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Vol. 43. TORONTO, DECEMBER 6, 1901. No. 11.

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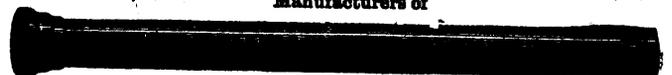
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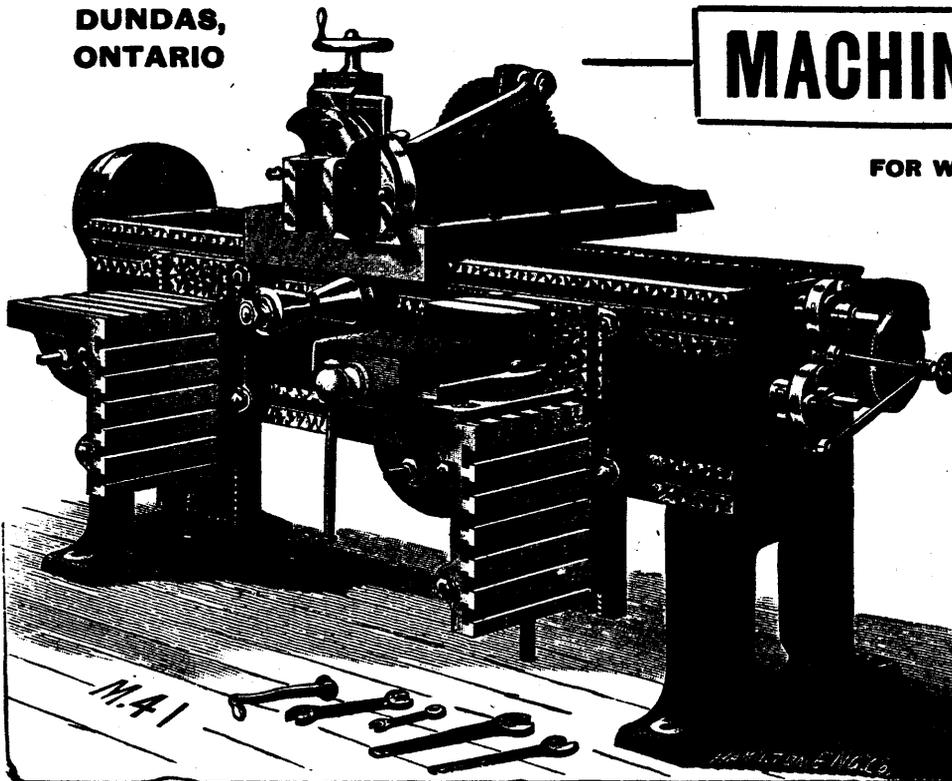
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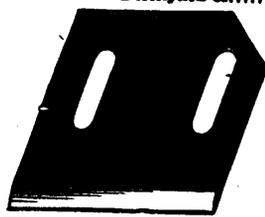
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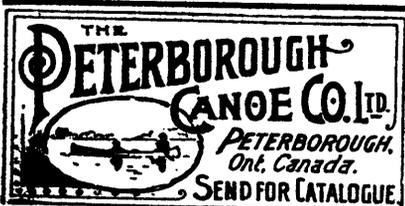
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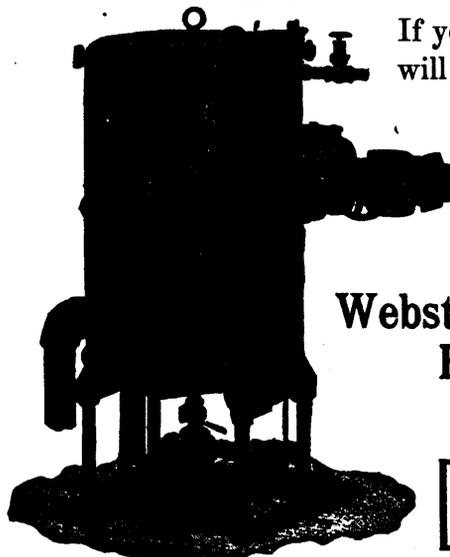
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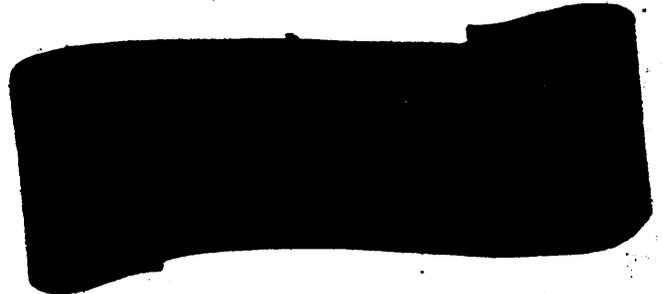
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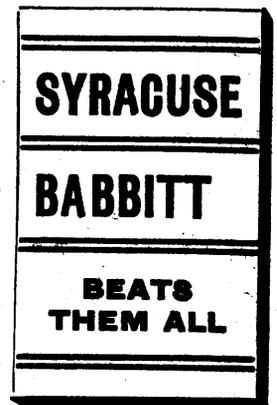
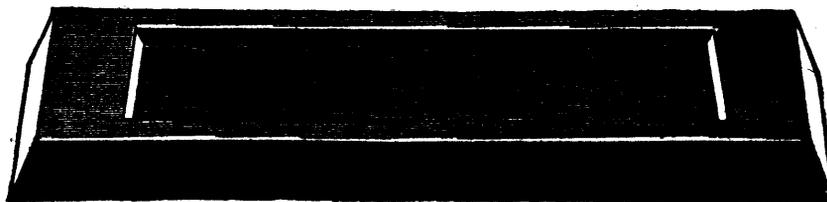
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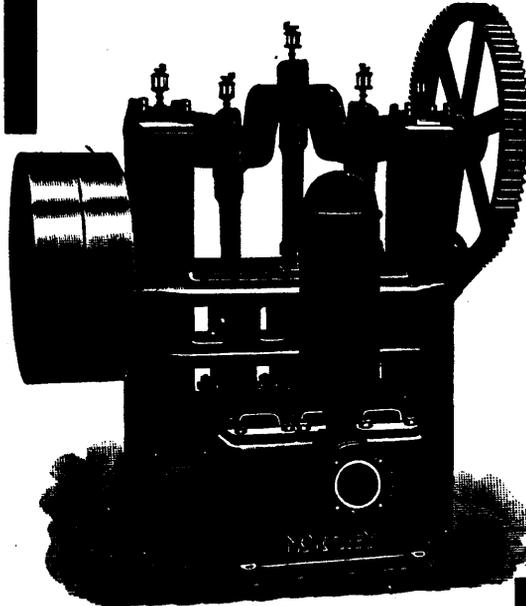
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PUBLISHED ON THE FIRST AND THIRD FRIDAYS OF EACH MONTH

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Cable address: "CANAMAN." Western Union Telegraphic Code used.**MESSRS. DAVISON & CO.,**164 Federal Street, Boston, Mass.
AGENTS FOR UNITED STATES.

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J. J. CASSIDY, Editor and Manager.

THE AMERICAN TARIFF THUMB-SCREW.

The Philadelphia Record for November 9 contained the following:—

Mr. John Charlton, a member of the Canadian Parliament, made an interesting speech before the New York Chamber of Commerce on Thursday last on the trade relations between Canada and the United States. His address deserves serious attention. He showed that Canada was the third largest customer in the world for the products of the United States, having bought of us in the last fiscal year goods valued at \$119,306,000. Our purchases in Canada for the same time—excluding gold and silver—were valued at \$39,497,000. In other words, we sell in Canada three dollars worth of merchandise where we buy one. This one-sided exchange of products is in part due to the excessive Dingley tariff rates, which are about double the Canadian rates.

Regarding which The Bulletin of the American Iron and Steel Association comments as follows:—

The Record would change "this one-sided exchange" by admitting more of Canada's products into our markets. That would mean less work for American farms and factories. That is what free traders aim at all the time. Canada, of course, does not buy anything of us as a matter of sentiment, or anything that it does not want or can not buy from us cheaper than it can buy elsewhere. It has been doing a great deal in late years to divert its foreign purchases from the United States to Great Britain by discriminating in duties against the United States and in favor of the mother country, which The Record seems to have forgotten. And yet Canada continues to buy from us because she can do better in our markets than in those of the mother country, even with discriminating duties in favor of Great Britain. Our protective duties cheapen everything that we make, as The Record ought to know. As for reciprocity with Canada, or any other scheme for reducing our duties on Canadian products we have nothing to gain but much to lose, as The Record also ought to know.

It is a hobby with Mr. Charlton to preach reciprocity in season and out of season, and he has been doing so for years. Time was when his utterances and sentiments possessed a certain value for a portion of the Canadian public, but in our opinion they always tended to place this country in a false position, Mr. Charlton's ideas being that the prosperity of Canada depended upon the closest possible trade relations with the United States. We have no objections whatever to that country enacting tariff laws to suit the requirements of its people; but it was through the preaching of just such persons as Mr. Charlton that the American people imbibed the idea that the welfare and the destiny of Canada required not only closer trade relations, but political annexation also. The prevalence of this

The Canadian Manufacturer

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

idea induced the American politicians to adopt a thumb-screw policy which they believed would result in developing a sentiment in Canada which would inevitably and speedily lead to annexation. Their ambition was, and is, to have their territory extend to the North Pole, their belief being that the thumb-screw process would accomplish it. But it has not, nor will it; but, on the contrary, Canada is awake to the fact that her best interests lie in another direction. Canada has for many years held out the hand of trade fellowship to the United States, but, more unfortunately for that country than for this, it has been persistently declined; and self-respect now impels us to look elsewhere and make other arrangements more becoming our dignity.

Our American friends talk much about "reciprocity," but really their idea of the meaning of the word differs widely from that which is usually accepted. The reciprocity they propose for Canada is to take all they can get of value from us and give nothing of value to us in return. As Mr. Charlton points out, Canada is the third largest customer in the world for the products of the United States, in answer to which The Bulletin shows that Canada continues to buy American goods because she can do better by doing so than purchasing in the markets of the Mother Country, even with discriminating duties in her favor. A Bourbon, it is said, never forgets and never learns. When a previous reciprocity was in force our American friends thought that Canada was obtaining some undue benefit from it, and, therefore, abrogated it. This abrogation was a part of its thumb-screw policy, for they believed that no other market than theirs was open to us for our agricultural products; but The Bulletin knows that Canada is not now dependent upon its country in that direction, but has, rather, become a no inconsiderable competitor with it in the markets of the world. This is where it forgets. On the other hand, it has not sufficiently laid the lesson to heart, nor learned that the thumb-screw policy has driven millions of American dollars to Canada for investments in manufacturing and industrial enterprises, and that the flow is steadily in this direction. Under a more equitable condition of things this situation would not have become as accentuated as it has now become. Was the lumber industry of Michigan and other border States ever of value to the American people? The consumption of several hundred million feet of Canadian logs per year in Michigan mills alone indicates that it was; yet the Dingley tariff demanded the imposition of a duty of \$2 per thousand feet on Canadian sawn lumber with the result

that those immense mills that have heretofore given employment to American labor are either in idleness or have been transferred to Canada, where they give employment to Canadian labor. This is what Mr. Charlton alluded to when he said that this one-sided exchange of products was due to the excessive rates of the Dingley tariff. And the conditions regarding nickel will also most probably shape themselves in the same way. The product of all the nickel mines in the United States is not sufficient to meet the requirement of its mint for manufacturing its nickel coin; and Canada is, of necessity, depended upon to supply the demand, and yet, under the thumb-screw process, a prohibitive Dingley duty of six cents a pound is imposed to prevent Canada refining its own nickel for the American market. How long would the United States have submitted to such a condition as has been imposed upon Canada? The temper of our people is sorely tried, and our neighbors need feel no surprise should Canada at an early day, inaugurate a reciprocity of tariffs as regards nickel, charging an export duty of six cents per pound upon the metal contained in the ore or matte which now goes to American works to be refined. Had it not been for the thumb-screw process Canada would not to-day be building up such a wonderful iron and steel industry, the products of which are now invading both the United States and the British markets.

The Bulletin reminds us that notwithstanding our tariff preference in favor of Great Britain, we continue to buy American goods in preference to like products from the Mother Country; but it should remember that the spirit that forced the transference of the Michigan lumber industry to Canadian soil is alive to the proposition to impose a heavy export duty on nickel, and a general import duty upon American manufactures precisely equivalent to the American duty imposed upon Canadian products of similar character. Our esteemed contemporary entertains the idea, and tells us that as for reciprocity with Canada, or any other scheme for reducing American duties on Canadian products, its country has nothing to gain but much to lose; but it may find, and at an early day, that its trade with its third largest customer—an export trade worth about \$120,000,000 a year—has dwindled away considerably.

THE STRENUOUS LIFE.

The Canadian Manufacturers' Association recently announced that woolen machinery in Canada capable of producing nearly three million dollar's worth of goods a year had within the past few years been thrown into disuse, claiming that the cause therefor was the insufficient tariff duty imposed upon such goods under the British preference. No doubt the duty, either general or preferential, is entirely too low to afford the protection to the home industry necessary to keep it in healthy condition; and it is to be hoped that the representations being made to the Dominion Government in this matter will result in an increase of such duties.

To our mind, however, the abandonment of this large quantity of machinery is not attributable entirely to the insufficiency of the tariff, but to the fact that it is not of the efficiency demanded of machinery in modern up-to-date mills. There are a number of woolen mills from which we hear complaints of undue competition through the lack of proper tariff protection against the product of mills in other countries; but we do not hear of any of their machinery being abandoned for that or any other cause, because it is equal to the best machinery in use in competing mills; and we have reason for believing that the disused machinery is of a charac-

ter that should have caused it to be consigned to the scrap pile years ago. Unfortunately for themselves, and for the industry generally, the owners of it imagine that as long as it will hold together and be made to produce fabrics they cannot afford to discard it. Perhaps fabrics produced with such machinery may be quite as good as any, but it cannot be claimed that the cost of production is as low as that of similar fabrics produced with modern, up-to-date machinery. In these days of strenuous competition the manufacturer who does not avail himself of the very best machinery to be had cannot but fall to the rear, and ultimately drop out of the race.

It cannot be said of any kind of machinery, says the Age of Steel, that it has reached the point where improvement is impossible. New machinery and better tools are being constantly added to manufacturers' lists. They come and go with increasing persistence, and what is a time and labor-saver to-day is being supplemented or supplanted without any regard to dates. Inventive genius knows no halt, and is in unbroken movement round the orbit of industrial life. It cannot be boycotted, strangled, starved, or sun-dried. In speed, accuracy of work and simplicity of construction we have the ideal of inventive ambition. It is only by retrospect that we see the wide difference between the old and the new. No industry has been exempt from change or the spirit of progress that is brooding over everything. It presides at the loom and the forge, and in mine and mill. In cutting lumber and fashioning iron, in stamping dies and making spoons, and from the building of a bridge to the manufacture of a pill box, the use of improved machinery and tools is everywhere visible. The machinery industry is becoming one of the great potentials of trade, and in the exchange of the old for the new, we have a business that is rounding out to large proportions.

The manufacturer behind the times in the use of improved machinery travels a rocky road, not to fortune, but insolvency. Machinery is rapidly displacing hand labor, and it will go on doing so till the last spindle hums, and the last wheel turns in the industrial world.

THE TORONTO INDUSTRIAL EXHIBITION.

Canada's great Industrial Fair, as the Toronto Exhibition has been heralded, was run at a loss this year. The directors in an "interim" report to the Board of Control announce that while their expenses were lower this year by \$783 their receipts were lower by \$22,935, and consequently they are in debt, to the tune of \$5,578. Even this does not represent their actual loss, because in addition to this amount, they have used up the \$10,000 reserve fund which they got from the city. They claimed it was necessary to have this to start business on, and while the directors do not ask for another \$10,000 to replace this amount at present they will, no doubt, do so soon, as a \$10,000 reserve is as necessary now as when it was first granted. The Exhibition directors will be content, at present, at any rate, if the city gives them \$6,000. They point out that since the arrangement of 1899 they have handed over profits amounting to \$14,000 or \$15,000. The profits of two years are swallowed up by the loss of the present year, which is \$16,000, including the \$10,000 reserve which has disappeared.—The Toronto Evening Telegram.

On two recent occasions the directors of the Toronto Industrial Exhibition Association have urged the Toronto City Council to invite the taxpayers to vote a large sum of money for erecting new buildings on the Fair Grounds, and the repairing of some of those already there. Without doubt these improvements were and are now absolutely required for the proper and successful conduct of the Fair; and unless they are made it is difficult to see how manufacturers and others whose exhibits are essential as attractions, can be induced to patronize the concern as heretofore. Regarding the first occa-

sion alluded to, the preliminary by-law was passed, submitting the vote of money for ratification by the taxpayers, but before the day for voting thereon arrived so much opposition to it was developed that it was withdrawn. The dissatisfaction of the taxpayers was with the bad management of the Fair. Later, when the directors hoped that the professions they had made had dispelled the dissatisfaction, they again induced the City Council to submit a by-law to the taxpayers voting \$135,000 for the purposes indicated, which, as is well-known, went to a vote and was overwhelmingly defeated. The dissatisfaction of the taxpayers with the management was still strongly in evidence. It is now stated that another appeal is to be made, this time for a vote of \$135,000, the submission of the necessary by-law to be coincident with the usual municipal elections in January. It is not difficult to foretell what the result will be of this proposed effort. The old dissatisfaction has become intensified. It was said of the old Bourbons that they never forgot and never learned; and the Bourbon element, always so strongly in evidence on the Board of Directors of the Industrial Association, is in the ascendancy there yet.

For many years the Toronto Fair has been a valuable asset in the prosperity of the city, and it is in the interest of Toronto that everything possible should be done to perpetuate it as such. It is evident that the taxpayers are dissatisfied with the way the Fair has been managed for a few years past, and that they would rather the institution cease than to have it run as now; and it would be well for all concerned if the directors would resign their charge, and the association go out of existence, allowing the City Council to take the management of the Fair into their own hands. There are some of the gentlemen now on the Board who would, no doubt, be invited to continue their services, and assist in conducting the affairs of the Exhibition, but something more than wearing attractive badges and devouring free lunches is essential in the management of a successful show, such as the Toronto Fair should be.

UNITED STATES AGRICULTURAL IMPORTS FROM CANADA.

The United States Department of Agriculture has just issued a bulletin having reference to sources of the agricultural imports of that country during the five fiscal years 1896-1900. A table shows the annual average for the period and the countries from which the products were received, Canada standing in fourteenth position as having furnished 2.58 per cent. of the whole, with an average value of \$9,725,809. The following shows the character and extent of Canada's share in the trade where that share amounts to not less than five per cent. of the whole as regards the thirty articles enumerated, the figure in the left column indicating the relative position as compared with other countries.

Relative position.	Article.	Annual Average Value.	Per cent.
2	Cattle.....	\$1,027,516	44.32
1	Horses.....	358,107	66.56
1	Sheep.....	1,070,491	96.53
2	Animals n.e.s.....	53,433	21.30
1	Live animals (total).....	2,509,547	59.53
1	Butter.....	4,362	64.50
1	Eggs.....	29,535	84.60
2	Wools—combing.....	571,393	19.33
7	Hides of Cattle.....	814,030	5.23
3	Meat and meat extracts....	52,408	12.66
1	Meat products, n.e.s.....	38,136	48.94
2	Animal oil n.e.s.....	1,118	20.61
1	Barley.....	179,909	99.89
2	Corn (maise).....	584	32.50
1	Oats.....	9,386	91.53

Relative position.	Article.	Annual Average Value.	Per cent.
2	Oatmeal.....	\$3,816	19.20
1	Rye.....	481	81.99
1	Wheat.....	1,229,954	99.85
1	Wheat flour.....	3,219	48.71
5	Breadstuffs n.e.s.....	60,639	5.24
3	Flax.....	214,156	18.64
4	Natural flowers.....	1,526	7.39
2	Oil cake.....	3,290	19.17
4	Linseed or flaxseed.....	21,791	8.69
2	Distilled spirits n.e.s.....	301,663	17.76
1	Straw.....	17,458	99.55
2	Tobacco—cigar wrappers....	274,075	5.56
1	Beans and peas.....	287,121	57.15
2	Potatoes.....	95,091	40.02
1	Vegetables n.e.s.....	107,989	35.05

COMBINES UNDER FREE TRADE.

Many ignorant, would-be free traders in Canada, and in the United States also, have repeatedly declared that such combines as the American Steel Trust are a result of tariff protection, and that they would be impossible in Great Britain; but such is not the opinion of the British Trade Journal, which publishes a leading editorial on the subject. It tells us that in England, as a result of the free trade system, it is much more difficult to form trusts or combines than in the United States, but that it is an error to suppose that they do not exist. It cites as follows:—

In 1888 the English Salt Union was formed with a capital of £4,200,000; in 1891 another combination, known as the United Alkali Co., came into existence, formed by forty-nine firms, with a capital of £8,500,000; in 1897 the English Sewing Cotton Co., combining fifteen firms, with a total capital of £3,000,000, was established; and since that date there have been formed, in 1898, the Fine Cotton Spinners' & Doublers' Association, forty firms, with a capital of nearly £7,000,000; the Bradford Dyers' Association, thirty firms, with a capital of £4,700,000; in 1899 the Calico Printers' Association, sixty firms, with a capital of £9,200,000; in 1900 the Wall Paper Manufacturers, thirty firms, with a capital of £4,200,000; the Bleachers' Association, fifty-three firms, with a capital of £8,250,000; the Associated Portland Cement Manufacturers, thirty-four firms, with a capital of £8,000,000; and the British Oil Cake Mills, seventeen firms, with a capital of £2,250,000. Although evidently selected for combination by the strength of the position with reference to foreign competition in the United Kingdom and in neutral markets abroad, the results of these trusts have not been altogether satisfactory. The lucrative returns shown by the first combination, viz., that of J. & P. Coats, in the thread trade, have not been realized. The last month has witnessed the formation of yet another combination in the form of the Imperial Tobacco Co., which has been joined by nearly every leading tobacco-manufacturing concern. Its ostensible object is to meet the competition of the American Tobacco Co., which about two months ago obtained control of Ogden's, Ltd., a well-known Liverpool house. The resources thus placed at the disposal of the American combination appear to have alarmed the British tobacco manufacturers, the result being the latest combination. The danger ahead in the tobacco trade was the fear that the American company would start a system of cutting prices; and present appearances indicate that the English counter move has forestalled the American concern. The first step taken has been to enlist on the side of the English the interest of the general retailers or shopkeepers by reducing wholesale prices, a relief for which the retailer should be grateful. It now remains to be seen whether the Transatlantic combination will retaliate by still further reductions in trade prices. A battle between holders of immense capital—one set in America and the other set in the United Kingdom—seems, therefore, about to begin, and it is not difficult to foresee the result.

After discussing an amalgamation of a number of important British railways, and of the union of English and Spanish iron ore interests, our contemporary says:—

It is known that efforts are being made in South Wales and several other districts to bring together three or four large concerns which have in the past competed keenly with each other. It is quite possible that this combination may be effected. A far greater scheme than any of those mentioned has been broached to a number of gentlemen engaged in the iron and steel trade of Great Britain. The proposal is nothing less than to consolidate the leading companies of the United Kingdom into one corporation on the American principle, with the avowed object of meeting, not merely the competition of the American Steel Trust, but of similar combinations which are stated to be forming in Germany, Belgium, and other Continental industrial centres. The reason for proposing this huge amalgamation of iron and steel interests is that unless an organization is established, the British iron and steel trade, now alleged to be conducted on defective and out-of-date methods, with so many different managements and divided interests, must be crushed under the rivalry of such confederations as that of the American Steel Trust, which intimates its intention to place steel upon the British markets at several dollars less per ton than can pay to produce it under present conditions in England.

THE C. A. S. E.

At the recent annual convention of the Canadian Association of Stationary Engineers, held at Brantford, Ont., the following officers of the various branches of the association were chosen for the ensuing year:—

Toronto, No. 1.—President, W. J. Webb; Vice-President, R. H. Johnston; Financial Secretary, N. V. Kuhlman; Recording Secretary, W. H. Johnston; Treasurer, S. Thompson. Delegates to Convention—W. J. Webb, N. V. Kuhlman, Jas. Huggett, W. Outhwaite, and A. E. Edkins.

Hamilton, No. 2.—President, F. Sculthorpe; Vice-President, Jas. Ferguson; Financial Secretary, G. W. Dawson; Recording Secretary, Joseph Ironside; Treasurer, W. R. Cornish. Delegates to Convention—Thomas Chubb, Joseph Ironside.

Brantford, No. 4.—President, T. Pilgrim; Vice-President, J. Walker; Secretary, Joseph Ogle; Treasurer, Fred. Lane. Delegate to Convention—S. McKinnon.

Dresden, No. 8.—President, S. M. Sager; Vice-President, Wm. Jamieson; Secretary, Willis Burnett; Treasurer, T. M. Steeper. Delegate to Convention—Willis Burnett.

Berlin, No. 9.—President, J. H. Walker; Vice-President, John Schneider; Secretary, Jacob Heyd; Treasurer, W. Giedt. Delegates to Convention—J. Heyd, A. McKersie.

Brockville, No. 15.—President, Wm. Robinson; Vice-President, John Grundy; Secretary, James Aikens; Treasurer, Wm. F. Chapman. Delegate to Convention—Matthew Turkington.

Waterloo, No. 17.—President, G. Beam; Vice-President, N. Beam; Secretary, F. A. Pflug. Delegate to Convention—John R. Uttley.

Toronto, No. 18.—President, Thomas Graham; 1st Vice-President, John J. Richardson; 2nd Vice-President, James Coulter; Financial Secretary, W. Inglis; Recording Secretary, John M. Dixon; Treasurer, P. Trowern. Delegates to Convention—J. M. Dixon, P. Trowern.

Vancouver, No. 19.—President, W. H. Paddon; Vice-President and Financial Secretary, Arthur Hortin; Recording Secretary, J. R. Badger; Treasurer, G. M. Taylor.

Sarnia, No. 20.—President, Richard Bell; Vice-President, Thomas Montgomery; Secretary, Walter D. Hall. Delegate to Convention—Richard Bell.

Montreal (not now working under the executive).—President, J. T. Murphy; 1st Vice-President, H. Wadey; 2nd Vice-President, H. Weaver; 3rd Vice-President, Thos. Ryan; Recording Secretary, W. Smythe; Financial Secretary, H. Nuttall.

In the September 6 issue of this journal we gave the names of the officers of this association, as above recorded, and a synopsis of the proceedings of the Brantford convention, since which time frequent enquiries have been made of us regarding it.

The men who compose this association are the ones who stand at the throttle in the engine-room of hundreds of the largest manufacturing and industrial concerns in Canada; and in that capacity are, and should be, in close relationship with our manufacturers. It has always been a contention of this journal that every man who is put in charge of a stationary steam engine should undergo an examination by experts as to his fitness for the position, and hold a certificate from proper authority to that effect. That, too, is the contention of this association; and whatever efforts they may make in this direction should receive the most hearty support of our manufacturers. It is safe to say that competent first-class engineers, as a class, favor this idea, and it is a natural and proper object of the association to bring into its membership all such competent men; for, as with all other organizations, the larger the membership and the more earnest the work done by the organization, the greater the probability of achieving its objects. We know that this association have striven for a number of years to secure the passage of suitable laws requiring examination by experts before an engineer is permitted to take charge of an engine, and that any engineer who is placed in such charge should always have on view in his engine-room a certificate showing his authority to act. Such is the case with marine engineers, for no vessel propelled by steam is allowed to move from the dock unless the engineer's certificate is in full view. If such requirement must be complied with regard to a small steam tug boat, how much more essential is it that a similar requirement should be observed in factories and other places where large numbers of hands are employed.

EDITORIAL NOTES.

Lally Bernard, in *The Globe*, writing of the necessity for a sanitarium for consumptives in Toronto, says: "It struck one as a curious travesty that while a 'temporary arch' costing \$10,000 was erected in a few weeks at the entrance of the Queen's Park, a citizen in the last stages of consumption spent hours driving from end to end of this magnificent city unable to find an institution in which he could spend his last dying hours."

Mr. Lewis S. Ware, editor of *The Sugar Beet*, writes us from Paris that he was just then back to that city from an extended tour through the beet sugar centres of Continental Europe, inspecting the conditions of the industry there. It will be remembered that some twenty years ago Mr. Ware took very active interest in promoting the establishment of the beet sugar factories at Berthier and Farnham, Que.

In another page will be found the advertisement of the *Anglo-Russian Trade Messenger*, published at Moscow, Russia, to which the attention of manufacturers and exporters to that country is directed. The publishers inform us that the business announcements of any who wish to reach the Russian trade through their journal will be properly and accurately translated into that language.

Elsewhere will be found an illustrated sketch of the Hospital for Sick Children in this city. This journal has frequently made reference to this most worthy institution, and we sincerely trust that our readers, all of them, when they read the article, will forthwith feel down in their pockets and fish up one or more dollars and send it to Mr. J. Ross Robertson, chairman of the Hospital Trust. This is the time to do it.

Prosperity has attended us during the past year, and now that the Christmas season is almost here again, the poor and helpless little sufferers should be participants of it. Inasmuch as we do for these children we are doing the will of the Great Giver of all good.

The persistence with which some of the officers of the Canadian Manufacturer's Association deny that the association is not a purely Toronto organization is very remarkable. According to *The Montreal Star*, Mr. Russell, the secretary, while in that city a few days ago, while congratulating the local committee of the association upon a gratifying increase of membership since the annual meeting in November, said that some people had come to regard it as a purely Toronto organization, but this was a mistake, as its scope embraces the whole Dominion. The meeting in Montreal, he said, had done a great deal to interest the manufacturers there in the aims of the association, and that when it is understood that Montreal had three manufacturing establishments to Toronto's one, the importance of the association in guarding the interests of that city could be understood. The records of the association show that Montreal manufacturers have always been, ever since its organization, an important factor of it. And not only Montreal, but other manufacturing centres, not only of the Province of Quebec, but also of Nova Scotia, New Brunswick, Ontario, Manitoba and British Columbia, have for years supplied liberal quotas of members, making it absolutely national in its character, aims and objects. Indeed soon after the organization of the Association, owing to this very fact, its name was changed from the Ontario Manufacturers' Association to what it now is. We cannot see that any good can result from this persistent effort to discount the past value of the association.

The first issue of *THE CANADIAN MANUFACTURER* occurred on the first Friday of July, 1880, ever since which time it has been published regularly on the first and third Fridays of every month. It is devoted to the manufacturing industries of Canada, and goes into about every manufacturing establishment in this country.

In a recent issue of this journal we made mention of the seventeenth annual convention of the Trades and Labor Congress of Canada which occurred in Brantford, Ont., in September. The proceedings of the convention were of an exceedingly interesting character, and the Secretary, Mr. P. M. Draper, has been busy since then preparing a souvenir of the occasion, which, we understand, will be issued on or about the middle of this month. It will contain the proceedings of the convention, portraits of the officers and others prominent in labor circles and other interesting matter.

We have before us a specimen of woolen knitting yarn such as is used in the homes of Canadian people for making hosiery, etc., which is sold at retail over the counter in town and country stores at five cents per ounce. The paper wrapper containing the yarn in question has printed upon it the cabalistic words "Made in Germany." There is something incongruous in the fact that Canadian yarn mills do not supply the demand for such yarns.

The G. & C. Merriam Co., Springfield, Mass., have issued a new edition of Webster's International Dictionary which brings it abreast of the growth of the language and makes it at once a popular and highly scientific work which will be found invaluable for constant reference and reliable data.

Great changes have taken place in the English language since the first edition of this excellent work was available to the public, and the aim of the publishers has been to include in the supplement the thousands of new words that have come into literary use, the old words that have changed their meanings, and the obsolete words that have been revived. In this the best scholarship and expert knowledge have been employed in building up the supplement so as to make it equal in every respect to the main vocabulary. It should be in every counting house, on the desk of every teacher and the companion of every student in Canada.

The fifteenth annual banquet of the Canadian Association of Stationary Engineers—Toronto Section No. 1—occurred at the Walker House, this city, November 27, and was a most enjoyable affair, as all such re-unions of the C.A.S.E. are. The details of the festival occasion were in the hands of Messrs. H. E. Terry, Chairman, and James Bannan, Secretary-Treasurer.

Mr. J. W. McRae, a prominent business man of the city of Ottawa, accidentally shot and killed himself in his office in that city on November 29. Mr. McRae was a man of remarkable business energy, and was identified with many commercial enterprises. He was associated with the starting of the Ottawa Electric Street Railway, and for some time after its inception was President of the company. He was also for a period President and Manager of the Ottawa Electric Co. Within recent months he had assisted in establishing the Consumers' Electric Co., and was Vice-President of the company. At the time of his death he was President of the Canadian Railway Accident Insurance Co., Secretary-Treasurer of the Ontario Graphite Co., and a shareholder in numerous other concerns. In politics he was a Conservative, and took a keen interest in the party organization. Mr. McRae was about fifty-two years of age, and leaves a widow and three sons and two daughters, with whom great sympathy is felt.

It is a matter of not unreasonable surprise in Great Britain that Germany has practically monopolized the manufacture of Union Jacks. This is sarcasm with a sting, but the end is not yet. It has come to light that the enterprising Teuton has gone into the coronation medal business, and is already shipping the same to all parts of the British Empire for the historic event of 1902. The old-time Birmingham medalist is left in the cold, as he cannot compete with German prices. These facts are bones in the throat that have to be swallowed. The question suggests itself as to how it is that the Briton can be so cleverly outwitted even in his own bailiwick. If "Made in Germany" is becoming a national nightmare, it is time for the sleeper to wake up.—*The Age of Steel*.

There can be no ground whatever for the familiar contention that another nation will buy from us only as we buy from it. This theory might be rejected even if experience were not against it, because every one knows that no sentimental or political considerations have large influence upon trade operations. England, Germany, and other foreign countries purchase our food products in vast quantities, not because they love us, not because we favor their productions, but because our prices are lower than prices offered elsewhere, quality for quality. If we buy more coffee from Brazil than England buys, the Brazilians are not impelled by gratitude to buy manufactured stuffs from us if they can make a better bargain for themselves in England. Probably we should not sell in the Argentine a dollar's worth more of our

products if we should be so foolish as to admit Argentine wool to our markets absolutely free. What would happen would be that we should help to impoverish our own wool growers, so that they would have to purchase less in the home market, while the people of Argentine would take their swollen profits and obtain their supplies from Europe just as the Brazilians do. There is but one kind of reciprocity that can be to the interest of this nation as a whole: it is that which will give tariff favors in our ports to articles we cannot produce, and give them in return for the decrease in the foreign country of duties upon American articles which compete in that country with similar articles made in and exported from Europe.—Textile Record.

Industrial Canada for November made a decided "scoop" in publishing the new Australian tariff, thus leaving all competitors in the rear. It might be observed, however, that the Australian Parliament have their tariff bill yet under discussion, the probability being that it will not receive its third reading until after the advent of the new year. Of course any publication issued before that time, purporting to be the new Australian tariff, cannot but be misleading and unreliable.

The Dominion Government has been notified that the new tariff recently submitted to the Parliament of Federated Australia is in force throughout the Commonwealth. The probability now is that the Canadian Government will pass an Order-in-Council abrogating the tariff preference to New South Wales, which has now become merged with the rest of the Australian colonies, excepting New Zealand. It would be anomalous, not to say absurd, to continue a tariff preference to New South Wales when the conditions upon which it was granted have ceased to exist. There is an impression abroad that as soon as the Canadian Government has had time to consider the altered state of affairs resulting from the new fiscal policy in Australia, inquiries will be set on foot with a view to ascertaining whether Hon. Edmund Burton and his colleagues would be favorable to a reciprocal trade arrangement. There is, however, no official basis for this impression, the Government as yet having had no time to deliberate upon the situation.

If we are to give employment to Canadian labor and Canadian capital in producing things other than breadstuffs and beef—other than what we find necessary to put into our bellies, let them be encouraged. We do not want to be obliged to import from other countries everything we find necessary for our comfort, such as clothing, when we can produce the article at home as we have done for many years. We love our British brethren very much indeed, and desire to see them prosperous and happy, but we love our Canadian selves more, and are not willing to see our Canadian factories closed and Canadian workmen thrown into idleness to the end that the capital of other countries may be profitably employed, and the workmen with whom we have no personal acquaintance looking fat and sleek. But this is what our preferential tariff is now doing.

Mr. J. E. Dawson, Chairman of the Executive Committee of the British Decimal Association, in a letter addressed to the Chamber of Commerce Journal, advocating the immediate adoption of the decimal system in Great Britain, closes his communication by saying:—

I may say frankly that my chief reason for advocating the

adoption of the metric weights and measures is that we may put a check on the inroad the Germans and others are making into our foreign trade. I know that it would be advantageous for our home trade to have the metric system, and that it would greatly simplify and facilitate the teaching of arithmetic in our schools; but even these considerations are of less importance than the development of our trade and intercourse with all the metric countries. Mr. Cox, however, almost ignores the question of foreign trade, and proposes a nomenclature which would not be understood by buyers who use no other system than the metric.

As to urging that the coinage should be changed before the weights and measures, I am quite sure this would be a mistake. At first the Decimal Association acted on these lines, and organized deputations to the Chancellors of the Exchequer, Liberal as well as Conservative, but these officials would not risk unpopularity by depreciating the so-called "poor man's penny." Further than this there is no agreement as to the system of coinage which should be adopted; but with regard to the weights and measures, it is generally conceded that if there is to be a change, it should be in favor of the metric system, which sooner or later will be international.

Mr. Russell, secretary of the Canadian Manufacturers' Association, as recorded in the Montreal Star, states that Montreal has three manufacturing establishments to Toronto's one. According to the Trade Index, published by the Association, there are but 119 manufacturing establishments in Montreal, and but 54 in the rest of the Province of Quebec, while it gives the names of 279 such concerns in Toronto alone. Which is correct, Mr. Russell or the Trade Index?

The following communication having reference to the industrial census of the Province of Quebec appeared in the Toronto Globe a few days ago:—

To the Editor of the Globe: A telegram from Montreal states that the census of the industrial establishments in the Province of Quebec has been completed, and Chevalier Drolet, Chief Industrial Census Commissioner, has prepared a report thereon. According to Chevalier Drolet's statement there are 1,042 manufacturing establishments in Montreal, and 580 in other towns throughout the Province, a total of 1,622. This information was also published in the Montreal papers.

As the entire community is interested in the accuracy of these figures, it may be well to cite reliable publications, which disagree not only with Chevalier Drolet, but also with each other.

The Canadian Trade Index, recently published by the Canadian Manufacturers' Association, gives the names of 173 manufacturing concerns in the Province of Quebec, of which 110 are in Montreal and 54 outside of that city.

Bradstreet's Book of Commercial Ratings for July, 1901, gives the names of more than 2,900 manufacturing concerns in the Province of Quebec, of which 660 are established in Montreal and 2,240 in other localities in the Province.

The Buyers' Guide, published in 1901 by the Manufacturers' List Co., Toronto, gives the names and addresses of 2,750 manufacturing concerns in the Province of Quebec, of which 590 have their factories and mills in Montreal and 2,160 in other places in the Province, and we have the assurance of the compiler of this last mentioned book that the information here alluded to was obtained through a personal canvass of the territory.

These different statements may be condensed as follows:—

	In Montreal.	Elsewhere in Quebec.	Total.
Chevalier Drolet.....	1,042	580	1,622
Trade Index.....	119	54	173
Bradstreet's.....	660	2,240	2,900
Buyers' Guide.....	590	2,160	2,750

It is evident that some of these compilations are very defective, and do great injustice to the Province of Quebec and to the City of Montreal.

M. J. HENRY.

Toronto, November 15.

CAPTAINS OF INDUSTRY.

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

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

The starting of any such concern means a demand for some sort of machines, machinery, or supplies, such as steam engines and boilers, shafting, pulleys, belting, 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 Robb Engineering Co., Amherst, N.S., has received an order through Ahern & Soper, Ottawa, for a 40 h.p. engine for the Dominion Arsenal, Quebec.

A large flour mill will be established at Keewatin, Ont., with a capacity of 3,500 barrels per day. Water power will be used from the Keewatin Power Co's works.

The Burrige Co., Winnipeg, Man., agents for Messrs. Goldie & McCulloch Co., Galt, Ont., has just delivered to G. F. Stephens & Co., for their new paint factory, the first gas engine for power purposes in this country. Mr. Stephens purchased a gas engine instead of an electric dynamo, considering that this power is cheaper than electric power and it is expected that there will be a great saving in using gas. The Electric Light & Gas Co. are making special discounts for gas used for power purposes, and it is expected that the use of gas will be a great deal cheaper than electric power. The Burrige Co. have also delivered recently a 50 h.p. high speed, Ideal engine, 10 x 10, to the North-West Laundry Co., who have built one of the largest laundries in this province. They have also delivered to Gordon, Ironside & Fares, of this city, a 50 h.p. Ideal engine for their abattoir. It is the intention of the company to open up in the spring large sample rooms and keep a stock of the Goldie-McCulloch goods. They are also agents for Burrow, Stewart & Milne Co.,

Imperial mill and elevator scales, the Canadian Sewer Pipe Co., the Kerr Engine Works Co., for waterworks and steam valves.—Winnipeg Commercial.

The Farmers' Co-operative Binder Twine Co., Brantford, Ont., of which Mr. J. Stratford is general manager, held their annual meeting a few days ago, when a dividend of five per cent. per annum was ordered to be paid on the past season's business, this making three hundred and five per cent. dividends declared on the paid-up capital stock of the company in the past nine years.

An expert from the Goldie & McCulloch works was in the city yesterday looking over the Woodstock Cereal Co's mill with a view to a complete renovation of the building and the putting in of a new flour plant. The company contemplate extensive improvements to the premises, and the installation of the flour plant will about double the output. When asked this morning as to the likelihood of an amalgamation of the interests of the Cereal Co. and the Woodstock (Woodburn) Milling Co., D. R. Ross, of the Cereal Co., said that the matter had been informally talked over, but he could not say whether the talk would amount to anything.—Woodstock Express.

The Dominion Lumber Co., who recently bought the Young Lumber property at Ingram River, N.S., intend to take out the old boilers at their mill and put in four new ones of 100 h.p. each,

before commencing operations in the spring. The new boilers are being built by the Robb Engineering Co., Amherst N.S.

There seems to be an excellent prospect for the establishment of a beet sugar factory at Peterborough, Ont. The beets grown in that district scored the highest percentage of quality in the Provincial test. Abundant limestone close to the town has proven on test by the Agricultural College analysts to be all that is needed.

The premises of W. & F. P. Currie, Montreal, were destroyed by fire November 24. The top flat of the building, occupied by George H. Harrower as a shirt factory, and the second floor by the Dominion Paper Co., were also destroyed. Loss about \$70,000.

The bleaching chambers of the Canadian Electro-Chemical Co., Sault Ste. Marie, Ont., were destroyed by fire November 24. Loss about \$25,000.

The contract for a new bridge across the Fraser River at New Westminster, B.C., will be let January 8.

The Springfield cheese factory and drying house, Springfield, Ont., was destroyed by fire November 23. Loss about \$6,000.

The Martin Mfg. Co's premises, Whitby, Ont., manufacturers of buckles, was destroyed by fire November 23.

The Bailey Cutlery Co., Brantford, Ont., have purchased the Wincey mill property at that place, in which they will install machinery to the value of about \$25,000, and develop the lines of manufacture in which they are now engaged, such as shears, scissors, razors, butcher knives, etc. Application will be made for incorporation with a capital of \$200,000.

The Rossendale Belting Co., Manchester, England, are exporting large lots of their Rossendale M.A.Y. woven belts to this country. Messrs. R. H. Buchanan & Co., Montreal, are looking after the belting at this end, being ably assisted by the "Rossendale" Co's representative, Mr. W. E. Pilkington, from Manchester. We would advise any who are in need of belting to correspond with Messrs. R. H. Buchanan & Co., 692

Pneumatic Tools and Appliances ARE GREAT MONEY SAVERS.

Air Hoists,
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of Liquids or
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Cushion and Car-
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ing, Air Brushes

INGERSOLL-SERGEANT

PISTON INLET AIR COMPRESSORS FOR ALL DUTIES

THE JAMES COOPER MFG. CO. LIMITED

299 St. James St., Montreal

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

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

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Craig street, Montreal, and any knotty problems pertaining to belting will receive their prompt attention, as they are open for business, and are bound to do their utmost to merit the confidence of our manufacturers.

The Royal Aluminum Co., which is being incorporated in Quebec, has for its object the manufacture of aluminum goods, similar to those manufactured by the Pittsburg Reduction Co., Pittsburg, Pa. It is understood that the promoters of the company are interested in the Pittsburg company. The applicants for incorporation are Messrs. G. G. Foster, S. G. Archibald, S. F. Belknap, all of Montreal; Arthur Davis, of Pittsburg, Pa., and Frederick A. Stoughton, of Shawinigan, Que. The company will have a capital of \$500,000. Arrangements for power have already been made with the Shawinigan company, and works are in the process of construction, so that business will begin at once.

The immense tube works originally projected for construction at Sault Ste. Marie, Ont., will instead be located on the American side of the river. The corporation back of the project, which will be known as the International Tube Co., is composed of F. H. Clergue, his associates and other capitalists. The proposed plant will cost in the neighborhood of \$1,000,000, and employment will be afforded to about 600 men.

The Nova Scotia Steel & Coal Co.,

which is at present issuing \$2,500,000 bonds, will derive, it is estimated, a profit of no less than 400,000 per annum from the sale of coal alone. The company's present market for coal comprises the Maritime Provinces, and since the British Government has put an export duty on English coal, the management is looking to introduce its product into the Mediterranean ports. There is also a prospect with the further deepening of the St. Lawrence River canals, of sending Cape Breton coal into Ontario. Aside from coal the company is estimated to be able to earn \$190,000 in profits from the sale of crude iron ore, which goes to Scotland, Germany, and the United States. From its iron and steel works the surplus profit is placed at \$150,000 a year. This makes the estimated average annual profit nearly \$750,000, or about three and a half times the sum required to pay the interest on the bonds and sinking funds, namely \$200,000.

The Stowe-Fuller Co., Cleveland, Ohio, manufacturers of fire brick, fire clay, etc., are supplying all of the fire brick materials for the new works of the Lake Superior Power Co., at Sault Ste Marie, having already shipped more than 500 car loads of fire brick to that concern, who are constructing one of the latest and most improved up-to-date plants on the continent. As our readers know, this is one of the Clergue enterprises so highly appreciated in Canada. The Stowe-Fuller Co., also furnish the Ontario

Malleable Iron Co., Oshawa, Ont., which is perhaps the largest concern of the kind in Canada, with their requirements of fire brick work; and also have furnished the fire brick for the "new improved" works of the Canadian Copper Co.

A cat was the cause of a good deal of trouble to the International Traction Co. and the Niagara Falls Power Co. a few nights ago. Puss climbed a trolley pole on the Buffalo and Lockport Electric Railway at Hoffmann, N.Y., a small hamlet west of Lockport, and tried to walk on a feed wire. Her tail touched the parallel wire that carried the current back to Niagara Falls. There was a flash that could be seen for miles as the 24,000 volts of electricity passed through her body. Puss was burned to a crisp. Her charred body fell across both wires and didn't drop to the ground. This short-circuited the current, and caused a fuse at the Niagara Falls power house to be burned out. The power was immediately cut off from all the lines running out of the power-house. It was two hours before the cause of the trouble was located and the charred remains of the cat removed from the wire. In the meantime almost all the electric railways and street lighting plants in Western New York were without power.

Messrs. Shurly & Dietrich, Galt, Ont., will receive a bonus of \$10,000 and free buildings from Tilsonburg, Ont., to establish their factory for manufacturing their farmers' tools in that place.

A Michigan Man

WRITES AS FOLLOWS:

"If we had one hundred more steam pipes we certainly should not be satisfied until we had them all equipped with



BURT EXHAUST HEADS

They save steam and increase the efficiency of your plant, and make escaping wet steam and oil a thing of the past.

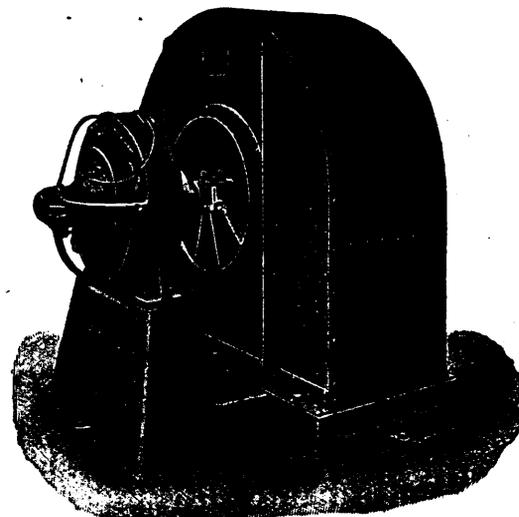
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THE BURT MFG. CO.,
AKRON, OHIO, U.S.A.

LARGEST MFRS. OF OIL FILTERS IN THE WORLD

Buffalo Mechanical Draft Fans

For BOILER PLANT ECONOMY



Buffalo Electric Induced Draft Fan.

BUFFALO FORGE COMPANY, BUFFALO, N.Y.

Canadian Representative,

E. A. WALLBERG, 410 Temple Building, TORONTO.
Merchants Bank Building, MONTREAL.

The Yarmouth Cotton Duck & Yarn Co., Yarmouth, N.S., have sold out their business to a syndicate headed by C. T. Grantham, of the Imperial Cotton Co., Hamilton, Ont.

Messrs. Wm. McKenzie and G. W. Thompson will install a plant for generating electric power at the confluence of the Winnipeg and Whitemouth rivers, for the supply of electric power to be transmitted to Winnipeg. Locations have already been surveyed for a dam, power-house, head race, tail race, etc. The plans are prepared for the installation of 10,000 h.p., which are drawn so the power can be increased and even doubled.

Some extensive discoveries of iron have recently been made at Steep Rock Lake, near Port Arthur, Ont., the deposits of which are believed to be a continuation of the Atikokan iron range. The Crown Lands Department report that several thousand acres of iron-bearing land have recently been applied for in the region of Steep Rock Lake.

In a communication to the Department of Trade and Commerce, Mr. Colmer, Secretary to the High Commissioner in London, says he understands from Mr. Walter G. Phillips of Hawthorn Villa, Durlston road, Kingston-on-Thames, that there is quite a demand in London just now for wooden houses of the "chalet" and ornamental class, made to specification and design, packed for export in a knock-down condition, with the parts numbered and ready to be put together. Mr. Phillips informs Mr. Colmer that he has the means of placing such goods to a considerable extent, and that as the price at which he can procure them from Norway is somewhat higher than it need be, he is looking for a new source of supply. Mr. Colmer, however, knows nothing of Mr. Phillips' standing, and any firms who may become interested must satisfy themselves on that point.

The Wire & Cable Co., Montreal, have ordered a 300 h.p. compound engine from the Robb Engineering Co., Amherst, N.S.

The Charlton Sawmill Co., Collingwood, Ont., has been incorporated with a capital of \$75,000, to manufacture timber, lumber, etc. The provisional directors include Thomas Charlton, North Tonawanda, N.Y.; John Charlton, Lyndoch, Ont.; T. J. McClelland, Collingwood, Ont.; and M. A. Charlton, Toronto.

Mr. F. H. Clergue, Sault Ste. Marie, Ont., has made a statement to the effect that the Algoma Central Steamship Co. will put two new passenger and freight steamers between the "Soo" and Windsor, Ont., next season. Work on the \$250,000 dam in the St. Mary's rapids is being pushed.

The Toronto Type Foundry Co., Toronto, has increased its capital stock from \$150,000 to \$200,000.

The Shellmouth Flour & Grist Milling Co., Shellmouth, Man., has been incorporated with a capital of \$10,000. The provisional directors include T. C. Gerard, W. S. Wallace and D. C. Stuart.

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RUBBER

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

THE STANDARD



GOLD WATER PAINT

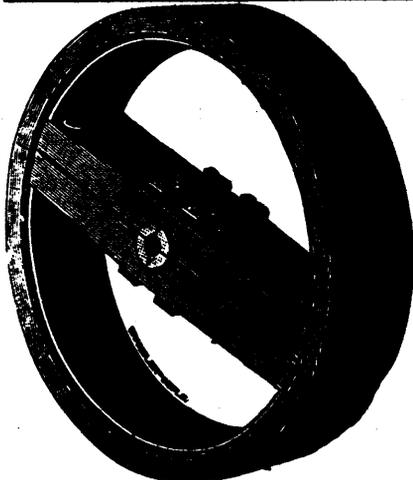
WEATHER PROOF, FIRE PROOF
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MILL SUPPLIES

Lubricating Oils and Greases
PAINT, PAINT OILS, ETC.

W. A. FLEMING & CO.

Montreal and St. John, N.B.



"The Reeves"

A HIGH GRADE

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BUILT HONESTLY

BUILT RIGHT

It Does the Work.

No Trouble.

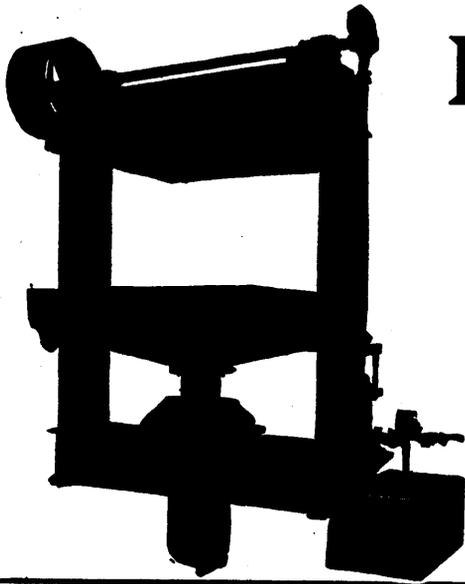
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Hydraulic **PRESSES**

We Build Presses
for...

**PRESSING VENEERS
TANNERS' USES
BALING, Etc.**

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AND PRICES

William R. Perrin & Company

TORONTO, - CANADA

Wm. R. Perrin & Co., Toronto, have received the contract for the overhead rail work in the new smoke houses being erected by the Wm. Davies Co., Toronto.

The Blenheim, Ont., News of November 7, after noting the objection to the payment of various accounts in its report of the Town Council meeting, says: A pleasant change was the prompt manner in which the Goldie & McCulloch Co's account of \$2,829.50 for boiler, engine and fittings was passed; amid words of highest commendation by all the members for the manner in which that firm had carried out their contract. On motion it was decided to tender them a vote of thanks for the manner in which they had done their work.

The third annual banquet of the James Warnock & Co's employees, Galt, Ont., was held November 15. The shop superintendent, Geo. Fairgrieve, occupied the chair. Speeches were made by Manager F. H. Hayhurst, C. F. Stewart, and Prof. Geo. Landreth. The programme included, besides the speeches, toasts, recitations and songs.

The Ontario Department of Crown Lands has been informed that the Keewatin Pulp & Paper Co. will erect a mill as expeditiously as possible. Negotiations were also recently completed for the leasing of the water power known as Cameron's Pool on the Nepigon river by

the Nepigon Pulp & Paper Co. The company bind themselves to develop 3,000 h.p. within two years, and not less than 6,000 h.p. for their mills within four years, and are permitted to sell additional power up to 4,000 h.p.

Morlock Bros., manufacturers of upholstered goods and mattresses, Guelph, Ont., will erect a large addition to their factory.

Black & Davidson, St. Catharines, Ont., have placed an electric light dynamo in their mill. The generator was manufactured by the Jones & Moore Electric Co., Toronto.

The British Columbia Fish Glue & Oil Co., Vancouver, B.C., have just installed a large hydraulic press, manufactured by William R. Perrin & Co., Toronto, for pressing oil from fish refuse.

Capitalists are forming a company for the erection of a brewery in Hull, Que.

The Anderson Furniture Co., Woodstock, Ont., received an order from the Duke of York while in Canada for one of their Prince of Wales baby carriages, which has been shipped to London.

The E. B. Eddy Co., Hull, Que., will rebuild their indurated fibre ware and pail and tub factories destroyed by fire some time ago.

The Jones & Moore Electric Co., Toronto, have received an order for one of

their new type dynamos from W. Macdonald, Morden, Man.

The ratepayers of Mildmay, Ont., have subscribed \$15,000 for the erection of a chair factory in that place.

A large carriage factory will be built at St. John, N.B., by L. S. Simms & Co.

A. J. Johnstone will erect a large carriage factory at Brockville, Ont.

The town of Berlin, Ont., has carried a by-law granting a bonus of \$25,000 to the Ontario Sugar Refining Co., toward the erection of a beet sugar factory.

Sydney, N.S., will have a new pumping station at an estimated cost of \$15,000.

Brockville, Ont., will spend \$25,000 in improving the gas and electric light plants there.

The factory of the Dominion Tobacco Co., Montreal, which was recently destroyed by fire, will be rebuilt.

The Montreal Street Railway, Montreal, will erect an addition to the present power house at an estimated cost of \$32,000.

Gordon, Ironside & Fares have purchased from William R. Perrin & Co., Toronto, a hydraulic press and also a complete lard refinery, comprising all the latest improvements in this class of machinery, which they are adding to their abattoir industry at Winnipeg, Man.

CONTRACTORS, ATTENTION!

If you are excavating in stone, use

THE "LITTLE GIANT" ROCK DRILL

... NINE SIZES ...

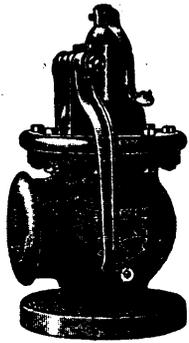
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THE CANADIAN RAND DRILL COMPANY

SHERBROOKE, QUE.

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CROSBY STEAM APPLIANCES EXCEL

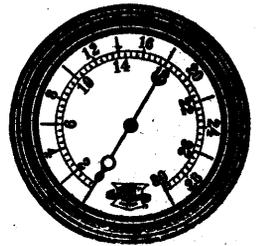
Steam Engine Indicators.
Recording Gages.
Revolution Counters.
Pressure and Vacuum Gages.
Lubricators, etc.



Stationary and Marine Valves.
Water Relief Valves.
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Globe and Angle Valves.
Single Bell Chime Whistles.
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CROSBY STEAM GAGE and VALVE CO.
BOSTON, NEW YORK, CHICAGO, LONDON

A TRUTHFUL GAGE
IS THE
ONLY GOOD GAGE



The Mildmay Bent Chair & Furniture Co., Mildmay, Ont., has been incorporated with a capital of \$30,000, to manufacture chairs and furniture. The provisional directors include George Schwalm, Mildmay, and William Hess, Listowel, Ont.

The Seamless Boat & Canoe Co., Montreal, has been incorporated with a capital of \$100,000, to manufacture boats, canoes, etc. The provisional directors include G. H. Duggan, Lachine, Que., and Edwin Hanson and H. M. Molson, both of Montreal.

The Grant Hamilton Oil Co., Toronto, are building a new factory on Strachan avenue, this city. The main building will be two storeys in height, 200 x 100 feet. The mixing rooms for the paints, etc., will be fitted up in most modern style. There will be a large coopeage in connection with the factory. The

Grand Trunk and C.P.R. have sidings into the yards.

The mill of the Keewatin Lumber Co., at Keewatin, Ont., cut 15,000,000 feet this season.

The contract for the construction of the Carnegie library building, to be erected at Vancouver, B.C., has been let, the figure being \$40,200.

The Rat Portage Lumber Co., at Rainy River, Ont., will double the capacity of their mill, giving 150,000 feet of lumber per day.

The Burgess Acetylene Gas Works, Bradford, Ont., were partially destroyed by fire November 28.

The Robinson McKenzie Co. has been incorporated with a capital of \$50,000 to take over the saw mill and planing mill of Messrs. Robinson & McKenzie at Cranbrook, B.C.

Mr. R. Macdonald will erect a large building on Queen street west, Toronto, to be known as the Western College of Music, at a cost of about \$25,000.

The paper mill at Napanee Mills, Ont., has been bought by William Finley, East Angus, Que. He will start it running as soon as possible.

The City Council of London, Ont., propose erecting a new city hall and police station at an estimated cost of \$80,000.

The Dominion Coal Co., Halifax, N.S., will ship a cargo of 5,000 tons of coal to Hamburg. This will be the first cargo of Cape Breton coal to be sent to Germany.

The Chilliwack Shingle Mfg. Co. has been incorporated with a capital of \$25,000 to take over and carry on the business of Fulbrook & Innes, Harriston, B.C., to manufacture lumber and shingles.

SOME HAVE LEARNED THAT IT IS DANGEROUS TO SIMPLY ORDER

"A Wood Split Pulley"

And are particular to specify

"DODGE"

when ordering, so as to get the best at same cost as other makes.

It's as well to have THE BEST when you are buying.

Remember **"Dodge"**
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80% of the Buyers do. Do You?

260-PAGE CATALOGUE MAILED FREE.

DODGE MANUFACTURING CO., Toronto, Ont.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

The Cascade Lumber Co. has been incorporated in British Columbia with a capital of \$20,000 to manufacture shingles, etc.

The King Mercantile Co. has been incorporated in British Columbia with a capital of \$25,000 to erect saw mills, etc.

The Walkerton Sugar Co., Walkerton, Ont., has been incorporated with a capital of \$300,000 to manufacture beet sugar, etc. The provisional directors include L. C. Benton, J. W. Bundy and R. W. Truax, all of Walkerton.

The Toronto Portland Cement Co., Dresden, Ont., has been incorporated with a capital of \$300,000 to manufacture Portland cement, lime, etc. The provisional directors include F. H. Laird, Dresden, Edward Terry, Toronto, and W. J. Budd, Owen Sound, Ont.

Mr. J. W. Leonard, general superintendent of the Western Division of the Canadian Pacific has written to Mayor Hogarth, Fort William, Ont., intimating that the improvements contemplated there, part of which will be commenced this winter, will involve an expenditure of \$400,000. These include a large cleaning elevator, tenders for which have been asked, and stipulating that the work must be completed and ready for the movement of the next harvest. Extensive docks for handling coal, and large warehouses are also to be constructed, the contracts for which have been awarded, the whole to be complete for the opening of navigation next spring.

During the month of August over 13,000 tons of pig iron from the furnaces at Sydney, N.S., were sent to Glasgow, Scotland. Supplies of Canadian pig iron will also be shipped to Liverpool and Manchester, England.

The Aikenhead Hardware Co., Toronto, has been incorporated with a capital of \$200,000, to manufacture hardware, etc. The provisional directors include T. E. Aikenhead, James Aikenhead and S. T. Sheppard.

The McLachlan Electric & Gasoline Motor Co., Toronto, manufacturers of electric light and power apparatus, gasoline engines for launches and horseless carriages, etc., have, within the last few days, shipped gasoline engines to the following parties:—One to Keystone Mfg. Co., Sterling, Illinois; one to Anderson Fish Co., Victoria Harbor, Ont.; three to Wilson Scale Works, Toronto; and one to W. J. Mannel, Niagara Falls, Ont. One other engine is now being built for J. D. Sprunt, London, Eng., which will be shipped in a few days. Other sales of electric motors have recently been made to Toronto parties as follows:—To J. L. Jones Engraving Co., one 3½ h.p.; John Laxton, one 2 h.p. and one 3½ h.p.; Turnbull & Russell, one 8 h.p. and one 3½ h.p. and five 6 h.p.; J. W. Langley, one 1½ h.p.; Alex. Dobson, one 3½ h.p.; Metallic Roofing Co., one 2 h.p.; Canada Biscuit Co., one 3½ h.p.; George D. Hunt, one 4 h.p.; Ed. Clancy, two 2 h.p.; Conger Coal Co., one 8 h.p.; Toronto Brew-

ing & Malting Co., one 2 h.p.; Wm. Davies & Co., one 8 h.p. and two 15 h.p.; Cowan & Co., one 6 h.p.; H. W. Petrie, one 8 h.p. In addition hereto two 25 h.p. and one 8 h.p. motors are in course of construction for the Conger Coal Co.

The Vulite Syndicate, Limited, 40 Wilton street, Finsbury, London, England, have an attractive card in another page, in which they direct attention to Peruvian Ash, manufactured by them. Appreciating that printers have for a long time been looking for a thoroughly reliable material for cleansing their type and composition rollers, the Vulite people have given the matter their special attention, and declare that, as a result, their Peruvian Ash completely fills the bill. Regarding it they inform us that it supercedes pot or pearl ash, turpentine, gasoline, etc.; it removes ink instantly, leaving the rollers and type perfectly clean; dissolves easily; is colorless; no sediment, no smell, free from causticity, is non-inflammable, non-irritant, does not injuriously affect the skin, and is perfectly harmless.

The factory for the Canadian Kodak Co., which has been started in Toronto, will be six storeys high. The Metallic Roofing Co., Toronto, have received the contract for the fire-proof windows and frames.

The planing and saw mill of Andrew Thompson, Strathroy, Ont., was destroyed by fire November 18. The mill will be rebuilt.

STOP!

ARE YOU INTERESTED IN

Engineers' Supplies?

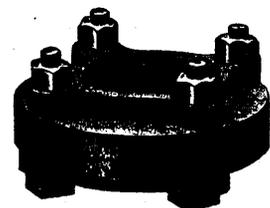
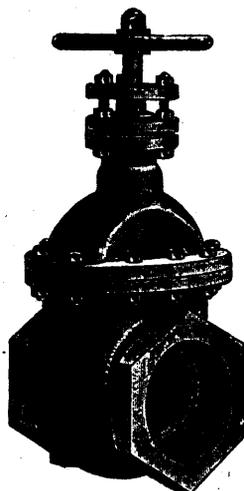
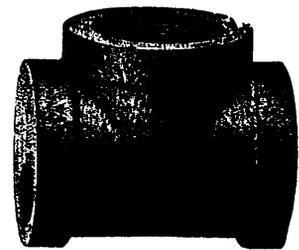
IF YOU ARE WE WOULD LIKE YOU TO GIVE US A TRIAL ORDER

WE KEEP A LARGE SUPPLY OF

**BLACK and GALVANIZED PIPE,
IRON and BRASS VALVES,
CAST and MALLEABLE FITTINGS,
STEAM TRAPS and RADIATOR VALVES,
SAFFORD STEAM and HOT WATER RADIATORS,
STEAM and HOT WATER BOILERS**

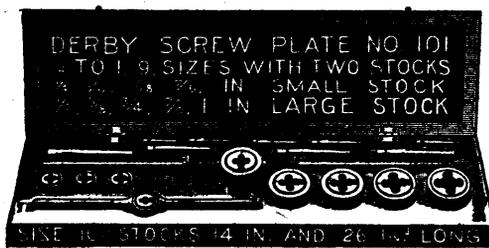
We can forward goods same day as we receive orders. Write for Latest Price List.

**THE DOMINION RADIATOR COMPANY, Limited,
TORONTO, ONT.**



When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

The universal satisfaction given by our **DERBY** and **REECE SCREW PLATES**, cutting from 1/16 to 1/2 inch, including all the machine screw sizes, has created a demand for a plate made on the same principle, to cut bolts to 1 inch in diameter. To meet this demand we have brought out these sizes.



BICYCLE SCREW PLATES, REECE SCREW PLATES, DERBY SCREW PLATES, BLACKSMITH'S STOCKS AND DIES, BLACKSMITH'S IMPROVED SCREW PLATES, HAND TAPS, MACHINE TAPS, PIPE TAPS, EVERY KIND OF TAPS AND DIES.



BUTTERFIELD & CO., - Rock Island, Que.

The Goldie & McCulloch Co., Galt, Ont., report trade good in all their lines. Besides numerous small shipments from their safe department this month up to November 5, they have shipped a car load of vault stuff to Golden, B.C., and a car load of vault doors to one firm in Toronto. They have also orders for a car load of safes for Sydney, N.S. Other shipments are: A car load of machinery for Canada Woolen Mills Co., Waterloo, Ont.; one car load of tanks to Port Arthur, Ont.; one engine to Toronto; one car machinery to Cargill, Ont.; and much other small stuff.

The E. Howard Clock Co., Boston and New York, was awarded a gold medal for their beautiful and comprehensive exhibit at the Pan-American Exposition. This, we understand, was the only concern in the United States manufacturing such goods which received the highest award; and it speaks well for the quality of their products. Included in their several specialties, in all of which they excel, are tower and street clocks, watchman's clocks, electric clock systems, railroad and school clocks, hall clocks, regulators, etc.

There is a collection of odd addresses in the Goldie & McCulloch Co's office at Galt, Ont., that is decidedly interesting. The peculiar and various ways the firm's name is spelled, and the unique addresses are very amusing. Frequently letters are addressed to this firm at Brantford, Toronto, and Guelph. One English firm recently addressed a letter "Galt, Canada, near Toronto." Some little idea may be

gained of how widely the firm of Goldie & McCulloch is known throughout Canada by the fact that a letter from British Columbia was addressed them to Guelph, but was not delivered to the Guelph office. Apparently the mail clerk on the train was so familiar with the firm name of Goldie & McCulloch that he overlooked the letter's address and put it into the Galt mail bag.—Galt Reformer.

The Owen Sound Dry Dock & Shipbuilding Co., Owen Sound, Ont., has been incorporated with a capital of \$40,000 to carry on a business of a dry dock, ship-building and dredging company, etc. The provisional directors include J. G. Hay, A. B. Hay and H. B. Smith, all of Owen Sound.

The McLachlan Electric and Gasoline Motor Co., Toronto, are in receipt of a letter from the Anderson Fish Co., Victoria Harbor, Ont., in which they say: The engine you sent us is now in good running order. The trouble was, it was feeding gasoline too fast, but since we have the gasoline regulated, we have no trouble whatever. Its operation is perfect, and no steam engine could run steadier. If it continues to run as good for two months, we will have a good many orders for you in the spring.

The organ factory of W. Doherty & Co., Clinton, Ont., was destroyed by fire November 16. It will be rebuilt immediately.

J. B. Smith & Son have installed a complete electric light plant for their Toronto works. The contract was given to the Jones & Moore Electric Co.

Arrangements are being made to open up the Tip-Top copper mine near Fort William, Ont., by Mr. B. W. Folger, Kingston, Ont. The company with which he is connected contemplate the erection of a smelter there.

The oatmeal mill of J. D. Moore, St. Mary's, Ont., was destroyed by fire November 17. Loss about \$6,000.

The Ottawa lumbermen who are to erect a new mill have purchased sixty acres of ground at Deschenes, a few miles from Ottawa, for a mill site and piling grounds. A splendid water power is available.

The Wallaceburg Cooperage Co., Wallaceburg, Ont., has been incorporated with a capital of \$50,000, to manufacture cooperage stock. The provisional directors include D. A. Gordon, Wallaceburg; G. B. Douglas and W. M. Fleming, Chatham, Ont.

The James McCready Co., Delorimier, Que., has applied for incorporation with a capital of \$400,000, to manufacture boots and shoes. The provisional directors include Chas. F. Smith, Clarence F. Smith and John Hammill, all of Montreal.

The Standard Furniture Co., Otterville, Ont., has been incorporated with a capital of \$20,000 to manufacture furniture, etc. The provisional directors include George Downing, Woodstock, Ont.; Le Roy Lossing and A. M. Barber, both of Otterville.

Kemp Mfg. Co., Toronto, have ordered from the Jones & Moore Electric Co., Toronto, one of their 20 K. W. machines.

THE BEST PIPE THREADING and CUTTING-OFF MACHINES

Are Made by the **ARMSTRONG MFG. CO., BRIDGEPORT, CONN.**

Also Manufacturers of a FULL LINE of **ADJUSTABLE STOCKS and DIES** and Water, Gas and Steam Fitters' Tools.
Send for Catalogue 27. Factory: BRIDGEPORT, CONN. New York Office: 139 CENTRE STREET.

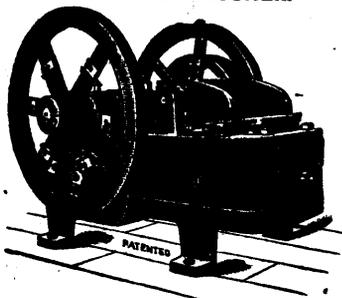
RICE LEWIS & SON, LIMITED, Hardware and Metal

MACHINIST TOOLS, PIPE FITTINGS, COMPLETE STOCK OF STOCKS AND DIES. PIPE VICES.
STILLSON AND TRIMO WRENCHES. STEAM PIPE.

CORNER KING AND VICTORIA STREETS, - - - TORONTO.

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ROLL JAW CRUSHER.



Crushes

Large Rock

to

4 inch.

Send for Circular.

STURTEVANT MILL CO.,

104 Clayton St.
Boston, - Mass.

THE CHARITY OF ALL CHARITIES.

THE CARE OF THE SICK CHILDREN.

WHAT THE HOSPITAL FOR SICK CHILDREN ON COLLEGE STREET, TORONTO, HAS DONE AND IS DOING FOR THE LITTLE SUFFERERS OF THE PROVINCE OF ONTARIO.

An institution that requires about \$34,000 a year for maintenance, an institution

faith in the love, affection and generosity of the people.

While the institution is located in Toronto its work is essentially provincial. It admits not only children from the city of Toronto, but from every city, town, village and hamlet, yea, from every spot in the Province of Ontario.

So when you give—be your giving large or small—it goes for the benefit of every child of the province that is admitted and treated.

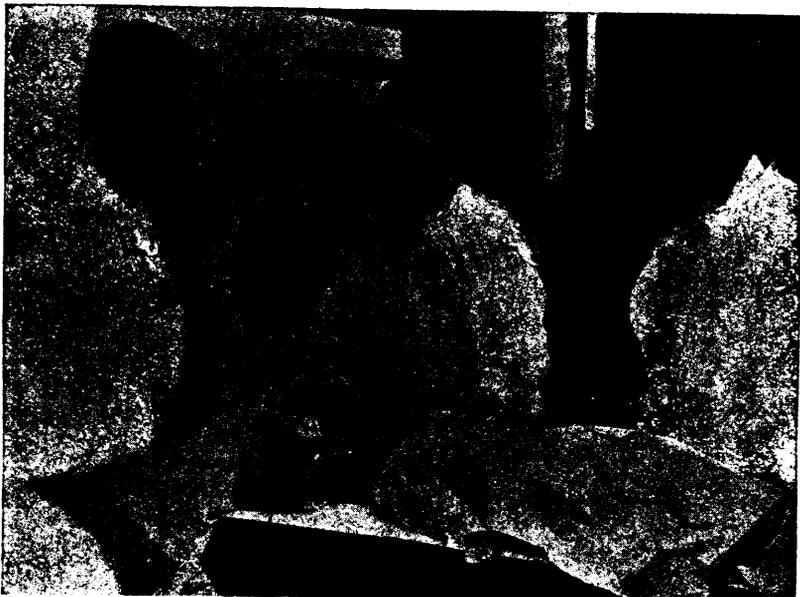
tients, whereas every sick child in Ontario has the same rights and privileges as those who live within the shadow of the great red pile on College street.

It costs about \$34,000 per year, or a dollar per patient, per day, to maintain the Hospital. The Government of the province gives about \$7,000 a year, or nearly eighteen cents per head, in other words, per patient per day. This amount is all expended in maintenance. The corporation of the City of Toronto does even more. It gives \$7,500 per year, or eighteen cents per head per day, and this, too, goes towards the maintenance, not only of Toronto patients, but for every patient in the Hospital, no matter from what part of the province the little one may come from. Yes, and this contribution of the corporation is increased by from \$4,000 to \$6,000 donated by citizens of Toronto for the maintenance of all patients, to say nothing of the \$4,000 contributed yearly by Toronto people, the founders of maintained and named cots in the building.

During its lifetime the Hospital has handled 8,000 indoor patients, and of these 4,000 were cured, and 2,700 were improved. Of these—and please note this—1,757 came from 1,205 places in Ontario and outside the city of Toronto.

Ten years ago the Hospital carried a heavy burden of debt. The building and its furnishings cost \$150,000, and of this \$20,000 was paid by the corporation of Toronto and \$60,000 by its citizens. Year by year the debt has been reduced, and it is now down to \$13,000.

To clear the indebtedness this appeal is made. Hospital work cannot be carried on without money. Interest on mortgages has to be paid. An army of work-



that depends for support on the goodness of the generous people of the Province of Ontario, must needs have considerable

This statement is made because occasional reference is made to the Hospital as a Toronto institution for Toronto pa-



Capacity 3-32 to 1 1/2 inches.

Style "K"

The "NEW YANKEE"

Drill Grinder

SAVES 50 PER CENT. OF TIME IN ADJUSTMENTS

COMPLETELY SELF-CONTAINED

OUR machines require no wrench, measuring instruments or gauge saws. We have entirely done away with them. Any amount of clearance desired can be obtained instantly. Drills can be ground to do more and better work. Send for Catalogue showing 10 styles, and full explanation of machines grinding from No. 60 to 5 inches.

JOHN LUMSDEN & CO., 375 St. James St. MONTREAL

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

ers has to live. Nurses, domestics, officials are all human. They earn their wages whether they live in or out of the Hospital.

A hundred and twenty children per day—yes, in some months a hundred and forty—once it was a hundred and fifty—all these to look after and care for. Thirty nurses continually at work. A half-dozen maids with brooms and dusters; cooks and table maids to prepare the food and serve it, clerks in the office who work like beavers, typewriters who tap the keys of their machines for hours a day, answering sheaves of letters, preparing accounts, watching every doing in the immense building on College street, that never closes night or day—all the year round—a hive of two hundred people, small and large, a little town doing what it can for God's suffering little ones.

True, it is, that some have to pay—yes, all who can afford it are expected to pay—but those who cannot pay and can produce the certificate of a clergyman or known ratepayer of the province to the effect that they are too poor to pay, can have maintenance and treatment free of charge.

If all could pay there would be no need to appeal for money, but eighty per cent. of the work is free work for the children of those who cannot afford to pay.

Fancy a great family of nearly one hundred and fifty sick children. You who have had perhaps one or two sick little ones at your own home, therefore know something of the work, but when you visit Toronto drop in and see what they are doing to win back little ones from the grave.

It would only weary the reader to go on with more story. This year a giant effort is being made to clear away the debt. Every dollar of this debt handicaps the Trustees. Every dollar sent in helps to lighten the load that is being carried.

If every reader would send but a dollar what a grand fund would be raised in a few weeks of time. Let every one who can spare a dollar, send it to Douglas Davidson, the Secretary-Treasurer of the Hospital, or to J. Ross Robertson, the Chairman of the Trust. And please send it in at once, for even the best of us are prone to forget our best intentions.

Lindsay's elevator at Beresford, Man., was destroyed by fire November 21.

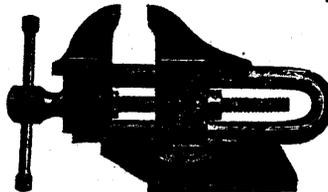
JAMES FOLEY & CO.

Dye Stuffs and Chemicals

MILL SUPPLIES

579 and 581 ATLANTIC AVENUE, - - - BOSTON, MASS.
Direct Importers of Best Brands Anilines.

WARE'S PATENT *Steel Yoke Vises.*



The weakness of all vises, made entirely of cast iron, is their tendency to break at the point where the strain is greatest, viz.: the junction of the front jaw with the slide or yoke.

This difficulty is completely overcome in WARE'S VISE, in which the yoke or slide is made of one piece of cold rolled wrought steel shafting cast into the front jaw.

This method of construction produces a vise that is practically unbreakable, of great strength and solidity; easy running, by virtue of the highly polished surface of the steel yoke; efficient and convenient in every particular.

The slide being narrow affords plenty of space on either side for the handling of long work perpendicularly, which cannot be done with other vises. Prices and all particulars on application. **SOLE MAKERS:—**

The JAMES SMART MFG. CO., Limited
BROOKVILLE, ONTARIO, CANADA.

MICA BOILER COVERING CO.

Contractors to the Admiralty **LIMITED**

The demand for **MICA COVERING** is largely increasing. It has been proved and tested in all kinds of service, and leads the market absolutely on its merits. Awarded the **Gold Medal** at the Pan-American; Prize Winner at the Paris Exposition, etc. Its use in Great Britain and the United States extending. Some recent Canadian **repeat orders.** Write for full particulars from

THE MICA BOILER COVERING CO, Limited, 86-92 Ann St., Montreal

Trade with Russia

Firms desirous of getting into communication with Russian buyers or merchants; or who wish to buy Russian products on the best possible terms; or who are willing to appoint agents for the sale of their goods in Russia, are invited to send particulars of their requirements for insertion in

The Anglo-Russian Trade Messenger,
10 Bolshaya Dvorianskaya Street, Moscow, Russia.

THE ANGLO-RUSSIAN TRADE MESSENGER is the sole commercial paper published in Russia, devoted to the interests of the Anglo-Russian trade. It circulates amongst the best firms all over Russia and Siberia.

Circulars and Catalogues Translated, Printed and Distributed AT VERY CHEAP RATES.

THE GEE ELECTRICAL ENGINEERING CO.

11 COLBORNE STREET, TORONTO.

LIMITED

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

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

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

ESTIMATES AND PLANS SUBMITTED.

Electrical Fittings, Arc Lamps, Telephone Bells, Etc.

THE STOWE-FULLER CO.
FIRE BRICK MANUFACTURERS
ALL FURNACE MATERIAL
 Superior Building
 CLEVELAND, O. SEND FOR
 CATALOGUE

CLARK & DEMILL
 MANUFACTURERS OF
Wood Working Machinery

Our Foundry is equipped with the best material, and our Machine Shop with the latest improved tools.

OFFICE AND WORKS:
 Directly South of C.P.R. Station,
GALT, ONT.

The Wm. Hamilton Mfg. Co.
 Peterboro, Ont., Can.
 Acting as the Patentee's Licensee

Are prepared to manufacture and supply
SAVERY'S PATENT SHAKE FRAMES
 FOR
Fourdrinier Paper Machines,
 AS DESCRIBED IN
 Canadian Patent No. 57,819.

—ALSO—
SAVERY'S PATENT COMBINED DRYER STEAM JOINT AND SAFETY VALVE
 AS DESCRIBED IN
 CANADIAN PATENT No. 68,093.
 ABOUT 2,000 NOW IN USE.

BALE'S Fire Cement
 FOR LINING AND REPAIRING STOVES, FURNACES, RETORTS
 And all work where great heat is required.
BALE & CO., Newgate St., LONDON, ENG.
 GAS PURIFICATION and GENERAL IRON MERCHANTS

Trimo Giant

 This Chain Pipe Wrench has interchangeable jaws. Improved method of holding and releasing chain. No locking. Send for catalog.
TRIMONT MFG. CO., Roxbury, Mass., U.S.A.

POETRY AND PAPER.

Who says there is no poetry in business? The following verses, written upon a specimen sheet of "Earncliffe," has been sent to us by the poet:

We write this verse to let you know—
 That "Earncliffe Bond" at the Paris Show,
 Took "Grand Prix" away from the world at large,
 And this paper we sell at a moderate charge.

It's brother—"Superfine Linen Record" of fame—
 Doth each sheet this water mark contain.
 Be sure your ledgers are made of this,
 And your business life will be perfect bliss.

The Rolland Paper Co. high grade paper makers, Montreal, Canada.

THE BRISTOL RECORDING PRES-SURE GAUGE.

The Bristol Co., Waterbury, Conn., manufacturers of recording instruments for pressure, temperature and electricity, have sent us a copy of their latest revised catalogue of recording, pressure and vacuum gauges.

In the construction of these instruments the pen arm is directly attached to the free end of a tube of flattened cross sections which is bent into a helical form of four complete convolutions. The tendency of pressure applied is to straighten or recoil the tube, which causes the pen arm to move over the range of the chart without the necessity of any intervening multiplying devices. The amount each coil is bent by the application of pressure is quite small, and consequently the tube is not strained beyond its elastic limit. The chart makes one revolution every twenty-four hours, and is graduated with radial arcs and concentric circles. The divisions on the radial arcs correspond to differences in pressure, while those on the concentric circles correspond to the hours of the day.

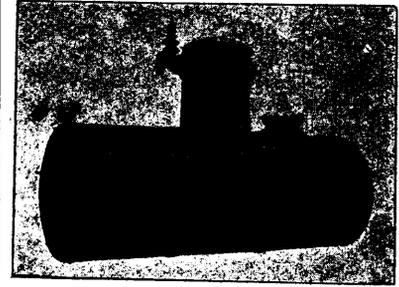
In the operation of these instruments, they may be placed in the office or engine room, or any other convenient place, at any desired distance from boiler or vessel of which the pressure is to be recorded; and, if required, gauges are furnished with electric alarm for high or low pressure.

The standard size chart is eight inches in diameter; and extra large size gauges are made with a chart twelve inches in diameter. Gauges are also furnished with charts making one revolution in fifteen minutes, one hour, six hours, twelve hours, and one week.

It may be said of these Bristol recording pressure gauges that they make a continuous record, day and night, of steam, water, gas, oil or air pressure, and are adapted to all ranges of pressure; and users of steam in factories and mills, water and gas works, electric light and power stations, public buildings and institutions, hotels, etc., find them of great value, as they show at a glance whether the boiler has received the attention upon

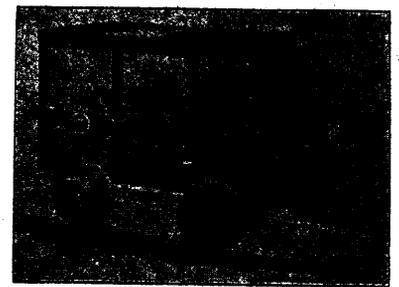
IS IT A BOILER YOU WANT?

Then there's where we want to come in.



WE MANUFACTURE

a large line of machinery, and invite comparison of our goods and prices with those of other makers.



CATALOGUES

Crocker Patent Turbine, Horizontal Tubular Boilers, Steam Engines and Boilers, Mining Machinery, Pulp & Saw Mill Machinery, Hoisting and Winding Engines.

ANY OF THE ABOVE ON REQUEST

THE JENCKES MACHINE CO.
SHERBROOKE

COAL JAS. H. MILNES & CO. COKE

WHOLESALE DEALERS IN
Best Grades of STEAM COALS.
Best Grades of BLACKSMITHS' COALS.
Best Grades of FOUNDRY COOKS.
 Shipments made direct from Mines to any point in
 Canada. Write for quotations.

Head Office: 78 QUEEN ST. EAST TORONTO. Docks: Esplanade, Foot of Yonge

which largely depends its safety and economy.

The Bristol Co. write us that they are now at work preparing new editions also of their catalogues for temperature and electricity; and in the meantime they will be pleased to mail copies of the Pressure Gauge catalogue, here alluded to, to any who may desire them.

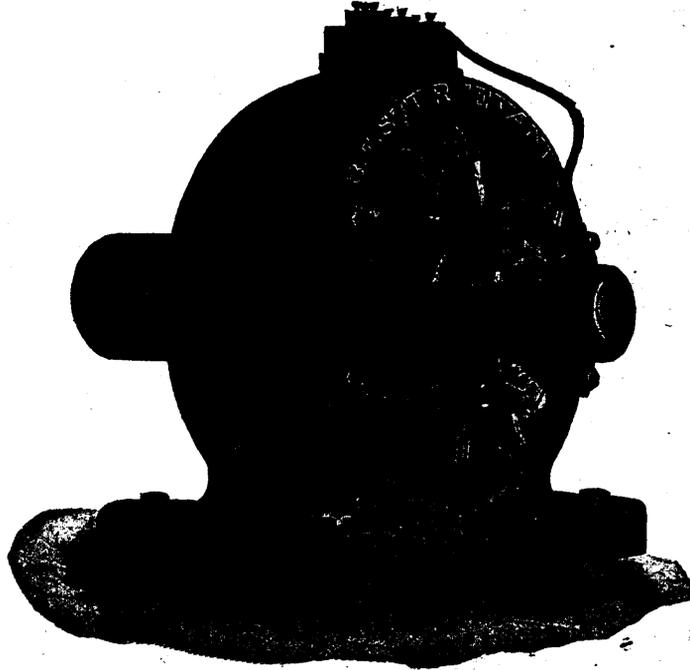
A NEW BI-POLAR STURTEVANT MOTOR.

In the development of the bi-polar type of motor, as especially adapted for direct connection to centrifugal fans, the B. F. Sturtevant Co., Boston, Mass., has gradually been led into the manufacture of the same general type as independent motors. They, of course, possess the inherent feature of great range of speed due to the bi-polar design. In the accompanying illustration is shown one of these machines, which are built in small sizes ranging from $\frac{1}{4}$ to 5 h.p.

The frame or magnet ring is usually of cast steel to support the armature bearing cradle. The stand or base is an entirely separate casting, in which the motor is placed and secured by set screws. Evidently the motor itself may therefore be turned to any angle, while the bearing cradle is maintained in a horizontal position. The bearings are of the ring-oiling, self-aligning type, the bearing sleeves being made of hard composition. This feature of having both bearings mounted in one and the same casting in-

dures absolutely perfect alignment, while this feature combined with the ring-oiling, self-adjustment design insures the minimum friction resulting from rotation

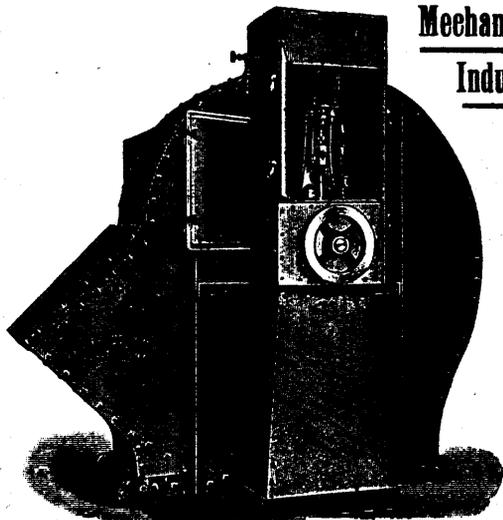
slots, being insulated in a most thorough manner. The commutator is built up of drop forged segments of pure lake copper mounted in composition shells, and insu-



New Bi-Polar Motor.

of the armature. Crucible steel is employed in making the shaft. The armature itself is of the ordinary toothed drum type, the coils being wound in

lating with pure amber mica carefully selected. After being wound, the whole armature is thoroughly saturated with an insulating compound, and baked at a



Bottom Angular Up Discharge Right Hand Fan.

Mechanical Induced DRAFT FANS

Installed in connection with a Boiler Plant, will prevent smoke, will give greater fuel economy and increased boiler capacity, besides which the initial cost is far less than that of a chimney.

Mechanical Draft may be applied to old boilers to increase draft at a minimum initial outlay.

FOR PRICES and PLANS WRITE

McEACHREN HEATING and VENTILATING CO.
GALT, ONT., CANADA

IN THEIR NEW FACTORY . . .

32, 34, 36, 38 and 40
 DUNDAS STREET

THE . . .

Electrical Construction Co.
 OF LONDON, Limited

Beg to call the attention of their patrons to their removal to a more commodious and up-to-date factory, where, with improved facilities, they can guarantee even better attention and satisfaction than ever before.

Don't buy before getting their prices, when purchasing Dynamos, Motors, Fixtures or Supplies

Quotations Supplied
 on Application.

PHONE 1103

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.

DIXON'S **DOES**

TWO THINGS



NOTHING
EQUALS
IT...

AND DOES THEM
THOROUGHLY

STOPS THE BELT
FROM SLIPPING.

PLEASES THE MAN
WHO USES IT.

SAMPLE SENT FREE.
SEND FOR ONE. **JOSEPH DIXON CRUCIBLE CO.,** **Jersey City, N.J.**
U.S.A.

"Zanzibar

Anti-Rust

.. Paint ..

MADE TO ENDURE

GARFIELD PAINT CO.

TORONTO, ONT., CANADA

Write for
Booklet

"A STUDY
IN BLACK."

W. A. FLEMING & CO., - **Montreal, Que.**

Agents for Quebec and Maritime Provinces

For Roofs
of all kinds,
Bridges,
Iron Work.

Toronto Elevator Co.

**MILLWRIGHTS AND
ELEVATOR SPECIALISTS**

Estimates Given and Losses
Adjusted

OUT-OF-TOWN WORK PROMPTLY ATTENDED TO.

PHONE **JOHN H. SHALES,** 74 ADELAIDE ST. WEST
1535 **Manager** **TORONTO**

AGENTS FOR....
Miller Bros. & Toms,
Elevators
Leitch & Turnbull Co.
Limited, Elevators.
Greening's Wire Ropes.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

temperature of 150° to 175°. This renders the armature oil and water-proof, and prevents any liability of a break-down.

The field coils are of durable cotton, covered with wire which, after being subjected to the same dipping and baking as the armature, are carefully covered with micanite paper and heavy tape. This is in turn given an external finish of oil and water-proof paint. Carbon brushes only are used, mounted in a socket type of holder, and provided with every faculty of adjustment.

Ordinarily, these motors are furnished with V slide-rails in all sizes, except the $\frac{1}{4}$ and $\frac{1}{2}$, but when it is desired to attach the motor to wall or ceiling, and have provision for tightening the belt, a special sliding base is furnished.

These motors, at standard speeds, can be wound to any voltage up to 600, and will carry their full rated load for ten hours with a temperature rise not exceeding 40° cent. above that of the surrounding air, and without sparking. Evidently motors with these provisions for adjustment can be used equally well for the floor, wall or ceiling.

STANYON ENGINEERING CO.

The Stanyon Engineering Co., Pittsburgh, Pa., have opened an office at 402 McKinnon Building, Toronto, for the purpose of extending their business in Canada as engineers, and also as buyers' agents. They have recently been appointed consulting engineers by the Cramp Steel Co., Collingwood, Ont., whose plant will be erected under their supervision.

They design and install steel works and rolling mills, rod mills, wire mills, galvanizing plants, nail factories and barb wire factories, and special machinery for any purpose. They have just issued to the trade in Canada a booklet entitled "In the Heart of the Manufacturing Centre," which will interest all manufacturers and dealers who are now purchasing, or expect to purchase, machinery or iron and steel products in the United States. Having an office in Pittsburgh, which is the greatest manufacturing centre of the United States, and having had years of experience in buying this class of material in that country, especially in the Pittsburg district, they say they are in a position to secure for Canadian buyers, lower prices, better goods and quicker shipments, than could be secured in any other way.

They will also, when possible, relieve buyers of the annoyance of getting materials through customs, and will deliver goods to their customers duty free. Their motto is: "Success depends on knowing when, where, and how to buy." They claim to be able to make their knowledge of value to Canadian buyers of hot rolled or cold rolled iron or steel, wire and wire products, furnace castings, power generating and transmitting outfits, elevating and conveying outfits, for the economical handling of materials, etc., and they ask for an opportunity to prove their claims.

The James Cooper Mfg. Co., Montreal, have ordered a 100 h.p. engine from the Robb Engineering Co., Amherst, N.S.

NEW DYESTUFFS.

Fast Light Yellow 3 G—This new brand differs from the older Fast Light Yellow G., chiefly in its shade, it producing a much clearer and greener tone, and is also remarkable for its particularly full shade. Fast Light Yellow 3 G., like the older G., brand, dyes in a strongly acid bath, and is possessed of the same excellent fastness to light; further, it dyes equally as level as Tartrazine. Cotton checking threads are left white, and it is equally as well adapted for the same branches of dyeing, as the older G. brand. The color can be discharged a good white with zinc powder, tin crystals, however, not producing so good an effect.

Katigen Indigo B.—This new dyestuff, like the other members of the series, is dyed with sulphide of soda, Glauber salt and soda. The strength of this product has been considerably increased, 65 parts of the present make being equal to 100 parts of the older quality, the benefit of which is given to the consumer. Katigen Indigo B., will no doubt form a good substitute for indigo, owing to its excellent fastness to light, its good resistance to washing and boiling, as well as its good fastness to cross dyeing, which no other product of a similar shade possesses to the same degree.

Our latest pattern card No. 875, 1901, illustrates fashionable shades on gentlemen's suitings. This card shows the different kinds of undyed material, together with a range of shades that will in all probability be in vogue during the

coming winter season. We have also included in this card a number of fashionable shades that are still popular, and trust that this shade card will be found useful to all interested in this branch of dyeing. Only such colors are used as dye easily, level and meet all other requirements.

Samples, instruction circulars, and pattern cards will be mailed gratis to interested dyers, upon application to the Dominion Dyewood & Chemical Co., Toronto, sole agents in Canada, for the Farbenfabriken vorm. Frieder. Bayer & Co., Elberfeld, Germany.

THE BUFFALO DOWN DRAFT FORGE.

A number of years ago the Buffalo Forge Co. installed for the Big Four route, i.e. the Cleveland, Cincinnati, Chicago & St. Louis Railway, a down draft forge shop equipment in their shops at Wabash, Ind. Recently Mr. Wm. Garstang, superintendent of motive power, at Indianapolis, addressed the following letter to the Buffalo Forge Co. :—

"Enclosed copy of letter is self-explaining, and is forwarded for your information. Wm. Garstang, Superintendent Motive Power."

Which letter is followed by a copy of his letter to the Embree, McClean Carriage Co., St. Louis, Mo., as follows :—

"Your favor of the 4th addressed to this company at Wabash has been referred by our master mechanic to the undersigned to answer direct.

"Our Wabash shop is equipped with the Buffalo Forge Co's down draft forges, and have been in service now for several years. I consider them a success, and especially so, in so far as keeping the shop free from smoke and gas is concerned.

"For the class of work that I imagine is done in a carriage shop, I don't believe there is any forge better adapted for this service than the one in question.

"If you are in the neighborhood of Wabash, Ind., at any time, I would be glad to have you call is and see how the forges in our shop are performing."

MACHINE TOOLS.

The Laurie Engine Co., Montreal, have sent us an illustrated catalogue having reference to a number of lathe, planer and shaper tools handled by them. The Champion tool holder is forged from the best carbon steel, and is case-hardened; and the cutters are of extra length, so that there are not so many ends to throw away when the tool is worn out. In the use of this tool the saving in time, money, labor and annoyance can hardly be over-estimated. It obviates all danger of steel being burned or worked badly. It saves the men from going to the tool dresser, machines standing idle, etc. With it no stock of heavy steel need be carried, and many points of various shapes can be kept on hand ready for instant use, which will take but little room and enable the men to turn out more and better work. Regarding the Western diamond point

LATHE, PLANER and SHAPER TOOLS

THE CHAMPION TOOL HOLDER, saves its cost in thirty days time.

THE WESTERN DIAMOND POINT TOOL.

THE CHAMPION CUTTING OFF TOOL.

THE SOLID HOLDER THREADING TOOL.

THE CHAMPION SQUARE THREAD TOOL.

THE CHAMPION PLANER TOOL.

THE CHAMPION EXPANDING MANDREL,

A Cylinder of Steel as flexible as India Rubber

A necessity to every machinist.

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Canadian
Agents...

LAURIE ENGINE CO.

**MACHINERY SUPPLIES
AND TOOL WAREHOUSE**

321 ST. JAMES STREET,

MONTREAL, QUE.

tool, we are told that the cutter cannot slip while in use. Cutter can be lowered so that cutting edge is in line with top of tool holder, which cannot be done with other diamond point tools.

In the offset cutting-off tool, the head of the stock contains plenty of material which gives all the strength required. The blade is held firmly in position by a V shaped, over-lapping clamp. The blades are self-hardening steel, and beveled to give proper clearance. In the spring threading tool the shape of the holder gives just enough spring to prevent chattering while in operation. With the offset square thread tool any size thread can be cut, either right or left hand, and to and from a shoulder.

For further information address Laurie Engine Co., Montreal.

CAPE BRETON RAILWAY.—The Cape Breton Railway Co., of which Dr. W. Seward Webb of New York is president, is making rapid progress with its new line from the Straits of Canso to Louisburg, N.S. Two construction gangs of 2,000 men each are employed, and the rails will be laid to River Inhabitants before Christmas, and if the weather is favorable the line will be completed early in the spring. If so, it will be the quickest construction work in the history of Nova Scotia railways. The company which proposes to bridge the Straits of Canso, will have a capital of five million dollars. The proposed bridge, when completed, will be one of the highest in the world, and will have a span of at

least 1,000 feet. The quantity of steel entering into the construction of the bridge will be approximately 350,000 tons, and it is estimated that the structure and approaches will cost in the vicinity of \$4,000,000.

NEW ONTARIO. — Mr. D. F. Burk — there is only the one Burk in all Canada — dropped into this sanctum last week, and, striking an attitude, and he struck it gracefully, warbled in a bird-like voice:—

O, come to New Ontario
And join our happy band ;
O, come to New Ontario
And get a piece of land.
O, come to New Ontario
For we on work are bent ;
O, come to New Ontario
Where you have to pay no rent.

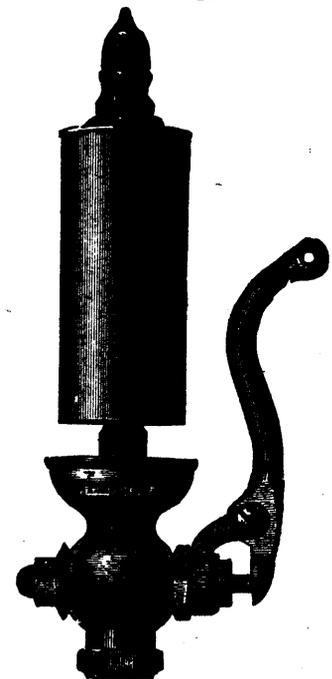
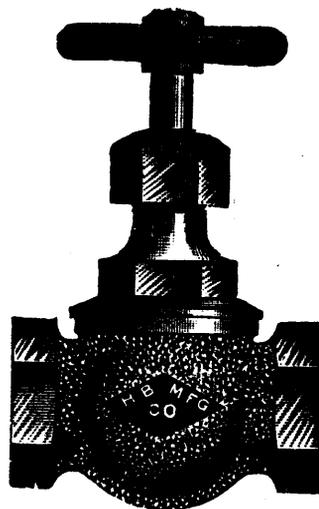
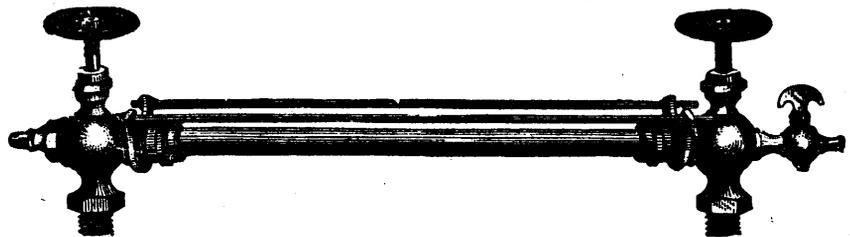
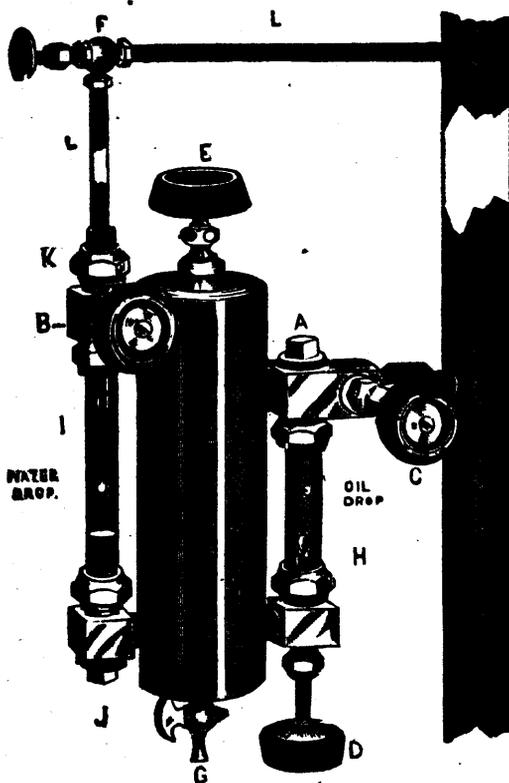
After chanting this beautiful anthem the silver-tongued speaker of Port Arthur delivered an impassioned oration as follows:—

Come to New Ontario. The Government offers you 160 acres free. You can get woodland or burnt land, or a combination of both, if you become an actual settler. You get free wood for stove, for your house, for your barn and fence ; you make it into cordwood and ship to the nearest town ; into ties and sell to the railways, thus clearing your farm, clothing the family, and feeding the children ; you have good water close at hand. The railways are being built in advance of settlement ; sawmills are making lumber for the prairies of the

West, the fishing industries thriving, the mines are being prospected, and towns and villages are springing up. All who are engaged in these industries must be fed. The climate is salubrious in the summer ; bright, cold and bracing in the winter. We have no banana belt, but the raspberries and bilberries cover the plains, the blueberries the hills, with cranberries in the swamps, while red and black currants, gooseberries and strawberries are plentiful. The day is coming when, at times, wheat will be shipped from here to Liverpool by all water for three cents a bushel. We are in the heart of the American continent, with all water to the sea, and the food-consuming market of Europe. 'Tis the desire to attain a competency. Here the man or family without means may, by industry, in a few years, clear up a farm and become independent. We have here a Settlers' Home, free for a time to the incoming settler.

Having orated thus far, Burk's voice became husky and his throat dry, very dry, but he survived long enough to whisper from the depths within his red necktie:—

New Ontario embraces that section of Canada lying between French River, Georgian Bay, Lake Superior, and the eastern boundary of Manitoba, where there is boundless wealth in the farm, in the water, in the forest and in the rocks. One mining company in New Ontario paid the Canadian Pacific Railway Co. last year for freights over two hundred and fifty thousand dollars.



WRITE FOR PRICES TO

The **HAMILTON BRASS MFG. CO. Limited**

HAMILTON, - ONTARIO

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

We have work for all—on our new railways, on the docks, on the elevators, on the coal piles, in the woods, in the sawmills, in the mines, in the smelters, in the fisheries, in the warehouses, in stores and offices, and on the farms where must and will be grown the wheat for our bread, the oats and hay for our horses, the fodder for our cattle, the pork, mutton and beef for our daily consumption, and the butter and cheese for our own use and export, and wool for our clothes. We have in New Ontario more butter grasses than any other known section of the globe, as witnessed our grass exhibition at Toronto and London fairs. Owing to our grasses and cool climate we expect to become, in time, the leading butter and cheese factor of the world. We have the lands, and they are mostly vacant. We want energetic settlers—men and women who are not afraid of work. At present 160 acres of land may be obtained free, and any hard-working men can be their own bosses and make, in a few years, a home and independence for themselves.

The renting farmer need rent no longer. The unemployed may secure work and make homes for themselves. Untold wealth awaits capital and labor in the development of New Ontario.

New Ontario's new railways will require five hundred thousand dollars worth of provisions every year.

Work and wealth for all who desire to come and assist in raising at home the farm products which New Ontario yearly imports, say 10,000 tons of hay, 2,000,000 pounds of butter, 500,000 bushels of oats, 10,000,000 pounds of meat, 200,000 bags of flour, are some of the things purchased from Old Ontario, Quebec and Manitoba, all of which can be produced here.

We have an excellent home and foreign market situated as we are in the centre of the continent, at the head of the finest waterway in the world.

The agricultural products of New Ontario are varied. We grow wheat, oats, rye, barley, flax, clover and timothy, corn stalks for fodder purposes, all kinds of ordinary vegetables, and excellent root crops.

The time is ripe for establishing small industries, for manufacturing soap, brooms, biscuits, cheese, butter, tobacco, cigars, etc.

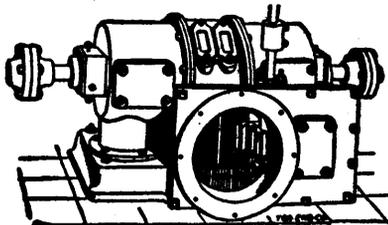
For free homes, how to get them and how to get there, for free maps, free atlas, and for information as to Settlers' Home or land guides, write or apply to R. A. Burriss, Port Arthur, Ont.

TORONTO'S PROSPERITY.—The report of City Engineer, C. H. Rust, for the year 1900 has been issued, and though somewhat late, contains much interesting information. The amount spent by the Works Department last year, including water-works expenditure, \$167,922, was \$1,233,724, an increase of \$120,478 over the year before. Of this amount \$560,618 was spent in local improvements, as follows:— Pavements and roadways, \$440,173; concrete sidewalks, \$67,632; brick sidewalks, \$472; plank sidewalks, \$45,167; sewers, \$7,171.

The mileage of streets did not increase,

The Bourne-Fuller Co.

**Iron, Steel,
PIG IRON.
Cleveland, - Ohio.**



Horizontal Type.

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.

**BELL
PIANOS and ORGANS**

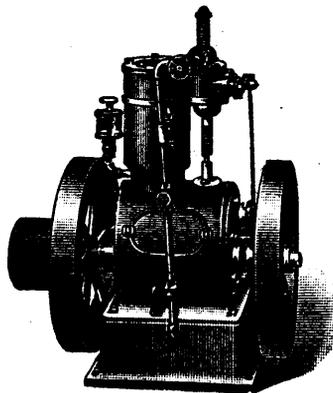
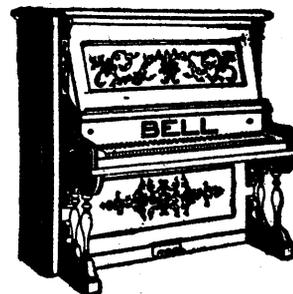
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AND USED THE WORLD OVER**

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GUELPH, - - ONTARIO.

LARGEST MAKERS IN CANADA.



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**GARTSHORE-THOMSON PIPE & FOUNDRY CO.
Limited**

CAST IRON PIPE

3 in. to 60 in. diameter.

For Water, Gas, Culverts and Sewers

Special Castings and all kinds of

FLEXIBLE AND FLANGE PIPE.

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Drop a line to us and we will send you samples of our **IMPROVED AUTOMATIC DUPLICATING BOOK** that makes copies without the trouble of inserting a Carbon Leaf.

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**HORIZONTAL AND VERTICAL
BUILT IN 44 SIZES.**

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

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FOUNDRY EQUIPMENT

CRANES

E. A. WALLBERG, C.E.

Temple Building, TORONTO

Merchants Bank Building, MONTREAL

and remained as at the beginning of the year, a little over 259 miles, of which nearly 182 miles are paved, and there are 84½ miles of lanes. Ten years before the city had 242 miles of streets, and a decade earlier only 116. The amount of the various classes of roadways at the beginning of this year was, in miles:— Cedar block, 70.49; stone and scoria, 68; asphalt, 30.81; wood on concrete, 67; macadam, 46.90; cedar block with asphalt track allowance, 1.54; cedar block with brick on track allowance, 13.75; macadam, with stone setts on track allowance, .91; brick, 10.77; gravel, 5.34; unpaved, 77.26.

Among the 24,666 miles of new road-

FOR SALE.

One 25-light Reliance Arc Dynamo, in first-class condition.

One 60-light Royal type Transformer, 1040 Volts to 110.
Newly Re-wound.

Three 10-light Shellenberger Watt Meters.

Two 20-light Duncan Watt Meters.

THE ABOVE WILL BE SOLD CHEAP

Address **CORPORATION OF MITCHELL,**
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FOR SALE

CANADIAN PATENT No. 70,666

(Patented March 23, 1901)

Miller's Detachable Horse Shoe Calk.

Durable and cheap.

For full particulars address J. WALLACE MILLER
Bernharts P.O., Berks Co., Penn.

ways constructed last year, asphalt held its own, with 6,348 miles, the largest amount of asphalt yet laid in any one year. There was more cedar block laid than in any year since 1891, 7,842 miles. The next largest amount of one class of pavement laid was brick on concrete, 5,472 miles. Other pavements laid were: Macadam, 2,503 miles; cobble, .068; stone sett on concrete, .107; scorie blocks on concrete, 1,247; brick on gravel, .057; brick on broken stone, .516; concrete pavements in lanes, .303; concrete on track allowance, .203. There were 15,227 miles of concrete walks laid.

In an interesting summary of the city's advantages, as a foreword to his report, the Engineer states that the Gas Company has 251 miles of mains, with 26,982 consumers; that there were 901 street gas lamps, 1,204 street arc lamps, 500 private business arc lights, 100,000 private incandescent lights, 960 miles of overhead and underground electric light wire, and 50 miles of underground conduit, 7,145 telephones, and 10,894 overhead and 9,438 miles of underground telephone wire. There were 181 hotels, 260 churches and missions, 115 schools and colleges, 9 convents, 29 banks, 623 factories, 360 wholesale houses, and 6,227 miscellaneous business companies, corporations and stores in the city. Each day 92 passenger trains entered and left the city, and 176 freight trains, while the street cars carried during the year 36,061,867 passengers.

WINTER NAVIGATION OF THE ST. LAWRENCE.—A Quebec special says that European capital is about to be employed in an attempt to accomplish the winter navigation of the St. Lawrence, which is

at present closed by ice for five or six months of the year. The main mover in this matter is W. Nordin, head of the timber house of O. W. Nordin & Co., Paris, who has satisfactorily mastered the difficulties attending the winter navigation of the Baltic. He visited Quebec last winter, and has again returned to resume the study of the situation. The vessels employed by the Messrs. Nordin for the winter navigation of the Baltic are of special construction, with raised bows heavily sheathed with metal which press down upon as well as cut out the ice, which attains a thickness of several feet in the Baltic. In the St. Lawrence, on the other hand, the river below Quebec is never frozen all across, the danger to winter navigation consisting in the bergs and floating fields of ice. Mr. Nordin's chief aim in striving to extend the season of navigation from the St. Lawrence is to facilitate the shipments of his products to Europe all the year round, without having to bear the additional cost in winter of sending them by rail to an American port. If he ships by way of Saguenay he will have to cut out a great depth of ice in that river, but not more than in the Baltic. He will scarcely attempt to keep the St. Lawrence clear of ice above Quebec, for between that city and Montreal the ice sometimes attains a thickness of nearly thirty feet, grounding on the river bed.

One of the greatest difficulties heretofore experienced by the many different persons who have proposed the winter navigation of the St. Lawrence has been that of insurance. Though occasional trips have been made in safety to the lower St. Lawrence in the winter months, none of these has been attempted by large and valuable ocean-going steamers, for the underwriters refuse to insure them because of the supposed perils. It will, therefore, be necessary for the syndicate of Mr. Nordin to become its own underwriters. The importance of this scheme, not only to Quebec, but also to the whole of Canada at the present time, arises from the fact that Quebec proved last summer that she is on the shortest and most direct route for the shipments of grain from the North-West to Europe, and is chiefly handicapped by her inability to continue these shipments during the winter season.

BLAGDEN, WAUGH & CO., 50 & 51 Lime St., London, E.C.

Telegraphic Address, "PHENOLATE, LONDON."

TAR PRODUCTS. Refined Tar, Benzole, Solvent Naptha.

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

NAPHTHALINE (CRUDE, PRESSED, CRYSTAL, SUBLIMED, MARBLES.) **CYANDIES.** PRUSSIAN OF POTASH AND SODA, PRUSSIAN BLUE.

AMMONIA (SULPHATE, NITRATE, LIQUID, MURIATE, ANHYDROUS, CARBONATE.)

Chemicals. Sulphate of Copper, Chlorates of Potash and Soda, Calcium Carbide, Acetate of Soda, Wood Naptha, Acetone, Bichromates.

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

WIRE ROPE of every Description
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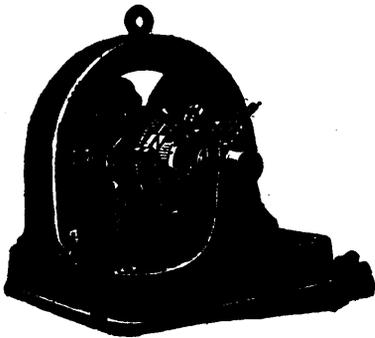
HAMILTON, ONT.
and **MONTREAL, QUE.**

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H. DIXON,
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SILICIA BRICKS
 Highest Grade for all Purposes
MAGNESIA BRICKS
 FOR LINING
Smelting, Refining and Matte Furnaces, also Converters Rotary Cement Kilns.
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 Capital and Surplus, \$1,500,000

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Correspondence Invited.
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 Winnipeg, Man.

THOMAS C. IRVING, Gen'l Manager Western Canada, TORONTO.
 JOHN A. FULTON, Gen'l Manager Eastern Canada, MONTREAL.

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.

611. A company manufacturing glue of various kinds asks to be placed in correspondence with Canadian buyers of the article.

612. A wholesale furniture house would be pleased to hear from Canadian manufacturers of carpets, furniture, etc.

613. A correspondent possessing a connection in chair materials, turned goods, etc., wishes to hear from Canadian producers of same.

614. A manufacturers' agent who supplies railway material is open to correspond with parties in Canada who are prepared to export veneers, sleepers, etc.

615. A London firm of timber brokers and agents desires to get into communication with Canadian manufacturers requiring a market for birch chair parts (seats, squares, turnery and dowels), basswood piano keyboards, white oak key rails; also soft elm boards, rock elm logs and planks, maple in log and plank, and furniture ash in board and plank.

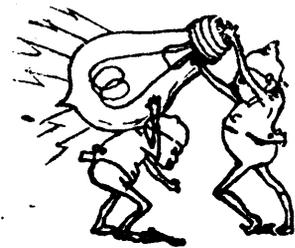
616. A Manchester firm ask to be referred to Canadian manufacturers of birchwood chair stock, seat squares, chair backs and tops.

617. A firm at Nottingham who are already importing Canadian eggs for the English market, desire to get into touch with exporters of poultry, etc., from the Dominion.

618. A Walsall firm of manufacturers of harness and buckles, bits, spurs and stirrups, who already do an extensive export business, are anxious to get into touch with Canadian buyers of such goods.

619. The names of the leading Canadian wood pulp makers are asked for by a correspondent in Antwerp.

This journal is in receipt of a letter from Mr. Mertin House, Port Elizabeth, Cape Colony, South Africa, in which he says he is confident there is now a good market there for many lines of Canadian products, that is if the sale of them was pushed by energetic salesmen. Mr. House would like to secure the agency of any of our manufacturers who desire to extend their trade to that country. He lived in Canada a number of years, and was connected with some of our best manufacturers of woven and knit goods, whose names will be given at this office on application.



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Our business includes everything Electric, from a bell for your house to a lighting or power plant for your town. But small or great, our work is always done well and at close prices.

R. A. L. GRAY & CO.
 85 YORK STREET
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(LIMITED)

Manufacturers of....

OIL-CLOTHS of Every Description

Floor Oil-Cloth, Table Oil-Cloth, Carriage Oil-Cloth, Enamelled Oil-Cloth, Stair Oil-Cloth, etc.

Office and Works:
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By Special Warrant

EXPORT TRADE

The Publishers announce the preparation of the Sixteenth Edition of the Directory of the

**MERCHANTS,
 MANUFACTURERS and
 SHIPPERS**

of the World. Containing Classified Trade Lists of the Merchants and Manufacturers, Importers and Exporters of the United Kingdom and all principal trading centres of the World. The work contains nearly 4,000 pages, and includes in addition to the above the Customs Tariffs for every Country and all classes of Goods.

HIGHEST AWARD, GOLD MEDAL, PARIS, 1900.

For further particulars, charges for advertisements, etc., apply.

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 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, etc.

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DYESTUFFS, CHEMICALS

AND

EXTRACTS

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a marvellous CLEANSER
for TYPE and COMPOSITION ROLLERS.
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Steam Users. VULITE
is unrivalled as a
disincrustant.

ON H. M. GOVERNMENT'S LISTS.

Vulite Syndicate, Limited

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

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*Clothboards, Lapping, Rolling and Baiting Boards
Veneers of Ash, Birch, Bass and Elm, all thicknesses
Cheese Box Bands and Rims
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NOTICE—The following are the Factory Inspectors for the Province of Ontario:

JAS. T. BURKE, Parliament Buildings, Toronto.
JAS. R. BROWN, Parliament Buildings, Toronto.
MARGARET CARLYLE, Parliament Buildings, Toronto.

O. A. ROCQUE, Orleans, Ont.

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

JOHN DRYDEN, Minister of Agriculture.

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, December 6.

There has been considerable more activity in all lines of trade the past week, and the approach of the holidays has created a demand for certain classes of goods, which are required for the Christmas season. There is no boom in business, but a healthy tone that indicates a continuance of the activity after the holidays are over. The outlook is certainly encouraging. Values of staples are generally steady, but in a few instances advances are reported. The increase in building operations has stimulated the trade in hardware, and orders for light shelf goods have been unusually heavy. Country remittances are fair and there is a better feeling existing between the wholesale and retail trade. The restoration of confidence is a great factor in business, and that this has much to do with the present prosperity of the country there can be no doubt.

Throughout the Dominion come reports that labor is well employed and good wages are being paid. These facts promise good results for trade.

Authorities on the copper trade say that the decline in the price of spot copper in London of \$25 per ton of 2,240 lbs., bringing the price to \$300 a ton, is due to gloomy views taken of the situation abroad and has no significance when ap-

plied to the position in America. These quotations are on speculation copper and only reflect the views, it is claimed, of timid speculators who run very easily. The trade situation in America is reported to be in good shape and there is confidence that it will continue on account of the enormous consumption of this metal, but it is freely admitted that the price of 17 cents for copper is no longer insisted upon.

Discussing the copper situation, the New York News says: "It is perfectly understood that secret cuts have been made for many weeks. If it be true that the Amalgamated Copper Co. openly recognizes the situation and decides to sell its product in accordance with the law of supply and demand, the outlook for the company is distinctly encouraging. There is not, and never has been, a combination of corporations which could control the prices of any commodity. Copper is being used in great quantities in the States of the Union, in Canada, and in many countries abroad."

The bank clearings at Toronto for the month of November were larger than for any previous month in the records of the

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clearing house. They were \$65,000 more than the previous high record in January last. The total clearings for the month were \$54,957,814, compared with \$47,550,777 in 1900 and \$44,637,522 in 1899. The clearings of the city banks for the eleven months this year amounted \$568,541,229.

Speculation in the local market for securities is restricted by the money stringency, call loans being made with difficulty at 5½ per cent. Quotations are a shade lower, but there does not appear to be any desire to dispose of stocks much below the existing prices. Dominion Steel common is fluctuating within a narrow range around 28.

BUFFALO PIG IRON MARKET.—Office of Rogers, Brown & Co., Buffalo, N.Y., December 3.

The buying public continues its interest in covering future requirements so far at least as its favorite brands of pig iron are concerned. The past week has been another one of heavy order booking. The largest consumers appear mostly to have covered their wants for the greater part of next year, and in many cases through the entire twelve months. Furnaces have been inclined to book freely into the future when buyers desired, wishing to do their share towards preventing an undue rise in prices. It is generally conceded that \$15 to \$16 at the furnace for 2 X iron is a fair price for both producer and consumer. The former is as much interested as the latter in holding prices down to this level.

The curtailment of local pig iron production, through inability to obtain full coke supply, continues to a certain extent.

We quote as follows, on the cash basis, f.o.b. cars Toronto, in bond :

No. 1, X. Tonawanda Scotch iron.	18 00
" 2, " " "	17 50
" 1, " Niagara iron	18 00
" 2, " " "	17 50
5% Silicon Mannie Charcoal softener	17 25
3% Silicon Mannie Charcoal softener	17 25
Connellsville 72 hour Foundry coke	5 10

BRITISH PIG IRON MARKET.—Messrs. Wm. Jacks & Co., 49 Leadenhall street, London, E.C., England, under date of November 19, 1901, quote as follows: "Since writing you last, prices of Scotch pig iron have remained steady, while

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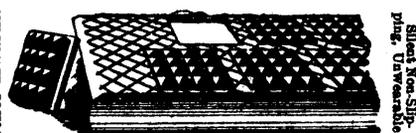
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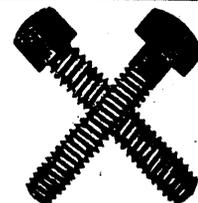
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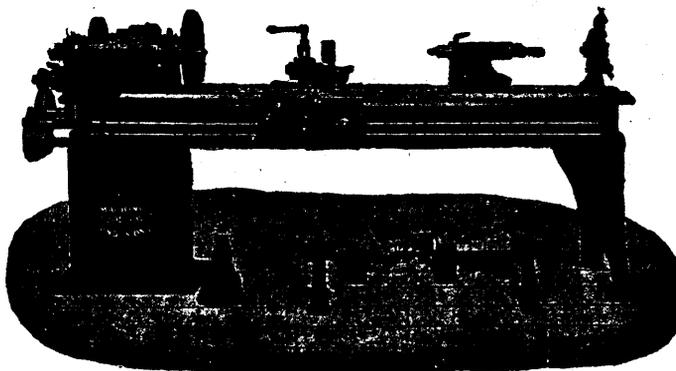
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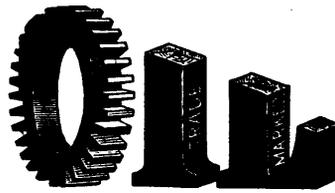
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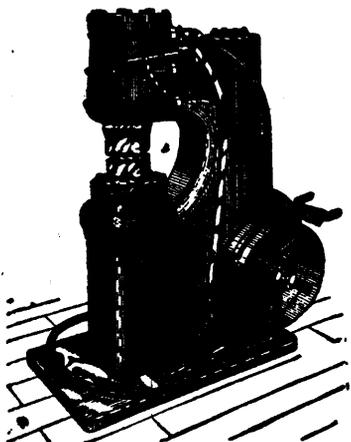
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those of cheaper grades of foundry pig iron have fallen 2/ per ton. This, however, we believe, will be only temporarily.

To-day's prices are as follows :—No. 1 Gartsherrie, 66/9-f.o.b. Glasgow ; No. 3 Gartsherrie, 56/6-f.o.b. Glasgow ; Nos. 1 2 and 3 Cumberland Hematite, 66/6-f.o.b. Liverpool, including dues ; Nos. 1 2 and 3 Cumberland Hematite, to special analysis, 72/-f.o.b. Liverpool ; Refined DTN pig iron in small pigs, 85/-f.o.b. Liverpool.

PIG TIN.—The Syracuse Smelting Works, Montreal, under date of November 27, says, "Owing to the scarcity of pig tin and the large demand, prices within the last few days have advanced about five cents per pound, and the market is strong ;" and on the next day they again advised us : "We have had another advance on pig tin of five cents per pound, making advance in all ten cents instead of five, as quoted yesterday."

BLEACHING POWDER.—The United Alkali Co. has announced its price on bleaching powder for 1902. The figures show a reduction from the figures for 1901.

The price for 1902 has been fixed at 1.75 cents straight, and 1.80 cents protected, as against 2.10 cents protected, and 2 cents straight in 1901. The new figures are even lower than for 1900, when the price was fixed at 2 cents all around.

Paper manufacturers generally are much pleased with the new figures. Estimating the annual consumption at 30,000 tons—a conservative figure—they mean a saving for 1902 of about \$150,000.

BRITISH TRADE RETURNS.—The British Board of Trade returns for the ten months ending with October show the following increases in British imports from Canada ; Sheep, £27,000 ; wheat flour, £49,000 ; peas, £20,000 ; butter, £246,000 ; wood pulp, £86,000. Decreases—Cattle, £242,000 ; wheat, £76,000 ; oats, £54,000 ; maize, £417,000 ; bacon, £176,000 ; hams, £139,000 ; cheese, £269,000 ; eggs, £21,000 ; fish, £265,000 ; Newfoundland copper, £15,000 ; hewn wood, £91,000 ; sawn, £445,000 ; horses, £40,000.

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British exports to Canada show the following increases: Spirits, £7,000; silk manufactures, £10,000; worsted tissues, £69,000; railroad iron, £168,000; galvanized sheets, £43,000; cast and wrought iron, £9,000; old iron, £24,000; lead, £9,000; apparel and stops, £15,000; earthenware, £14,000; stationery, £9,000. Decreases—Salt, £11,000; wool, £14,000; cotton, piece goods, £50,000; linen, piece goods, £10,000; lace, £11,000; cutlery, £9,000; hardware, £5,000; pig iron, £10,000; bar, angle, rod and bolt iron, £7,000; tin plates, £77,000; unwrought steel, £36,000; unwrought tin, £11,000; haberdashery and millinery, £29,000; cement, £22,000; seed oil, £3,000.

PROSPECTS FOR WINDOW GLASS.—The expected surplus in window glass is likely to be changed into a shortage if the plans of the manufacturers are carried into effect. It is now proposed, according to well-authenticated reports, to so limit the production that stocks will at no time become excessive, and with this end in view the combination owners have decided not to light their fires until December 1, instead of November 1, as previously announced, or three months later than the usual time. A considerable surplus is now in stock, but is being drawn on more freely than for some weeks, and the probabilities point to a continued demand in anticipation of an advance which does not now seem improbable in view of the action taken by the manufacturers toward limiting output.

ALUMINUM NAILS.—After many unsuccessful experiments and trials, an alloy of aluminum has been made with which nails, staples, and tacks can be made to compete with copper. Among other advantages claimed for the new material is that it is not affected by the weather, and will not deteriorate, as in laying roofs, lining tanks, etc. As the alloy is non-corrosive and non-poisonous, the new nails ought to find favor among makers of refrigerators and other articles used for food storage. When the difference in point of number and weight is taken into consideration, it is seen that aluminum nails are about four cents a pound cheaper than copper nails. It is not intended to put them into competition with ordinary steel nails.—Hardware.

BRITISH IRON TRADE.—The Engineering and Mining Journal says:—A recent statement shows that in Great Britain, while the Scotch furnaces about hold their own, in the Cleveland district there were in October only 84 furnaces in blast against 97 a year ago, and in the Cumberland district 33 furnaces against 43. A good authority estimates that the British output of pig iron for 1891 will be from 800,000 to 1,000,000 tons less than in 1900. It is fair to say, however, that in some quarters this is held to be an over-estimate, though it is conceded that Notwithstanding the diminished output, there is a serious drop in production. There has been an increase in unsold

stocks, and the quantity reported in public stores on October 15 was 208,069 tons, being 81,775 tons more than at the corresponding date last year. Shipments of iron, both to home and foreign consumers, are falling off sharply. To take a single instance, last year there was considerable export of Cleveland iron to Germany, but this year German pig is being pressed for sale in British markets. A stronger indication of depression is found in current quotations of pig iron. Scotch pig warrants sold recently at \$12, against \$17.50 a year ago; Cleveland iron at \$11, against \$16.50, while Cumberland (Bessemer) pig has fallen within the year from \$19.20 to \$14.50 a ton.

GROWTH IN THE USE OF TERNE PLATES.—It is an open secret that the poor grades of terne roofing plate put on the market a few years ago created a prejudice in the minds of many builders and architects against the material as a class. This was but a natural consequence of the entrance into the business of so many new manufacturers, coupled with the general demand for the cheapest material and the great difficulty in distinguishing a good plate from a poor one except by the unsatisfactory way of trying it on the roof. It is believed that of late there has been a tendency to return to the use of terne plate for roofing, owing to the putting on the market of more reliable brands and to the missionary work which has been done by a number of the older manufacturers. We are able to present a care-

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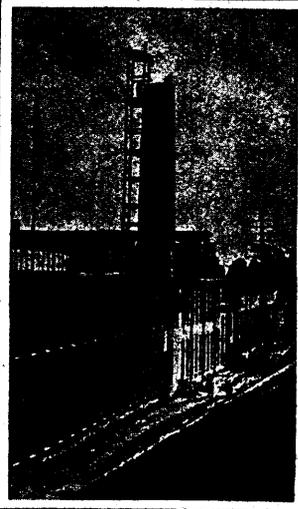
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ful summary of the production of terne plate during the first half of this year as compared with the first half of 1900, which more than bears out this assumption and shows that the use of this material for roofing has grown at a remarkable rate.

Comparing the first half of last year with the first half of this, the increase in the production of terne plate in the United States was probably a little over 95 per cent. The increase in the production of the better grades, or plates carrying a coating of, say, 10 pounds and over per single box, was about 130 per cent., so that the production of the special brands more than doubled, while the production of plates carrying light coatings increased by something like 85 per cent. That the increased production is due primarily to the use of better plates, which give better service on roofs and are an advertisement for the use of terne roofing, is shown by the fact that while in the first half of 1900 the special grades made constituted, say, a little over 25 per cent. of the total terne plate production, in the first half of this year the proportion was over 30 per cent.

The production of terne plate constitutes about one-eighth of the total tin and terne plate production of the country at the present time. The great bulk of the production is, of course, coke bright plates, used for cans and other purposes where only the lightest coating is required, the production of coke plate being about 80 per cent. of the total. The balance is made up of charcoal tin plates and terne plates.—Iron Trade Review.

BUSINESS CHANGES.

FROM BRADSTREETS.

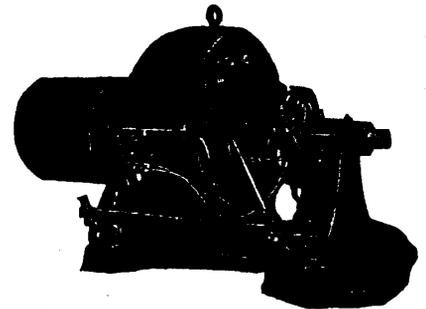
ONTARIO.

BERLIN—Berlin Furniture Co., obtained charter.
CLINTON—W. Doherty & Co., mfrs. organs, loss by fire.
COLLINGWOOD—Charlton Saw Mill Co., obtained charter.
DRESDEN—Toronto Portland Cement Co., obtained charter.
GALETTA—Galletta Milling Co., obtained charter.
HAMILTON—J. Hoodless & Son, mfrs. furniture, meeting of creditors.
MILDMAY—Milway Bent Chair & Furniture Co., obtained charter.
OTTERVILLE—Standard Furniture Co., obtained charter.
OWEN SOUND—Owen Sound Dry Dock & Shipbuilding Co., obtained charter.
PARIS—Standard Needle Co., closing out.
PORT HOPE—Wm. Craig & Son, tanners, dissolved.
SAULT STE. MARIE—Canadian Electro-Chemical Co., loss by fire.
SOUTH RIVER—South River Lumber Co., advertised mills for sale.
STRATFORD—E. S. Porteous, mfr. furniture, suspended.
STRATHROY—Andrew Thompson, saw mill, burnt out.
TILBURY—Robert H. Smith, electric light, sold to F. A. Nelson.
TORONTO—Aikenhead Hardware Co., obtained charter.
Bates, Robinson & Co., plumbers, assigned.
Canada Brass & Electrical Co., plant advertised to be sold.
Gee Electrical Engineering Co., obtained charter.
Grip Printing & Publishing Co., assigned.
Meriden Hydro-Carbon Arc Light Co., obtained charter.
WALKERTON—Walkerton Sugar Co., obtained charter.
WALLACEBURG—Wallaceburg Cooperage Co., obtained charter.
WHITBY—Martin Mfg. Co., saddlery hardware, loss by fire.
WILTON GROVES—Elliott Bros., saw mill, sold out.
WINGHAM—Wingham Farmers' Flax Co., advertised mills for sale.

QUEBEC.

DELORIMER—James McCready Co., mfr. boots and shoes, applied for charter.

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EASTMAN—Manosh & Welcome, tub factory, dissolved, new partnership registered.
FARNHAM—Farnham Brewing Co., meeting of creditors.
ISLE VERTE—Sea Moss Carpet Co., obtained charter.
MAISONNEUVE—Baril & Fils, sash and door mfrs. dissolved.
MONTREAL—American Silk Waist Mfg. Co., registered as incorporated.
 Campbell Mfg. Co., mfrs. clothing, etc., dissolved.
 Campbell Mfg. Co., registered as incorporated.
 Empire Lithographing Co., Norman Connor registered.
 Dominion Paper Co., stock damaged by fire and water.
 G. H. Harrower Co., mfrs. shirts, etc., burned out.
 Jos. Goldberg & Co., mfrs. stove pipes, etc., dissolved, Joseph Goldberg now registered.
 Murray & St. Armour, electricians, dissolved.
 A. C. Lariviere, mfr. carriages, etc., applied for charter.
 Montreal Longueuil Bridge Co., applied for charter.
 E. Provost, stove mfr., etc., Alex. Robert, registered.
 Seamless Boat & Canoe Co., obtained charter.
 John Watson & Son, mfrs. architectural iron, registered.
 E. Parent & Co., mfrs. boots and shoes, assigned.
 Standard Shirt Co., increasing capital to \$1,000,000.
 Dominion Window Bolt & Latch Works, dissolved.
QUEBEC—G. Rochette, tanner and mfr. shoes, assigned.
ST. GERMAIN DE GRANTHAM—La Compagnie Lemier, mfr. cheese cutting machines, Louis A. Brien registered.
ST. JEROME—Loins Papin, sawmill, assigned.
SHAWINIGAN—Royal Aluminum Co., applied for charter.
WINDSOR MILLS—Laineau Mfg. Co., financial agents, applied for charter.

NEW BRUNSWICK.

ROTHESAY—McAdamite Metal Co. of Canada, incorporated.

NOVA SCOTIA.

PORT HASTINGS—Strait of Canso Bridge Co., incorporation applied for.
NEW GLASGOW—Nova Scotia Steel & Coal Co., adv. issue \$2,500,000 first mortgage 6 per cent. 30-year gold bonds.
WINDSOR—Wm. McCurdy & Son, planing mill, building and stock damaged by fire.
YARMOUTH—Yarmouth Duck & Yarn Co., controlling interest acquired by Imperial Cotton Co.

MANITOBA.

BRANDON—W. J. Lindsay, grain elevator at Beresford burnt.
LUMSDEN—Winnipeg Elevator Co., sold to Balfour Bros.
SHELLMOUTH—Shellmouth Flour & Grist Milling Co., incorporated.
SWAN LAKE—Downey & Collison, hardware, etc., succeeded by A. A. E. Downey.
WINNIPEG—British Columbia Mills Timber & Trading Co., sold to J. D. McArthur.
 Winnipeg Shirt & Overall Mfg. Co., dissolved, M. Haid continues.
 Winnipeg Trunk & Box Co., assigned.

BRITISH COLUMBIA.

CRANBROOK—Robinson, McKenzie Lumber Co., incorporated.
FERNIE—O. N. Janes, sawmill, sold to D. V. Mott.
HARRISON RIVER—Fulbrook & Innes, sawmill, succeeded by Chilliwack Mfg. Co.
MOYIE—Moyie Lumber Co., incorporated.
VANCOUVER—Cascade Lumber Co., incorporated.

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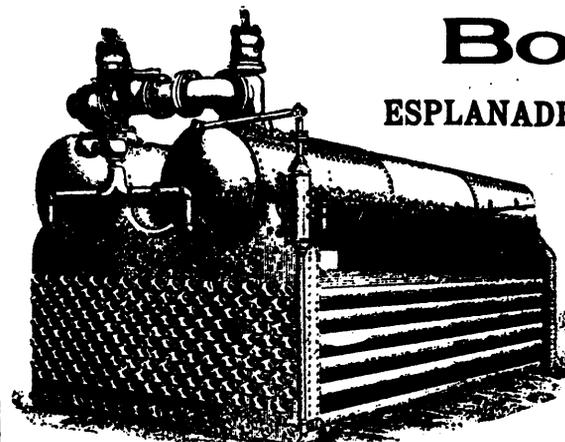
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**Valleyfield, P.Q.
 Canada**

'Phone No. 2

MANUFACTURERS OF

"HANDY" ELEVATORS
 STEAM, HOT WATER
 and GAS RADIATORS

"HANDY"
 DUMB WAITERS

SECTIONAL HEATING
 BOILERS

PLAIN AND
 AUTOMATIC LOOMS
 SPOOLERS, WARPERS

FIRE
 DOOR FIXTURES

SANITARY OUTFITS
 FOR MILLS AND
 FACTORIES

VENTILATING and
 EXHAUST FANS

TOOL GRINDING
 MACHINERY

NICKEL AND BRONZE
 PLATING

PATENT HANGERS
 AND COUPLINGS

MODEL AND PATENT
 MACHINERY

WRITE FOR QUOTATIONS

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

CROW BARS.—Duty 30%.
5 cents per lb.

CRUCIBLES.
Dixon's, 7 cents per number.

DRILLS.—Duty 25%.
Blacksmiths' \$6 to \$15 each.
Jardine's, \$7.50 to \$20 each.

DYES (Aniline).

DYNAMITE.
30 to 50 cents per lb.

EMERY.
Coarse, 7 cents per lb.
Fine, 5 cents per lb.

EMERY CLOTH.—Duty 25%.
Beader & Adamson, 40% discount.

EMERY HONES.—Duty 25%.
\$3 to \$5 per doz.

EMERY STEELS.—Duty 25%.
\$2 per doz.

EMERY WHEELS.—Duty 25%.
65% discount.

EXPANDERS.—Duty 30%.
Tube, Dudgeon, 33½% discount.

FAUCETS.—Duty 30%.
Brass, \$2.50 to \$5 per doz.
Wood, 60c. to \$1.00 per doz.

FENCING.
Barb Wire, \$3.05 per 100 lbs.

FENCING (Wire).—Duty 15%.
Galvanized, barb, f.o.b. Toronto, \$3.05.
Galvanized, plain twist, f.o.b. Toronto, \$3.05.
Galvanized, barb, f.o.b. Cleveland, \$2.82½ in
less than car lots, and \$2.70 in car lots.
Mesh, 4x10, 20 rod rolls 55% discount, Can. list.
" 4 x 8, 20 " 50 & 5% " "
" 3 x 6, 20 " 55 & 5% " "

FERRULES.—Duty 30%.
Tool handle, 5c. & 6c. per lb.

FILES.—Duty 30%.
Black Diamond, 50 and 10% discount.
Globe, 70% discount.
Grobet, net.
Jowitz's, 25% discount.
Nicholson, 50 & 10% discount.
Stabbs', 15% discount.

FITTINGS (Pipe).—Duty 30%.
Bushings, 55% discount.
Cast Iron, 55% discount.
Cocks, 60
Elbows, tees, crosses, couplings, lock nuts, re-
turn bends, 50% discount.
Flanges, 55% discount.
Nipples, 55
Plugs, 55
Unions, 55
Wrought Iron, 50% discount.

FLUE SCRAPPERS.—Duty 30%.
Engineers' Favorite, 40% discount.
Inglis, 30% discount.
Wire, 50

FORKS, HOES AND RAKES.—Duty 25%.
50, 10 and 5% discount.

FUSE.
Blasting, Single tape, \$3.75 per M ft.
Double tape, \$5 per M ft.

GASKETS.—Duty 35%.
Rubber Insertion, 60 cents lb.

GAUGE GLASSES.—Duty 30%.
Water, 25% discount.

GAUGES.—Duty 30%.
Steam, 50% discount.

GLASS.—Duty 20%. (Window—Box Price).
Star, under 26 in., \$2.15 per 50 ft., \$4.15 per 100
ft.; 26 to 40 in., \$2.30 per 50 ft., \$4.45 per 100
ft.; 41 to 50 in., \$4.85 per 100 ft.; 51 to 60 in.,
\$5.15 per 100 ft.; 61 to 70 in., \$5.50 per 100 ft.;
71 to 80 in., \$6 per 100 ft.; 81 to 85 in., \$6.50
per 100 ft.

D. Diamond, under 26 in., \$6 per 100 ft.; 26 to 40
in., \$6.65 per 100 ft.; 41 to 50 in., \$7.50 per
100 ft.; 51 to 60 in., \$8.50 per 100 ft.; 61 to 70
in., \$9.50 per 100 ft.; 71 to 80 in., \$10.50 per
100 ft.; 81 to 85 in., \$11.70 per 100 ft.; 86 to 90
in., \$14 per 100 ft.; 91 to 95 in., \$15.50 per 100
ft.; 96 to 100 in., \$18 per 100 ft.

Glass Demijohns or carboys, empty or filled,
bottles, decanters, flasks, phials, glass jars,
lamp chimneys, glass shades or globes, cut,
pressed or moulded crystal or glass table-
ware, decorated or not, and blown glass
tableware—Duty 30%.

GLASS LAMP CHIMNEYS.—Duty 30%.
Common Crimp, per doz. O, 43 cents.
" " " " A, 45 " "
" " " " B, 65 " "
" " " " C, 60 " "
Lead Glass, " " A, 60 " "
" " " " B, 75 " "

FRUIT JARS.—Duty 30%.

Standard pints, \$7.25 per gross.
quarts, \$7.75 per gross.
" half gal., \$10.00 per gross.
Imperial pints, \$7.75 per gross.
quarts, \$8.75 per gross.
" half gal., \$12.00 per gross.

GLUE.—Duty 25%.

Cabinet, sheet, 12 to 13 cents per lb.
Common, 8½ to 9 cents per lb.
Coopers', 19 to 20 cents per lb.
French Medal, 14 to 14½ cents per lb.
Gelatine, 22 to 30 cents per lb.
Huttner, 18 cents per lb.
Strip, 18 to 20 cents per lb.
White, extra, 18 to 20 cents per lb.
LaPage's, 25% discount.
Progressive, 25

GOVERNORS.—Duty 25%.
Gardners', 25% discount.

GRANITEWARE.—Duty 35%.
Firsts, 50% discount.

GRAIN CRADLES.—Duty 25%.
With Scythes complete \$33 per doz.
Without scythes, \$18.50.

GRINDSTONES.—Duty 25%.
Large, \$1.75 per 100 lbs.
Mounted, \$3 to \$3.50 each.
Small, \$1.50 per 100 lbs.

HALTER MOUNTINGS.—Duty 30%.
1x1½ inch, 10c. per lb.
(Evans), 1x1½ in., doz. set packages, \$8.00 per
gross.

HALTERS.—Duty 30%.
Leather, 1 in. strap, \$3.87½ to \$4 per doz.
Leather, 1½ in. strap, \$5.15 to \$5.20 per doz.
Rope, \$3 per gross.
Rope, 1 to 1½, \$14 per gross.
Web, \$1.87 to \$2.45 per doz.

HAMMERS.—Duty 30%.
Blacksmiths', 10 cents per lb.
Carpenters', Madoles', \$6.40 to \$8.75 per doz.
Carpenters', Warnock's, \$4 to \$7.50 per doz.
Machinists', 22 cents per lb.
Sledge, 10 cents per lb.
Tack, 60 cents to \$1.20 per doz.
Tinners', \$4 to \$6.50 per doz.

HANDLES.—Duty 25%.
Axe, \$1.50 to \$2.50 per doz.
Chisel, \$3.50 to \$5 per gross.
Cross-cut saw, \$2 to \$3 per doz.
File, \$2 to \$2.50 per gross.
Hammer, 50 cents to \$2 per doz.
Pick, \$1.50 to \$2.50 per doz.
Plane, \$3.50 per gross.

HANGERS.—Duty 30%.
Barn Door, round groove, \$4.50 to \$6.50 per doz.
Lanes, \$6.75 to \$12 per doz.
Parlor door, \$3 to \$6 per set.
Stearns, \$5.50 to \$6.50 per doz.

HARVEST TOOLS.—Duty 25%.
Forks, 50 & 10% discount.
Rakes, 50 & 10
Hoes, etc., 50 & 10

HATCHETS.—Duty 30%.
Canadian, 40 to 42½% discount.

HAY KNIVES.—Duty 25%.
50, 10 and 5% discount.

HINGES.—Duty ½ cents per lb., & 25%.
Blind, Parker's, 50 & 10 to 60% discount.
Heavy T and strap, 4 in., 6½ cents per lb.
" " 5 in., 6½ " "
" " 6 in., 6 " "
" " 8 in., 5½ " "
" " 10 in., 5½ " "

Light T and strap, 65 & 5 off.
Screw hook and hinge, 6 to 12 in., \$4.50 per 100
lbs.; 14 in. up, \$3.50.
Spring, \$12 per gross pairs.

HOES.—Duty 25%.
Grab, \$5 to \$6 per doz.

HOOKS.—Duty 30%.
Brush, \$7.50 to \$9.
Reaping, 50, 10 and 5% discount.
Chain, wrought, round or grab, \$3 & \$4.50 per
doz.
Lumber Piling, \$7 to \$19 per doz.
Malleable, wardrobe, \$1.50 to \$2.50 per gross.
Wire, \$1.25 to \$2

HORSE NAILS.—Duty 30%.—See Nails.

HORSE SHOES.—Duty 30%.
Lt. Med. & H., \$3.40 per keg.
Snow, \$3.95 per keg.
Steel, \$3.80 to \$5.25 per keg.
Toe weight steel, \$6.15 per keg.

HOSE.—Duty 35%.
City Standard, 70% discount.
Phoenix, 60% discount.

INJECTORS.—Duty 30%.

Pemberthy, 65% discount.
I. J. C., 65% discount.

IRON.—See Metals.

JACKS.—Duty 30%.
Lifting, 40% discount.

KEYS.—Duty 30%.
Carpenter, 50 cents to \$1.25 per doz.
Desk, 25 to 35 cents per doz.
Mortise Lock, 25 cents to \$1 per doz.
Padlock, 25 to 35 cents per doz.
Rim Lock, 25 cents to \$1 per doz.

KNIVES.—Duty 30%.
Butcher, \$2 to \$5 per doz.
Pocket, \$1 to \$5 per doz.

KNOBS.—Duty 30%.
Door, Bronze, \$7 to \$12 per doz.
" White Porcelain, 90 cents per doz.
" Wood, \$4.50 per doz.

LACING.—Duty 15%.
Belt (Raw Hide Cuts), \$1 per lb.
" (Leather Side Cuts), 75 cents per lb.

LADDERS.—Duty 25%.
Step, 10 cents per foot.
Rung, 10 cents per foot.

LAND ROLLERS.—Duty 20%.
\$12 to \$15 each.

LANTERNS.—Duty 30%.
Cold Blast, \$7 per doz.
Dashboard, cold blast, \$9 per doz.
Japanned, 50 cents per doz. extra.
No. 0, \$5.75 per doz.
No. 3 " Wright's, \$8.50 per doz.
Ordinary, with O burner, \$4 per doz.

LAWN MOWERS.—Duty 35%.
Pennsylvania, 50% discount.
Stearns, 50
Woodyatt, 40

LEAD (Bar and Strip).—Duty 25%.—See Metals.
Lead, pig.—See Metals.

LEAD.—Duty 5%.
Red and White, dry.—See Paints.

LINES (Cotton).—Duty 25%.
Chalk, \$2 to \$3.50 per gross.
Wire, clothes, \$2.50 to \$4.50 per M ft.

LOCKS.—Duty 30%.
Cupboard, \$1.50 per doz. up.
Desk, \$1.50 per doz. up.
Drawer, \$1 per doz. up.
Padlocks, 75 cents per doz. up.
Rim and Mortise, Peterboro, \$1.50 per doz. up.
Amer., \$1.50 per doz. up.

MALLEABLES.—Duty 30%. See Castings.

MALLETS.—Duty 30%.
Carpenters', hickory, \$1.25 to \$3.75 per doz.
Caulking, 60 cents to \$2 each.
Lignum Vitae, \$3.85 to \$5 per doz.
Tinsmiths', \$1.25 to \$1.50 per doz.

MATTOCKS.—Duty 30%.
Canadian, \$5.50 to \$6.50 per doz.

MEAT CUTTERS.—Duty 30%.
Amer., 25 to 30% discount.
German, 15% discount.

METALS.
Ingots.—Aluminium, 35 to 50 cents per lb.
Antimony (Cookson's), 10½ to 11 cents
per lb.
" Copper, " English," 18 cents per lb.
" " Bar, 25 cents per lb.
" Tin, " Lamb & Flag," 32 cents per lb.
" " Straits, 33 cents per lb.
" " Bar, 33 cents per lb.
" Zinc, 6 to 6½ cents per lb.; sheets, 7
cents per lb.
Babbit Metal (duty 10%).
Lewis, 7 to 10 cents per lb.
Magnolia, 25 cents per lb.
Post's Zero, 25 cents per lb.
Spoooner's Copperine, No. 2, 12½ cents per lb.,
finest, 25 cents per lb.
Syracuse Smelting Works, dynamo, 29 cents
per lb.; special, 25 cents per lb.
Sheets, Black, Duty \$7 per ton.
" 10—\$2.65, 100 lbs.
" 12—\$2.75, " "
" 14—\$3.10, " "
Sheets, Black, Duty 5%.
" 17—\$3.10, 100 lbs.
" 18—\$3.20, " "
" 20—\$3.25, " "
" 22—\$3.30, " "
" 24—\$3.50, " "
" 26—\$3.75, " "
" 28—\$4.00, " "
Sheets, Tinned—7½ cents per lb., Base price.

METALS—Continued.

Sheets, Galvanized Iron.
 17—\$3.80 per 100 lbs.
 18—\$3.90
 20—\$3.90
 22 to 24—\$4.10 per 100 lb.
 18 to 24—\$4.50
 26—\$4.25 per 100 lb.
 28—\$4.50
 16—(Queen Head), \$3.90 per 100 lb.
 18-22-24—(Queen's Head), \$4.15 per 100 lb.
 26—\$4.40 per 100 lb.
 28—\$4.65
 Sheets, Corrugated—Galv., \$4.50 per 100 sq. ft.
 Shafting, Bright Steel.—\$3.50 per 100 lb.
 Shingles, Galv. Iron, Ordinary, \$4.90 per sq. ft.
 " " " Medium, \$5.45
 " " " Best, \$5.80
 Painted Steel, Ordinary, \$3.15 per sq. ft.
 " " " Medium, \$3.35
 " " " Best, \$5.80
 Iron (duty \$7 per ton).
 " Angle.—\$2.75 per 100 lb.
 " Bar (Common).—\$1.95 @ \$2.05.
 " Bar, " Swedes.—\$4.50 per 100 lb.
 " " Lowmoor.—\$6.50 per 100 lb.
 " Refined Bar.—\$2.60 per 100 lb.
 Iron, Planished Sheet (duty 5%)
 " "A"—\$6.00 per 100.
 " "B"—\$5.00
 " Russia—\$10.00 per 100 lb.
 Iron, Galv. Sheet, see Sheets.
 " " and Corrugated, see Sheets.
 Pig Lead (duty 15%).—Domestic, \$3.75 per 100 lb; pigs, imported, \$4.25 per 100 lb.; bars, \$5 per 100 lb; sheets, \$5.50 per 100 lb.
 Solder bar (duty 25%).—1st, refined, 18 cents per lb.; half-and-half, 18 cents per lb.
 Iron, Pig (duty \$2.50 per net ton). \$16.50 @ \$17 per ton.
 Iron, English Horse Shoe.—\$2.85 per 100 lb.
 Iron, Band.—\$2.05 per 100 lb.
 Iron, Hoop.—\$2.90 per 100 lb.
 Beams, Steel.—\$3 per 100 lb.
 Rods.—Brass, 24 cents per lb., base price; hard sheets, 20 to 30 cents per lb.; soft sheets, 30 to 30 cents per lb.
 Rails, Small Steel.—\$3 per 100 lb.
 Steel, Cultivator.—\$4.50 per 100 lb.
 " Channel.—\$3 to \$4 per 100 lb.
 " "Firths."—12 cents per lb.
 " "Crescent."—9 cents per lb.
 " Cant Hook.—74 cents per lb.
 Machinery (in the rough).—\$2.25 per 100 lb.
 Machinery.—\$2.75 per 100 lb.
 " Mild.—\$1.90 per 100 lb.
 Sleigh Shoe.—\$1.90 per 100 lb.
 Spring.—\$3.00 per 100.
 " Tire.—\$2.05 per lb.
 Toe Caulk.—\$2.20 per 100 lb.
 Steel, Cast.—Firth's, 12 cents per lb.
 Jessop's, 14 cents per lb.
 Black Diamond, 12 cents per lb.
 Silver, 15 cents per lb.
 Mushets.—55 cents per lb.
 Steel, Bilster.—124 cents per lb.
 Steel, Hammer.—7 cents per lb.
 Steel, Decarbonized Sheet.—7 cents per lb., base.
 Steel, Black Sheet, Duty \$7 per ton.
 10—\$2.65, 100 lbs.
 12—\$2.75
 14—\$3.10
 Sheets, Black, Duty 5%.
 17—\$3.10, 100 lbs.
 18—\$3.20
 20—\$3.25
 22—\$3.30
 24—\$3.50
 26—\$3.75
 28—\$4.00
 Tank Steel Plate (duty \$7 per ton).—3-16, \$2.60 per 100 lb.
 Plates, Steel Boiler (duty 10%).—1 and larger, \$2.50 per 100 lb.
 Steel Boiler Heads (duty 10%).—\$2.60 per 100 lb.
 Canadian Plates.—All dull, 52 sheets, \$2.90; half polished, \$3.
 MOPS.—\$1 per doz.
 NAIL PULLERS.—Duty 30%.
 German and American, \$1.85 to \$3.50 each.
 NAILS.—Duty, cut, 1/2 cent per lb.; wire, 3-5 cent per lb.
 Chair nails, 35% discount.
 Clout nails, blued, 65 and 5% discount.
 Coopers', 35% discount.
 Copper nails, 52 1/2% discount.
 Cut, 2d \$3.65; 3d, \$3.30; 4 & 5d, \$3.65; 6 & 7d, \$2.95; 8 & 9d, \$2.80; 10 & 12d, \$2.75; 16 & 20d, \$2.70; 30, 40, 50 & 60d (base), \$2.65.
 Flour barrel nails, 30% discount.
 Galvanizing, 2 cents per lb. net, extra.
 Horse (C brand), 50 & 74% discount.
 M brand, 50 & 10% discount.
 Steel cut nails, 10 cents extra.
 Trunk nails, black, 65 and 5% discount.
 Trunk nails, tinned, 65 and 10% discount.
 Wire, 2d \$3.85; 3d, \$3.50; 4 & 5d, \$3.25; 6 & 7d, \$3.15; 8 & 9d, \$3; 10 & 12d, \$2.85; 16 & 20d, \$2.90; 30, 40, 50 & 60d (base), \$2.85; fine, 3d, \$3.85.
 Wire nails in car lots, \$2.74.
 Miscellaneous wire nails, 70 & 10% discount.
 NAIL SETS.—Duty 30%.
 Assorted sizes, \$1.20 per doz.

NETTING—Wire.—Duty 30%.

Galvanized, 50% discount.
 Green wire, \$1.50 per 100 sq. ft.
 Poultry, 2x2 mesh, 150 ft. roll, 55 off Canadian List.

NOZZLES.—Duty 30%.

Hose (Brass), \$3.50 to \$5 per doz.

NUTS.—Duty 1/2 cent per lb. & 25%.

Finished, tapped, 25% discount.
 Rough, square head, 4 cents per lb. from list.
 Rough, hexagon head, 4 cents lb. from list.
 Semi-finished, tapped, 25% discount.

OAKUM.

Navy, \$7.80 per 100 lb.
 Spun, \$9.30 per 100 lb.

OIL.—Duty 25%.

Boiled Linseed Oil bbls., 86 cents per gal.
 Cylinder Oil, from 40 cents up.
 Lard Oil, bbls., 90 cents per gal.
 Machine.
 Prime White (Can.), 14 cents per gal.
 Prime White (U.S.), 154 cents per gal.
 Raw Linseed Oil, bbls., 83 cents per gal.
 Sperm Oil, bbls., \$1.75 per gal.
 Water White (Can.), 15 cents per gal.
 Water White (U.S.), 164 cents per gal.

OILERS.—Duty 30%.

\$1 per doz. up.

PACKING.—Duty 35%.

Rubber Insertion, 60 cents per lb.
 Rubber Sheet, 22 cents per lb.

PACKING.—Duty 25%.

Asbestos, 35 cents per lb.
 Flax, 35 cents per lb.
 Hemp, 124 cents per lb.
 Jute, 8 cents per lb.

PAILS.—Duty 25%.

Galvanized Iron, \$2.50 to \$3.50 per doz.

PAINTS.—Duty 25%.

Elephant Snow White, 8 to 9 cents per lb.
 Pure White Zinc, 8 to 9 cents per lb.
 No. 1, 6 to 74 cents per lb.
 No. 2, 5 to 64 cents per lb.
 Prepared, in 1, 1/2 and 1-gallon tins, \$1.25 per gal.
 Barn, in barrels, 75 to 85 cents per gal.
 Canada Paint Co's Pure, \$1.25 per gal.
 Second qualities, \$1.10 per gal.
 Sherwin-Williams Paints, \$1.45 per gal.
 Toronto Lead & Color Co's Pure, \$1.25 per gal.
 Zanzibar, all colors, 75 cents per gal., f.o.b. Toronto or Windsor.

PAINTS.—Duty 30%.

Copper, \$3.50 per gal.

LEAD, DRY WHITE.—Duty 5%.

Pure, in casks, \$5.75 per cwt.
 Pure, in kegs, \$6.25 per cwt.
 No. 1, in casks, \$5.50 per cwt.
 No. 1, in kegs, \$5 per cwt.

LEAD, WHITE.

Pure, \$6.37 per 100 lb.
 No. 1, pure, \$6 per 100 lb.
 No. 2, pure, \$5.624 per 100 lb.
 No. 3, pure, \$5.25 per 100 lb.
 No. 4, pure, \$4.874 per 100 lb.
 Elephant and Decorators' Pure, \$7.124 per 100 lb.
 Brandram's B. B. Genuine, \$9 per 100 lb.
 " " Decorative, \$7.55 per 100 lb.
 " " No. 1, \$6.85 per 100 lb.
 " " No. 2, \$6 per 100 lb.

LEAD, RED.—Duty 5%.

Genuine, 500 lb. casks, \$5.50 per cwt.
 Genuine, 100 lb. kegs, \$5.75 per cwt.
 No. 1, 500 lb. casks, \$5.25 per cwt.
 No. 1, 100 lb. kegs, \$5 per cwt.

COLORS (Dry).—Duty 25%.

American Oxides, \$1.75 to \$2 per 100 lb.
 Brussels Ochre, \$2 per 100 lb.
 Burnt Sienna, pure, 10 cents per lb.
 " " Umber, pure, 10 cents per lb.
 Raw, 9 cents per lb.
 Canadian Oxides, \$1.75 to \$2 per 100 lb.
 Chrome Greens, pure, 12 cents per lb.
 Chrome Yellows, pure, 18 cents per lb.
 Drop Black, pure, 9 cents per lb.
 English Oxides, \$3 to \$3.25 per 100 lb.
 English Vermillion, 80 cents.
 Fire Proof Mineral, \$1 per 100 lb.
 Genuine English Litharge, 7 cents per lb.
 Golden Ochre, 34 cents per lb.
 Mortar Color, \$1.25 per 100 lb.
 Pure Indian Red, No. 45, 90 cents per lb.
 Super Magnetic Oxide, \$2 to \$2.25 per 100 lb.
 *Ultramarine Blue, in 28-lb. boxes, 8 to 24 cents per lb.
 Venetian Red (best), \$1.80 to \$1.90 per 100 lb.
 Whiting, 12 cents.
 Yellow Ochre (J. C.), bbls., \$1.35 to \$1.40 per 100 lb.
 Yellow Ochre (J. F. L. S.), bbls., \$2.75 per 100 lb.
 Yellow Ochre (Royal), \$1.10 to \$1.15 per 100 lb.

COLORS (In Oil).—Duty 25%.

25 lb. tins, Standard Quality.
 Chrome Green, 8 cents per lb.
 Chrome Yellow, 11 cents per lb.
 French Imperial Green, 104 cents per lb.
 French Ochre, 5 cents per lb.
 Golden Ochre, 6 cents per lb.
 Marine Black, 9 cents per lb.
 Marine Green, 9 cents per lb.
 Venetian Red, 5 cents per lb.

PAPER.—Duty 25%.

Brown Wrapping, 2 1/2 to 4 cents per lb.
 Manila Wrapping, No. 1, 4 cents per lb.
 " " " No. 2, 5 1/2 " " "
 Carpet Felt, \$45 per ton.
 Plain building, 35 cents per roll.
 Tarred lining, 45 cents per roll.
 Tarred roofing, \$1.65 per 100 lbs.

PEAVEYS.—Duty 30%.

Round and Duck bill, \$2.50 and \$13 per doz.

PIKE POLES.—Duty 30%.

\$10.50 per doz.

PICKS.—Duty 30%.

\$4.50 to \$7 per doz.

PITCH.

85 cents 100 lbs.

PIPE.—Duty, \$3 per ton.

Cast Iron Soil, Medium and Heavy, 65% discount
 " " " Light, 60% discount.

PIPE.

Brass, 25 to 35 cents per lb., base price.
 Copper, 25 cents per lb., base price.

PIPE.—Duty 30%.

Galvanized Iron.
 1/2, \$5.15 per 100 ft.; 3/4, \$5.50 per 100 ft.; 1, \$7.95 per 100 ft.; 1 1/2, \$10.80 per 100 ft.; 1 3/4, \$12.85 per 100 ft.; 2, \$17.35 per 100 ft.

PIPE, BLACK IRON.—Duty 30%.

1/2, \$4.65 per 100 ft.; 3/4, \$3.40 per 100 ft.; 1, \$3.45 per 100 ft.; 1 1/2, \$3.30 per 100 ft.; 1 3/4, \$3.75 per 100 ft.; 2, \$4.25 per 100 ft.; 2 1/2, \$4.70 per 100 ft.; 3, \$5.00 per 100 ft.; 3 1/2, \$5.75 per 100 ft.; 4, \$4.75 per 100 ft.; 4 1/2, \$5.15 per 100 ft.; 5, \$5.75 per 100 ft.; 6, \$7.45 per 100 ft.

PIPE.—Duty 30%.

Wrought Iron, 1 inch, per ft. 164 cents.

PIPES.—Duty 30%.

Stove, 5 and 6 in., \$7 per 100 lengths.
 7 in., \$7.50 per 100 lengths.

PLANES.—Duty 30%.

Bailey's, 40% discount.
 Canadian wood, 25% discount.
 Mathieson wood, 20

PLUMBERS' BRASS GOODS.—Duty 30%.

Check Valves, 60% discount.
 Compression Cocks, 50% discount.
 Gate Valves, 55% discount.
 Genuine Jenkins' Valves, 45 " "
 Imitation Jenkins' Valves, 55 " "
 Radiator Valves, 55% discount.
 Standard Angle Valves, 65% discount.
 Standard Globe Valves, 65 " "
 Stop Cocks, 65% discount.

POLISH.—Duty 25%.

Liquid Stove, \$5 per gross.
 Paste, \$5 per gross.

PULLEYS.—Duty 25%.

Awning, 25 to 60 cents per doz.
 Clothes Line, 50 cents per doz.
 Dodge wood split, 50% discount.
 Sash, 25 to 27 cents per doz.

PUMP CYLINDERS.—Duty 25%.

Regular patterns, 65% discount.

PUMPS.—Duty 25%.

Cistern, 50% discount.
 Force, 50 " "

PUNCHES (centre)—Duty 30%.

Assorted sizes, \$1.80 per doz.

PUTTY.—Duty 20%.

In bbls. (Bladders), \$2.10 per 100 lbs.
 In kegs, boxes or loose, \$2.25 per 100 lbs.
 In 25-lb. tins, \$2.35 per 100 lbs.
 In 12 1/2-lb. tins, \$2.65 per 100 lbs.
 In bulk or tins less than 100 lb., \$2.90 per 100 lbs.
 Bulk, in bbls., \$1.90 per 100 lbs.
 " " in less quantity, \$2.05 per 100 lbs.

RASPS.—Duty 30%.

Blacksmiths, Woodworkers, etc., see Files.

REGISTERS.—Duty 30%.

Floor and Wall, 50% discount.

RIVET SETS.—Duty 30%.

Canadian, 35 to 37 1/2% discount.

RIVETS AND BURRS.—Duty 30%.
Copper Rivets and Burrs, 35 & 5 off; cartoons, 1 cent per lb. extra.
Extras on Iron Rivets in 1-lb. cartoons, 1/2 cent per lb.
Extras on Iron Rivets in 1/2-lb. cartoons, 1 cent per lb.
Extras on Tinned or Coppered Rivets, 1/2-lb. cartoons, 1 cent per lb.
Iron Rivets, black and tinned, 60 & 10% discount.
Iron Burrs, 55% discount.

ROPE, ETC.—Duty 25%.
Cotton, 3-16 in. and larger, 16 cents per lb.
" 5-32 in., 21 cents per lb.
" 1/2 in., 22 1/2 cents per lb.
Crucible Steel Rope, 25% discount.
Galvanized Wire Rope, 25% discount.
Jute, 8 cents per lb.
Lath Yarn, 94 cents per lb.
Manila, 7-16 in. and larger, 13 1/2 cents per lb.
" 1/2 in., 14 1/2 cents per lb.
" 1/4 and 5-16 in., 15 1/2 cents per lb.
New Zealand Rope, 10 cents per lb.
Russia Deep Sea, lines 1 1/2 cents per lb.
Sisal, 7-16 in. and larger, 10 cents per lb.
" 1/2 in., 11 cents per lb.

RUBBER.
Reclaimed.

RULES.—Duty 30%.
Boxwood, 75 and 10% discount.
Ivory, 37 1/2 to 40% discount.
Lumbermans.

SAD IRONS.—Duty 30%.
Mrs. Potts', No. 55, polished, 62 1/2 cents per set.
" No. 50, nickel-plated, 67 1/2 cents set.
" "Sensible," 55 and 60 cents set.
" "Toy," \$13.00 gross.

SAND AND EMERY PAPER.—Duty 25%.
B. & A. Sand, 40 & 5% discount.
Garnet, 5 to 10% advance of list.

SAP SPOUTS.—Duty 30%.
Bronzed iron, with hooks, \$9.50 per 1,000.

SASH WEIGHTS.—Duty 25%.
Sectional, \$2.75 to \$3 per 100 lb.
Solid, \$1.25 to \$2.25 per 100 lb.

SAWS.—Duty 30%.
Crosscut, Disston's, 35 to 55 cents per foot.
Hack, complete, 75 cents to \$2.75 each.
Hack, frame only, 75 cents each.
Hand, Disston's, 12 1/2% discount.
S. & D., 40% discount.
S. & D., 35 off on Nos. 2 and 3.

SCALES.—Duty 30%.
Champion, 60% discount.
Gurney's, 40
Troemner's, 30 " Canadian list.

SCREENS.—Duty 30%.
Door, \$7.50 to \$12 doz.
Window, \$1.75 to \$2.75 doz.

SCREWS.—Duty 35%.
Bench, iron, \$4.25 to \$5.75 per doz.
" wood, \$3.25 to \$4 per doz.
Drive Screws, 87 1/2 & 10% discount.
Hexagon Cap, 45
Set, case-hardened, 60
Square Cap, 50 & 5
Wood, F. H., bright and steel, 87 1/2 & 10% discount.
" R. H., bright, 82 1/2 & 10% discount.
" F. H., brass, 80 & 10
" R. H., brass, 75 & 10
" F. H., bronze, 75
" R. H., bronze, 70

SCREWS, (Machine, Iron and Brass)—Duty 35%.
Flat head, 25% discount.
Round head, 20

SCYTHES.—Duty 25%.
Grass, \$8 to \$10.
Grain, \$12 to \$14.

SHEARS.—Duty 30%.
Tailors, 30 % discount Amer. list.

SHELLS (Cartridge).—See Ammunition.

SHOT, See Ammunition.

SHOVELS AND SPADES.—Duty 35%.
Burns', 40 and 5% discount.
Ely's, " " "
Gray's, " " "
Jones', " " "
Steel Snow, \$2.45 @ \$2.60 per doz.
Wood, " " "

SKATES.—Duty 35%.
American Hockey.
Canadian " 40 cents to \$2.50 pair.

SNAPS.—Duty 30%.
Harness, 40% discount.

SNATHS.—Duty 25%.
Sythe, \$5.25 to \$8 per doz.

SOLDER (Plumbers').—See Metals.

SOLDERING IRONS.—Duty 30%.
20 to 90 cents each.

SPIKES.—Duty 1/2 cent per lb.
Rail, 20% discount.
Ship, \$5 per 100 lb.

SPRINGS.—Duty 35%.
Bright Carriage, 6 1/2 per lb. net.

STAPLES.—Duty 30%.
Barb wire, \$3.75 per 100 lb.
Bed, 50% discount.
Blind, 25
Wrought iron, 75% discount.

STEEL—see Metals.

STOCKS AND DIES.—Duty 30%.
Blacksmiths', Lightning, 25% discount.
" Green River, 25
" Reeco, 30% discount.
" Jardine, 35%
Pipe, Solid, 70 & 10% discount.
" Duplex, 33 1/2% discount.
" Jarecki, 33 1/2%
" Oster, 30%
" Armstrong, 35%
Wiley & Russell's, 25% discount, Canadian list.

STONES.—Duty 30%.
Arkansas, \$1.50 per lb.
Hindustan, 6 to 7 cents per lb.
" slip, 9 cents per lb.
Labrador, 13 cents per lb.
" axe, 15 cents per lb.
Scythe, \$3.50 to \$5 per gross.
Turkey, 50 cents per lb.
Washita, 28 to 60 cents per lb.
Water-of-Ayr, 10 cents per lb.

TACKS, BRADS, etc.—Duty 35%.
Carpet tacks, blued, 80 & 15% discount.
" " tinned, 80 & 20
" " in kegs, 40% discount.
Cheese-box tacks, blued, 85 & 12 1/2% discount.
Copper tacks, 50% discount.
Cut tacks, blued, in dozens only, 80% discount.
" " weights, 60% discount.
Fine finishing, 40% discount.
Leather carpet tacks, 55% discount.
Lining tacks, in papers, 10% discount.
Patent brads, 40% discount.
Picture frame points, 10% discount.
Strawberry box tacks, bulk, 75 & 10% discount.
Swedes, cut tacks, blued and tinned, in bulk, 80
& 10% discount; in dozens, 75% discount.
Swedes, upholsterers', bulk, 85, 12 1/2 & 12 1/2% dis.
" brush, blued and tinned, bulk, 70% dis.
" gimp, blued, tinned and japanned, 75
& 12 1/2% discount.
Trunk tacks, black and tinned, 85% discount.
Zinc tacks, 35% discount.

TAGS.—Duty 25%.
Shipping, 50 @ 70 cents per M.

TAR.
Coal \$2.75 bbl.
Refined, \$4 per bbl.

TENTS.—Duty 30%.
Canadian list, 20% discount.

TONGS.—Duty 30%.
Ice, \$9 per doz.
Pipe, " Brown's," net.
" " Brock's," 25% discount.
" " Trimco," 25

TRAPS.—Duty 30%.
" Hawley & Norton's," 65% discount.
" Newhouse," 45% discount.
" Victor," 75% discount.

TRUCKS.—Duty 30%.
1, \$3.75; 2, \$5; 3, \$6.75 each.
" Handy" Canadian, \$18 to \$18.

TUBES FOR BOILERS.
1 1/2, 1 1/4, 1 1/8, 2, 2 1/2, 3, 3 1/2, 4
15, 12, 12, 10 1/2, 13, 14, 14 1/2, 18, 24 1/2 ft.

TURNBUCKLES.—Duty, 1/2 cent per lb., 25%; 33 1/2% discount.

TURPENTINE.—Duty 5%.
55 cents per gal.

TWINES.—Duty 25%.
Bag twine, 3-ply, 20 cents per lb.
" 4-ply, 20 cents per lb.
Binding, 12 1/2 cents per lb.
Colored, 27 cents per lb.
Cotton bag, 30 cents per lb.
Cotton, White, 20 to 30 cents per lb.
" Colored, 30 to 40
Hemp, 20 cents per lb.
Jute, 20 cents per lb.
Mattress, 45 cents per lb.
Sewing, 45 cents per lb.

TWINE—Continued.
Tarred Lath, 11 cts.
Wrapping, 22 to 27 cts.

VARNISHES.—Duty 20 cents per gal.
20% off 5-gal. lots.
Black Japan, \$2 per gal.
" No. 1, 75 cents to \$1.50 per gal.
Brown Japan, \$1.50 to \$2.50 per gal.
Carriage, No. 1, \$2 to \$3 per gal.
" body, \$4 to \$6 per gal.
" rubbing, \$2.50 to \$4 per gal.
Demar, \$2 to \$2.50 per gal.
Elastic Oak, \$1.50 to \$2.50 per gal.
Furniture Brown Japan, \$1.25 to \$2 per gal.
Furniture, extra, \$2 to \$2.50 per gal.
" No. 1, 75 cents to \$1.50 per gal.
Gold Size, Japan, \$1.50 to \$2.50 per gal.
Hard Oil Finish, \$1.50 to \$2.50 per gal.
Light Oil Finish, \$1.50 to \$2.50 per gal.
Shellac, orange, \$2 to \$2.50 per gal.
" white, \$2 to \$2.50 per gal.

VICES.—Duty 30%.
Amer., 13 1/2 cents per lb.
Brooks', 13 1/2 cents per lb.
Peter Wright's, 15 cents per lb.

WASHERS.—Duty 1/2 cent per lb., 25%.
Buggy, 75% discount.
Wrought iron, 40% discount.

WASHING MACHINES.—Duty 35%.
Re-acting square, \$51.00 per doz.
" Round, \$48.00
Rocker, \$48.00 per doz.
Popular Brands, \$30.00 to \$42.00 per doz.
Dowsell, \$3.75 each.
Re-acting (Dowsell), \$5 each.

WIRE.
Barbed Wire, see Fencing.
Brass Wire, (duty 10%), 50 to 50 & 2 1/2% discount.
Copper Wire, (duty 15%), 45 & 10% discount net
cash 30 days f.o.b. factory.
Smooth Steel Wire, (duty 20%), is quoted at the
following net selling prices:
No. 8 to 8 gauge, \$2.50 per 100 lbs.
" 9 " 2.80
" 10 " 2.87
" 11 " 2.90
" 12 " 2.95
" 13 " 3.15
" 14 " 3.37
" 15 " 3.50
" 16 " 3.65

Other sizes of plain wire outside of Nos. 9, 10, 11, 12 and 13, and other varieties of plain wire remain at \$2.80, base, with extras as before. The prices for Nos. 9 to 13 include the charge of 10 cents for oiling. Extras net per 100 lb.: coppered wire, 60 cents; tinned wire, \$2; oiling, 10 cents; special hay-baling wire, 30 cents; spring wire, \$1; best steel wire, 75 cents; bright soft drawn, 15 cents; in 60 and 100-lb. bundles net, 10 cents; in 25-lb. bundles net, 15 cents; packed in casks or cases, 15 cents; bagging or papering, 10 cents.

Fine Steel Wire, 17 1/2 off. List of extras, in 100 lb. lots. No. 17, \$5; No. 18, \$5.50; No. 19, \$6; No. 20, \$6.65; No. 21, \$7; No. 22, \$7.30; No. 23, \$7.65; No. 24, \$8; No. 25, \$8; No. 26, \$9.50; No. 27, \$10; No. 28, \$11; No. 29, \$12; No. 30, \$13; No. 31, \$14; No. 32, \$15; No. 33, \$16; No. 34, \$17. Extras net: tinned wire, Nos. 17-25, \$2; Nos. 26-31, \$4; Nos. 32-34, \$6; coppered, 5 cents; oiling, 10 cents; in 25-lb. bundles, 15 cents; in 5 and 10-lb. bundles, 25 cents; in 1-lb. hanks, 60 cents; in 1/2-lb. hanks, 75 cents; in 1/4-lb. hanks, \$1; packed in casks or cases, 15 cents; bagging or papering, 10 cents.

Galvanized Wire, per 100 lb.: Nos. 6, 7, 8, \$3.50 to \$3.85; No. 9, \$2.85 to \$3.15; No. 10, \$3.00 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 \$5.05; No. 16, \$4.85 to \$5.35. Base sizes, Nos. 6 to 9, \$2.57 1/2 f.o.b. Cleveland.

Clothes Line Wire, solid 7 strand, No. 17, \$4.25; No. 18, \$2.65; No. 19, \$2.35; f.o.b. Toronto, Hamilton and Montreal.

WASTE (Cotton).
Colored, \$5.50 to \$6 per 100 lb.
White, \$7.75 per 100 lbs.
" extra, \$8 per 100 lb.

WHEELBARROWS.—Duty 30%.
Garden, \$2 to \$4.50 each.
Navy, \$19 per doz.
" Iron wheel, \$22.50 per doz.
Steel tubular, \$7.50 to \$10.50 each.

WRENCHES.—Duty 30%.
Agricultural, 60% discount.
Alligator, 50
Coes', 30
P.S. & W., 30
Stillson's, 25
Trimco, pipe, 25

WRINGERS (Clothes).—Duty 35%.
Ajax, \$66 per doz.
Canadian, \$26 to \$30 per doz.
Crescent, \$17.50 to \$20 per doz.
Leader, \$30 per doz.
Novelty, \$23 to \$27 per doz.
Popular Brands, \$16.50 to \$22 per doz.
Royal American, \$28 to \$30 per doz.
Royal Canadian, \$28 to \$30 per doz.

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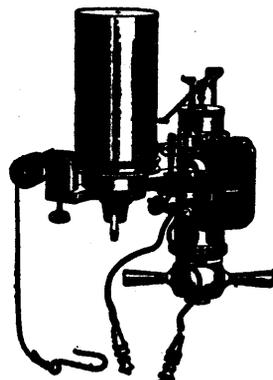
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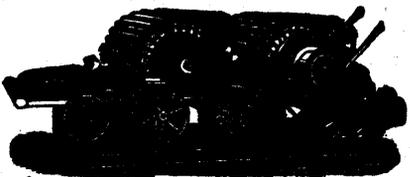
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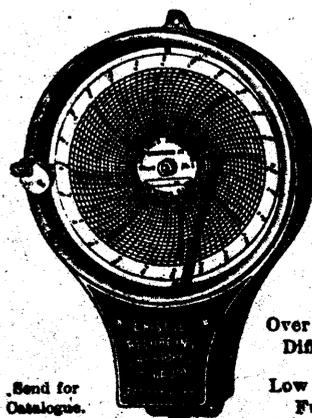
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