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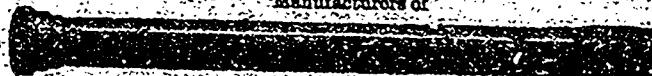
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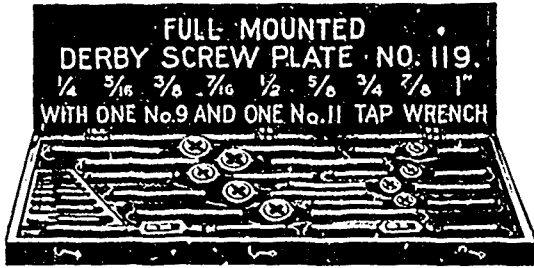
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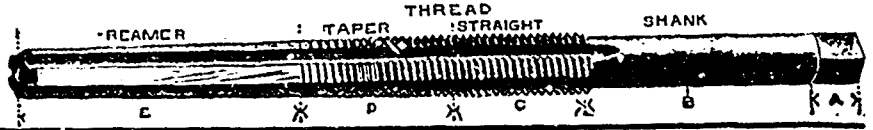
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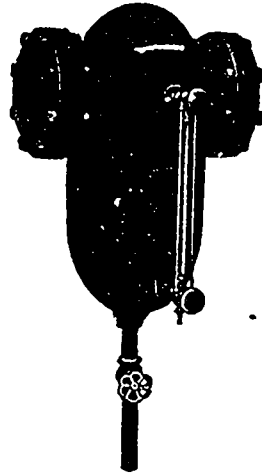
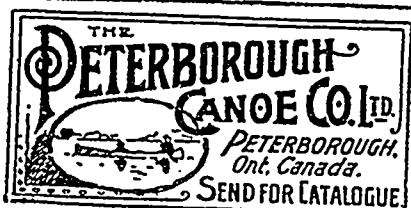
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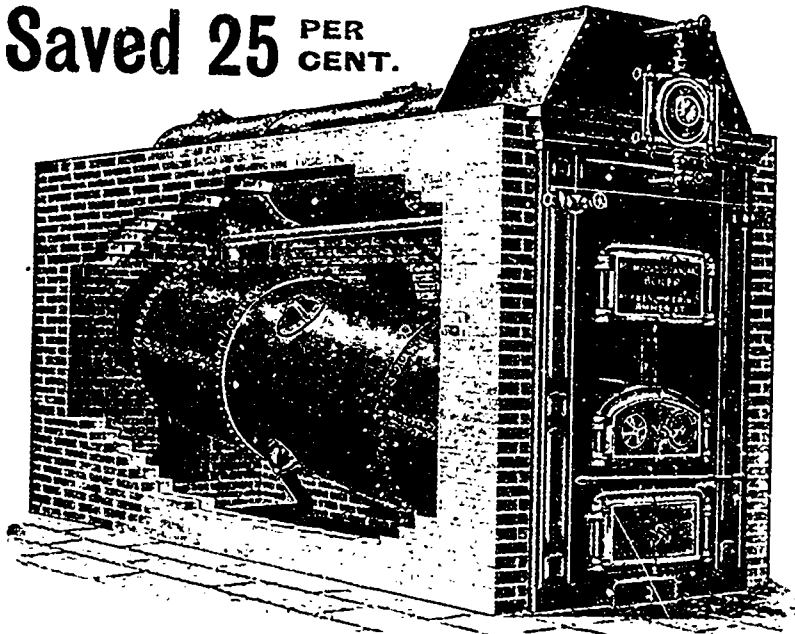
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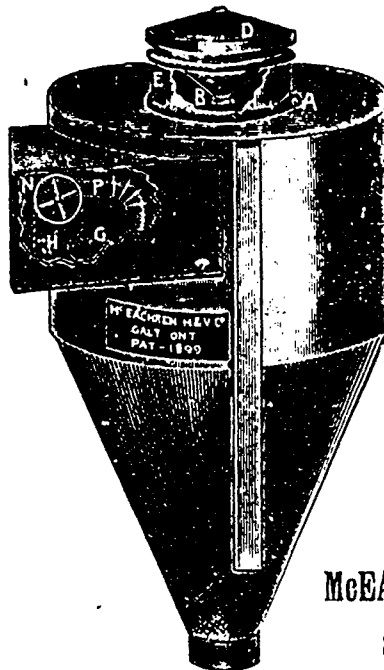
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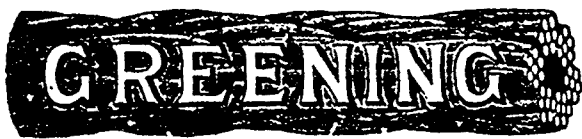
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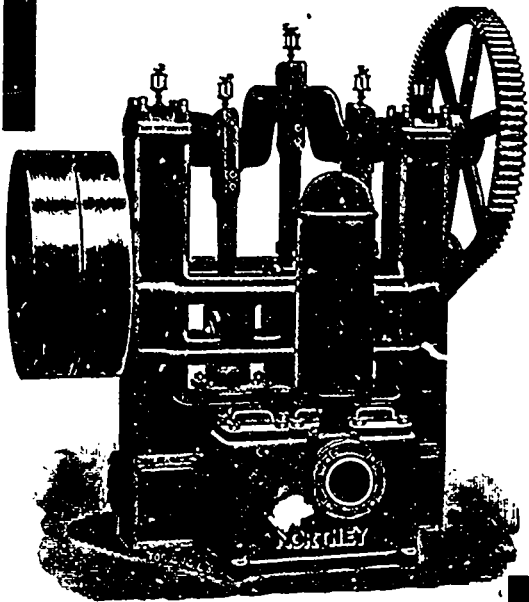
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J. J. CASSIDEY, Editor and Manager**A DISEASE AND A REMEDY.**

The serious labor troubles which have during late years affected the business interests of Canada and the United States, and in fact pervaded the whole business world, has brought forth many plans looking to the removal of this potent evil and bar to industrial progress. In earlier days these troubles were directed against the introduction of mechanical operations as was displayed previous to that time in England; but more recently such contentions between employer and employee have been largely conducted for the latter by various labor organizations, and while such things as wage advances, shorter working hours, etc., enter into these contentions, the leading object in most instances has been that of obtaining recognition of the labor organizations at the hands of the manufacturers. The fact is, such organizations desire a voice in the conduct of the various large concerns in which their members are employed. Viewed in the proper light such contentions seem absurd, and when applied to the great manufacturing interests the same principles are involved as in individual transactions. Thus a man who employs one workman would have just the same right to allow that employe to have a voice in the conduct of his business as would the employer of a hundred or a thousand workmen. But the labor organizations usually take but little notice of the smaller concerns, centering their efforts upon the large employers of labor where through the united action of their members they have a much better opportunity to embarrass the manufacturers interests. Not only do they attempt to reserve to their own counsels the power of deciding when their members shall or shall not work, but they also attempt to prevent the employer from conducting his business with other than employes who hold membership in their organization. In addition to all this, force and riot are frequently, if not generally invoked to uphold their claims. In past years manufacturing interests have suffered the loss of millions of dollars through damage to their properties at the hands of lawless mobs either directly or indirectly inspired by the action of labor organizations. Notwithstanding the fact that great labor troubles have been less bloodless in recent years than formerly, the principle upheld by the labor organizations is none the less anarchistic from the very fact that such organizations under the plea of securing what they are pleased to call fair dealings for their members, attempt to dictate to the employer just how he shall conduct his business, so far as the labor employed is concerned. At the same time the labor organizations have not a cent at stake, and in most

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instances they impair rather than improve the conditions of the laboring class, for an employer cannot be greatly blamed for retrenchment to cover losses sustained by labor troubles, and in the end it is the employe who usually foots the bills.

In all the leading manufacturing countries labor troubles have for years formed the basis of inquiries at the hands of experts. In Australia the plan of compulsory arbitration has been in effect for several years, with a varying success, and similar plans have been attempted in other countries. Some of the great manufacturing concerns in the United States have adopted the plan of allotting a certain amount of stock to their employes, thus making them, in a small way, participators in the prosperity of the business, a thing which has done much toward removing the troublesome questions which are liable to arise between capital and labor. But in this plan the labor organization is left out altogether. Save in the case of the employes in the coal regions of the United States organized labor has made but little progress in late years. A year or so ago the employes of the United States Steel Corporation conducted a strike for the recognition of their organization and lost. In fact most of such strikes in that country in recent years have resulted disastrously for organized labor, and such would have undoubtedly been the case with the now closing coal strike had it been extended to the bituminous fields where the mine workers organization is but little recognized.

In ordinary law a man is held liable for damages resulting to his fellow men in consequence of his acts, and the same is true of a business organization. However, the law fails to define definitely the legal position of the various labor organizations. They can never be classed as individuals nor corporations, and thus it is difficult for the employer to obtain redress for damages sustained at their hands. Whenever such labor organizations are brought into court it has been their policy to disclaim liability for damages sustained through strikes precipitated by their action. Such action on the part of labor organizations was witnessed in Toronto only a short time ago when the Metallic Roofing Co. sought an injunction to restrain the Sheet Metal Workers Union from interfering with the work of the company. But this is only one of the many instances in which such organization sought to escape the jurisdiction of the courts on the plea that inasmuch as they were not incorporated bodies they could not be made liable for their acts.

It would seem that the most logical solution of this matter would be to require all such labor organizations to become

incorporated and thus be placed on an equal footing with the manufacturing interests with respect to responsibility for their action. In this way the position of such organizations would be defined, and they would be made amenable to the courts for their acts. The funds of such organizations would then be made liable for damages caused to manufacturing or other interests through strikes brought on by such organizations. In fact the labor organization would be placed on an equality with the manufacturer in the eyes of the law.

Already employers in the United States have organizations for their mutual protection against strikes and labor troubles, and lately such an organization has been formed in Toronto. Undoubtedly the best results toward the solution of these troublesome questions could be obtained through a uniform effort of the manufacturers to obtain the enactment of laws defining the position of organized labor and compelling the incorporation of all such bodies.

THE MAN AT THE THROTTLE.

In the September 5 issue of this journal was an item to the effect that the Canadian Association of Stationary Engineers was a unique institution in that it had, at its convention held in Toronto in August, refused to accept an invitation to become connected with the International Association of Stationary Engineers. The matter had been very fully discussed by the convention, and the determination arrived at was that the Association would steer clear of the possibility of labor troubles, and interest itself in every possible way in elevating the standard of engineering proficiency of its members.

We are in receipt of a communication from Mr. W. Inglis, executive secretary of the Association, in which he confirms and approves of what we said in the matter, and requests us to direct the attention of manufacturers, who are the chief employers of the engineers, to the reasons why his Association declined to affiliate with the International body. Mr. Inglis says that one great objection to the affiliation was that the International Association required that the Canadian Association should insist that all its members should demand and receive a minimum of daily wages, eight hours to constitute a full day's work, while, under the circumstances, such a requirement could not be enforced in Canada. It might be in some places and under some circumstances, but entirely impossible as a general thing in this country. Furthermore, the Association declines to become entangled with a foreign body by which it might be dragged into unjust or unnecessary strikes, or, declining to be thus drawn, branded as cowards. Regarding the question of wages, Secretary Inglis says that the members of his Association are not, as a class of experienced and efficient engineers, paid as much as their services are worth; and he appeals to the manufacturers and other employers to assist his Association in obtaining legislation which would require that no man should be in charge of a steam plant who was not in possession of a certificate showing his qualification for the position. The tendency of such a law would be to elevate the standard of proficiency of stationary engineers, placing them on a similar footing to that held by marine engineers, it being a serious offence for an engineer to stand at the throttle of any steamer unless he can show his certificate of qualification. His Association, Secretary Inglis says, desires the co-operation of the manufacturers and other steam users in obtaining the enactment of a law such as here alluded to, believing that only gratifying results could accrue from it, not only to the engineers but to their employers also.

The Association desires to be in closer touch with steam users with a view, by personal interviews, to discuss the questions herein alluded to, a mutual understanding regarding them being of the greatest importance to all concerned.

SHOULD ACCEPT THE INVITATION.

In another article in this issue allusion is made to the refusal of the Canadian Association of Stationary Engineers to affiliate with the International Association of Stationary Engineers, a body whose headquarters are in the United States, from which it desires to control the Canadian Association.

We cannot too highly commend the action of the Canadian body. It has been in active existence for a number of years, and its transactions have always been characterized by the utmost conservatism, a feature which has commended it most strongly not only to steam users but to the community generally; and it may be said of it that it has never assumed to itself any functions such as usually characterize labor organizations; its chief object being to elevate the standard of engineering efficiency of its members. It discourages strikes and labor troubles, and does not claim that a uniform rate of wages be demanded without regard to qualification.

What this Association has done and is doing should commend it most strongly to the kindest consideration of steam users, particularly those who are manufacturers; and without doubt these should join hands with the Association, and give it their hearty support in its efforts to obtain the legislation it desires. This legislation, in our opinion, should be granted. The object of it is to compel every engineer to demonstrate his efficiency and fitness before being allowed to assume charge of a stationary steam plant. It has been frequently shown in this journal the absolute necessity for such a law. Manufacturing establishments, industrial works of various descriptions, and large office buildings are multiplying very rapidly in Canada, in all of which steam power is used, and in which, of course, engineers are employed. In many of them the boilers, for convenience, are placed beneath the sidewalks over which thousands of people are constantly passing, unconscious of the pent-up power beneath their feet. The cupidity of some owners leads them to employ engineers, so-called, whose chief recommendation is the low pay they are willing to accept for their services; and while there are many exceptions to this rule, where only accomplished and efficient men are employed, it is only by the good sense and sound judgment of the employer, not that there is any law to require it. It is not so with marine engineers. The law requires that only competent men be placed in charge of the steam plant on any vessel that navigates the water. They must favorably pass examination before a board of examiners appointed by the government, and not even the most insignificant tug or steamer can be moved from the dock without the presence of a certificated engineer. This being the case, of how much greater importance is it that only certificated engineers be allowed to have charge of stationary steam plants.

We commend a careful consideration of this matter to the Canadian Manufacturers' Association in which are such a large number of manufacturers whose factories are operated by steam. In the most friendly manner the Association of Stationary Engineers hold out their hands and invite the employers to assist them in their educational campaign; and we are sure that a conference between representatives of the two Associations would result in much good to all concerned.

THE TORONTO INDUSTRIAL EXHIBITION.

Toronto's Industrial Exhibition this year was a money-making concern for the city. The books, according to the statement presented at the meeting of the Board of Directors held a few days ago, show a balance on the right side. The total receipts amounted to \$115,785, while the estimated expenditure (there being yet a few small accounts to settle) was \$104,543. This leaves an approximate balance on hand of \$11,242, which must be considered a very good showing.

The total paid admissions at the gate were \$94,355, or an average of over \$9,000 a day. The dollar season tickets, which were sold this year as an experiment, brought in about \$9,000, and the directors are so satisfied with this that it is probable next year the system will be extended. Although the profits were so satisfactory, the expenditure of the Exhibition of 1902 were exceedingly heavy, owing to the damage to the ring, grand stand and buildings occasioned by the military review of 1901, and also owing to the failure to have the new Main Building completed, as had been arranged for. This extra expenditure, amounting to several thousand dollars, was paid out of the receipts of the present year.

From the profits made there is yet to come out the sum of \$500, which is to be expended in the purchase of pictures, according to the agreement made with the Art Association. The percentage to the Exhibition from the side shows amounted to about \$2,500, but it is believed that when the expenses entered into in connection with these shows is counted up, such as the expense of lighting, there will not be very much profit left to the Exhibition on this account.

Labor Day was not as successful as usual this year; in fact the labor organizations who had charge of the demonstration closed their books with a deficit of between \$65 and \$70. This amount the Exhibition Board presented to them, so as to leave them with a clean sheet. The expenses of the Labor Day Committee were largely due to the special prizes given, while their only source of revenue was the commission on the sale of tickets.

It was decided that no change should be made in the date of the Exhibition, which will next year again be held during the first two weeks of September.

CANADIAN MANUFACTURERS' ASSOCIATION.

Mr. C. A. Birge, president of the Canadian Manufacturers' Association, is sending out a circular addressed to the members, which explains itself as follows:

Rumors have been in circulation during the past few weeks that the Canadian Manufacturers' Association has entered politics, that it contemplates the purchase of certain Canadian newspapers, and also that it has established a political campaign fund. In reply to these statements we desire to say:

1. The Canadian Manufacturers' Association has not entered politics, nor has it any desire to do so. On the contrary, it has discussed and will continue to discuss every issue affecting manufacturers from a national and business standpoint, and from this standpoint alone.

2. The Association has neither directly or indirectly endeavored to purchase or secure the control of any newspaper in Canada.

3. No political fund has been or is being established by the Association.

4. By an unanimous vote of those present at the last annual meeting, the Association expressed itself in favor of a general revision of the tariff, believing this to be in the best interests of Canada. Every honorable means will be used to secure this end both by educating public opinion and by endeavoring to impress our views upon the Government.

This is a true statement of our position. Our resolutions are known. Our policy and our plans have been stated

publicly. They are legitimate and honorable in every detail. Our faith in the policy we advocate remains unshaken and we believe it is growing every day in public favor because it is a true Canadian policy needed at the present time, not bound up in any way with the past, and having no interests to serve except the welfare of Canada.

The members of the Association may rely upon the organization remaining true to these principles, and maintaining its honor and integrity in spite of all rumors to the contrary.

TRADE OF THE YUKON.

Mr. Geo. Anderson, special trade commissioner regarding trade conditions in the Yukon Territory, has transmitted his report to the Minister of Trade and Commerce. The report is a document of 43 typewritten pages and contains a very thorough and practical review of the business situation in the Yukon, and many suggestions as to openings for development of Canadian trade. Mr. Anderson gives a brief sketch of the history of Yukon development, and at once takes up the question of the relative volume of Canadian and American trade. The following table shows this comparison of imports for the fiscal year ending June 30, 1902:

	Canadian.	Foreign.
Via St. Michael	\$612,406	\$654,558
Via White Horse.....	3,109,187	1,192,361
Totals	\$3,721,593	\$1,846,919

Canadian goods, 67 per cent. Foreign goods, 33 per cent.

The following table of annual percentages of imports shows the rapid growth of Canadian business:—

	Canadian.	Foreign.
1898.....	10	90
1899.....	15	85
1900.....	25	75
1901.....	67	33
1902.....	70	30

Mr. Anderson says that Dawson is becoming more of a wholesale or distributing centre for the stores that are being established on the creeks. This will lessen the number of successful retailers in Dawson, but he does not agree with those who say that the closing of the dance halls will prove an injury to trade. The tendency of trade is towards larger houses controlling the business, as they save the middleman's profits and obtain lower freight rates.

Among the commodities in which Mr. Anderson thinks Canadian trade may be increased with profit are included most of the staple lines of goods. In reference to many of these he makes suggestions as to the means by which such an increase can be brought about. Of butter, for instance, he says the Canadian trade has suffered owing to early importations of inferior quality from Eastern Canada. The market requires butter of the best quality put up in one-quarter and one-half barrels and in cases, the quarter and half barrel packages being in brine. Creamery butter is put up in two pound tins, also in brine, and it is in this way that it is preferred. Canadian biscuits are well put up and command the trade. Of boilers, Mr. Anderson says the demand is great. Last fall at the close of navigation 125 boilers were in stock at Dawson, and all were sold before March 1. Vertical boilers are from 6 to 20 h.p., and horizontal boilers from 20 to 75 h.p.; some of them of the locomotive type are in great demand. Those light in construction and economical in fuel are preferred. In ready-made clothing Mr. Anderson says the bulk of the trade now going to the United States might readily be secured by Canadian firms. There is a good opening for Canadian-made cigars, and for an increase in the sale of Canadian-made carpets. The bulk of the trade in oils

and candles is secured by the Standard Oil Co., which has an agency in Dawson.

Complaint is made that orders for firsts in crockery are filled with seconds, and dealers may import direct from England. Electrical appliances are largely brought from the United States, the American being said to be 30 per cent. cheaper than Canadian goods. A large proportion of the eggs used come from the United States. Only eggs of first quality should be sent, carefully candled before shipment and packed in 30-dozen cases. The demand for engines is very great and is chiefly filled from the United States. Engines run from 10 to 50 h.p., should be light, durable and compact. The bulk of this trade, Mr. Anderson thinks, could be secured by Canadians. Compressed hay of the very best quality comes nearly all from Washington Territory. 28,000 bales were shipped via St. Michael this season. The trade in iron pipe is large and controlled by United States firms. All sizes, from three-eighths up, for mining and steam-fitting are required. There is a large market for steel hydraulic pipe from 8 to 30 inches, punched, rolled and ready to be riveted.

The trade in canned meats is decreasing, as fresh meat comes in frozen from Australia and the United States. Oats are purchased in the United States, and there is a great opening for first-class Canadian goods. Some have gone in from the Edmonton district. Potatoes come from California and Oregon, as the British Columbia crop do not ripen in time to get in before the close of navigation. In evaporated potatoes German sliced are considered best, but Canadian granulated are securing a fair share of the trade. The rubber boot trade has gone to the United States owing to early shipments of inferior Canadian goods. Fifteen tons of old worn-out rubbers were shipped out as junk in August, 1902. There is a good market for Canadian rubber hose. The same is true of road scrapers. Granulated and cube sugar comes principally from the United States. Salt comes entirely from Windsor, Ont. Altogether American hams and bacon are used. The quality of Canadian meats would secure the trade whenever our manufacturers desire it. Shovels come mostly from the United States. The Canadian soap-makers are advised to look up this business. Vinegar is concentrated 1 to 12, to save high freight charges and is chiefly of German manufacture.

Mr. Anderson gives an interesting table showing the fluctuations in retail prices at Dawson in 1898, 1899 and 1902. Some of these are: Potatoes, \$1.25 per pound, 33c. per pound, and 8c. per pound; eggs, \$18 per dozen, \$2 per dozen, 50c. per dozen; hay, \$500 per ton, \$90 per ton; candles, \$1 each, 25c. each, 4c. each. Coal equal to Comox coal is being mined at several points. Mr. Anderson gives a great deal of valuable information about freight rates, classifications, etc. He predicts a good future for the country and strongly advocates the building of a Canadian railway at an early date.

DOMINION FINANCES.

The finally revised statement of revenue and expenditure of the Dominion for the last fiscal year makes a better showing than the Finance Minister anticipated when he delivered his budget speech a few months ago. Mr. Fielding estimated that the revenue on consolidated fund account would be \$56,800,000 and the expenditure \$51,000,000. The actual figures were \$58,024,228 and \$50,739,000 respectively, or \$1,224,228 more revenue and \$261,000 less expenditure than was expected by our Chancellor of the Exchequer. The

ordinary receipts gained by \$5,509,527 as compared with 1901, while the expenditure exhibited an increase of \$3,873,586. There was an excess of \$7,284,275 of ordinary revenue over ordinary expenditure, but the capital expenditure reached a total of over \$13,000,000. Deducting from the latter item the surplus on consolidated fund and the charges for sinking fund, it leaves \$3,398,412 to be added to the national debt. Mr. Fielding was of opinion that the year's transactions would involve an addition of \$6,000,000 to the public debt, whereas his estimate exceeded the actual amount by \$2,600,000. The large capital outlay was necessitated by the falling due of iron and steel bounties, the equipment of the Intercolonial with rolling stock and new rails, the development of our transportation routes, and the settlement of awards aggregating nearly a million to two of the provinces. The first quarter of the present fiscal year has closed very auspiciously. There has been a reduction of \$1,778,000 in capital expenditure and a slight diminution in ordinary expenditure, compared with the same period of last year. The ordinary revenue exceeded the ordinary expenditure by \$7,210,000 and showed a gain of \$1,638,000 compared with 1901. Following are the items for the three months compared with the first quarter of the previous fiscal year:

	1901.	1902.
Revenue.		
Customs	\$8,009,968	\$9,079,086
Excise	2,653,265	2,834,455
Post-Office	780,000	890,000
Public works and railways	1,652,248	1,750,746
Miscellaneous	453,238	613,079
Total.....	\$13,548,519	\$15,187,367
Expenditure.		
Public works and railways.....	\$2,433,510	\$1,075,635
Dominion lands.....	52,584	35,425
Militia.....	22,504	10,793
Railway subsidies.....	745,930	327,420
Iron and steel bounty	65,610
N.W.T. Rebellion.....	267
South African contingent	86,248	65,610
Total	\$3,345,778	\$1,567,069

For the month of September alone the receipts totalled \$5,428,419, as against \$4,731,456 in 1901. The expenditure was \$2,422,877, as against \$2,720,152. The capital outlay was \$801,554, as against \$853,962.

DECLINING IMPORTANCE OF ANTHRACITE FUEL.

One of the arbitrators appointed by President Roosevelt for the settlement of the dispute between the anthracite coal operators and the miners is Mr. Edward W. Parker. Mr. Parker, it might be stated, besides being the editor of the Engineering and Mining Journal, prepares the articles on coal production published in the annual reports of the Geological Survey. In the latest report, that for 1901, Mr. Parker calls attention to the increased competition of bituminous with anthracite coal. He says that in the last 20 years the conditions affecting the anthracite coal-mining industry have materially changed. The change has been a gradual but a very decided one. It has involved a practical elimination of anthracite coal as a factor in manufacturing, and its restriction now almost entirely to domestic consumption, and even as a domestic fuel it has not kept pace with the increased use of bituminous coal. In 1880 the production of anthracite coal was 25,580,189 long tons; the bituminous output in the same year was 38,241,641 long tons, or 50 per cent. more

than that of anthracite. In 1900 the anthracite production was 51,221,353 long tons, while the bituminous production amounted to 189,784,564 long tons, or 270 per cent. larger than the anthracite. From this it will be seen that, whereas in 1880 the bituminous product was only 1.5 times as much as anthracite, in 1900 it was 3.7 times. The anthracite production in 1901 was increased because of the shortage made by the strike of the year before, and because of the general condition of prosperity which prevailed throughout the United States, and particularly in the eastern cities, where anthracite coal finds its principal markets.

The production of anthracite last year was not quite 2.4 times that of 1880. The bituminous product last year was about 5.3 times that of 1880, so that the ratio of increase between the production in 1901 and 1880 is more than two to one in favor of bituminous coal. Referring to the then existing strike, Mr. Parker said: "As the entire supply of anthracite coal has been shut off from a large number of markets, bituminous coal or its products, coke and gas, have obtained a foothold which in many cases will not be lost. In some cases, too, manufacturers have considered the feasibility of installing oil-burning devices, and it is quite probable that this new fuel will become a strong competitor of anthracite coal for manufacturing purposes in cities where smoke-suppressing ordinances are enforced." These admittedly expert views, says Bradstreets', have certainly received indorsement in the numberless reports of the substitution of oil, oiled-brick, gas, peat, wood and a number of other inflammable substances. It is, indeed, certain that all the ground lost in the past few months by anthracite coal will not be regained. In manufacturing, certainly, anthracite has received a vital blow, and, as for the household demand, the eyes of the people of the east have been opened to the fact that the rest of the world has gotten along reasonably well without anthracite. It really seems as if the old story of the goose and the golden eggs had had a modern simile in the case of the anthracite coal strike. The coal miners themselves must be content to know that organized labor itself has struck a leading industry a very severe blow, and rendered its own occupation a more precarious one.

EDITORIAL NOTES.

Dr. George Archbold, M.A., consulting chemist, Prescott, Ont., has accepted an invitation to attend a meeting of the Society of Chemical Industry in Toronto, in January, before which he will read a paper upon the manufacture of starch.

Mr. J. Alexr. Culverwell, Toronto, managing director of the Central Ontario Power Co., Peterboro, Ont., has had the honor conferred upon him of a vice-presidency of the Upper Canada College Old Boys' Association, which is practically the governing body of that great school, the Ontario Legislature having placed this power with the Association.

Emphasizing what is elsewhere said of the necessity of a law requiring that only competent engineers should be in charge of stationary steam plants in mills, factories, and other industrial establishments, we mention the explosion of a boiler in Day & Hammersly's flour mill in Aberfoyle, Ont., on October 9. The account of the event states that Mr. Hammersly, one of the proprietors of the mill, was in the boiler room, a stone and brick building, attending to the engine. He was standing at or near the door when the explosion occurred. The boiler was projected through the

walls of the building, one portion going forward through one wall, another portion going through another wall, each two feet thick, and the roof was blown to atoms. The dome attached to a large portion of the boiler was projected more than 100 yards into an orchard. The boiler had been in use for 33 or 34 years, was worn out, and only used when the usual water power was deficient and extra power required. Fortunately no one was hurt, but many passers by had narrow escapes. Had any loss of life occurred no doubt an intelligent coroner's jury would have laid the blame upon the Almighty by declaring it an accident; but to our mind a charge of manslaughter would have been the correct thing against the man in charge. A competent engineer would never have attempted to use an old and worn out boiler. It ought not to be possible for an ignorant to endanger the lives of innocent people as was done at Aberfoyle.

The British Pacific cable has been completed, and was officially opened October 31. The event is regarded as of the highest importance, as the completion of the cable brings into being for the first time a British telegraphic girdle around the globe. The cable is 7,900 miles in length, and it has been laid in three sections. The southern section joins Brisbane and Norfolk Island, in the South Pacific ocean, the northern section extends from Vancouver Island to Fanning Island in that ocean, and the central section, which was completed on October 30, unites Fanning Island to Norfolk Island. The Vancouver-Fanning portion is the longest cable without a break in the world.

There is an average decrease of 100 men this year, and there are therefore not enough operatives to properly man the industrial portion of the work. This is the situation in the Central Prison, at Toronto, at the present time, as described by Hon. J. R. Stratton a few days ago. In consequence the warden finds it most difficult to successfully operate the various industries which are carried on, including the making of rope, binder twine, brooms, etc. As contracts are let for the manufacture of specified quantities of goods, it will be seen that the situation, admirable as it is from the moral standpoint, has peculiarly embarrassing effects. The general prosperity and abundance of employment throughout the whole country are largely responsible for the scarcity of criminals, while the Government's action in driving all tramps out of the province is also a contributory cause.

An injunction granted by Judge Richardson, of Boston, against the striking brewery employees is sufficiently inclusive to reach every temperance and prohibition organization in the State. Under its provisions the strikers are restrained from exercising any form of intimidation or coercion calculated to injure the breweries or the property of the brewers. The strikers are restrained from publishing, circulating or exhibiting any card or notice calculated to affect the sale of the goods or products of the breweries. They cannot represent that the beer made by the breweries is unfair or seek to influence anybody from using the said products. In case any of the brewery workers go back to work his union must not discipline him, under penalty of being in contempt of court.

Some leading papers in the United States are claiming that the bankruptcy of the American Bicycle Co. furnishes indubitable evidence that advertising pays, or rather that a failure to advertise does not pay. They point out the successes of the

early bicycle companies when the daily and weekly papers and the magazines were full of advertisements, and show that when a bicycle combination was formed of all the leading companies, the managers undertook to retrench by almost abandoning the advertising field, and consequently all public interest in wheeling disappeared. In Canada we have had startling evidences of the failure of non-advertising bicycle combinations to make dividends, but it was generally thought that bicycling as a sport had died a natural death. Probably both explanations have something to do with the disastrous careers of these Trusts. The American Trust in its prospectus claimed it was absolutely certain to make 20 per cent. on its many millions of stock, but instead of this it has been unable to pay interest on its bonds, and its common and preferred shares have been practically wiped out. Its Canadian imitator has had a somewhat similar fate, and there is no doubt more than one lesson to be learned from these humiliating experiences.—Toronto Saturday Night.

In the course of a few months the export restrictions on lumber imposed by the Government of British Columbia has resulted in driving a number of United States sawmills across the line, and largely prospering the Canadian lumber trade, according to a short report to the State Department from United States Consul Dudley at Vancouver, B.C. He also says that shingles produced in Canada go into the United States, notwithstanding the duty. There is a demand for five or six thousand men to work in the mills and logging camps, although the wages offered are lower than on the American side of the line.

A proclamation has been issued bringing into force the act passed at the last session of the Dominion Parliament providing that foreign-built British ships, whether registered in Canada or elsewhere, shall, before engaging in the coasting trade of Canada, obtain a license from the Minister of Customs and pay a duty of 25 per cent. ad valorem on their fair market value. The act was rendered necessary by the practice which prevailed of obtaining registration for foreign-built vessels at some British port, and then claiming exemption from duty and the right to engage in the Canadian coasting trade such as bona fide British ships would enjoy. The act has been submitted to the Imperial authorities and approved of by them. It makes an exemption in favor of foreign countries which have a reciprocal arrangement with Great Britain, but does not apply to vessels engaging in the coasting trade before September 1, 1902. The law is therefore not retroactive.

The Postmaster-General and the Minister of Customs have concluded an arrangement with the authorities of Great Britain whereby the duty as well as the postage on parcels sent through the mails from that country into Canada may be prepaid. The parcels can then be sent direct to the persons to whom they are addressed in Canada, thus doing away with the delay at this end caused by retention until the parties interested have been notified and duty paid. For all such prepaid duties the Imperial Government will account to the Dominion authorities. The new arrangement affords a simple means of avoiding delay and inconvenience, and Sir William Mulock and Mr. William Patterson have earned the thanks of the many people who will benefit by it.

An unrevised statement received from the customs authorities in the Yukon district shows the values of Canadian and foreign goods entering northern British Columbia and the

Yukon Territory via the White Pass and Yukon route to be as follows. Canadian goods, \$3,109,191; foreign, \$1,192,361, excess of Canadian goods, \$1,916,830. The classification of Canadian goods includes goods of foreign origin that may have been imported and entered at customs at other points in the Dominion. For the month of August the total amount of Canadian or duty paid goods entering the Yukon Territory by all routes was \$901,419. The total amount of United States goods entered for consumption in the Yukon district for that month was only \$210,013. Goods from other countries were entered at customs during the month to the amount of \$2,420.

During the Pennsylvania strike Canadians have heard a lot about the advisability of this country securing state-owned coal mines. It is admitted that in the public ownership of extensive coal areas the people of Canada would find a safeguard against the possibility of fuel famines in the future. Provided with a national storehouse of fuel, the public would no longer be at the mercy of either home or foreign coal barons, or labor organizations. Now, according to Captain Bernier, who is organizing a Canadian expedition to the North Pole, Northern Canada contains extensive and as yet unexploited fields of bituminous coal. The deposits are said to extend from the mouth of Hudson Bay across the north coast islands to and beyond the mouth of the Mackenzie River. Half a dozen of the polar expeditions have burned this coal during their stay in the north, and the Hudson Bay Co. and the United States whalers and fishermen use the same fuel during their annual excursions north. The deposits are clearly capable of approach by water, and the problem of transporting the fuel should not be a difficult one to solve—particularly if we once get a railway to Hudson Bay. Now since these coal areas exist, the duty of the Dominion Government is evidently to investigate them, and, if they are as important as represented, to secure possession of them. In case of emergency they might prove the salvation of the country, and even in the ordinary course of events they would likely in time be of immense commercial value to the nation.

At the recent annual meeting of the Montmorency Cotton Co., in the course of his report the President, Lieut.-Col. Henshaw, made the following remarks: "The tariff question is one that is causing a good deal of interest at the moment, as a united effort is being made by manufacturers generally on both sides of politics to obtain greater protection. Unquestionably a large quantity of goods are coming into the country which might be displaced by home products were a higher tariff in force. A mill in Canada necessarily costs much more than the identical plant in England. Most of the machinery is of English manufacture, and not obtainable in this country, and the duty and other extra charges due to transportation of such fragile goods make our mills cost fully 50 per cent. more than an English mill. It will be seen by this that a Canadian manufacturer trying to keep his plant up to date in order to produce a high class of goods really makes it more difficult to meet his English competitors. In addition to these difficulties the Canadian market, as we all know, is used as a slaughter market for surplus American production. Within two weeks I have myself seen a letter from a large American competitor, calling attention to the fact that his goods are offered much below the cost of production, being exported only in order to maintain home prices, which were at the time much higher than his quotations for this market. The American manufacturer, in addition to a high tariff, is further protected by a body of highly paid experts known as the Board of Appraisers, who have power to see that the tariff is rigidly enforced and refuse to admit any goods into the United States at a less valuation than the known market value of similar articles in the exporting country. I would urgently impress upon all our manufacturers in their fight for further protection to stand and work together, and avoid even the slightest appearance of political leaning towards either party. I think that the cotton manufacturers should especially co-operate with other manufacturers who buy their product, with a view to further converting it."

CAPTAINS OF INDUSTRY.

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

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

The starting of any such concern means a demand for some sort of machines, machinery, or supplies, such as steam engines and boilers, shafting, pulleys, bolting, lubricants, machinery supplies, wood or iron working machinery, ventilating and drying apparatus; pumps, valves, packing, dynamos, motors, wire, arc and incandescent lamps, and an infinite variety of electrical supplies, chemicals, acids, 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 Woodworkers Limited, Wiarton, Ont., have been incorporated with a capital stock of \$20,000, to manufacture wooden goods, and to acquire business heretofore carried on by the R. Ely Novelty Works. The provisional directors include A. P. Ebert, H. Ralph and Anthony Ely, all of Wiarton.

The Mount Forest Mfg. Co., Mount Forest, Ont., has been incorporated with a capital stock of \$40,000, to manufacture picture frames, mouldings, etc. The provisional directors include F. A. Mulholland, Toronto; E. F. R. Zoeliner and J. A. Halstead, both of Mount Forest.

The Dymond-Sommerville Co., Strathroy, Ont., has been incorporated with a capital stock of \$40,000, to manufacture furniture. The provisional directors include W. P. Dymond, St. Mary's, Ont.; P. A. Sommerville, Hamilton, Ont.; and J. W. Cameron, Strathroy.

The saw mill properties of Messrs. Jardine Bros., Rexton, N.B., were destroyed by fire October 26.

The masonry work of the Quebec bridge will be completed in a few weeks. The iron work, which is being partially placed in position, is ready and next summer the bridge will be opened for traffic.

The North River Pulp & Lumber Co., Baddeck, N.S., will erect a pulp mill at a cost of about \$750,000. The company has already expended \$100,000 in saw mill and barking machinery capable of

handling 70 cords a day. The plant when completed will cost about \$2,000,000.

About 200 carloads of sea grass is being dried and shipped this fall to the United States from points in the county of Rimouski, Que., to be utilized in the upholstering of furniture. Farmers received some \$15 per ton for it. It has been shipped in former seasons under the name of sea moss, and duty has been paid upon it as such. Now, however, it is said by scientists to be not sea moss, but simply sea grass, and on this article there is no duty.

The three-masted schooner Clarence arrived at North Sydney, N.S., a few days ago, from a trip to Hamilton River, northern coast of Labrador. She proceeded 200 miles up river, taking a milling outfit as well as men and horses for a large lumber mill, which has just been started there by a Nova Scotia company. There is a magnificent virgin lumber land on the river.

Toronto capitalists have purchased land from Mr. Donald Jackson, Lindsay, Ont., which contains an immense deposit of the finest marl, while nearby there is any amount of the right kind of clay needed to mix with the marl. A company will be formed in the near future to develop the industry.

The British Board of Trade report of the coal trade of 1901, shows that the total production of the United Kingdom

was 219,047,000 tons, compared with 260,929,000 in the United States; 108,417,000 in Germany and 31,513,000 in France. The report points out that the production of the United States alone continues to increase, although in comparison with its population the production of the United Kingdom still surpasses that of the United States, the output being 5½ to 3¾ tons respectively.

For the three months of the present fiscal year, ending September 30, the aggregate trade of Canada on a basis of imports for consumption and exports of all kinds amounted to \$112,481,550, an increase of \$7,750,000 over the same period of last year. The imports for consumption were \$50,911,940, an increase of \$3,887,227. Dutiable goods showed a gain of \$3,963,147, but the imports of free goods slightly declined. The exports of domestic produce amounted to \$57,493,585, which was an increase of \$7,359,388 over the same period of last year. Exports of animals and their produce were \$5,363,145 higher than during the corresponding period of 1901, but mineral products declined by \$2,304,000. Other classes of exports increased as follows:—Products of the fisheries, \$95,330; products of the forest, \$2,148,936; agricultural products, \$1,383,191; manufactures, \$644,426.

The Canadian Oak Belting Co., manufacturers of pure oak tanned leather belting, Brockville, Ont., have sent us a circular which contains a diagram having reference to a splice for connecting the ends of leather belts. The point of the outside of splice is covered by making a very thin slit in the leather and inserting the point under the slit, similar to dovetail. It will, they say, resist dampness and make the life of a belt at least 20 per cent. longer than the ordinary splice.

The corporate name of The Morden Mfg. Co., Gananoque, Ont., has been changed to that of Canada Cabinet Co.

The De Lano-Osborn Engineering Co., Toronto, has been incorporated with a capital stock of \$10,000, to carry on the business of a civil, mechanical, electrical and mining engineer. The provisional directors include Milton De Lano, Toronto; F. C. Osborn and W. O. Henderer, both of Cleveland, Ohio.

Pneumatic Tools and Appliances ARE GREAT MONEY SAVERS.

Air Hoists,
Baggage Hand-
lers, Agitation
of Liquids or
Syrups in Re-
frigerators.
Cushion and Car-
pet Cleaners,
Chipping Tools
for use by Ma-
chinalists, Boiler
Makers, Stone-
cutters and
Marble Works.
Calking and Drill-
ing, Air Brushes

INGERSOLL-SERGEANT

PISTON AIR COMPRESSORS FOR ALL DUTIES
INLET

THE JAMES COOPER MFG. CO. LIMITED

299 St. James St., Montreal

BRANCHES - - ROSSLAND, B.C. RAT PORTAGE, Ont. HALIFAX, N.S.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

Pneumatic
Augers,
Punches,
Hammers,
Rammers,
Rotary Drills,
and Augers.
Reversible
Boring Machine,
Fluo Cutters,
Rollers and
Welders,
Air Lift Pumps,
Jacks,
Paint Spreaders,
Bolt Nippers.

The Kemp Mfg. Co., Toronto, is negotiating with the city for the purchase of a plot of land adjoining their present property at the corner of Gerrard and River streets. The company desires to secure direct railway connections and to make other improvements to their plant.

The Canadian General Electric Co. is sending out price list of "Flexduct" an up to date conduct for interior wiring.

The W. H. Dwyer Co., Ottawa, has been incorporated with a capital stock of \$50,000, to manufacture bricks, tiles, pipes, etc. The provisional directors include W. H. Dwyer, J. R. Osborne and J. L. Waite, all of Ottawa.

The charter of the John Abell Engine & Machine Co., Toronto, has been surrendered, the concern having been merged into the American Abell Engine & Thresher Co.

The capital stock of the Ontario-Slocan Lumber Co. has been increased from \$40,000 to \$100,000.

The Oxley-Enos Co., Toronto, has been incorporated with a capital stock of \$10,000, to manufacture electric light and gas fixtures, etc., and to take over the Canadian business of the Oxley-Enos Co. The provisional directors include A. T. Enos, Frank Enos, both of New York City; and F. C. Henderson, Toronto.

The Consolidated Petroleum Co., London, Ont., has been incorporated with a capital stock of \$100,000, to acquire oil-lands and produce crude oil, etc. The provisional directors include D. S. Robb,

London, Ont.; and J. H. Stewart, Toronto.

The Ontario Asphalt Block Co., Windsor, Ont., has been incorporated with a capital stock of \$150,000, to manufacture paving materials. The provisional directors include Andrew Anuerson, O. E. Fleming, both of Windsor; and J. D. Frost, Detroit, Mich.

The British Canadian Pulp Co., Toronto, has been incorporated with a capital stock of \$500,000, to manufacture wood-pulp, etc. The provisional directors include F. A. Ritchie, J. E. McDougall, and T. P. Coffee, all of Toronto.

The Domestic Supply Co., Toronto, has been incorporated with a capital stock of \$40,000, to manufacture household supplies, etc. The provisional directors include James Stevenson, Archibald Stevenson, and L. C. Smith, all of Toronto.

The Kingston Foundry Co., operated by Messrs. Selby & Youlden, Kingston, Ont., has just installed a new air compressor, improved drills, hammers and other equipments which will greatly improve their facilities for turning out the large amount of work now on their books and for handling the orders for various machinery and supplies being constantly received. Among the new equipments installed by them may be mentioned a 700 pound steam hammer and several radial drills. This company has just closed a contract for a 14 x 28 x 20 compound fore and aft engine for the tug "Glyde," of the Montreal Transportation

Co. Among the recent deliveries were two 20 x 6 feet boilers of 125 h.p. each and an 84 foot smoke stack of 5 feet in diameter for the Marlbank plant of the Canadian Portland Cement Co., Deseronto, Ont. The company has recently shipped an 85 h.p. boiler to the Canadian Carriage Co., Brockville, Ont., and a similar boiler to the Ontario Wheel Co., Gananoque, Ont.; and have also installed two 100 h.p. boilers in the asylum buildings at Kingston, and delivered a 125 h.p. boiler to the Kingston waterworks.

The Massey-Harris Co., Toronto, has received an order from the Crown agents for the new colonies in South Africa for 2,000 zig-zag harrows, the cost of which will be over \$40,000.

The Silicate Brick Co. is erecting a factory at Sydney, N.S., which will have a capacity of 20,000 pressed bricks per year.

The Crown Furniture Co., Preston, Ont., has been incorporated with a capital stock of \$40,000 to manufacture furniture. The provisional directors include Hon. Samuel Merner, Berlin, Ont.; D. W. Albright and Elven Werner, both of Preston.

Mr. John J. Gartshore, Toronto, informs us that he has purchased the logging railway of Messrs. Holland & Graves, at Wahnapiatae, Ont., including 3 locomotives, 68 logging, flat and box cars—3-foot gauge, and about 16 miles of track, principally 30-lb. steel rails, which articles are now in the market for disposal in lots to suit customers.

You Can't Mistake the Symptoms

WHEN YOU NEED A

Burt Exhaust Head

The noisy exhaust pipe proclaims the fact with disagreeable persistency. The leaky exhaust pipe writes it upon rotting roofs and disfigured walls.

Make the exhaust DRY and NOISELESS by using a Burt Exhaust Head and you secure peace and quiet, and nip repair bills in the bud.

GENTLEMEN.—The Exhaust Head bought of you has remedied the nuisance of condensed exhaust steam, contaminated with oil, being discharged over roofs, driveways, etc., and is appreciated by us for this reason.

Yours respectfully,
G. & J. MICHELS BREWING CO.,
La Crosse, Wis.

All Exhaust Heads sold subject to your perfect satisfaction. We take the risk. Full particulars in booklets, mailed free.

THE BURT MFG. CO.,

LARGEST MFRS. OF OIL FILTERS IN THE WORLD.

AKRON, OHIO, U.S.A.

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

BUFFALO IMPROVED VENTILATORS

FOR

SCHOOLS, CHURCHES, FACTORIES, FOUNDRIES
AND ALL INDUSTRIAL BUILDINGS



Impure Air, Smoke, Steam and Gases rapidly
and constantly withdrawn.

BUFFALO FORGE COMPANY,
BUFFALO, N.Y.

The Weston Shoe Co., Campbellford, Ont., has been incorporated with a capital stock of \$40,000 to manufacture boots, shoes, slippers, etc. The provisional directors include R. C. Weston, G. H. Weston, both of Toronto; and P. J. Winis, Campbellford.

The Nova Scotia Steel & Coal Co. will erect another blast furnace in Sydney, N.S., the capacity of which will be about 300 tons per day.

The Lake Rosseau Lumber Co., Toronto, has been incorporated with a capital stock of \$40,000, to manufacture lumber, etc. The provisional directors include G. W. Boake, Toronto; Andrew Boyd, Bracebridge, Ont.; and W. F. Boake, Downsview, Ont.

Messrs. Gorman, Eckert & Co., London, Ont., have been incorporated with a capital stock of \$100,000, to manufacture spices, baking powder, etc. The provisional directors include Wm. Gorman, R. C. Eckert, and R. G. Bowie, all of London.

The Ontario Compressed Air Dustless House-Cleaning Co., Toronto, has been incorporated with a capital stock of \$50,000, to manufacture machinery, etc., for cleaning carpets, furniture, etc., and to acquire the Thurman patents for carpet renovators by compressed air. The provisional directors include W. T. Bradshaw, D. K. Ridout, T. C. Irving and J. D. Montgomery, all of Toronto.

The Lake Erie Coal Co., Walkerville, Ont., has been incorporated with a capital stock of \$100,000. The provisional directors include E. C. Walker, William Woollett and Alexander Leslie, all of Walkerville.

The Downie Milling Co., South River, Ont., has been incorporated with a capital stock of \$20,000, to manufacture flour, etc. The provisional directors include Francis Downie, R. M. Carter and W. J. Unger, all of South River.

The Burt Mfg. Co., Akron, Ohio, announce a recent order from the Atlas Portland Cement Co. for six of their

Cross oil filters, making 16 of this make in use by the latter concern in its different plants.

The Buffalo Tool & Machine Co., have opened an office and salesrooms at 116 Bay St., Toronto. This is the first Canadian office of this well known firm, of which Mr. Charles Hood is general manager. Those interested in the company are also at the head of the Baden Machinery Co., recently incorporated with a capital of \$40,000 to erect and operate a plant for the manufacture of machinery at Baden, Ont.

The Hewson Woolen Mills, Amherst, N.S., are rapidly nearing completion, and the machinery will soon be installed.

The Polson Iron Works, Toronto, have received an order from the Dominion Minister of Marine and Fisheries to build two lightships, which are to be stationed in the lower St. Lawrence and will cost about \$250,000. They will be built of the best steel obtainable and equipped with the latest improvements.

CAMEL BRAND
BALATA
RUBBER

BELTING

Linen Fire Hose,

Water and Steam Hose,

Packings, Etc., Etc.

THE STANDARD



GOLD WATER PAINT

WEATHER PROOF, FIRE PROOF
WHITE AND COLORS.

MILL SUPPLIES

Lubricating Oils and Greases
PAINT, PAINT OILS, ETC.

W. A. FLEMING & CO.

Montreal and St. John, N.B.

THE CANADIAN PORTLAND CEMENT CO. LIMITED

MANUFACTURE "RATHBUN'S STAR" BRAND

THE LEADING CANADIAN PORTLAND CEMENT

Capacity of Works—500,000 Barrels per Year

THE RATHBUN COMPANY,
310-312 Front Street West,
Telephone Main 1379.

TORONTO, ONT.

SALES
AGENTS

ST. LAWRENCE PORTLAND CEMENT CO.,
2664 Notre Dame St. W.

Telephone Main 3987.

MONTREAL, QUE.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

The Toronto Junction Town Council have awarded the contract for the new electric light system to the Canadian General Electric Co. for \$3,580, which is \$143 higher than the offer of the Western Electric Co., Chicago. The town committee had visited Orillia and Woodstock, and had seen both the systems in operation. They pronounced them equally good, but chose that of the Canadian company, on the principle of Canada for the Canadians.

The elevator of the Hedley Shaw Milling Co., St. Catharines, Ont., was destroyed by fire October 10. Loss about \$14,000.

A. Dunbar & Son, Woodstock, N.B., are erecting a machine shop 120 x 45 feet, and a new foundry 85 x 40 feet. They now have an order for 43 shingle machines, and will add the manufacture of other mill machinery.

J. J. Hutchinson, Vancouver, B.C., will erect a large shingle mill at False Creek.

Mr. Wellington Mackenzie, Toronto, who discovered the asbestos deposit on the shore of Lake Temiscaming, has returned home, bringing with him a sample which shows the fibre to be unusually long and clean. This is said to be the only known deposit of asbestos in Ontario.

The Dominion Paper Box Co., Toronto, will erect a large factory building on King street, immediately west of the Toronto Lithographing Co.

The brass and copper works of Coulter & Campbell, Toronto, were badly injured by fire October 23. Loss about \$4,000.

The Huntsville & Bracebridge Tanning Co., Huntsville, Ont., will erect an 100 x 60 feet addition to their factory.

The St. Croix Soap Mfg. Co., Truro, N.S., will erect another addition to their factory, 40 x 30 feet, three stories high.

The premises of the Warwick Overall Co., Warwick, Que., were destroyed by fire October 29. Loss about \$10,000.

The Canadian Centrifugal Windmill & Mfg. Co., Woodbridge, Ont., is being formed with a capital stock of \$400,000, to manufacture the Minniear windmills, tanks, towers, etc. It is claimed for the Minniear windmill that one of its chief merits consists in the mill governing itself in all winds, is storm proof and works perfectly at a uniform speed. It is known as the Centrifugal windmill and has no brake, springs or chains.

The Londonderry Iron & Mining Co., Montreal, has been incorporated with a capital stock of \$1,000,000. The provisional directors include G. E. Drummond, J. T. McCall and T. J. Drummond, all of Montreal.

The premises of the Garlock Packing Co., Hamilton, Ont., were destroyed by fire October 28. Loss about \$1,300.

The Gorman-Eckert spice mills, London, Ont., were destroyed by fire October 30. Loss about \$1,000.

The Imperial Pneumatic Tool Co., Sherbrooke, Que., has been incorporated with a capital stock of \$25,000, to manufacture pneumatic tools, etc. The provisional directors include H. D. Lawrence, E. W. Gilman and W. R. Elliott, all of Sherbrooke.

The Montreal Chemical Product Co., Montreal, has applied for incorporation with a capital stock of \$100,000, to manufacture chemical products, etc. The applicants include Adolphe Brosseau, Guillaume Boivin, both of Montreal; and C. A. Chenevert, Berthier, Que.

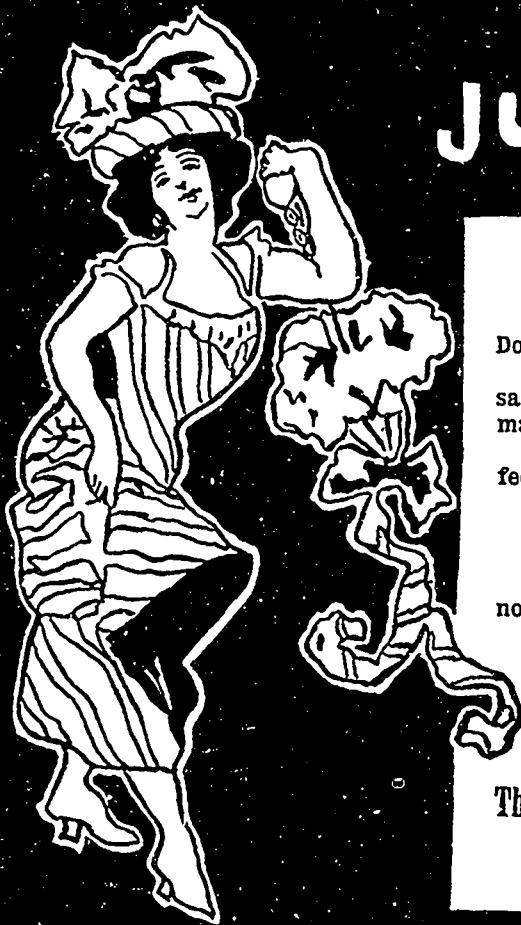
The St. Lawrence Starch Co., Montreal, has increased its capital stock from \$80,000 to \$250,000.

The town of Strathroy, Ont., is contemplating the establishment of a water works system. A by-law will probably be submitted in January.

The Sissiboo Pulp & Paper Co., is enlarging its wharf at Weymouth, N.S., and will erect a warehouse 300 x 50 feet.

The sawmill of Blue & Deschamp, Rossland, B.C., was destroyed by fire October 28. Loss about \$8,000.

The freshman class at the School of Practical Science, Toronto, numbers 140 this year, and the total enrolment 340, as compared with 290 a year ago. The increase is due to the demand for engineers for the various enterprises now in progress in connection with railways and power developments.



JUST A MOMENT PLEASE—

There are many wood split pulleys on the market. There is but one Dodge.

Many people have used them all and pronounced the Dodge the best. It has many exclusive features.

It will transmit from 25 to 60% more power with the same belt tension than any iron or metal pulley on the market.

The compression fastening in every instance is perfect and will hold more positively than set screws.

Besides, the Dodge is easy to put on.

No shafting to be taken down—no delay.

The Dodge Wood Split Pulley is the perfect pulley.

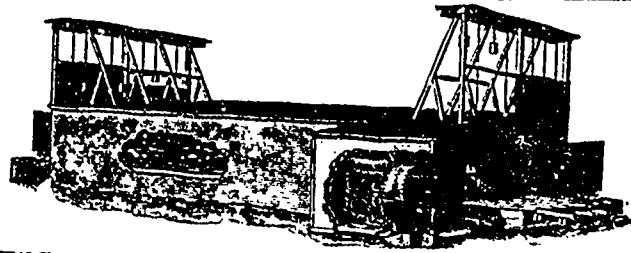
No better wood pulley was ever made. Most positively no iron pulley ever equalled it.

A letter or post card requesting our Blue Book No. 4 will be the best investment of one or two cents you ever made. Blue Book No. 4 tells about the Dodge Wood Split Pulley.

The Dodge Mfg. Co. of Toronto, Limited
TORONTO

STURTEVANT DRY KILNS

**BUILT TO DRY
ANYTHING
WHATSOEVER IN
THE WAY
OF LUMBER.**



**POSITIVE
IN ACTION
RAPID
IN OPERATION
SUCCESSFUL
IN RESULTS**

B. F. STURTEVANT CO., - Boston, Mass.

NEW YORK.

PHILADELPHIA.

CHICAGO.

LONDON.

271

Mr. Geo C. Rough, for the past six years connected with R. E. T. Pringle, has severed his connection with that company and opened offices for the Packard Electric Co., St. Catharines, in Montreal. Mr. Rough is one of the best known electrical men in the Dominion, particularly in the eastern provinces where he has been located for several years. Mr. Rough's offices will be located in the Street Railway Building, corner Craig St. and Place D'Armes, Montreal. The business of the Packard Electric Co. has been expanding with wonderful rapidity and the establishment of the Montreal office will doubtless facilitate a quicker handling of their business in the east. Mr. Rough's friends will wish him success in his new associations.

Messrs. Cowan & Co., Galt, Ont., have just completed a large order for the Globe-Wernicke Co., Stratford, Ont., consisting of a large 3 drum sand papering machine, a band re-saw, a 12-inch moulder, 2 surface planers, 5 sand tables and several smaller tools. The company are outfitting a new sash and door factory for Wm. M. Drader, Chatham, Ont. Other important orders that will be filled before the end of the year are:—Large surfacer and moulder for the Dominion Furniture Co., St. Therese, Que., and a large band re-saw machine, and double cut off saw, for Rhodes, Curry & Co., Amherst, N.S.

The new cerberite works are now pretty well under way for the manufacture of their non-explosive powder. The buildings which have been erected by Lawson & Busby claim to have given the best of satisfaction. The company will employ about 30 hands the whole year round which will be quite an addition to this town. The company have already received a contract for 200 tons of cerberite for the new railway, now being built from North Bay to Temiscaming.—Sudbury, Ont., News.

Letters patent of incorporation have been issued by the Ontario government to the General Distilling Co., an organization recently formed in Toronto for the purpose of distilling spirits from the by-product of the beet sugar factories that have recently been opened throughout Canada. The company has a capital of \$600,000. The incorporators are Messrs. George Gooderham, W. G. Gooderham and T. G. Blackstock, Toronto, and Messrs. F. H. Walker and J. H. Walker, Walkerville, Ont. Building operations will soon be commenced on the property adjoining the Gooderham & Worts distillery in Toronto, where the plant will be located, and facilities have been provided to receive shipments from the beet sugar factories. The industry is essentially a new one in Canada, and owes its establishment solely to the beet sugar industry, in the manufacture of which a by-product similar to molasses is accumulated. This syrup will be shipped in tank cars to the new distillery and there distilled into alcohol.

The Dominion Iron & Steel Co. has been securing a large supply of ore from Sweden and Cuba, pending a settlement of the revolution in Venezuela, when the Dominion Co. will be able to secure 300,000 tons of ore per annum from that country. The Dominion Iron & Steel Co. has a supply of high grade phosphorous ore in the Belle Isle and Baruchois properties in Nova Scotia, sufficient to last 25 or 30 years, but it is obliged to secure a large supply of non-phosphorous ore for the manufacture of foundry pig iron for which there is a big demand in Canada.

The manufacture of this foundry pig requires a mixture of one-half Belle Isle ore and one-half non-phosphorous ore. The latter is now being secured from Sweden and Cuba, the Cuban ore through the Bethlehem Steel Co.—Halifax Herald.

The Restigouche Foundry & Supply Co., Campbellton, N.B., is applying for incorporation with a capital stock of \$100,000.

The Woodstock Lumber & Mfg. Co., Woodstock, N.B., has been incorporated with a capital stock of \$24,000; to acquire the business of J. N. W. Winslow.

TOOL STEELS

of all grades and tempers, for all purposes.

ENGLISH AND AMERICAN

Best Results Guaranteed

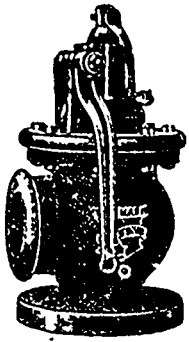
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For sizes in stock, see pages 24-25 of our monthly stock list.

THE
BOURNE-FULLER CO.

IRON, STEEL
and
PIG IRON.

Cleveland, O.



A
VALVE
YOU
CAN
RELY
ON

SEND
FOR
PRICES

CROSBY STEAM APPLIANCES EXCEL

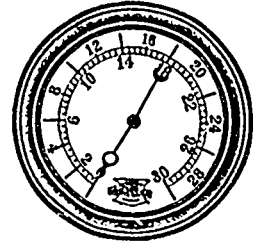
Steam Engine Indicators.
Recording Gages.
Revolution Counters.
Pressure and Vacuum Gages.
Lubricators, etc.



Stationary and Marine Valves.
Water Relief Valves.
Blow-off Valves.
Globe and Angle Valves
Single Bolt Chime Whistles.
SEND FOR CATALOGUE

CROSBY STEAM GAGE and VALVE CO.
BOSTON, NEW YORK, CHICAGO, LONDON

A TRUTHFUL GAGE
IS THE
ONLY GOOD GAGE



There is perhaps no better economy to the steam-fitter and the engineer than a perfectly tight joint, yet one that can be easily taken apart if desired. It is possible to have such joints if Dixon's Graphite Pipe-Joint Compound is used. Flake graphite is impervious to the action of heat or cold, acids or alkalis. Hence the value of a graphite compound when properly prepared. The Joseph Dixon Crucible Co., Jersey City, N.J., will send booklet and sample free of charge.

In view of the high price of fuel, Orillia has reason to congratulate herself that she is now independent of coal and wood in running her light and water plants. It was hard enough to get fuel during the last year the steam plant was in operation, and the cost of coal made a material increase in the tax rate. If we had been dependent on this fuel now, it is not unlikely we should have been going

without light half the time, and the coal bill would well-nigh have bankrupted the town. Our manufacturers also can look with condescending pity on the establishments in other places whose profits have been materially reduced because of the coal famine, or who have even had to consider closing altogether for want of fuel. The present is a favorable opportunity for impressing on outside manufacturers the advantages Orillia offers in the way of cheap, convenient and reliable power.—Orillia, Ont., Packet.

The question of the consolidation of Canadian boot and shoe manufacturing interests has been under consideration for some months and has now reached a point of interest to all the manufacturers and large jobbers. The plan is to systematize the manufacturing and make the goods of a better quality at less expense. The most important part and largest bulk of

boots and shoes are made in Quebec, Levis and the east, and by a merging of interests in this section will be a great advantage to all. The Montreal and Toronto manufacturers and jobbers will join with the Quebec manufacturers in this consolidation.—Quebec Telegraph.

The lift lock on the Nassau Little Lake section of the Trent canal, near Peterboro, Ont., said to be the largest lock of its kind in the world, the lift being 65 feet, and the only one of its kind on this continent, has been completed. The lock is constructed entirely of cement concrete, over 30,000 barrels having been used. The placing of the necessary steel work, pontoons, etc., by the Dominion Bridge Co. will require about a year.

The ratepayers of Yarmouth, N.S., voted in favor of installing an electric street lighting plant, owned and operated by the town.

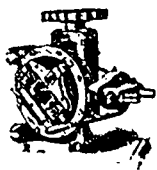
WANTED

A Partner to join Advertiser in taking over a Machinery and Supply Business, long established, well connected, and doing a large and profitable trade. Easy terms and every assistance is promised to the right parties. For a man who understands the Machinery and Supply Trade this is a magnificent opportunity.

Further particulars will be furnished by application to

D. E.,

Care of R. A. DUNTON, Notary,
Temple Building, MONTREAL.



ARMSTRONG'S PIPE THREADING AND CUTTING OFF MACHINES,

Save Time and Labor.

For Hand or Power.

Capacity from 1/4 to 6 inches.

Armstrong's Genuine Stocks and Dies,

THE BEST WATER, GAS, AND STEAM
FITTERS' TOOLS

ARE MANUFACTURED BY

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

New York Office -139 Centre St.

Catalogue on Request.

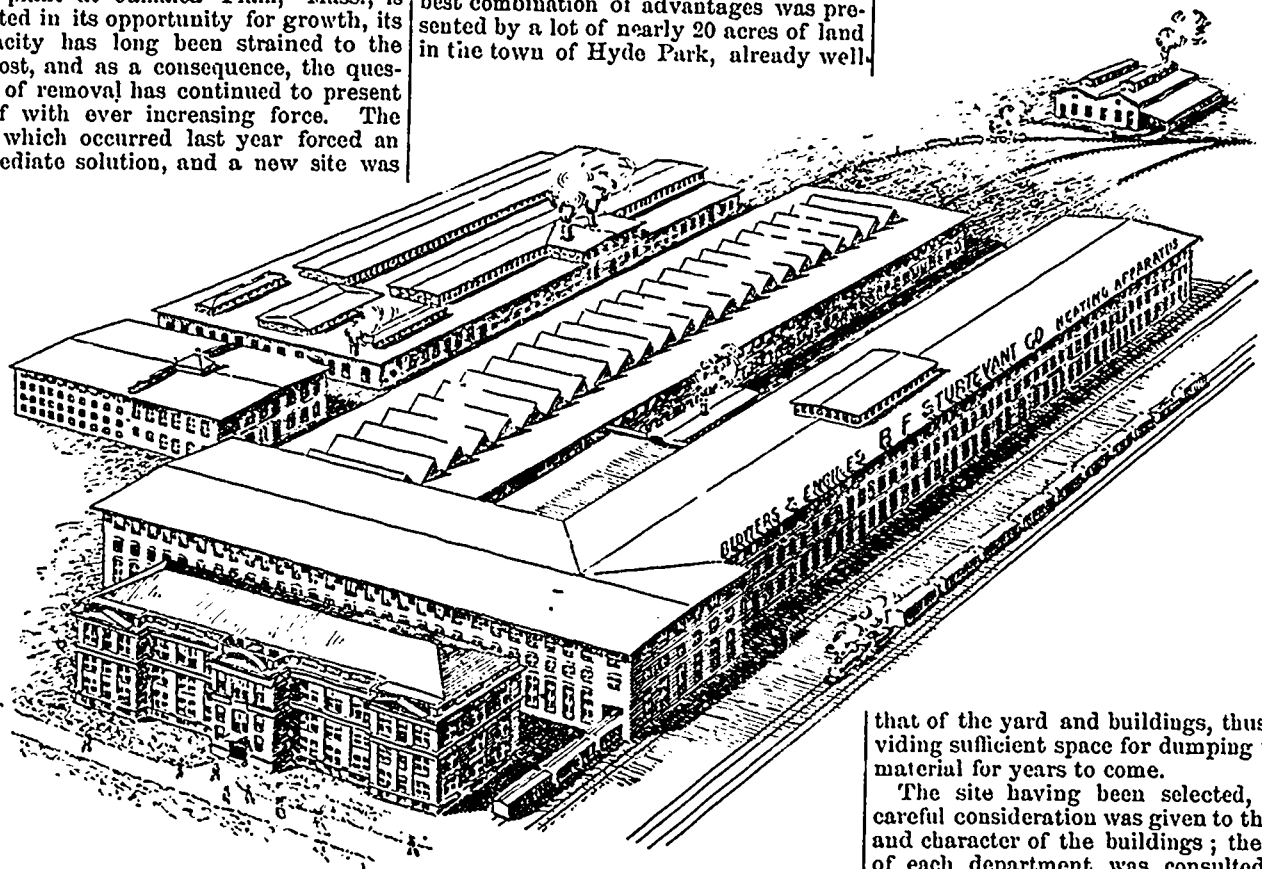


THE NEW WORKS OF THE B. F. STURTEVANT CO. AT HYDE PARK, MASS.

The new works of the B. F. Sturtevant Co., now nearing completion at Hyde Park, Mass., present an excellent opportunity to study the factors that control in the location and design of the modern manufacturing plant. The present plant at Jamaica Plain, Mass., is limited in its opportunity for growth, its capacity has long been strained to the utmost, and as a consequence, the question of removal has continued to present itself with ever increasing force. The fire which occurred last year forced an immediate solution, and a new site was

and space for ready disposal of waste material. The advantages of the West as against the East were carefully weighed, but the company readily expressed its abiding faith in the prosperity of New England, in the facilities which it presents for work of the character conducted by this company, and in the quality of its skilled labor as an offset to present somewhat higher rates for raw material. The best combination of advantages was presented by a lot of nearly 20 acres of land in the town of Hyde Park, already well-

by present employees of the company, the new location being only six miles from the old plant. The lot selected has a frontage of about 1,300 feet upon the freight yard of the N. Y., N. H. & H. R. R., etc., at Readville Station. One side of the lot is bounded by a plentiful stream known as Mother Brook, and the adjacent shore is at a level of nearly 10 feet below



NEW PLANT OF THE B. F. STURTEVANT CO., HYDE PARK, MASS.

selected after the most careful consideration. Aside from the general character of the lot itself, the principal factors considered in reaching a decision were proximity to raw materials, and to an abundance of skilled labor, adequate shipping facilities, ample water supply

known as the home of such industries as the Becker, Brainard Milling Machine Co., the American Tool & Machine Co., the new shops of the N. Y., N. H. & H. R. R., etc. Here was presented a population of particularly skilled workmen which could readily be supplemented

that of the yard and buildings, thus providing sufficient space for dumping waste material for years to come.

The site having been selected, most careful consideration was given to the size and character of the buildings; the head of each department was consulted, his recommendation reduced to writings, and frequent conferences held as to the requirements of the individual departments. With these data at hand the individual and aggregate areas were determined, and the plans started with the idea of providing a total floor space slightly more than double that of the present plant. Consideration was first given to the question of the number of floors to be pro-

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vided in the various buildings. The lay- out of the land and its available area being somewhat against a group of one story buildings, and a simple calculation showing that the actual cost of the power expended in a single year for lifting the entire produce of the works through a

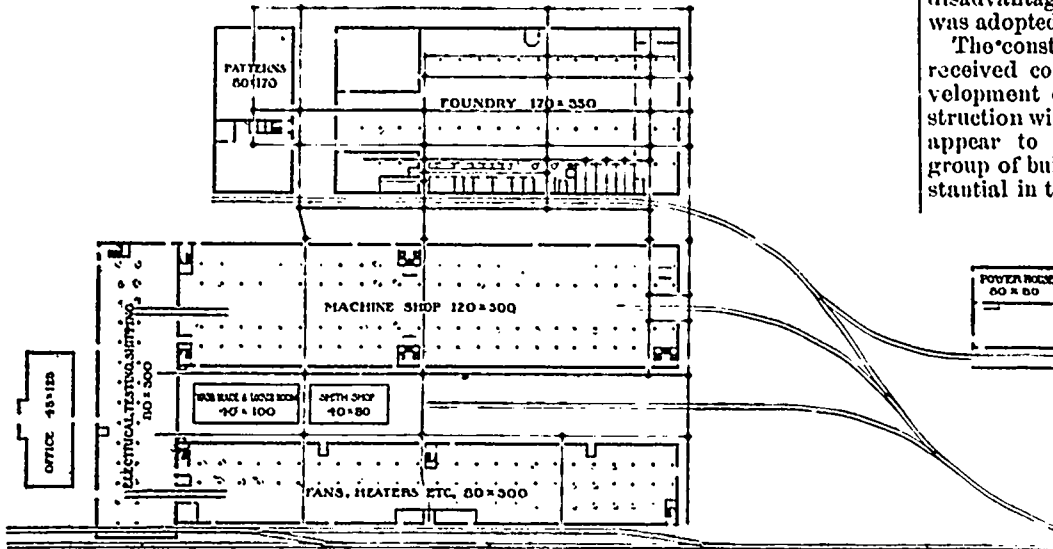
charges on elevating machinery would be more than offset by a reduction in the horizontal distances necessary to be traversed.

The arrangement of the buildings was determined by the provision to be made for growth. One arrangement of a series

to the railroad tracks, with accommodation for switch tracks between the buildings, and for their entrance at the ends of the building, with an opportunity for growth by extension in length. After a careful consideration of many schemes, and a comparison of the advantages and disadvantages, the latter arrangement was adopted.

The construction of the buildings next received consideration. The latest development of all-steel and concrete construction with large window areas did not appear to meet the requirements of a group of buildings as permanent and substantial in their character as these. All-

steel buildings, with brick walls and concrete fire-proof floors, presented disadvantages in the way of discomfort to the workmen, inconvenience in attaching machines on hangers, and excessive expense, which did not appear to be offset by advantages to be secured in the way of absolutely fire-proof construction. The type finally selected is composite in its character, consisting of steel interior columns and main steel girders, with heavy brick walls, wood timbered floor and plank roofs. In the case of the one-story foundry, the roof is supported by steel trusses, in the other buildings open timbering with wooden columns in the upper floor is employed. The main floor



NEW PLANT OF THE B. F. STURTEVANT CO., HYDE PARK, MASS.

distance of 20 feet, figured only a little over a dollar, determined the company upon the building of multi-storied buildings. The character of the products of this company readily lent itself such a design, and it was believed that the fixed

of parallel buildings permitted increase only by multiplication of buildings, but provided an excellent opportunity for the carrying of switch tracks across both ends of each building. The other arrangement provided for a group of buildings parallel

walls, wood timbered floor and plank roofs. In the case of the one-story foundry, the roof is supported by steel trusses, in the other buildings open timbering with wooden columns in the upper floor is employed. The main floor

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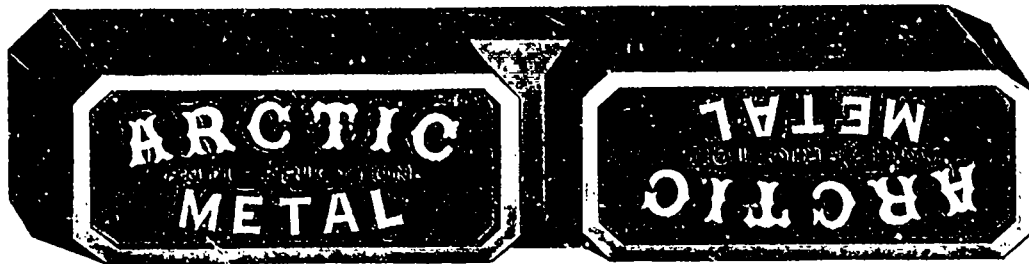
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in the machine shop is of tar concrete with spruce and maple flooring. The upper floors are carried upon wooden beams spanning the spaces between the steel girders, which follow a unit system of 20 feet on centers through the building. All roofs are of three-inch plank, with tar and gravel top.

The question of power was early decided to the extent that the entire plant would be electrically driven from a central power house; that the engines would run condensing, that the exhaust steam derived from engines under test which is considerable would be utilized for heating with supplementary amount of live steam admitted at reduced pressure as might be required. The final decision regarding the power house placed it sufficiently far from the ends of the buildings to permit sufficient extension of each, and near enough to the water supply to reduce to a minimum the expense of conveying and condensing other water.

In the accompanying illustration is pre-

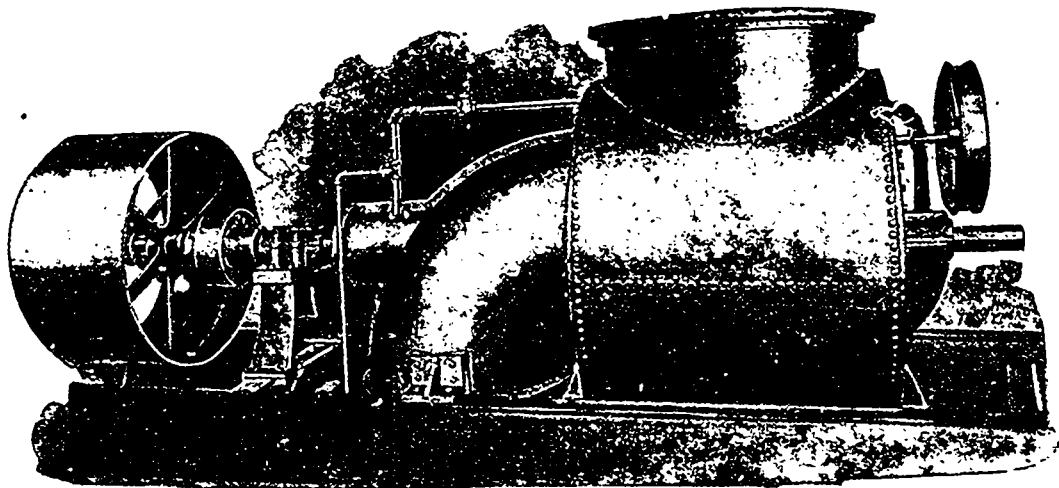
sented a block plan of this plant, showing that in its design the most careful consideration has been given to the transfer of material through the various buildings to the point of storage or shipment.

The pattern building provides at one end a two-story portion, 80 feet square, for carpenters and flask makers on the first floor, and for pattern makers on the second floor. The balance of the building, which is devoted to pattern storage, is provided with intermediate floors, making four in all, separated from the other portion of the building by double fire walls and automatic fire closing doors. The close proximity of this building to the foundry facilitates rapid intercourse.

The foundry, 170x350 feet in dimension, is designed with the idea of distributing iron upon a track system, and is to be equipped with narrow gauge railways bedded in concrete, making runways between the molding floors. Two crane-ways run lengthwise through the building the greater part of its length, and the tracks extend beneath the crosswise

travelling crane in the cleaning room at the end of the building. The brass foundry is located in one corner, a wash room in the adjacent corner, a core room between the two; the latter has ample opportunity for growth towards the center of the building, while the foundry itself can be extended to practically double its length. Storage for supplies is provided upon one side adjacent to the railroad switch. From the bins thus provided, the iron and fuel charges will be carried directly to the charging floor.

From the foundry the castings will be passed to the rear of either the machine shop or the fan shop. The former is of the familiar gallery type, 500 feet long with wings 40 feet wide, and center runway of the same width for crane of 20 ton capacity. The lighting will be principally by a series of sawtoothed skylights running crosswise of the roof, with glass facing due north. The crane will serve the entire floor, and transport heavy castings from the machine tools to the erecting floor, where the completed engine



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or generator may be lifted upon a transfer car passing through the testing building, and there picked up by another 20 ton crane which will drop it upon the testing plate, and subsequently carry it forward to the steam railway track which passes through the end of the building, and provides space for the loading of two cars at a time. The upper floor of this building, together with portions of the adjoining buildings, is devoted to the electrical department and provided with individual small travelling cranes.

The building devoted to the manufacture of fans, heaters, etc., is 80 feet in width, of the same length as the machine floor, is three stories in height, of typical mill construction, provided with all conveniences for handling material, and arranged so that shipment can be made from numerous points along one side, while supplies are brought in from the court between it and the machine shop.

The smith shop, 40x80 feet, serves both buildings with equal facility, while the wash house and locker room, 40x100 feet, three stories in height, is so located as to reduce to a minimum the distance to be traversed by the individual workman. The third floor will be used as a lunch room.

The standard first floor height in the main buildings is 17 feet, that of the second and third stories is 15 feet. The windows are large and numerous.

The office is to be a model structure of its kind, and is to serve as headquarters for the entire business. It will contain the correspondence, designing and drafting offices, the superintendent's quarters, and the cost department, the advertising bureau and a printing office which will be located in the basement. It will be three stories in height, with a finishing attic to provide additional drafting room space.

The equipment of this plant will be largely Sturtevant in its character. Beginning with the power plant, the mechanical draft apparatus, the engines and generators and the exhaust head will be of Sturtevant make. The buildings will be heated by the Sturtevant system, the shafting and individual machines driven by motors of the same make, the refuse from the wood-working machinery, the dust from the cleaning room of the foundry, for ventilation of the offices, toilet rooms and wash house, and the re-

moval of smoke from the smith shop will be accomplished by the Sturtevant exhaust fans, while Sturtevant blowers will be used for brass and iron foundry, forge shop blast and the like, and Sturtevant steam traps will be employed upon the steam driers.

The accompanying bird's-eye-view presents a clear idea of the general arrangement and appearance of these buildings.

THE HYDE WATER TUBE BOILER.

The Hyde Water Tube Boiler which is here illustrated was introduced in the United States in 1893 and the original boilers built in that year are still in active operation and giving good service.

Various improvements have been made in it from time to time so as to increase the accessibility, durability, and general efficiency of it, and to-day these boilers are being used from the Atlantic Coast to the Rocky Mountains and from the Gulf to the Great Lakes; an order having recently been placed for them by the London Rolling Mill Co., London, Ont., and negotiations are under way for the erection of a number of them in Great Britain.

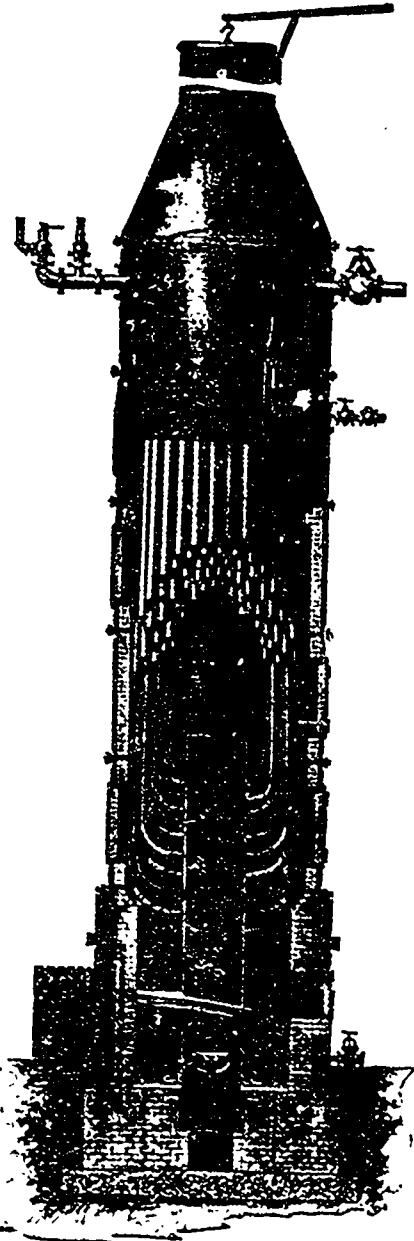
The boiler consists essentially of a steam drum, central water column, and water tubes connecting the two. The boiler is so designed as to permit of free expansion and contraction in all its parts without injury.

The circulation of the whole of the water is constant and thorough, the steam and water raising up the tubes to the steam drum where a large disengaging surface allows the steam to rise freely from the water, which water returns down the central column.

By this means not only the highest economy and safety is secured, but a steady water level is maintained no matter how hard or irregularly the boiler may be fired.

There is no lower drum to the Hyde boiler, consequently the draught of the furnace is not impeded and there are no flat surfaces for the dust and soot to accumulate upon.

When used in connection with puddling, heating, or similar furnaces, such furnaces are guaranteed to turn out the same amount of material, in the same time, and with the same fuel consumption



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as if the furnaces were connected directly to the stack, so that whatever steam power is generated is so much clear gain, and there are a number of rolling mills in the United States where the entire power required for operating, (frequently amounting to several thousand h.p.) is obtained entirely from use of Hyde boilers operated by the waste heat from furnaces, which heat would otherwise be lost. By this means the power required for operating a rolling mill is obtained absolutely free of cost.

Repeat orders from the largest concerns in the country have been received five and six times over, showing that the results obtained are eminently satisfactory.

The Hyde boiler is very compact, so that the space occupied in the mill is very little greater than that which would be required for the furnace stack, and less than would be required for two puddling furnace stacks, one boiler taking care of the waste heat from two furnaces.

The element of safety is a most important one and in the nine years in which the Hyde boiler has been used, under all kinds of conditions in all parts of the

United States, there is no record of any person ever having been injured by one of these boilers.

ANTHRACITE IN ONTARIO.

Anthracite in Ontario is the announcement made by parties concerned in some recent tests and examinations of coal in the vicinity of Chelmsford, Ont., 20 miles northwest of Sudbury. For some years the existence of a deposit of carboniferous material at that point has been known, but in its early days the boom was snuffed out by a Provincial geologist calling the discovery anthraxalite. Nevertheless it was used as fuel by persons living nearby, though it left considerable ash. For some weeks past interest has revived, and a German geologist connected with one of the large nickel companies at Sudbury has given it as his opinion that the mineral is no other than anthracite, a precious article recently known and revered as black diamonds. A Toronto gentleman connected with the property makes this announcement. "Even if it were anthraxalite," he said, "it would be just as combustible and as good ma-

terial for use as anthracite, but anthraxalite is found in smaller quantities. The percentage of carbon in the Chelmsford article has been found to be very high. Picked pieces have gone 95 per cent., and when mixed even with quartz it has shown 65 per cent. of carbon. As far as it has been exposed the outcropping is apparently increasing in size. Some Pennsylvania coal experts who have recently examined the property say that the slate found in opposition to the coal is of exactly similar quality to that found in the anthracite beds of Pennsylvania. It is only a question of developing to see how large is the quantity."

It is stated that some Pennsylvania coal people have become interested in the property, and that energetic development work will be prosecuted at once.

In connection with the early unfavorable reports presented regarding this deposit by Ontario authorities, it is interesting to recall that cold water was similarly poured by scientists upon early discoveries of iron in the famous Mesaba range of northern Michigan, upon the gold of Cripple Creek, and upon the gold in the granite rocks of Hastings County.

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For the convenience of our customers in the Eastern Provinces we have opened offices in Montreal at Room 42, Street Railway Building, cor. Craig Street and Place d'Armes.

This step has been necessitated by our increasing business and the belief that our customers will receive better service and more personal attention through our direct representation than through the medium of a selling house.

Mr. George C. Rough, who for the past six years has been associated with R. E. T. Pringle, has severed his connection with that company and takes charge of our Montreal offices.

Orders to the Montreal office will receive the personal attention of Mr. Rough, and customers will receive prompter service and greater satisfaction than in the past.

THE

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CALIFORNIA EXCURSIONS.

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

A NEW PORTLAND CEMENT COMPANY.

The Superior Portland Cement Co. of Toronto, was recently organized by the election of the following officers:

Judge Morgan, president; James McCullough, 1st vice-president; C. C. VanNorman, 2nd vice-president; W. H. Jackson, manager; R. J. Daley, secretary; J. J. Follett, treasurer; E. Utley, auditor; J. W. McCullough, solicitor.

The directors of the new company are: Judge Morgan, W. H. Jackson, J. J. Follett, R. J. Daley, E. J. Jackson, C. C. VanNorman, Dr. B. E. McKenzie, C. J. W. Neale, J. Muldoon, Toronto; James McCullough, D. Stouffer, Stouffville; George McIntyre, D. B. Brown, Orangeville; Sheriff J. W. Bettes, Bracebridge; Dr. W. Chambers, Oakwood; J. Moore, Mt. Albert; S. A. Flumerfelt, Goodwood; Thomas McCarty, Sault Ste. Marie.

The company owns large deposits of marl and cement clay at the Caledon Lakes near Orangeville. A modern plant with a capacity of 600 barrels daily is to be erected, and put in operation at the earliest possible date, at Orangeville, Ont. Expert chemists and engineers, after thorough examinations, say in their reports that the marl and clays contain the proper ingredients to turn out Portland cement equal to any in the world.

THE SMART-TURNER MACHINE CO.

What was until recently the Smart-Eby Machine Co., Hamilton, Ont., after having had a most successful career since its inauguration, has recently made some changes in its members and the name has been changed to the Smart-Turner Machine Co., Limited. Mr. J. A. Turner having been appointed manager in place of Mr. Eby, who has gone out of the business.

Mr. Turner is a young man who has had an unusual amount of experience in the machine business, having held important positions with the Westinghouse Electric & Mfg. Co., Pittsburg, Pa.; the American Tin Plate Co., Pittsburg, Pa.; the Hamilton Steel & Iron Co., Hamilton, Ont.; John Bertram & Sons, Duudas, Ont.; besides being a graduate of McGill University in mechanical engineering.

The Smart-Turner Co. has, we are informed, never had so much work on hand as at present, having a number of waterworks plants and other contracts in the course of construction. A few of the recent contracts on its order books are: A pair of triplex power pumps direct connected to two gas engines, for the corporation of Bridgeburg, Ont.; a tan-

dem compound duplex direct-acting pumping engine with 2-60x14 steel boilers, for the corporation of Newcastle, N.B.; a duplex, outside packed, pot valve pump for the Halifax Electric Tramway Co., Halifax, N.S.; a duplex pump for the Stratcona Coal Co., River Hebert, N.S.; a duplex pump for the Jacques Cartier Electric Co., Quebec City; a duplex pump for the Deering Harvester Co., Hamilton, Ont.; a duplex

pump for the Canadian Rand Drill Co., Sherbrooke, Que.; a duplex pot valve pump for the Beardmore Co., Acton, Ont.; a pair of vertical high speed engines direct connected to electric generators, for the Collingwood Shipbuilding Co., Collingwood, Ont.; a Meyer cut-off engine with boiler heater, pump, etc., for the Dominion Harness Co., Port Elgin, Ont.; 1-10 ton hand power travelling crane, 55 feet span, for the

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new power house of the Halifax Electric Tramway Co.; 1-5 ton travelling crane for the foundry of the I. Matheson Co., New Glasgow, N.S.; 1-10 ton travelling crane for James Brodie, Granitoville, Que., besides many other orders.

THE NEW CANADIAN PACIFIC RAILWAY SHOPS AT MONTREAL.—The grounds being covered by the new works of the Canadian Pacific Railway Co. at Montreal are about 350 acres in extent, being about 4,500 feet in length and 200 feet wide.

The purpose of these shops is the concentration in one plant of a large part of the repairing of the engines and passenger coaches used on the road, at the same time making large provisions for the manufacture of locomotives, passenger and sleeping coaches as well as freight cars. The total floor space of the buildings planned for immediate construction is about 750,000 square feet. The buildings will be of pressed brick on rubble stone and concrete foundations. The trusses will be combination resting on steel columns for the shops of the car department, and steel trusses for the locomotive shops, the blacksmith shop and foundry. The hot blast system of heating will be used throughout.

The passenger car shops, when completed, will be able to turn out 100 new cars per year, and repair 900 old ones. The freight car shop will have a capacity of 25 to 30 new cars per day and will be able to repair 100 cars per day. The locomotive erecting and machine shops

and the boiler shop will have a capacity of 75 new engines per annum and in addition will be able to repair 400 during the same period. The wheel foundry is designed to turn out 250 wheels per day.

Electric transmission of power will be used throughout with individual machine and group motors in the several shops. The sizes of the buildings are as follows:

Freight car shop, 540 x 107 feet; planing mill shop, 500 x 127 feet; cabinet shop, 290 x 62 feet; hardware storage and upholstering shop (two storeys), 290 x 62 feet; passenger car paint shop, 672 x 100 feet; passenger car erecting shop, 672 x 100 feet; truck shop, 432 x 82 feet; car machine shop, 288 x 310 feet; blacksmiths' shop, 610 x 130 feet; gray iron foundry, 380 x 125 feet; machine and locomotive erecting shop, 900 x 160 feet; boiler shop, 300 x 120 feet; wheel foundry, 170 x 110 feet; frog shop, 250 x 100 feet; drying kiln, 250 x 100 feet; power house, 120 x 100 feet; office, 110 x 60 feet, making a total of about 750,000 square feet or over 17 acres.

CLAY LANDS OF ONTARIO.—The preliminary report of the geologist, Mr. L. L. Bolton, who accompanied Mr. T. B. Speight's surveying party into the country lying between Lake Temiskaming and the Abitibi River, has been received at the Ontario Bureau of Mines. Mr. Speight and his party subdivided the Township of Eby into farm lands, and ran the meridian line north from the northeast corner of Eby to the Abitibi.

Mr. Bolton was attached to the party for the purpose of making an examination of the geological and mineralogical features of the country. In part, his report says that the rocks in the Township of Eby are chiefly of the Huronian series, and as the minerals of Ontario are usually found in that formation this is considered encouraging. The party crossed the height of land and reached the Black River, 20 miles north of Eby. They found, at two points on the river, falls, respectively 46 and 35 feet, which would furnish good waterpower. The river was banked by rolling clay land, which did not, however, extend far back. Heavy spruce and poplar were found near the seventh portage, and continued as far north as the party went. No navigable streams and no lakes were found between the Black and Abitibi Rivers.

A few miles north of the Black River they encountered a clay belt, which extended northward about 20 miles, the land being almost perfectly level. The timber there was chiefly spruce and poplar, averaging 12 to 14 inches in diameter, but many of the poplar reached 20 inches. Balsam, balm of Gilead and white birch also occurred, but only in small quantities, while white and red pine were almost completely absent from the territory visited.

The American Abell Engine & Thresher Co., Toronto, will erect a brick addition to their boiler room and foundry, at a cost of about \$11,000.

A GOOD PLANER . . .

WILL SAVE ENDLESS WORK FOR FITTERS

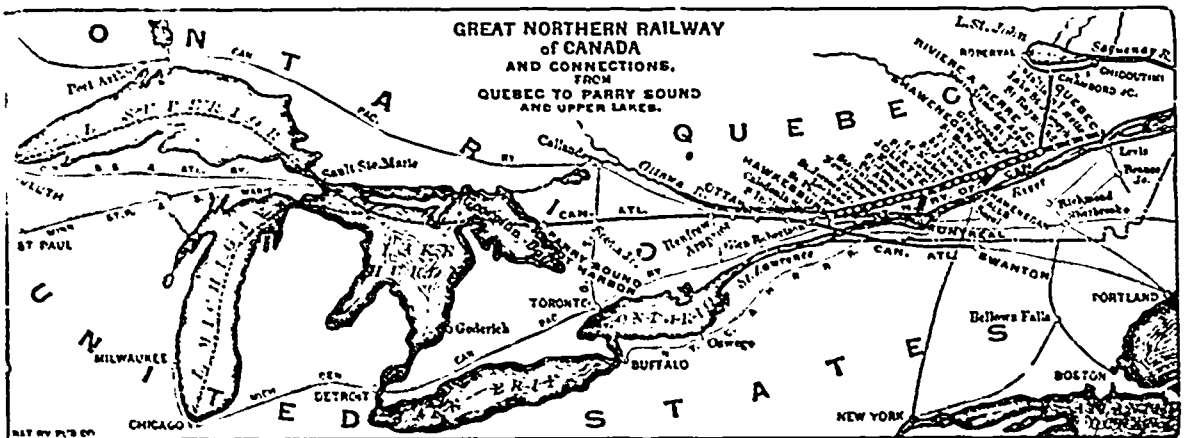
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Power, strength, convenience and accuracy are to a high degree combined in their construction. Is such a combination interesting?

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EXCEPTIONAL opportunities for manufacturers are offered.



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OPPORTUNITIES.

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

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

858. The manufacturers of a popular Briar pipe wish to appoint suitable Canadian resident agent.

859. A Birmingham house possessing a large connection in box shooks, wishes to hear from Canadian firms who can supply same in large quantities.

860. A London company manufacturing tobaccos, cigars and cigarettes, asks to be placed in touch with Canadian importers of these lines.

861. A London firm makes enquiry for Canadian firms manufacturing articles for tradesmen's equipment, such as butchers' blocks, alarm tills, bent-wood shop chairs, light two and four wheeled carts, barrows, ladders, etc.

862. Enquiry comes from a Yorkshire firm for houses in Canada, from whom they can purchase maple wood lumber for wringing machine rollers.

863. A gentleman just over on a visit from the Transvaal, desires to get into communication with a Canadian steel company manufacturing steel tubes and similar articles.

864. A Colonial merchant in London, having a branch house in South Africa, desires to get into touch with Canadian shippers of doors, sashes, windows, dimension-lumber and deals, with a view to large shipments for South Africa.

865. A manufacturer of cycle saddles and general leather goods, desires to be placed in communication with Canadian buyers of such goods.

866. An English correspondent asks for the names of Canadian manufacturers of condensed milk, as he has an outlet for the article in that country.

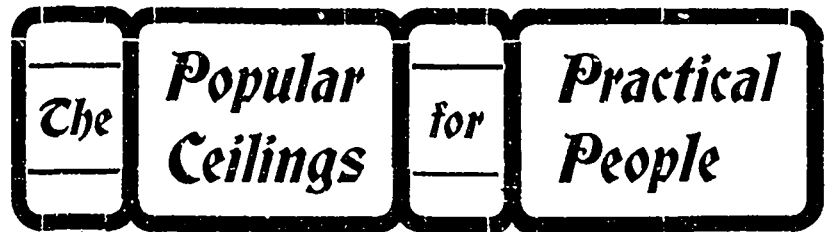
867. A manufacturer of copper and tin moulds, and paste cutters for kitchen use, is desirous of getting into touch with hardware firms in Canada open to purchase those goods.

868. Enquiry is made by a Barcelona house for the address of Canadian manufacturers of evaporated cream.

869. A firm in the Midlands, desire to receive quotations from Canadian shippers of fruit and poultry (turkeys).

870. A Birmingham firm who wish to introduce Canadian manufactures to their foreign correspondents, desire to get into touch with reliable commission agents in Montreal, Toronto and other centres, who could undertake the purchase and shipment of the goods required, viz., hardware, lumber, etc.

871. Enquiry is made for the names of Canadian firms who are prepared to export roofing slates.



WE claim that our Metallic Ceilings and Walls are the very best style interior finish made . . .

Sanitary—Artistic—Fireproof—exceedingly durable, and capable of an immense amount of variety in coloring and effect

They satisfy all buyers—no imperfections—no stinting of quality—highest grade materials and workmanship throughout. Certain to please you



INDUSTRIAL PUBLICATIONS.

Messrs. Wm. Jessop & Sons, Sheffield, England, have issued a valuable illustrative and descriptive booklet entitled, "Jessop's Steel and How They Make It." The book contains 75 pages, filled with valuable information on steel making and illustrations of the plant of the company. The publication also contains a fine illustration of the new plant of the Jessop Steel Co., at Washington, Pa., which is about to be put in operation.

Messrs. Wm. R. Perrin & Co., Toronto, have issued a little booklet of testimonials of leading Canadian concern, who have purchased and used the hydraulic presses manufactured by them. Nothing but the highest praise is given these products, which are now in wide use in this country.

The Robb Engineering Co., Amherst, N.S., has issued a very attractive catalogue describing their line of Mumford boilers, for all the purposes of steam power. The publication contains some valuable information on economic steam production and many testimonials from users of Mumford boilers.

The mechanical induced draft for power plant equipment, just issued by

the Buffalo Forge Co., Buffalo, N.Y., tells something of the advantages of the Buffalo blower manufactured by the company. The Buffalo engine is described and illustrated in a similar booklet issued by the company.

The New Bedford Textile School, New Bedford, Mass., has issued its new catalogue for the term of 1902-1903, which contains much information concerning the textile industries.

The Canada Radiator Co., Port Hope, Ont., has issued a catalogue descriptive of the product of the company.

The Canadian General Electric Co. has issued a new price list of telephone supplies.

The Christensen Engineering Co., Milwaukee, Wis., has sent us their new catalogue of "Cecco" electrical machinery, which contains much information of interest to power users.

The final of the series of Indian calendars for 1902, entitled "A Scout," has just been received from the Reese-Hammond Fire Brick Co., Bolivar, Pa.

The first annual report of the Alumni Association of the Philadelphia Textile School, just issued, contains a number of very interesting papers on the various phases of the textile industries.

MARKETS.

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

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

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

TORONTO, November 7, 1902.

The passing of the coal strike has caused renewed activities in nearly all industrial lines, and a fair supply of fuel is now being received. The foundry interests were perhaps the heaviest sufferers during the fuel famine, many of the foundries being closed down owing to the scarcity of coke. All of these concerns have resumed work and in nearly every line the manufacturers are very busy with a large amount of work on their hands. The general metal market conditions display some few changes since our last issue, and altogether there has been a considerable increase in the volume of business.

THE TORONTO MARKET.—There is a good demand for seasonable goods, such as stoves and ranges, furnaces, pipes, wire, shovels, weather stripping and also for sporting goods. The shipments to the West have been quite heavy lately. The outlook for the holiday trade is very good. A good many sorting orders in that department are expected soon. Values are generally steady in this market.

There is a good inquiry for metals, and the firmness previously noted for most lines appears to be well maintained.

Barbed Wire—\$2.67½ to \$3 per 100 lbs.

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

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

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

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

Cut Nails—\$2.40 to \$2.50.

Galvanized Wire—Nos. 6, 7 and 8, \$3.50 to \$3.85; No. 9, \$2.85 to \$3.15; No. 10, \$3.60 to \$3.95; No. 11, \$3.70 to \$4.10; No. 12, \$3 to \$3.30; No. 13, \$3.10 to \$3.40; No. 14, \$4.10 to \$4.50; No. 15, \$4.60 to \$5.50; No. 16, \$4.85 to \$5.35.

Glass—Terms, 4 months, or 3 per cent. off cash 30 days. Discount from pane price list, 33½ per cent.

Green Wire Cloth—\$1.37½ per 100 square feet.

Harvest Tools—60 per cent. to 60 and 10 per cent.

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

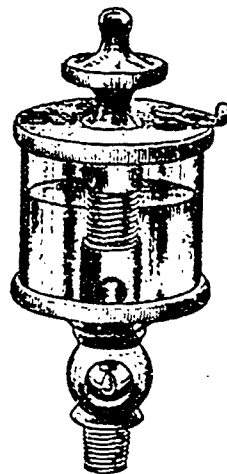
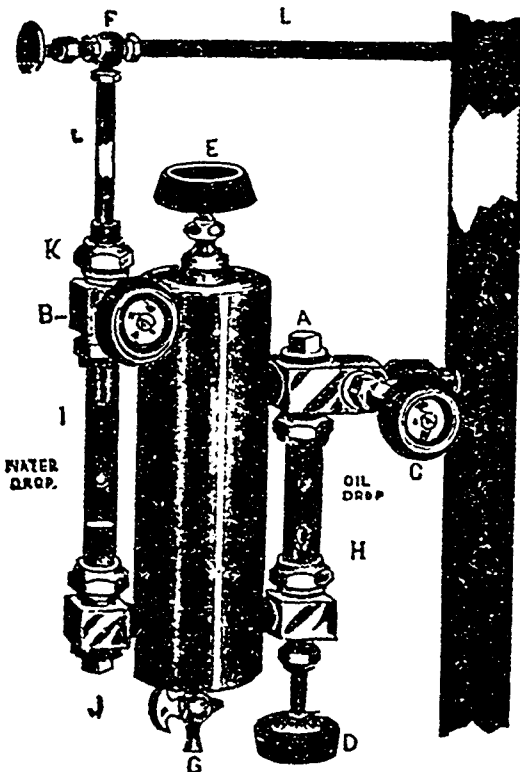
Horseshoes—No. 2 iron shoes, light, medium and heavy, \$3.45 f.o.b.; snowshoes, \$3.70.

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

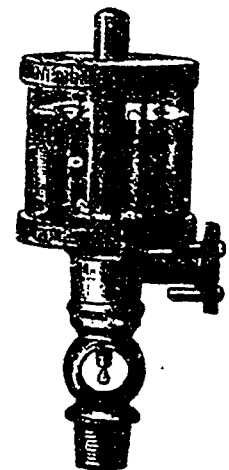
Poultry Netting—2-inch mesh, 19 w.g., 60 per cent. off the list; 2-inch mesh, 18 w.g. and heavier, 50 and 10 per cent.

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

Sight Feed LUBRICATORS



And



Engine Glass Oilers

OF EVERY DESCRIPTION.

Hamilton Brass Mfg. Co.

HAMILTON, ONT. Limited

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

Rivets and Burrs—Iron rivets, 60 and 10 per cent.; iron burrs, 35 per cent.; copper burrs, 30 and 10 per cent.; copper rivets and burrs, 45.

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

Spades and Shovels—40 and 5 per cent.

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

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

Old Material—Agricultural scrap 60c; machinery cast, \$14 to \$15; stove plate, \$10; No. 1 wrought, \$12.50 per ton; No. 2, \$4.50; new light scrap copper, 8c to 8½c; coil wire, scrap, 10c; light brass, 5 to 5½c; heavy yellow brass, 8c to 8½c; heavy red brass, 9½c; scrap lead, 2c to 2½c; zinc, 3c; scrap rubber, 6c to 6½c; good country mixed rags, 50c to 60c.

Antimony—9½c per lb.

Bar Iron—Common, \$1.95 to \$2.05 per 100 lbs.

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

Brass—Sheet and rod, discount 15 per cent.

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

Copper—Ingot at 13½c per lb., and 22c to 23c for sheet.

Galvanized Sheets—\$4.30 to \$4.50.

Lead Pipe—Discount 35 per cent.

Pig Iron—No. 1, \$23; No. 2, \$22.50.

Pig Tin—31c to 32c.

Pig Lead—3½c to 3¾c.

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

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

Spelter—5c to 6c per lb.

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

Terne Plates—\$8.50.

Tinned Sheets—7½c to 8c.

Zinc Sheets—6c to 6½c.

THE MONTREAL MARKET.—A good many orders for harvest tools are coming forward. The trade seems to be under the impression that the present low prices of these articles will not be maintained for any length of time, and are sending in their orders for immediate delivery. The manufacturers, however, refuse to fill any orders that are not accompanied by specifications, and jobbers and retailers, in ordering these, should enclose specifications to ensure delivery of the goods.

Wholesalers report a good demand for all lines of hardware.

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

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

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

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

Ingot Tin—31c per lb.

Lead—\$3.25 per 100 lbs.

Terne Plates—\$7.50 per box.

REQUIRED.

THE AGENCY FOR SOUTH AFRICA OF CANADIAN MANUFACTURES.

Advertiser carrying samples of British and Colonial goods throughout South Africa is open to arrange commissions to sell Canadian Manufactures and Produce. Ten years experience of South African requirements.

F. G. BECKS,

P. O. BOX 23,

PORT ELIZABETH, CAPE COLONY.

IMPORTANT to MANUFACTURERS

We are introducing articles and goods into Manitoba and the Territories, where there are excellent openings in a flourishing country.

Correspondence Solicited.

NICHOL, McDONALD & CO.

Real Estate, Insurance and Commission Brokers

222 McDERMOTT AV., WINNIPEG, MAN.

"SCIOTO" FIRE BRICKS

are the best. WHY NOT USE THEM?

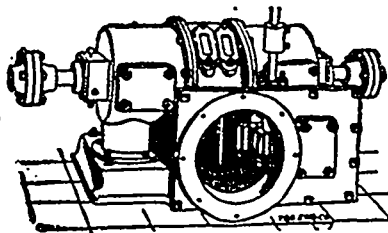
More extensively imported into Canada than any others made in the United States. One million now sold for Spring delivery to Ontario. Special inducements. Write to day.

MANUFACTURED BY

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

One of the oldest firms in the States

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



Horizontal Type.

"LITTLE GIANT" TURBINE

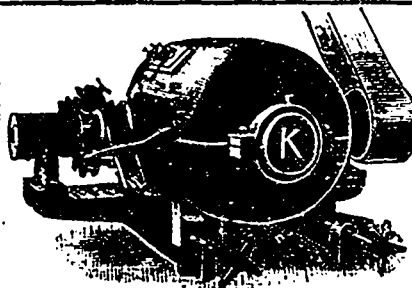
...FOR ALL PURPOSES....

HORIZONTAL AND VERTICAL BUILT IN 44 SIZES.

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

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

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



Special Attention Given to Electrical Repairing.

THE KAY ELECTRIC DYNAMO & MOTOR COMPANY, Limited

219-221 Queen St. East, Manufacturers of - TORONTO, ONT.

MULTI-POLAR MOTORS.

BI-POLE MOTORS

ALTERNATING CURRENT MOTORS.

INDUCTION MOTORS.

DYNAMOS for Incandescent and Arc Lighting.

DYNAMOS for Electro-plating and Electrotyping.

ELECTRIC CONTROLLERS for Elevators.

ELECTRIC ORGAN BLOWERS.

Schoellkopf, Hartford & Hanna Co.,

BUFFALO, N.Y.

Aniline Colors, Manufacturers of Dyestuffs, Chemicals

NEW YORK, BOSTON, PHILADELPHIA, PROVIDENCE, CHICAGO,

MILWAUKEE, CINCINNATI, KANSAS CITY, NEENAH, WATERTOWN.

**BARGAINS IN
Second-Hand Machinery**

BOILERS

41" x 162" Horizontal Tubular.
43" x 192" " " "
38" x 131" " " "
70" x 180" " " "
28" x 51" Water Tube.
26" x 106" Fire Box.
72" x 192" " " "
37" x 68" Vertical.
28" x 44" " " "
19" x 41" " (New).
26" x 60" " " "

ENGINES

14" x 20" Dickey, Neill & Co. make.
9" x 12" Becket Co. make, Corliss bed.
11" x 15" Contro Crank, Dutton & Co.
7 1/2" x 8" " " "
8" x 8" " " Laurio Engine Co.
4" x 4" Vertical, Doty make.
100 h.p. W heolock Tandem Compound.
8 h.p. Haggas Gas Engine.
8 h.p. Toronto Junction Gas Engine.
4 1/2 h.p. " " "

SCREW CUTTING ENGINE LATHES

24" x 16" London Tool Co. make, now.
24" x 12" " " "
24" x 10" " " "
18" x 8" Crosby Co. make, now.
18" x 6" " " "
14" x 6" " " "

GAP LATHES

26" x 42" x 20" London Tool Co. make, now.
14" x 20" x 9 1/2" American make.
15" x 22" x 14" Sebastian make.

Send for Monthly Stock List and Prices
A full stock of Engineers' and Millmen's Supplies

H. W. PETRIE,

131-33-35-37-39-41-43-45 Front St. West,
8-10-12-14-16-18-20-22 Station Street,
TORONTO

Established



1799.

By Special Warrant.

EXPORT TRADE

Canadian Merchants and Manufacturers
desiring to do business with

**GREAT BRITAIN, THE COLONIES
or FOREIGN COUNTRIES**

will do well to consult

KELLY'S DIRECTORY

OF THE

MERCHANTS, MANUFACTURERS

AND

SHIPPERS OF THE WORLD.

(Endorsed by the British Government).

The 17th edition of which is being prepared. In addition to the Classified Trade Lists of the Importers and Exporters, Merchants and Manufacturers of the United Kingdom and all principal trading centres of the World, it gives the Customs Tariffs for every country and all classes of goods. The work contains over 4,000 pages, and gives more information than any other work published.

Highest Award, Gold Medal, Paris, 1900

For further particulars, apply.

Kelly's Directories Limited (London, Eng.)

Dominion Branch—71 Victoria St., Toronto, Ont.
W. P. DENT, - Manager.

Branches in Great Britain—Glasgow, Liverpool, Manchester, Birmingham, Leeds, Sheffield, Nottingham, also Paris, Hamburg, New York, Bombay, Calcutta, Cape Town, Melbourne, Sydney, Dunedin, Buenos Ayres, etc.

Lead Pipe—7c for ordinary, and 8c for composition waste, with 37 1/2 per cent. off.

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

Coil Chain—No. 6, 12 1/2c; No. 5, 10 1/2c; No. 4, 10c; No. 3, 9 1/4c; 1/4 inch, 7 1/2c per lb.; 5-16, \$5.05; 3-5, \$4.40; 7-16, \$4.20; 1/2, \$4; 9-16, \$3.95; 5/8, \$3.70; 3/4, \$3.65; 1, \$3.65; 1, \$3.65. In carload lots an allowance of 10c is made.

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

Antimony—10c a lb.

Tiuplates—\$4.25 for coke; \$5.75 to \$5.25 for charcoal.

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

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

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

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

Horseshoes—Iron shoes, light and medium patterns, No: 2 and larger, \$3.35; No. 1 and smaller, \$3.60, snowshoes, No. 2 and larger, \$3.60; No. 1 and smaller, \$3.85; X.L. steel shoes, all sizes, 1 to 5. No. 2 and larger, \$3.45; No. 1 and smaller, \$3.70, featherweight, all sizes, \$5, toe weight steel shoes, all sizes, \$6 25 f.o.b.

Horse Nails—Discount of 60 per cent. on oval heads, and 65 and 5 per cent. on countersunk heads; C brand, discount of 40, 10, 7 1/2 per cent.

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

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

Building Paper—Tared felt, \$1 70 per 100 lbs.; 2-ply ready roofing, 85c per roll; 3-ply, \$1.10 per roll; carpet felt, \$2.25 per 100 lbs.; dry sheathing, 35c per roll; tar sheathing, 45c per roll; dry fibre, 50c per roll; tared fibre, 60c per roll; O.K. and I.X.L., 65c. per roll; heavy straw sheathing, \$30 per ton; slaters' felt, 60c per roll.

Cordage—Manila, 15c per lb for 7-16 and large; sisal, 12 1/2c per lb., and lath-yarn, 11 1/2c lb.

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

Galvanized Wire—Nos. 6, 7 and 8 gauge, \$3.45; No. 9, \$2.80; No. 10, \$3.55; No. 11, \$3.65; No. 12, \$2.95; No. 13, \$3.05; No. 14, \$4.05; No. 15, \$4.55; No. 16, \$4.80; No. 17, \$5.20; No. 18, \$5.45.

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

Fine Wire—The discount is 25 per cent.

Brass and Copper Wire—Discount, 62 1/2 per cent.

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

Harvest Tools—Discount of 60 per cent. and 10 per cent. off list prices for balance of 1902 and for season of 1903.

Oils and Putty—Turpentine, 76c per gal.; linseed oil, raw, 68c; boiled, 70c; Newfoundland pure prime cod, 32c; castor oil, 8 to 10c; putty, in bulk, bbls., \$1.90; in bladders, per 100 lbs., in bbls., \$2.25; bladders, in boxes, \$2.40; tins, \$2.25 to \$2.65.

Glass—First break, per 50 feet, \$2.10; second break, per 50 feet, \$2.20; per 100 feet, third break, \$4.70; fourth break, \$4.95; fifth break, \$5.20; sixth break, \$5.70; seventh break, \$6.20.

Leads and Paints—White lead, Government standard, \$5 to \$5.25; exterior, \$4.75; No. 1 grade, \$4.65; No. 2 grade, \$4.50; red lead, pure, in casks, \$4.50; in kegs, \$4.75; No. 1, in casks, \$4.25; in kegs, \$4.50; pure mixed paints, \$1.20 gallon.

BUFFALO PIG IRON MARKET.—Office of Rogers, Brown & Co., Buffalo, N.Y., November 4, 1902.

Iron is just as scarce as ever but the remarkable coke situation diverts attention from it. It is difficult to image a worse outlook for procuring regular supplies than that which now confronts the trade, with winter so near. The railroads that serve the coke sections of the country simply cannot handle the cars, and if they could coke would be none too plentiful.

The market is firm, quiet and unchanged.

BRITISH PIG IRON MARKETS.—Messrs. William Jacks & Co., 49 Leadenhall street, London, E.C., England, under date of October 24, 1902, quotes as follows:

Since writing you last prices have here fallen owing to the general dullness of trade in this country, and absence of American enquiries:

No. 1 Gartsherrie, 66/- per ton, f.o.b. Glasgow. No. 3 Gartsherrie, 59/6 per ton, f.o.b. Glasgow. No. 3 Foundry

GALVANIZING

We are prepared to attend to all orders Promptly and Economically.

WINDMILLS, PUMPS, TANKS, Etc.

ONTARIO WIND ENGINE and PUMP CO.

LIMITED.

95 ATLANTIC AVE., TORONTO.

:: PLATING ::

Gold, Silver, Nickel, Copper and Brass Plating in any quantity.

MANUFACTURERS OF METAL SPECIALTIES

BRANTFORD PLATING CO., Brantford, Can.

F. W. HORE & SON, Limited, HAMILTON, ONT.

Manufacturers of CARRIAGE, WAGGON, AND SLEIGH WOOD WORK.

Middlesbro, 52/3 f.o.b. per ton, makers wharf including dues. Nos. 1, 2, 3 Cumberland Hematite 67/- per ton, f.o.b. Liverpool. Special analysis, 71/- per ton f.o.b. Liverpool. Refined D.T.N. Hematite in small pigs, 85/- per ton, f.o.b. Liverpool.

ENGINEERS' CLUB MEETING.—At the regular meeting of the Engineers' Club of Toronto, on last Tuesday evening, Prof. A. P. Coleman read an interesting paper on "The Sudbury Nickel Region." The program for the special meeting to be held on Tuesday evening, November 20, includes a paper on "Recent Applications of Compressed Air," by A. A. Bowman, Toronto representative of the Canadian Rand Drill Co. An enjoyable feature of the club are the business luncheons held every Monday. The organization is gaining rapidly in membership and has prepared an interesting program for the coming winter.

DECREASE IN IMPORTS OF ANTHRACITE.—The effect of the coal strike on Canadian importations of coal during the summer months, when transportation is usually active is evidenced by figures obtained at the statistical office of the Customs Department at Ottawa. What has been most secured is bituminous or soft coal, the strike evidently keeping the anthracite mines pretty well tied up. In the months of July and August of last year 328,459 tons of bituminous coal and 423,002 of anthracite were imported, in

the corresponding period of this year 388,595 tons of soft coal were brought in, but the supply of anthracite was but 22,335 tons, a decrease of over 400,000 tons.

THE CROWN BANK OF CANADA.—Toronto is to have still another bank, the "Crown Bank of Canada," for which a charter was obtained at the last session of the Dominion Parliament. The provisional directors, as named in the charter, are Senator McMullen, of Mount Forest, Ont.; M. P. Davis, of Ottawa, Ont.; and Whitford Vandusen, Henry R. Hardy, Wm. J. Clarke, and Daniel A. Gordon, of Toronto. It is said that the head office of the bank will be in the Temple Building, in the premises lately occupied by the Bank of Ottawa, and that the Board of Directors and other officers will be named at once, and the bank opened within a very short time.

PEAT GAS FOR STEEL MAKING.—Peat gas, according to Mr. J. G. Thaulow in the Teknis Ugeblad, has been employed as fuel at the Motala Steel Works, Sweden, for the past 30 years, originally for the puddling furnaces, and to a still greater extent, subsequently, for the open-hearth furnaces. The peat is obtained chiefly from the further side of Lake Wetter, across which it is brought in sailing vessels and unloaded direct into large storehouses, whence it is traamed to the gas producers. The yearly consumption is from 13,000 to 16,000 cubic

yards of dry kneaded peat, costing about 75 cents per cubic yard delivered at Motala. Two large gas producers are used, from which the gas is led to the open-hearth furnace through a condenser for ridding it of some of its moisture. Although the peat gas, owing to the distance the peat has to be brought, is dearer than coal gas, it is used preferably in most Swedish steelworks in consequence of the insignificant amount of sulphur and phosphorous it contains. In the rolling mills there is a smaller peat gas producer for one of the plate furnaces, and thin steel plates especially scale less in rolling where the furnace is fired with peat gas.

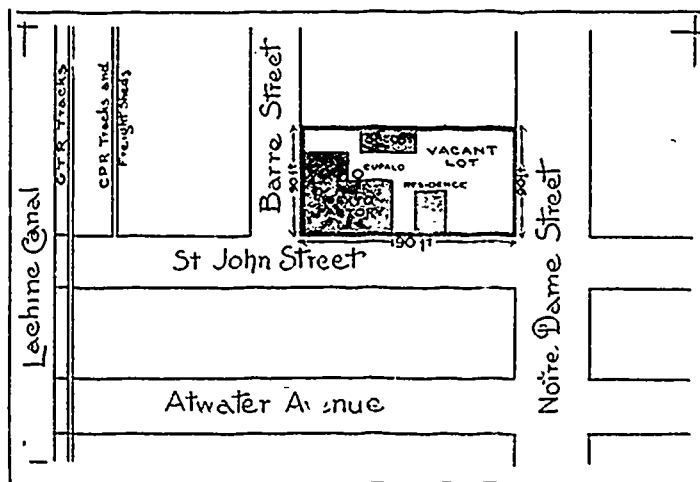
MINERAL RESOURCES OF THE UNITED STATES.—The annual volume on the Mineral Resources of the United States for 1901, prepared by Dr. David T. Day of the Geological Survey, has been sent to press, and will be issued soon. An interesting feature of the report is a compilation of statistics, showing the number of working days lost in strikes in the coal industry. These figures include the present year and are brought up to date. The total number of days lost during the present year is placed at 20,000,000 days, compared with 733,802 days in 1901, 4,878,102 in 1900, and 2,124,154 in 1899. The report places the total mineral output of the country for the year at \$1,086,529,521, a gain of a little more than 2 per cent, over the production of 1900. The gain was made in the non-

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Price of the Property, with all accessories, would be reduced to \$26,000.

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metallic products and amounted to \$55,065,882, against a loss of \$32,156,909 in the metallic products. As heretofore, iron and coal are shown to be the most important of the mineral products. The value of iron in 1901 was \$242,174,000, as compared with \$259,944,000 in 1900, and the value of coal was \$348,910,469, as compared with \$306,671,364 in 1900.

The value of fuels increased from \$406,359,351 in 1900 to \$452,395,304 in 1901, a gain of almost 9 per cent. Every variety of fuel increased in value except petroleum, which showed an increase in quantity of 5,768,665 barrels, but a decline in value of \$9,571,978, due largely, the report states, to the less valuable character of the increased product of the new petroleum fields, as compared with the older fields. Anthracite coal increased 9,021,207 long tons in output, and \$26,746,169 in value. The average price of anthracite coal per ton at the mine was \$2.05, the highest figure obtained since 1888, and the average price per ton for bituminous coal at the mine was \$1.05, about one cent more per ton than in 1900.

THE DOMINION COTTON MILLS Co.—The extensive mills of the Dominion Cotton Co., are at Magog, Que. On October 15, on the invitation of Mr. A. F. Gault, president of the company. Hon. Mr. Tarte visited these mills in his pursuit of information regarding the cotton industry, and there he saw the whole process of the manufacture of cotton goods. According to the facts furnished by the general manager, Mr. A.

B. Mole, the mills at Magog were built in 1884, and were enlarged in 1898. The cotton mill has 50,000 spindles and 1,234 looms. It uses 6,000 bales of cotton per year, and produces 13,000,000 yards of cloth, not including 5,560,000 yards of goods printed from outside mills, making a total product of 18,500,000 yards. The number of hands employed is 1,000, and the average wage in the print works, including men, women, and children, is \$6.90 per week. The capital invested is \$2,000,000, and the coal consumed is 10,000 tons per annum. Incidentally it may be mentioned that of the 324 shareholders, no less than 117 are women and children. Those in charge at Magog are Messrs. A. B. Mole, general manager; J. H. Hindle, superintendent print works, and Geo. H. Wilson, superintendent cotton mills.

All of the circumstances of the case were fully explained to Mr. Tarte, and the relation between the tariff and the manufacturer of cotton was also fully set before him. It was explained that, in substance, the position is that the English manufacturer is gradually learning to avail himself of the advantage which he enjoys under the preferential tariff, and is steadily increasing the amount of goods sent to this market. At the same time the duty is not high enough to prevent the American manufacturer from slaughtering in Canada whatever output he may have left over after his own market is fully supplied. What the Canadian manufacturer asks in such an arrangement of the duties as will ensure stability in this country, giving assurance that he

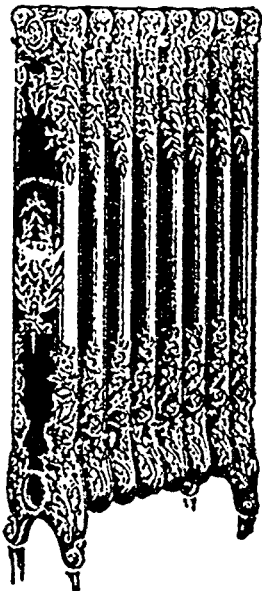
will not be buried by the surplus output of either the United States or Great Britain.

The position of the cotton industry in Canada is this: Taking all the companies together, they have 792,496 spindles and 18,679 looms. There are two mills closed, one at Brantford, Ont., and one at Coaticook, Que. These two have 22,164 spindles and 530 looms. Deducting those there are in Canada 770,332 spindles and 18,129 looms. This represents a very substantial industry which in the best opinion of men who know is in danger unless proper tariff changes are made without unnecessary delay.

WORK AT THE SYDNEY PLANT.—The iron framework of the new rail mill at the Dominion Iron & Steel Co's plant, at Sydney, N.S., is now completed and the work of putting on the roof and sides is being pushed rapidly forward. The iron construction work was done by the company, the material being furnished by the Dominion Bridge Co., of Lachine, Que. Already the work of installing the machinery has been begun.

The blooming mill and the ten open hearth furnaces are now in operation. The average output of steel from the open hearth plant is 750 tons a day. The blast furnaces, each have a capacity of 300 tons.

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SOUTH AFRICAN TRADE.—Mr. J. G. Jardine, Canadian Commissioner in South Africa, in a report to the Trade and Commerce Department, dated Pretoria, September 8, states that a very large demand has arisen for agricultural machinery, plows, cultivators, harrows, etc., of the most simple and inexpensive kind, suitable for the thousands of expatriated Boers, discharged Australians, Canadians and British irregulars who are remaining in South Africa. The Imperial Government, he says, are placing these men on the land and giving them a start. Major Leggett, the Imperial officer at the head of the movement, and a Canadian officer who assists him, are both anxious to place orders of this kind with Canadian firms if the machinery can be made promptly, rather than buying in the United States. British makers, they think, cannot compete in supplying these implements. Agricultural firms in Canada in a position to make these cheap plows should, Mr. Jardine suggests, communicate with him at once.

IMMIGRATION DURING 1902.—The revised returns of immigration to Canada for the fiscal year ending June 30 last, show that the total number of emigrant arrivals was 67,230, an increase of 18,081 over the previous year. The greatest gain was in the arrivals from the United States, the total being 26,312, as against 17,987 for the previous year, a gain of 8,325. British arrivals came next, with a gain of 5,449. The figures for the first

two months of the present fiscal year show a total immigrant arrival amounting to 15,365, as against 8,223 for the same two months of the previous year.

SUBSTITUTES FOR COAL.—All over the continent people are discussing possible substitutes for hard coal. Hard wood and soft coal, corn-cobs and peach-stones are favored in the localities where they are respectively plentiful. The trouble with nearly all the substitutes is that in many places they are as scarce as anthracite. The Utica Observer has discovered a substitute, however, that is not so subject to geographical limitations. It says:

Here is the manner in which one housewife has to a certain degree overcome the pressing question of fuel:

She took four common bricks and placed them in a pail. Over the bricks she poured a gallon of kerosene oil, and let them stand until the bricks had absorbed all of the oil they would take up. Then she took out two of the bricks and placed them in the kitchen range and set fire to them. They burned fully two hours, and the fire that they made was one by which it was possible to do any kind of cooking or other work requiring considerable heat. The lady says in this way it will be possible in her home to get along with the cooking, washing and ironing without resort to gas. There was no unpleasant odor or any trouble whatever, for the oil just blazed away like a stove full of good wood.

A similar experiment is reported by a correspondent of the New York Sun, who writes:

I procured some kerosene oil, and taking a porous, hollow brick, soaked it in the oil for a few seconds and then ignited it. The brick burned for fully forty minutes, giving out a bright flame and emitting great heat. One such brick should be sufficient to cook a meal and heat the boiler, at a cost of less than one cent. These bricks, being fireproof, can be used over and over again by simply re-soaking in the oil.

It is as well to remember, though, that experiments with coal oil and kitchen stoves can scarcely be conducted with too much caution.

TRY THE BUSY MAN.—If you would get a favor done by some obliging friend, and want a promise, safe and sure, on which you can depend, don't go to him who always has much leisure time to plan, but if you want your favor done, just ask the busy man. The man with leisure never has a moment he can spare. He's always "putting off" until his friends are in despair. But he whose every waking hour is crowded full of work, forgets the art of wasting time; he cannot stop to shirk. So, when you want a favor done and want it right away, go to the man who constantly works thirty hours a day. He'll find a moment, sure, somewhere, that has no other use, and help you, while the idle man is framing an excuse.

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Canadian Rand Drill Co., Sherbrooke, Que.
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Jenckes Machine Co., Sherbrooke, Que.

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Syracuse Smelting Works, Montreal.

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Nova Scotia Steel & Coal Co., New Glasgow, N.S.

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Syracuse Smelting Works, Montreal.

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McDougall, The R. Co., Galt, Ont.
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Tallman, J. N., & Sons, Hamilton, Ont.

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Owen Sound Portland Cement Co., Owen Sound, Ont.

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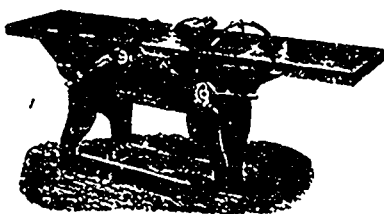
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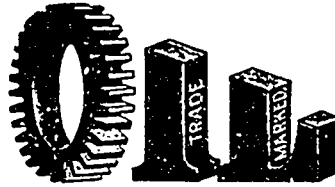
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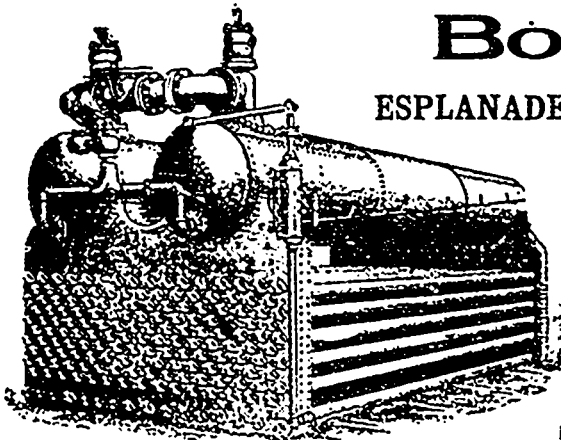
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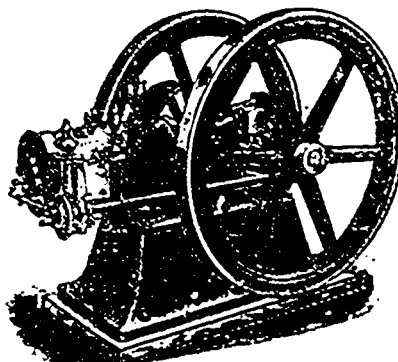
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Karch, H. W., Hespeler, Ont.
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McDougall, The R. Co., Galt, Ont.
Morrow, John, Machine Screw Co., Ingersoll, Ont.
Petrie, H. W., Toronto.
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Geo Electrical Engineering Co., Toronto.
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Oils and Lubricants

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

Oil Filters

Burt Mfg. Co., Akron, Ohio.

Paints and Colors

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

Paper Manufacturers

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

Patents

Budden, Hanbury A., Montreal.
Case, Egerton R., Toronto.
Fethers-tonhaugh & Co., Toronto.

Pig Iron

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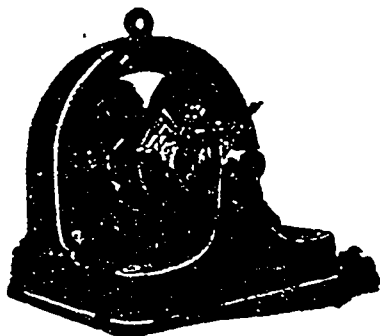
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Gartshore Thomson Pipe & Foundry Co., Hamilton, Ont.
Montreal Pipe Foundry Co., Montreal.
Rico Lewis & Son, Toronto.
Samuel, M. & L. Benjamin & Co., Toronto.

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

Plating

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

Pneumatic Tools

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Jenckes Machine Co., Sherbrooke, Que.

Portland Cement

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Hyde, F., & Co., Montreal.
Owen Sound Portland Cement Co., Owen Sound, Ont.
Rathbun Co., Toronto.
St. Lawrence Portland Cement Co., Montreal

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

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

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Goldie & McCulloch Co., Galt, Ont.

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Canada Switch & Spring Co., Montreal.
Gartshore, John J., Toronto.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.
Phillips, Eugene F., Electrical Works, Montreal.

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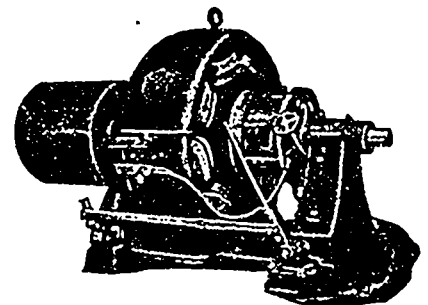
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Kerr Engine Co., Walkerville, Ont.
Williams, A. H., Machinery Co., Toronto.

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Drummond, McCall & Co., Montreal and Toronto.

Steel Shafting

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Rice Lewis & Son, Toronto.

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Textile Manufacturers

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Dominion Oil Cloth Co., Montreal.
Hamilton Cotton Co., Hamilton, Ont.
Morrice, D., Sons & Co., Montreal.
New Toronto Wool Stock Co., New Toronto, Ont.
Parker, A. S., New Toronto, Ont.
Reiche & Co., Bradford, England.
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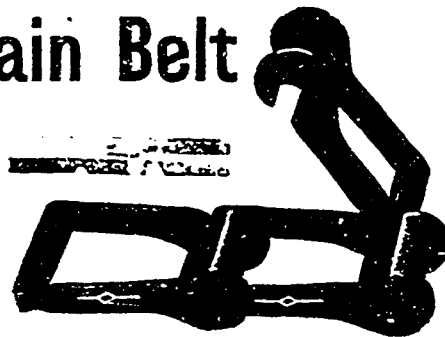
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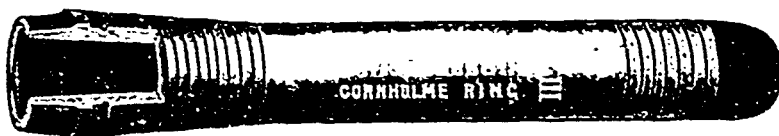
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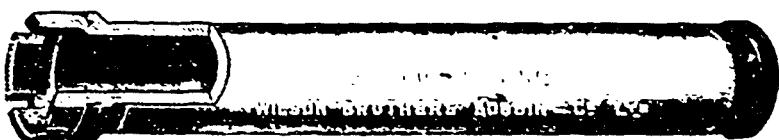
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 Sturtevant, B. F. Co., Boston, Mass.

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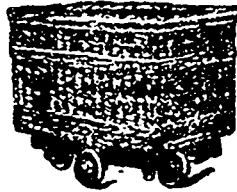
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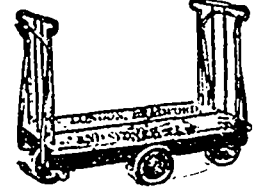
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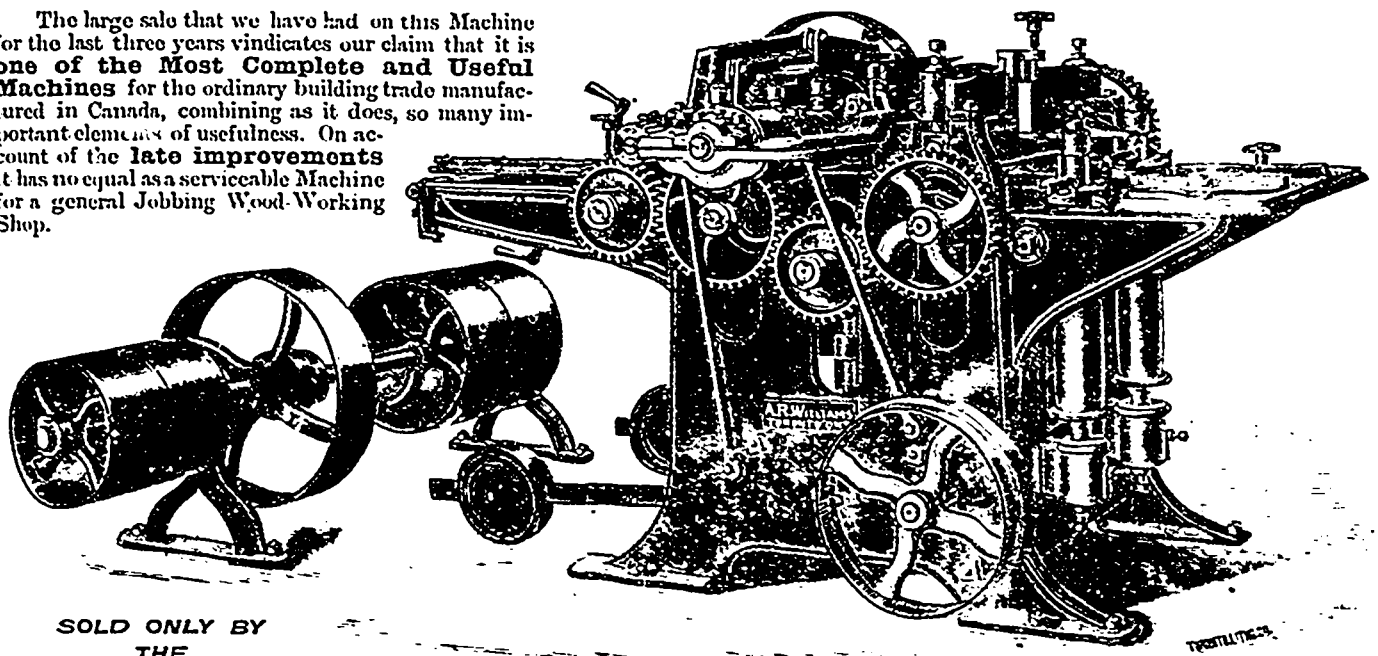


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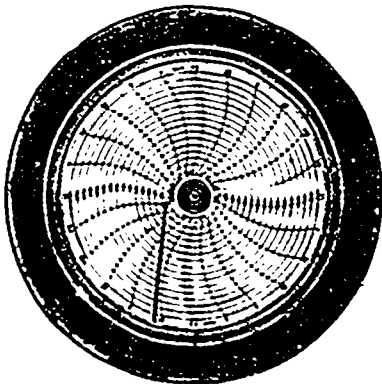
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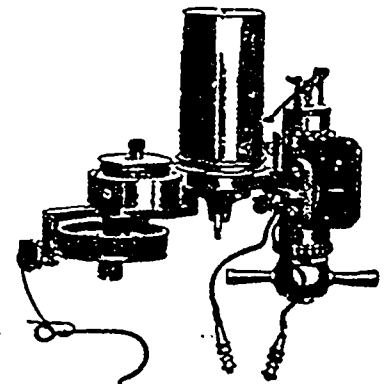
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