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•VOL. 45. TORONTO, SEPTEMBER 5, 1902. No. 5

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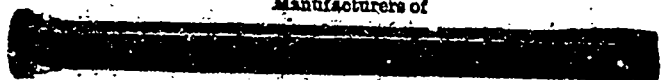
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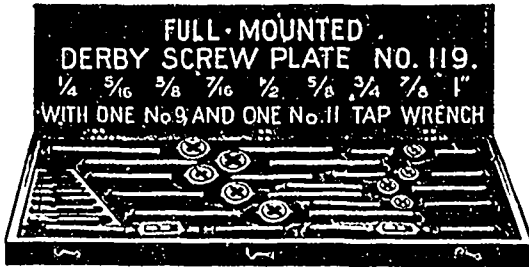
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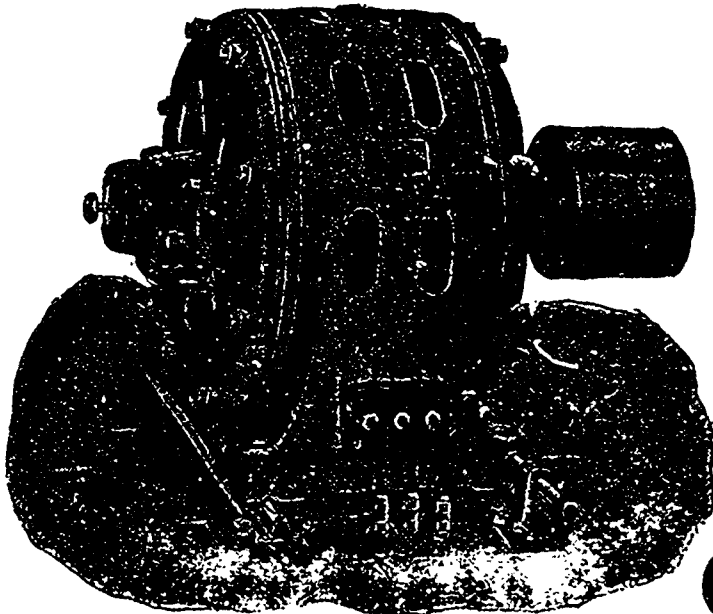
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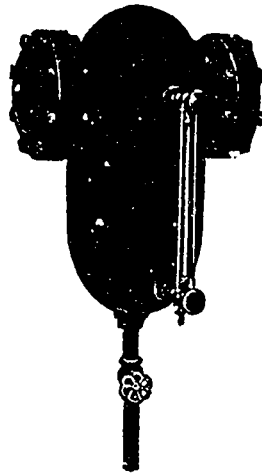
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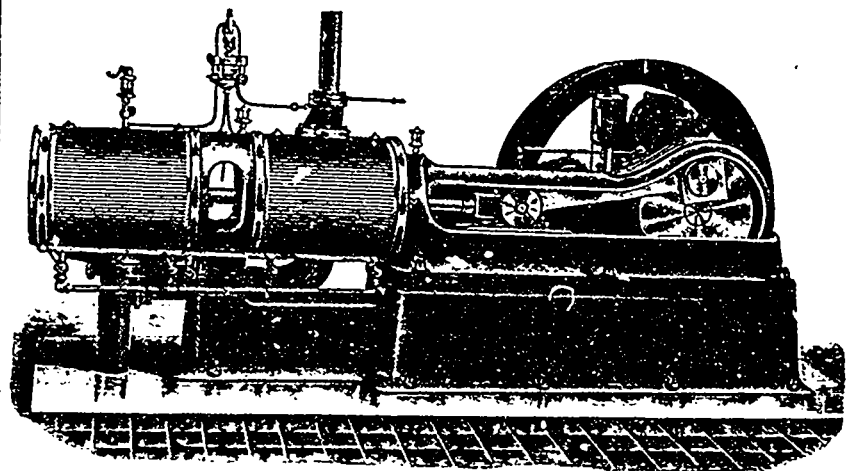
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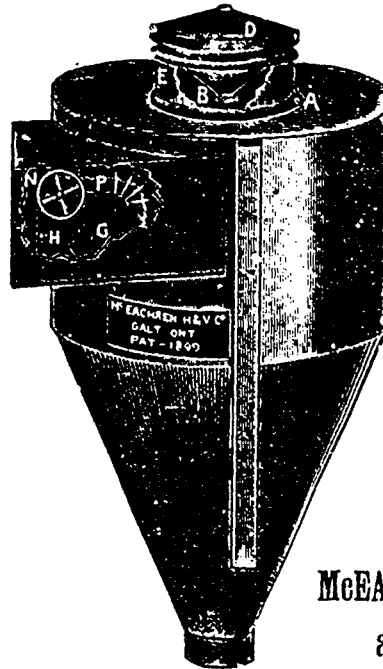
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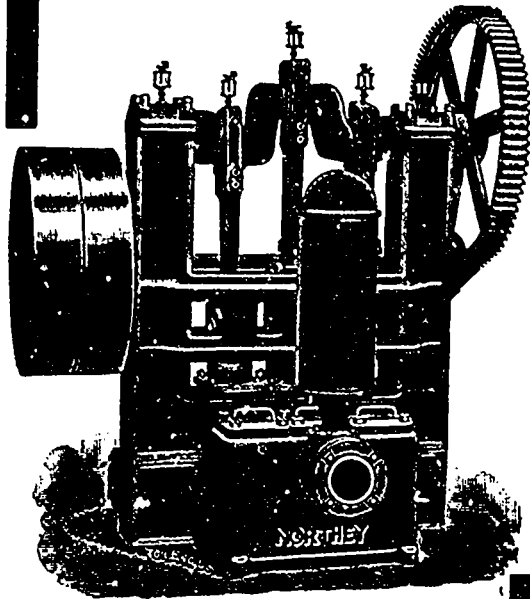
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Many manufacturers who are users of Pumping Machinery pay coal bills that are from 10% to 50% higher than they should be, because their pumps are old and leaky, do not give the service they should, and waste steam. Would it not pay you to look into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

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The Canadian Manufacturer Publishing Co., Limited.

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

Cable address: "CANAMAN." Western Union Telegraphic Code used.

MESSRS. DAVISON & CO.,164 Federal Street, Boston, Mass.
AGENTS FOR UNITED STATES.

Index to AdvertisersPage 42

*J. J. CASSIDY, Editor and Manager***MR. GIBSON'S REPORT.**

We have received from the Provincial Crown Lands Department a copy of the report of Mr. Thomas W. Gibson, Director of Mines, just issued, for 1901. It is a document of special interest and value as a record of the remarkable progress made in the leading branches of the mining and metal-manufacturing industries during the twelve months, which is far in excess of the advance made in any previous year. The mineral output of the year reached the total value of \$11,831,086, being an increase of 63 per cent. over the production of 1898, which amounted to \$7,235,877. The most noticeable characteristic of the year's work is the phenomenal expansion of the metallic as compared with the non-metallic output. The value of the items comprised under the former heading has increased from \$2,565,286 in 1900 to \$5,016,734 last year, showing an increase of 72 per cent. As compared with the output for 1898, which, however, amounted to \$1,689,002, there is an increase in the metallic production of 191 per cent., while the increase in the total mineral product is 63 per cent. The items to which this remarkable expansion is due are those of nickel, pig iron and copper, which combined furnish 81 per cent. of the total metalliferous yield.

The leading place in the list of mineral industries is accorded to nickel mining, which produced returns exceeding in value those of any other branch of the industry. The output in 1901 was the largest yet recorded, and owing to the more extended manipulations to which the nickel-copper matte of the Sudbury district is now subjected previous to its exportation, the product has a much larger value than ever before. The production for the year amounted to 8,882,000 pounds or 4,441 tons, valued in the matte at \$1,859,970, an increase in quantity of 25 per cent. and in value of 145 per cent., as compared with 1900 when the yield was 3,540 tons valued at \$756,626. Owing to the process of re-treatment of the low grade matte now adopted at the Ontario Smelting Works at Copper Cliff, the average price at which the nickel contents of matte were appraised in 1901 was 20.9 cents per pound, as compared with 10.7 cents per pound in 1900. This is a very appreciable advance in the direction of having as much as possible of the labor requisite to transform the raw material into the finished article of manufacture performed in this country.

A statistical table is given showing the striking and satisfactory progress made in the nickel-copper mining industry

The Canadian Manufacturer

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

since 1897, from which it appears that in the course of five years the quantity of ore smelted has increased from 96,098 to 270,380 tons; the value of the nickel produced from \$359,651 to \$1,859,970; the value of the copper output from \$200,067 to \$589,080; the number of men employed from 585 to 2,284, and the aggregate wages paid from \$253,226 to \$1,045,389.

The later returns, already published, covering the first three months of the current year, show that the advance is being maintained, as the nickel yield shows a gain of \$355,498 and copper a gain of \$121,545 over the first quarter of 1901.

Equally encouraging are the figures given in the report respecting the production of iron ore, pig iron and steel. The output of iron ore for 1901 was three times as great as that of 1900, amounting to 278,538 tons valued at \$174,428, as against 90,302 tons of the value of \$111,805 during the previous twelve months. By far the larger portion was the product of the Helen Mine, from which 258,755 tons were shipped during the year. The pig iron product of the blast furnaces of Ontario was 116,370 tons valued at \$1,701,703, an advance in quantity of 53,984 tons and in value of \$765,637 over the yield of 1900. This gain is largely due to the starting up of the Canada Iron Furnace Co's furnaces at Midland, only two plants being in operation previously. The steel product has increased from 2,819 tons worth \$46,380 in 1900 to 14,471 tons valued at \$347,280. The number of working-men employed in the iron and steel industries is 580, who last year drew \$274,554 in wages. Bounties out of the Iron Mining Fund amounting to \$25,000 were paid on the output of pig iron, that being the maximum amount which can be paid in any one year by the Ontario Government. The amount usually awarded is one dollar per ton, but where the number of tons made exceeds the limit of the annual payment, the amount is reduced pro rata, and the rate of bounty last year was accordingly \$0.472 per ton. The rapid growth of this important staple industry, on which the manufacturing prosperity of the Province is so largely dependent, is a cause for congratulation to all who are concerned in our industrial and commercial development. This is a noteworthy evidence of the wisdom of the policy pursued by the Provincial Government in encouraging the growth and expansion of our industries, and a justification of the course steadily pursued by Premier Ross in regard to the opening up of our mineral resources.

There are many other features of the report which are of general interest as recording a steady development in connection with other and longer established branches of mineral production. A good deal of space is devoted to the results of investigations and researches by specialists who are steadily at work under the direction of the Bureau of Mines seeking to locate new mineral regions and direct capital to the most promising fields for exploration, and a great deal of valuable work has been accomplished in this direction.

The present volume comprises comprehensive reports on the iron ranges of North-Western Ontario and Michipicoten, the Eastern Ontario gold belt and the Nipissing District between Lake Tamiscaming and the Height of Land, which will be found of much practical interest to all who seek to inform themselves as to Ontario's latent mineral wealth. Mr. Gibson, the energetic and capable Director of Mines, is entitled to great credit for the share he has taken in aiding the work of mineral development, to the importance of which the public has now fortunately awakened. Under his direction the Bureau has greatly increased its usefulness as a means of preparing and circulating the accurate and detailed information which is so essential a requisite to the end in view.

CUT-THROAT COMPETITION.

The Canadian Manufacturers' Association are distributing a small booklet which has reference to Industrial Canada, the official organ of the Association, and also a commercial venture to the support of which not only the members but the general public are invited to contribute by advertising their business therein.

The membership of the Association includes quite a large number of printing and publishing concerns, and the dues contributed by these go in part to sustain Industrial Canada, which is as fierce a competitor to them in their business as the Association can possibly make it. It is an anomaly that this should be so, but so it is. Those members of the Association who are publishers, and whose contributions and dues are used to support Industrial Canada, find that the Association has entered into active competition with them; and to accentuate this the booklet alluded to publishes a card of advertising rates in which prices for space are quoted at much lower figures than those named by any reliable trade journal or newspaper in Canada. Such publications depend upon their intrinsic merits for commercial favors, but not so Industrial Canada, for the Association which own it does not have to depend upon the advertising patronage it receives for its support. It has a yearly income of more than ten thousand dollars which can be drawn upon to meet deficiencies, and therefore in its fight upon its own members it can afford to take advertising at rates under which private concerns could not prosper.

In proclaiming the merits of Industrial Canada the booklet sets forth some arguments why advertisers should patronize it. For the last six months its circulation, it says, has averaged 2,450—we can mention a dozen trade journals in Canada whose circulation, according to their own claims, is more than twice as large. Where is it circulated? To members of the Association; to correspondents in foreign countries; to British consuls; to Chambers of Commerce; to exchanges, and to general subscribers.

The value of Industrial Canada to the members of the Association consists in the bulletin feature of it, by which they are informed regarding the transactions of the Association and its different committees. The object of advertisers

is to bring their business to the attention of purchasers of such goods as they have for sale; and in placing their advertisements, special reference is had not so much to the number of copies printed as to the classes of concerns who receive them. The manufacturer of agricultural implements would not be interested in advertising his goods in Industrial Canada because it circulates to manufacturers of account books, axes, bags, biscuits, bicycles, billiard tables, boots, tooth brushes, canned goods, carpets, jewelry, watch cases, etc., although all these industries may be represented in the Association, nor would he be particularly interested in having his advertisement placed before other manufacturers of agricultural implements, but his desire would be, naturally, to place it where it would come to the attention of possible purchasers of such goods as he produces, and this could be accomplished with gratifying success only through the circulation of a trade journal devoted to that particular industry. This illustration may be applied to all the different trades represented in the Association; and an inspection of the Members' Business Directory, regularly published in the organ, indicates the large variety of interests represented in it, even as the fewness of display advertisements in it indicate that 99 per cent. of the members view this question as we do.

The publication of a bulletin by which the members of the Association are informed regarding the work being done by it is eminently proper, and should be paid for out of the general fund contributed to by all the members, and this is what it was proclaimed Industrial Canada would be when it was first established. But now it is asserted that "it is not owned by a private corporation," which is a fact, for it is operated by the Association in competition with quite a number of private concerns who are members of the Association, and who are engaged in similar business; but the assertion that "it is not published as an investment" is open to doubt.

If this competitive enterprise, the publication of Industrial Canada as a trade journal, is the success the booklet says it is, there is no reason why the Association should not embark in the manufacture of watch cases, jewelry, paints, stationery, etc., as well. Of course members who are engaged in the manufacture of such goods would not object, but would hail with delight the fact that their Association had become an active competitor in their business.

A NEW TRADE INDEX.

At the recent Halifax meeting of the Canadian Manufacturers' Association the committee having the matter in hand reported as follows:

The publication last October of a Canadian Trade Index, having been followed by so many beneficial results, and the membership of the association having increased considerably in the meantime, your committee has been encouraged to recommend to the executive that this meeting should consider the publication of another volume of the same kind in the near future. We would recommend this meeting to consider whether or not the next issue contain the names of all the manufacturers in the Dominion, so that it may be more thoroughly representative. Should such a plan be adopted, special attention should be called to the names of the members of our association. There can be no doubt that the last edition has done much to increase the export trade of Canada, and if the co-operation of the Government can be secured in distributing the next edition, your committee has every reason to believe that much larger results may be obtained.

It is questionable about the number of beneficial results which have accrued to the members of the Association, or to those who are not members, from the publication of the two editions of the Trade Index which have heretofore been issued

by the Association. The first was an abortion of which the authors had good reason to be ashamed, and regarding which the committee, in their report, had not a word to say; and the second was more or less like therouto. They both abounded in most palpable absurdities and errors which should not have been made, and but very little credit could come to Canada through them. In any reliable index of Canadian manufacturers and of the products of Canadian manufacturing enterprises the names of not less than about fifteen thousand concerns should be given, and an enumeration of the articles produced by them should make reference to at least twenty-five thousand items; but in the second issue of the index published by the Association last year there were less than 860 names and less than 2,000 items given; and among the names given were those of quite a number who were engaged in no manufacturing industry whatever, and many articles were enumerated which were not produced in Canada.

It is claimed that both these indexes were distributed profusely throughout the commercial centres of the world, but it should be borne in mind that outside of Canada the commercial world has but an inadequate knowledge of what Canada can and does produce, and an even more inadequate knowledge of the names and numbers of our manufacturers, and it could not but be a serious injustice to Canada to distribute throughout the world a book purporting to be an index of names of our manufacturers when not a tenth of their number was enumerated in it. If there can be no doubt that the indexes already sent out have done much to increase the export trade of Canada how much more would have been done in that direction had they contained the names of all our manufacturers, both members and non-members of the Association, and a fairly accurate and complete list of the articles they produce, and had omitted the names of those who were not manufacturers in any sense of the word, and of those who were only agents for concerns who are manufacturers in other countries but not in Canada. There can be no justification in including such persons in an index merely because they pay the usual membership fee; and no surprise should be felt that, and for the reasons here given, the Dominion Government declined to give their hearty co-operation in the endorsement and distribution of so inaccurate and misleading a book.

It goes without dispute, however, that a properly prepared index of Canadian manufacturers, and the many different articles they produce, would be of very great value, but that value should in no way be lessened by the inclusion of the names of the members of the Manufacturers' Association only, or the exclusion of the names of non-members, and it should include the names of only those who are manufacturers. The Association seems to consider it one of the duties it is called upon to perform to engage in the publishing business; and if it is the intention to publish another edition of the trade index, it certainly has the means and facilities of doing so and of making it all that it should be. Were the Association to publish a book of the proper character it would be of great value to every business concern in Canada, and the information it contained would be of great value to all business concerns in all other countries who desired knowledge regarding the manufacturing possibilities of this Dominion.

ARE LABOR UNIONS LIABLE?

An action has been commenced by the Metallic Roofing Co., of Toronto, the result of which will be of far-reaching importance to all manufacturers as well as all the labor organizations of the Dominion. Especially will this be the case

when the recent English decisions against labor organizations are considered.

For some time past the Metallic Roofing Co. has had trouble with its sheet-metal workers, and these in went out on strike on August 7 last. The strike appears to have affected the company's business in various ways, and they came to the conclusion that the local Sheet-metal Workers' Union was taking an active part in the squabble by engineering a boycott of their goods. As the Metallic Roofing Co. were attempting to put up a large exhibit at the Industrial Exhibition as well as do contract work at the Fair and at other places, this interference with their business has proved embarrassing, to say the least of it.

A few days ago, through their solicitors, the Metallic Roofing Co. made application before Chief Justice Falconbridge at Osgoode Hall for an interim injunction restraining Local Union No. 30, Amalgamated Sheet-metal Workers' International Association, and certain of its members, who were named, from interfering with the company's business. In the usual affidavits put in to support their application, the company allege that the union and its members have unlawfully refused to handle their products, to the great injury of their business. They, therefore, ask for an injunction "to prevent the defendants from unlawfully interfering with the plaintiff's business, and for damages for alleged interference."

Chief Justice Falconbridge sustained their application to the extent of granting an interim injunction as asked for, which will be finally disposed of at an early day.

Legal talent appeared for the defendant union, and argued that there had been no concerted action on the union's part in the matter, and that it was therefore not responsible for the action of its individual members.

The case will be watched with great interest by both labor employers and members of unions, as it is in the nature of a test case to determine just how far workmen's associations can go in this country in fighting to support their demands. Several cases of a parallel nature have been fought out in England, which resulted unfavorably to the labor organizations. The important point at issue, of course, is not only in how far the unions can legally go in fighting employers, but to what extent, if at all, they can be held responsible for damages inflicted. There will probably be a long and interesting legal fight over the matter.

THE TRADES AND LABOR CONGRESS.

The Eighteenth Annual Session of the Trades and Labor Congress of Canada will be commenced in Berlin, Ont., on Monday, September 15. During the month the executive officers of the Congress issued a circular to all labor organizations in the Dominion, inviting them to send representatives. The following is given as the basis of representation:

Trade Unions, Local Assemblies of the Knights of Labor and Federal Unions shall be allowed one delegate for each one hundred members or under, and one for each additional one hundred or majority fraction thereof; Trade Councils, Central Labor Unions, National Trade Unions and District Assemblies of the Knights of Labor, three delegates each. Two or more Trade Unions or Local Assemblies of the Knights of Labor, whose aggregate membership does not exceed 150, may unite to send one delegate. No proxy representative will be allowed, and all delegates must be members of the bodies they represent (except in the case of bodies composed of delegates from local organizations) at least six months prior to and at the time of election, but

nothing in this clause shall be construed to prevent unions or assemblies from combining to send one representative who is a member of one of such unions or assemblies; also provided that nothing in this clause shall prevent organizations being represented not six months organized.

Among the subjects announced for discussion at the Congress are the following bills which were introduced at the last session of the Dominion Parliament, but which received only first or second readings:

"An Act for the Settlement of Railway Labor Disputes"; "An Act further to Amend the Act to restrict the Importation and Employment of Aliens"; "An Act to Amend the Conciliation Act, 1900." Other topics are the proposed amendment to the Trade Mark and Design Act with a view to legalizing the Union Label, and the report of the Chinese and Japanese Commission on the exclusion of Oriental coolie labor in the Province of British Columbia. As a larger number of organizations have received invitations to send delegates than at any previous time, it is expected that the September Convention will be the largest and most representative in the history of the Congress.

EDITORIAL NOTES.

Police Magistrate Denison, of Toronto, has decided that an American workman who had been invited to accept a position in a Canadian factory must be deported, and that the manufacturer who had invited him must pay a fine of \$50 and costs for having done so, and thus is Canadian industry hampered.

Twenty per cent. off regular advertising rates is the discount offered to members of the Canadian Manufacturers' Association who can be induced to place their business cards in Industrial Canada, the Association's new trade journal enterprise. The offer is an inducement to manufacturers and others who are not members, to put up their \$10 a year for membership dues. If a space is occupied at say \$50 per year, to a non-member, the 20 per cent. discount would pay the membership dues. You pay your money and you have your choice, \$50 straight to a non-member; or \$40 for advertising and \$10 for membership. A bonus of subscription to Industrial Canada goes to the advertiser anyhow.

The Canadian Association of Stationary Engineers is unique in one particular; it is not a trades union in any sense of the word, but simply an educational organization, whose whole aim is the improvement of its members in their profession. A suggestion was made at their convention held in Toronto, August 20, that the association join forces with the International Association of Stationary Engineers. This was referred to the Good of the Order Committee, which reported favorably upon it. The question was then discussed at considerable length, and finally defeated, for the present year at any rate. The association proposes to steer clear of labor troubles, and interest itself more particularly in the ethics of the profession. As an aid to this it was decided to issue a monthly lesson sheet giving instructions on steam engineering, etc.

Dr. S. Morely Wickett has written a letter from Vancouver to the Canadian Manufacturers' Association, describing his trip through the North-West. Dr. Wickett was sent as a special representative of the Association to the Yukon, and his first report of his impressions in the West is most interest-

ing. He states that one of his earliest opinions formed in the West was that the country was anxious that the leading business men of the East should know its possibilities, and for this reason he strongly advocated that the next meeting of the Canadian Manufacturers' Association should be held in Winnipeg. Canada, he states, is now face to face with a new condition of affairs, demanding from legislators and the active framers of public opinion, journalists and others, the most farseeing and energetic efforts. Possible cleavage between the West and East would be obviated by common national interests, and by the rise of manufacture in the West. Dr. Wickett believes that the tariff itself will not play a dominating part in future political campaigns. As long as Canadian manufacturers depend upon a protective tariff to save them from the unfair encroachment of the manufacturers of other countries; and as long as there are free traders in Canada who are always striving to throw down and destroy our protective tariff policy, just so long will the tariff play a dominating part in Dominion politics, and this is a fact that Dr. Wickett should not forget. A burnt child usually dreads the fire.

Preferential trade with Great Britain, as we now have it, puts the textile industries of Canada out of business; and now the blessings of free trade are to be extended by extending our preferential trade to France.

Lord Masham, an English protectionist, announces that he is anxious to form a company, with a capital of not less than ten millions, in the colonies, for growing wheat on all suitable land in the colonies and British possessions, on the condition that the Government would guarantee the company 6 per cent. on its capital for 10 years and 3 per cent. for another 10, and guarantee a duty of 9 cents a bushel. The Manitoba farmers have formed a company to grow wheat without any of these conditions, and are making a good deal more than 6 per cent.—Toronto Globe.

If Lord Masham desires to do something in the direction indicated he should induce the British Government to impose an import duty on foreign wheat, and that would fix the matter. If Lord Masham has ten millions of capital at his disposal to invest in Canada, we suggest that he put some of it in manufacturing enterprises.

One woman's household in Nanticoke, Pa., is under boycott for the reason that she gave a drink of water to one of the company guards at Slope 6 of the Susquehanna Coal Co. The guard had left the stockade for a brief walk. The day was oppressively hot and he stopped in front of a house and asked a woman in the doorway for a drink. She hesitated a moment, knowing the man to be a guard and that there was a boycott threat against those who aided the guards. But she reasoned that a mere glass of water to a thirsty man would not hurt the striking miners' cause. But her charitable act was seen by a spy, and when she attempted to buy a loaf of bread that evening she was told by her dealer that he didn't dare serve her. Grocery stores are not plentiful in the mining towns, so the woman went home and the next morning took a basket and started for the city to do her marketing. She was followed from the house by a crowd of boys. Some one had provided them with money, for they followed her aboard the train and hooted at her wherever she went in town.

ADVERTISE IN THE CANADIAN MANUFACTURER.
Send for rates.

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 on these pages, and to every concern in Canada interested in any manufacturing industry whatever, this interest extending to supply houses also.

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

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

The Jones & Moore Electric Co., Toronto, have received an order from The Maple Leaf Woolen Mills Co., Markham, Ont., for an incandescent dynamo to light their mills.

Some weeks ago a valuable mineral deposit was discovered near Glace Bay, C.B. It is known as libbettenite, and is found elsewhere only at Libetten, in Hungary. Owing to its great scarcity it is worth from \$600 to \$800 a ton. The Cape Breton property has been bonded, and a local company is being formed to develop it.—Maritime Merchant.

From Port Arthur, Ont., to Calgary, N.W.T., at nearly every point of any importance will be seen new elevators erected this fall. C. C. Castle, Manitoba warehouse commissioner, up to date this year has issued licenses for 157 elevators, which are now in course of erection, or projected, with a total capacity of 4,500,000 bushels. This list does not include the large railway elevators at Port Arthur and Fort William. The Ogilvie Milling Co., and the Northern Elevator Co., and many other firms have also made arrangements to go ahead and build, but have not yet secured the requisite licenses.

The Algoma Navigation Co. will, it is stated, place an order for a new steel boat, to run between Owen Sound and the Soo, with the Bertram Engine Works, Toronto. The new boat will be thoroughly modern; 190 feet in length by 34 feet beam, 700 tons, with accommodation

for 110 passengers, and a speed of 16 miles an hour.

Charles Archer, solicitor, of Dawson, gives notice of three applications to Parliament for legislation affecting the welfare of the Yukon. One is for power to construct a railway from Dawson to the boundary line, a second is to incorporate the Yukon Consolidated Water & Power Co., with a capital of \$2,000,000, for the purpose of supplying water to work the gold mines, and for domestic purposes, and the third is to incorporate the Stewart River Developing Co., with a capital of \$500,000.

The Canada Metal Milling Co., Toronto, has been incorporated with a capital stock of \$50,000, to manufacture metal, metallic compounds, etc. The provisional directors include J. R. Barber, Georgetown, Ont., J. J. McCaffrey, and A. A. Reinhardt, both of Toronto.

The Jones & Moore Electric Co., Toronto, are installing a complete lighting plant on the Dredge "Frank" at Owen Sound, Ont.

It is probable that the Stohl Wagon & Farm Implement Co., Harrisburg, Pa., will erect a factory in Toronto, and employ about eighty hands.

The firm of Colby, Scott & Co., Chatham, Ont., has been formed to manufacture wagon racks, sashes, doors, etc.

The Gardiner Furniture & Furnishings Co., Toronto, has been incorporated

with a capital stock of \$40,000, to manufacture furniture, etc. The provisional directors include W. H. Gardiner, F. J. Harding, and R. E. Graham, all of Toronto.

The Sylvester Mfg. Co., Lindsay, Ont., has been incorporated with a capital stock of \$650,000, to manufacture agricultural implements, pumps, boilers, engines, etc. The provisional directors include Richard Sylvester, R. B. M. Sylvester, both of Lindsay, and E. R. Michie, Toronto.

The Talbot Oil & Gas Co., Dutton, Ont., has been incorporated with a capital stock of \$40,000. The provisional directors include H. P. McMahon, Aylmer, Ont., Wm. Hollingshead, Dutton, Ont., and B. F. Housinger, St. Thomas, Ont.

The Cannington Electric Light Co. have placed an order with The Jones & Moore Electric Co., Toronto, for one 100 h.p. dynamo, for supplying power to motors.

The Imperial Paper Co., Toronto, has been incorporated with a capital stock of \$100,000, to manufacture paper, etc. The provisional directors include W. G. Viel, Howard Southcombe, and Philip Heild, all of Toronto.

C. Wilson & Son, Toronto, have been incorporated with a capital stock of \$200,000 to manufacture scales, tools, implements, hardware, etc. The provisional directors include R. A. Wilson, G. L. Hillman and James Lawrie, all of Toronto.

The Canadian Wood Mfg. Co., Toronto, has been incorporated with a capital stock of \$500,000 to manufacture woodenware, etc. The provisional directors include R. S. Wood, London, Ont.; Angus McLeod, Bracebridge, Ont., and Dr. Beattie Nesbitt, Toronto.

The Brodhagen Lumber Co., Brodhagen, Ont., has been incorporated with a capital stock of \$50,000, to manufacture lumber, timber, etc. The provisional directors include Charles Querengesser, John Bennevis and W. F. Pushelberg, all of Brodhagen.

The Jones & Moore Electric Co., Toronto, are installing a complete electric light plant, including multipolar dynamo, marble switchboard and enclosed arc lamps, for the yards of The People's Coal Co., Toronto.

Pneumatic Tools and Appliances ARE GREAT MONEY SAVERS.

Air Hoists,
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lers, Agitation
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fineries.
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Augers,
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Hammers,
Rammers,
Rotary Drills,
and Augers.
Reversible
Boring Machine,
Flue Cutters,
Rollers and
Welders,
Air Lift Pumps,
Jacks,
Paint Spreaders,
Bolt Nippers.

The Noxon Co., Ingersoll, Ont., is erecting a building 120x100 feet, to be used for shipping, storage and erecting purposes.

Messrs. Bush & Piper, Detroit, Mich., will erect a factory in Canada for the manufacture of porcelain bath tubs, soil pipes, etc.

The A. D. McRae Co., Fernie, B.C., has been incorporated with a capital stock of \$16,000 to manufacture timber, lumber, etc.

The H. R. Lamb Fence Co., London, Ont., has been incorporated with a capital stock of \$300,000, to manufacture woven wire fences, etc. The provisional directors include H. R. Lamb, C. A. Hendershott, both of Adrian, Mich., and J. M. Lamb, Clayton, Mich.

Messrs J. Robson & Son, Oshawa, Ont., are installing a new lighting dynamo, and the order for it has been placed with The Jones & Moore Electric Co., Toronto.

The Ontario Works Building Co., Niagara Falls South, Ont., has been incorporated with a capital stock of \$40,000 to carry on the business of contractors. The provisional directors include J. S. Lovell, Robert Gowans and Richard Richardson, all of Toronto.

The Industrial Advocate, which under the able management of Mr. Fred. P. Ronnar has in the past drawn so much attention to the mining, milling, manufacturing and mechanical interests of the Maritime provinces, is in future to be published at Halifax by the Industrial

Publishing Co., in which that gentleman is largely interested. The July number, just to hand, is an earnest of this attempt, and is a thoroughly creditable undertaking.

The Kingston Locomotive Works, Kingston, Ont., have received a contract for twenty consolidated locomotives for special freight service, five passenger locomotives and two for switch work on the Intercolonial Railway. The Rathbun Co., Deseronto, Ont., will build 150 platform cars for the same road.

The works of the Portland Rolling Mills and Maritime Nail Works will be moved from St. John, N.B., to Sydney, N.S., where there would be an annual saving of \$10,000 on the cost of coal alone.

The Dominion Iron & Steel Co., are now developing the marble areas of Eskasoni, C.B. The working of the areas will necessitate the building of a line of railway from Grand narrows to connect with the Intercolonial at Coxheath a distance of about 30 miles.—Maritime Merchant.

The Lausdale Woolen Mills, Napanee, Ont., were destroyed by fire August 14.

The lumber mill of the Georgian Bay Lumber Co., at Waubushene, Ont., was destroyed by fire August 16. Loss about \$5,000.

The Ottawa & Hull Power Co., will erect a pulp and paper mill on the Quebec side of the Chaudiere. It will utilize all the water power available which is probably 35,000 h.p.

The foundry of Marsh & Henthorn, Belleville, Ont., was destroyed by fire August 21.

The Canadian Steel Corporation, Welland, Ont., has been incorporated with a capital stock of \$18,000,000. The plant will occupy 188 acres.

The National Cash Register Co., a United States concern, will erect a factory at Toronto, at a cost of about \$75,000.

Fire in the compound department of the Canadian General Electric Co., Peterborough, Ont., caused a loss of about \$6,000.

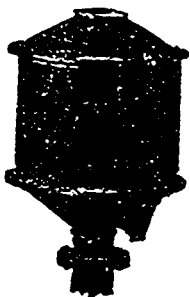
The Shawinigan Water & Power Co., has submitted a scheme to the Dominion Government to convert the channel of the St. Lawrence between Montreal and Quebec into a canal, either bank of which would be outlined with electric lights at the end of buoys moored on the side of the channel. The Government has found it necessary for the purpose of utilizing the canal system to the greatest advantage to provide electric lights for the canal so that vessels may use the same at night, and the scheme of the company is to apply this system to the channel of the river, with a difference that the lights in the river would be applied to floating buoys.

The Superior Drill Co., Springfield, Ohio, contemplate erecting a factory in Chatham, Ont., to manufacture disk drills, barrows, etc. The factory will be in operation in time to meet the demands of next year's business.

One More Government Adopts Burt Exhaust Heads.

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The perfect principle and lasting construction of



BURT EXHAUST HEADS

have carried their reputation far and wide.

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feet long, 58 inches wide, and weighed 2½ tons. The company also put in a rubber belt 3,529 feet long and 36 inches wide, in the Intercolonial Railway elevator at St. John. This belt weighed nine tons.

G. F. Leonard and J. F. Warne are connected with a company which is to be organized in Ottawa with a capital stock of \$40,000 to manufacture loose leaf ledgers.

The Little Giant Water Wheel manufacturers, J. C. Wilson & Co., Glenora, Ont., report the following among recent sales and shipments of the above turbine: One 28-inch vertical to Wm. Sutton, Simcoe, Ont.; two 18-inch verticals to G. J. Adams & Co., Montreal; two 21-inch verticals to S. Howes, London, England, one 16-inch vertical to A. Smith, Sheldon, Ont.; one 21-inch horizontal to the Electrical Co. of Baie St. Paul, Que.; one 18-inch vertical to H. R. Young, Grafton, Ont., and one 33-inch vertical to Goldie Milling Co., Ayr, Ont.

The works of the Humber Power & Light Co., near Toronto, are being rushed through to completion, and they are now installing the 2x36 inch turbines made by Barber, of Meaford, Ont. The poles from Toronto Junction to the power house are completed and wiring will be finished shortly. Everything is being done in a thorough, substantial manner, indicating stability and strength.

The Burt Mfg. Co., Akron, Ohio, made a large shipment of their oil filters and exhaust heads to Buenos Ayres last

month, to be used by the Argentine Government. This makes one more government, or ten in all, which have adopted the Burt Co's Cross oil filters for use in war vessels, arsenals, etc.

The plant of the North Sydney Silicate Brick Co. has arrived and is being installed. The works, which are situated at Indian Beach, North Sydney, will employ about 60 hands.

Among the additions to the I.C.R. rolling stock will be twenty consolidated locomotives for special freight service, five passenger locomotives and two for switch work. The contract for these has been given to the Kingston Locomotive Works. The Rathbun Co., of Deseronto, will build 150 platform cars. In addition, large contracts are now in the hands of the Rhodes-Curry Co., of Amhorst.

The directors of the Portland Rolling Mills and Maritime Nail Works, St. John, N.B., contemplate moving these industries to Sydney, N.S.

A very large number of the friends of the Otis Elevator Co. were last week in receipt of an invitation to visit them at their exhibit in the Main Building at the Toronto Industrial Exhibition. We are certain that those who accept this invitation will be well repaid for doing so.

The demand for all classes of skilled labor seems to be quite unprecedented. In Saturday's issue of The Globe, under the heading "Mechanics Wanted," the services of 247 persons were sought. This

on the basis of two persons per advertisement, in cases where the number called for was not specified. Last year on the same day 75 mechanics were advertised for. The increase is an evidence of the extraordinary prosperity of the country.

The Peterborough, Ont., Review, speaking of the industrial development of that town, enumerates the number of employes in some of them as follows:

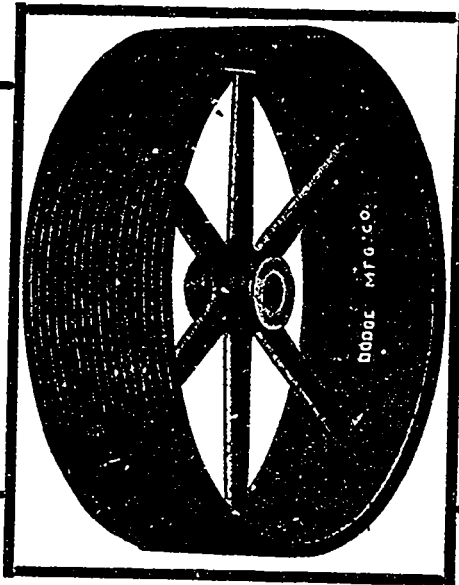
Canadian General Electric Co	800
Wm. Hamilton Mfg. Co.....	200
Peter Hamilton Agr. Works.....	150
Peterborough Lock Works	100
Auburn Woolen Mills.....	160
Peterborough Cordage Co	200
Three Canoe Factories.....	60
Lock Factory.....	100
Turner's Tent Works.....	25
Ackerman's Harness Factory.....	100
Cereal Works.....	800
Saw Mills (3)	100
Flour Mills	50
Tailors, Mantle Makers, etc.....	200
The Geo. Matthews Co.....	80
Three Printing Offices.....	100

3,225

The latest illustration of the bonus craze is furnished by the town of Cornwall. An agreement has been signed between the Town Council and a joint stock company, by which the latter binds itself to erect at Cornwall a furniture factory that will employ at least eighty hands, and pay out in wages not less than \$25,000 annually. In return the Council guaran-

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- Detachable Chain.
- Sprocket Wheels.
- Belt Conveyors.
- Friction Clutch Pulleys.



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DROP AND POST, SAFETY COLLARS, ETC.

Power Transmission Machinery. GRAIN HANDLING MACHINERY.

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DODGE MANUFACTURING CO., - TORONTO, ONT.

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tees the company \$15,000 cash, \$1,200 with which to purchase a factory site, and exemption from taxes. The giving of these bonuses and exemptions does not increase the demand for manufactures, or add to the sum of industry. It enables those who purpose establishing a manufacturing concern to play off one centre against another, and from the local jealousy thus aroused to reap a substantial profit for themselves at the expense of the public. If the bonus system were abolished in Ontario we should have just as many factories as we have now, and the municipalities of the province would be relieved of an oppressive burden.—Palmerston, Ont., Spectator.

The manufacture of gear wheels having their teeth machine dressed on two sides is a specialty with J. C. Wilson & Co., Glenora, Ont., and is an expanding branch of their business. They have recently booked orders from such well-known firms as The Rathbun Co., Deseronto, Ont.; Toronto Bolt & Forging Co., Toronto; London Machine Tool Co., London, Ont.; The Northey Co., Toronto. These gears are mostly of large design and intended for heavy duty. They have a full range of patterns in all styles of gears, and their pattern list is to be had for the asking.

The flour mill of George Reid, Dunnville, Ont., was destroyed by fire Aug. 27. Loss about \$8,000.

The Chicoutimi Pulp Co., Chicoutimi, Que., is erecting a large factory at that place, which, it is estimated, will increase

the annual output of the works to about 60,000 tons.

Messrs. Price Bros. & Co., are erecting a large pulp mill at Jonquiere, Que.

The Ontario Cabinet has authorized the construction of a coffer dam on Dufferin Islands on the Niagara River, by the Ontario Power Co., to be used in diverting water through the park to the company's outlet below the falls. Although the company's application has been opposed by the Canadian Niagara Power Co., which was first in the field, and has built a magnificent power tunnel, the Government has decided to grant the Ontario Power Co's application, in order to stimulate competition in that district.

The Canadian Pacific Railway Co. has awarded the contract to Lessard & Harris, Montreal, for four of the buildings of the new locomotive works to be established at Hochelaga. The buildings will be of brick, and the car shop will be 900 feet long. The amount of the contract is \$225,000.

The Saginaw Salt & Lumber Co., Windsor, Ont., have completed their salt works at Sandwich, Ont. The output of the works will be 500 barrels per day.

St. Joseph's Hospital, London, Ont., is to have a \$20,000 addition, contracts for which have been let.

Mr. J. E. Aldred, manager of the Shawinigan Water & Power Co., in discussing the recent proposition of his company to light the channel of the St. Lawrence between Montreal and Quebec,

says among other things: The advisability of adopting such measures as will make the river available during the twenty-four hours of each day for the passage of large vessels is not to be questioned, when the statement is made by those familiar with the shipping business at Montreal that it would result in increasing the efficiency of this route not less than 50 per cent. We are apt to becloud the issue by thinking of the St. Lawrence as something apart from an ordinary inland waterway, whereas to all intents and purposes its navigation is confined strictly to the channel, which is practically a submerged canal and should be treated as such. The advisability of lighting the present system of canals by electric lights has ever been questioned, and it is evident, therefore, that inasmuch as it is entirely practicable, to apply electric lights to the channel of the St. Lawrence, that it only needs the attention of the public to bring about the necessary improvements.—Montreal Star.

The plant of the beet sugar factory at Benton Harbor, Mich., has been removed to Berlin, Ont.

OTIS ELEVATOR COMPANY.

One of the most interesting exhibits at the Fair, to the architect and engineer and also to the general public is that of the Otis Elevator Co., of Hamilton, Ont. This company has on exhibition in the main building, several elevators which will give a good illustration of the class

WRITE FOR PRICES TO

The HAMILTON BRASS MFG. CO. Limited

HAMILTON, - ONTARIO

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of work turned out by them. One of the most interesting of these is the model of their Standard House Push Button Elevator. This little elevator does everything but talk and is so simple that a child can operate it with perfect safety. This class of elevator is now being installed in all the large private houses in the United States. There is also running a No. 2 electric machine which is controlled by the Otis Magnet Control, lately perfected and which is said to be the most reliable and simple elevator control yet devised. The Otis Elevator Co., will be glad to see anyone at their exhibit and explain any and all points of their machinery.

Some of the Otis hydraulic elevators in use in Canada at this time are:

MONTREAL.—Board of Trade Building, British Empire Mutual Life Assurance Co., Canadian Pacific Railway, Fraser Building, New York Life Assurance Co. (3), Standard Life Assurance Co., Temple Building, Waddell Building, Wilson Building, etc.

TORONTO.—City Hall (3), British American Assurance Co., Board of Trade (2), Canada Life Assurance Co., Canadian Bank of Commerce, Dominion Bank, T. Eaton & Co. (2), Freehold Loan & Savings Co. (2), London & Canadian Agency Co., Mail Printing Co., etc.,

HAMILTON.—Canada Life Assurance Co.

WINNIPEG, MAN.—McKenzie Hotel.

VICTORIA, B.C.—Driard Hotel, Hudson Bay Co.

Some of the Otis electric elevators in use in Canada are:

MONTREAL.—Bank of Montreal, Bank of Toronto, Barron Block, W. S. Brown (2), City Hall, La Banque Du Peuple (2), Montreal Street Railway Co., Royal Insurance Co., Sun Insurance Building, Estate of Thomas Wilson, Montreal Star Building, Joseph Murphy & Co. (2), Gault Bros. & Co., Wire & Cable Co.

OTTAWA.—Central Chambers.

TORONTO.—Confederation Life Association (3), Dominion Bank, Geo. Gooderham, Imperial Bank, P. Jamieson, Ontario Parliament Buildings (4), Toronto General Hospital, Robt. Walker & Sons, Western Canada Loan & Savings Co.

VANCOUVER, B.C.—G. W. De Beck, Molsons Bank.

VICTORIA, B.C.—Weiller Bros.

WINNIPEG, Man.—Bank of Ottawa, Thomas Ryan.

THE PACKARD LAMP.

The Packard Electric Co., St. Catharines, Ont., have sent us a folder in which we are told something about the Packard lamp, which, they say, embodies perfection in every detail in incandescent lamp manufacture. In the makers' efforts to bring this lamp to its present development they have drawn upon the experience of many makers and have combined the best features of manufacture of all lamps with their own original improvements.

The manufacturers describe it as follows:

In appearance the Packard Lamp is dainty and symmetrical, making it an attractive fixture wherever used.

The straight sided or moulded bulb, now adopted by the leading makers of the foremost countries in the world, is a Packard feature, which distinguishes this lamp from many others.

The glass used is the finest obtainable. It is carefully annealed and never cracks from heat strain. Even in thickness and free from defects and discolorations, it produces a uniform distribution of light and loses nothing by refraction.

The bases are cemented on with mechanical perfection and absolute uniformity. The cement used is a specially prepared waterproof mixture, which actual test has proven to withstand the severest strains for an indefinite time without stretching or in any way allowing the base to become loosened from bulb.

The soldered connections are substantial, and insure the prevention of a disconnection or weakening when screwing into the sockets.

The filaments are of a class scientifically proven to produce the most uniform distribution of light possible, while maintaining strength to withstand vibration and to retain a symmetrical position in the centre of the bulb. Each lamp is mechanically and chemically exhausted, and the vacuum is the most perfect obtainable. Each lamp is separately tested for vacuum, and following each mechanical process, rigid tests are given to insure perfection, and a final test before shipping assures to every lamp sent out the retention of the vacuum and an almost absolute maintenance of rated candle power and unequalled durability.

JAS. DOUGALL & SONS

LIMITED

BONNYSIDE

Trade Mark.

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

DOUGALL

Trade Mark.

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MANUFACTURERS OF

Silica and Fire Bricks for Steel and Iron Furnaces, Coke Ovens,
Gas, Glass and Chemical Works.

Best Scotch Ganister for Steel Furnaces and Foundries.

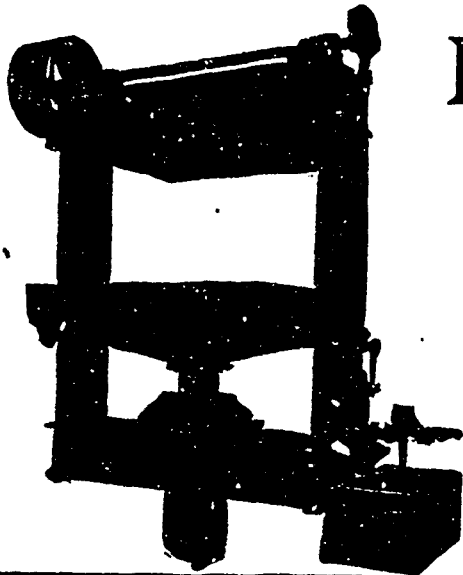
STOPPERS, NOZZLES and LINERS for Steel Pouring Ladles.

Our goods have been, and are in use by all the leading Steel Works, Forges, Iron Foundries, Glass and Chemical Works and Gas Companies. Reports from these and some leading Canadian customers on application.

Direct shipments by quickest routes on lowest through rates to all Canadian points. Quotations promptly given on receipt of specifications.

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**PRESSING VENEERS
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William R. Perrin & Company
TORONTO, - CANADA

Packard lamps are measured photo-metrically while revolving, and are rated according to average candle power produced. They are made in three efficiencies—3, 3½ and 4 watts per candle. When the voltage is practically constant, lamps of 3 watts efficiency only should be used. Where voltage varies approximately two per cent., 3½ watt lamps should be used; and where the voltage is widely fluctuating, lamps of no higher efficiency than 4 watts should be specified.

JOHN BERTRAM & SONS CO.

One of the very oldest and most reliable manufacturing concerns in Canada who make machine tools is The John Bertram & Sons Co., Dundas, Ont., and the Bertram tools of to-day are the result of the efforts of forty years. They stand for forty years of untiring effort of trained brains and hands of specialists in all branches of machine tool design and construction.

All improvements that improve, and labor-saving features that save labor are embodied in the Bertram machines; but at the same time no sacrifice whatever is made in weight, quality of material or superior workmanship. This special attention to the vital parts is the secret of the durability and capacity for work of these tools.

**MINERAL PRODUCTION OF
BRITISH COLUMBIA.**

From the annual report of the minister of mines of British Columbia are condensed the following statistics:

The total value of the various mineral products of the province up to and including 1901 was \$172,241,988, as follows:

Gold—Placer.....	\$63,554,543
Lode.....	17,161,463
Silver.....	16,534,554
Lead.....	9,622,689
Copper.....	8,809,546
Other metals.....	51,878
Coal and Coke.....	54,157,315
Building stone, bricks, etc.....	2,350,000

Total.....\$172,241,988

The product of the mines in the province during 1901 was \$20,086,780. The per capita mineral production of the province for 1901 was \$134.

The production of lode mines in 1901 is valued at \$13,683,044, an increase over the previous year of \$3,613,287, or 36 per cent.

The tonnage of ore mined in 1897 was 169,362 tons; in 1898 it had increased to 215,944 tons, or about 27.5 per cent.; in 1899, to 287,343 tons, or 33 per cent.; in 1900, to 554,796 tons, or 93 per cent.;

in 1901, to 920,416 tons, or 66 per cent. over previous years.

While this great advance in tonnage is chiefly due to the enlarged output of the mines previously working, there have been a number of new ones added to the list during the past year.

Incomplete returns from nonshipping mines indicate that these number 47 and employed 374 men—227 below ground and 147 above ground.

The following table shows the value of the mineral production of British Columbia in 1901:

Gold.....	\$5,318,703
Silver.....	2,884,745
Copper.....	4,446,963
Lead.....	2,002,733
Iron.....	17,238
Coal.....	4,380,992
Coke.....	685,405

Total.....\$19,686,780

The gross output of coal during 1901 was 1,691,557 tons, of which 221,226 tons were used to make coke, so that the net output for the year was 1,460,331 tons of coal and 127,081 tons of coke. The increase over 1900 was 1.5 per cent. of coal and 49 per cent. of coke.

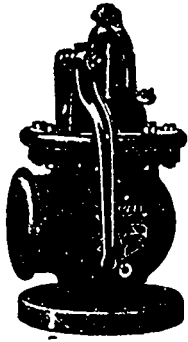
The sales of coal were: For consumption in Canada, 413,705 tons; for export to the United States, 895,197 tons; for

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DRILLS**

THE CANADIAN RAND DRILL CO.
SHERBROOKE, QUE.
BRANCH OFFICES IN
MONTREAL, QUE. TORONTO, ONT. HALIFAX, N.S.
ROSSLAND, B.C. RAT PORTAGE, ONT. GREENWOOD, B.C.
VANCOUVER, B.C.

**AIR
COMPRESSORS
GAS**

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A VALVE YOU CAN RELY ON
SEND FOR PRICES

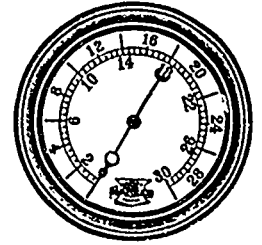
CROSBY STEAM APPLIANCES EXCEL

Steam Engine Indicators.
Recording Gages.
Revolution Counters.
Pressure and Vacuum Gages.
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Stationary and Marine Valves.
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BOSTON, NEW YORK, CHICAGO, LONDON

export to other countries, 18,966 tons—total, 1,327,868 tons (of 2,240 pounds).

The total sales of coke amounted to 127,533 tons, of which 80,154 tons were for consumption in Canada and 47,379 tons were for export to the United States. The Vancouver Island collieries produced 1,261,744 tons of coal and 15,398 tons of coke. The Crow's Nest collieries produced 198,587 tons of coal and 111,683 tons of coke.

The gold production of the province—including both placer and lode—was valued at \$5,318,703, an increase over that of 1900 of \$586,598, or about 12 per cent. The placer-gold output for 1901 was \$970,100, a decrease from the previous year of \$308,624; but the lode mines produced \$4,348,603 in value, a gain of \$895,222, or 26 per cent. Approximately, this gold has been derived as follows: From direct smelting of

copper-gold ores, \$3,474,738; from combined amalgamation and concentration, \$873,865; total \$4,348,603.

The total quantity of silver produced in 1901 was 5,151,333 ounces, valued at \$2,884,745. This is an increase over the previous year of \$575,545 in value.

The production of lead was 51,582,906 pounds, worth \$2,002,733, a decrease in value of \$689,154, or about 25 per cent., as compared with the production of 1900, but in that year there was a phenomenal increase over 1899 of 206 per cent. The lead production of 1901 shows an increase over 1898 of 86 per cent. and over 1899, of 128 per cent.

The copper production for the year was 27,603,746 pounds of "fine copper," valued at \$4,446,963, an increase of 17,606,666 pounds and of \$2,831,674 in value over that of the previous year; it was derived from the following:

	Pounds.
Boundary district.....	14,511,787
Trail (Rossland) district..	8,333,446
Coast district.....	3,115,872
Nelson district.....	1,599,449
Other districts.....	43,192

Total..... 27,603,746

A small quantity of platinum—about \$457 worth—was produced from the Similkameen district.

Statistics show that 5,746 tons of iron ore were shipped, which were used for experimental purposes or as a flux in smelting other ores, no iron blast furnace at present existing in British Columbia.

IRON WORKS AT GUELPH, ONT.

An arrangement, it is understood, has been arrived at by which the Page-Hersey Iron & Tube Co., Montreal, will remove

SHAFTING

We have the Sole Agency for Planished Shafting, Shapes, etc.


AND CARRY STOCK OF ALL SIZES

PROCESS—By one pass through the dies, the bars are brought to EXACT DIMENSIONS specified, and with a bright smooth surface. In the further operation of Automatic straightening they are given AN EXCEEDINGLY FINE POLISH by the action of planishing rolls. Bars finished by this method are very largely increased in TENSILE, TRANSVERSE and TORSIONAL STRENGTH, in consequence of the compression producing a considerable increase in density at and near the surface.

Large as is the consumption of these bars for power transmission shafting, its use in machine manufacture is much greater. Machine Shafts and Rods, Valve Stems, Pump and Piston Rods, Engine and Elevator Guides, Screw Rods and Bicycle Hub Stock, are a few of its many uses.

Turned Shafts are less strong than cold drawn, for the reason that the strength portion, or outside of the bar, is OUT AWAY. For further particulars and price, address

LAURIE ENGINE CO. 321 ST. JAMES STREET MONTREAL



ARMSTRONG'S PIPE THREADING AND CUTTING OFF MACHINES,

For Hand or Power.


Save Time and Labor. Capacity from 1/2 to 6 inches.

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

ARE MANUFACTURED BY

THE ARMSTRONG MFG. CO., BRIDGEPORT, CONN.

New York Office—139 Centre St. Catalogue on Request.



their plant from that city to Guelph, Ont. The buildings and plant will cost about \$100,000; the output will be about 5,000 tons of finished products; 125 hands will be employed, to whom about \$100,000 a year will be paid.

The city, on the other hand, is asked to supply free, a site comprising ten acres and give ten years' exemption from taxation—school taxes excepted. It will have to give a bonus of \$40,000 to the company, \$15,000 of which must be paid ten days after the mill is put into successful operation, and the balance annually at the rate of \$1 for every ton of pipe turned out of the mill. In no one year, however, is more than \$5,000 to be paid.

CALCIUM CARBIDE AT SHAWINIGAN FALLS.

Shawinigan Falls, the new manufacturing centre of the Province of Quebec, is to have another industry in the shape of extensive calcium carbide works. The demand for calcium carbide has increased marvelously within the past few years and existing plants are quite unable to keep pace with it. In spite of its rapid growth the industry is said to be only in its infancy, and men who have studied the question prophesy that within a comparatively short time calcium carbide will be used to a far greater extent than at present, especially for lighting purposes.

Shawinigan Falls has peculiar advantages, which will help to make the new carbide company a success. There is an inexhaustible supply of cheap water-power, taxes are exceedingly low, and the supply of labor is sufficient to provide for all requirements in that direction. The town is centrally situated, and it is an easy matter to ship to any point in the Dominion either by water or rail.—The Paper Mill.

TRUCKS.

The John Watson Mfg. Co., Ayr, Ont., have sent us a copy of their new catalogue having reference to the trucks manufactured by them. The trucks illustrated and described in the catalogue are the Watson No. 1, standard size 27x48 inches, main wheels 14x2 1/2 inches face,

capacity 1,500 pounds, with two heavy swivelled caster wheels. These casters are practically anti-friction, and move freely under load. The load rides on the centre wheels and the truck is easily turned in any direction. They are made in all sizes, and a boy and one of these trucks will, we are told, take the place of five men in any factory where stock is moved from place to place.

No. 2 Watson truck is of same general design as No. 1, but made much stronger and heavier in all its parts. The size of this truck can be varied to suit; and for extra heavy work two caster wheels at each end are recommended.

No. 3 warehouse truck is equipped with main wheels 18x2 1/2 inches and two caster wheels at one end, capacity 3,000 pounds. Made in all sizes and is a favorite with merchants, millers and warehousemen.

No. 4 warehouse and factory truck is light, set low, suitable for quick and easy handling. Made in all sizes, with racks on 4 sides or two ends, or with box.

The No. 5 truck is specially adapted for use on an incline, and the arrangement of wheels can be applied to all sizes of Watson trucks. Built in all sizes and designs.

A truck with racked ends is shown, which arrangement can be applied to all trucks, and is designed for handling boxes and small packages which are liable to be jarred off. These racks are removable.

Another truck is shown with removable side and end boards, which makes it easily convertible from a truck with all four sides enclosed to one having three, two or one side only.

A paper truck is shown for handling rolls of paper of any size.

Other trucks shown include warehouse hand truck, barrel truck, bag truck, etc.; also wheelbarrows, barrel and box cart, etc.

The catalogue will be sent on application.

A LIFE-SAVING AUTOMATIC COUPLER.

The Imperial Limited left for the coast to-day equipped with the latest life and labor-saving device, in the shape of the Trethewey automatic steam and air couplers. This is a simple invention by

means of which the system of pipes conveying the steam for car-heating purposes, the steam for the signal pipes and the compressed air attachment for the Westinghouse brakes are automatically coupled by the mere impact of the cars.

The invention is a casting which is clamped into the draw bar consisting of guide horns arranged diagonally containing the three system of pipes, which, when coupled, make an absolutely perfect connection steam and air joint and do away entirely with the necessity of trainmen making the separate connections of each pipe. The impact of the cars makes the connection as instantaneous as the car coupling is made and the uncoupling is equally expeditious. So favorably impressed with the invention are the Canadian Pacific that they have decided to equip all their cars with it. At present the Trethewey Co. is equipping one hundred cars, and is erecting shops at Valleyfield for carrying on its business on a large scale. The advantages of the new device are self-evident; a train of any number of cars can instantly be coupled by impact, there is no going between cars by attendants, no scalding by steam or freezing of hose pipes; there is a saving of fuel and water on the road, and a saving, it is estimated, to the C.P.R. alone of \$25,000 a year in rubber hose alone. In addition to this, the general appearance of the train is greatly improved, as the unsightly system of rubber hose between cars is replaced by the perfectly constructed hood.—Montreal Star.

FISH FLOUR.

A great deal is done in Norway to improve and preserve the provisions produced in the country and to procure a market for them abroad. The fisheries represent one of Norway's chief industries, and quantities of fish are sold at very low rates, particularly during summer. One way in which these are utilized is by means of an invention which quickly dries and pulverizes the flesh of fresh fish. The resulting product called fish flour, is easy to transport from one place to another and has great nutritive value. A new and profitable branch of industry might be established in Canada by utilizing fish in this way.

RICE LEWIS & SON, LIMITED, Hardware and Metal

MACHINIST TOOLS, PIPE FITTINGS,

COMPLETE STOCK OF STOCKS AND DIES.

PIPE VICES.

STILLSON AND TRIMO WRENCHES.

STEAM PIPE.

CORNER KING AND VICTORIA STREETS,

TORONTO.

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THE GEE ELECTRICAL ENGINEERING CO.

11 COLBORNE STREET, TORONTO.

LIMITED

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

Dynamos, Motors, AND ALL..... **ELECTRICAL APPLIANCES**

We have every facility for repairing. We guarantee all our work. We keep a large staff of competent electricians and wiremen, and are in a position to do Electrical Work of every description. We wire Residences, Business Houses, Factories, etc. We have on hand a large stock of

ESTIMATES AND PLANS SUBMITTED.

Electrical Fittings, Arc Lamps, Telephone Bells, Etc.

NOVA SCOTIA COAL.

The rapid increase in the foreign sales of the Dominion Coal Co., particularly in the United States, makes it necessary for the company to open new mines. As a result, the abandoned workings at Port Morien and Victoria Mines, N.S., will probably be reopened at an early date. The output of the Dominion Coal Co. for the past year will be considerably over three million tons. This is the statement made by Mr. James Ross, managing director of the company. The output for the preceding year was a little over a million and a half tons, so the past year will likely be the banner year in the history of the company. Mr. Ross says that the output for the past month would amount to about 310,000 tons. The average daily output is now about 12,000 tons. The shipments to the St. Lawrence this year will be a little over a million tons, which is a small increase over last year's shipments.

The Dominion Iron & Steel Co. have received an order from the Consolidated Gas Co., New York City for 25,000 tons of coke. This order is rather significant,

coming, as it does, when the great coal strike is at its height in the United States.

IRON ON THE SASKATCHEWAN.—The prospectus of the proposed Irondale Coal & Iron Mining & Development Co., of Edmonton, is received, says the Edmonton Bulletin. The following extracts from the prospectus are of interest.

The Irondale Coal & Iron Mining & Development Co., has been formed for the purposes of acquiring a valuable iron property, which has been located at Red Earth and Stoney Creeks, about 18 miles east of Victoria in Alberta. The property, which is situated about 3 miles north of the Saskatchewan river, comprises six claims of 160 acres each. The surface indications exist throughout the entire ground, and consists of a deposit of iron oxide varying from 6 feet to a few inches in depth. The ore is a ferrous oxide, assaying from 40 to 47 per cent. in iron. The character of these deposits and the general formation of the ground point to the existence of a main deposit of iron ore at no very great depth.

Red Earth Creek, in the banks and bed of which the oxide is found for a distance of three-quarters of a mile, 2 and 3 feet in depth, rises from an underground spring, the water of which brings the iron up from below, and re-deposits it along its course. The water in this creek is so strongly impregnated with iron that it never freezes in the coldest weather. It is anticipated that by boring the existence of the main deposit will be established, and as the surface indications have been found over the whole 3 miles of ground, the inference is that this deposit is of considerable extent and value.

Coal seams of considerable extent are known to exist on the Saskatchewan at no great distance above the property. The coal is of excellent quality, and from an analysis of it published in the report of the Dominion geological survey for 1886, it has been judged to be of a very satisfactory character for smelting purposes. It is proposed to acquire the most valuable of these coal limits from the Dominion government to hold in conjunction with the iron property.

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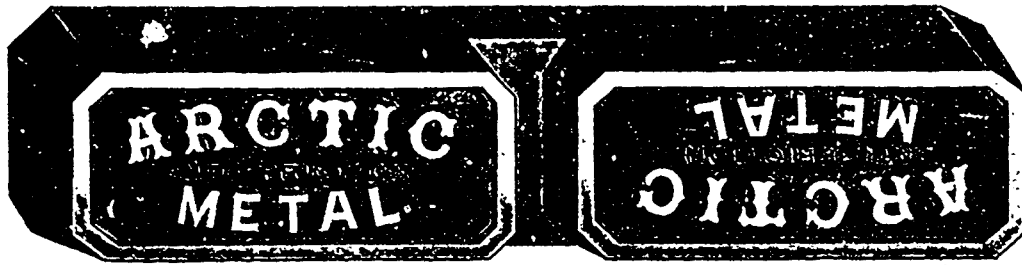
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Creek, a considerable deposit of a substance, which W. Pellew Harvey, the provincial assayer to the British Columbia Government, pronounces to be almost pure lime, and very valuable for fluxing purposes in connection with the iron deposits, has been discovered by the promoters of the company, which can easily be acquired.

It is believed that this combination of iron, coal and lime will form, with a little exploratory work, a very attractive property to outside capital.

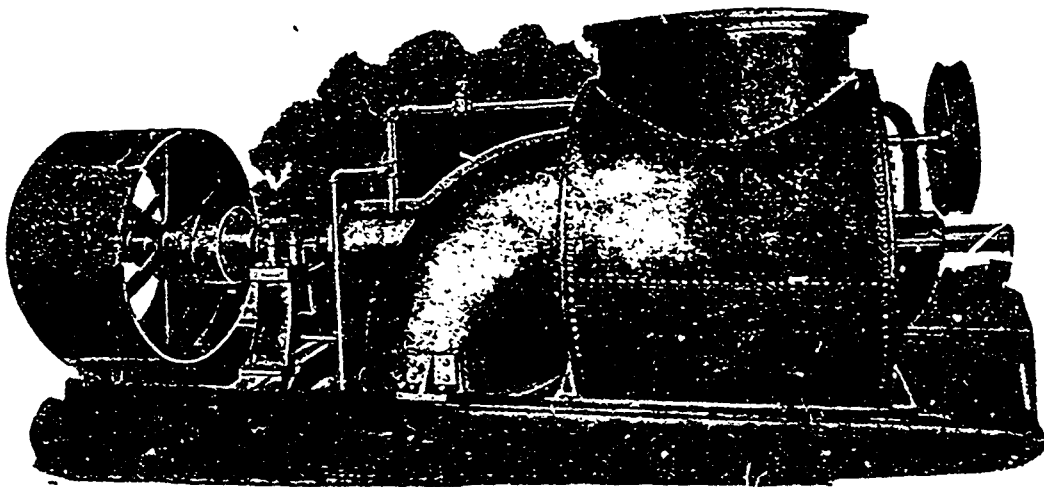
VARIED RESOURCES OF ONTARIO.—It may be regarded as a fact beyond dispute that, the more varied are the natural resources afforded by a country, the greater will be its prosperity. An example of this on a scale of magnificent proportions is to be seen in the United States, which possesses, within the limits of one nation, everything, with few exceptions, that is required for all the necessities of living and the arts and manufactures of civilization.

The districts of New Ontario are also exceptionally favored in this respect, the varied natural resources of the country being such that every description of industry can be pursued within the territory that lies between the eastern boundary of Nipissing and the western border line of Rainy River. While coal has as yet not been discovered within these limits the easy transportation on the waters of the Great Lakes brings it to our ports at prices that could hardly be cheapened, even though coal discoveries were made in the unknown lands of the north and the fuel were brought down by rail. Added to this is the fact that the tendency of modern invention is to make more and more use of natural water-powers, of which this country of lakes and rivers possesses an innumerable store.

Primarily a timber country, the first industries have been those connected with the lumberman, followed by pulp mills, utilizing a raw material of which Northern Ontario and Northern Quebec have an

inexhaustible supply. Following upon the exploration of timber ranges, came mineral discoveries, which have been brought markedly to the front by the enterprise of the Clergue companies, who have made of Sault Ste. Marie an example of what can be done when capital and brains back up the imaginative power that alone can conceive such industrial undertakings in a new country. From a small insolvent pulp industry Clergue has hatched successful pulp mills, nickel refineries, smelting works and steel mills, the raw material for which is taken from his own limits and mines, and carried on his own railways and steamers. New Ontario nickel is the ruling factor in the world's market for that metal, and the other mineral resources of the country are taking a prominent place in the records of the production of Canada.

But besides her timber and minerals, New Ontario possesses that without which no country can claim permanence and solidity, soil that is the equal for productiveness of any of the lands east



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or west. With a climate in which agricultural produce can be raised that is an impossibility in Manitoba, the New Ontario farmer need not compete with the wheat raiser of the prairies. He has a field of his own, and practically a market of his own, and, although he cannot cultivate the area that the Western farmer can he has advantages that counterbalance those of the prairie. While land companies are exploiting the North-West, and the available free lands close to any central railway point in the Territories is all taken, and even that which has been in the market is nearly all bought up, there is still a steady stream of settlers flowing into the less heralded but equally attractive free lands of New Ontario, which are easily accessible by railway. In this large territory including the fertile valley of the Rainy River, as well as the agricultural areas of Temiscamingue, there is room for a large and successful population of farmers, who will find climatic conditions and agricultural methods little different to those in the older portion of the province, while even as far north as the shores of the

Hudson's Bay it has been demonstrated that all the produce of a temperate zone will flourish.

This, then, is the position of New Ontario, containing within itself mineral wealth, agricultural lands and timber resources, affording opportunities for the investment of capital, and the application of labor in any of the industries springing from these, which actually embrace the whole gamut of human activity.—Industrial Review.

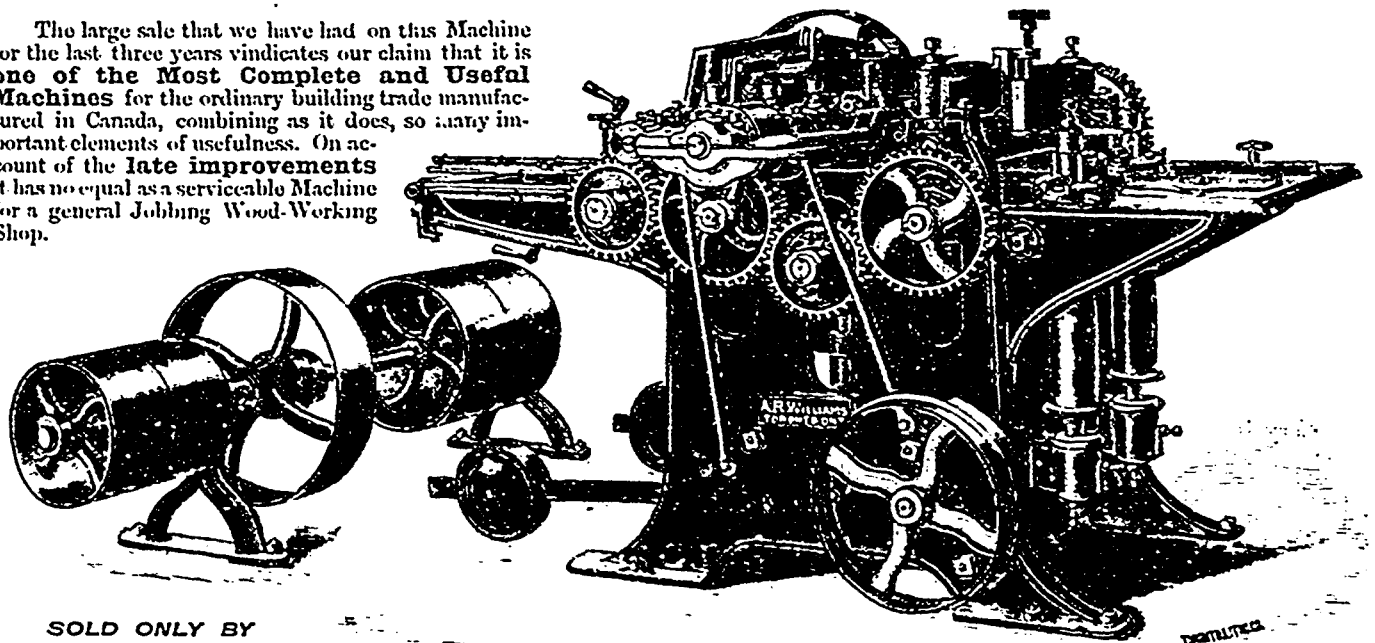
COPPER SMELTING ON VANCOUVER ISLAND.—The establishment of a custom smelting plant of large capacity on the Pacific Coast in British Columbia has been "under discussion" for some years past. Various proposals, to each of which a bonus requisition was attached, have been presented for the consideration of the City Councils of both Victoria and Vancouver, but since last January the supplying of this need was decided upon and arrangements immediately entered into in a practical way by practical smelter men without any flourish of

trumpets or requests for financial assistance. Messrs. Breen & Bellinger, than whom there are no better known metallurgists in the West, after thoroughly investigating conditions and ascertaining the amount of ore supplies available, proceeded to select a suitable site and at once started the constructive work with a view to the commencement of smelting operations about July 1, of the present year. As a base for ore supplies a contract was entered into with the Lenora Mining Co., of Mount Sicker, and the location selected was the new townsite of Crofton, which had been acquired by Mr. Henry Croft, for the ocean terminus of his ore railroad.

The prospects for obtaining a sufficient supply of ore to keep a smelter of a large enough capacity in continuous operation to produce satisfactory commercial results were also investigated, with the result that apparently when the claims and prospects in course of development on the east and west coasts of Vancouver Island and in the adjacent mainland districts, were taken into consideration, it was determined to build a smelter with

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MEET EVERY
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a capacity to treat about 800 tons of ore per day.

In deciding upon the erection of works of so large a capacity as those projected, the promoters of this enterprise were influenced by the following favorable conditions:

(1) The geographical situation is such that not only the mines of British Columbia can be reached, but also the rapidly developing portions of Alaska to the extreme northern limit, as well as the entire Pacific Coast to the southern portion of South America.

(2) The deep water harbor at Crofton Bay on the shore of which Crofton is located, with the channels which lead into that harbor, and which are navigable for the largest vessels afloat, provided for the transportation of ores and fuel at the lowest possible cost for freight.

(3) The fact that in the past the very large majority of the vessels which have come from either the North or the South to load with coal, coke or lumber have usually arrived at the Island ports in ballast, offered an opportunity to promote not only the smelting interests but also the shipping interests, because in future it will be possible for vessels to load from their home ports with ore instead of ballast, and thereby obtain paying freight on both voyages, and at the same time admit of the freight cost on ore being sufficiently low to induce many of the producing mines in California, Mexico and South America to ship their ore to the Crofton Smelter in cases where high railway freights to interior points would prohibit shipments.

(4) The close proximity of the Vancouver Island, Washington and Queen Charlotte Island coal mines, as well as the possibility, if necessary, of obtaining coke from the Crow's Nest Pass coal field via the Great Northern Railroad Co's newly constructed line from Morrissey Creek in the Crow's Nest Pass, insuring a fuel supply at exceptionally low cost.

(5) The presence in the immediate neighborhood of suitable fluxes, such as limestone and iron ore, in large quantity, both of which are obtainable from several points on the east coast of Vancouver Island.

(6) The ample supply of timber obtainable in the smelter's vicinity for calcining purposes if required in the case of certain classes of refractory ores.

(7) The fact that labor conditions are favorable, there being less likelihood of strike troubles so common in many of the smelting centres of the United States.

(8) And the fact that the location of the smelter on the Coast would admit of the product being consigned direct to the English markets by water transportation and thus avoid the excessive all-rail freight rate across the continent to the New York market.

These then were the reasons duly considered, together with the circumstance that the ore in sight in the Lenora mine at Mount Sicker was sufficient to guarantee a base for supply, that influenced such practical smelter operators as Messrs. Breen & Bellinger in their decision to inaugurate this important enterprise at

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Crofton. Meanwhile construction had hardly been commenced on the smelter at Crofton before the Tyeo Copper Co., which owns the Tyeo mine on Mount Sicker, also gave practical assurance that they had sufficient confidence in their property and the future growth of the mineral resources of the Island by making arrangements to build a smelter at Ladysmith, situated on Oyster Bay on the east coast of Vancouver Island and about ten miles northerly from Crofton. The plant at present being installed by this company will have a capacity to treat about 100 tons of ore a day, and the company estimate that they have sufficient ore in sight in their own mine to keep the smelter running continuously for at least two years, and they anticipate that as the development work progresses, further reserves of ore will be exposed. This smelter is being erected under the superintendence of Mr. Thos. Kiddie, a thoroughly competent and practical metallurgist.

While it is almost certain that the results from smelting on this portion of Vancouver Island will prove satisfactory and profitable to the smelter companies, there is another feature in connection

with the establishment of these enterprises, which is important.

The establishment of the Crofton smelter will, as has already been pointed out, have a strong tendency to promote the shipping industry here by inducing the construction of vessels for the carrying of ore, not only from the coast mines of British Columbia, but from those situated in countries to the north and south.

For the reason just given the lumber and coal trades, which are so important to Vancouver Island and the coast of the mainland, will likely develop far beyond their present limits. The establishment of the smelter, moreover, should furthermore prove an incentive to owners of the many promising claims in the immediate neighborhood to put forth greater effort in the direction of developing these properties and placing them upon a productive footing. Meanwhile the immediate effect of Messrs. Breen & Bellinger's enterprise has been to stimulate enquiry on part of both American and British investors for partially developed properties in this section of the country, and there can be no doubt but that capital in large amounts will be invested in the near future in mining on Vancouver

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Island and the adjacent islands in consequence. The mineral resources of Vancouver Island, so far as metalliferous ores are concerned, have not been developed in the past as they should have been, and it is not likely that a repetition of past mistakes will be witnessed.—Victoria, B.C., Mining Record.

OPPORTUNITIES.

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

832. A London firm of engineers' furnishers contemplate appointing buying agents in Canada for the sale of a number of their specialities and have asked to be referred to likely parties.

833. A correspondent at Constantinople desires to get into communication with Canadian manufacturers of ropes, cordage, etc.

834. A firm of importers and merchants at Lourenco Marques, East Africa, is proposing to open a sample show room at that port and wish to hear from Canadian manufacturers who would be likely to exhibit.

835. A North of England correspondent interested in a process for making pure coke for use in foundries has asked to be furnished with a list of the leading foundries in Canada.

836. An important firm of hotel and house furnishers and decorators is prepared to purchase quantities of wood mouldings and structural steel work from Canadian manufacturers.

837. A firm of large importers of provisions would like to represent in Glasgow a good Canadian house dealing in canned goods or dairy produce.

838. A London importer of Almeria grapes has asked to be referred to fruit brokers in Canada interested in the import of this fruit.

839. A firm in Glasgow, large dealers in asbestos for packing purposes, are anxious to be put in communication with a firm of direct shippers in Canada.

840. A London firm of fruit salesmen and commission agents are desirous of extending their Canadian connection, and are prepared to correspond with apple shippers in the Dominion.

841. An agent in London is prepared to buy heavy scrap brass on behalf of Canadian houses if desired; he is also open to take up agencies for the sale in the United Kingdom of doors, sashes, caskets, frames, etc.

842. Enquiry is made by a firm in the North of England for names of Canadian shippers of packing cases in a knock down condition.

843. A London firm wishes to hear from Canadian shippers of Malpeque and Caraqueet oysters.

844. A London house asks to be placed in communication with Canadian producers of pulp board used for making boot and shoe soles.

845. A manufacturing firm is prepared to appoint suitable Canadian resident agent for the sale of paraffin specialities and other druggist lines.

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

TORONTO, September 5, 1902.

The Toronto Industrial Exhibition, otherwise known as Canada's Great Fair, blossomed into beauty on Monday, as per programme, more radiant than ever. At the appointed hour Mr. McNaught, the president, made his opening address which was responded to by Major-General the Earl of Dundonald, after which his Lordship pushed the button, the whistles schreeched their unearthly blasts, the machinery was set in motion and all went merry as a marriage bell.

The manufacturers have responded heartily to the efforts of the city and the association to afford them increased facilities, and the increased extent and

variety of exhibits in all branches testify to their appreciation. The exhibits were in a much more advanced state than is usual on the opening day, and there is every indication that this year they will exceed all former records. With more exhibits displayed to better advantage in new buildings and with suitable surroundings and a first-class programme of special attractions for the amusement of visitors, there appears to be every ground for belief that the hopes of the management to make this a record year in point of attendance and usefulness will be fulfilled.

Visitors to the Fair will note a considerable change in the appearance of the

grounds this year. The main building is in the same old place, and has the same class of exhibits, with the stove display in addition, the old stove building at the end of the main roadway entering the grounds having been torn down. The natural history building, which was just north of the stove building, has also been removed. The pianos are in their old building. The midway has been moved and is now situated just east of the grand stand, while the space formerly taken up by the midway is now occupied by the art gallery and the dairy building. The latter is now completed, and the art gallery nearly so. It is, however, sufficiently completed to allow the hanging of the pictures and to open to the public. Across the roadway from the art gallery are the walls of the new main building, and while the work upon it is not very far advanced, there is enough to show what a splendid and spacious building it will be when completed.

BRITISH PIG IRON MARKETS.—Messrs. Wm. Jacks & Co., 49 Leadenhall street, London, E.C., England, under date of August 23, 1902, quote as follows:

Since writing you last the iron market here has been very strong, shipments to the United States and Canada having caused a large decrease in the stocks of iron in the public stores.

To-day's prices are as follows:—No. 1 Gartsherrie, 67/6 per ton, f.o.b. Glasgow. No. 3 Gartsherrie, 59/6 per ton, f.o.b.

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Of paying HIGH PRICES for FAST CUTTING STEEL if your machine will not stand the strain required to get results.

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The Carbide is held in a magazine attached to the side of the Generator, and is fed into the water in varying quantities, according to the number of lights in use, and cannot operate when gas is not being consumed. The Carbide magazine is of large size, is easily re-charged, but contains sufficient Carbide to illuminate an ordinary house for one week without re-charging.

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BUFFALO PIG IRON MARKET.—Office of Rogers, Brown & Co., Buffalo, N.Y., September 2, 1902.

Present indications are that foundries and mills are to have a difficult time to get raw material into their yards this fall. Those who secure and pile up a stock ahead of requirements will be exceptional.

Absolutely the only relief now is found in importations, by those who find their stock short.

It is only reasonable to expect these unfortunate conditions to continue for a time, as the heavy transportation season is almost upon us.

THE CANADIAN MANUFACTURERS' ASSOCIATION.—At the recent Halifax convention of the Canadian Manufacturers' Association the following officers were elected for the ensuing year: President, Cyrus A. Birge, of the Canada Screw Co., Hamilton, Ont.; 1st vice-president, George E. Drummond, of the Drummond & McCall Co., Montreal; Ontario vice-president, W. K. George, The Standard Silver Co., Toronto; Quebec vice-president, J. J. McGill, Canadian Rubber Co., Montreal; Nova Scotia vice-president, D. W. Robb, Robb Engineering Co., Amherst; New Brunswick vice-president, C. J. Osman, The Albert Mfg. Co., Hillsboro; British Columbia vice-president, John Hendrie, B.C. Timber Co., Vancouver; Manitoba vice-president, F. L. Drury, Winnipeg; treasurer, Geo. W. Booth, The Booth Copper Co., Toronto.

MASTER PLUMBERS ASSOCIATION.—At the recent meeting in Halifax, N.S., of the National Association of Master Plumbers the following named officers were elected for the ensuing year: Past president, W. H. Meredith, Toronto; president, John McKinley, Ottawa; vice-president, Frank Powers; secretary, H. A. Knox, Ottawa; treasurer, Joseph Lamarche, Montreal; provincial vice-presidents, Ontario, William Mansell, Toronto; Quebec, John Watson, Montreal; Nova Scotia, G. A. Perrier, Halifax; British Columbia, J. H. Wilson, Toronto; Manitoba, J. G. Johnson, Ottawa.

THE DRUGGISTS' ASSOCIATION.—The Canadian Wholesale Druggists Association in convention at Halifax a few days ago elected the following officers: Hon. President, Henry H. Lyman, Montreal; president, W. S. Kerry, Montreal; vice-presidents, F. C. Simson, Halifax, N.S.; F. M. Henderson, Vancouver, B.C.; Geo. H. Clarkson, Toronto; secretary, James Matheson, London, Ont.; treasurer, W. S. Elliot, Toronto. Board of management: Arthur Lyman, Montreal; Charles McD. Hay, Toronto; C. W. Tilling, Hamilton; W. Skinner, Kingston; H. W. Barber, St. John; J. W. Kuox, Montreal; D. W. Bolo, Winnipeg.

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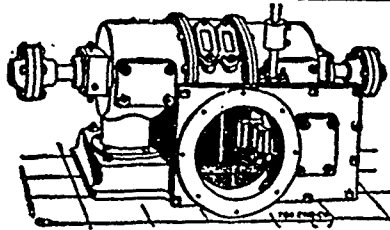
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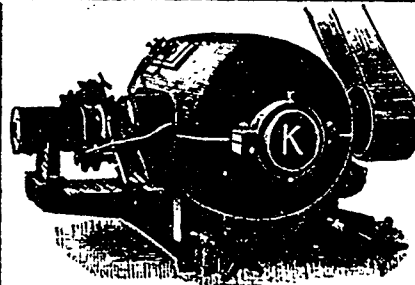
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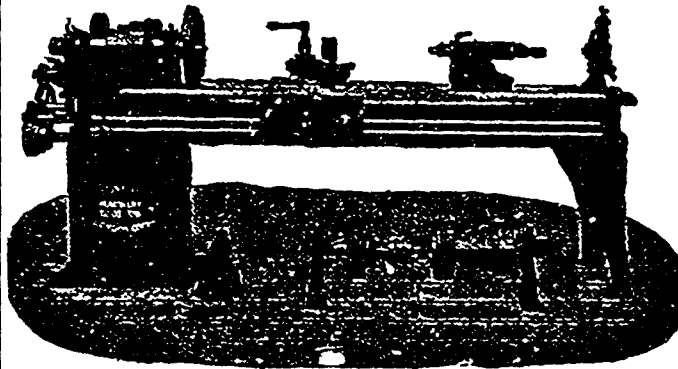
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A Few Extracts from Letters from British Consuls, etc.

"I have to thank you very heartily for the copy of your Directory for 1901. I have always found it most valuable in supplying reliable information in answer to inquiries."—*H. B. M.'s Consul at Asuncion, Paraguay, Aug. 20th, 1901.*

"I am directed to thank you for the book and to express the opinion of this Consul that the work is one which cannot fail to be very useful to the commercial community."—*The Secretary of the Chamber of Commerce of Georgetown, Demerara, Aug. 12th, 1901.*

"I consider your Directory a most useful publication. Consuls are inundated with inquiries, which a reference to your work would have answered at once, and manufacturers would effect a large economy in wasted clerical work, postage and advertising, by purchasing the Directory."—*H. B. M.'s Consul at Amoy.*

"As a work of reference I consider it to be most useful. By keeping it up-to-date you are improving it in the best possible manner."—*H. B. M.'s Consul at Para.*

"I have to thank you for the two volumes of your work, which are very acceptable, as containing much useful information."—*H. B. M.'s Consul at Callao.*

"I beg to thank you for the copy of your Merchants' Directory, which is a most useful work, and one to which I am constantly referring business people who send inquiries to this Consulate for the names and addresses of houses connected with different trades."—*H. B. M.'s Consul at Cadix.*

"I have the last copy of the Directory—a most useful work, but which I think is not consulted by exporters as much as it deserves to be, as I am constantly receiving letters asking for information which could be obtained from its pages."—*H. B. M.'s Vice-Consul at Paysandu.*

"I beg to inform you that I shall be very pleased to offer you every assistance in my power to facilitate your very interesting work for the benefit of commerce and industry."—*H. B. M.'s Consul at Jaffa.*

"I have duly received your valuable and useful Directory of Merchants, Manufacturers and Shippers for 1899, and beg to express my best thanks for same."—*British Vice-Consul, Spezia (Italy)*

"I am constantly receiving letters of enquiry for information that in most cases could be obtained in your Directory."—*British Consulate, Uruguay.*

"The only book consulted is Kelly's Directory."—*From British Consular Return, Riga.*

"Many of these inquiries would have been rendered superfluous by a reference to Kelly's Directory."—*Report from British Consul, Genoa.*

"The Directory has been of the greatest service to me in my former Consular posts, and will, I believe, be doubly useful here."—*B. C. Chicago.*

"We beg to express our appreciation of the thorough and exhaustive character of the Directory, which covers exactly the fields we desire to reach."—*Messrs. H. M. Anthony Co., New York.*

"The copy of Kelly's Directory has already been of great use to me."—*B. V. C. Thorshavn.*

"It is a Directory which is very often consulted by the Merchants of our town."—*B. V. C. Dedea-gatch, Turkey.*

"Your Directory was useful to me and the merchants in general."—*British Consular Agent, Teluan.*

THE C.A.S.E.—At the regular annual meeting of the Canadian Association of Stationary Engineers held in Toronto, August 20, the following officers were elected for the ensuing year: President, W. Oelschlagel, Baden, Ont.; vice-president, Herbert Terry, Toronto; treasurer, James Ironsides, Hamilton, Ont.; secretary, Walter Inglis, Toronto; conductor, James Struthers, Sarnia, Ont.; doorkeeper, N. Bean, Waterloo. Berlin, Ont. was selected as the place for the next annual meeting.

QUEBEC MANUFACTURERS ORGANIZE.—The Quebec manufacturers formed a branch of the Canadian Manufacturers' Association on August 19, and the following officers were elected: President, G. F. Amyot, Dominion Corset Mfg. Co.; vice-president, W. A. Marsh, Wm. Marsh & Co.; secretary, J. Picard, Rock City Tobacco Co.; committee, C. H. Carrier, of Carrier, Laine & Co.; G. A. Vandrey, J. S. Langlois and T. S. Hetherington.

ONTARIO'S HARDWARE ASSOCIATION.—A convention of the hardware men of Ontario is to be held at Toronto on 9th and 10th inst. to consider a plan to bring about direct communication between all sections of the hardware trade. Questions relating to the betterment of conditions for the trade, what should be the general profit on goods, the injurious effect of departmental stores, and the effect upon the retail trade caused by wholesalers selling direct to consumers, are to be included in the discussions.

LARGE SHIPMENTS TO SOUTH AFRICA.—From present appearances the steamship Ontario, of the Allan Line, which sails for South Africa on October 20, will carry a full cargo. The Allans are receiving applications and enquiries every day, and considerable space has already been asked for. The Ogilvie Milling Co. will ship 10,000 sacks of flour or perhaps more. The Lake of the Woods Milling Co. will also be large shippers. Their business in South Africa has increased so rapidly that they now have a permanent agent there in the person of Mr. C. M. Kitson, from the Montreal office, with headquarters at Durban, and they are continually receiving orders from all parts of the country through him.

The Rathbun Furniture Co. are also likely to be heavy shippers. Boot and shoe houses are also making enquiries, so that the prospects are excellent.

The agents of the three companies who are to despatch steamers to the Cape, at a joint meeting have arranged a schedule of rates. These are considerably lower than New York. The agents are still considerably in the dark as regards details of the service. The question of the ports-of-call is still indefinite, but full particulars will probably arrive next week. The question of coaling is also a matter of considerable importance, and it is not known whether the vessels will carry coal from the other side or coal here or at St. Vincent.

The New York people, who have been

booming this trade lately, according to letters received here, are not by any means pleased at this latest move in the development of Canada's export trade, and they facetiously enquire what Canada expects to ship, one writer suggesting that unless the Canadian ships can procure crude oil in tanks they are likely to sail in ballast. When the same folks across the border learn of the reduction in rates made here, they will probably have some further comment to make.—*Montreal Star.*

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Electrical and Mechanical

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Will accept the agency for Great Britain and the Continent of reliable Canadian Manufacturers who may desire their services. Representatives canvas in all important industrial centres.

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Engineers and Chemists...

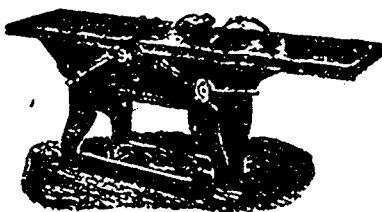
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Prices and description furnished on application

CANADA'S FOREIGN TRADE.—A statement of Canada's trade by countries has been prepared by the customs department. There is noted an increase in the trade with all the principal countries. A feature of the statement is the steady growth of trade with Great Britain. The total imports for consumption in the fiscal year up to June 30 amounted to \$202,791,505, as against \$181,237,988 in the corresponding period of 1901. Following are the values of some of the principal imports for consumption:

	1902.	1901.
United States.	\$120,809,956	\$110,485,008
Great Britain	49,215,693	43,018,164
France	6,670,778	5,393,021
Germany	10,814,029	7,021,405
Italy	724,082	327,361
Belgium	1,700,697	3,823,450
Newfoundland	1,125,426	625,568

The value of exports of Canadian produce amounted to \$196,019,763 in the last fiscal year, as against \$177,443,439 in 1901. Some of the principal items in this total were valued as follows:

	1902.	1901.
United States.	\$71,196,505	\$67,995,726
Great Britain	109,348,245	92,857,525
France	1,388,848	1,436,628
Germany	2,692,535	1,374,716
Belgium	2,444,490	1,723,484
Newfoundland	2,381,367	2,142,877
Australia	2,574,759	2,297,521
West Indies..	1,967,039	1,898,262

THE CANADA-AFRICA STEAMER SERVICE.—The first week of October will see the establishment of the promised line of direct steamships between Canada and South Africa. The negotiations which Sir William Mulock has been carrying on in London during the past few weeks, while there is connection with the inter-colonial conference, have reached a successful conclusion, and a contract has been made with a syndicate of steamship lines for a period of five years for a regular line of steamers.

A cable from Sir William, at London, has been received which says:

Pleased to inform you Government has completed contract with syndicate composed of Allan, Elder-Dempster and Furness lines for cargo service between Canada and South Africa, sailings at least monthly, with provision for increased frequency. Summer sailings, Montreal and Quebec, winter, St. John and Halifax. African ports, Cape Town and two other ports. First sailing, first week October, from Montreal. Ships will carry mails; also supplied with cold storage. Contract five years. Mulock.

In the reports that the Canadian Manufacturers' Association furnished to Sir William Mulock regarding the volume of freight that would be available for a direct steamship line, it was estimated that at least 4,000 tons a month could be promised, with the trade that is at present doing, and not considering at all the possibilities of future expansion. To do this it would be necessary to divert a large Canadian business that now goes via the New York steamship lines, and also to have equal freight rates out of Canadian ports with the competing American lines.

PORTLAND CEMENT

HIGHEST GRADES

FIRE BRICKS

Describe your requirement and we will supply a fire brick in shape and quality to suit.

Mention whether you burn coal, coke, gas or oil.

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31 Wellington St., Montreal

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The Electrical Construction Company of London,

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32-40 Dundas St., London, Can.

Perfection TYPE DYNAMOS

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Multipolar or Bipolar, Direct-Connected or Belted.

OVER 1500 OF OUR MACHINES IN USE

We contract for complete installations, including wiring of factories.

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BRANCHES AT

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NOTICE.

Printers. USE PERUVIAN ASH, a marvellous CLEANSER for TYPE and COMPOSITION ROLLERS.

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Steam Users. VULITE

is unrivalled as a disincrustant.

ON H. M. GOVERNMENT'S LISTS.

Vulite Syndicate, Limited

40 Wilson Street, Finsbury, London, E.C., England.

Wanted—An Active Representative for Canada



NOTICE—The following are the Factory Inspectors for the Province of Ontario:

JAS. T. BURKE, Parliament Buildings, Toronto.
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O. A. ROCQUE, Orleans, Ont.

Persons having business with any of the Inspectors will find them at the above address.

JOHN DRYDEN, Minister of Agriculture.

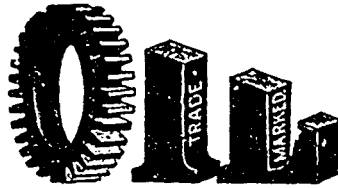
"Capitol" Cylinder

"RENOVN" ENGINE

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ELECTRIC LIGHT LINE WIRE,
INCANDESCENT AND FLEXIBLE CORDS,

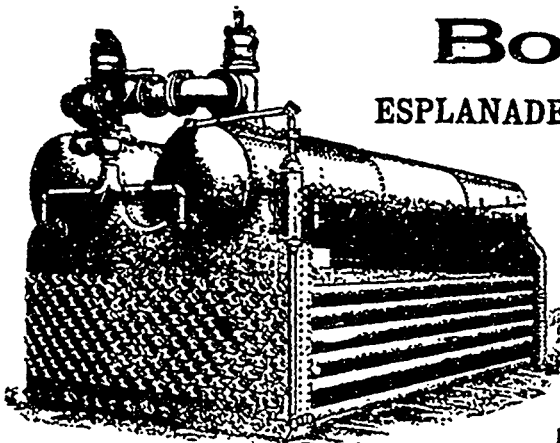
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RUBBER-COVERED, MAGNET, OFFICE AND
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CABLES FOR AERIAL and UNDERGROUND USE.

The Canadian Heine Safety Boiler Co.

JOHN J. MAIN,
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Water Tube Steam Boilers..

FOR ALL PRESSURES
DUTIES AND FUEL

From 75 to 600 H.P. Each

REFERENOES :

N.B.—We do not make small Boilers

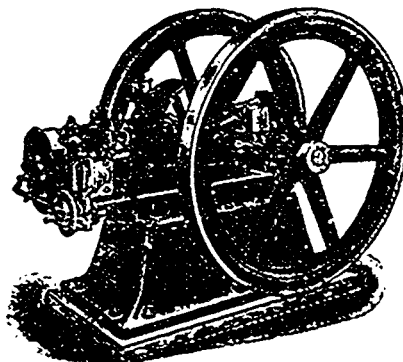
The Toronto Electric Light Co., Limited; The T. Eaton Co., Limited; The Massey-Harris Co., Limited; The Gutta Percha Rubber & Mfg. Co.; The Wilson Publishing Co., Limited; Sunlight Soap Co., Dominion Radiator Co., Central Prison, Foresters' Temple, Toronto City Hall, Canada Bleuch Co., Confederation Life Co. (all of Toronto, where Boilers may be seen working), also Orillia Asylum, Orillia, Ont., and LaPresse Publishing Co., Montreal.

GASOLINE ENGINES

3 to 21 Horse Power.

Write for prices and descriptive matter

The Dominion Motor & Machine Co.,
50 Esplanade St. East,
TORONTO.



When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

The two other ports of call which the steamers of the new line are to touch at are not mentioned by Sir William Mulock in his cable, but the ports recommended by the Canadian Manufacturers' Association are Durban and Port Elizabeth, both, these serving a large stretch of territory that cannot be well reached from Cape Town.

THE SOUTH AFRICA STEAMSHIP SERVICE.—Sir William Mulock, Postmaster General, has written a letter confirming his previous telegram telling of the arrangements made for a steamship service between Canada and South Africa. Sir William's letter, in part, says: "I presume the companies forming the syndicate will put themselves in immediate touch with the business men of Canada. The contract contains a provision that the contractors will supply additional ships if the business warrants it, and the government, trusts that the results will fully justify their action in having established the line."

GOODS DETAINED FOR FREIGHT.—The British Board of Trade has received from Cape Colony a copy of a Government notice approving of the following addition to the regulations of the Port Elizabeth Harbour Board with regard to goods detained for freight:

Goods landed and placed in the custody of the Board may be detained for freight, demurrage or charges, for which a lien is claimed, on due notice being given to the Board, in writing, by the master or agent of the vessel, or other person interested in such freight, demurrage or charges.

The Board may, if they deem it necessary, require from such master, agent, or other person interested, an indemnity in respect of the detention of the goods, or any legal charges and expenses connected therewith.

Goods detained as above will not be delivered until the stop has been removed, or until the amount claimed has been deposited with the Board.

HARDWARE IN TEXAS.—A duel was fought in Texas recently by Alexander Shott and John S. Nott, as we learn from an American contemporary which says: Nott was shot, and Shott was not. In this case it is better to be Shott than Nott.

There was a rumor that Nott was not shot, and Shott avows that he shot Nott, which proves either that the shot shot at Nott was not shot, or that Nott was shot notwithstanding. Circumstantial evidence is not always good.

It may be made to appear on trial that the shot Shott shot shot Nott, or, as accidents with firearms are frequent, it may be possible that the shot Shott shot shot Shott, when the whole affair would resolve itself into its original elements, and Shott would be shot and Nott would be not.

We think, however, that the shot Shott shot shot not Shott but Nott; anyway, it is hard to tell who was shot and who was not.

PATENT FOODS.—In a lecture delivered before the South-west London Medical Society, Dr. Robert Hutchison has been doing his best to smash some popular idols. He asks at the outset what is the necessity for patent foods at all, and, although he admits that there are certain scientific conditions which might justify their existence, he proceeds roundly to declare that "not one of them is worth the money asked for it." In one much-used food there are six units of energy for a shilling, in another nine and in another sixteen and a half, while in a shilling's worth of meat there are 511; of eggs, 1,065; of milk, 3,440, and of sugar, nearly 5,000. Even in the matter of compactness, says Dr. Hutchinson, artificial foods, as given to the patient, do not compare favorably with many natural foods. For example, if it is a question of giving sugar, a pound of honey at 9d., is a better source of sugar than a pound of malt extract at 3s. Again take cod liver oil emulsions as a means of administering fat. "In cream you get a more valuable substance, because ordinary cream contains more than 50 per cent. of fat, and butter fat is as easily digested and absorbed as the fat of cod liver oil, besides being much more palatable and considerably cheaper."

There are emulsions of lard, but they are no richer in fat than butter, which contains 80 per cent. Again, there are other foods, combining fat and carbohydrates, or sugar, which cost 8d. or 9d. for two ounces, but chocolate contains

more of both, and common Everton coffee consists of equal quantities of fat and carbohydrate without water. So the Doctor goes on, saying grievous things of many products we look on with great respect, but he observes for the comfort of the manufacturers that human nature is the same as in the days when Naaman, the leper, refused to bathe in Jordan, considering the cure too simple.

"If you tell a man to drink milk or to take any ordinary food, he will probably pay no heed to your advice, but if you tell him to take so-and-so's patent food, which he has some trouble to get, and for which he has to pay a good deal, then he will diligently take large quantities of it, and boast that he is doing so." At the same time, there is no doubt that in the vastly complex chemico-physiological problems of diet there is a place for patent foods, and, as the doctor admits, from the mere point of view of faith they will often be more valuable than more commonplace remedies.—London Telegraph.

ADDITIONAL UNITED STATES DUTY ON PULP.—The decision of Acting Secretary of the United States Treasury Spaulding to the effect that wood pulp imported from Canada is subject to the proviso of paragraph 393 of the existing Tariff Act is attracting considerable attention. The question was raised by the auditor for the Treasury who, on May 20 and June 23 last, addressed a letter to the Secretary of the Treasury, in

which it was stated that large quantities of wood pulp, dutiable under paragraph 303 of the Act of 1897, and occasional consignments of printing paper, dutiable under paragraph 396 of said Act, are imported into the United States from Canada, and asking the department to ascertain from the Secretary of State whether it was true that Canada levied an export duty on wood pulp exported from the Dominion. The Secretary of State replied to the effect that there is a charge of 65 cents a cord levied on wood cut under a license, and that when the lumber is manufactured into pulp in Canada there is a reduction of 25 cents a cord.

The proviso of paragraph 393 is "that if any country or dependency shall impose an export duty on pulp wood exported to the United States, the amount of such export duty shall be added, as an additional duty, to the duties herein imposed upon wood pulp, when imported from such country or dependency." The proviso in paragraph 396, relating to printing paper, is as follows: "That if any country or dependency shall impose an export duty upon pulp wood exported to the United States, there shall be imposed upon printing paper when imported from such country or dependency, an additional duty of one-tenth of one cent per pound for each dollar of export duty per cord so imposed, and proportionately for fractions of a dollar of such export duty."

For the information of the auditor, it

AUCTION SALE OF VALUABLE FACTORY PROPERTY IN THE TOWN OF DUNDAS.

Mr. Thomas Burrows has received instructions from the owners to offer for sale on the premises at public auction at the Town of Dundas, on Monday, the 15th Day of September, 1902, at 3 o'clock p.m., the following property:

All and Singular those certain parcels or tracts of land situate, lying and being in the Town of Dundas, in the County of Wentworth, known as the Dundas Cotton Mills, formerly owned by the Dundas Cotton Mills Company, together with all buildings, shafting, boilers, fittings, fixtures and works in and upon the said premises.

The lands consist of about eleven acres, including mill pond, and in addition to extensive factory buildings there are a number of dwellings for the use of operators and others.

The property has good railway facilities and privileges suitable for manufacturing.

TERMS:—10% on day of sale, balance with interest at 5% in 30 days. Possession will be given on payment of 50% of the purchase money being paid or satisfactorily secured.

For further particulars and conditions of sale apply to

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The Canadian Colored Cotton Mills Company, Limited, HAMILTON,

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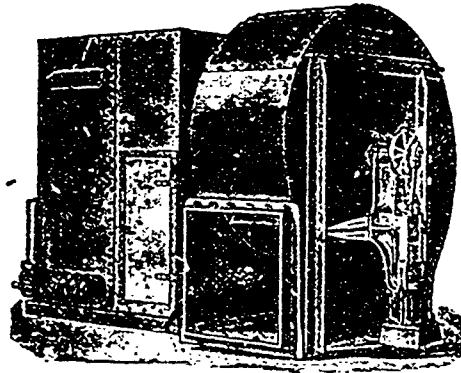
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The Sturtevant Apparatus consists of a steel pipe steam-heater through which a fan draws or forces the air. It can be applied for the drying of all classes of material, such as lumber, wool, cotton, grain, packing house products, etc. We furnish designs for drying rooms and beds, and design special apparatus for meeting exact requirements.

B. F. STURTEVANT CO.,

Boston, Mass.

New York. Philadelphia. Chicago. London.

193

was stated that one cord of pulp wood will produce one ton of mechanically ground wood pulp, or about 1,400 pounds of chemical wood pulp or sulphite.

MONTREAL HARDWARE PRICES.—Following are the quotations on the principal

Stanyon Engineering Co.,

402 McKinnon Bldg.

Phone, Main 2177. TORONTO, ONT

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When wanting Machinery or Iron and Steel products from the United States consult us.

General Office, - Pittsburg, Pa., U.S.A.

E. M. & A. ALLAN CO.

MANUFACTURERS' AGENTS,

34 Yonge Street, - Toronto, Canada.

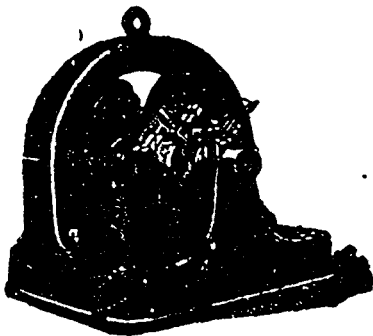
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Experienced travellers reach all the principal Cities and Towns in Canada.

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THE STOWE-FULLER CO.

FIRE BRICK MANUFACTURERS

ALL FURNACE MATERIAL

Superior Building CLEVELAND, O. SEND FOR CATALOGUE

lines, corrected to date by the Montreal Star:

Bar iron—Merchants' bar, \$1.95 per 100 pounds, in small quantities.

Black sheets—\$2.40 for 8 and 16 gauge, per 100 pounds.

Galvanized iron—No. 28 Queen's Head \$4.40; apollo, 10 3-4 ounces, \$4.40; and comet, \$4.25, with 25 cents extra in less than case lots.

Ignot tin—33 cents a pound.

Lead—\$3.25 per 100 pounds.

Torne plates—\$7.50 a box.

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

Antimony—10 cents a pound.

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

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

Tool steel—Black Diamond, 8 cents; Jessops, 18 cents a pound.

Steel—Sleighshoe, \$2.20; tire, \$2.30; spring, \$3.00; reeled machinery, \$2.85; and toe calk, \$2.90.

Barbed wire—\$3 f.o.b. Montreal in less than car lots.

Horse nails—Discount of 60 per cent. on oval heads, and 70 per cent. on countersunk heads; C brand, discount of 40 and 7½ per cent.

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

Cut nails—\$2.45 for small lots; and \$2.37½ for car lots.

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

Cordage—Manilla, 15c per pound for 7-16 and large; sisal, 12½c per pound, and lath-yarn, 11c per pound.

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

Fine wire—The discount is 22½ per cent.

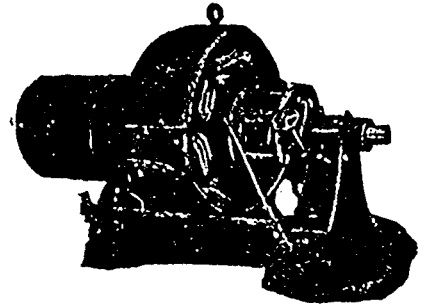
Brass and copper wire—Discount, 62½ per cent.

Fence staples—Bright staples sell for \$2.90 per 100 pounds keg, and galvanized at \$3.25, with an extra of 25c for 25 and 50 pound packages.

FARMERS' INSTITUTES FOR WOMEN.—A hand book of Woman's Institutes has just been issued by the Ontario Department of Agriculture for use at the meetings during the coming fall and winter. It contains specimen programmes for women's gatherings; it suggests topics of study; it contains lists of good books, bulletins and other publications that should be helpful in the home. In addition to this there are leading articles by

The Jones & Moore ELECTRIC CO.

ELECTRICAL CONTRACTORS



DYNAMOS, TELEPHONES, SLOW SPEED MOTORS, MOTORS, SUPPLIES, DIRECT CONNECTED DYNAMOS.

We manufacture Direct Current Machinery in all sizes and for any purpose.

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"WEBER" VALVES

ARE THE GENUINE
VALVES OF THAT
NAME.

ALL OTHERS
ARE IMITATIONS.

BE SURE AND GET
THOSE MADE BY

THE KERR ENGINE CO.

LIMITED

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Capital and Surplus, \$1,500,000

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Canadian and American authors on subjects relating to the home, care and furnishing of the house, care of children, treatment of servants, housekeeping as a profession, housekeeping in the country, etc.

BERMUDA.—The following tables show the values of the imports into and the exports from Bermuda during the year 1901 as compared with preceding year:

IMPORTS.		
	1901.	1900.
United Kingdom ...	£104,509	£142,911
Canada.....	31,488	41,167
Other British Colonies	9,932	11,399
United States	250,729	296,937
Other countries.....	978	8,302
Total.....	£397,136	£500,716

EXPORTS.		
	1900.	1901.
United Kingdom ...	£4,683	£3,333
Canada.....	2,071	1,036
Other British Colonies	1,299	3,456
United States.....	85,599	90,654
Other countries	117
Total.....	£93,769	£98,479

The principal exports to the United States in the same two periods were as follows:

Bulbs	£11,382	£7,634
Onions	43,039	48,597
Potatoes	25,207	25,224
Miscellaneous vegetables	2,515	1,986

CANADIAN TRADE IN JULY.—The Customs Department has prepared a statement of the imports and exports for the month of July, compared with the same month last year. The figures are as follows:

IMPORTS.		
	1901.	1902.
Dutiable goods..	\$8,284,112	\$8,987,698
Free goods.....	5,260,037	4,738,898
Coin and bullion	333,553	346,696
Total.....	\$13,877,702	\$14,073,292
Duty collected..	\$2,172,505	\$2,406,073

EXPORTS.		
	1901.	1902.
Domestic	\$13,032,244	\$15,612,783
Foreign.....	2,544,149	885,279
Coin and bullion	78,741	106,069
Total.....	\$15,655,134	\$16,604,131

The details of the domestic exports are:

The mine.....	\$1,682,620	\$2,668,902
Fisheries	657,497	705,937
Forest.....	3,753,686	3,872,060
Animals and produce	4,548,438	5,348,675
Agriculture ...	1,352,081	1,962,998
Manufactures .	1,034,867	1,048,762
Miscellaneous.	2,910	5,449

Total..... \$13,032,244 \$15,612,783

There is a drop in the value of the imports of free goods, but an increase in the dutiable, which makes the increase on duty of over \$200,000 for the month.



Largest Truck Works in the World.

Main Factory—BRADFORD, ENGLAND.
Canadian Factory—MONTREAL.

WE BUILD THE BEST

TRUCKS

Of every description on the Slingsby Patent Sliding Wheel Principle.
Tell us what you need.

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TEMPLE BUILDING, MONTREAL

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The J. A. Gowdey Reed and Harness Mfg. Co.

Manufacturers of

LOOM REEDS FOR SILK, COTTON, WOOL AND LINEN WEAVING,
Metal Reeds a Specialty. Reeds for Carpet Weaving. Reeds for Wire Weaving.

40 CLIFFORD STREET, PROVIDENCE, R.I.

DOES TWO THINGS

AND DOES THEM THOROUGHLY

STOPS THE BELT FROM SLIPPING.
PLEASES THE MAN WHO USES IT.

NOTHING EQUALS IT...
SAMPLE SENT FREE. SEND FOR ONE.

SOLID Belt Dressing.

JOSEPH DIXON CRUCIBLE CO., JERSEY CITY, N.J. U.S.A.

Noble's Dominion Detective Agency

TORONTO, - CANADA

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

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

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

LONG DISTANCE PHONE.

The domestic exports increased by about two millions and a half.

THE DOMINION WHITE LEAD ASSOCIATION.—There has been a small family quarrel in the Dominion White Lead Association, which is composed of all the large wholesale paint manufacturers and dealers in Canada, the result of which is that Messrs. P. D. Dods & Co. are no longer members of the combine.

The Association consists of the following firms: Baylis Mfg. Co., Henderson & Potts, R. C. Jamieson & Co., McArthur, Corneille & Co., Montreal Rolling Mills Co., Ontario Lead Co., A. Ramsay & Co., James Robertson & Co., and Sherwin-Williams Co.

The White Lead Association was formed a number of years ago for the purpose of putting an end to the ruinous competition, accompanied by adulteration, which then prevailed. It is claimed that its object was not to enhance the price of white lead to the public, but rather to protect the public and ensure a reasonable profit to the members on their sales rather than have a cut-throat competition. The principal effect was to lead to standards being adopted in the trade. At first a White Lead Association was formed by a number of manufacturers, a sort of private association. They determined to put a stop to the adulteration that was going on, and to this end had analyses made of different grades of white lead offered for sale as pure white lead. The result was that some were found to contain as high as 50 per cent. of adulteration, chiefly bayrites.

The analyses were published, with the names of the firms, exposing them for sale, and naturally, the publication caused a great sensation. An amendment was made to the Adulteration Act by Parliament, in which pure white lead was defined. The Association issued registered labels to its members certifying that the contents of the package conformed to the law.

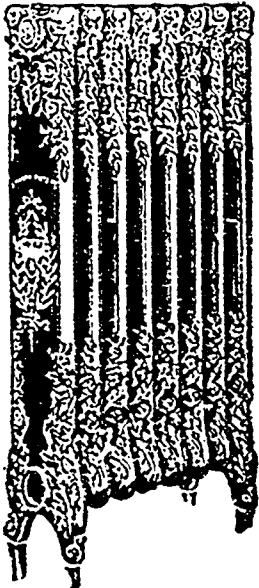
Later on the association was widened in its range, all the white lead manufacturers being admitted to membership, and rules adopted for the guidance of the trade. Standards were set up, and an agreement entered into to preserve uniformity of prices.

Though the agreement was a strict and binding one, it was not always observed, in spirit at least according to some members. In fact, troubles have been constantly occurring. It was found that advances in prices were constantly discounted by members, and later it was arranged that a circular should be sent out from time to time by the secretary fixing prices. These were based on the cost of pure dry lead, linseed oil, cost of manufacture and the profit agreed upon added together. Even this did not prove satisfactory to all concerned. Frequently there were troubles also over the freight rates and other matters, so that the association though its members were supposed to be working for their common interests, was not a shining success.

NEW TRANSPORT FACILITIES FOR WESTERN ONTARIO.—The arrangement lately made between the Pere Marquette

and the Lake Erie and Detroit River Railway companies will doubtless prove of vast importance to Western Ontario. By virtue of this agreement, the Pere Marquette Co. secures the right to run trains over the Lake Erie and Detroit River tracks from Port Sarnia, Ont., to Rondeau and Port Stanley, Ont., where it will connect with the car ferry from Conneaut, Ohio, thus making a short cut from the upper peninsula of Michigan to the Bessemer and Lake Erie Road and the Eastern States. Supplying as it does nearly all the soft coal for Western Ontario from the Ohio and Pennsylvania fields, the ferry is already of considerable importance, but it is expected through this new arrangement that greater facilities will be added to the ferry system across Lake Erie, making it a line of general traffic, adapted for passengers as well as freight. There is now but one ferry steamer running across Lake Erie between Conneaut and Port Stanley. It has a capacity of twenty-six to twenty-eight loaded cars and makes twelve round trips per week. It is proposed to add several steamers of equal or greater capacity, sufficient to meet all demands on the new line. The distance from Port Sarnia to Conneaut, Ohio, is about 150 miles, half by land and half by water.

A BEAUTIFUL SOUVENIR.—Messrs. Jaffray Bros., publishers of the Galt, Ont., Reporter, have published "Picturesque and Industrial Galt," a copy of which they have sent us. The object of this very beautiful souvenir is to do justice



WARM UP YOUR

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They are the triumph of the century.
In demand the world over.

Made in countless sizes and every possible shape, and in a variety of styles, plain and ornamental, sufficient to suit the most exacting.

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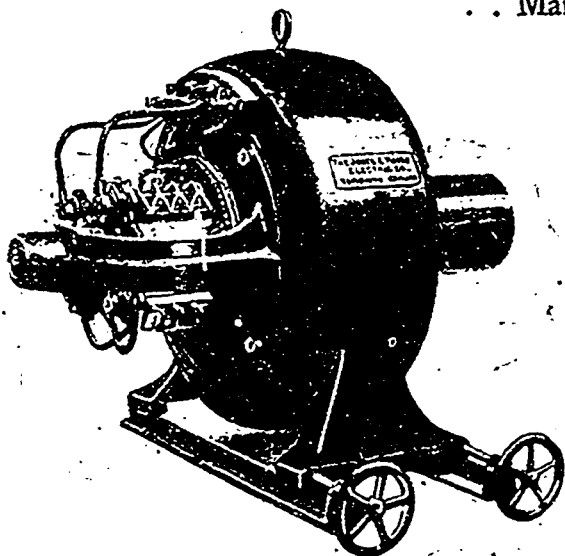
THE DOMINION RADIATOR CO., Limited,
TORONTO

HEAD OFFICE, - - DUFFERIN STREET

THE JONES & MOORE ELECTRIC CO.

20 and 22 ADELAIDE STREET WEST, - TORONTO.

.. Manufacturers of ..



DYNAMOS

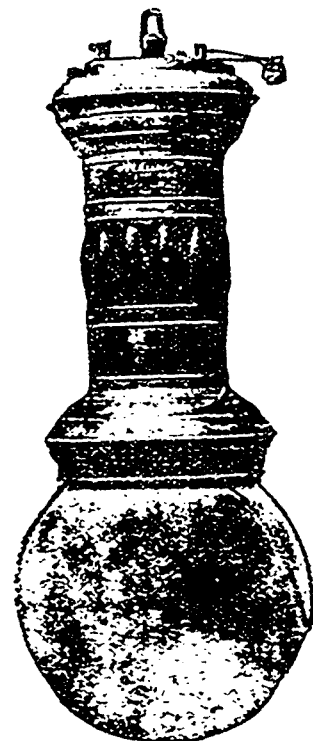
All Sizes.

MOTORS

For All Purposes.

ARC LAMPS

For Any Current.



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WRITE FOR ESTIMATES.

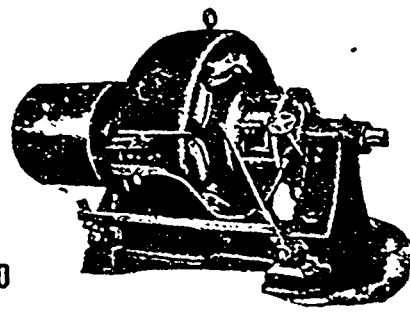
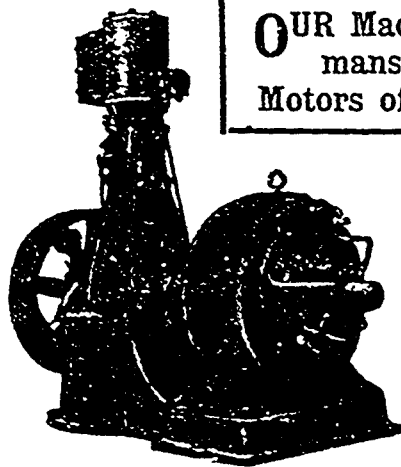
ELECTRIC SUPPLIES OF EVERY DESCRIPTION.

OUR Machinery is of the Highest Efficiency, and the Workmanship cannot be surpassed. Over 1,500 Dynamos and Motors of our make now in operation. : : : : : : : :

REPAIRS TO ALL SYSTEMS.
PROMPTLY PERFORMED.

THE JONES & MOORE ELECTRIC CO.

20 and 22 Adelaide St. W., TORONTO



Factory Buildings FOR SALE

- AT -

BRANTFORD

The present factory of the Cockshutt Plow Company, Limited, will be vacated by this firm on the completion of their new plant.

The company desire to dispose of this property to a suitable purchaser.

The buildings are in good condition, and conveniently situated, having a switch from the Grand Trunk Railway.

The purchaser could also arrange to secure the power, heating and lighting plant.

The factory is suitable for almost any kind of manufacturing, but more especially for agricultural implements, stoves, carriages or machinery. It has ample capacity for a large business, and the present owners are only disposing of it because they have found it necessary to erect much larger works.

It may be bought for cash or on easy terms.

The company would not be averse to taking stock for part payment from suitable parties, should an acceptable proposition be made them.

For further information or particulars write or apply to the Managing Director.

H. COCKSHUTT, Brantford, Ont.

pictorially and industrially to one of the most enterprising and ambitious towns in Canada, and without doubt the object has been most successfully attained. Galt is most deservedly the pride, not only of its residents, but also of all who are acquainted with it—with its people, its industries, its ambitious and its surroundings. Galt possesses some of the largest and most important manufacturing establishments in the Dominion, and the Dominion has much to be thankful for in the noble Captains of Industry it produced in the building up of that great policy of tariff protection to Canadian manufacturing industries which has made this one of the greatest and most important countries on the earth. Messrs. Jaffray are to be congratulated upon having produced so valuable a work.

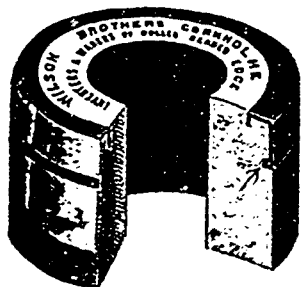
PROPOSED INCREASE IN CUBAN TARIFF.

—The Cuban Senate has authorized radical increases in the import duties now in force in order to provide security for the proposed loan of \$4,000,000 for the relief of Cuban agriculturists. The heaviest increase is on corn, the duty on which is raised 333 per cent. Other increases proposed are: Soap, 150 per cent.; poultry, fresh pork, salt pork, bacon, lard, cheese, condensed milk, wheat flour, codfish, rice, alimentary preserves, eggs, beans and peas, onions, potatoes and olive oil, 100 per cent.; butter, liquors and wine, 70 per cent.; hats, 60 per cent.; stearine, beef in cans, fresh beef, fresh mutton, salt beef, jerked meat, hams, herring, coffee, cider and beer, 50 per cent.; pine lumber, 40 per cent.; boots and shoes, 10 to 17 per cent. A specific duty is also proposed for coal of 25 cents per 1,000 kilos.

LONG DISTANCE WIRELESS TELEPHONING.—Experiments in wireless telephoning in Germany were successfully conducted last week between Sassnitz and Kolberg, a distance of 105 miles.

Sir William Preese announced to the British Association in September, 1900, that the experiments in wireless telephoning which he had been conducting since 1894 had finally been successful. His feat was that of telephoning without wires across Loch Ness, a distance of a mile and a half.

Since Sir William's announcement experiments in the same direction have



ESTABLISHED 1823

WILSON BROS. BOBBIN CO. LIMITED (1900)

45 GOLD MEDALS AND DIPLOMAS

HIGH CLASS WORKMANSHIP.

SEVENTY YEARS' REPUTATION.

BOBBIN AND SHUTTLE

MANUFACTURERS

Telegrams—"WILSONS, CORNHOLME, A B C AND A I CODES.

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GARSTON, - LIVERPOOL, ENGLAND

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OFFICE AND SHOWROOMS—

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Zanzibar Paints

Made in all Colors

Rust Proof.

Decay Proof.

Fire Proof.

Absolutely will not Blister, Peel Off or Chalk.

FOR—

Bridges, Roofs,
Factory Buildings,
Structural Iron Work,
Warehouses, Etc.

USE—

Zanzibar Crucible Black

For Smoke Stacks, Boilers, Steam Pipes
Furnace Cupolas, Etc.

Extraordinary High Fire Test.
Elastic and Durable.

Manufactured by

THE ZANZIBAR PAINT CO., Limited, TORONTO, CANADA.

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The B. GREENING WIRE CO., Limited



MANUFACTURERS
OF



Lang's Patent Wire Ropes
For Colliery and Mining Use.

WIRE ROPE of every Description
and for all purposes.

HAMILTON, ONT.
and MONTREAL, QUE.

been conducted in many countries. The Signal Service Corps of the United States announced in March of this year that it had succeeded in sending telephone messages 450 feet without wires.

A Mr. John J. McNally, of Boston, Mass., made his claim some time ago that he had successfully transmitted wireless telephone messages for six miles, but the scientists did not accept the statement as a valuable fact.

In August, 1901, Dr. H. P. Pratt, an electrical expert, of Chicago, managed to send wireless telephone messages over a quarter of a mile.

But the Germans have been most successful in these experiments in aerial telephony, and last July Herr Ernst Ruhmer succeeded in transmitting a

wireless "hello" that was heard nearly five miles.


YUKON GOLD RETURNS.—Some of the banks are taking exception to the opinions expressed by Mr. Geo. A. Hees, who went out to the Yukon in the interests of the Canadian Manufacturers' Association. Speaking to the "Man on the Street" Mr. James H. Plummer, assistant general manager of the Bank of Commerce, said: "We have despatched in all seventeen shipments of gold since the opening of navigation. The average shipments were each under \$250,000. The business out there is steadily settling down to a good and sounder basis. True, this year's yield will not be up to expectations, owing to the shortage of water, but we

look for a fairly handsome return."—Mail-Empire.

ON THE FREE LIST.—The Government of Guatemala, Central America, has passed an ordinance exempting from duty wooden houses complete or in parts, wooden posts and wire fencing, and wooden doors and window sashes, all of which are made in Canada for export.

DANGER IN TEMPERANCE FIXINS.—The generator for the soda water machine in the Royal Hotel at Guelph, Ont., exploded a few days ago, tearing a hole through the two floors above it, and doing damage to the extent of several hundred dollars.

PACKARD LAMPS




ARE UNEXCELLED

Canada's Great Fair

typifying the great industrial strides of the Dominion, shows no greater accomplishment in any field than that which "Packard Lamps" exemplify in incandescent lighting.


In industrial fields "Packard Lamps" turn night into day and make possible double and treble development.

By the brilliant rays of the "Packard Lamp," the greater ends that are possible in the future years, are more easily attained.



THE PACKARD ELECTRIC CO. LIMITED

ST. CATHARINES, ONT.



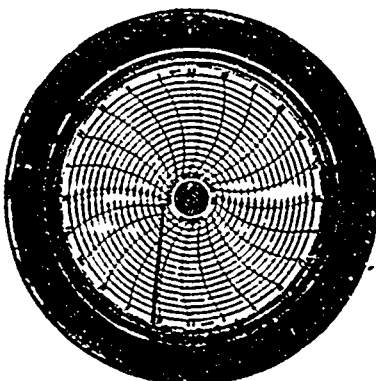
INDEX TO ADVERTISEMENTS.

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

Agriculture, Ontario Minister of, Toronto.....	33	Fetherstonhaugh & Co., Toronto.....	ofc	Nova Scotia Steel & Coal Co., New Glasgow, N.S.....	4
Albert Mfg. Co., Hillsborough, N.B.....	6	Firstbrook-Box Co., Toronto.....	43	Oakay, John & Sons, London, Eng.....	5
Algoma Steel Co., Sault Ste. Marie, Ont.....	2	Flomling, W. A. & Co., Montreal.....	15	Ontario Malleable Iron Co., Oshawa, Ont.....	obc
Allan & Co., E. M. & A., Toronto.....	30	Forman John, Montreal.....	5-8	Ontario Wind Engine & Pump Co., Toronto.....	32
American Steam Gauge & Valve Mfg. Co., Boston, Mass.....	42	Frost, W. H., Smith's Falls, Ont.....	obo	Otis Elevator Co., Hamilton, Ont.....	8-23
American Steam Pump Co., Battle Creek, Mich.....	42	Gartshore, John J., Toronto.....	43	Owen Sound Portland Cement Co., Owen Sound, Ont.....	6
Anglo-Russian Trade Messenger, Moscow, Russia.....	43	Gartshore-Thomson Pipe & Foundry Co., Hamilton, Ont.....	28	Packard Electric Co., St. Catharines, Ont.....	41
Archbold, George, Prescott, Ont.....	43	Geo Electrical Engineering Co., Toronto.....	3	Parko, Rodrick J., Toronto.....	8
Armstrong Mfg. Co., Bridgeport, Conn.....	21	Goldie & McCulloch Co., Galt, Ont.....	43	Parker, Alfred S., New Toronto, Ont.....	43
Barber, Wm. & Bro., Georgetown, Ont.....	43	Gooding William, London, Eng.....	43	Patent Clothboard Co., Parry Sound, Ont.....	43
Bellhouse, Dillon & Co., Montreal.....	obc	Gowdoy, J. A., Reed & Harness Mfg. Co., Providence, R. I.....	37	Perrin, Wm. R. & Co., Toronto & Chicago, Ill.....	19
Benson, W. T. & Co., Montreal.....	28	Great Northern Railway, Quebec City.....	29	Peterborough Canoe Co., Peterborough, Ont.....	31
Bertram, John & Son, Dundas, Ont.....	3	Greening B. Wire Co., Hamilton.....	41	Phillips, Eugene F., Electrical Works, Montreal.....	6
Big Four Route, Boston, Mass.....	43	Gutta Percha & Rubber Mfg. Co., Toronto.....	ofc	Queen City Oil Co., Toronto.....	ofc-31
Blagden, Vaughn & Co., London, England.....	23	Hamilton Brass Mfg. Co., Hamilton, Ont.....	17	Ratcliffe Advertising Agency, London, E.C., England.....	43
Bourno-Fuller Co., Cleveland, Ohio.....	36	Hamilton Cotton Co., Hamilton, Ont.....	obc	Rehder Plating & Mfg. Co., Thorold, Ont.....	33
Bradstreets, Toronto and New York.....	obo	Hamilton Facing Mills Co., Hamilton, Ont.....	33	Reich & Co., Bradford, England.....	21
Bristol Co., Waterbury Conn.....	43	Hassan, Tagge & Dean, Detroit, Mich.....	4	Rice Lewis & Son, Toronto.....	ofc
Brown & Co., Paris, Ont.....	43	Hay, Peter, Galt, Ont.....	43	Riley, C. E. & Co., Boston, Mass.....	6
Brunner, Mond & Co., Northwich, Eng.....	5	Hore, F. W. & Son, Hamilton, Ont.....	31	Robb Engineering Co., Amherst, N.S.....	7
Budden, Hanbury A., Montreal.....	14	Howard, E. Clock Co., Boston, Mass., and New York City.....	3	Sadler & Haworth, Montreal and Toronto.....	26
Buffalo Forge Co., Buffalo, N.Y.....	14	Hyde, F. & Co., Montreal.....	24	Schoellkopf, Hartford & Hanna Co., Buffalo, N.Y.....	31
Bureau of Mines, Toronto.....	14	Imperial Oil Co., Petrolca, Ont.....	32	Scoto Fire Brick Co., Scotoville, Ohio.....	37
Burt Mfg. Co., Akron, Ohio.....	14	Jenckes Machine Co., Sherbrooke, Que.....	2	Slingsby, H. C. for Canada, Montreal.....	obc
Butterfield & Co., Rock Island, Quo.....	5	Jones & Moore Electric Co., Toronto.....	32	Smith & Cameron, Toronto.....	33
Canada Foundry Co., Toronto.....	2	Jones, J. L., Engraving Co., Toronto.....	31	Smith, G. Glenson, Port Elizabeth, South Africa.....	43
Canada Iron Furnace Co., Montreal.....	obc	Karch, H. W. Hespeler, Ont.....	2	Smith Woolstock Co., Toronto.....	43
Canada Switch & Spring Co., Montreal.....	33	Kay Electric Dynamo & Motor Co., Toronto.....	2	South American Trade Journal, London, E.C., England.....	43
Canadian Colored Cotton Mills Co., Montreal.....	7	Keller, John J. & Co., New York, N.Y.....	2	Spence, R. & Co., Hamilton, Ont.....	36
Canadian Electric & Water Power Co., Perth, Ont.....	43	Kelly's Directories, Toronto and London, England.....	28	Stanyon Engineering Co., Toronto & Pittsburgh, Pa.....	43
Canadian Helio Safety Boiler Co., Toronto.....	15	Kerr Engine Co., Walkerville, Ont.....	6	Storoy, W. H. & Son, Acton, Ont.....	35
Canadian Manufacturer Pub. Co., Toronto.....	19	Kingston Foundry, Kingston, Ont.....	30	Stowe-Fuller Co., Cleveland, Ohio.....	35
Canadian Office & School Furniture Co., Preston, Ont.....	33	Kinloch Paper Co., St. Catharines, Ont.....	21	Sturtevant, R. F. Co., Boston, Mass.....	7
Canadian Portland Cement Co., Deseronto, Ont.....	33	Klipstein, A. & Co., New York, N.Y.....	31	Syracuse Smelting Co., Montreal and New York.....	24
Canadian Rand Drill Co., Montreal.....	obc	Laurie Engine Co., Montreal.....	36	Tallman, J. N. & Sons, Hamilton, Ont.....	36
Canfle, James A., Montreal.....	ofc	Lewis, Rice & Son, Toronto.....	2	Toronto & Hamilton Electric Co., Hamilton, Ont.....	43
Carrier, Laine & Co., Lewis, Que.....	ofc	London Machine Tool Co., London, Ont.....	43	Toronto Paper Mfg. Co., Cornwall, Ont.....	obc
Carruthers, Robert, Lowell, Mass.....	ofc	Mason Machine Works, Taunton, Mass.....	28	United Electric Co., Toronto.....	33
Case, Egerton R., Toronto.....	33	Metallic Roofing Co., Toronto.....	7	Vullto Syndicate, London, E.C., England.....	30
Cassella Color Co., New York and Montreal.....	40	Milnes, J. H. & Co., Toronto.....	ofc	Waikerville Malleable Iron Co., Wakerville, Ont.....	25
Clark & Demill, Galt, Ont.....	13	Montreal Pipe Foundry Co., Montreal.....	ofc	J. Wallace & Son, Hamilton, Ont.....	ofc
Cockshutt, W., Brantford, Ont.....	20	Morrow, John, Machine Screw Co., Ingersoll, Ont.....	ofc	Williams, A. F. Machinery Co., Toronto.....	ofc
Cooper, James Mfg. Co., Montreal.....	6	Morton Co., Toronto.....	43	Williams & Wilson, Montreal.....	5
Cowan & Co., Galt, Ont.....	22	McArthur, Cornelle & Co., Montreal.....	29	Wilson & Holland, Montreal.....	40
Crosby Steam Gauge & Valve Co., Boston, Mass.....	2	McDougall, R. Co., Galt, Ont.....	29	Wilson Bros. Bobbin Co., Todmorden Eng.....	31
Darling Bros., Montreal.....	37	McEachren Heating & Ventilating Co., Galt, Ont.....	43	Wire & Cable Co., Montreal.....	ofc
Dean Bros., Toronto.....	16	McKinnon Dnsh & Metal Works Co., St. Catharines, Ont.....	43	Worth & Martin, Toronto.....	32
Deseronto Iron Co., Deseronto, Ont.....	31	McLaron, D. K., Montreal and Toronto.....	37	Wright & Dallyn, Hamilton, Ont.....	9
Dixon, Jos., Crucible Co., Jersey City, N.J.....	43	Neff & Postlethwaite, Toronto.....	8	Zanzibar Paint Co., Toronto.....	40
Dodge Mfg. Co., Toronto.....	33	Neil, James M., Toronto.....			
Dominion Dyewood & Chemical Co., Toronto.....	ofc	New Toronto Woolstock Co., New Toronto, Ont.....			
Dominion Motor & Machine Co., Toronto.....	43	Noble's Detective Agency, Toronto.....			
Dominion Oil Cloth Co., Montreal.....	33	Nonce, J. A. & Co., London, E.C., England.....			
Dominion Radiator Co., Toronto.....	18	Northley Mfg. Co., Toronto.....			
Dougall, James & Sons, Bonnybridge, Scotland.....	2				
Drummond, McCall & Co., Montreal, Quo.....	22				
Eby Mfg. Co., Toronto.....	33				
Electric Construction Co., London, Ont.....					

ofc outside front cover.

obc.....outside back cover.



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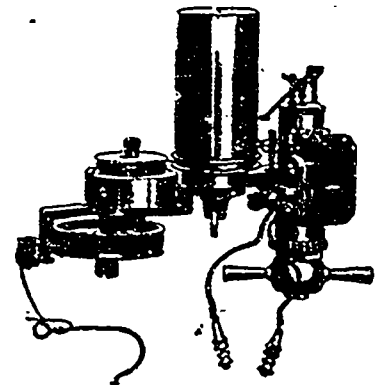
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