Wire Rope Fittings
 Dominion Wire Rope Co., Montreal.

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 Greening, B. Wire Co., Hamilton, Ont.

Wire Drawing Machinery
 Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio

Wood-Working Machinery
 Advance Machinery Co., Toledo, Ohio.
 Goldie & McCulloch Co., Galt, Ont.
 Petrie, H. W., Toronto.
 Sheldon & Sheldon, Galt, Ont.
 Williams, A. R. Machinery Co., Toronto.

Zinc
 Leslie, A. C. & Co., Montreal.
 Syracuse Smelting Works, Montreal.

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J. J. CASSIDY, Manager.

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American Architect	New York	Weekly	\$6 00	\$6 25	Illustrated London News	London	Weekly	\$6 00	\$6 25
American Electrician	New York	Monthly	1 00	1 25	Inter-Ocean	Chicago	Weekly	1 00	1 25
American Federationist	Washington	Monthly	1 00	1 25	Iron Age	New York	Weekly	5 00	5 25
American Inventor	New York	Monthly	1 50	1 75	Ironmonger	London	Weekly	4 00	4 25
Architect and Builders Magazine	New York	Monthly	2 00	2 25	Ladies' Home Journal	Philadelphia	Monthly	1 25	1 50
Architectural Record	New York	Monthly	3 00	3 25	Leshes' Monthly Magazine	New York	Monthly	1 00	1 25
Architectural Review	London	Monthly	4 00	4 25	Literary Digest	New York	Weekly	3 00	3 25
Atlantic Monthly	Boston	Monthly	4 00	4 25	Machinery (Engineering Edition)	New York	Monthly	2 00	2 25
Boys Own Paper	London	Weekly	1 75	2 00	McClure's Magazine	New York	Monthly	1 00	1 25
Brick Builder	Boston	Monthly	5 00	5 25	Mines and Minerals	Scranton	Monthly	2 00	2 25
British Architect	London	Weekly	6 00	6 25	Modern Methods	Detroit	Monthly	50	1 50
Buffalo Express, Illustrated	Buffalo	Weekly	2 00	2 25	Montreal Herald	Montreal	Daily	3 00	3 25
Builders' Journal	London	Weekly	3 50	3 75	Montreal La Presse	Montreal	Daily	3 00	3 25
Camera	Philadelphia	Monthly	2 00	2 25	Montreal Witness	Montreal	Daily	3 00	3 25
Canada First	Toronto	Monthly	1 00	1 25	Motor Age	Chicago	Weekly	2 00	2 25
Canadian Magazine	Toronto	Monthly	2 50	2 75	Motoring, Illustrated	London	Weekly	2 25	2 50
Cassiers Magazine	New York	Monthly	3 00	3 25	Municipal Journal	New York	Monthly	3 00	3 25
Chemical News	London	Weekly	5 25	5 50	National Builder	Chicago	Monthly	2 00	2 25
Colliers Weekly	New York	Weekly	5 20	5 25	National Monthly	Toronto	Monthly	1 00	1 25
Commercial Intelligence	London	Weekly	5 00	5 25	New York Clipper	New York	Weekly	4 00	4 25
Compressed Air	New York	Monthly	1 00	1 25	New York Commercial	New York	Daily	6 00	6 25
Cooking School Magazine	Boston	Monthly	1 00	1 25	North American Review	New York	Monthly	5 00	5 25
Cornhill Magazine	London	Monthly	2 50	2 75	Our Dumb Animals	Boston	Monthly	50	75
Delineator	New York	Monthly	1 00	1 25	Outing	New York	Monthly	3 00	3 25
Electrical Engineer	London	Weekly	4 50	4 75	Ottawa Citizen	Ottawa	Daily	3 00	3 25
Electrical Magazine	London	Monthly	2 25	2 50	Ottawa Free Press	Ottawa	Daily	3 00	3 25
Electrical Review	London	Weekly	5 75	6 00	Pearson's Magazine	New York	Monthly	1 00	1 25
Electrical World and Engineer	New York	Weekly	3 00	3 25	Photographic Journal	London	Monthly	2 00	2 25
Electrician	London	Weekly	7 30	7 50	Photographic Times	New York	Weekly	1 00	1 25
Electro-Chemical Industry	New York	Monthly	2 00	2 25	Photography	London	Weekly	2 25	2 50
Engineering and Mining Journal	New York	Weekly	5 00	5 25	Popular Science Monthly	New York	Monthly	3 00	3 25
Engineering Review	New York	Monthly	1 00	1 25	Power	New York	Monthly	1 00	1 25
Engineering Review (Fieldens)	London	Monthly	3 05	3 25	Queen, The	London	Weekly	10 00	10 25
Everybody's Magazine	New York	Monthly	1 00	1 25	Review of Reviews	London	Monthly	2 00	2 25
Field and Stream	New York	Monthly	1 50	1 75	Scientific American	New York	Weekly	3 00	3 25
Forest and Stream	New York	Weekly	4 00	4 25	Scribners' Magazine	New York	Monthly	3 00	3 25
Four Track News	New York	Monthly	1 00	1 25	Sporting Times	London	Weekly	3 00	3 25
Gentlemen's Magazine	London	Monthly	4 00	4 25	Street Railway Journal	New York	Monthly	3 00	3 25
Girl's Own Paper	London	Weekly	1 75	2 00	Toronto Saturday Night	Toronto	Weekly	2 00	2 25
Good Housekeeping	Toronto	Monthly	1 00	1 25	Toronto Sunday World	Toronto	Weekly	2 00	2 25
Good Roads Magazine	New York	Monthly	1 00	1 25	Youth's Companion	Boston	Weekly	1 75	2 00
Hardware Dealers Magazine	New York	Monthly	1 00	1 25	Weldon's Ladies' Journal	London	Monthly	1 25	1 50
Harpers' Magazine	New York	Monthly	4 00	4 25	Winnipeg Free Press	Winnipeg	Daily	3 00	3 25
Harpers' Weekly	New York	Weekly	4 00	4 25					

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INDEX TO ADVERTISEMENTS.

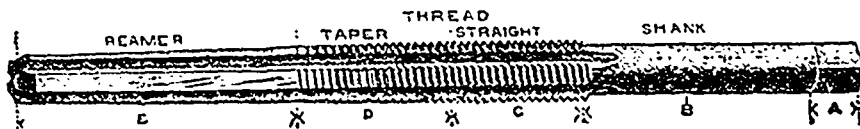
Where the follo is not given the Advertisement appears at intervals.

See Classified Index Beginning on Page 37

ofc .. outside front cover.		obc .. outside back cover.	
A	PAGE		PAGE
Alance Machinery Co., Toledo, Ohio.	8	Canadian Casualty & Boiler Insurance Co., Toronto.	10
Agriculture, Ontario Minister of, Toronto.	36	Canadian Copper Co., New York, N.Y.	5
Aiken, K. L., Toronto.	10	Canadian General Electric Co., Toronto	13
Albert Mfg. Co., Hillsborough, N.B.	9	Canadian Manufacturer Pub. Co., Toronto	43
Aloma Steel Co., Sault Ste. Marie, Ont	4	Canadian Office & School Furniture Co., Pres- ton, Ont.	35
Als-Chalmers-Bullock, Ltd., Montreal	47	Canadian Raml Drill Co., Sherbrooke, Que.	36
American Carpet & Upholstery Journal, Phila- delphia, Pa	43	Canadian Westinghouse Co., Ltd., Hamilton, Ont.	47
American Steam Pump Co., Battle Creek, Mich.	3	Canadian White Co., Montreal	3
Arnold, Dr. Geo., Prescott, Ont	10	Cassella Color Co., New York and Montreal.	32
Armstrong, Herbert J., Toronto.	10	Central Ontario Power Co., Peterboro, Ont.	14
Armstrong Mfg. Co., Bridgeport, Conn	35	Chapman Double Ball Bearing Co., Toronto.	14
		Chicago & North-Western Railway, B. H. Ben- nett, General Agent, Toronto.	29
		Clemson, W. J., Wolverhampton, England.	35
		Conduits Co., Limited, Toronto.	obc
B		Continental Iron Works, New York, N.Y.	3
Bacock & Wilcox, Limited, Montreal.	ofc	Corbett, R. B., Brooklyn, N.Y.	35
Bank of Hamilton, Hamilton, Ont.	40	Crocker-Wheeler Co., St. Catharines, Ont.	12
Baker, Wm. & Bro., Georgetown, Ont.	38		
Bames, B. F. Co., Rockford, Ill	8	D	
Baker-Stranard Milling Machine Co., Hyde Park, Mass	31	Darling Bros., Montreal	
Bell Telephone Co	32	Department Public Works, Ottawa	
Benson, W. T. & Co., Montreal.	32	Dewar Detective Agency, St. Louis, Mo	35
Berry Bros., Walkerville, Ont.	28	Dixon, Jos., Crucible Co., Jersey City, N.J.	35
Boiler Inspection & Insurance Co., Toronto	obc	Dominion Belting Co., Hamilton, Ont.	ofc
Bonne-Fuller Co., Cleveland, Ohio	4	Dominion Oil Cloth Co., Montreal.	ofc
Bosley Pulverizer Co., Boston, Mass	33	Dominion Wire Rope Co., Montreal.	8
Boston, Toronto and New York	40	Downie Pump Co., Downieville, Pa	35
Bradford Co., Waterbury, Conn	obc	Drummond, McCall & Co., Montreal	4
Branmer, Mond & Co., Northwich, England.	32	Dun, R. G. & Co., Toronto	40
Briden, Hanbury A., Montreal.	10	Dunbar Fire Brick Co., Pittsburg, Pa	9
Brentfield & Co., Rock Island, Que	45		
		E	
C		Edwards, R. I., Toronto	36
Canada Chemical Mfg. Co., London, Ont.	32	Eco Magnet Clock Co., Boston, Mass.	10
Canada Foundry Co., Toronto.		Electrical Construction Co., London, Ont.	13
Canada Iron Furnace Co., Montreal.	4		
		F	
		Engineering Review, London, England.	41
		Evans, Horace F., Ashcroft, B.C	10
		Expanded Metal & Fireproofing Co., Toronto	8
		G	
		Gallatin Hotel, New York City.	38
		Gartshore, John J., Toronto.	10
		Gearing, H., Toronto	10
		Geigy Amline & Extract Co., New York, N.Y.	32
		Globe Machine & Stamping Co., Cleveland, Ohio	36
		Goldie & McCulloch Co., Galt, Ont.	3
		Greening, B. Wire Co., Hamilton, Ont.	ofc
		Gutta Percha & Rubber Mfg. Co., Toronto	ofc
		H	
		Hamilton Brass Mfg. Co., Hamilton, Ont.	
		Hamilton Facing Mills Co., Hamilton, Ont.	obc
		Hamilton, Wm. Mfg. Co., Peterborough, Ont.	31
		Harbison-Walker Refractories Co., Pittsburg, Pa.	29
		Hawthornth, Alfred, Montreal	8
		Hay, Peter Knife Co., Galt, Ont.	9
		Heys, Thomas & Son, Toronto	10
		Hopkins, F. H. & Co., Montreal.	
		Hore, F. W. & Son, Hamilton, Ont	41
		Hunt, Robert W. & Co., Chicago, Ill.	10
		Hutcheson, S. M., Paisley, Ont.	35



BUTTERFIELD & CO.,
Rock Island, Que.



When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER

INDEX TO ADVERTISEMENTS (Continued).

I	PAGE	I	PAGE	S	PAGE
Imperial Oil Co., Petroleum, Ont.	33	McLaren, D. K., Montreal and Toronto.....	36	Sadler & Haworth, Montreal and Toronto . . .	39
Inter-Insurers of America, New York City....	8	McLaren, J. C., Belting Co., Montreal and Toronto.....	36	Schutte & Koerting, Philadelphia, Pa.	37
International Harvester Co., Hamilton, Ont.	34		obc	Sheldon & Sheldon, Galt, Ont.....	12
				Smith Mfg. Co., Toronto.....	38
		N		Smith's Falls Malleable Castings Co., Smith's Falls, Ont.....	obc
		National Supply Co., Leamington, Ont., and Pittsburg, Pa.....	2	Spence, R. & Co., Hamilton, Ont.....	38
J		Neff & Postlethwaite, Toronto	10	Storey, W. H. & Son, Acton, Ont.....	41
Jeffrey Mfg. Co., Columbus, Ohio	31	Nichols Chemical Co. of Canada, Montreal	33	Stowe-Fuller Co., Cleveland, Ohio.....	10
Jenckes Machine Co., Sherbrooke, Que.	6	Northern Aluminum Co., Shawinigan Falls, Que. and Pittsburg, Pa.....	5	Sturtevant, B. F. Co., Boston, Mass.....	31
Jones & Moore Electric Co., Toronto.	13	Nova Scotia Steel & Coal Co., New Glasgow, N.S.....	4	Sunbeam Incandescence Lamp Co., Toronto and St. Catharines, Ont.....	obc
Jones, J. L., Engraving Co., Toronto.....	35			Syracuse Smelting Co., Montreal and New York	5-13
		O			
		Onkey, John & Sons, London, England...	9	T	
K		Old Colony Coal & Coke Co., Pittsburg, Pa.....	6	Toronto & Hamilton Electric Co., Hamilton, Ont.....	1
Kelly's Directories, Toronto and London, England	7	Ontario Wind Engine & Pump Co., Toronto	41	Toronto Paper Mfg. Co., Cornwall, Ont....	3
Kerr Engine Co., Walkerville, Ont.....	13	Orford Copper Co., New York, N.Y.....	5	Turner, Vaughn & Taylor, Cuyahoga Falls, Ohio.....	10
Keystone Engineering Co., Toronto.....	10	Orillis, Ont., Board of Trade.	34		
		P		EU	
		Packard Electric Co., St. Catharines, Ont....	12	United Electric Co., Toronto.	obc
		Parke, Roderick J., Toronto.....	10	Union Drawn Steel Co., Hamilton, Ont..	
		Payne Machinery Exchange Co., Elmira, N.Y....	35		
		Penberthy Injector Co., Windsor, Ont.....	2	V	
		Pennsylvania Fire Brick Co., Lock Haven, Pa.	9	Vogel, C. H., Ottawa.....	
		Perrin, William R. & Co., Limited, Toronto and Chicago, Ill.....	35	Von der Osten, E. & Co., Toronto.	
		Peterborough Canoe Co., Peterborough, Ont....	41		
		Petric, H. D., Hamilton, Ont.....	10	W	
		Petrie, H. W., Toronto.....	7-8-34	Wardlaw, T. D., Toronto.....	
		Phillips, Eugene F., Electrical Works, Montreal.	13	Westinghouse Electric & Mfg. Co., Pittsburg, Pa.....	
L		Pittsburg Coal Co., Pittsburg, Pa.....	7	Wick, H. K. & Co., Buffalo, N.Y.....	
Leslie, A. C. & Co., Montreal.	2	Pittsburg Crucible Works, Pittsburg, Pa.	30	Wilham, A. R. Machinery Co., Toronto	
Link-Belt Engineering Co., Philadelphia, Pa.	10	Power & Gas Machine Co., Galt, Ont.		Winn & Holland, Montreal.....	
Locke, C. E. Mfg. Co., Kensett, Iowa	10			Wilson, H. T. Coal Co., Detroit, Mich	
London Rolling Mill Co., London, Ont.....	14	Q		Wilson, J. C. & Co., Glenora, Ont.....	
Lowell Crayon Co., Lowell, Mass.	10	Queen City Oil Co., Toronto.....	ofc	Worth & Martin, Toronto.....	
Lysaght, John, Limited, Bristol, England and Montreal	ofc	Queen's Run Fire Brick Co., Lock Haven, Pa.....	ofc		
		R			
M		Reddaway, F. & Co., Montreal.	11		
Marion & Marion, Montreal.	41	Reese-Hammond Fire Brick Co., Bohvar, Pa....	9		
Miller, S. D., Toronto.	10	Retail Coalman, Chicago, Ill.....	43		
Milnes, J. H. & Co., Toronto.....	6	Robb Engineering Co., Amherst, N.S.....	37		
Montreal Belting Co., Montreal.....	36				
Montreal Pipe Foundry Co., Montreal.....	34				
Morris Machine Works, Baldwinsville, N.Y.	34				
Morrison, T. A. & Co., Montreal.	10				
Morrow, John, Machine Screw Co., Ingersoll, Ont.	38				
Myles, Thos. Sons, Hamilton, Ont.....	6				
Mc					
McArthur, Cornelle & Co., Montreal	obc				
McCullough-Dalzell Crucible Co., Pittsburg, Pa.	30				
McDougall, John, Caledonian Iron Works Co., Montreal.	34				

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