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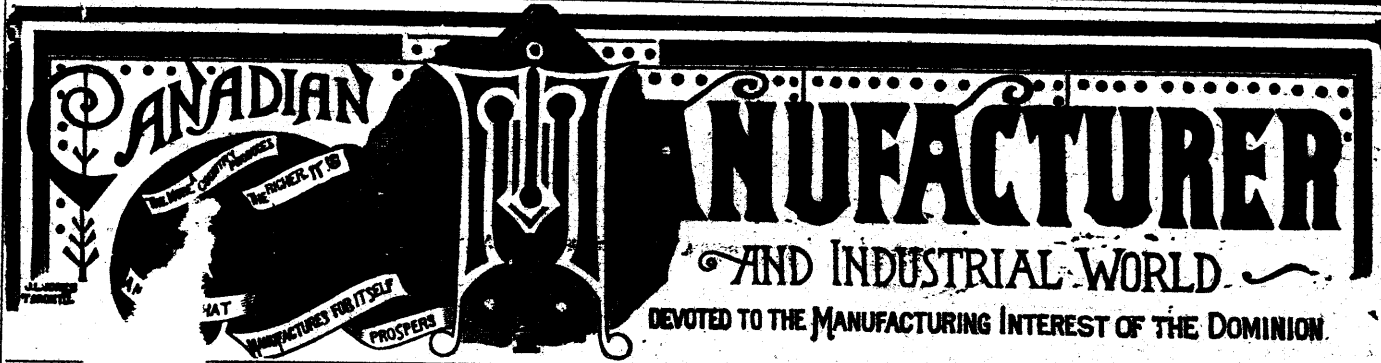
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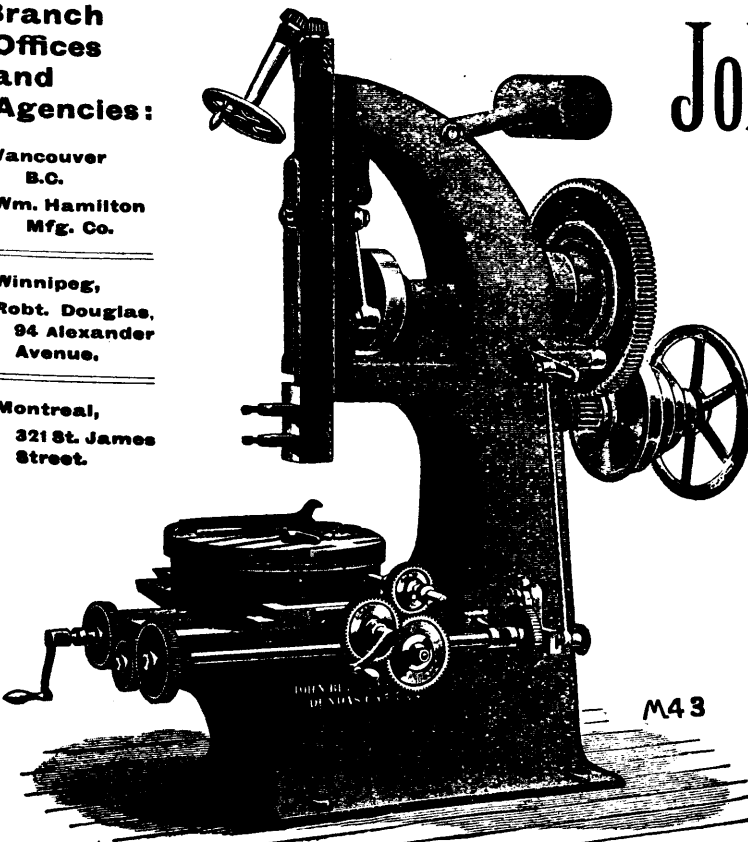
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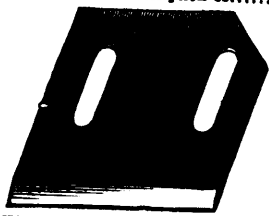
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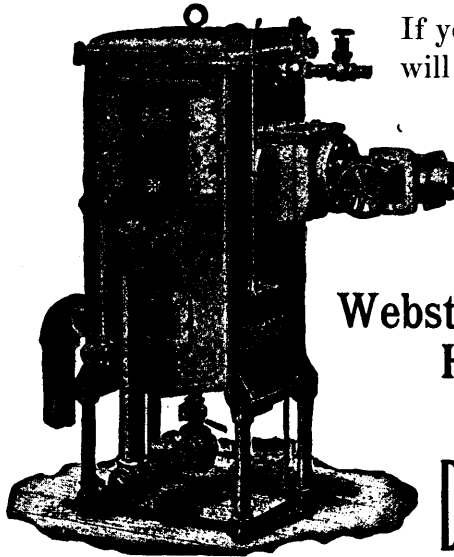
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FOR HEATING BUILDINGS
BY THE WASTE EXHAUST STEAM

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And we will explain HOW
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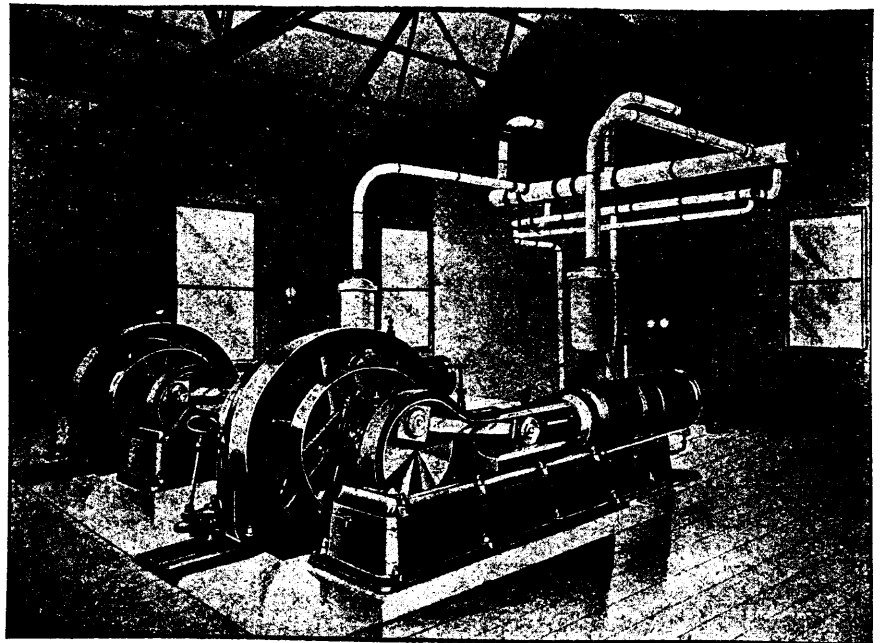
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 The Generator is simple in construction, and does not require skilled labor to work it. **No Purifiers required. Products being a Rich Permanent Gas and Charcoal.**
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Supplies a cheap, simple, easily applicable form of power that is filling the necessity for such a motor very extensively and satisfactorily. The running expenses are very light. It requires no experience to handle, and runs for hour without attention. Well adapted for running independent electric lighting plants or pumping and elevator plants.

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ESTABLISHED IN 1880.

PUBLISHED ON THE FIRST AND THIRD FRIDAYS OF EACH MONTH

The Canadian Manufacturer Publishing Co., Limited.

McKinnon Building, Cor. Melinda and Jordan Sts., Toronto.
Cable address: "CANAMAN." Western Union Telegraphic Code used.

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

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J. J. CASSIDEY, Editor and Manager

OUR CURRENT MARKET QUOTATIONS.

THE CANADIAN MANUFACTURER has pleasure in directing attention to the current market quotations of prices of hardware, metals, paints, oils and many specialties such as are usually found on sale in hardware stores in Canada, and handled by jobbers of hardware, metals, etc., now first presented in these pages.

Without question there is a strong demand for such a feature in an up-to-date trade journal devoted to such interests, and we give the assurance that the prices quoted are those given by the most reliable manufacturers, jobbers and wholesale dealers in the trade to their Canadian customers.

A most valuable feature of these quotations consists in affixing the Canadian duty to each article upon which a duty is levied. This feature has never before been observed by any trade journal, and the utility of it consists in the ability of the reader to learn just what the duty upon such articles is when imported, always bearing in mind that should the article be of British manufacture and imported from Great Britain, one-third the amount of the duty is rebated under the operation of the preferential tariff.

The circulation of THE CANADIAN MANUFACTURER extends to every hardware dealer in the Dominion.

ORGANIZED CAPITAL AND ORGANIZED LABOR.

Coincidentally, organized labor, represented by the International Association of Machinists, assembled in convention in Toronto in the early days of last month, while at the same time organized capital, represented by the National Metal Trades Association, assembled in Chicago.

The Toronto convention consisted of some four hundred delegates from all parts of the United States and Canada, and was presided over by President O'Connell, who stated the situation from his standpoint substantially as follows:

The present strike has an interesting history. It was declared on May 20, but dates back beyond that, being merely a continuation of the bitter fight of a year ago, when the workmen brought the bosses to terms. A great convention was held in New York in May, 1900. The men were granted a nine-hour day, to go into effect on May 20 of this year, all other questions being left to arbitration. These questions included the all-important one of a wage schedule. Work was resumed, and for a year efforts were made to recon-

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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.

cile all the existing differences. Then came a demand for higher compensation. The employers asserted that the demand should have been made to the individual employer. If resisted, the district councils of the employees' organization and the union should be appealed to for arbitration. If no agreement could be reached by them, the subject would go before the National Joint Arbitration Boards of the National Metal Trades' Association and the International Association of Machinists.

These contentions of the manufacturers were resented by President O'Connell, of the Machinists' Union, and his colleagues. They held that under the terms of the agreement the entire question of compensation should be arbitrated by the National Board, settling it for the time throughout the entire country. This the National Board of Manufacturers declared they had no authority to do. From that source arose hard feeling that culminated in the call for a national strike on May 20. The manufacturers regarded this as a breach of faith, and the New York agreement, granting the nine-hour day, was abrogated, and the decision to ignore the Machinists' Union in future arrived at.

The aims and objects of the Machinists' Association was summed up in a concise manner by President O'Connell in a speech made by him while in Toronto in which he said: "The way to get steady employment is to band together and get the hours of labor down until the only thing you need to do in the morning is to roll over in bed, push the button, and the day's work is done."

The Chicago meeting was a conference of the administrative council of the National Metal Trades Association with other representative manufacturers in the Association, a result of which was the formulation of a platform or declaration upon which the members would conduct their business, and a call for a general meeting of their Association in New York on June 11, which other manufacturers would be invited to attend.

The New York meeting was held as indicated, at which the following declaration was unanimously adopted:

We declare that the Machinists' Union has, through its national and local officers, broken faith with us, and proved itself to be an irresponsible body, with whom we can make no contracts that will be binding upon it. We recognize the right of any man to belong or not to any religious, political, or economic sect, as he may see fit; also his right to leave our employment at his free will; and his right to sell his labor at the best price he can command. We maintain our inalienable rights to employ a man whether he belongs or not to any organization, and at wages mutually satisfactory; and also to discharge him at our discretion. We insist that the management of a shop is in the hands of the employer, and is not to be interfered with by the employe. We insist that a fair day's work shall be given for a fair day's wage; and we will

give a fair day's wage for a fair day's work. We believe that shortening of the working hours or an increase of wages can only be brought about by the hearty co-operation of employer and employe in advancing and not in retarding production, and by introducing and not fighting improved methods. We decry strikes and lockouts as unbusinesslike and unnecessary, and believe that all disagreements can be adjusted by other means, and the condition of employer and employe both benefited more by harmonious progress than by strife and discord.

The manufacturers decided to make no definite declaration as to the length of a day's work, maintaining that the declaration of principles make the question of hours and wages a local issue. The carrying on of the struggle was left in the hands of the Finance and Strike Committees, subject to the general supervision of the Administrative Council. Five hundred thousand dollars, raised by assessment, is to be placed at the disposal of this committee, to be used in behalf of the employers.

At the New York meeting it was made clear that each firm was at liberty to deal with the trouble locally, but all the members will be in the National Association, and will work back and forth in harmony. The manufacturers declare that they have suffered no loss arising from delay on contracts which were fulfilling at the time the machinists struck, as all the contracts contain a strike clause, releasing them from liability. It is claimed that the manufacturers as a whole are united and determined to quash the pretensions of the International Association of Machinists once and for all.

The manufacturers contend that it would be folly to deal with the officers of the Machinists' Association, as they not only break agreements entered into in good faith, but use their influence in compelling men who are in favor of a settlement by arbitration to go on strike. Any concession granted would simply be the signal for a fresh demand. The manufacturers declare that while they are in favor of arbitration and intend to deal justly with their men, they will not tolerate imposition, and will fight to a finish.

The following platform, adopted by the Administrative Council at its Chicago meeting, sets forth the position of the machine shop proprietors, and embodies the basis on which they will operate their plants :

"We, the members of the National Metal Trades' Association, declare the following to be our principles, which shall govern us in our relations with our employes :

"Since we, as employers, are responsible for the work turned out by our workmen, we must, therefore, have full discretion to designate the men we consider competent to perform the work and to determine the conditions under which that work shall be prosecuted. The question of competency of the men being determined solely by us, and while disavowing any intention to interfere with the proper functions of labor organizations, we will not admit of any interference with the management of our business.

"Disapproving absolutely of strikes and lockouts, the members of this association will not arbitrate any question with men on strike. Neither will this association countenance a lockout on any arbitrable question unless arbitration has failed.

"Employment.—No discrimination will be made against any member of any society or organization. Every workman who elects to work in a shop will be required to work peaceably and harmoniously with all his fellow-employes.

"Apprentices, helpers and handy men.—The number of apprentices, helpers and handy men to be employed will be determined solely by the employer."

"Methods and wages.—We will not permit employes to place any restriction on the management, methods or produc-

tion of our shops, and will require a fair day's work for a fair day's pay.

"Employes will be paid by the hourly rate, by premium system, piece work or contract, as the employer may elect.

"It is the privilege of the employe to leave our employ whenever he sees fit, and it is the privilege of the employer to discharge any workman when he sees fit.

"The above principles being absolutely essential to the successful conduct of our business, they are not subject to arbitration.

"In case of disagreement concerning matters not covered by the foregoing declaration, we advise our members to meet their employes either individually or collectively, and endeavor to adjust the difficulty on a fair and equitable basis. In case of inability to reach a satisfactory adjustment, we advise that they submit the question to arbitration by a board composed of six persons, three to be chosen by the employer or employes. In order to receive the benefits of arbitration the employe or employes must continue in the service and under the orders of the employer, pending a decision. In case any member refuses to comply with this recommendation he shall be denied the support of this association unless it shall approve the action of said member.

"Hours and wages.—Hours and wages being governed by local conditions shall be arranged by the local associations in each district. In the operation of piece work, premium plan or contract now in force or to be extended or established in the future, this association will not countenance any conditions of wage which are not just, or which will not allow a workman of average efficiency to earn at least a fair wage."

THE NATIONAL ASSOCIATION OF MANUFACTURERS OF THE UNITED STATES, AND COMMERCIAL RECIPROCIDY.

The masterly address of President J. C. Search, at the recent annual meeting of the National Association of Manufacturers, at Detroit, is, very deservedly, attracting a great deal of attention, particularly that portion of it which makes reference to the necessity of a change of policy by the United States Government, by the adoption of commercial reciprocity with other nations. Of course the necessity for the change has been and is being forced upon the people of the United States by recent events which are well known to all; and it is to the credit of President Search and his Association that they should so soon have observed the necessity of a change of policy, and so quickly taken action looking to the change. In the introductory portion of his address leading up to this important subject Mr. Search said :—

We are living in an era of such momentous changes that it is unsafe to hazard predictions of what is to come next. We have been accustomed heretofore to regard the past and present as a safe basis upon which to forecast events likely to occur in the future. Within the past two years, however, we have witnessed such an overturning of precedents, such a procession of unexpected happenings in defiance of apparently well-founded prophecy, that we are led naturally to the conclusion that a new era and a different order of things have come upon us.

Having thus prepared the way, he introduced his plea for commercial reciprocity as follows :—

The most serious problem that now presents itself in relation to the export trade of the United States concerns not only the further extension of this trade but also the preservation of the business already established. Heretofore it has been comparatively easy for American manufacturers to secure foreign business whenever they have put forth serious effort to get it. Emergencies of unusual activity in England and

Germany, which have debarred manufacturers in those countries from aggressive competition, have made it possible in many instances for American manufacturers to secure with little effort orders which under ordinary conditions could have been taken only by a struggle. Then, again, American competition has not been regarded abroad as a very important factor in international trade by those who have encountered it. These conditions have changed very materially during the past year and will be altered still further in the near future. Instead of a free field and open markets we are likely to encounter obstacles that will hinder very seriously the further extension of our foreign trade and threaten that which is already established. Decreasing industrial activity and declining prices in many lines, particularly in Germany and Great Britain, are making American competition oppressive where its force was not felt when business was abundant for all. Europe has suddenly awakened, too, to a realization of the vast competitive strength of the United States, and those who formerly were amused and entertained by American aggressiveness now are alarmed by our encroachment upon the markets which they have regarded as their own. All of this indicates that new conditions will be encountered and new problems will have to be solved in our commercial relations with other nations.

The expansion of the territorial limits of the United States, has given rather a sharp wrench to our governmental organism, and the extension of the field of our commercial operations is likely to give a no less severe shock to the economic policy which has made possible the marvellous industrial and commercial development of the nation. So long as it was necessary to consider only the needs of the country, its industry and its commerce, it mattered not what other nations thought or said of the American protective policy. That they considered as selfish what we deemed patriotic did not concern us. The practice of getting all that could be had and keeping all that was obtained was eminently a proper principle upon which to proceed with the development of the nation's industries within the limits of the domestic market. Having crossed the seas with goods to sell, and having begun a business that has amazed foreign competitors, we are confronted with new conditions, and we find that the outer view of our economic policy differs somewhat from its appearance on this side. A century of history has demonstrated the marvellous efficiency of the protective policy for the creation of a great and prosperous industrial nation. Other nations, profiting by our experience, adopt the same policy and barriers rise to impede our commercial progress abroad.

What shall we do under these conditions to preserve our export trade and open the way for its further expansion? Shall we abandon our protective system and ask other nations to give us equally free admission to their markets? Not for a moment should we consider such a step. It would be neither safe, expedient nor practical in accomplishing the desired purpose. If Germany seeks industrial advancement through a protective policy, far be it from us to object to the fullest enjoyment by others of that which has given us so great prosperity. If Russia undertakes to plant factories throughout her vast domains, we should be the last to criticize her adoption or the methods that have proved so successful here. Conditions which now confront us in our foreign trade present the opportunity and impose upon us the duty of readjusting our commercial relations with other countries upon such a basis as shall insure freer intercourse without any sacrifice of material interests by either party. To put it in a word, reciprocity is the one factor that is of the utmost value to us in the present stage of our export trade. For twelve years past, ever since James G. Blaine attempted to bring the nations of the two Americas into closer union by the application of this principle, reciprocity has been a favorite topic of discussion by economists and business men as well. Belief in the potency of this principle, however, has been based more upon prophecy than upon experience; but now as never before do we see plainly before us conditions which call for the immediate practical application of commercial reciprocity. We see industrial Germany aroused and alarmed by the encroachment of American competition, not in foreign neutral markets, but in the midst of the empire where our manufacturers have been selling their machinery and products as never before. We see Russia incensed because her friendly efforts to secure com-

mercial courtesies in return for valuable concessions extended to us have been cavalierly ignored and great injustice done to her. France has waited patiently for nearly two years to give us abundant time to consider propositions touching mutual trade concessions; but even such courteous forbearance hardly may be expected to continue without end. Even Austria and Switzerland, of less importance to us from a commercial standpoint, are expressing with much emphasis their dissatisfaction with our national policy which seeks to obtain all possible trade advantages and yet is unwilling to concede any favors in return.

To my mind there is no more important work to which the National Association of Manufacturers can apply its energy and influence in the immediate future than an effort to induce the senate of the United States to give favorable consideration to treaties of commercial reciprocity submitted for approval by that body. The position in which the people of the United States find themselves is humiliating. After reiterated expressions of desire for reciprocity treaties, after the added emphasis given to these requests by successive presidential messages, and even after the creation of special machinery within the department of state for the negotiation of such international agreements, we find all of these efforts made of no effect by the refusal of the senate to give consideration to the treaties presented for ratification. And the special plenipotentiary of the state department abandons his work and resigns his office because of the evident futility of the undertaking. Here is a problem which can well command our most serious attention and our most determined efforts.

The continuance and further extension of our magnificent export trade in manufactured products depends more upon our willingness to barter privileges with our foreign customers than upon any other influence that we can discern at the present time. We can yield much that will be of value to others without causing loss or injury to our own interests. If we are not willing and able to adopt such a policy we must expect not only the loss of privileges we now enjoy but also open retaliation as a punishment for our selfishness. There is need for vigorous and continued effort to bring about the practical application of the principles of reciprocity in our commercial intercourse with other nations.

THE ALLEGED PAPER COMBINE.

The Canadian Press Association is busy collecting information for a statement to be presented at the Government inquiry into the alleged paper combine which was again opened in Montreal this week, and has sent out a circular to that effect, in which it is shown that apparently the paper makers will attempt to prove that the duties now levied on paper imported into Canada are a necessity to their industry, and that their industry is very important, to offset which the Association desire to show that the rate of profit in the newspaper business is lower than the profit in the paper-making business, and that the capital invested and the number of persons employed are greater.

While it may be admitted that the price of printing paper in Canada is higher than it would be owing to a combine among the paper makers, we fail to see how a reduction would be effected by the removal of the duty. If, as the Association claims, the newspapers are within the tentacles of a Canadian octopus, certainly their condition would not be improved were they released from their distress to be immediately enfolded within the embraces of the American paper octopus. As newspaper readers, the Association should know that American newspapers claim that their condition is exceedingly distressing because of the unnecessarily high prices they are forced to pay to American paper makers, and that the removal of the duty would immediately throw the Canadian publishers into the same boat with the American publishers. Of what benefit would it be to Canada to close up Canadian paper mills and throw thousands of Canadian workmen out of employment to the end that Canadian publishers

might purchase paper at possibly a little lower price than they now have to pay. To our mind the idea is ridiculous, that the removal of the duty would lower the price of paper, and the movement on the part of the Press Association, whether it so intends it or not, seems to be an ill-concealed attempt to break down and destroy not only a worthy Canadian manufacturing industry, but the very policy of tariff protection under which Canadian manufacturing industries generally are thriving and prospering. The action of the Association indicates that the Canadian newspaper publishing business is a puling babe in long clothes and clouts, whining for the grandmotherly interference of the Government.

EDITORIAL NOTES.

The initial number of this Journal bore date June 24, 1880, since which time THE CANADIAN MANUFACTURER has been published with unfailing regularity. This current issue, bearing date July 5, 1901 is No. 1 of Vol. 43. THE CANADIAN MANUFACTURER is now in the twenty second year of its age. "Devoted to the Industrial and Manufacturing Interests of the Dominion of Canada."

Sir Wilfrid Laurier, Premier of Canada, has promised to open the Toronto Industrial Exhibition on August 27, provided no unforeseen event occurs to prevent his doing so. He will receive a rousing reception. It is expected that the manufacturing display will be the greatest and most important ever seen at the Toronto Fair.

The eleventh annual convention of the Canadian Electrical Association was held at the Russell House, Ottawa, June 19, with Mr. A. A. Dion, President, in the chair. Among those present were:—Second Vice-President P. G. Gossler, Superintendent Royal Electric Company, Montreal; Secretary-Treasurer C. H. Mortimer, of the Canadian Electrical News, Toronto. Executive Committee—Messrs. J. J. Wright, Manager Toronto Electric Light Company; Ormond Higman, Chief of Electrical Inspection Department, Ottawa; A. B. Smith, Superintendent G. N. W. Telegraph, Toronto; D. R. Street, Secretary-Treasurer, Ottawa Electric Company; B. F. Reesor, Manager Electric Light & Power Company, Lindsay; W. H. Brown, Manager Royal Electric Company, Montreal; John Yule, Manager Guelph Light, Heat & Power Company, and John Murphy, President and Wm. Ahearn, jr., Secretary of the local committee. At the business meeting of the convention two papers were read, one being on "Dominion Electrical Standards," by O. Higman, Ottawa, and the other entitled "Notes on Construction and Protection of Aerial Transmission Lines," by K. B. Thornton, Montreal. The delegates were cordially welcomed to Ottawa by Mayor Morris, and were afterwards entertained to a drive around the city.

The Canadian Year Book. Alfred Hewett, Toronto, the publisher, has sent us a copy of his Canadian Year Book for 1901 which contains a vast mass of information which cannot but be useful in all commercial offices. It begins with an enumeration of the Canadian tariff schedule, list of post offices, names of all officers of the Dominion Government and the different departments, also of all the Provinces, historical occurrences as regards Canada, the militia list, sporting records, etc.

John Grant's Argentine Commercial Guide. Ernest Danvers, Esq., the editor, has sent us a copy of John Grant &

Son's Directory of the British, Anglo-Argentine and North American residents in the Argentine Republic, and Argentine Commercial Guide for 1901. This most valuable book contains information re area, population, education, religion, justice, finance, debt, provinces, railways, tramways, light, water and drainage, shipping, ports, imports, exports, banks, insurance, industries, British institutions, sports, average prices, metrical tables, etc. Published by John Grant & Son, Buenos Ayres, Argentina, for whom Messrs. H. G. Ramsperger & Co., 180 Pearl St., New York, are United States agents. Price, \$1.50.

Nova Scotia may in the very near future be supplying the Russian and German navies with coal. Mr. N. De Struve, the Russian Consul-General, who, with Mr. A. Boff, the German Consul-General in Canada, is making a tour of inspection of the coal and iron industries of Cape Breton, said in an interview at Sydney:—"I am told that there is an unlimited coal supply in Cape Breton. Hitherto Russia has been securing most of the coal for her navy from England. If coal is cheaper in Canada I will certainly recommend to my Government the advisability of purchasing considerable for our navy from Cape Breton. Russia is, of course, also greatly interested in the iron and steel industry. We want rails for our Siberian railway, and we want other products of iron. And I will make a report to my Government on the steel industry as it exists in Canada to-day. I was at Sault Ste. Marie two weeks ago, and was very much pleased with the outlook there. Siberia is rapidly increasing in population and will soon be a great country, and I hope to more closely unite the relations between Canada and that country. It is solely an agricultural country, and will need all sorts of machinery, and I look to Canada to supply a large portion of the same."

Arrangements have been completed for the Canadian Press Association's excursion to the Maritime Provinces. The start will be made from Montreal on August 15, via the Intercolonial Railway, and a trip extending for eighteen days will be made through the Provinces by the sea. Some of the places to be visited are:—The Sydneys, New Glasgow, Truro, Halifax, Windsor, Kentville, St. John, Annapolis, Digby, Levis and Quebec. The route has been carefully planned, the arrangements will be found suitable for all and the excursion no doubt will be as successful as those of former years. Mr. A. G. F. Macdonald, of Alexandria, Ont., is president of the Association, and Messrs. John A. Cooper and A. W. Law, Toronto, secretary and assistant secretary respectively. Application should be made to the last mentioned, before July 8.

Mr. J. S. Larke, Canadian Commercial Agent in Australia, reports: "The first sale of news paper from Canada has been effected. Paper should become one of the large exports of the Dominion. Hitherto the makers have not shown a disposition to cultivate this trade. The sales have been of flat news and jobbing. The large contracts are for cylinders for the high-speed newspaper presses, but it will probably require some time to get into that trade. The president of a leading newspaper company, since my last report, has gone to Canada with a contract of about a quarter of a million dollars which he would place in Canada if possible. The chief difficulty in the way of Canadian mills securing the order is freight."

George Wilson of New York and London, representative of the Atlantic Steamship Co., is in correspondence with the Department of Marine, regarding the establishment of a fast Atlantic service. Mr. Wilson says his company is prepared to make a bid for the service, and wants to be advised when tenders are invited. In his opinion, if Guysboro', N.S., were made the port of call for the proposed service, the run across the Atlantic could be made in three-and-a-half days. From what he says, it is quite evident that a thirty-knot service is quite possible.

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, alkalies, 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 Metabetchouan Pulp Co., Quebec City, has applied for incorporation with a capital stock of \$150,000.

It is stated that arrangements for building the proposed large pulp mill at Norman, near Rat Portage, Ont., are rapidly progressing.

The Blanche River Pulp & Paper Co., will erect their mill at Leeave Rapids, four miles west of Mattawa, Ont., instead of at Johnson's Rapids, as it was shown the latter were unsuitable, and further, that the Georgian Bay and Ottawa Valley Canal Co., had the right to the power there.

A syndicate headed by W. H. Davis and David Russell, Montreal, has purchased nearly 1,100 square miles of the finest pulp and timber lands in Quebec. The limits contain over 2,000,000 cords of pulp wood and 3,000,000 saw logs.

Major Gaudet, superintendent of the Government cartridge factory at Quebec City, was recently in Ottawa in connection with the extension of the work of the factory. In addition to turning out ball and blank cartridges on an average of a million and a half rounds annually, some three or four thousand common, shrapnel, and segment shells are being produced. In connection with the manufacture of projectiles it is proposed to go a step further than the manufacture of cast-iron shells and to produce projectiles of forged steel, the plan to manufacture these, being now on its way from England. It is proposed to begin with the manufacture of twelve-pounder breech-

loading shells, but the plant is designed for expansion, and will be capable of producing 5-inch and 6-inch shells when required. About 135 hands are employed at the factory.

The London Sugar Refining Co., London, Ont., has been incorporated with a capital stock of \$1,000,000, to manufacture sugar, syrups, etc. The provisional directors include J. A. Moody, D. A. McIntyre, both of St. Thomas, Ont., and F. T. Fawkes, London.

The C. H. Hubbard Co., Toronto, has been incorporated with a capital stock of \$50,000, to manufacture dental and surgical supplies, etc. The provisional directors include W. B. Nesbitt and A. C. Macdonell, both of Toronto.

The Ottawa Saw Co., Ottawa, has been incorporated with a capital stock of \$15,000, to manufacture mill machinery and tools, etc. The provisional directors include P. M. Feeny, C. A. Lewis and H. B. Lewis, all of Ottawa.

Dyer & Howard's planing mills at Exeter, Ont., were destroyed by fire July 3. Loss about \$7,000.

The Dominion Iron & Steel Co., Sydney, N.S., are installing a new 5,000 horse power boiler and equipment at their rolling mill.

The Cape Breton Electric Tram Co. will extend their service to the pier at Sydney, and through Colby and Ashby. They will shortly put in a new electric plant.

The Dominion Coal Co., Sydney, N.S.,

have, at present, an output of 16,000 tons daily.

Fire in the lumber yards of William Rutherford & Co., St. Cuingine, Que., did damage to the extent of \$50,000.

The woolen mill of Bain & Co., Elora, Ont., was destroyed by fire June 30.

Fire in the buildings of the Montreal Pipe Foundry Co., Montreal, did damage to the extent of about \$100,000 June 28. The firm will rebuild immediately.

The Diamond Lighting Co., Montreal, will apply for incorporation with a capital stock of \$500,000. The applicants will include W. J. Poupore, Ottawa; J. A. Rafter, Montreal; and J. C. Malone, Three Rivers, Que.

The Slocan Power Co., Victoria, B.C., has been incorporated with a capital stock of \$50,000, to construct electrical works, power-houses, etc., to use water power for milling, manufacturing, etc.

The British Columbia Shingle Mfg. Co. has been incorporated with a capital stock of \$20,000, to manufacture lumber, shingles, etc.

The elevator of Kellett, Parkes & Riley, Morden, Man., was destroyed by fire June 19.

A by-law was recently carried in Berlin, Ont., to build a new \$10,000 town hall.

The Montreal Bridge Co., Montreal, ask a bonus of \$1,000,000 to aid in the construction of a bridge across the St. Lawrence from St. Helen's Island to the south shore.

It is stated that the Strathroy Furniture Co., Strathroy, Ont., are negotiating for the purchase of the Berlin Furniture Co's factory, Berlin, Ont., for the sum of \$32,000.

The Toronto Electric Light Co., Toronto, will erect a large new office building on Adelaide Street East, and will install new engines and machinery at their Scott Street establishment.

The Nova Scotia Steel Co., New Glasgow, N.S., has changed its name to the Nova Scotia Steel & Coal Co., with a capital stock of \$9,500,000.

At the recent annual meeting of the Dominion Iron & Steel Co., the following directors were elected: Sir W. C. Van Horne, R. B. Angus, James Ross, Hon. G. A. Cox, Elias Rogers, Hon. Robert

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Mackay, H. F. Dimock, A. H. Paget, Hon. David Mackeen, W. B. Ross, B. F. Pearson, J. S. McLennan, A. J. Moxham, H. M. Whitney, F. S. Pearson. At a subsequent meeting, Mr. H. M. Whitney was re-elected president, and Mr. A. J. Moxham, vice-president and general manager.

An elevator is being built at Wellwood, Man., by Bready, Love & Tryon.

Messrs. Suttter & Cullen, Woodstock, Ont., are increasing the capacity of their mills from 200 to 240 barrels a day.

White's flour mill, Galena, Ont., was recently destroyed by fire. Loss about \$15,000.

The Canadian Aluminium Works have been voted a bonus of \$20,000, and the Davies Rubber Tire Co. one of \$25,000 by the village of Chambly, Que.

Mr. W. J. Mallard, Atlanta, Ga., was recently in Toronto, with a view to selecting a site for the erection of a factory for the manufacture of a patented feed cutter.

The new plant of the B. F. Sturtevant Co., at Hyde Park, Mass., sketch plans for which are well under way, will probably provide about eight acres of floor space, fully double that existing in the old plant

at Jamaica Plain. Nearly one-third of this area will be devoted to the manufacture of engines, motors and generating sets. The recent growth of this department has been almost phenomenal and it is in this field—particularly in the application of Sturtevant motors to Sturtevant fans—that the most rapid growth is expected in the near future. The entire plant will be equipped with Sturtevant generating sets and motors for direct driving of line shafts and of large individual machines.

The Ogilvie Milling Co. will erect a large elevator at Napinka, Man.

An extensive addition will be built to the iron works of John Crowe, at Guelph, Ont.

The Terreault Steel & Malleable Iron Co., St. Henri, Que., has applied for incorporation with a capital stock of \$200,000. The applicants include John Terreault, L. E. Bernard, both of St. Henri, and Frank Pauze, Montreal.

The Barrie Tanning Co., Barrie, Ont., has increased its capital stock from \$40,000, to \$100,000.

The Shawinigan Lumber & Wood Working Co., Shawinigan Falls, Que., has applied for incorporation with a capital

stock of \$50,000. The applicants include Ulderic St. Onge, Francois Labelle, both of Shawinigan Falls, and R. K. Laflamme, Lyster, Que.

The Manxman Gold Mining Co., Sault Ste. Marie, Ont., has been incorporated with a capital stock of \$1,000,000. The provisional directors include J. J. Nierling, Jamestown, N.D., A. E. Nugent and Angus Gibson, both of Duluth, Minn.

The works of the Rhodes-Curry Co., Amherst, N.S., were damaged by fire June 18, to the extent of about \$4,000.

The Aberdeen Woolen Mills, Lanark, Ont., were damaged by fire June 18. Loss about \$3,000.

The corporate name of the firm of Menzie-Turner, Limited, Toronto, has been changed to the Menzie Mfg. Co.

The United Electric Co., Toronto, has increased its capital stock from \$150,000, to \$300,000.

According to bids asked for excavation work, etc., the Lake Superior Power Co., have in immediate contemplation the building of a second water power canal on the Canadian side of the St. Mary's river. The present canal generates power for the operation of the big pulp mill, alkali works, electric light plant and iron

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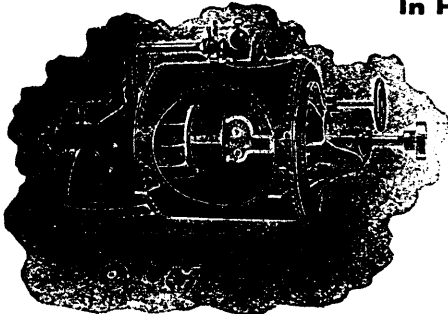
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WATER POWERS examined and Reports made. Estimates submitted for Complete Equipments. - - -

The JENCKES MACHINE CO.,
42 Lansdowne St., Sherbrooke, Que.

works, and has a capacity of 25,000 h.p. The new canal will parallel the one in operation on the north side, and will be 150 feet in width and of sufficient depth to give a head of water so as to develop 40,000 h.p. Most of this will be utilized electrically in the operation of the big steel plant now building, and for other enterprises yet in embryo. It is designed to complete the canal within eighteen months if possible. The project is one that will materially benefit the two "Soo's." When the water power developments now under way are finished, the company will have at its command the vast amount of approximately 120,000 h.p. of what is usually considered the cheapest motive force on earth.

A. B. Cowan, of Cowan & Co., engine and boiler manufacturers, Galt, Ont, who has lately been travelling extensively throughout the west, is a guest at the International. Mr. Cowan reports that "the growing time" which has struck the west is a permanent thing. Business throughout the country is very good, and those who alone are complaining are the people who have been making a practice of bleeding others for a living of their own. The mining camps are all busy. All the towns are growing rapidly and the ranchers are doing well. In speaking of the crop prospects Mr. Cowan said that the yield of wheat would this year be one half larger than ever before. A visit to Sydney, Cape Breton some time ago, had convinced him that in ten years there would be forty thousand men engaged in steel ship-

building there. Canada is destined to become the first shipbuilding country in the world. Mr. Cowan was very enthusiastic over the general prospects of Canada for a bright future. The people have only lately begun to realize that with immense timber resources to draw from Canada can out distance the world in the race for industrial supremacy.—Sault Ste. Marie, Mich., News-Record.

An initial order for forty machines has been received from Australia by the Canadian Composing Co., Montreal, manufacturers of the Monoline composing machine. A portion of the order is for machines which are to be installed in the printing offices of the new federal government of the Australian Commonwealth. No machine of labor-saving character has had a more successful experience than the Monoline. Not to be disregarded is the feature that a Canadian company manufactures the machine, owning all the Canadian rights. The Australian cousins evidently know a good thing when they see it, a representative of the company having but recently gone to Australia to introduce the machines, taking five with him, three for Australia and two for New Zealand.

After a most careful consideration of sites the B. F. Sturtevant Co. has recently completed the purchase at Hyde Park, Mass. of a tract of land containing some fifteen or more acres, and is preparing plans for the erection thereon of a large up-to-date plant for the manufacture of blowers, engines, motors, forges, heating

apparatus, etc. This purchase, although hastened by the recent fire which damaged the works at Jamaica Plain, Mass., and which will be eventually abandoned, is the natural outcome of the rapid growth of this concern during the past few years and of the congested condition of the present plant in which increased facilities could not be advantageously provided. The new site is only five miles from the old plant and less than ten miles from Boston.

The season's lumber cut in New Brunswick is estimated at 150,000,000 feet. The greatest quantity of lumber cut on the River St. John and its tributaries in one year was 190,000,000 feet.

Sault Ste. Marie, Ont., will spend about \$60,000 on its sewerage system.

Preston, Ont., will install a water-works system.

The representatives of the Georgian Bay, Ottawa & Montreal Ship Canal Co., state the company will build a 20-foot canal, to allow lake vessels from Chicago, Milwaukee, Duluth, Fort William, to go direct to Montreal, Quebec, Sydney, Halifax or St. John, if the Government will give assistance. There will be many great power centres on the canal utilized for the manufacture of pulp, etc. The cost of construction is estimated at \$65,000,000.

The British Consul at Porto Alegre, Brazil, reports that many of the hardware importing firms at that port being German, they naturally give the preference

W. A. FLEMING & CO.,

771 CRAIG STREET, - - MONTREAL.

THE STRONGEST AND MOST DURABLE



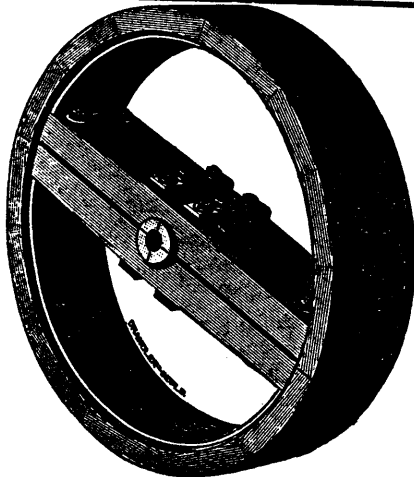
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 BUILT HONESTLY Wood-Split PULLEY
 BUILT RIGHT

It Does the Work. No Trouble. No Worry.

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REEVES PULLEY MANUFACTURING CO., Limited

14 Pearl Street, - Toronto, Ont.

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to German articles as far as they can, but on the whole the larger share of the trade falls to the United Kingdom, as the native and Portuguese houses have no such preference and buy where they find it suits them best. Hardware comes principally from the United Kingdom, but it is a general complaint that British makers do not put their goods up so neatly and effectively as their competitors, who are always striving after attractiveness in making up goods for sale and are willing to carry out the suggestions of their customers whenever possible. There is no doubt this has great influence with buyers, and a neatly parcelled article of inferior quality, especially if cheaper, is more saleable than a better one got up in an unattractive way. The Consul adds that it would probably be well worth the while of British manufacturers and exporters to give more attention to this detail.

STEEL SHIPBUILDING IN CANADA.

Captain McDougall, who is a builder of whalebacks at Duluth, and a director of the Collingwood Shipbuilding Co., was in Toronto this week and said to a reporter:—

Steel shipbuilding in Canada cannot be a great success until some protection is given against the evils now existing. In the United States, where there is cheap steel, many shipbuilding yards, encouraged by protection, are now selling ships for Canadian coastwise trade, while

Congress has forbidden Canadian or any ships save those built in the United States to trade coastwise in United States waters. The only condition upon which a foreign vessel can come under the United States flag is by special act of Congress, or when it is wrecked on the coast of the United States, and is repaired in the United States at a cost of more than three-quarters her value.

If a United States vessel is repaired in Canada, she must pay fifty per cent. of this cost as customs duty at the first United States port she enters. Thus American shipyards have protection for both building and repairing ships, while Canadians have little or no ship protection. The Canadian coastwise trade is freely open to all British ships, and British ship registers are open to all foreign-built ships, so that when a ship is wanted in Canada it can be bought in the United States, with all its appurtenances, which belong to many branches of trade, and by a little red tape can be enrolled under British registry and hail from some British port by putting its name on her stern and buying a British flag. A Canadian vessel can get repairs in a United States port and pay but little customs charges for such repairs.

The United States Government further protect their Pacific coast shipyards, by allowing a large percentage in favor of Pacific coast shipyards when tendering for Government work, and at present there are United States Government ships under contract at San Francisco and Seattle at prices from one to two hundred

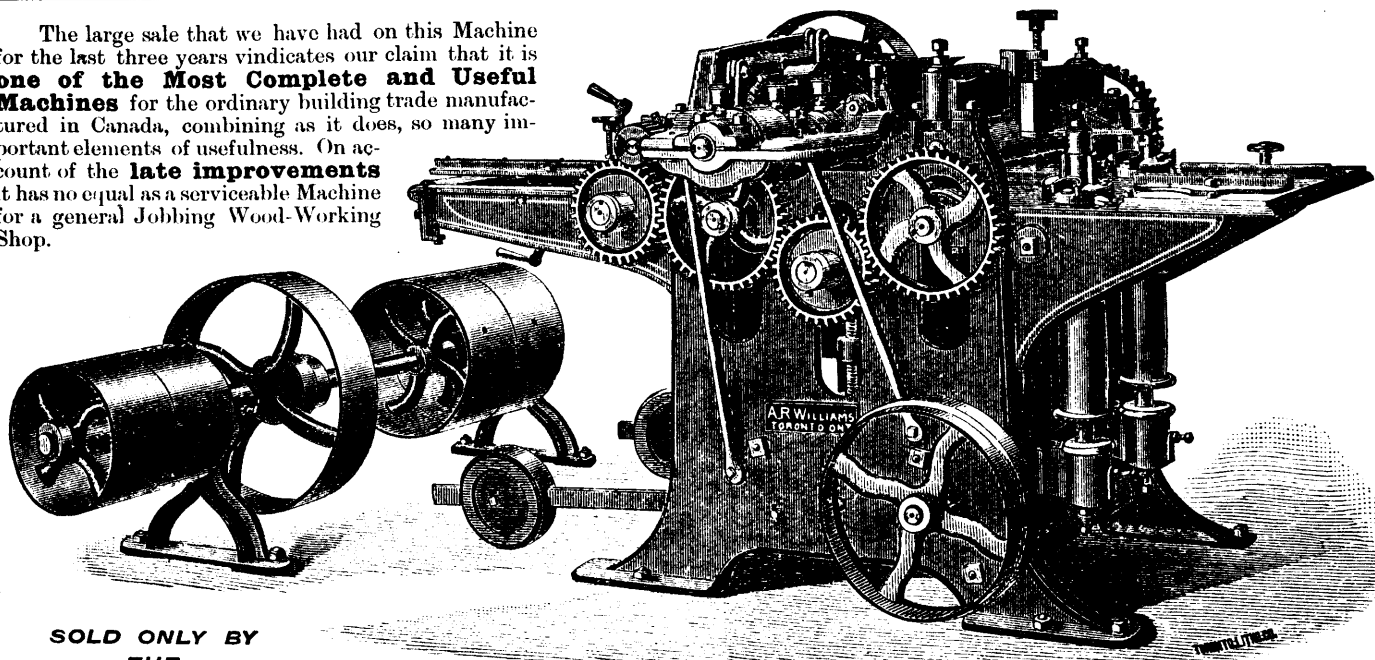
thousand dollars more than they could be built for on the Atlantic coast. In Canada, when Government ships are wanted, bids are asked for in Canada and also in Great Britain; the details of their specifications and fittings are of a class such as can only be got in Great Britain, and the Canadian shipbuilder would have to pay duty on these parts. Unless the Canadian is the lowest bidder the contract is let to an outsider, who can get the ship built in Great Britain, Germany, the United States or elsewhere. Thus an industry which, with its great quantity of raw material, Canada is peculiarly fitted for, is hampered, and the heavy traffic along the frontier is carried by ships not made in the Dominion. If some restriction were laid upon British ships and foreign-built ships of English register engaging in the Canadian coastwise trade; if the Canadian Government would pay a small bounty on all steel ships built in this country, and if an increased custom duty was charged on repairs to Canadian ships in foreign parts, steel shipbuilding here would be so stimulated that in the near future steel ships might be sold with their cargoes in foreign countries, as formerly wooden ships, built in Québec, were sold all over the earth.

TO SEARCH FOR MINERALS.

A license of occupation was granted a few days ago, by order in Council passed by the Government to Messrs. F. S. Wiley, W. A. Wiley and George Hodder,

IMPROVED "ECLIPSE" PLANER, MATCHER and MOULDER

The large sale that we have had on this Machine for the last three years vindicates our claim that it is **one of the Most Complete and Useful Machines** for the ordinary building trade manufactured in Canada, combining as it does, so many important elements of usefulness. On account of the **late improvements** it has no equal as a serviceable Machine for a general Jobbing Wood-Working Shop.



SOLD ONLY BY
THE

A. R. WILLIAMS MACHINERY CO., Limited, Toronto

Manufacturers, Importers and Dealers in

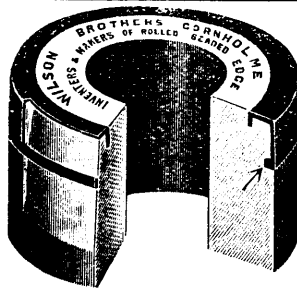
ENGINES, BOILERS AND MILL MACHINERY SUPPLIES

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of Port Arthur, Ont., and W. F. Hogarth, of Fort William, Ont., of an area of Crown land on Hunter's Island, Rainy River District, authorizing them to search for valuable minerals on those lands, and to take up, under the ordinary provisions of the Mines Act, such mineral deposits of value as they may find thereon. The license is for three years, and the licensees are required to expend in exploration and development work on the lands occupied \$120,000 during the three years, viz., \$25,000 during the first year, \$40,000 during the second year, and the remainder during the third year. At the end of the first year one-quarter of the area is to be surrendered to the Crown; at the end of the second year, five-twelfths of the area, and the remaining one-third at the end of the third year, the assumption being that these respective sections will have been in turn thoroughly explored, and should then be restored to the Crown and the general public for exploration purposes. All existing rights or previous discoveries made by other parties are reserved from the concession, and the licensees are to furnish such proofs of the expenditure of the money as the Commissioner of Crown Lands may require. The timber is, of course, reserved to the Crown. On failure to comply with the terms of the license, the Commissioner of Crown Lands may cancel it at any time.

The concession covers an area of about 147 square miles, exclusive of the lands under the waters of the lakes and rivers. The land is situated in the south-east portion of Hunter's Island, and next to the international boundary between Ontario and the State of Minnesota. Iron ore is known to exist near the territory covered by the concession, and a number of locations were taken up many years ago, but so far have remained entirely undeveloped.

It is the purpose of the licensees, who are well-known in mining and commercial circles, to prosecute vigorously the work of exploration and development, and if their search is rewarded by the discovery of iron ores or other minerals in sufficient quantities, it is intended to make them accessible by the construction of a railway, and to carry on extensive mining operations. The region at present is remote from means of transportation, lying a considerable distance south of the



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45 GOLD MEDALS AND DIPLOMAS

HIGH CLASS WORKMANSHIP.

SEVENTY YEARS' REPUTATION.

BOBBIN AND SHUTTLE MANUFACTURERS

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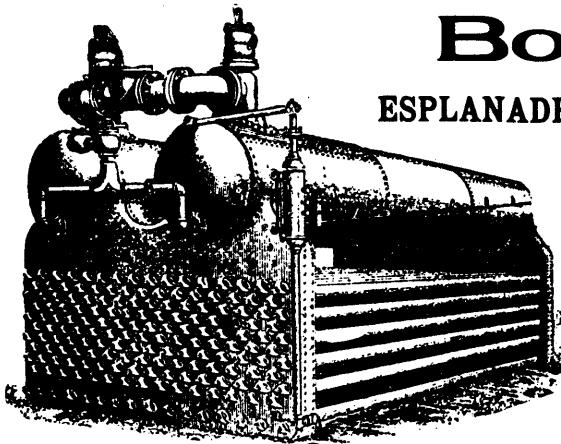
OFFICE AND SHOWROOMS—

14 Market Place, Manchester, Eng.



The Canadian Heine Safety Boiler Co.

JOHN J. MAIN, MANAGER.



ESPLANADE (Opp. Sherbourne St.)

TORONTO

HIGH-CLASS

Water Tube Steam Boilers..

FOR ALL PRESSURES DUTIES AND FUEL

From 75 to 600 H.P. Each

REFERENCOES :

N.B.—We do not make small Boilers

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

CENTRAL CANADA EXHIBITION OTTAWA Sept. 13th to 21st, 1901

A cordial invitation is extended to manufacturers in all lines to exhibit this year.

FREE SPACE AND POWER

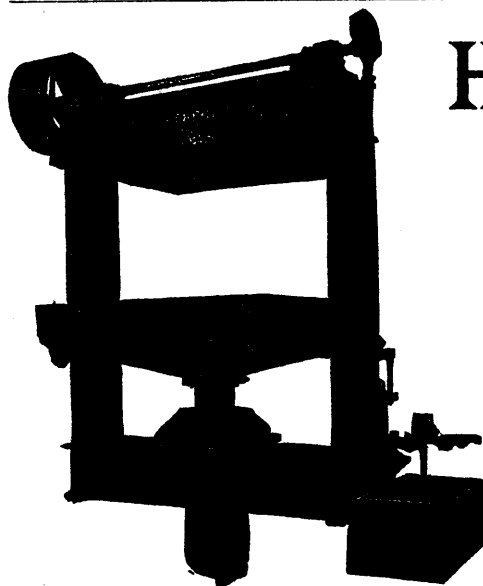
Entries Close September 11th.

FOR ALL INFORMATION WRITE

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We Build Presses
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**PRESSING VENEERS
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AND PRICES

William R. Perrin & Company

TORONTO, - CANADA

recently-constructed Ontario & Rainy River Railway. The Messrs. Wiley have been operating the West End Silver Mine, about fifty miles west of Port Arthur, for a number of years, and are producing bullion steadily therefrom. They have also recently acquired, by purchase, other silver mining properties in that district, including the Porcupine and Badger mines. They are also interested in iron ore property on the Atikokan and Pic Rivers.

The terms and extent of this concession are very similar to those granted to the Engledue Syndicate several years ago, and to the Anglo-Canadian Gold Fields Syndicate last year.

NEW ZEALAND.

There is obvious suggestions for Canadian manufacturers and wholesale dealers, especially those of British Columbia, in an article on the possibilities of trade between United States and New Zealand, written to the Commercial Tribune of Cincinnati, from Dunedin, New Zealand, by an American visitor to that colony. Following are some extracts from the article, and even allowing something for the exuberant imagination of the correspondent, there will be noted a very distinct danger of Canada losing the advan-

tage of a trade of great proportions possible with the Antipodean colony:—

The trade of New Zealand is a ripe, red apple, ready to drop into Uncle Sam's mouth if his commercial agents will only climb the tree and shake it. New Zealand has less than 800,000 people, but it has the greatest spenders on the face of the globe. One family here buys more than three in Russia, almost twice as much as one in Germany, and more than ten-fold the amount of the average family of South America, India, China, or the Philippines. The people like American goods, and they are friendly to Americans. They are proud to call themselves our cousins, and there is no doubt that we might double the trade if we tried. I have met a number of American drummers. They all say they are doing well.

I was riding with a New Zealand merchant, and I asked him what he thought of American goods. He pulled his right foot from under his travelling blanket. "You see those shoes," said he, "they are American. They are the easiest shoes I have ever had on. They have not troubled me a day since I bought them."

American shoes will outsell the English makes in all parts of Australasia. I see them advertised as high as seven dollars a pair in the shop windows.

One of the chief customers for machinery in New Zealand is the Government.

It owns the railroads, and it will eventually control all the street car plants and electric light plants. It builds bridges, and it is thinking of operating coal mines. The result is the Government purchases are enormous. The State Department should instruct our consuls to see that American goods are properly placed before the Government Boards. We might supply all sorts of building materials in the shape of iron and steel. The Government buys hardware, galvanized roofing, elevators, pumps for irrigation, and all sorts of machinery and engineering.

I stopped at an agricultural implement store. The showroom was filled with farming machinery. Half the supply was American. There were several Chicago drills, two Ohio harvesters, and some Illinois ploughs. I entered and talked with the proprietor. He told me that he found a good sale for American reapers, and all sorts of American farming tools, but that the British and Canadians were trying to crowd us out of the market. Said he:

"One of our chief competitors is Canada. The Canadian firms will sell on longer time, and we can get better prices for their goods on that account."

Further up the same street I saw American bicycles in a shop window, and further on, American handsaws.

GEORGE W. CHAPIN,

229 and 231 CHURCH ST., PHILADELPHIA.

AMERICAN, EGYPTIAN, SEA ISLAND COTTON
Plain, Combed, Mercerised, Knitting
Weaving, Splicing

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**BALE'S
FIRE CEMENT**

For Lining and Repairing
STOVES, FURNACES, RETORTS,
and all work where great heat is used.

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GAS PURIFICATION and GENERAL
IRON MERCHANTS

Schoellkopf, Hartford & Hanna Co.,

BUFFALO, N.Y.

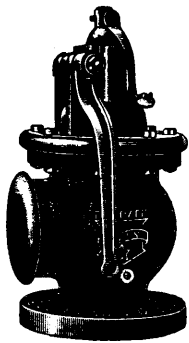
**Aniline Colors,
Dyestuffs, Chemicals**

Manufacturers of

NEW YORK, BOSTON, PHILADELPHIA, PROVIDENCE, CHICAGO,

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



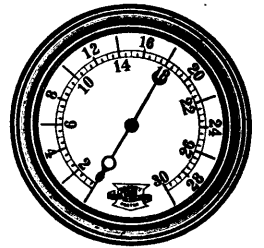
Stationary and Marine Valves.
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Globe and Angle Valves
Single Bell Chime Whistles.

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CROSBY STEAM GAGE and VALVE CO.

BOSTON, NEW YORK, CHICAGO, LONDON

A TRUTHFUL GAGE IS THE ONLY GOOD GAGE



CONSOLIDATED LAKE SUPERIOR CO. PLANS.

The New York Financial and Commercial Chronicle gives the following regarding the properties and plans of the Algoma Steel Co., and the Consolidated Lake Superior Co., the parent company for the new steel plant at Sault Ste. Marie.

There are to be six four hundred ton furnaces, a Bessemer plant and also blooming and rolling mills equipped for turning out one thousand tons a day of steel rails and structural material. The new enterprise centres about the Helen ore mine, on Michipicoten Bay. This is the first great find of high-grade ore on the Canadian shore of Lake Superior. The Helen mine is twelve miles inland from Michipicoten Bay. The ore-shipping pier

is at Gros Cap, about fifteen hours' steaming from Sault Ste. Marie. The ore has to be passed through a crusher, but it grades as high as sixty-four per cent. of metallic iron. The ore body rises to a point from the east end of Boyer Lake, and forms a hill ninety-four feet above its level. The superficial area of the ore body is six hundred and fifty feet by eight hundred and fifty feet, and drilling has shown that the ore goes down to a distance of at least one hundred and eighty-eight feet below the lake level.

The Sault Ste. Marie plant, as is now the case at the furnaces in blast at Hamilton and Midland, will have to obtain its coke from Pennsylvania. Until 1907, however, the higher rate of bounty given by the Dominion government on pig iron made from Canadian ores, will more than offset this disadvantage, and do much to

equalize conditions as between Ontario and Nova Scotia. At the furnaces in Nova Scotia, Newfoundland ore is used. This is classed in the Dominion bounty acts of 1897 and 1899, as foreign; and in 1901 and 1902 pig-metal made from it will receive only \$2 a ton in bounties as compared with \$3, which will be paid on the output of the Ontario plants at Sault Ste. Marie and at Midland. In addition to this bounty the Ontario Government, since 1897, has been paying a bounty of \$1 a ton on pig metal from ores mined in this province.

Mr. Clergue has obtained, without competition, a contract with the minister of railways under which, for five years to come, the Sault Ste. Marie plant is to furnish twenty-five thousand tons of steel rails a year for the re-tracking of the Intercolonial railway. The deliveries in

"Our Country's Welfare is Our First Concern."

MANUFACTURERS'

WILL MISS A

GRAND OPPORTUNITY

IF THEY FAIL TO EXHIBIT

This Year

AT.....

CANADA'S GREAT EXPOSITION, TORONTO
August 26th to Sept. 7th, 1901

Increased Accommodation

VISITORS FROM ALL PARTS of the WORLD

APPLICATIONS FOR SPACE

SHOULD BE MADE

AT ONCE

ENTRIES CLOSE AUGUST 3rd

FOR PRIZE LISTS, ENTRY FORMS, AND ALL PARTICULARS, ADDRESS

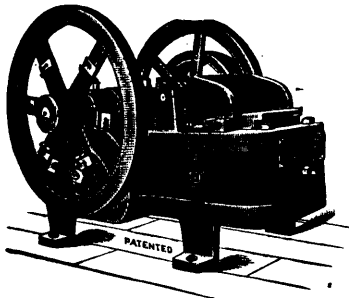
ANDREW SMITH, F.R.C.V.S.,
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H. J. HILL,
MANAGER, TORONTO.

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ROLL JAW CRUSHER.



Crushes

Large Rock

to

4 inch.

Send for Circular.

STURTEVANT MILL CO.,

104 Clayton St.
Boston, - Mass.

1901 are to be at \$32.50 a ton. In the four following years the price is to be fixed by the then prevailing rate in England.

CEDAR LOGS.

A well-posted Puget-Sound log buyer prophesies in the Pacific Lumber Trade Journal that within the next five years cedar stumpage will be worth \$4 per 1,000 feet. He bases his predictions on the fact that the consumption of timber in the manufacture of shingles is so enormous, as compared with the amount available, that the growing scarcity will force the price to the figure named. There may be a great deal of truth in the statement. The Government estimates place the amount of standing cedar at 16,309,453,000 feet. The annual shingle production is not far from 4,000,000,000 shingles, or at 10,000 pieces to 1,000 feet of log, 400,000,000 board measure is a fair estimate of the amount used by the shingle manufacturers annually, and the cedar lumber production is estimated at 100,000,000 feet in round numbers per year. Eliminating, however, the great damage done annually by forest fires, the inaccessibility of a good deal of the timber and the fact that some of the most valuable tracts are being held for the distant future by large holders, it is fair to assume that within fifteen years red cedar as a shingle wood will be a comparatively scarce commodity in this state. As it is, there are now practically no locations available in this state where cheap timber is to be had, and on the whole we are inclined to believe that the statement referred to is based upon facts.

In the face of this state of affairs, says the Vancouver, B.C. Trade Bulletin, the action of the British Columbia Government in passing the act to prohibit the exportation of cedar logs is to be commended, as it is very detrimental to the interest of the Province to deplete our valuable forests to enrich saw mill men on Puget Sound.

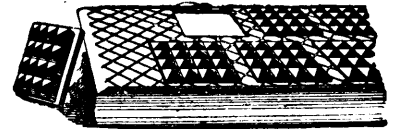
QUEBEC TIMBER LANDS.

The adjourned sale of Crown timber limits was continued at the Parliament buildings in the city of Quebec, last week. The lots offered were in the St. Maurice, Bonaventure, Rimouski, Grandville, Lake St. John, St. Charles and Saguenay agencies. For the St. Maurice lots no bid could be obtained at the Government's upset price of \$60 per mile. The same thing happened in the case of the Bonaventure and Rimouski lots, and it seemed as if there was a combination among the lumbermen to buy nothing at the Government's upset prices. However, when the Grandville agency was reached, thirty-nine and a half miles in the Township of Bungalow was sold to Mr. Remington, of Watertown, N.Y., at two hundred dollars per mile, and another limit of thirty-two miles on the Jacques Cartier River, St. Charles agency, went to Mr. William Power, at eighty-one dollars per mile. After going through the list, which was mostly of lots held over from the last sale, or not paid for then, a fifty miles limit on the River Nouvelle, in the West Bonaventure agency was sold to W. J. McKeen, at thirty-one dollars per mile. The sale in all realized about \$50,000.

GOODING'S INTERCHANGEABLE RUBBER STAIR TREAD.

The accompanying illustration is of Gooding's Patent Interchangeable Rubber Stair Tread, manufactured by Wm. Gooding, North Road Works, Halloway, London, N. England.

This useful article is adapted for railway stations, railway and other carriages, tramcars, omnibusses, footbridges, public buildings, hotels, factories, warehouses, hospitals, schools, theatres, music halls, turkish and public baths, ships, yachts, aisles of churches, pulpit



stairs, office stairs, landings, restaurants, public houses, entrances to shops, private houses, etc., and, in fact, anywhere where a firm, noiseless surface is required.

These treads consist of an iron keeper pierced with a number of square-shaped holes, through which blocks of rubber are placed, these blocks forming the wearing surface, and affording a perfectly firm footing under all circumstances.

They are easily adapted to existing stairs, and can be readily fixed, two or three screws being sufficient to keep them in position.

They do not in any way weaken the stairs, but greatly enhance the appearance.

It is a most durable tread, as the wearing surface is capable of almost indefinite re-adjustment.

A VALUABLE PATENT FOR SALE

The Invention for which a Canadian Patent has been granted, and which is hereby offered for sale, relates to **AXLES** and **BEARINGS** for Vehicles generally, and is especially applicable to Automobiles and similar vehicles where **Sensitiveness and Economy in the Motive Power, and great Strength and Durability** are desirable.

The principal object of this invention is to provide Bearings for vehicles which shall be practically Frictionless and Noiseless in Operation, yet Simple and Inexpensive in Construction, and Strong and Durable, and in which the parts may be readily assembled or replaced when worn without interference with the main portion. For further particulars apply to

J. J. CASSIDEY, care The Canadian Manufacturer,

TORONTO, CANADA

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It is a well-known fact that the majority of people pass up a staircase in the centre. It is therefore evident that the centre of the treads become worn before the two ends. When the rubbers in the centre are worn down to the level of the keeper they can be moved to the ends, and those at the ends, which are not so much worn, brought into the centre, thus avoiding the expense of new blocks for some time.

They can be made to any size or design.

Worn steps can be fitted with these treads.

Specially adapted for iron staircases, either straight or spiral.

The blocks can be renewed by anyone in a few minutes.

The Shipping World says: As a result of a series of tests recently carried out by the direction of Mr. Frank Furness, a well-known American architect, the relative durability of certain flooring materials has been determined as follows. Sample blocks of each of the materials were prepared with surfaces of six square inches, and these were placed face downward upon a horizontal iron rubbing wheel, contact with which was ensured by a pressure of three and a half pounds to the square inch, a suitable frame holding the blocks loosely in place, and preventing them rotating, the wheel was run for sixty minutes at seventy-five revolutions per minute, the face being freely supplied with the best sharp rubbing sand and water. Strange to say, the best results were shown by a interlocking rubber

tile, which lost only one-sixty-fourth of an inch in thickness by one hour's grinding, while a teak slab was reduced thirteen sixteenths, and a soft white pine slab seven sixteenths of an inch in the same time. A number of specimens of marble were also tested, but the average resistance of these was somewhat below that of the woods, of which oak and Oregon pine each lost five-eighths of an inch. This affords good testimony of the value of rubber as a material for stair treads and similar purposes.

THE JONES & MOORE ELECTRIC CO.

The Jones & Moore Electric Co., Toronto, are installing a 250-light compound wound incandescent dynamo for the Schofield Woolen Mills Co's mills, at Oshawa, Ont., to replace their old plant.

They are also placing a 25-horse power motor in the factory of Messrs. Smith Bros., Toronto.

They have been awarded the contract for installing the lighting plant of the steamer Algoma, including dynamo, marble switch board, etc.

They are now manufacturing and placing on the market a new line of multi-polar electrical machinery especially adapted for direct connection to engine.

BALE'S FIRE CEMENT.

Messrs. Bale & Co., 120 Newgate street, London, E.C., England, are inviting the attention of proprietors and managers of gas, iron, glass and chemical works,

stove and other foundries, potteries, breweries, electrical and other works to the many uses of the fire cement manufactured by them. They say that this cement is particularly well adapted for building furnaces of all kinds, lining furnace arches, fixing and coating gas retorts; repairing cracks and holes in all kinds of retorts, brickwork, etc.; prevention of porosity in retorts and deposits of carbon; for backing of fire grates, boilers, ranges, hot air and coke ovens; for fixing, repairing and coating of all brick and iron work subjected to great heat, etc. It is further described as being able to stand most intense heat; does not spoil by keeping; can be mixed and applied by any ordinary laborer, and can be used when the work is either hot or cold.

For further information, prices, etc., apply as above.

THE CENTRAL CANADA EXHIBITION.

A splendid chance for cheap and profitable advertising of any and all mechanical products is offered to the manufacturers of Canada by the liberality of the management of the Central Canada Exhibition Association, whose fourteenth annual exhibition takes place at Ottawa from September 13 to 21.

In order to secure an exhibit of unusual merit, and also to benefit both the producer and the purchaser, by giving the former the opportunity to display his wares to the best advantage, and the latter a chance to become acquainted with

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—AND—
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INTERESTING BOOKLET MAILED TO ALL STEAM USERS UPON REQUEST.

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In the expansion of business now bringing profit to so many manufacturers, advertisers who have made themselves regularly prominent in past years have been notable in reaping the rewards of persistent publicity by advertising in

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IN A CLASS BY ITSELF

Not built to compete with some other make—not the "just as good" kind, but an Exhaust Head that's in a class by itself.

THE BURT EXHAUST HEAD



gives practical, efficient, lasting service from the time it's installed.

THE BEST IS WHAT YOU WANT

Shall we send Catalogue?

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AKRON, OHIO, U.S.A.

LARGEST MFRS. OF OIL FILTERS IN THE WORLD

the most modern productions of mechanical skill, their huge machinery hall will be thrown open to any and all firms who wish to exhibit, gratis. There will be absolutely no charge for space and any required amount may be secured by writing to the secretary, Mr. E. McMahon, 26 Sparks street, Ottawa. Should power be desired for the better displaying of any machinery, this too, will be furnished free. These together with other inducements, will, no doubt, result in the securing of one of the finest machinery exhibits ever seen at any fall fair, and the results cannot fail to be beneficial to all parties concerned. Farmers and all other users of labor-saving machinery are only too pleased to be placed in a position to see and study the latest mechanical devices, while the manufacturers should let no opportunity slip whereby they can bring their products to the notice of the purchasing public, and the Central Canada Exhibition Association, by their liberality, deserve the consideration and the patronage of the Canadian manufacturers of machinery.

A SMELTER AT VANCOUVER.

Vancouver is to have the smelter and refinery. The Granby Consolidated Mining, Smelting & Power Co. has definitely decided to build a smelter at Vancouver, with the intention of adding a refinery to its plant in a short time.

The fact that the smelter is to be established will give an impetus to mining all along the Coast and moreover it

will give a new industry and another payroll. We understand that the company has made, or is making, arrangements to secure ore from South America for treatment; it will be in the market for ore from all the camps along the Coast; from Kamloops, Revelstoke and other places along the C.P.R. line. The establishment of a smelter in Vancouver will benefit many districts. Lynn creek across Burrard Inlet will attract more prospectors; Texada Island will be more thoroughly developed, and hasten development work in Howe Sound. Many prospectors will endeavor to do enough work to ship ore in order to get money to keep working their claim. A smelter with prospects of a refinery put up by such a progressive and substantial people as the Milner-Graves Syndicate is an augury of better times on the Coast.—Trade Budget.

ARTIFICIAL BUILDING STONE.

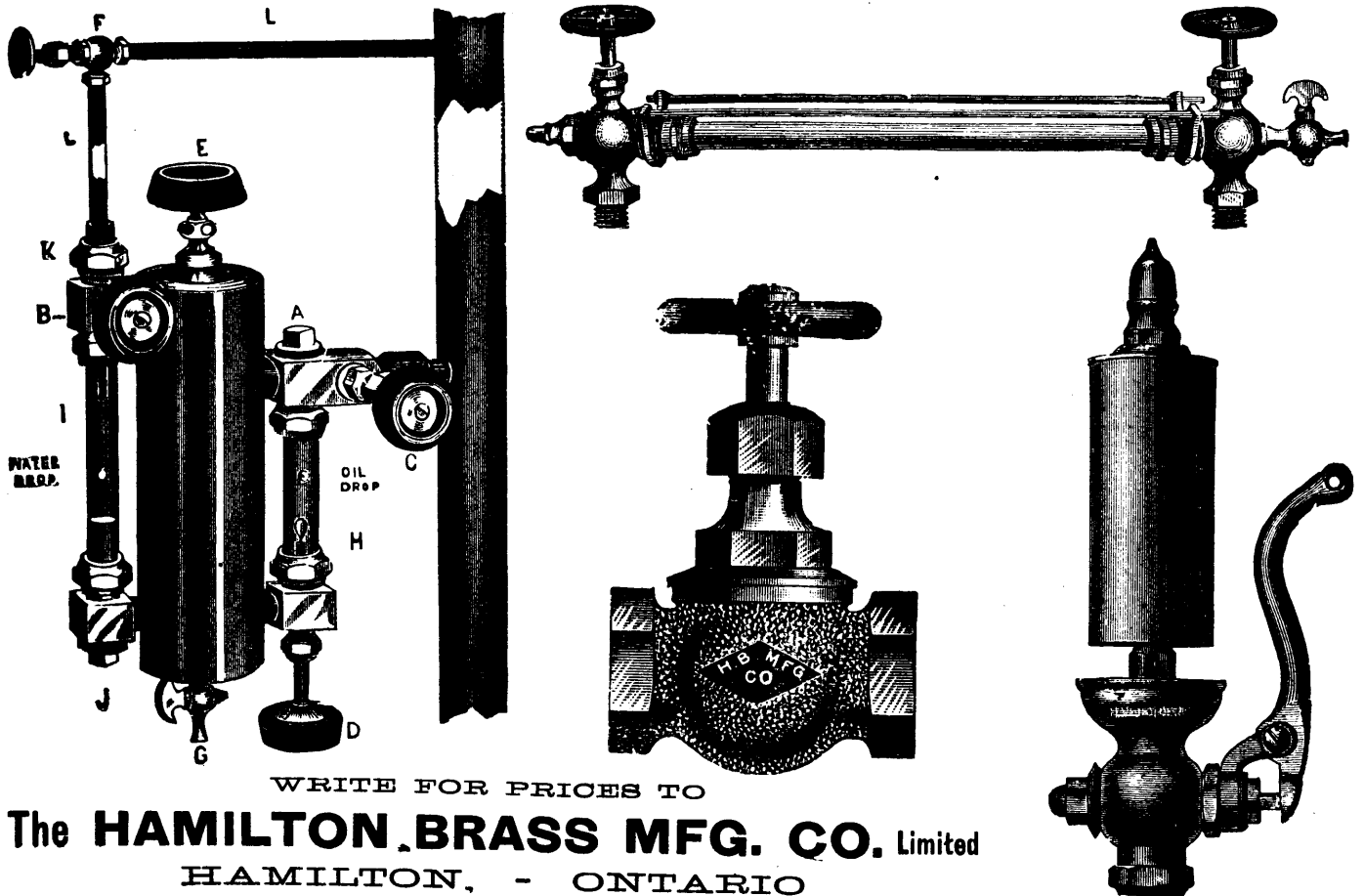
The following is a rough sketch of the process for producing this stone:—Hydraulic or quicklime, as well as fat or rich lime, may be used; hydraulic lime is preferred, however, if the price warrants it. All kinds of sand suitable for building purposes or for the preparation of mortar may be used, but the cleanest is the best. The proportions are from four to six parts of lime to ninety-four or ninety-five parts of sand, the small variation depending on the quality of the sand. After pulverising the lime in a ball

grinder (Kugelmuehle), both substances are mechanically measured and then thoroughly mixed by machinery. This mixture is then pressed into bricks, which are afterwards piled on flat cars and pushed into a cylindrical boiler. The boiler is then hermetically closed and steam turned on at a pressure of from eight to nine atmospheres. In about ten hours the process of hardening is finished and the stones are then ready for use.

The process of hardening the stones in the boiler is explained by the operation of high-pressure steam on the freshly pressed stones. Through the influence of the calcium hydroxide on the silicic acid of the sand, different kinds of calcium silicates are formed, which are the accepted standard in the process of hardening. The exact time for hardening is determined by the quantity and the nature of the silicic acid in the sand.

The essential points of advantage claimed in the manufacture of the lime-and-sand over the clay-brick are:—

1. The cost of production is much lower.
2. With a smaller investment, considerably more bricks can be produced.
3. The production can take place in all seasons of the year and at all hours.
4. The stone has a much higher compressive strength—about 550 pounds per square centimetre.
5. Colored face, and fancy stone can be produced.
6. The stone has a much better and smoother appearance, and there is no loss on account of breakage.



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The HAMILTON BRASS MFG. CO. Limited
HAMILTON, - ONTARIO

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Toronto Elevator Co.

**MILLWRIGHTS AND
ELEVATOR SPECIALISTS**

Estimates Given and Losses
Adjusted

OUT-OF-TOWN WORK PROMPTLY ATTENDED TO.

PHONE **JOHN H. SHALES,**
1535 Manager

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Elevators
Leitch & Turnbull Co.
Limited, Elevators.
Greening's Wire Ropes.

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TORONTO

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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.

WATER WORKS SUPPLIES

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PACKARD

**ELECTRIC
COMPANY
LIMITED**

MAKERS OF

LAMPS AND TRANSFORMERS

SOLE AGENTS FOR CANADA

SCHIEFFER RECORDING WATT METERS

ST. CATHARINES, - CANADA

DON'T BURN YOUR BOILER

Save it by removing the incrustation. Give a long life to your steam boiler, valves, engine, steam pipes, etc., which is sure to be done by the use of

SUTTON BOILER COMPOUND . . .

Every up-to-date steam user is alive to its many good qualities. For everything in the mill supply line ask

THE WM. SUTTON COMPOUND CO., OF TORONTO LIMITED.

186 Queen Street East.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

7. All drying sheds and brick kilns necessary for the production of clay-brick are done away with. A space of 65 feet is all that is needed for the building of a lime-and-sand stone factory producing 12,000 bricks per day.

Another factor of great importance in this system is that, instead of sand, the granulated cinder from the blast furnaces may be used, when the mode of manufacture is identical with that of the lime-and-sand stone. Waste of all kinds of sand and of building stones, which contain silicic acid, are equally useful and make a good stone.—Kuhlow's.

PULP WOOD IN QUEBEC.

The position of American manufacturers of paper and pulp who are in any degree dependent upon the Province of Quebec for their supply of pulp wood has been very materially improved during the past week or two, if reports coming from the capital of that Province be true. It will be remembered that early last year, the Government of the Province of Quebec undertook to restrict the exports of pulp wood to the United States by raising the stumpage dues on such wood cut on Crown Lands from 40 cents per cord to \$1.90, and by providing at the same time for a rebate of \$1.50 a cord upon all such pulp wood manufactured within the Province. That was equivalent in effect to the imposition of an export tax of \$1.50 per cord on pulp wood shipped out of the Province. The Government has recently concluded to modify these terms very considerably, and a new order, so it is said, has been issued, making the stumpage tax sixty-five cents per cord, and providing for a rebate of twenty-five cents per cord on all pulp wood manufactured at home. But the Government's liberality is not quite so extensive as these figures indicate, for the new order stipulates that a cord shall be equal to 600 feet, board measure, whereas heretofore 1,000 feet, board measure, have been considered equivalent to a cord.

The value of a cord varies considerably in different localities. Those who studied Eaton's Mental Arithmetic thirty or forty years ago learned that a cord consisted of eight cord feet, or 128 cubic feet. In other words, a pile of wood eight feet long, four feet wide and four feet high constituted a cord, while of course the actual quantity of wood in a cord would vary somewhat as the wood was very large and piled loosely, or comparatively small and piled closely. Custom in some parts of Vermont fixes 132 cubic feet as the measure of a cord for some purposes, while custom in Quebec heretofore has fixed a cord at 1,000 feet by board measure; that is to say, as much timber as, according to the arbitrary scale used by lumbermen, will presumably cut up into 1,000 feet of boards, or into lumber equal thereto in cubical contents. Further, in some portions of the timber lands of New York State, 685 feet, board measure, and a cord, are accepted as terms of equal value, in so far as pulp wood is concerned.

The effect of the new order in Quebec is this: Previous to a year ago, the

stumpage fee being forty cents per cord and a cord being 1,000 feet board measure, any one, Canadian or American, cutting timber on Crown Lands could cut a cord of pulp wood of the present size of a cord for a stumpage fee of twenty-four cents. During the past year the Canadian has cut his wood at the same price, while the American has had to pay for a cord of the present size a stumpage fee of \$1.14. Under the new order, the Canadian manufacturer will get his pulp wood for home manufacture at the rate of forty cents per cord; that is to say, for sixty-five cents, with a rebate of twenty-five cents, while the Americans will have to pay sixty-five cents per cord. The position, therefore, of the American manufacturer is considerably improved, as a differential of twenty-five cents per cord is not a serious matter. The price in some localities varies more than twenty-five cents per cord at different times of the year.

It may be remarked that the Canadian Government is actuated by no consideration for the welfare of the American manufacturers in making this change. It has found that with a stumpage fee of \$1.90 per cord it cannot sell its timber to American manufacturers, and consequently its revenues are very seriously reduced. It has also found that Canadian manufacturers have been seriously embarrassed by being compelled virtually to place \$1.50 per cord on all the pulp wood they cut in the hands of the Government for a considerable period of time, with a certainty of course of getting it

back eventually, but of losing the use of the money meanwhile. As capital is not over plentiful in Canada, the burden thus placed upon Canadian pulp manufacturers was altogether too heavy for them to bear with comfort.—The Paper Mill.

ADVANTAGE OF MECHANICAL DRAFT.

In the summary of advantages of mechanical draft presented in the treatise on that subject published by the B. F. Sturtevant Co., it is stated that to a great extent they are independent, and the possession of one advantage is evidence of the possession of others of similar character. In a brief summary, however, these may be more readily brought into accord. Thus the very adaptability of mechanical draft is indicative of the fact that it is more flexible than that produced by the chimney, is more readily controlled, and less influenced by climatic changes; while the apparatus for its production is more readily transported and has a higher potential value than a chimney. To a considerable extent these stand but as the conveniences of this method, regardless of their economies. When it is shown that increased efficiency can be secured by a method that is more convenient, the advantage of mechanical draft is established.

The actual omission of the chimney is sometimes of far greater importance than would at first appear, while the readiness with which the rate of combustion may

be increased is doubly appreciated when it is shown that under proper conditions the efficiency of combustion may be increased thereby. The purely economic features are presented most prominently in the ability to utilize low grade fuels, the resultant economy being shown in numerous examples here presented. The economy in the quantity of fuel consumed has, in its relation to the use of mechanical draft on shipboard, an advantage which is closely allied to that resulting from the decreased space occupied.

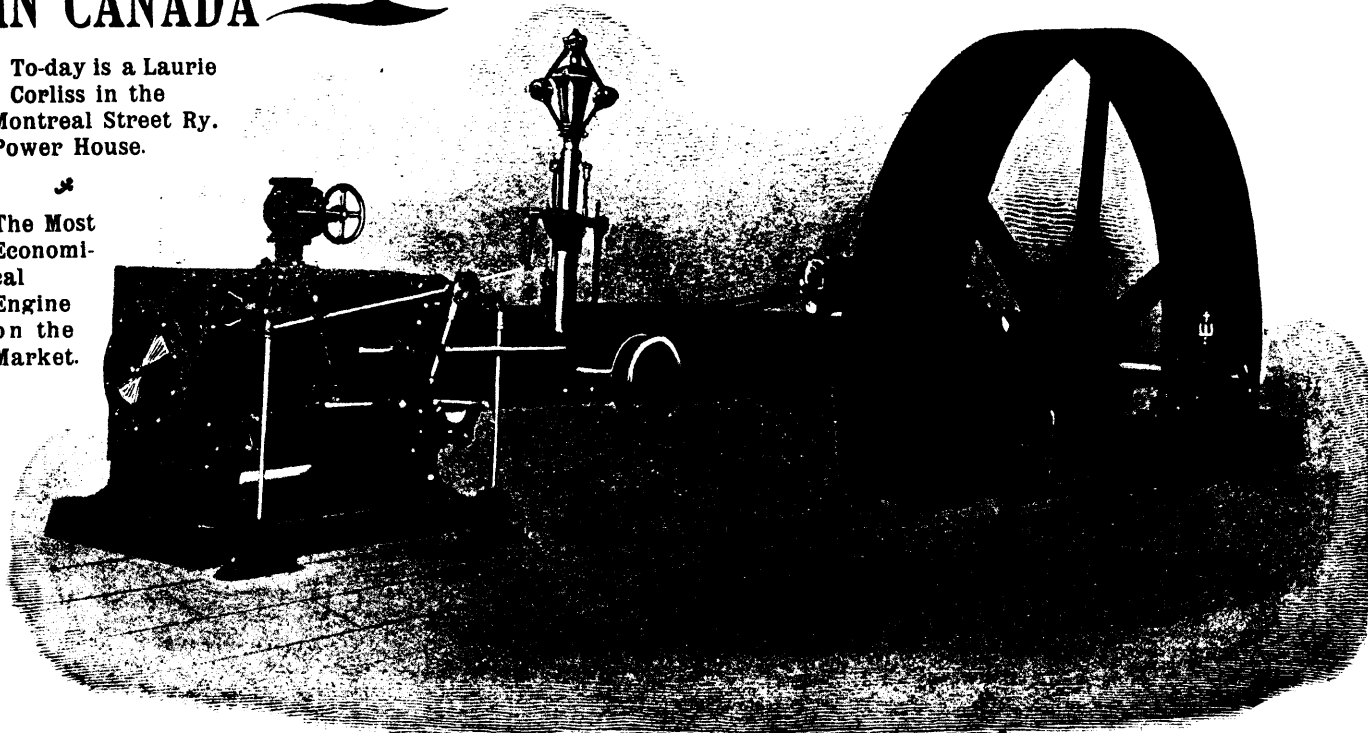
The economic results which may be secured through the introduction of mechanical stokers and devices for utilizing the waste heat of the gases are rendered most evident under the conditions of mechanical draft production, as are also the great advantage of preventing smoke and the blessings of good ventilation as they are exemplified on shipboard. The facts that the size of a boiler plant required for a given output can be reduced when a fan is substituted for a chimney, that the cost of the mechanical draft plant is usually far less than that of the chimney draft plant, and that its operating expense is likewise less under proper conditions, all point most conclusively to the purely economic advantages of the method which it is the purpose of this book to present. When these are considered in the light of the convenience and various other advantages of mechanical draft, its evident superiority to chimney draft must be conclusively established in the mind of any one who has read these pages.

THE BIGGEST ENGINE IN CANADA

Laurie Engines are installed in the Power Houses of the Montreal, Toronto, Winnipeg and Vancouver Street Railways, the Dominion Iron & Steel Company, Sydney, etc.

To-day is a Laurie
Corliss in the
Montreal Street Ry.
Power House.

The Most
Economical
Engine
on the
Market.



Any Size—Small or Large—Supplied
Information gladly furnished
upon writing to. . . .

LAURIE ENGINE CO., 1021 and 1014 St. Catherine St.,
321 St. James Street, **Montreal.**

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COAL JAS. H. MILNES & CO. COKE

WHOLESALE DEALERS IN
Best Grades of STEAM COALS.
Best Grades of BLACKSMITHS' COALS.
Best Grades of FOUNDRY OKES.

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

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.

509. A Birmingham firm in a good position to handle wood handles and particularly Shovel of D. & Crutch patterns desires to be put in touch with Canadian makers.

510. A Northampton house possessing a large connection with boot and shoe manufacturers is prepared to act as agent for Canadian leather producers wishing to establish trade in the United Kingdom.

511. An Italian house asks for names of Canadian shippers of dried codfish and reports good local market for same.

512. A firm in Hamburg having a large outlet for evaporated apples, canned lobsters, etc., desires to be placed in communication with Canadian shippers of these goods and other products suitable for the German market.

513. Enquiry is made for the names of Canadian firms who require the services of a representative or sole agent who can

provide office accommodation and promote the interests of his principals in the English markets.

514. A Liverpool firm is willing to act as agents in the North of England for a Canadian exporter of furniture wood.

515. A firm of metal brokers in South Wales ask for names of Canadian firms having metal residues for disposal.

516. A Canadian house largely interested in a company now being formed for the manufacture of wood pulp on an extensive scale ask to be placed in communication with parties enquiring for the product.

The opportunity for reduction in fuel cost in a small boiler plant is well illustrated by a statement made by the Eagle Machine Works, of Memphis, Tenn., in a recent letter to the B. F. Sturtevant Co., Boston, manufacturers of the forced draft fan outfit, to the effect that "the boiler is estimated at 85 h.p. and hard worked. The blower is driven from a line shaft and the main air pipe is connected to the ash-pit to act on the forced draft principle. Soft coal is used. The saving according to the statement of the owners is three dollars a day, and is caused by the difference in the price of coal. Formerly they used coal at \$2.85, now they use coal at \$2.25 per ton. The amount of coal used is the same. Formerly they were often short of steam, now they have plenty of it.



Decided improvement. Less friction. Can be changed from a roller to a three-wheel cutter. Extra wheels in the handle. Send for catalog. TRIMONT MFG. CO., Roxbury, Mass., U.S.A.

N.Y. & Boston Limited
Kniekerboeker Special
South-Western Limited

Famous Trains between

BOSTON	CINCINNATI
NEW YORK	CHICAGO
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Via

Big Four Route

AND

NEW YORK CENTRAL
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Cafe, Library, Dining and Sleeping Cars

M. E. INGALLS, President.
 W. J. LYNCH, Gen. Pass. and Ticket Agent.
 W. P. DEPPE, Asst. Gen. Pass. and Tkt. Agt.
 CINCINNATI.

Toronto Woolen Machinery Co.

We now offer as a going concern the property known as

The Vienna Woolen Mills

Consisting of the following machinery:—

One set 48 in. Platt Cards, all clothed.
 One 264 Spindle Bancroft Mule.
 One 24 in. G. & Mc. Picker. One Cone Duster.
 One Fraser's Card Grinder. One Yarn Spooler.
 One 60 Spindle Fly Twister.
 One 108 in. Crompton Cone Loom, 4x4 box, 4 harness.
 Two 92 in. Faisey " " 4x4 " 24 "
 One 48 in. Gilbert " " 3x1 " 4 "
 One 48 in. " " 1x1 " 4 "
 One Broad Warper and Beamer.
 One Bobbin Winder.
 Two Broad Up and Down Gigs.
 One Rotary Pulling Mill. One Cloth Washer.
 One Yarn Washer.

With Spools, Bobbins, Tools, etc., etc.

BUILDING No. 1.

Two and a-half Storey Frame, with stone foundation, 30x60 feet.

BUILDING No. 2.

Boiler and Picker House—One Storey Brick, 25x64.

A never-failing Water Power, all heat by steam and in first-class order. Good local trade has always been done.

The above can be bought cheap and on easy terms. Apply

TORONTO WOOLEN MACHINERY CO.

118 DUKE ST., TORONTO.

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HAVE YOU HEARD
 ABOUT OUR
STEEL POINTED
CORE DRILL?
 CUTS ANY ROCK. NO DIAMONDS.
Davis Calyx Drill Co.
 Canadian Rand Drill Co.
 Agents.
 18 VICTORIA SQ.
MONTREAL.

**E. B. THOMPSON,
CUSTOM HOUSE BROKER**

**GENERAL FORWARDING
and TICKET AGENT,**

Correspondence Solicited. **38 YONCE ST., TORONTO.**

**THE ABBEY IMPROVED CHILLED
SHOT COMPANY, Limited, Newcastle.**

What better testimonials do sportsmen require than the following, viz.:

Output of Shot in 1899 exceeded 1897 by 4,040 cwt., or equal to the loading of (at 1 oz. per load) 9,031,680 Cartridges.

The winner of the All-England Championship Cup in December, 1898, fired with our shot, and speaks highly of it.

.. TO MANUFACTURERS ..

GORDON, DRUMMOND & CO.

134 LONDON WALK

LONDON, E. C.

Desire the representation in Europe of a **FIRST-CLASS MANUFACTURER.**

References kindly permitted to the Editor of this journal. Address as above.

Telegrams: "Bierenate, London," A B C code used. Bankers: London City and Midland.

MARKETS.

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 of 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.

THE MASTER PLUMBERS.—The sixth annual convention of the National Association of Master Plumbers, and Gas, Steam and Hot Water Fitters of Canada assembled in Toronto, June 26, and were in session three days. The officers present at the opening were:—J. W. Harris, Past President, Montreal; W. H. Meredith, President, Toronto; John McKinley, Vice-President, Ottawa; Wm. Mansell, Financial and Recording Secretary, Toronto; Joseph Lamarche, Treasurer, Montreal. Provincial Vice-Presidents—Ontario, Joseph Pennington, Windsor; Quebec, Joseph Thibeault, Montreal; Manitoba, J. H. Wilson, Toronto; British Columbia, Joseph Wright, Toronto; Nova Scotia and New Brunswick, F. Powers, Lunenburg, N.S. Toronto sub-Executive Committee—W. H. Meredith, Wm. Mansell, J. H. Wilson, Joseph Wright.

At the initial meeting about fifty members were present, which was largely increased before the close of the session. A deputation representing the plumbers' supplies manufacturers, composed of Messrs. A. A. McMichael, H. W. Anthes, A. G. Booth, Adam Taylor, Thos. B. Alcock, and Fred Somerville were in attendance upon the convention.

The President reported an improvement in the relations between the members of the association and the manufacturers and jobbers, but room remains for further advance along that line, the gentlemen engaged in those lines of business not yet having grasped the aims and objects of the association. He renews the complaints of over-keenness on the part of masters to obtain work which causes some to under-bid and to resort to rather

DIXON'S

**SOLID
Belt Dressing.**

DOES TWO THINGS

AND DOES THEM THOROUGHLY

STOPS THE BELT FROM SLIPPING.

PLEASES THE MAN WHO USES IT.

Joseph Dixon Crucible Co., Jersey City, N. J. U.S.A.

NOTHING EQUALS IT.

SAMPLE SENT FREE. SEND FOR ONE.

“Zanzibar

Anti-Rust

.. Paint” ..

MADE TO ENDURE

GARFIELD PAINT CO.

WINDSOR, ONT., CANADA

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

Eastern Agents

For Roofs of all kinds, Bridges, Iron Work.

Write for Booklet "A STUDY IN BLACK."

THE SMART-EBY MACHINE CO. LIMITED,

191 Barton Street East, Hamilton, Ont.

High Speed Engines, Brown Automatic Engines, Boilers, Rogers' Patent Shaking and Dumping Grate Bars, Pumping Machinery, Electric and Hand Power Travelling Cranes, Shafting, Pulleys, General Machinery, Etc.



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Electrical Contractors

NITROUS OXIDE and OXYGEN GAS

SWITCHES AND SWITCH BOARDS MANUFACTURED

Dynamos and Motors

Built and Repaired. We have a well-equipped Machine Shop. Model and Experimental Work a specialty. Inventions perfected. All work perfectly confidential. Correspondence solicited.

35 to 39 ADELAIDE ST. W., TORONTO

PHONE 8494.

questionable methods in order to get work, and instead of blaming the manufacturers and jobbers for not accomplishing greater success, the President advised members to turn the searchlight upon themselves to see whether the defects are not to be found there. As a means of obtaining a more perfect organization which shall embrace all the master plumbers in the towns and villages, the suggestion is offered that the Secretary be allowed some remuneration for his services in order that he may be able to devote his time to organizing the trade. The state of the trade generally is regarded as satisfactory.

Discussion on the question of provincial associations occupied a considerable portion of the time of the Association. The committee to which the matter had been referred recommended the formation of six provincial associations, as follows:—Nova Scotia and Prince Edward Island, New Brunswick, Quebec, Ontario, Manitoba and North-West Territories, and British Columbia; these associations to be composed of representatives of local associations, each provincial association to be represented in the National Association, and the latter to continue to be composed of representatives of local associations.

The scheme for the formation of Provincial associations to be composed of representatives of the various local associations, was approved, and the report of the committee was handed over to a special committee to prepare the necessary by-laws. As soon as these are perfected the Provincial Vice-Presidents will at once proceed with a formation of the associations.

The following officers were elected for the ensuing year:—President, John McKinley, Ottawa; Vice-President, Frank Powers, Lunenburg, N.S.; Secretary, H. A. Knox, Ottawa; Treasurer, Joseph Lemarche, Montreal, re-elected.

Provincial Vice-Presidents—Nova Scotia, Cape Breton and Prince Edward Island, G. H. Perrien, Halifax; New Brunswick, James Walker, St. Johns; Quebec, John Watson, Montreal; Ontario, W. Mansell, Toronto; Manitoba, Capt. Joseph Giroux, Montreal; British Columbia, J. H. Wilson, Toronto.

Chairman of committees were appointed as follows:—Sanitary, J. W. Hughes,

Montreal; Apprentice, Robt. Ross, Toronto; Legislative, E. B. Butterworth, Ottawa; Essay, Geo. Martin, Yarmouth, N.S.

Halifax was decided upon as the next place of meeting of the Association.

During the session of the Association a banquet was tendered to the members by the Toronto Plumbers Supply Association and the Toronto Master Plumbers' Association, Mr. A. G. Booth being chairman of the joint committee, and in the evening of June 27, with the mercury apparently indicating about 999 degrees in the shade, a delightful time was had at McConkey's.

UNITED STATES PIG IRON MARKET.—

The production of pig iron on June 1 was at the rate per week of 314,000 tons, and increase from 301,000 tons during the preceding month. At that date stocks had declined from 363,000 tons on May 1 to 333,000 tons, thus showing that in the face of a production which had never been equalled, the consumption was in excess of the immediate supply. Since June 1 sales of pig iron have materially increased and the market has stiffened, the principle consuming interest having bought no less than 150,000 tons for delivery during the latter half of the year. The report regarding this purchase was at first denied but has since been confirmed.

The consumption of pig iron continues at a heavy rate and prices are generally steady. Foundry iron is dull and drooping because of large sales early in the present year, but the general situation is favorable. This is still further indicated by the fact that a number of new furnaces with a large capacity will be blown in, according to statements made by the builders, before the close of the year, thus increasing the output to a considerable extent and aiding in proof of the prediction made some weeks ago that the production this year would probably exceed

all previous records, as had been done by June 1.—Stoves & Hardware Reporter.

TRADE CONDITIONS IN CANADA.—Dun's Review, speaking of Canadian business, says:—

Montreal.—Business is assuming more of a midsummer tone, but is better than usual at this season, especially in hard-

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—

Fourdriner 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.

SILICIA BRICKS

Highest Grade for all Purposes

MAGNESIA BRICKS

FOR LINING

Smelting, Refining and Matte

Furnaces, also Converters

Rotary Cement Kilns

F. HYDE & CO. 31 WELLINGTON ST. MONTREAL.

GALVANIZING

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

WINDMILLS, PUMPS, TANKS, Etc.

ONTARIO WIND ENGINE and PUMP CO.

LIMITED,

95 ATLANTIC AVE., TORONTO.

BUY OUR

CARD CLOTHING

BECAUSE IT IS

ALL ENGLISH

LEATHER & CLOTH BACKINGS,
HARD & TEMPERED WIRE
MACHINERY

WORKMANSHIP

MADE HERE AT HOME

ASK FOR SAMPLES & QUOTATIONS

THE **J. C. McLAREN BELTING COY.**

TORONTO

FACTORY MONTREAL.

ware and metals. Collections are fair to good, and crop prospects bright.

Quebec.—A general quietness prevails in wholesale circles, although no complaints are heard. The lumber market is active, and the general country trade seems to be fine.

Toronto.—General wholesale trade is fairly active. Groceries, sugars and coffees are selling freely, and in hardware, metals and leather there is a good movement, with paints and oils firm. The grain market is very dull, and prices lower.

Hamilton.—Manufacturers and jobbers report business as generally good, though retail trade has not been up to the mark, owing to wet and cool weather. Collections fair and money market easy.

Halifax.—Fine weather has caused more activity in business, but it is probably not so good as at this time last year.

St. John.—The lumber trade is fairly active, and orders are being filled with profit. Wholesale dry goods and shoe dealers report trade very quiet. In groceries and hardware it is only fair. Fine weather has made some improvement in retail dry goods.

Winnipeg.—In general lines the trade volume is about the average for the season, with payments likewise excellent. The weather for crops brightens the prospects materially.

Victoria.—Trade in most lines is re-

ported quiet, with collections rather slow. Foreign business fairly active.

PUT ON THE FREE LIST.—The following articles, which are used as materials in Canadian manufactures, have been transferred to the free list:—Keypins, damper springs, jack springs, rail springs, regulation screws, spoons, bridle wire, damper wire, back check wires, dowel wires, German centre pins, brass pins, rail hooks, brass brackets, plates, damper rod nuts, damper sockets and screws, shell, brass capstan screws, brass flange plates and screws, hammer wires, fly felt, butt felt, damper felt, hammer rail cloth, back check felt, catch felt, thin damper felt, whip cloth, bushing cloth, hammer felt, back hammer felt, bridle leather and buckskin, when imported by manufacturers of piano-keys, actions, hammers, base dampers and organ keys, to be used exclusively for the manufacture of such articles in their own factories.

The following yarn will also be admitted free of duty, viz., Botany yarn, single in numbers 30 and finer, on mule cops, dry spun, on what is known as the French or Belgian system, not doubled or twisted, in white only, when imported by manufacturers of cashmere socks and stockings, to be used exclusively for the manufacture of such articles in their own factories.

CUSTOMS UNDERVALUATION.—An alleged case of undervaluation of goods imported from the United States is now engaging the attention of the customs

authorities. The concern interested is the Carbon Light & Power Co., which recently made a contract with the city of Toronto for lighting a portion of the city streets with gas lamps. The company has imported burners manufactured by the Pennsylvania Globe Gas Light Co., Philadelphia, Pa., and the customs authorities being under the impression that the valuation placed upon the burners was incorrect, Inspector Belton made a visit to the United States, the result of which was that a penalty was imposed upon the Carbon Light & Power Co. for undervaluation. The company insisted that they had correctly stated the value in the invoices upon which they paid duty, and the department in accordance with the usual custom in such cases has referred the matter to the Customs Board for investigation and determination.

WIRE NAILS.—The Wire Nail Association of Canada held a session in Halifax, N.S., June 25, at which almost every mill in the Dominion was represented. Factory reports were received from all parts and prices allowed to remain as they have been since the first of the year.

THE FISHING REEL.—B. F. Meek, the inventor of the fishing reel, died at his home in Frankland, Ky., June 26, aged about 60 years. Although known to fame as the inventor of the reel now attached to all up-to-date fishing rods, Mr. Meek always has boasted he never went fishing in his life.

STAR WIND MILLS

FOR PUMPING OR POWER PURPOSES

Galvanized Steel or Wood, all Sizes, 4 to 26 feet in Diameter.

PUMPING MILLS

FURNISHED WITH OR WITHOUT TANK ELEVATED IN TOWER.

GALVANIZED

Steel Towers

Any height, either Three or four post, with substantial ladder.

TANKS

Any Capacity, Any Purpose Made in Pine, Cypress, Fir or Galvanized Steel.

Our windmills are self-regulating and self-governing, and with our Hoosier Automatic Anti-Freezing Force Pump the windmill outfit takes care of itself, night or day, in calm or storm.

"Hoosier" IRON
—AND—
"Fast Mail" PUMPS.

Designs and Prices Furnished. Write for Catalogue.

Address **FLINT & WALLING MFG. CO.**
"STATION A" **KENDALLVILLE, IND.**

Buffalo Forge Company

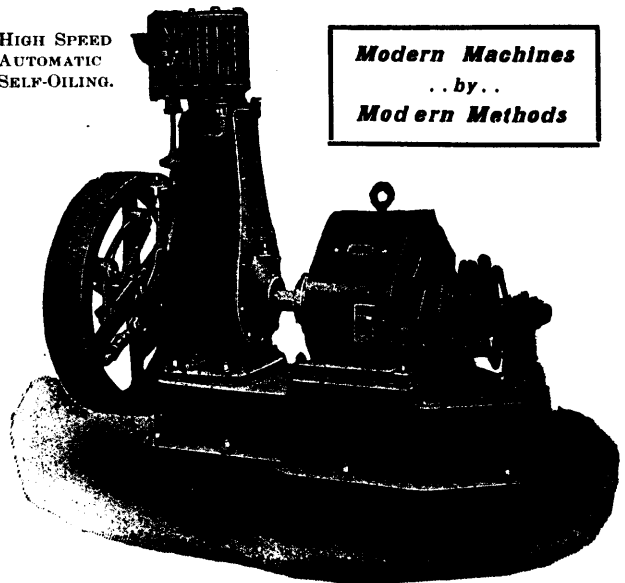
ENGINES

HIGH SPEED
AUTOMATIC
SELF-OILING.

Modern Machines

.. by ..

Modern Methods



Buffalo Single Vertical Direct Connected Engine.

BUFFALO FORGE CO., BUFFALO, N.Y.

E. A. WALLBERG, - CANADIAN REPRESENTATIVE
410 TEMPLE BLDG., TORONTO. Merchants Bank Bldg., MONTREAL.

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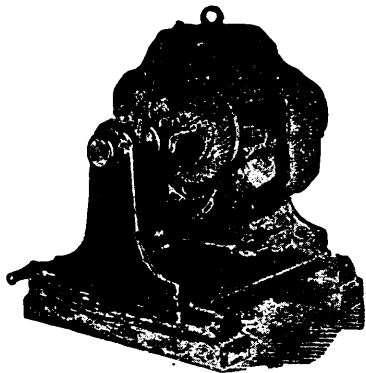
BEET SUGAR IN ONTARIO.—Mr. Hugh Blain was the host at a banquet at the National Club, Toronto, June 26, which was attended by seventy prominent men in business and public life, at which the beet sugar industry was pretty thoroughly discussed, various opinions being expressed as to the conditions surrounding the introduction of the industry into Ontario. Among those who spoke to the toast of "The Beet Sugar Industry" were Hon. Geo. W. Ross, Mr. Goldwin Smith, Hon. John Dryden, Hon. E. J. Davis, Mayor Howland, E. Gurney, W. R. Brock, M.P., and G. R. R. Cockburn. Mr. Tarte was present for a short time. A toast was offered to the health of Hon.

J. H. Turner of British Columbia, who was present and made an appropriate and happy reply, and the gathering closed with three cheers for Mr. Blain.

CANADIAN PIG IRON IN ENGLAND.—A notable event in the iron world and of great interest otherwise, is the arrival in the Clyde this week of a cargo of 3,500 tons of pig iron from Canada. The quality corresponds with Cleveland iron,

and is, therefore, suitable for foundry purposes. It comes across, we understand, at a freight of 10s per ton, which is about the equivalent of half the bounty on export granted by the Dominion Government; and it incurs landing and other charges amounting to 5s per ton, which closely approximates the cost of taking Cleveland iron to Scotland by sea. The Canadian product, then, enters into direct competition with Cleveland iron,

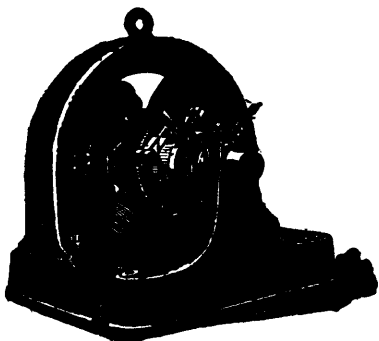
Electrical Construction Co. of London, Limited.



MULTIPOLAR MOTORS & DYNAMOS
And Direct Connected Plants for Isolated Lighting.

Repair Work a Specialty.
HEAD OFFICE AND FACTORY:
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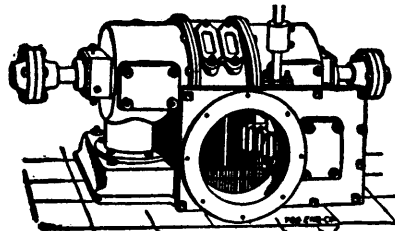
TORONTO and HAMILTON ELECTRIC CO.



MOTORS and DYNAMOS

MODERATE and SLOW SPEED OF HIGH EFFICIENCY.
EITHER BELTED OR FOR DIRECT CONNECTION.
REPAIRS PROMPTLY EXECUTED ON ALL ELECTRICAL APPARATUS.

T. & H. ELECTRIC CO.
99-103 McNAB N., HAMILTON, ONT.



Horizontal Type.

"LITTLE GIANT" TURBINE

....FOR ALL PURPOSES....

HORIZONTAL AND VERTICAL
BUILT IN 44 SIZES.

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

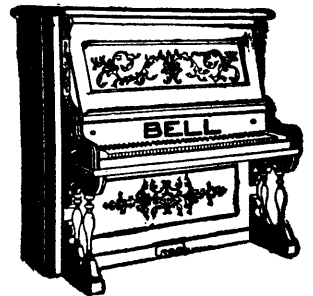
Water Wheel Governors, Machine Dressed Gearing, Pulleys, Shafing and Bearings.
Catalogue and Gear List mailed on application. Correspondence Solicited.

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

BELL PIANOS and ORGANS

BUILT TO LAST A LIFETIME
AND USED THE WORLD OVER

Send for Catalogue No. 47 to
THE BELL ORGAN AND PIANO CO., LIMITED
QUELPH, - - ONTARIO.
LARGEST MAKERS IN CANADA.

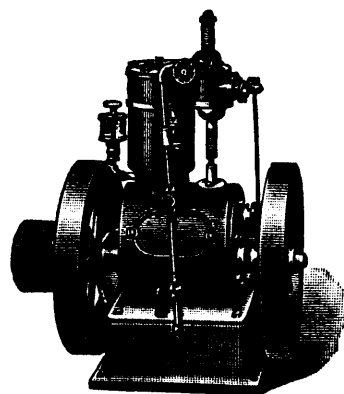


THE WELLINGTON MILLS, London, Eng. GENUINE EMERY

Oakey's Flexible Twilled Emery Cloth. Oakey's Flint Paper and Glass Paper.
Oakey's Emery Paper, Black Lead, Etc.
Prize Medal and Highest Award Philadelphia, 1876, for Superiority of Quality, Skillful Manufacture, Sharpness, Durability, and Uniformity of Grain.
Manufacturers, **JOHN OAKEY & SONS, Limited**, Wellington Mills, Westminster Bridge Road, London, England.

ENQUIRIES SHOULD BE ADDRESSED TO **JOHN FORMAN, 650 ORAIG ST., MONTREAL**

THE SYLVESTER GAS and GASOLINE ENGINES



Are beyond doubt the most complete and economical engine in the market. They are compact and perfectly under control, easily managed, get up speed immediately, thoroughly reliable, and where intermittent power is required they are just the thing.

They are built in sizes from 1 to 20 h.p., upright and horizontal, for pleasure yachts, boats, shops, farm work and any purpose where light power is required. Tell us to what use you want to put the engine, and what power you require, and we will name you prices.

SEND FOR CATALOGUE.

SYLVESTER BROS. MFG. CO., Lindsay, Ont.

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CUPOLAS

FOUNDRY EQUIPMENT

CRANES

E. A. WALLBERG, C.E.

Temple Building, **TORONTO**

Merchants Bank Building, **MONTREAL**

which, again, displaces Scotch ordinary iron—at a price. The price at which the Canadian iron has been sold, has not yet been disclosed, but Cleveland warrants are just now 8s 6d per ton under Scotch G. M. B., which is considerably more than the normal difference, so that the moment of arrival is not very opportune from the Cleveland point of view.

The shipment marks a strange reversal in the current of trade, for Canada has been in the habit of taking about 10,000 tons of pig iron per annum from us, notwithstanding the contiguity of the United States. But it marks more than that. This iron comes from Cape Breton, Nova Scotia, where have just been completed four large blast furnaces, for the smelting of iron ore conveyed at a low rate of freight, and on a short sea run of 24 hours or so, from the iron mines of Newfoundland. These mines are near the seaboard and are cheaply worked, so that the ore is one of the cheapest ironstones in the world.

Whether it will pay Nova Scotia better to export pig iron than to turn it into steel is another question. The one disadvantage under which Cape Breton must suffer; is the matter of freight, for we do not know what cargoes large steamers

can get to induce them to go there for return cargoes of iron, and to go there for ballast must be of course, to enhance the outward freights. In the meanwhile, however, it must pay the smelters handsomely to export pigs, because of the bounty, which bounty has been extended to 1907.—Iron Trade Review.

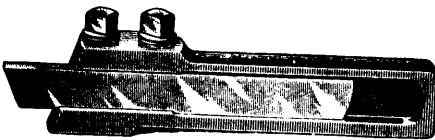
DOOR KNOBS.—The door knob of fifty years ago was of brass. Then came into use the mineral knob, which plenty of people of middle age will be able to recall. Mineral knobs were made of clays of different colors, and sometimes of clays of different colors mixed, the knobs being baked with a glazed surface. A common and familiar form of the mineral knob was about the color of dark mahogany. In their day mineral knobs were highly esteemed, and some of them cost as much as \$12 a dozen pairs. Now there are mineral knobs that can be bought for seventy-five cents a dozen pairs. Mineral knobs are still used. After the mineral the bronze knobs came into fashion, and after the bronze the wooden knob came into more or less extended use. The prevailing door knob of to-day as used in cities is made of bronze. The first bronze knob put on the

market cost \$7 or \$8 a pair. Many bronze knobs in one form and another are now produced very cheaply, but it might easily be that fine, handsome bronze knobs would cost from \$2.50 to \$6 a pair. More or less brass knobs are still made, but nowadays mostly in bronze designs. Door knobs are now made of iron, and they are still made in considerable variety of shapes and sizes of various kinds of wood. There are also made door knobs of glass. These are now produced in greater variety than formerly. They are made in smooth and in cut glass, and some of them, simple in design as they may be, are beautiful. Glass door knobs cost up to \$4 a pair. But while door knobs are made and sold in all these various materials, yet the prevailing knob in city use and the one that would be found in one grade and quality or another in most of the city's dwellings would be one of bronze. Among the hundreds of varieties in which door-knobs are made there may be found not only knobs in various conventional forms, but knobs made in conformity with architectural styles and historical periods. For all that, door knobs are not infrequently made to order for single houses from designs furnished by the architect.—New York Sun.

GEORGE W. CHAPIN, COTTON, MERCERISED WORSTED, SPUN SILK and TRAM SILK, ALL WIDTHS
229 and 231 CHURCH ST., PHILADELPHIA.

BRAID

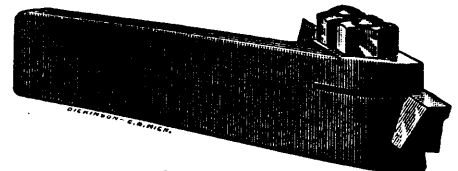
HILL TOOL HOLDERS



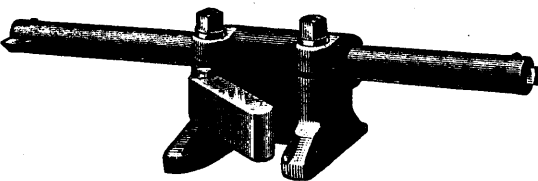
Straight Cutting-Off Tool



Diamond Point Tool



Side Tool



Boring Bar

John Lumsden & Company

375 St. James St., Montreal

Sole Agents for HILL TOOLS in the Provinces of Quebec, New Brunswick and Nova Scotia

B. GREENING WIRE CO.
(LIMITED)
WIRE MANUFACTURERS
& METAL PERFORATORS
HAMILTON & MONTREAL.

Wire Screens for Every Class of Material.

Perforated Metal of Steel, Copper, Brass, Zinc for all purposes.

Special Attention given to Miners' Requirements.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

STANDARDIZED SCREWS.—The importance of standard sizes of screws is one which has long been realized by engineers. Many attempts have been made to carry out this uniformity with more or less success. Whitworth has shown us that a uniformity of thread is possible, and his gauges have largely been adopted. Interchangeable parts introduced by American manufacturers and followed by so many British makers of machinery have been a boon to the repairer and simplified many difficulties. The War Office have just appointed a committee to inquire into the measurement of guns and their component parts. The accuracy of the fit of screws and their regulation sizes is one of the important points for the consideration of this committee. The difficult question for them to solve will be the one of obtaining a master-screw for tracing leading screws for lathes. The Committee includes representatives of the engineering firms of Armstrong & Whitworth; Vickers, Son & Maxim; Muir & Co., etc., together with the superintendents of the Royal Gun Factory at Woolwich. Doubtless this inquiry will result in a strong recommendation in favor of the general standardization of machine screws.—Iron-mongers' Chronicle.

ALUMINIUM.—The year 1889 marked a revolution in the aluminium industry. Castner and Netto, by new and ingenious processes, had made metallic sodium (the reducing agent of Deville's process) at a greatly reduced cost, and had thereby largely reduced the cost of producing aluminium. New life had thus been put into the industry, and the yearly output had increased to seventy-one tons, while the selling price of the pure metal had decreased to less than \$5 per pound. In fact, that very year it fell to about half that figure. Besides this, the electric processes of Cowles Bros. and of Heroult were furnishing aluminium in copper and iron alloys (but not the pure metal) at even lower prices. The last year of the century finds the industry upon an entirely different basis. From an annual production of seventy tons it has risen to the relatively enormous figure of 7,000 tons; and the price has fallen from nearly \$5 a pound to the almost incredible figure of thirty cents. The seeds of this revolution were already germinating in 1889, for in that year pure aluminium, made electrolytically (by Hall in America and by Heroult in Europe), began to undersell the product of the sodium processes, and two years later the sodium processes were distanced and driven out of the business. The pure sodium exhibited in Paris in 1889 was all made by the sodium process; while that shown in 1900 was all made electrolytically.—Prof. J. W. Richards.

In 1889 the production of aluminium in the United States was about twenty-two tons, and in all other countries seventy-one tons. In the calendar year 1900 the United States produced about 4,000 tons of this metal, against 7,500 tons in all other countries. It is believed that in the near future copper telegraph and

telephone wires will be replaced to a great extent by those made of aluminium, it having been demonstrated that in order to do the same work copper wires must be twice as heavy as aluminium ones, and it is estimated that 6,000 tons of aluminium used for sheathing for roofs will replace 20,000 tons of copper. Aluminium wires are now being used in many localities, but the scarcity of the metal has until now prevented its general use.

ADVERTISING VAGARIES.—The development of the modern trade journal has kept even pace with the division of labor. Every department of human industry, whether it be iron, coal, cotton, electricity, engineering, furniture, carpets, or what not, is now represented by one or more journals of various grades of ability and influence. And in every class there is invariably one that by superior ability, larger capital, or better methods gains a commanding position over its fellows. The leading journal in any department is not compelled to be self-seeking or noisily self-assertive. Its position is recognized, its influence tacitly admitted. The leading manufacturers and merchants look to it for the news that pertains to their interests, employ its facilities for spreading a knowledge of their productions, and would as soon think of taking down their signs as to allow a single issue to appear without their announcements. Those who do not pursue this policy never attain a permanent place in the front rank. These are simple facts which are apparent to any man who will take the trouble to turn over the advertising pages of any of the journals which hold the commanding position.

It would stagger the ablest accountant to attempt to estimate the amount of money that is annually wasted by otherwise intelligent business men in all sorts of plausible advertising schemes. Apparently nothing is too absurd or too visionary to escape their respectful attention. When they buy goods they buy the article from which they can reap the largest and speediest returns. They experiment, they apply to the investigation all the results of years of experience; they think, study, and spend time and trouble in the effort to get the best. When they have anything to sell, on the other hand, they seem to pursue an opposite policy. Instead of buying their advertising, as they buy goods, with a view to getting the largest returns, they take the cheapest thing that is offered, and trust to luck for the rest. If it costs £250 to have their names painted on the face of the moon, to be read of all mankind, they would shudder at the expense, and calmly appropriate £350 to have the same advertisement painted on a dozen barns in a single hamlet.

A man who advertises a little bit and quits is sure to lose his money, and is sure to get erroneous ideas into his head.—The Furnisher.

The steam barge Victoria was destroyed by fire June 27, at Chambly Basin, Que. Loss about \$5,000.

W. J. McGUIRE & CO.,

TORONTO and MONTREAL.

THIS COMPANY makes complete installa-

"International" tions of either the
Head. WET or DRY
SYSTEMS



The Best!

OF
**AUTOMATIC
...FIRE...**

EXTINGUISHING

APPARATUS

Systems, Devices and Workmanship fully approved by Insurance Companies and Bodies.

Systems in extensive use, and have stood the test of time.

Write for full particulars and Catalogue.

40 to 70 % OF INSURANCE SAVED

Dominion Oil Cloth Co.

(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:

Cor. St. Catherine and Parthenais Sts.
MONTREAL, Que.

Protection Against Fire

Apart from the protection it affords, it pays as an investment to use an

AUTOMATIC SPRINKLER SYSTEM

From 40 to 70 per cent.
of cost of insurance
saved by putting in an



**AUTOMATIC
SPRINKLER
EQUIPMENT**

No charge for estimating.

Endorsed by Insurance Companies

The General Fire Equipment Co.

**72 Queen Street East,
TORONTO.**

WATER POWER
FOR SALE or TO LET

For Sale or to Lease, for a term of years, one of the best central

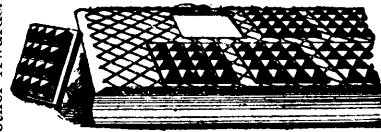
CHAUDIERE WATER LOTS,

with extensive manufacturing site, in the City of Ottawa. Address,

THE OTTAWA INVESTMENT CO., Limited,
OTTAWA, CANADA

THE PATENT INTERCHANGEABLE RUBBER TREAD

14 Gold Medals & other Awards.



Patent Non-Slip-Proof, Unwearable.

For Public Institutions, Warehouses, Offices, etc. The Treads consist of a metallic keeper, fitted with pieces of rubber (specially prepared), which form the wearing surface, and can be renewed when worn, by anyone in a few minutes.

WILLIAM GOODING, Manufacturer,
North Road Works, Holloway, London, N. Eng.

THE WAR OF COMMERCE.—Frank A. Vanderlip, formerly Assistant Secretary of the United States Treasury, who has just returned to Washington from a long trip abroad, is quoted by The New York Tribune's correspondent as saying:—

I think it is not only possible, but highly probable, that Europe can and will agree to binding terms of trade combination against the United States within the next few years, and that the result will be the most gigantic stubborn war in the history of the world. As most of our commercial treaties expire in 1903, I look for the real beginning of the war then, in a refusal of most of the continental nations to renew these conventions. At the present moment Austria, which never did like us, is leading in the movement against the United States, and I found Goluckowski, head of the Ministry of that country, our bitterest, and most outspoken enemy. Obviously, the other Ministries of the old world, including even that of England, are artfully encouraging Goluckowski in his course of oppression, with a view of drawing our fire before they openly declare themselves.

KINLEITH PAPER COMPANY LIMITED

MANUFACTURERS OF

Book, Writing Envelope and Cover PAPERS

AND SPECIALTIES

MILLS AND HEAD OFFICE

St. Catharines, Ont.



EDWARD FINLAY

MANAGING DIRECTOR.

McLachlan Electric & Gasoline Motor Co., LIMITED.
94 ADELAIDE ST. WEST. TORONTO

MAKE Gas or Gasoline Engines from 1 h.p. to 6 h.p. Stationary or Marine and Electric Motors from 1/2 h.p. up. Motor Carriages for Pleasure or Business. One cent spent for a postal will bring you any information you wish.

"GENUINE OAK" BELTING

More SOLID LEATHER to the Foot than any Belt made.

"LANCASHIRE" HAIR BELTING

FOR EXPOSED SITUATIONS

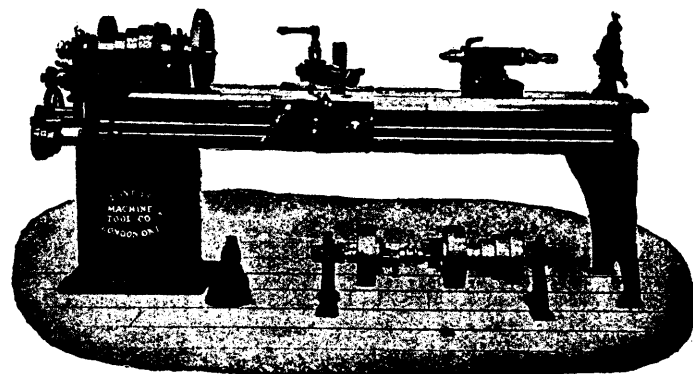
ENGLISH CARD CLOTHING

D. K. McLAREN

Head Office and Factory, - MONTREAL.

Western Trade, - TORONTO STOCK DEPOT, 88 Bay Street.

The London Machine Tool Co., LONDON, ONT.



MANUFACTURERS OF

General Machinery

- LATHES,
- PLANERS,
- DRILLS,
- SHAPERS,
- HAMMERS,
- BULL DOZERS,
- PUNCHES,
- PRESSES.

A NEW USE FOR CADMIUM.—The new Edison electric storage battery, if it will do what is claimed for it, will develop a market for cadmium such as that metal has never had and will correspondingly help the producers of spelter in Upper Silesia, who also make cadmium as a by-product. The capacity for the production of cadmium in Upper Silesia is very large, but there has never yet been an important demand for it, and consequently its recovery has been undertaken by only a few concerns and in a limited quantity, most of the cadmiferous furnace product from which it might be obtained being permitted to go to waste in so far as cadmium is concerned.

The Edison storage battery comprises cadmium-copper couples in an electrolyte consisting of a ten per cent. solution of caustic soda. It is claimed to be not only less expensive, lighter and more compact than the lead storage batteries now in use, but also capable of withstanding rougher usage and to require less attention. Moreover, it is said that it can be discharged to zero voltage, which cannot be done with the lead battery, that it has twice the output for the same weight, and that it deteriorates very slowly indeed, if at all. These are obviously highly important advantages in a storage battery, and if Edison's expectations are borne out in practice, apparatus of his type will find employment for a multitude of purposes for which the existing type of storage battery has been impossible.

In this connection it is interesting to remark that the discovery of the high efficiency and other advantages of the copper-cadmium couple was no haphazard one, but was made in pursuance of the Edisonian principle to try everything and select the combination best answering the purpose. There are doubtless many stories as to the way in which that principle is carried out in the Edison laboratory. We remember one, which

we have never seen in print, of a junior chemist fresh from school who received instructions to prepare samples of the oxides of all the elements. The tale does not relate whether the chemist, no longer young, is still engaged on the task or has in the meanwhile obtained other employment, but inasmuch as his name is not recorded in the scientific hall of fame, there is no doubt that he has not yet been able to produce all the oxides.—Kuhlows'.

UNCLE SAM AND THE BEAR.—A despatch to the New York Herald from St. Petersburg says that when Secretary Gage talks of Russia's not having a legal right to raise the taxes on American goods, he is not aware that M. de Witte looks upon Mr. Gage's policy of arresting Russian products upon suspicion as grossly illegal according to the international law. M. de Witte will, therefore, not hesitate to take still more severe measures until right is done. America will lose ten times more than Russia by a tariff dispute,

Bellhouse, Dillon & Co.

30 ST. FRANCOIS-XAVIER ST.

MONTREAL

DYESTUFFS, CHEMICALS

AND

EXTRACTS

SOLE AGENTS IN CANADA FOR

KUTTROFF, PICKHARDT & CO'S

ANILINE and ALIZARINE COLORS

TORONTO OFFICE:

JAS. HAYWOOD, Agent, 30 Wellington St. E.

NEW YORK OFFICE:

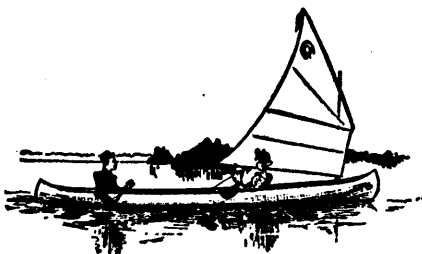
DILLON & CO., 20 Cedar Street.

MILL TELEPHONES

F. O. PLUMMER

Boston, Mass., U.S.A.

THE CANADIAN CANOE CO., Limited,
PETERBOROUGH, ONT.



Manufacturers of CANOES and SKIFFS
BEST QUALITY LOWEST PRICES
Send for Catalogue J.

that being the balance of trade in her favor.

The Herald says editorially:—Despite Russia's solemn assurance that she pays no export bounty on sugar, Mr. Gage insisted upon interpreting the Russian regulations in his own fashion, asserted that she does pay a bounty and upon that conclusion imposed the counter-vailing duty and precipitated the present unfortunate misunderstanding.

ITALY'S PROTEST.—Italy has protested against the United States view that Italian sugar is bounty-fed. The action taken by Italy raises a question somewhat analogous to that now pending with Russia, each concerning sugar and each referring to the alleged payment of a bounty. Russia has taken the position that she pays no bounty, and Italy now makes a formal declaration of the same kind. While this is not necessarily a protest, it presents an issue of fact as to whether bounty is or is not paid. It is understood that within a week the Italian Government will submit a full presentation of facts sustaining its declaration, the present announcement to the State Department being merely a brief official notification of Italy's position without the data to uphold that position. The terms of the treasury order are such that the discriminating duties are now being enforced against Italy, although its terms indicate that the permanency of the increased duties is subject to a fuller investigation to be made.

EMERY IN GREECE.—The British Consul, at Syra, Greece, reports that the establishment of the Naxos emery depot at that port in 1899 by the International Control Committee has been attended with success, to the great satisfaction of both the Government and the shippers of Naxos emery, the price of which remains the same, viz., 106 fr. 50 cents (about £4 5s.) per metric ton, including the tax of 7 dr. 90 l. (nearly 4s.) per ton levied by the Government. The total amount exported in 1900 was 6,023 tons, valued at £26,000, an increase of 884 tons over 1899. This excess is alleged to be due to the facility in the shipping operations at Syra. The quality of the mineral is now far better than it was formerly, although the price is the same, as it arrives in Syra specially selected for exportation. The trade in this article promises to flourish, as already over 3,000 tons have been exported in the three months of this year, and several large orders are in hand. The amount dealt with in 1900 was distributed as follows: 1,760 tons to Hamburg, 1,670 tons to Liverpool, 1,380 tons to Rotterdam, 1,000 tons to Boston, and the remainder to Odessa.

A WINGED SANITARY INSPECTOR.—A gentleman, making a call at the house of a friend, was astonished to find the rooms and passages in confusion; and, on inquiring the cause, was answered: "Oh, we are very much annoyed here; a rat has come to finish his existence under the floor of our large drawing-room. We do not know the exact place, but we cannot endure the stench any longer, so we have

ELECTRIC WORK WHICH LASTS

We do work which proves a lasting testimonial to us.

No matter what the job is, whether the installing of Electric Bells, or the equipping of a factory for Light or Power, the material used is right, and the important little details closely watched.

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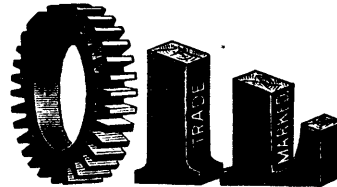
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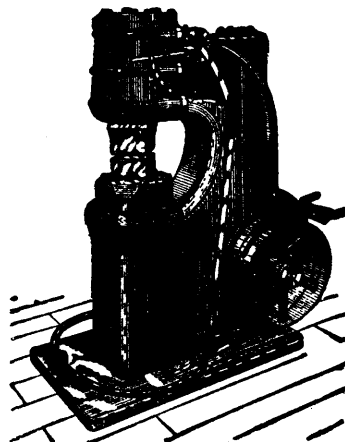
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removed the furniture, rolled up the carpets, and called in the carpenters, who are just beginning to take up the floor." "Now, don't be too hasty," said the visitor, "you need not pull up more than one board. I will show you what I mean presently; and meanwhile shut down the drawing-room windows and close the door." He then stepped down into the garden, walked around the horse stables, and after a few minutes absence, came back to the drawing-room with both hands tightly clasped. Placing himself in the centre of the drawing-room, he opened his hands, and out flew two large blue-bottle flies, and buzzed around the room for a second or two. But presently one of them alighted on a certain plank of the floor, and was almost immediately followed by the other. "Now, then," said the visitor, "take up that plank and I'll engage that the dead rat will be found beneath it." The carpenters applied their tools, raised the board, and at once found the cause of the unpleasant smell.

THE DOMINION ASSAY OFFICE.—Mr. Thomas J. McCaffrey, formerly manager of the Union Bank of Canada in Winnipeg, will be Business Manager of the new Dominion Assay Office to be established at Vancouver, B.C. Prof. Haanel, Superintendent of Mines, having purchased the necessary apparatus in New York, is now on his way out to the coast to start the office. It is learned that all the mining work now carried on by the Geological Survey staff will be transferred to the control of Prof. Haanel. This gentleman, in addition to being a practical geologist; has a talent for organization which will be called into play in connection with the creation of a mines branch at the Department of the Interior.

PLATINUM.—The uses to which platinum is put are very multifarious. It is employed to-day in the electric incandescent lamp as a fine wire for conveying the electric current through the glass walls of the bulb to the light-giving carbon filament within; in telegraph, telephone, and other electric apparatus for non-corroding contact points; in warfare, in the form of fine wires for exploding torpedoes and submarine mines; in pyrometers, for the measurement of the temperature of blast furnaces and for determining the fusing point of other metals; in the X-ray tube, as leading-in wires and as a source of excitation of the X-rays; and in photography, in the production of platino-types noted for the artistic effects produced and the permanency of prints attained.

These are but a few of the many applications of this metal and its salts, but enough are enumerated to illustrate its wide and varied applications. It is of some significance that the world depends for about ninety-five per cent of its annual supply upon Russia alone, and were that country to fail us, the position would be serious. Happily, Russia's output has increased steadily, and has just about kept pace with the enhanced demand.

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 Morse, straight shank, 45% discount.
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 Hyper Acme, 15 " "
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 Stove, 60 " "
 Tire, 55 " "
 Plow, 60 " "
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 Sink, 50 " "
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 Bolt Ends, 62½ " "
 Elevator Bolts, 45% discount.
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 Small or Medium, ball, \$4.25 per M.
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- BOOT HEELS & TAPS (Leather).**—Duty 25%.
- BORAX.**
 Lump, 8 cents per lb.
 Powdered, 10 cents per lb.
- BRUSHES.**—Duty 25%.
 Canadian list, 50% discount.
- BRICK (Fire).**—Duty 20%.
 Square, \$30 per M.
 Circular, \$35 per M.
- BUCKLES.**—Duty 30%.
 Double Grip Trace, three loop, tinned and
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 cents per doz.; 1¼", 65 cents per doz.
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 Shoe, japanned or tinned, 12 cents per lb.
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 Wrought Iron, 60% discount.
 Cast Butts, 60 " "
 Wrought Brass, 50 " "
 Loose Pin, wrought, 50 " "
 Loose Pin, B. Bronze, 30 cents to \$1 per pair.
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 Plain building, 35 cents per roll.
 Tarred lining, 45 cents per roll.
 Tarred roofing, \$1.65 per 100 lbs.
 Carpet Felt, \$45 per ton.
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 \$10 per doz.
- CASTINGS.**—Duty 30%.
 Carriage, in 5 ton lots, 5 cents per lb.:
 " 3 " 5½ " " "
 " 2 " 5½ " " "
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 " ½ " 5½ " " "
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 Plate, 55% discount.
 Bed, 55 " "
 Truck, Payson's, 60% discount.
- CEMENT.**—Duty 12½ cents per 100 lbs.
 Canadian, Portland, \$2.50 to \$2.80.
 English, Portland, \$3.
 Belgian, Portland, \$2.50 to \$2.75.
 Canadian, hydraulic, \$1.25 to \$1.50.
- CHALK.**
 Carpenters', colored, 45 to 75 cents per gross.
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- CHISELS.**—Duty 30%.
 Calking, Socket, Framing and Firmer.
 Warnock's, 70% discount.
 P.S. & W. Extra, 60, 10 & 5% discount.
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 Brass, Jack, 30 " "
 Safety, 55 " "
 Coil, 3-16, \$11.00 per 100 lb.; ½, \$8.75 per 100 lbs.;
 5-16, \$5.50 per 100 lbs.; ¾, \$4.90 per 100 lbs.; 1,
 \$4.40 per 100 lbs.; 1¼, \$4.00 per 100 lbs.; 1½, \$3.90
 per 100 lbs.
- CLEAVISES.**—Duty 30%.
 Screw, \$2.50 per doz.
- COLORS.**—In oil, see Paints.
 Dry, see Paints.
- CORD.**—Duty 25%.
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 Baltic, 25 cents per lb.
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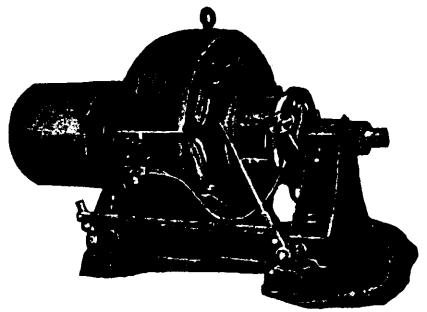
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48 in. wide, 45 cents per yd.
60 in. wide, 57 cents per yd.

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DYNAMITE.
36 to 50 cents per lb.

EMERY.
Coarse, 7 cents per lb.
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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, 33¼% discount.

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

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FENCING (Wire).—Duty 15%.
Mesh, 5½x10½, 20 rod rolls 55% discount, Can. list.
" 4 x8, 20 " 50 & 5% "
" 3 x6, 20 " 55 & 5% "
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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.

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

FILES.—Duty 30%.
Jowitt's, 25% discount.
Stubbs', 15 " "
Black Diamond, 50 to 10% discount.
Globe, 65 to 70% discount.
Nicholson, 50 & 10% discount.
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FITTINGS (Pipe).—Duty 30%.
Elbows, tees, crosses, couplings, lock nuts, return bends, 50% discount.
Cast Iron, 55% discount.
Wrought Iron, 50% discount.
Nipples, 55% discount.
Flanges, 55 " "
Unions, 55 " "
Cocks, 55 " "
Bushings, 55 " "
Plugs, 55 " "

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Engineers' Favorite, 40% discount.
Wire, 20% discount.
Inglis, 50 " "

FUSE.
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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.

GLUE.—Duty 25%.
Common, 8½ to 9 cents per lb.
French Medal, 14 to 14½ cents per lb.
Cabinet, sheet, 12 to 13 cents per lb.
White, extra, 18 to 20 cents per lb.
Gelatine, 22 to 30 cents per lb.
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Coopers', 19 to 20 cents per lb.
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Progressive, 25 " "

GRANITEWARE.—Duty 35%.
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Gardners', 25% discount.

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Carpenters', Warnock's, \$4 to \$7.50 per doz.
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Sledge, 10 cents per lb.
Machinists', 22 cents per lb.
Tinners', \$4 to \$5.50 per doz.
Blacksmiths', 10 cents per lb.

HANDLES.—Duty 25%.
Axe, \$1.50 to \$2.50 per doz.
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Hammer, 50 cents to \$2 per doz.
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HANGERS.—Duty 30%.
Stearns, \$5.50 to \$6.50 per doz.
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Lanes, \$6.75 to \$12 per doz.
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HARVEST TOOLS.—Duty 25%.
Forks, 50 & 10% discount.
Rakes, 50 & 10 " "
Hoes, etc., 50 & 10 " "

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

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" " 6 in., 6 " "
" " 8 in., 5½ " "
" " 10 in., 5½ " "

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Screw hook and hinge, 6 to 12 in., \$4.50 per 100 lbs.; 14 in. up, \$3.50.
Spring, \$12 per gross pairs.

HOOKS.—Duty 30%.
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%.
C brand, 50 & 7½% discount.
M brand, 50 & 10 " "

HORSE SHOES.—Duty 30%.
Lt. Med. & H., \$3.70 per keg.
Snow, \$3.95 per keg.
Steel, \$3.80 to \$5.25 per keg.
Toe weight steel, \$6.15 per keg.

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

IRON.—See Metals.

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Lifting, 40% discount.

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Desk, 25 to 35 cents per doz.
Padlock, 25 to 35 cents per doz.
Rim Lock, 25 cents to \$1 per doz.
Mortise Lock, 25 cents to \$1 per doz.
Carpenter, 50 cents to \$1.25 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 cuts, \$1 per lb., Raw Hide.
Sides, 75 cents per lb., Leather.

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

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

LANTERNS.—Duty 30%.
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Ordinary, with O burner, \$4 per doz.
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No. 0, \$5.75 per doz.
Japanning, 50 cents per doz. extra.

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

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

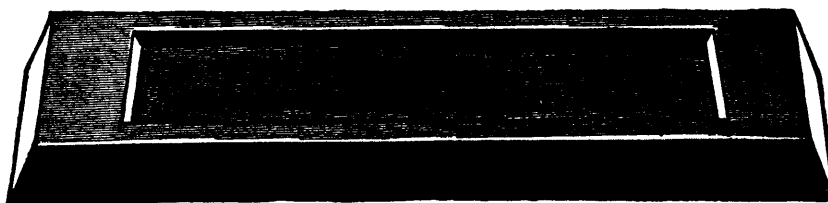
LEAD.—Duty 5%.
Red and White, dry.—See Paints.

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

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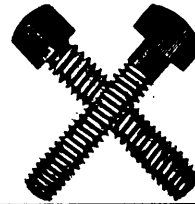
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" Amer., \$1.50 per doz. up.
Desk, \$1.50 per doz. up.
Cupboard, \$1.50 per doz. up.
Padlocks, 75 cents per doz. up.
Drawer, \$1 per doz. up.

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

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

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

MALLEABLES.—Duty 30%.

METALS. see Castings.
Aluminium.—Ingots, 35 to 50 cents per lb.;
sheets, 45 to 65 cents per lb.
Antimony.—Ingots, Cookson's, 10 1/2 to 11 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.; Spooner's Copperine
No. 2, 12 1/2 cents per lb.; No. 2, 16 cents per lb.;
finest, 25 cents per lb.; Syracuse Smelting
Works, dynamo, 29 cents per lb.; special, 25
cents per lb.
Copper.—Ingots, English, 18 cents per lb.; bar,
25 cents per lb., base price; sheets, 25 cents
per lb., base price.
Brass.—Rods, 24 cents per lb., base price; hard
sheets, 20 to 30 cents per lb.; soft sheets,
20 to 30 cents per lb.
Lead Pig (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.
Soldier bars (duty 25%).—1st, refined, 18 cents per
lb.; half-and-half, 18 cents per lb.
Tin.—Ingots, Lamb & Flag's, 32 cents per lb.;
Straits, 32 cents per lb.; bar, 33 cents per
lb.; Sheets, usual sizes, 1C, \$8.75; 1X, \$10;
1XX, \$11.25.
Tinned Sheets.—Base price, 7 1/2 cents per lb.
Zinc.—Ingots, 6 to 6 1/2 cents per lb.; sheets, 7
cents per lb.
Pig Iron (duty \$2.50 per ton).—Ranges about
\$16.50 per ton.
Bar Iron (duty \$7 per ton).
Common.—Base price, \$1.85 per 100 lb.
Refined Bar Iron.—\$2.60 per 100 lb.

METALS.—Continued.
English Horse Shoe Iron.—\$2.85 per 100 lb.
Swedes Bar Iron.—\$4.50 per 100 lb.
Lownoor Bar Iron.—\$6.50 per 100 lb.
Band Iron or Steel.—\$2.05 per 100 lb.
Hoop Iron or Steel.—\$2.90 per 100 lb.
Angle Iron or Steel.—\$2.75 per 100 lb.
Steel Channels.—\$3 to \$4 per 100 lb.
Steel Beams.—\$3 per 100 lb.
Small Steel Rails.—\$3 per 100 lb.
Machinery Steel.—\$2.75 per 100 lb.
Rough Machinery Steel.—\$2.25 per 100 lb.
Bright Steel Shafting.—\$3.50 per 100 lb.
Sleigh Shoe Steel.—\$2 per 100 lb.
Tire Steel.—\$2.50 per ton.
Spring Steel.—\$3 per 100 lb.
Toe Caulk Steel.—\$3 per 100 lb.
Cultivator Steel.—\$4.50 per 100 lb.
Cast Steel.—Firth's, 12 cents per lb.; Jessop's,
14 cents per lb.; Black Diamond, 12 cents
per lb.; Silver, 15 cents per lb.; Crescent,
9 cents per lb.; Mushet's, 55 cents per lb.
Cant Hook Steel.—7 1/2 cents per lb.
Blister.—12 1/2 cents per lb.
Hammer.—7 cents per lb.
Sheet Cast Steel.—Firth's, 12 cents per lb., base.
Decarbonized Sheet Steel.—7 cents per lb., base.
Black Sheet Steel (duty 5%).—10, \$2.50 per 100
lb.; 12, \$2.60 per 100 lb.; 14, \$2.70 per 100 lb.;
17, \$2.75 per 100 lb.; 18, \$3 per 100 lb.; 20,
\$3.15 per 100 lb.; 22, \$3.25 per 100 lb.; 24,
\$3.25 per 100 lb.; 26, \$3.40 per 100 lb.; 28, \$3.65
per 100 lb.
Tank Steel Plate (duty 10%).—3-16, \$2.50 per 100 lb.
Steel Boiler Plate (duty 10%).—1/4 and larger,
\$2.50 per 100 lb.
Steel Boiler Heads (duty 10%).—\$2.50 per 100 lb.
Planned Sheet Iron (duty 5%).—A, \$6 per 100
lb.; B, \$5 per 100 lb.; Russia, \$10 per 100 lb.
Canadian Plates.—All dull, 52 sheets, \$2.90;
half polished, \$3.
Galvanized Sheet Iron (duty 5%).—Apollo, 18,
\$1.40 per 100 lb.; 22, \$1.50 per 100 lb.; 24, \$1.50
per 100 lb.; 26, \$1.75 per 100 lb.; 28, \$5 per 100
lb. Queen Head, 16, \$3.90 per 100 lb.; 18,
\$4.15 per 100 lb.; 22, \$4.15 per 100 lb.; 24, \$4.15
per 100 lb.; 26, \$4.40 per 100 lb.; 28, \$4.65 per
100 lb.
Corrugated Sheets—Galv., \$4.50 per 100 sq. ft.

SHINGLES.—Duty 25%.
Steel, Painted, ordinary, \$3.15 per sq.; medium,
\$3.35 per sq.; best, \$3.90 per sq.
Galvanized, ordinary, \$4.90 per sq.; medium,
\$5.45 per sq.; best, \$5.80 per sq.

BLACK IRON PIPE.—Duty 30%.
1, \$4.60 per 100 ft.; 1 1/2, \$3.40 per 100 ft.; 2, \$3.45 per
per 100 ft.; 3, \$3.70 per 100 ft.; 3 1/2, \$3.85 per
100 ft.; 4, \$5.40 per 100 ft.; 4 1/2, \$7.35 per 100 ft.;
1, \$8.80 per 100 ft.; 2, \$11.80 per 100 ft.; 2 1/2,
\$22.00 per 100 ft.; 3, \$25.80 per 100 ft.; 3 1/2,
\$32.30 per 100 ft.; 4, \$4.05 per 100 ft.; 4 1/2, \$43.90
per 100 ft.; 5, \$49.70 per 100 ft.; 6, \$65.20 per
100 ft.

NAILS.—Duty, cut, 1/2 cent per lb.; wire, 3-5 cent
per lb.
Cut, 2d \$3.35; 3d, \$3; 4 & 5d, \$2.75; 6 & 7d,
\$2.65; 8 & 9d, \$2.50; 10 & 12d, \$2.45; 16 &
20d, \$2.40; 30, 40, 50 & 60d (base), \$2.35.
Wire, 2d \$3.85; 3d, \$3.52; 4 & 5d, \$3.35; 6
& 7d, \$3.20; 8 & 9d, \$3; 10 & 12d, \$2.85; 16 &
20d, \$2.90; 30, 40, 50 & 60d (base), \$2.85.
Wire nails in car lots, \$2.77 1/2.
Galvanizing, 2 cents per lb. net, extra.
Steel cut nails, 10 cents extra.
Miscellaneous wire nails, 70 & 10% discount.
Coopers', 25% discount.
Flour barrel nails, 25% discount.
Copper nails, 50% discount.
Trunk nails, black, 65 and 5% discount.
Trunk nails, tinned, 65 and 10% discount.
Clout nails, blued, 65 and 5% discount.
Chair nails, 35% discount.

NAIL PULLERS.—Duty 30%.
German and American, \$1.85 to \$3.50 each.

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.

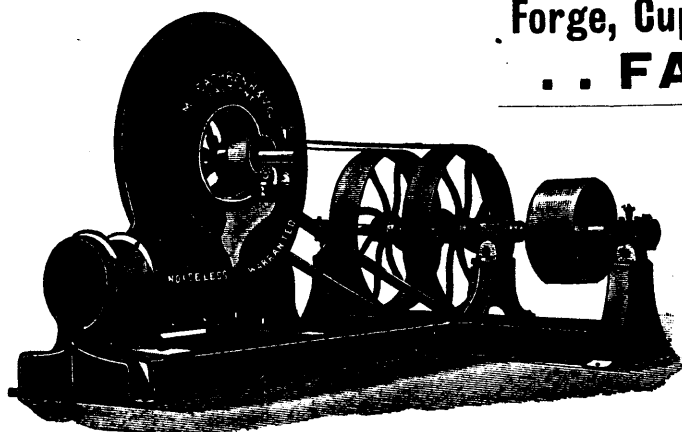
NUTS.—Duty 1/2 cent per lb. & 25%.
Rough, square head, 4 cents per lb. from list.
Rough, hexagon head, 4 1/2 cents per lb. from list.
Semi-finished, tapped, 25% discount.
Finished, tapped, 25% "

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

OIL.—Duty 25%.
Water White (U.S.), 16 1/2 cents per gal.
Prime White (U.S.), 15 1/2 cents per gal.
Water White (Can.), 15 cents per gal.
Prime White (Can.), 14 cents per gal.
Raw Linseed Oil, bbls., 83 cents per gal.
Boiled Linseed Oil, bbls., 86 cents per gal.

GEORGE W. CHAPIN, COMMON, TWILLED and SUPERFINE
Plain, on Spools.
229 and 231 CHURCH ST., PHILADELPHIA
Guaranteed 1,000 Yards, all Nos.

TAPES



Cupola Fan and Counter Shaft on Adjustable Bed

**HEATING CONTRACTS TAKEN
WITH GUARANTEED SATISFACTION**

McEACHREN HEATING & VENTILATING CO., Galt, Ont.

We also Make STEAM TRAPS, OIL SEPARATORS, BACK PRESSURE VALVES
AND OTHER STEAM SPECIALTIES

**Forge, Cupola and Disc
.. FANS ..**

Electric Fans

**HEATERS
and FANS
FOR
Drying any Material**

**Mechanical Induced
DRAFT FANS
WITH or WITHOUT
ENGINES**

MARINE Engines

FROM 1 TO 200 H.P.

HYDRAULIC RAMS

—AND—
FORCE PUMPS

**STEAM and HAND POWER CAPSTANS
AND STEERING GEARS.**

Sole Agents in Canada for the Hoff-
man Detachable Screen Door Hinge
and Bronzite Anti-Friction metal.

A TRIAL ORDER IS SOLICITED

Raneys Specialty Mfg. Co.

33 PRINCESS STREET

KINGSTON, ONT.

OIL—Continued.
Lard Oil, bbls., 90 cents per gal.
Machine.
Sperm Oil, bbls., \$1.75 per gal.
Cylinder Oil, from 40 cents up.
OILERS—Duty 30%.
\$1 per doz. up.
PAISLS—Duty 25%.
Galvanized, \$2.50 to \$3.50 per doz.
PACKINGS—Duty 25%.
Jute, 8 cents per lb.
Hemp, 12½ cents per lb.
Rubber sheet, 22 cents per lb.
Asbestos, 35 cents per lb.
Flax, 35 cents per lb.
PAINT, WHITE ZINC—Duty 25%.
Elephant Snow White, 8 to 9 cents per lb.
Pure White Zinc, 8 to 9 cents per lb.
No. 1, 6 to 7½ cents per lb.
No. 2, 5 to 6½ cents per lb.
PAINTS, PREPARED—Duty 25%.
In 1, ½ and 1-gallon tins.
Pure, \$1.25 per gal.
Second qualities, \$1.10 per gal.
Barn, in barrels, 75 to 85 cents per gal.
Sherwin-Williams Paints, \$1.45 per gal.
Canada Paint Co's Pure, \$1.25 per gal.
Toronto Lead & Color Co's Pure, \$1.25 per gal.
Zanzibar.
PAINTS—Duty 30%.
Copper, \$3.50 per gal.
LEAD, DRY WHITE—Duty 5%.
Pure, casks, \$5.75 per cwt.
Pure, kegs, \$6.25 per cwt.
No. 1, casks, \$5.50 per cwt.
No. 1, kegs, \$5 per cwt.
LEAD, WHITE.
Pure, \$6.37 per 100 lb.
No. 1, pure, \$6 per 100 lb.
No. 2, pure, \$5.62½ per 100 lb.
No. 3, pure, \$5.25 per 100 lb.
No. 4, pure, \$4.87½ per 100 lb.
Elephant and Decorators' Pure, \$7.12½ per 100 lb.
Brandran'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%.
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.
Brussels Ochre, \$2 per 100 lb.
Venetian Red (best), \$1.80 to \$1.90 per 100 lb.
English Oxides, \$3 to \$3.25 per 100 lb.
American Oxides, \$1.75 to \$2 per 100 lb.
Canadian Oxides, \$1.75 to \$2 per 100 lb.
Super Magnetic Oxides, \$2 to \$2.25 per 100 lb.
Burnt Sienna, pure, 10 cents per lb.
" Umber, pure, 10 cents per lb.
" Raw, 9 cents per lb.
Drop Black, pure, 9 cents per lb.
Chrome Yellows, pure, 18 cents per lb.
Chrome Greens, pure, 12 cents per lb.
Golden Ochre, 3½ cents per lb.
Ultramarine Blue, in 28-lb. boxes, 8 to 24 cents per lb.
Fire Proof Mineral, \$1 per 100 lb.
Genuine English Litharge, 7 cents per lb.
Mortar Color, \$1.25 per 100 lb.
English Vermillion, 80 cents.
Pure Indian Red, No. 45, 90 cents per lb.
Whiting, 12 cents.
COLORS (In Oil)—Duty 25%. 25 lb. tins, Standard Quality.
Venetian Red, 5 cents per lb.
Chrome Yellow, 11 cents per lb.
Golden Ochre, 6 cents per lb.
French Ochre, 5 cents per lb.
Marine Black, 9 cents per lb.
Marine Green, 9 cents per lb.
Chrome Green, 8 cents per lb.
French Imperial Green, 10½ cents per lb.
PAPER—Duty 25%.
Brown Wrapping, 2½ to 4 cents per lb.
Manilla Wrapping, No. 1, 4 cents per lb.
No. 2, 5½ " " "
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 \$6 per doz.
PITCH.
85 cents 100 lbs.
PIPE—Duty, \$8 per ton.
Cast Iron Soil, Medium and Heavy, 65% disc.
" 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, \$5.15 per 100 ft.; 3, \$5.50 per 100 ft.; 1, \$7.95 per 100 ft.; 1½, \$10.30 per 100 ft.; 1½, \$12.95 per 100 ft.; 2, \$16.25 per 100 ft.
PIPES—Duty 30%.
Stove, 5 and 6 in., \$7 per 100 lengths.
" 7 in., \$7.50 per 100 lengths.
PIPE—Duty 30%.
Wrought Iron, 1 inch, per ft. 16½ cents.
PLANES—Duty 30%.
Canadian wood, 25% discount.
Mathieson wood, 20 " "
Bailey's, 40% discount.
PLUMBERS' BRASS GOODS—Duty 30%.
Standard Globe Valves, 65% discount.
Standard Angle Valves, 65 " "
Imitation Jenkins' Valves, 55 " "
Genuine Jenkins' Valves, 45 " "
Gate Valves, 55% discount.
Stop Cocks, 55 " "
Compression Cocks, 50% discount.
Radiator Valves, 55% discount.
Check Valves, 60 " "
POLISH—Duty 25%.
Liquid Stove, \$5 per gross.
Paste, \$5 per gross.
POWDER (Sporting).
Canadian, \$4.50 per keg 25 lbs.
English, " " "
American, \$5.50 " " "
POWDER (Blasting).
\$2.50 per keg.
PULLEYS—Duty 25%.
Dodge wood, 50% discount.
Awning, 25 to 60 cents per doz.
Clothes Line, 50 cents per doz.
Sash, 25 to 27 cents per doz.
PUMPS—Duty 25%.
Cistern, 50% discount.
Force, 50 " "
PUMP CYLINDERS—Duty 25%.
Regular patterns, 65% discount.
PUTTY—Duty 20%.
Bulk, in bbls., \$1.90 per cwt.
" in less quantity, \$2.05 per cwt.
Bladders, in bbls., \$2.10 per cwt.
" in kegs, boxes or loose, \$2.25 per cwt.
" in 25-lb. tins, \$2.35 per cwt.
" in 12½-lb. tins, \$2.65 per cwt.
" in bulk or tins less than 100 lb., \$2.90 per cwt.

Northrop Iron Works

IRON and BRASS FOUNDERS

Heating and Ventilating Engineers,

OFFICE and SHOWROOMS :

296

ST. JAMES STREET,

MONTREAL

'Phone Main 4180



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Canada

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"HANDY" ELEVATORS
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DUMB WAITERS

SECTIONAL HEATING
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PLAIN AND
AUTOMATIC LOOMS

SPOOLERS, WARPERS

FIRE
DOOR FIXTURES

SANITARY OUTFITS
FOR MILLS AND
FACTORIES

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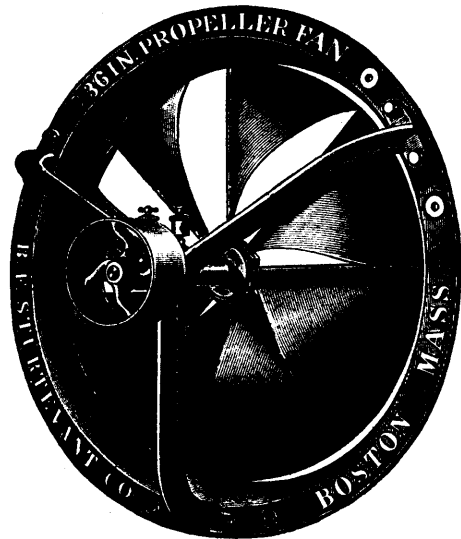
TOOL GRINDING
MACHINERY

NICKEL AND BRONZE.
PLATING

PATENT HANGERS
AND COUPLINGS

MODEL AND PATENT
MACHINERY

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PROPELLER FANS

for

SUMMER VENTILATION

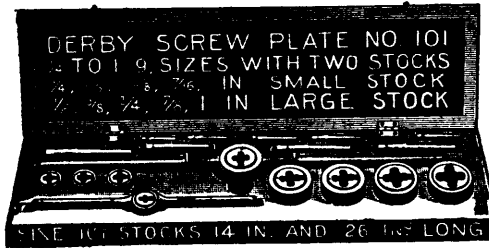
Sizes from 18-inch. to 120-inch. Capacities from
2,000 to 175,000 cubic feet per minute.
Driven by belt or direct-connected electric motor.

B. F. STURTEVANT CO.

195 BOSTON, MASS.
NEW YORK PHILADELPHIA CHICAGO LONDON

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.

RASPS.—Duty 30%.
Blacksmiths, Woodworkers, etc., see Files.
REGISTERS.—Duty 30%, 50% discount.
Floor and Wall.
RIVETS AND BURRS.—Duty 30%.
Iron Rivets, black and tinned, 60 & 10% discount
Iron Burrs, 55% discount.
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.
Copper Rivets and Burrs, 35 & 5 off; cartoons, 1 cent per lb. extra.
Extras on Tinned or Coppered Rivets, 1/2-lb. cartoons, 1 cent per lb.
RIVET SETS.—Duty 30%.
Canadian, 35 to 37 1/2% discount.
ROPE, ETC.—Duty 25%.
Sisal, 7-16 in. and larger, 10 cents per lb.
1/2 in., 11 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.
Cotton, 3-16 in. and larger, 16 cents per lb.
3-32 in., 21 cents per lb.
1/2 in., 22 1/2 cents per lb.
Russia Deep Sea, 15 1/2 cents per lb.
Jute, 8 cents per lb.
Lath Yarn, 9 cents per lb.
New Zealand Rope, 10 cents per lb.
Galvanized Wire Rope, 25% discount.
Crucible Steel Rope, 25%
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, nickle-plated, 67 1/2 cents set.
SAND AND EMERY PAPER.—Duty 25%.
Dominion Flint Paper, 47 1/2% discount.
B. & A. Sand, 40 & 5% discount.
Garnet, 5 to 10% advance.
SAP SPOUTS.—Duty 30%.
Bronzed iron, with hooks, \$9.50 per 1,000.
SAWS.—Duty 30%.
Hand, Disston's, 12 1/2% discount.
S. & D., 40% discount.
Crosscut, Disston's, 35 to 55 cents per foot.
S. & D., 35 off on Nos. 2 and 3.
Hack, complete, 75 cents to \$2.75 each.
Hack, frame only, 75 cents each.

SASH WEIGHTS.—Duty 25%.
Sectional, \$2.75 to \$3 per 100 lb.
Solid, \$1.25 to \$2.25 per 100 lb.
SCALES.—Duty 30%.
Gurney's, 40% discount.
Champion, 60 " " Canadian list.
Troenmer's, 30 " " Canadian list.
SCREEN'S.—Duty 30%.
Window, \$1.75 to \$2.75 doz.
Door, \$7.50 to \$12 doz.
SCREWS.—Duty 35%.
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 " "
Drive Screws, 87 1/2 & 10 " "
Bench, wood, \$3.25 to \$4 per doz.
iron, \$4.25 to \$5.75 per doz.
Set, case-hardened, 60% discount.
Square Cap, 50 & 5% discount.
Hexagon Cap, 45 " "
SCREWS, MACHINE (Iron and Brass)—Duty 35%.
Flat head, 25% discount.
Round head, 20 " "
SHEARS.—Duty 30%.
Tailors, 30% discount Amer. list.
SHOT. See Ammunition.
SHOVELS AND SPADES.—Duty 35%.
Jones', 40% discount.
Ely's, 40 " "
Burns', 40 " "
Gray's, 40 " "
Steel, Snow.
Wood.
SKATES.—Duty 35%.
American Hockey.
Canadian " 40 cents to \$2.50 pair.
SNATHS.—Duty 25%.
\$5.90 to \$7.50 per doz.
SOLDER (Plumbers').—See Metals.
SPIKES.—Duty 1/2 cent per lb.
Ship, \$5 per 100 lb.
Rail, 20% discount.
STAPLES.—Duty 30%.
Wrought iron, 75% discount.
Barb wire, \$3.75 per 100 lb.
Blind, 25% discount.
Bed, 50 " "

STONES.—Duty 30%.
Washita, 28 to 60 cents per lb.
Hindustan, 6 to 7 cents per lb.
" slip, 9 cents per lb.
Labrador, 13 cents per lb.
" axe, 15 cents per lb.
Turkey, 50 cents per lb.
Arkansas, \$1.50 per lb.
Water-of-Ayr, 10 cents per lb.
Scythe, \$3.50 to \$5 per gross.
SNAPS.—Duty 30%.
Harness, 40% discount.
SOLDERING IRONS.—Duty 30%.
20 to 90 cents each.
SPRINGS.—Duty 30%.
Bright Carriage, 6 1/2 per lb. net.
STOCKS AND DIES.—Duty 30%.
Wiley & Russell's, 25% discount, Canadian list.
Blacksmiths', Lightning, 25% discount.
" Green River, 25 " "
" Reece, 30% discount.
" Jardine, 25 " "
" 20% discount.
Pipe, Solid, 70 & 10% discount.
" Duplex, 33 1/2% discount.
" Jarecki, 33 1/2 " "
" Oster, 30% " "
" Armstrong, 35% " "
SYTHES.—Duty 25%.
\$9 to \$14 per doz.
TACKS, BRADS, ETC.—Duty 35%.
Strawberry box tacks, bulk, 75 & 10% discount.
Cheese-box tacks, blued, 80 & 12 1/2% discount.
Trunk tack, black and tinned, 85 " "
Carpet tacks, blued, 80 & 15% discount.
" " tinned, 80 & 20 " "
" " in kegs, 40% discount.
Cut tacks, blued, in dozens only, 80% discount.
1/2 weights, 60% 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.
" grimp, blued, tinned and japanned, 75 & 12 1/2% discount.
Zinc tacks, 35% discount.
Leather carpet tacks, 35% discount.
Copper tacks, 50% discount.
Patent brads, 40% discount.
Fine finishing, 40 " "
Picture frame points, 10% discount.
Lining tacks, in papers, 10 " "
TAGS.—Duty 25%.
Shipping, 50 @ 70 cents per M.

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

Bar Iron, Steel, Boiler Plate Tubes

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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CHARTERED ACCOUNTANT
 Room 500 McKinnon Bldg.,
 Tel. 1330. — TORONTO.
 Audits and Investigations a Specialty.

THE.....
Toronto Paper Manufacturing Co.,
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Manufacturers of Engine Sized Superfine Papers, White and Tinted Book Papers, Blue and Cream Laid and Wove Foolscaps, Account, Envelope and Lithographic Papers, etc.

Chemistry of the Arts and Manufacturers.
DR. GEO. ARCHBOLD,
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CONSULTING CHEMIST,

(Formerly Chief Chemist, Ordnance Dept., U.S. Navy Yard, Washington, D.C.)
 Gives expert technical advice in all matters relating to chemical arts and manufactures. Thirty years practical experience in Great Britain, Europe and the United States.
P. O. BOX 283, - PRESCOTT, ONT.

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...Contractors' Supplies
METALS and SCRAP IRON
 Bought and Sold.

PATENTS
TRADE MARKS, Etc.
HANBURY A. BUDDEN
NEW YORK LIFE BUILDING,
MONTREAL.

FIRE-PROOF GLASS WINDOWS

THAT
 ARE
 FIRE-PROOF

Many practical tests have proved it's efficiency.

Used in conjunction with our hollow sheet-metal frames and other fire-proof fittings, it gives the most perfect protection available.

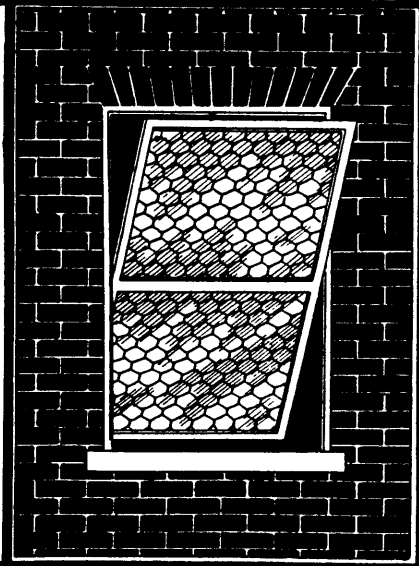
It's adoption lessens insurance rates.

If you want to know more about "fire-proof windows," write us, it's an interesting subject.

... THE ...
Metallic Roofing Co.,
TORONTO, Canada. LIMITED,

These windows in a fire-proof building, complete the security, and in any building will thoroughly prevent the spread and advancement of the fiercest flames.

Better than iron shutters (even if they happened to be closed at the needed time); fire-proof glass remains intact, resisting both the intense heat of the fire and the action of water.



- TAR.
 Refined, \$4 per bbl.
 Coal \$2.75 bbl.
- TENTS.—Duty 30%.
 Canadian list, 20% discount.
- TONGS.—Duty 30%.
 Ice, \$9 per doz.
 Pipe, Browns, net.
 " Brock's, 25% discount.
 " Trimo, 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.
- TURNBUCKLES.—Duty, 1 cent per lb., 25%; 33 1/2% discount.
- TWINES.—Duty 25%.
 Cotton bag, 30 cents per lb.
 Bag twine, 3-ply, 20 cents per lb.
 4-ply, 20 cents per lb.
 Mattress, 45 cents per lb.
 Tarred Lath.
 Wrapping.
 Stone.
 Sewing, 45 cents per lb.
 Colored, 27 cents per lb.
 Jute, 20 cents per lb.
 Hemp, 20 cents per lb.
 Binding, 12 1/2 cents per lb.
- TURPENTINE.—Duty 5%.
 55 cents per gal.
- VARNISHES.—Duty 20 cents per gal., 20%.
 5-gal. lots.
 Carriage, No. 1, \$2 to \$3 per gal.
 body, \$4 to \$6 per gal.
 " rubbing, \$2.50 to \$4 per gal.
 Gold Size, Japan, \$1.50 to \$2.50 per gal.
 Brown Japan, \$1.50 to \$2.50 per gal.
 Elastic Oak, \$1.50 to \$2.50 per gal.
 Furniture, extra, \$2 to \$2.50 per gal.
 " No. 1, 75 cents to \$1.50 per gal.
 Hard Oil Finish, \$1.50 to \$2.50 per gal.
 Light Oil Finish, \$1.50 to \$2.50 per gal.

- Demar, \$2 to \$2.50 per gal.
- Shellac, white, \$2 to \$2.50 per gal.
 orange, \$2 to \$2.50 per gal.
- Furniture Brown Japan, \$1.25 to \$2 per gal.
- Black Japan, \$2 per gal.
 " No. 1, 75 cents to \$1.50 per gal.
- VICES.—Duty 30%.
 Amer., 1 1/2 cents per lb.
 Peter Wright's, 15 cents per lb.
 Brooks', 13 1/2 cents per lb.
- WASHERS (Clothes).—Duty 35%.
 Downswell, \$3.75 each.
 Re-acting, \$5 each.
- WASHERS.—Duty 1 cent per lb., 25%.
 Wrought iron, 40% discount.
 Buggy, 75% discount.
- 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. 6 to 8 gauge, \$2.90 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 50 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, \$9; 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, 50 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, \$3.60 to \$3.95; No. 11, \$3.70 to \$4.10; No. 12, \$3 to \$3.30; No. 13, \$3.10 to \$3.40; No. 14, \$4.10 to \$4.50; No. 15, \$4.60 to \$5.05; No. 16, \$4.85 to \$5.35. Base sizes, Nos. 6 to 9, \$2.57; 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%.
 Navy, \$19 per doz.
 Iron wheel, \$22.50 per doz.
 Garden, \$2 to \$4.50 each.
 Steel tubular, \$7.50 to \$10.50 each.
- WRENCHES.—Duty 30%.
 Coes', 30% discount.
 Agricultural, 60% discount.
 P.S. & W., 30
 Trimo, pipe, 25
 Stillson's, 25
 Alligator, 50
- WRINGERS.—Duty 35%.
 Royal Canadian, \$32.50 per doz.
 Royal American, \$27.50 per doz.
 Ajax, \$65 per doz.
 Crescent, \$20 per doz.
 Leader, \$32.50 per doz.
- ZINC.—See Metals.

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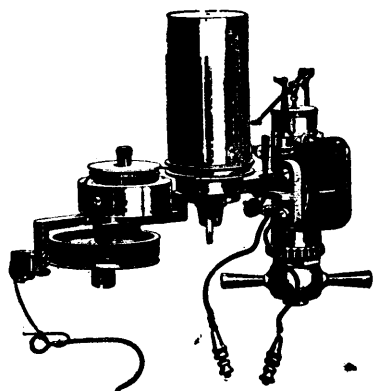
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American Thompson Improved Indicator with Reducing Wheel and Electrical Attachment.

American Steam Gauge and Valve Mfg. Co.

BOSTON, MASS., U.S.A.

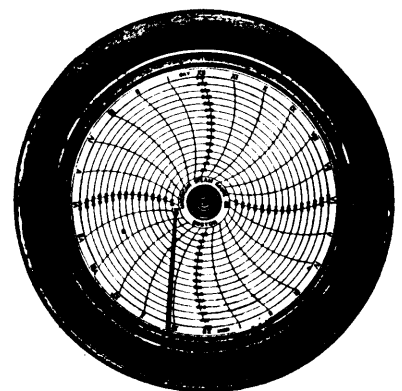
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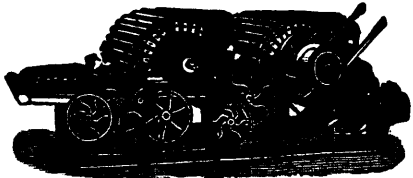
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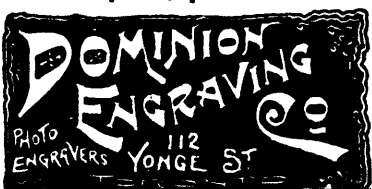
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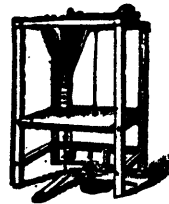
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