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Vol. 53.

TORONTO, NOVEMBER 16, 1906.

No. 10.

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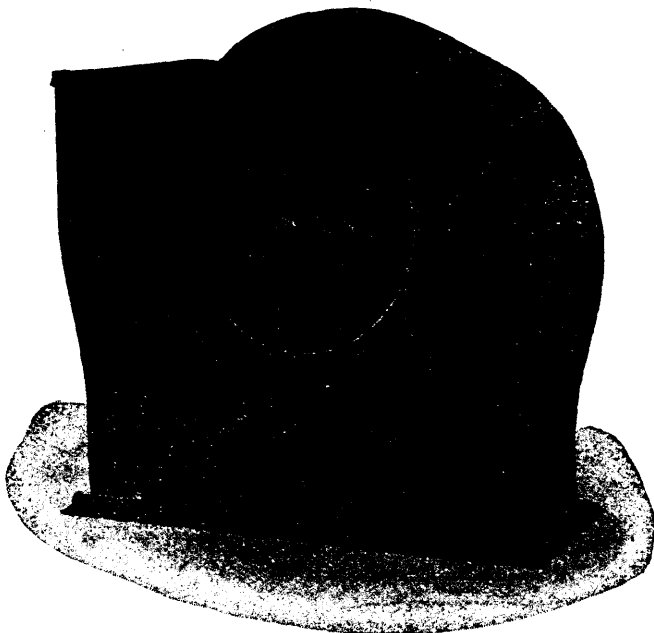
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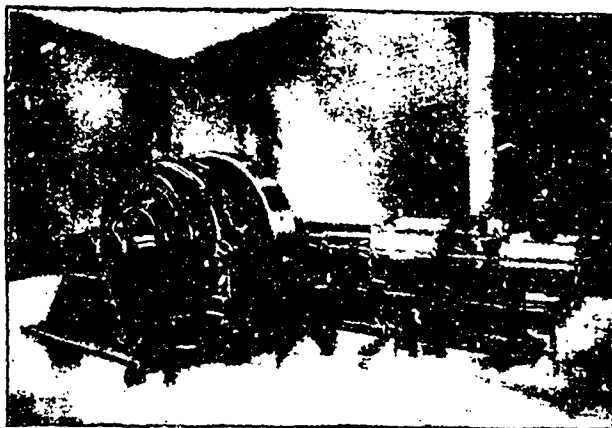
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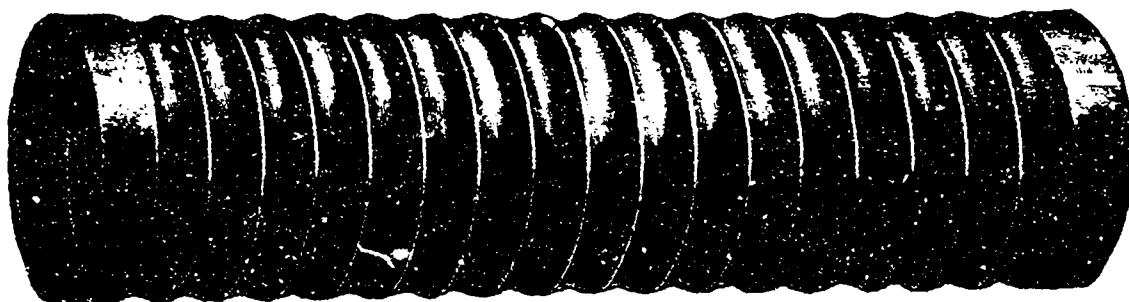
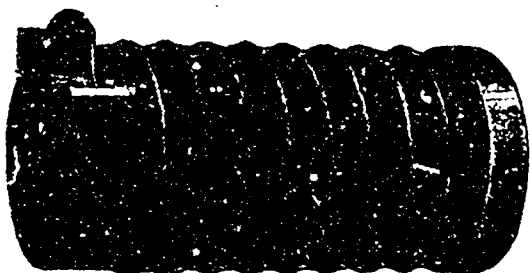
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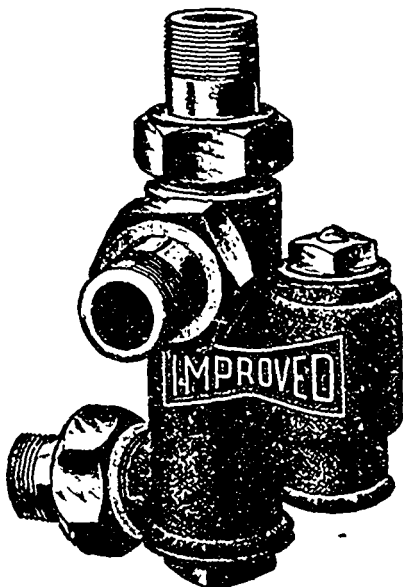
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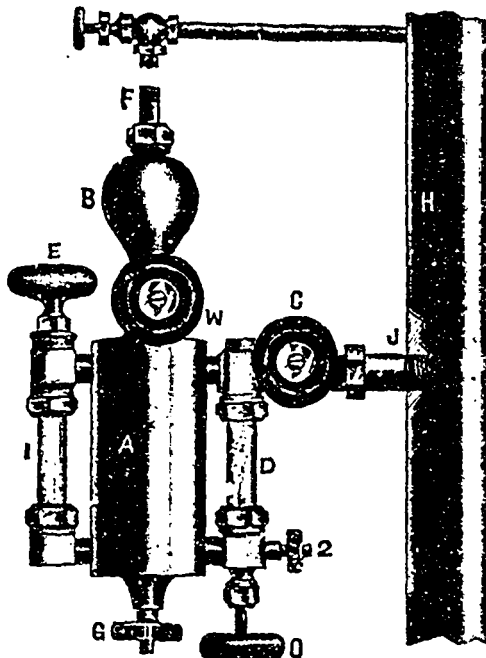
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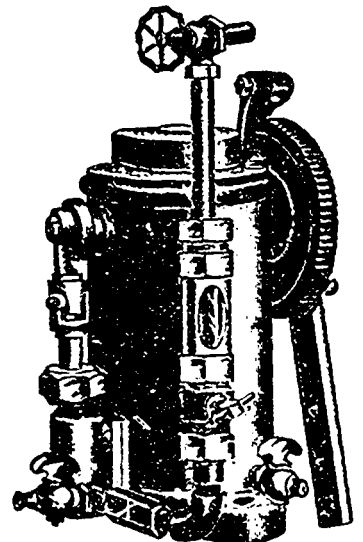
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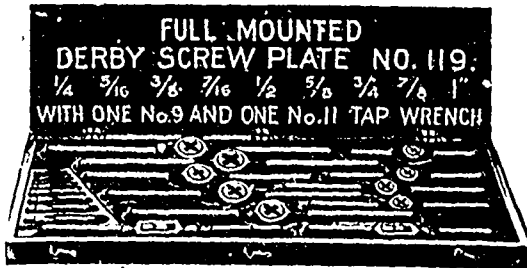
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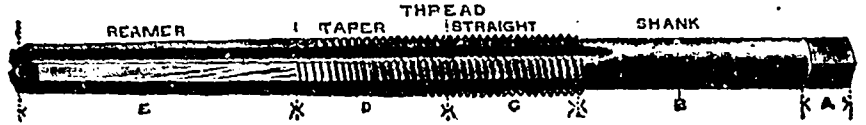
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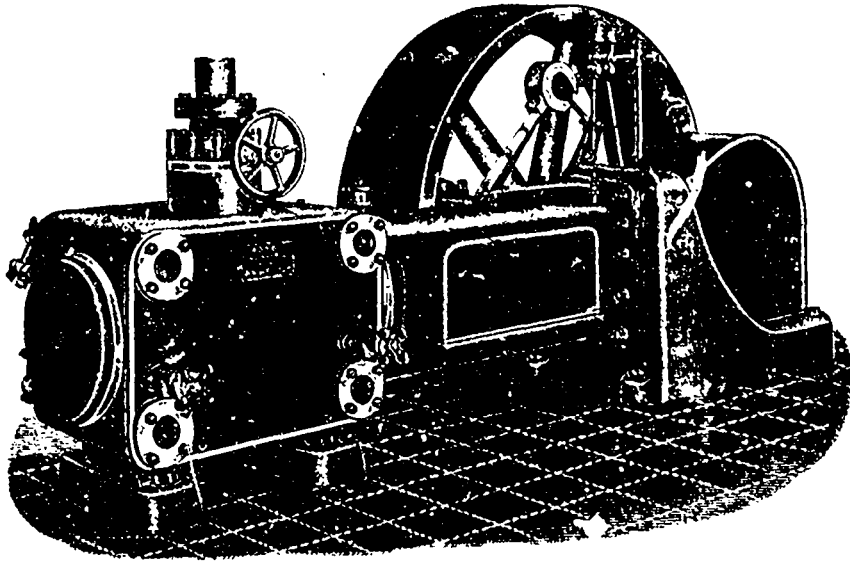
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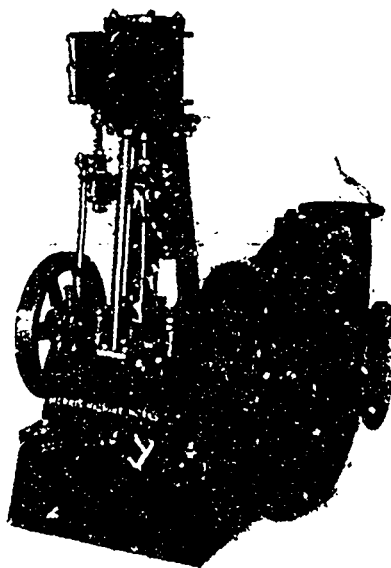
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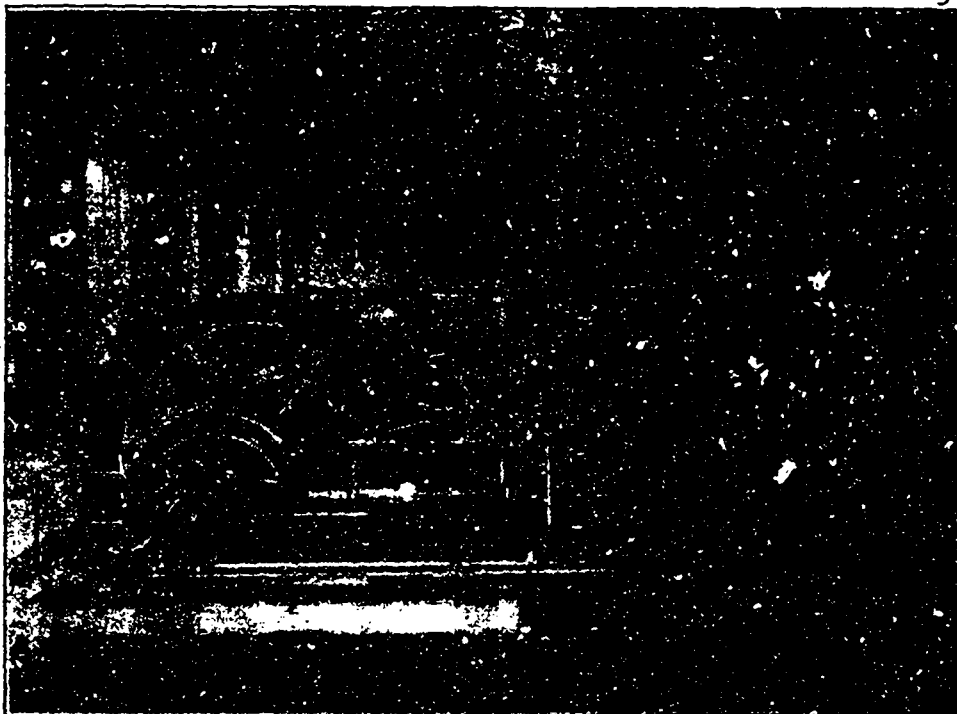
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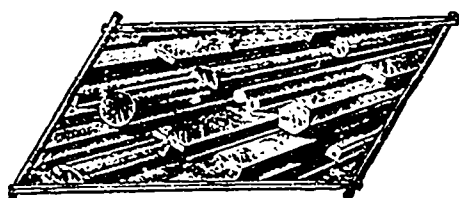
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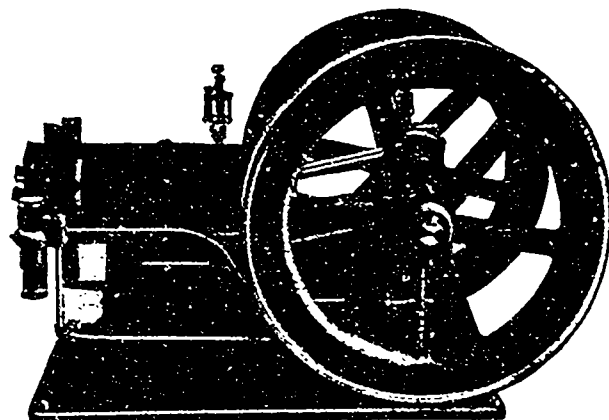


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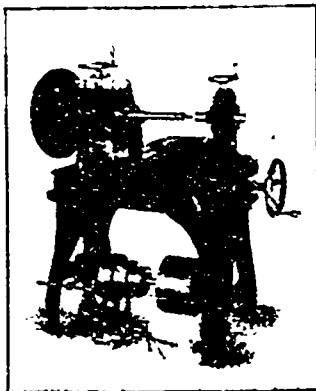


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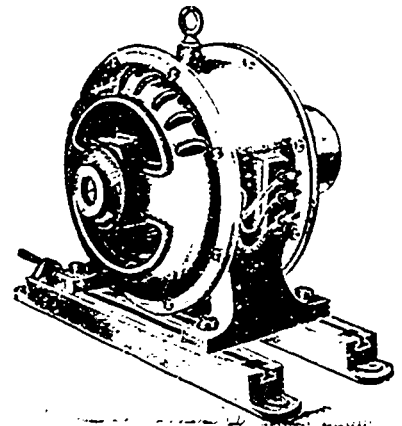
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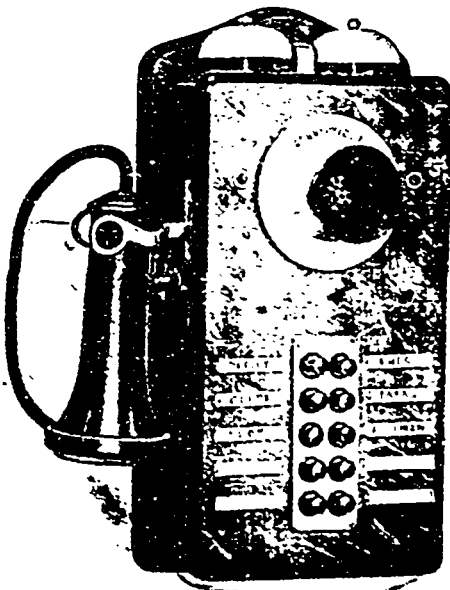
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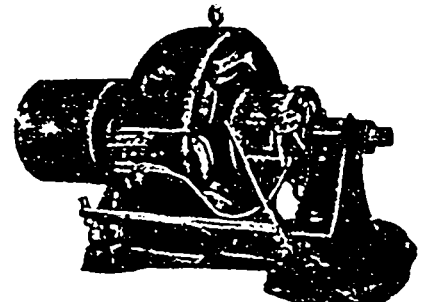
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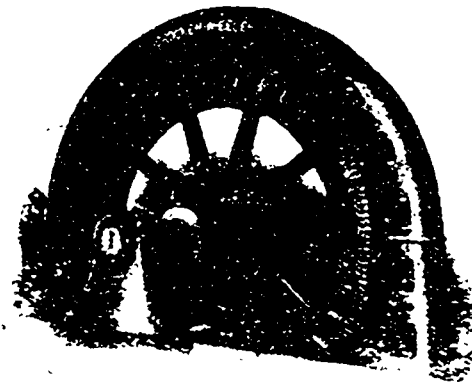
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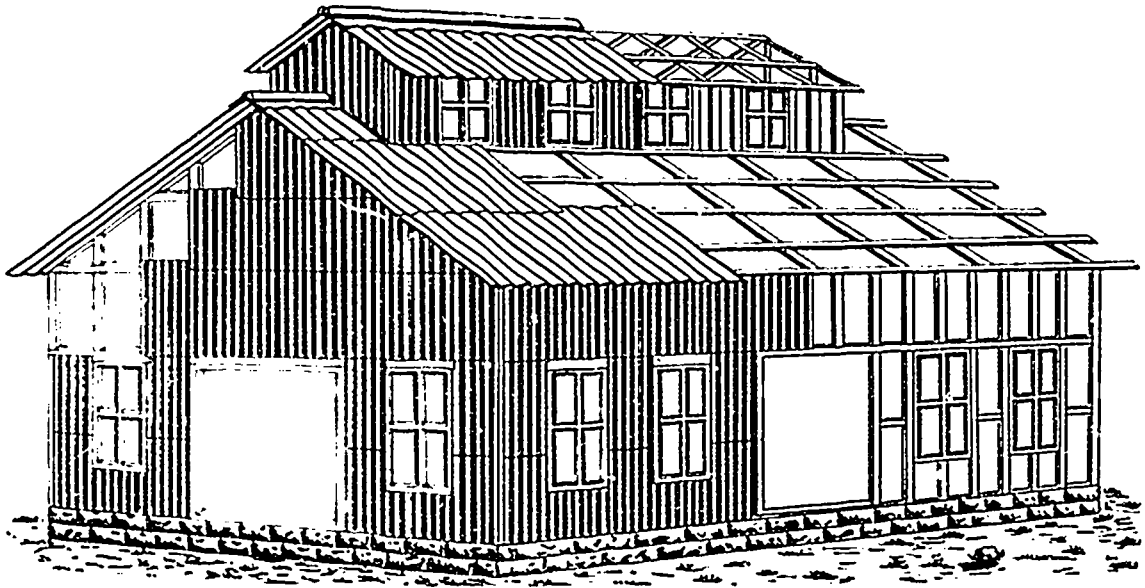
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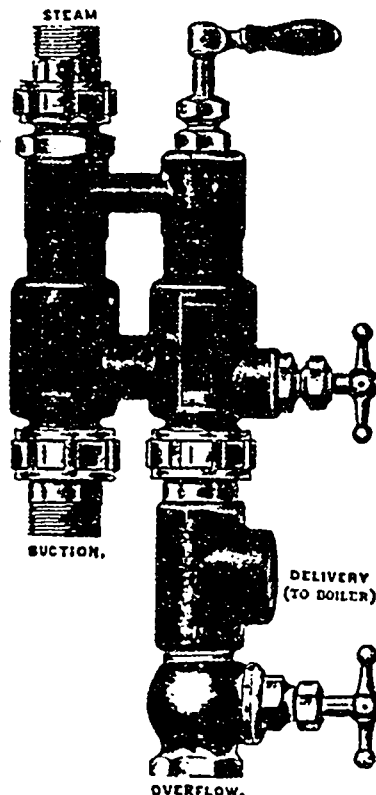
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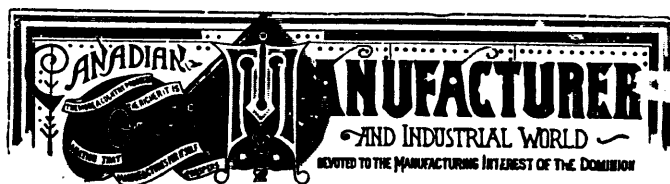
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## THE DOMINION PARLIAMENT.

According to the promise made by the government several months ago, a call has been made for the reconvening of the Dominion Parliament on November 22 instant.

The long promised revision of the tariff will, it is hoped, be made at this session; and it is also to be hoped that no material changes will be made. We sincerely trust that there will not be any three columns in the duty rates. What Canada needs and should have is a uniform rate of duty charges, affording adequate protection to all Canadian industries. If favors are to be shown to Great Britain or any other countries within or without the Empire, let the concession be made from the general schedule; and if tariff hostility is to be shown to any country, let it be by surtax, as is now made on German goods. Every branch of industry in Canada has been for years, and is now enjoying unexampled prosperity, and manufacturers are unable to fill more than a small portion of the orders that are pouring in upon them. There should be no dog in the manger feature in the tariff. Adequate protection is all that is or should be required, and that we must have. We want no earthquakes, cyclones or cataclysms in the revised tariff.

Without doubt whatever changes are made will be based on what Mr. Fielding and his Tariff Commission learned during their investigations throughout the country last year.

## CANADA'S COMMERCIAL AND INDUSTRIAL POSITION.

At the recent convention of the Canadian Manufacturers' Association in Winnipeg, Mr. Ballantyne, the retiring president, made quite a number of interesting statements regarding Canada's commercial and industrial position which deserve attention. We quote some of them:

"Our country has become so immense, our prosperity has made it so contented, our aspirations have so steadily developed along natural lines, that we have assumed the task of working together for the good of our vast heritage, with nothing on the horizon to interfere with a continuance of united and successful advancement."

"It is a great privilege to look back over Canada's activities during the past year and see on every hand evidences of comfort on the part of our people, and the prosperity of our business institutions."

"Canada's foreign trade has shown a remarkable increase. The total trade is \$73,046,000 in excess of 1904-05, and our exports have increased \$52,270,000, or in round figures, \$20,000,000 more than our imports. The imports from the United States show another increase. This year they reached \$180,729,000 or an increase of 8 per cent. over the previous year. A gratifying feature of our trade is that the imports of British goods have increased more proportionately than imports from the United States. The increase is 13 per cent.; the total imports \$69,298,000. There is no doubt that a large proportion of this increase is a direct result of the preferential tariff. \* \* \* Manufactured goods have increased from \$21,191,000 to \$24,561,000, showing a gain of about 16 per cent."

"With the development of our farms we have built railroads, established banks and opened trading houses, all of which are most necessary."

"In 1900 there were 1,180,000 persons of Canadian birth living in the United States. I feel safe in saying that the most of these Canadians were lost to our country because we had not the towns or the factories—in other words the inducements and the opportunities. To-day the situation is completely changed. We have begun to study our own resources."

"It is for us to say whether we will continue to purchase our manufactured goods in the United States or put more tariff on certain lines, and make the factories in the States build plants in Winnipeg or other of the many centres of our great Western prairies which have advantages to offer, and by this means keep the population we are getting. Last year our dutiable imports from the United States amounted to \$94,200,167, the large proportion of which was manufactured goods, and might just as well have been made in Canada. As it is the United States farmer, workman, manufacturer and other citizens have just that much of our money that should have been kept at home."

"It is very important for us to adopt a policy that will assure to our own people the full benefit of the coming development. Many millions of dollars will be realized annually from the crops produced in our rich soil. Many millions more will be taken from our forests and our mines. Shall this wealth remain in the country; shall the money which represents it circulate in the Dominion for the benefit of the people who develop these resources, or shall we, by a mistaken fiscal policy allow it to go abroad for the enrichment of other nations?"

"It must be a matter of gratification to all patriotic

Canadians that the fiscal policy has ceased to be a matter of partisan controversy."

"When a number of members of the Canadian Manufacturers' Association visited the United Kingdom last year the leaders of the party took pains to make our position regarding the question of a preferential tariff clear to the British people. We told them that it was our ambition to make in Canada everything which we could advantageously produce, and that while we did not desire a prohibitive tariff against Great Britain, we would insist upon sufficient protection to at least put Canadian manufacturers on an equivalent footing with those of Great Britain, but that we were anxious to divert into British channels, as far as possible, the trade we now do with foreign countries. In other words that when we must go abroad to buy goods we would prefer to buy from our fellow citizens of the British Empire. The leaders of the tariff reform movement in England expressed approval of our attitude."

"The true preferential policy has been aptly expressed by two little stamps, one of which bears the words 'Keep your money in circulation at home by buying goods made in Canada,' while the other says 'When you can't get what you want at home, buy within the British Empire.'"

"We are sometimes asked what we mean when we say Canadian manufacturers do not demand a prohibitive tariff against the United Kingdom, but that we must have at least sufficient protection to put them on an equivalent footing with those of Great Britain. While giving our manufacturers fair play in competition with British manufacturers we (should) make our tariff so high against all foreign countries that our surplus requirements, above what our own factories can supply will be obtained from British manufacturers. A vast amount of money which now goes to enrich foreign nations would thus be turned into the pockets of British manufacturers and their workmen."

"If the United States manufacturer was not permitted to dispose of his wares quite so easily in Canada, our foreign trade would not be quite so great, but our home trade could be very greatly increased."

"We hope that the tariff which the government will bring down at the coming session of Parliament will effectually prevent future annual importations from the United States amounting to three times the value of our exports to that country."

"The Canadian West is getting thousands of American farmers and settlers every year. Why not, by means of our tariff, invite American manufacturers to follow them in and build factories in the towns of Manitoba, Alberta and Saskatchewan? I am convinced that the great majority of Canadians in the great West would approve of a policy that would bring this about."

The report of the tariff committee, made at the Winnipeg convention, also has a direct bearing upon Canada's commercial and industrial position. The report was read by Mr. W. K. McNaught, a former president of the Association and for quite a number of years chairman of the tariff committee, and was succeeded this year by

Mr. W. K. George, also a former president of the Association. It may be said without disparagement to any that Canada has no more energetic, thoughtful and useful manufacturers than Messrs. Ballantyne, McNaught and George, who are so prominent in the counsels of the Association.

Mr. McNaught, in introducing the tariff resolutions to the convention said:

"The committee views with regret the great increase in the importation of dutiable goods during the past year, and the continuance of the excess of our imports over our exports, which this year amounts to \$35,000,000. Canada's total import trade for 1905-06 reached \$176,771,000, an increase of \$19,606,000, of which increase \$10,960,000 has been purchased from the United States. It is satisfactory, however, to your committee to note that if Canada has to go abroad to make such large purchases, Great Britain's share is increasing very satisfactorily. This year our imports from Great Britain amounted to \$69,298,000, which is an increase of \$7,972,336, or 13 per cent. over the previous year, and which may largely be attributed to the preferential tariff."

"It has never been demonstrated more clearly than during the sittings of the Tariff Commission that the tariff is not now a political question. We regret that some of the newspapers of Canada have not realized this. The tariff is a business proposition, and the newspaper that puts its politics before its patriotism has not the true interests of our country at heart. The question is one that will bear full and frequent discussion, and actual conditions, not theories or political exigencies, are the principles upon which its revision should be based."

Mr. George, in seconding the resolution, to adopt the report of the committee, said:

"I think that the gist of the whole question is contained in the old Halifax resolution. That is the basis on which we should work in the tariff revision. We all recognize that the great majority of our industries under the conditions in which they stand to-day, are exceptionally prosperous. But we do believe that revising the tariff, and bringing it up to the requirements of present conditions, would cause many more industries to be brought into this country, and thus aid in the development and upbuilding of Canada.

"We also recognize that some industries have trouble in meeting competition, and it is on that particular ground that we ask for a revision of the tariff. We have never advocated an extreme tariff as a policy of the Association. The tariff committee will not endorse extreme requests, but they will try to carry out what is stated in the old Halifax resolution."

"At the present time industries are being transferred to Canada from the United States almost weekly. Any thinking man knows that nothing but the tariff induces manufacturers in the United States to establish branches here. These factories are furnishing employment to thousands of workmen. Thus are our cities being built up, and a market provided for our home produce."

President Ballantyne, in putting the motion, said:

"You have heard the adoption of the resolution moved and seconded. I wish to state that according to our custom we do not expect that any member will take up grievances which will refer to his business alone. This discussion will be on national lines. It will deal with the tariff as it affects the whole country."

There was no discussion had on the resolution, and it was declared adopted.

The Halifax resolution of 1902, which has been reaffirmed at every subsequent annual meeting of the Association, is as follows:

"Resolved, that in the opinion of this Association the changed conditions which now obtain in Canada demand the immediate and thorough revision of the tariff upon lines which will more effectually transfer to the workshops of our Dominion the manufacture of many of the goods which we now import from other countries;

"That in any such revision the interests of all sections of the community, whether of agriculture, mining, fishing, or manufacturing should be fully considered, with a view not only to the preservation but to the further development of all these great natural industries;

"That, while such a tariff should primarily be framed for Canadian interests, it should nevertheless give a substantial preference to the Mother Country, and also to any other part of the British Empire with which reciprocal preferential trade can be arranged, recognizing always that under any conditions the minimum tariff must afford adequate protection to all Canadian producers."

#### CANADIAN DEVELOPMENT.

One of the most gratifying features of President Ballantyne's address at the recent Winnipeg convention of the Canadian Manufacturers' Association was the optimistic views he expressed regarding Canada's material development. In his introductory remarks he spoke of the immensity of the country, the prosperity that attends it which has made us so happy and contented; of our aspirations that have been so steadily and satisfactorily realized, and that there is nothing on our horizon to interfere with a continuance of our successful advancement. We have built railways, established banks and opened trading houses all over the country. It is only within the last decade, he tells us, that we have begun to properly appreciate our rich resources, that we are full of confidence in the future of our vast Dominion, and that the outside world is beginning to learn what great opportunities we have to offer.

But it is not all optimism with Mr. Ballantyne, nor with some of the other gentlemen who gave expression to their views. After telling of the remarkable increase of Canada's foreign trade, and of the sources from which our imports come, we are told that it is for us to say whether we will continue to purchase as extensively as we do from the United States, or to put on heavier tariff brakes to obstruct the trade with that country. The obstacles to be placed in the way of American trade is to be compensated by an inflow of American capital and American industrial establishments into Canada.

The Americans who are now selling us so largely of their products are, by the large increase of our import duties—by the adoption of McKinleyism—to be forced to establish factories in Winnipeg, Saskatoon, Moose Jaw, Calgary, Medicine Hat, Regina, Edmonton and many other places in our great Western prairies. The Canadian West is getting thousands of American farmers as settlers every year, says Mr. Ballantyne, then why not, by means of our tariff, prevent them from purchasing American made goods? "We hope," he says, "that the tariff which the government will bring down at the coming session of Parliament will effectually prevent future annual importations from the United States amounting to three times the value of our exports to that country." Mr. Ballantyne is convinced, so he says, that "the great majority of Canadians in the great West would approve of a policy that would bring this about." It is this sort of ultraism that disgusts the friends of adequate tariff protection to Canadian industrial enterprises, and Canada will make a very serious mistake if the views of Mr. Ballantyne and of the Association he represents should be adopted. It would be worse than McKinleyism as they have it in the United States, against which the Association so persistently declaims, and so ardently desires to follow.

Another remarkable feature of the discussion at the Winnipeg convention was the British preferential tariff matter. It was a rehash of the old song, of course, diaphonous and insincere, and is only used for the purpose of stimulating a sentiment of opposition to the large and increasing importations of American goods. The tariff was never intended to exclude the products of any country, but rather to afford reasonable and adequate protection to Canadian industries. That should be the measure of the tariff. Mr. Ballantyne declared that the Association does not demand a prohibitive tariff against the United Kingdom, but advocates it against the United States. In any preference (?) there may be shown to Great Britain there must be sufficient protection to put Canadian manufacturers on an equivalent footing with British manufacturers, which is very sound and reasonable doctrine. But there must be a prohibitive tariff against American goods—Mr. Ballantyne says so. But why? In the days of Sir John Macdonald, when Canadian manufacturers, particularly those comprised in the Manufacturers' Association, were struggling for very existence, all that was asked as the limit for the protection they desired was that it should be measured by the difference of the cost of production at home and the cost of production abroad. Nothing more. But it is now set up that because Canada is under some sort of obligation to Great Britain—the Mother Country, we must make that claim good, and Canadian manufacturers—not Canada—must bear the brunt. The tariff being established on the Sir John Macdonald idea, the rates being as low as compatible with justice to Canadian manufacturers, Canada cancels her obligation to the Mother Country by removing all vestige of protection by the remission of a third of the duties imposed. That's patriotism—of a sort in the direction

of free trade. Mr. Ballantyne and Mr. McNaught and Mr. George and the other leaders and managers of the Association desire to be patriotic and so they throw up their hats and hurrah for a British preferential tariff; but there is a string to the hat, and so they resolute that the net preference shall be not less than the adequate protection they very properly insist on having. Consistency is a jewel.

Mr. Ballantyne's method of fixing the thing by which it would be shown that the preference would be the real stuff itself, is to impose adequate duties on British goods, and prohibitory duties on American goods, trusting to the obtuseness of British manufacturers to not observe the inconsistency of the proposition.

We should render to Caesar the things that are Caesar's to God the things that are God's, and to Great Britain the things that are hers, but we should never forget that God always comes before Caesar and that for us Canada always before the Mother Country.

#### THE TARIFF IS A POLITICAL QUESTION.

In his address to the Canadian Manufacturers' Association, recently held in Winnipeg, Mr. Ballantyne, the retiring president, speaking of Canada's tariff attitude, said:

"It must be a matter of gratification to all patriotic Canadians that the fiscal policy has ceased to be a matter of partisan controversy. The leading politicians of both political parties now recognize the necessity of protecting Canadian industries of all kinds, and we hope that when the members of our Dominion Parliament are called together in November to consider the revision of the tariff they will set aside all old prejudices and look at the question from the broad standpoint of Canadian interests; that they will consider what policy will best develop the varied resources of our country, give profitable employment to all classes of our people and maintain and advance the prosperity that now exists."

In presenting the report of the tariff committee to the convention, Mr. McNaught, speaking of the tariff, said:

"It has never been demonstrated more clearly than during the sittings of the Tariff Commission that the tariff is now not a political question. We regret that some of the newspapers of Canada have not realized this. The tariff is a business proposition, and the newspaper that puts its politics before its patriotism has not the true interests of our country at heart. Your tariff committee believe that sentiment in Canada was never so thoroughly in accord regarding the tariff question as it is to-day."

We have all heard of the ostrich when, being pursued by the hunter, buried its head in the sand, hoping that its bulky body would escape observation.

If any man imagines that any question touching the method of raising the national revenue in Canada, Great Britain or any other country, is not one of politics, he is an anomaly that should be captured, embalmed and stowed away in a museum of antiquities. There are tariffs and tariffs. Great Britain is a free trade country so-called, but tariff duties are imposed that in the last

year realized more than \$160,000,000 to the British treasury. Canada operates two tariffs, one for love and the other for revenue. One is protection and the other is not. The aim of one political party is to place the tariff as nearly on a revenue basis as possible, while another political party desires adequate or more tariff protection in every item, and now Mr. Ballantyne for his Association, wants an entirely prohibitive tariff against goods made in the United States. Mr. McNaught is red hot and persistent for a preferential tariff that will allow a discount on British goods which must pay protective duties; and this song has been sung in season and out ever since the Halifax convention in 1902—the same old unvarying tune. No political party at Ottawa or anywhere else, that we have any knowledge of, joins with any heartiness in singing Mr. McNaught's tune, but we have knowledge of many politicians almost, but perhaps not quite as patriotic as he is, whose melody is expressed in quite different keys. In fact we have knowledge of quite a number of members of his Association who differ from him in many particulars. Of course Mr. Ballantyne desired to create the impression that the Association was a harmonious whole, in full accord with him and the tariff committee, but there was something suspicious in what he said when, putting the tariff resolutions before the convention, he stated that in discussing them no member should take up tariff grievances which affected him individually. What were the individual members of the Association there for? The fish had a stale and ancient smell. The tariff question, as a political issue is a very live one in the Association as it is throughout the country, and will so demonstrate itself in the Dominion Parliament when the Finance Minister is ready to discuss it.

Mr. McNaught regrets that there are some newspapers in Canada which do not view the matter as he does, and agree with him that the tariff is not a political issue, and he calls in question their patriotism when they differ from him. No Canadian paper, he says, can have the true interests of the country at heart if they do not think as he does. It was Abraham Lincoln, we believe, who uttered the saying that one might fool all of the people some of the time, and some of the people all of the time, but no one could fool all of the people all of the time. The tariff is now, as it always has been, a political question, and there is quite as great necessity now for the friends of protection to be up and looking after their best interests as ever before in the history of the country.

#### DENATURED ALCOHOL.

Internal-Revenue Commissioner Yerkes and Congressman E. J. Hill, of Connecticut, recently returned from Europe, where they made an examination of the working of regulations for free denatured alcohol in Great Britain, France, and Germany, and have furnished some interesting information on the subject.

Representative Hill says that, spurred on by the keenness of German competition, Great Britain has found it necessary to make much more liberal provision

for the use of free alcohol than heretofore. Where a 10 per cent. denaturant had been used formerly, only 5 per cent. will hereafter be used, thus materially reducing the cost. Beside that, the cost of supervision, which has heretofore been thrown upon the consumer, will, under the terms of the bill, be hereafter paid wholly by the government. The investigators also found that Australia had taken the matter up and that every probability exists for a law being passed very similar to that adopted by Congress at its last session. France is paying a bounty of 5 cents a gallon on all completely denatured spirit. Mr. Hill says that in Manchester there are two large factories where denatured alcohol is being used in the manufacture of hats. At one factory the proprietor said that he paid from 30 to 32 cents per gallon for denatured alcohol. They bought their spirit on printed requisition forms and were under bonds to the government for its proper use. A government inspector came into the factory whenever he chose to do so. The manufacturers use the spirit, recover it, and redistill the product in their own factory and use it over again until it is used up. The only restriction placed upon them was that they were not allowed to sell either the original or recovered spirit, but aside from that used it as they pleased.

The mixture which was there used consisted of 90 per cent. ethyl alcohol, 10 per cent. methyl alcohol, with 3 per cent. of benzine added. Under the provisions of the new law the 10 per cent. of wood spirit will be reduced to 5 per cent. The benzine is not required to be added except where recovery and redistillation is practiced. Mr. Hill said that they had no trouble in buying completely denatured alcohol as freely as they could buy any other article kept for sale, and he thinks that the same freedom of use should be accorded to the hat and other manufacturers of the United States.

The strongest alcohol of commerce in the United States is usually 95 per cent. alcohol, and the price varies from \$2.30 to \$2.50 per gallon, showing that the greater part of the cost is due to the revenue levied by the government. The greater part of the 60,000,000 gallons of alcohol consumed in the United States is used in the manufacture of whisky and other beverages. The revenue tax prevents the use of alcohol to any great extent in the industries of the country. The bill passed at the last Congress, designed to promote the use of untaxed alcohol in the arts and as fuel, takes effect January 1, 1907. The first effect of free alcohol will be, it is said, to supplant the 12,000,000 gallons of wood alcohol which are used in the manufacture of paints, varnishes, shellacs, and other purposes. Another use that is expected of denatured alcohol is in the manufacture of certain products, such as dyestuffs and chemicals, which can not now be manufactured commercially in the United States because of the high cost of alcohol, and which are imported largely from Europe. A very rapid development of the industry of manufacturing chemicals as a result of free alcohol is looked for. In the production of alcohol there is always formed as a by-product

a certain amount of fusel oil, which is very useful in manufacturing lacquers which are used on metallic substances, fine hardware, gas fixtures, and similar articles. The industries manufacturing these wares will undoubtedly receive a great stimulus as a result of cheaper fusel oil caused by the increased production of alcohol.

The use of denatured alcohol as a fuel has yet to be fully developed. Although alcohol has only about half the heating power of kerosene or gasoline, gallon for gallon, yet it has many valuable properties which may enable it to compete successfully in spite of its lower fuel value. In the first place it is very much safer. Alcohol has a tendency to simply heat the surrounding vapors and produce currents of hot gases which are not usually brought to high enough temperature to inflame articles at a distance. It can be easily diluted with water, and when it is diluted to more than one-half it ceases to be inflammable. Hence it may be readily extinguished; while burning gasoline, by floating on the water, simply spreads its flame when water is applied to it. Although alcohol has far less heating capacity than gasoline, the best experts believe that it will develop a much higher percentage of efficiency in motors than does gasoline. Since gasoline represents only about 2 per cent. of the petroleum which is refined, its supply is limited and its price must constantly rise, in view of the enormous demand made for it for automobiles and gasoline engines in general. This will open a new opportunity for denatured alcohol. Industrial alcohol is now used in Germany in small portable lamps, which give it all the effects of a mantle burner heated by gas. The expense for alcohol is only about two-thirds as much per candle-power as is the cost of kerosene. Even at 25 or 30 cents a gallon, denatured alcohol can successfully compete with kerosene as a means of lighting.

Commissioner Yerkes has issued the departmental regulations controlling the making of denatured alcohol in the United States, its handling and uses. These regulations will render effective the law passed by Congress to take effect January 1, next, and provide for the withdrawal from bond, tax free, of domestic alcohol when it is rendered unfit for beverage or liquid medicinal usage by the admixture of suitable denaturing materials. The tax now amounts to about \$2 per wine gallon on alcohol at 180° proof, and the denatured article after January 1 will be free from that tax. Mr. Yerkes, speaking on the subject, said:

"There will be two classes of denatured alcohol—first, that styled 'completely denatured,' which will pass into general use for general consumption, and can be purchased at the stores without limiting regulations as against the private consumer; and second, 'especially denatured,' in which the material demanded by the needs of manufacturing interests will be regarded. As to this latter there are limitations confining it to the special manufacturing industry for which it is prepared.

"This especially denatured alcohol will be kept under strict surveillance and governmental supervision.

"For the completely denatured article 10 parts of



wood or ethyl alcohol and one-half part of benzine will be added to 100 parts of ethyl alcohol. In other words, to every 100 gallons of ethyl alcohol will be added 10 gallons of wood alcohol and one-half gallon of benzine.

The denaturing process will be accomplished on the distillery premises where the alcohol is produced, in special bonded warehouses designated and used alone for denaturing purposes and for the storage of denaturing materials. These buildings and the operation itself will be under closest governmental inspection and control. Denatured alcohol will supplant very largely the consumption of wood alcohol for both domestic and manufacturing purposes, as it will be cheaper.

"While the price of the completely denatured product can not now be definitely stated, it is believed it will not be more than 35 cents a gallon. The price of the specially denatured alcohol will naturally vary according to the cost of the denaturing ingredients selected to meet the necessities of the manufacturing industries. These special formulas will only be used where it is made perfectly apparent to the Department that the industrial interests involved cannot use completely denatured alcohol by reason of the presence of wood alcohol or benzine. In that case some other denaturing agent or agents, which will accomplish the purposes of destroying, as far as possible, the potable or beverage qualities of the alcohol, and at the same time adapt the denatured article to the special ends desired, will be determined upon.

#### HE SIZES IT UP.

American Consul H. D. Van Sant, of Kingston, Ont., reports concerning America's commercial connections with Canada. He finds that a spirit of fairness toward the United States is being built up among the Canadian people that is far more powerful than any law placing British goods under preferential tariff. He writes:

"There is considerable discussion in this district among commercial men as to the cause of the increase of the trade relations between the United States and Canada, as against the mother country with the Dominion. While the loyalty to the Empire remains strong and unquestionably preponderating, the commercial relations between the border countries continue to increase largely, both in this district and the entire Dominion.

"The needs of the two peoples are similar, their business intercourse of necessity more frequent, their taste, costumes, and style almost alike, and their social, religious, and business interests constantly increasing. A few hours at most separate the commercial centers of the two countries. A trip from one to the other incurs no more expense or time than would a trip from one State to another. It takes weeks to get a shipment from England or Germany to Canada as compared with a few days at most to get them across the line.

"The retailer in this district will explain that goods bought in the United States are more cheaply, easily and safely handled, and owing to keen competition are growing better each year in quality and value. In some cases the writer has found that the demand for American-made

goods in the line of boots and shoes, drugs and staple groceries, hardware and machinery is so great as to compel dealers who are otherwise inclined to keep them in stock. Machinery, marine engine and tools, farming implements, windmills, boilers and engines, and hardware of almost every description are mostly American manufacture, and the imports from the United States lead. Considerable quantities of hardware imported from England have been in reality of American manufacture. A certain amount of sales made in this way is not credited to the total amount of exports of the United States to Canada. I have the authority of a number of hardware dealers in both western and eastern Ontario for this statement.

"The higher social circles are intensely loyal to the Empire, and usually make purchases based upon their sentiments; but as a whole they take less interest in the matter of trade and commerce than the leading business men, wholesalers and retailers. The middle and lower classes usually buy where they can get the lowest-priced goods of good quality, and as a result the business man keeps in touch with the wants of his best customers, at the best profit he can make, and almost invariably on account of easy, safe, quick, and cheap shipments the demand for goods of American make and manufacture increases with the population and wealth of the country.

"American commercial sentiment has also largely increased because from 75 to 80 per cent. of the Canadians settling in the United States report the advantages of American goods and their constant improvement in quality and manufacture. Thousands of Americans pass through Canada each season, and by their generally kindly deportment and generous outlay as tourists help to advertise the country and cultivate closer commercial interests.

"The tariff is an accepted condition which must stand in the present relations of the two countries, and on its present lines seems to be doing more if the present prosperity on every side is taken as an indication of its effect, to build up the unbounded natural resources and wealth of the two countries than any other economic condition."

#### AN APPROACHING LUMBER FAMINE.

When the American manufacturers of vehicle woodstock recently assembled at Niagara Falls, one of the subjects which engaged their attention to a marked degree was the threatened shortage in timber suitable for use in vehicle manufacture, and there was no difficulty in figuring out that, if the depletion of the American forests continues at its present rapid rate for many years, the day will soon come when carriage makers will have to make their carriages of something besides wood or some new source of wood supply will have to be discovered. Vehicle woodstock is a staple article of export to many countries, and the bearing of the prices on the export trade thus becomes rapidly apparent.

The New York Commercial says that the question is too large a one to be settled by individual enterprise, and its solution will ultimately involve the co-operation of the entire agricultural community. The carriage

makers sincerely believe they must look to the farmers of the country for relief from the threatened famine. The farmers have the land which is necessary for tree growing, and, if a new wood supply is to be cultivated, it can only be accomplished by the growing of forests. The question is whether it can be demonstrated to the farmers that it will be remunerative to them or their children to grow timber in place of the staple products which they can sell much quicker and probably at a better profit.

The vehicle makers even maintain that if the agricultural interests will not voluntarily plant trees, means must be found to compel the farmers or someone else to do so. Even at best, it seems apparent that the use of inferior grades of lumber for wagon, carriage and automobile construction, and for many forms of agricultural implements, will become necessary at a comparatively early date. There is already more or less frequently complaint among the manufacturers as to the quality. The outcome of the increased use of inferior lumber can readily be comprehended. The quality of numberless factory products would be undermined with a consequent loss of prestige among the manufacturers.

It is computed that the present annual consumption of hickory is from 100,000,000 to 150,000,000 feet annually, and every year the demand for hickory is greater than the year before. At this rate the practical exhaustion of the hickory supply becomes only a matter of time, and as things stand at present no satisfactory substitute for hickory is available.

The inevitable result will be a higher price for hickory, and, consequently, a higher price for carriages and wagons made of hickory. The people must always have carriages and wagons, under all circumstances, and it is almost impossible to foretell what is to be the effect of the anticipated shortage.

Perhaps the question will be settled by the importation of carriage wood from Canada, whose supply of timber is commonly supposed to be practically inexhaustible.

#### EDITORIAL NOTES.

Collectors of Customs throughout Canada have been notified that in the recent treaty with Japan, ratified on July 12 last, it is provided in effect that higher duties shall not be imposed on goods of Japanese origin than on similar goods of French origin. Collectors are therefore advised that the duties of Customs, if any, collected on goods of Japanese origin entered in Canada since July 12, 1906, in excess of the duty payable in respect of like goods under the French Treaty Act will be refunded pending further legislation on the subject. It is held that a Parliamentary enactment is necessary to justify the Customs authorities in allowing the lower rate of duty. The recent order, however, has been passed as an evidence of Canada's good-will towards Japan.

Sir William Van Horne believes that Canada is making a mistake in allowing the export to the United States of spruce and spruce pulp for paper manufacture. He pointed out at the recent annual meeting of the Laurentide Paper Co. that a cord of pulpwood yields to all

interests in Canada, the individual, the government and the transportation companies, only six dollars. The same cord converted into ground wood pulp would yield \$13; if made into sulphite pulp, \$21; and if made into paper, at least \$36. With these *a priori* facts Sir William makes the logical and eminently common-sense deduction that it would be to the interest of this country to have the spruce converted into paper at home. A small export duty on pulpwood and on pulp would force the American capitalists to establish mills in Canada. This is always economically desirable, and certainly it would be the result, for timber limits in the United States are getting scarcer every year. The Americans must come to this country for their pulp. Why should they not come here for their paper?

The British Trade Journal, of London, has this to say concerning the Australian commerce act:

"Our Australian correspondent forwards a copy of the new regulations under the commerce act of 1905, which came into force on June 8. Some idea of the nature of these regulations may be gathered from the fact that they stipulate that seeds imported into Australia shall be accompanied by indications of the place of production and the year in which they were grown; jewelry must be accompanied by a statement showing the purity of the gold used in its composition; no goods shall be imported described as wool containing less than 90 per cent. of pure wool; whisky when described as whisky, must show the date of manufacture in the label or brand, the method of manufacture, and the material from which it is made. In the case of blended spirits, the date of blending must be given. It need hardly be pointed out that such regulations are largely unworkable, and if insisted upon must tend to disorganize trade. They appear to be simply a disguised attempt to prohibit a large number of imports, and to give importers much unnecessary trouble."

The French minister of public instruction has decided that all teachers throughout France are in future to employ the following distinctive abbreviations for the various weights and measures:—For denoting length—myriamètre, Mm; kilomètre, Km; hectomètre, Hm.; décamètre, dam.; mètre, m.; décimètre, dm.; centimètre, Cm, and millimètre, mm. For areas—hectare, ha; are, a, and centiare, ca or m2. For measures of bulk (timber), décastère, das; stère, s or m3, and décistère, ds. For measures of mass and weight—tonne, t; quintal métrique, q, kilogramme, kg; hectogramme, hg; décagramme, dag; gramme, g; décigramme, dg; centigramme, cg, and milligramme, mg. For measures of capacity—kilolitre, kl; hectolitre, hl; décalitre, dal; litre, l; décilitre, dl; centilitre, cl, and millilitre, ml. The use of the capital letters for the three largest denominations of length are intended to prevent confusion, and all the other abbreviations follow on uniform lines. The employment of full stops between the letters is officially abolished, and k. g. for kilogramme and m. m. for millimetre disappear.

## CAPTAINS OF INDUSTRY.

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

The premises of John Logan, Toronto, brick manufacturer, were damaged by fire recently. Loss about \$10,000.

The Supreme Heating Co., Welland, Ont., have commenced the erection of their plant for the manufacture of stoves. One building, 500x60 feet, and another 300x60 feet, will be erected; also several smaller buildings.

Messrs. Haney & Miller, Toronto, intend opening a branch office in Woodstock, Ont., for the sale of builders' supplies and machinery in Western Ontario.

A new wing will be erected to the hospital, Stratford, Ont.

A new Y.M.C.A. building will be erected at Ottawa.

An electric light plant will be installed at Niagara Falls, Ont.

The elevator of Messrs. Muirhead & Black, Fort William, Ont., was destroyed by fire November 10. Loss about \$20,000.

It is reported that the Gilson Mfg. Co., Fort Washington, Wis., will establish a branch in Guelph, Ont., to manufacture gasoline engines, office chair irons, and other articles.

The Reid Wrecking Co., Sarnia, Ont., have been awarded the contract of raising the steel steamer, Lackawanna, at Cleveland, Ohio, at a cost of about \$500.

The Fink, Lee & Peabody Overall Co., Windsor, Ont., have been organized with W. M. Fink, Detroit, Mich., one of the largest manufacturers in the United States, as president.

The Smith's Falls Malleable Castings Co., Smith's Falls, Ont., have purchased the new shops recently built by the Rideau Malleable & Foundry Co. They will now be able to supply the demand for malleable castings which they have been unable to do for some time.

The Upper Ontario Steamboat Co., New Liskeard, Ont., have been incorporated with a capital of \$99,000, to build steamers, vessels, elevators, warehouses, etc. The provisional directors include F. S. Brickenden, F. W. Hendry and M. R. Jennings, New Liskeard, Ont.

The Leitch Collieries, Limited, Ottawa, have been incorporated with a capital of \$1,000,000, to carry on a mining, milling and reduction business. The provisional directors include A. A. Baylie, E. Seybold and J. Gibson, Ottawa.

The Ontario Torpedo Co., Petrolea, Ont., have been incorporated with a capital of \$40,000, to manufacture nitro-glycerine, dynamite, gas, oil, etc. The provisional directors include G. M. Cary, T. Johnstone and B. B. Van Tuyl, Petrolea, Ont.

The Cobalt Portage Mines, Toronto, have been incorporated with a capital of \$1,000,000, to carry on a mining, milling and reduction business. The provisional directors include J. J. Hubbard, H. S. Pritchard, and J. Lewis, Toronto.

The Northern Ontario Consolidated Copper Co., Sault Ste. Marie, Ont., have been in-

corporated with a capital of \$1,500,000, to carry on a mining, milling and reduction business. The provisional directors include J. N. Oldham, C. A. Paul and C. S. Hodgins, Sault Ste. Marie, Ont.

The National Stationery Co., Toronto, have been incorporated with a capital of \$40,000, to manufacture stationery, etc. The provisional directors include W. H. Becker, W. T. Lucas and L. Archambault, Toronto.

The Erie Evaporating Co., Dunnville, Ont., have been incorporated with a capital of \$40,000, to can and preserve fruits, vegetables, etc. The provisional directors include W. J. Aikens, E. J. Aikens, Dunnville, Ont., and W. T. Henderson, Brantford, Ont.

The Dominion Brush & Mirror Co., Toronto Junction, Ont., have been incorporated with a capital of \$65,000, to manufacture brushes, mirrors, etc. The provisional directors include J. G. Shaw, J. Montgomery, and J. G. Strong, Toronto.

An addition will be erected to the station of the Grand Trunk Railway Co., Peterborough, Ont.

J. Coulter, Toronto, manufacturer of jewelry cases, will erect a warehouse at a cost of about \$8,000.

The Gowans Kent Co., Toronto, are erecting an addition to their factory on King Street at a cost of about \$30,000.

The Rochester Cobalt Mines, Cobalt, Ont., have been incorporated with a capital of \$1,000,000, to carry on a mining, milling and reduction business. The provisional directors include N. S. Scott, F. B. Sanders and S. W. Parsons, Cleveland, Ohio.

The New York Cobalt Silver Mines, Toronto, have been incorporated with a capital of \$1,000,000, to carry on a mining, milling and reduction business. The provisional directors include J. Lewis, W. Hogan and F. Watt, Toronto.

The Standard Fittings & Valve Co., a branch of the Aird-Don Co., Troy, N.Y., have been established at Guelph, Ont., with a capital of \$100,000. A site has been acquired and a plant will be installed at a cost of about \$25,000. The principle articles manufactured will be wrought iron pipes and plumbers' supplies.

The Auto Car Equipment Co., Buffalo, N.Y., are considering the erection of a factory at Niagara Falls, Ont.

Messrs. Littlejohn & Vaughan, Toronto, will erect a new factory on Adelaide Street, Toronto.

A waterworks system will be installed at Ridgetown, Ont.

The stables of the Windsor Hotel, Belleville, Ont., were destroyed by fire November 9. Loss about \$5,000.

It was stated at the Bureau of Mines that the American Madoc Mining Co., who are working iron-pyrites mines in the township of Hungerford, Ont., are preparing to erect large chemical works for the manufac-

ture of sulphuric acid, etc. The mines are near Bogart, Ont., and at present are employing a staff of from 40 to 50 men.

The ratepayers of Goderich, Ont., voted favorably on a by-law to grant a loan of \$50,000, to the Goderich Wheel Rigs Co., also to grant free electric power to the Jackson Clothing Co.

The John Morrow Machine Screw Co., Ingersoll, Ont., have purchased the plant of the Standard Bolt & Screw Co., Toronto, for the sum of \$28,000. The plant will be moved to Ingersoll.

The Smart-Turner Machine Co., Hamilton, Ont., are supplying the Canadian White Co., Fort William, Ont., with one of their standard duplex pumps.

The Guelph Typewriter Exchange, Guelph, Ont., have been incorporated with a capital of \$40,000, to manufacture typewriters, office furniture, stationery, etc. The provisional directors include J. M. Spence, W. A. Vandenburg, Guelph, Ont., and G. H. Wilson, Hamilton, Ont.

The Guelph Tailoring Co., Guelph, Ont., have been incorporated with a capital of \$40,000, to manufacture wearing apparel, etc. The provisional directors include J. M. Spence, Guelph, Ont., J. Dow, Belwood, and A. Groves, Fergus, Ont.

The J. A. Robertson Co., Toronto, have been incorporated with a capital of \$500,000, to manufacture brick, tile, sewer pipes, logs, timber, metal, etc. The provisional directors include R. Gowans, J. S. Lovell and W. F. Rolph, Toronto.

The Sharples Separator Co., Toronto, are erecting a building at a cost of about \$15,000.

The Elder Carriage Co., Toronto, are erecting a factory at a cost of about \$9,000.

The new factory of McGlashan, Clarke & Co., Niagara Falls, Ont., is now in operation. The main building is 300 x 70 feet and is equipped with the latest machinery. Flatware and cutlery, both silver and nickel silver, are being manufactured. The directors of the company include E. G. Clarke, J. G. Cadham, L. McGlashan and J. C. McCain, Niagara Falls, Ont.

The Brinton Carpet Co., Peterboro, Ont., have ordered an automatic feed pump and receiver, and a centrifugal pump, from the Smart-Turner Machine Co., Hamilton, Ont.

The Y.M.C.A., Hamilton, Ont., will erect a four story building at a cost of about \$30,000.

The Dowswell Mfg. Co., Hamilton, Ont., are erecting an addition to their factory at a cost of about \$8,000.

The name of the Toronto Contracting & Paving Co., has been changed to the Orpen Co., Limited.

The Seaman-Kent Co., Toronto, are considering the establishment of a branch at Fort William, Ont.

A hydraulic plant has been installed about two miles out of New Liskeard, Ont., to supply the town with light and power.

The Dominion Steel Co., Sydney, N.S., are considering the establishment of wire works in Port Arthur, Ont.

The Merchants Check Book Co., Toronto, will erect a factory corner of Camden street and Spadina avenue.

T. M. Buston, Brantford, Ont., will erect a planing mill there.

J. I. MacCracken, Ottawa, will erect an iron clad foundry.

The boiler room of the Rossin House, Toronto, was damaged by fire recently. Loss about \$2,500.

The North Ward school, Peterborough, Ont., will be remodelled at a cost of about \$25,000.

A sewerage system will be installed in the east end, Hamilton, Ont., at a cost of about \$125,000.

The Belleville Portland Cement Co., Belleville, Ont., started operation in June, 1905, and to the end of the year produced an average of 200 barrels of cement daily. The investment represents \$500,000. The company own 400 acres, about four miles from Belleville, on which are large quantities of limestone rock and clay, and have erected thirteen buildings and five storage tanks. The capacity of the plant is to be increased to 900 barrels daily.

Mr. T. J. McCutcheon, Dunnville, Ont., has placed an order with the Smart-Turner Machine Co., Hamilton, Ont., for a standard duplex pump.

The Collingwood Shipbuilding Co., Collingwood, Ont., will convert into a steamer the large steel tow barge Agawa, built at Collingwood several years ago.

The car shops of the Toronto, Hamilton & Buffalo Railway Co., Hamilton, Ont., were destroyed by fire November 1, owing to the explosion of natural gas. Loss about \$10,000.

A sea wall will be constructed from Bathurst street to Spencer avenue, Toronto, at a cost of about \$40,000.

The largest boat ever built in Toronto, the ferry for the Grand Trunk Railway Co., will be launched on December 1, at the works of the Canadian Shipbuilding Co. The boat is 320 feet long and 56 feet wide and will cost about \$375,000. The vessel will run from Rochester, N.Y., to Port Hope and Cobourg, Ont., making daily trips winter and summer.

The ratepayers of Stratford, Ont., voted favorably on a by-law to guarantee the bonds of the Kemp Mfg. Co. This company will take over the old Kemp factory and will manufacture agricultural implements.

The Toronto Street Railway Co., Toronto, are building six cars for the electric car service, Monterey, Mexico. In addition to this the company are building cars for the Toronto & York Radial lines.

The Larder Lake Gold Mining Co., Haileybury, Ont., have been incorporated with a capital of \$500,000, to carry on a mining, milling and reduction business. The provisional directors include A. T. Budd, J. F. Gillies, Haileybury, Ont., and F. Pottage, Toronto.

The Superior Dock Coal & Metal Co., Sault Ste. Marie, Ont., have been incorporated with a capital of \$75,000, to carry on a warehousing and dockage business. The provisional directors include F. A. Lucas, J. N. Oldham and A. Spencer, Sault Ste. Marie, Ont.

The Waterloo Mining Co., Berlin, Ont., have been incorporated with a capital of \$200,000, to carry on a mining, milling and reduction business. The provisional directors include A. M. Clemens, New Hamburg, Ont., A. S. Green and J. A. Scellen, Berlin, Ont.

The Heathcock Mining Co., Dresden, Ont.,

have been incorporated with a capital of \$100,000, to carry on a mining, milling and reduction business. The provisional directors include I. B. Webster, H. Bishop and D. B. Wallen, Dresden, Ont.

The Volcanic Oil & Gas Co., Chatham, Ont., have been incorporated with a capital of \$300,000, to manufacture oil, gas, petroleum, etc. The provisional directors include H. D. Symmes, Niagara Falls, Ont., J. T. O'Keefe and J. G. Kerr, Chatham, Ont.

The Rogers Mfg. Co., Toronto, have been incorporated with a capital of \$200,000, to manufacture machinery, etc. The provisional directors include A. F. Reitz, A. J. Stanford, Kansas City, Kansas, and D. E. Dancy, Goderich, Ont.

The Colonial Mining Co., Cobalt, Ont., have been incorporated with a capital of \$100,000, to carry on a mining, milling and reduction business. The provisional directors include W. H. Wallbridge, F. C. E. Kelly and F. B. McLean, Toronto.

The Smart-Turner Machine Co., Hamilton, Ont., are supplying the Continental Life Bldg., Toronto, with one of their compound duplex pumping engines.

The Hagen Shirt & Collar Co., Berlin, Ont., have been incorporated with a capital of \$40,000, to manufacture shirts, collars, cuffs, etc. The provisional directors include D. Kniffel, P. Ringle and E. E. Werner, Berlin, Ont.

The Golden Park Mining Co., Windsor, Ont. have been incorporated with a capital of \$100,000, to carry on a mining, milling and reduction business. The provisional directors include A. Van Schuick, C. Pohlman, Detroit, Mich., and J. W. Drake, Windsor, Ont.

The Sherman Cooper Co., Toronto, have been incorporated with a capital of \$40,000, to manufacture machinery, tools, boats, generators, engines, etc. The provisional directors include W. S. Cooper, H. B. O'Dell and J. B. Howse, Toronto.

The Wm. Hamilton Mfg. Co., Peterboro, Ont., have placed an order with the Smart-Turner Machine Co., Hamilton, Ont., for one of their duplex pumps.

The Bracebridge Gazette Printing & Publishing Co., Bracebridge, Ont., have been incorporated with a capital of \$10,000, to carry on a printing and publishing business. The provisional directors include G. H. O. Thomas, H. Linney and E. A. Thomas, Bracebridge, Ont.

A new music hall will be erected at Brampton, Ont.

It is expected additions will be erected to St. Michaels', Western and Grace Hospitals, Toronto.

The Jenckes Machine Co., St. Catharines, Ont., have ordered a duplex pump from the Smart-Turner Machine Co., Hamilton, Ont.

The Grand Trunk Railway Co., Toronto, are about to remove their repair shops, which are now located on the Esplanade, to New Toronto, where they will, in addition, begin the manufacture of all the steel switches and diamond crossings required for the whole Grand Trunk Railway system, and possibly for the Grand Trunk Pacific. Large buildings will be erected.

The new grand stand at the Exhibition Grounds, Toronto, will be of steel and reinforced concrete, and will be 600 feet long, with thirty rows of seats. The stand will be

roofed, but there will be no gallery. The seats to be used will be benches, with comfortable backs, each bench about six feet long.

The Department of Public Works, Ottawa, invite tenders up to November 26, for the construction of an addition to the Parliament Buildings, Ottawa.

The Dominion Radiator Co., Toronto, will erect a new factory on Dufferin Street, at a cost of about \$200,000. They will double the capacity of their plant and the manufacture of steam fittings will be gone into on a large scale.

The Smart-Turner Machine Co., Hamilton, Ont., are supplying Mr. N. Sinclair, Nelles Corners, Ont., with one of their duplex pumps.

The Guelph Carpet Mills, Limited, have completed the purchase of the old Petrie-Taylor cream separator factory at Guelph, Ont. It is understood the building will be turned into a spinning mill.

The Victoria Biscuit Co., will erect a new factory at Guelph, Ont., at a cost of about \$20,000.

A street water tower will be erected at Fort Frances, Ont., with a capacity of 100,000 gallons.

S. McPhie, Hamilton, Ont., will erect a skating rink at a cost of about \$10,000.

The Manufacturers Life Insurance Co., Toronto, and the Sovereign Bank of Canada have purchased property on the southeast corner of King and Bay Streets for the sum of \$280,000. A first-class office building will be erected on the site.

The new terminal station of the Cataract Power Co., Hamilton, Ont., when completed will cost about \$250,000.

The Magdalen Islands Development Co., Montreal, are erecting a large storage plant on Magdalen Islands.

Messrs. Willis & Co., Montreal, will erect a ten story building there.

J. Cherrier, Quebec City, will erect a building at a cost of about \$5,000.

An addition will be erected to the cement mill of T. M. Morgan, Longue Point, Que. When completed the mill will have an output of about 4,000 barrels per day.

The Royal Paper Mills, East Angus, Que., have been sold to G. Vandyke, of Boston, Mass., the price paid being \$1,000,000.

Messrs. R. & W. Kerr, Montreal, have been incorporated with a capital of \$90,000, to manufacture furniture, hardware, etc. The charter members include R. Kerr, E. F. Kerr and J. L. Kerr, Montreal.

The Montreal Sand & Gravel Co., Montreal, have been incorporated with a capital of \$100,000, to buy, sell and deal in sand, gravel, stone, etc. The charter members include W. Mann, C. Percy and L. M. Terrill, Montreal.

Westmount Publishers, Limited, Westmount, Que., have been incorporated with a capital of \$18,000, to carry on a printing and publishing business. The charter members include H. Groves, Montreal; W. T. S. Burns and W. C. Snowdon, Westmount, Que.

The James S. Dunn Co., Montreal, have been incorporated with a capital of \$20,000 to manufacture typewriters, mineographs, stationery, office furniture, etc. The charter members include J. S. Dunn, J. I. Brady and E. Seager, Montreal.

The New York Silk Waist Mfg. Co., Montreal, have been incorporated with a capital of \$20,000, to manufacture waists, cloaks, etc. The charter members include J. S. Leo, I. S. Goldstein, Westmount, Que., and H. S. Arnold, Montreal.

Messrs. Gravel & Duhamel, Montreal, have been incorporated with a capital of \$990,000, to manufacture saddlery, carriages, hardware, etc. The charter members include P. Gravel, J. G. Duhamel and J. A. Barrette, Montreal.

The Quebec Harbor, Quebec City, will be extended and improved at a cost of about \$5,000,000.

The town council, Magog, Que., will erect a new pumping station in connection with the waterworks.

The sawmill of J. H. Gignac, St. Roch, Que., was destroyed by fire November 5. Loss about \$15,000.

The hardware establishment of L. C. Giguere and the furniture building of G. Vallieres, Quebec City, were destroyed by fire November 9. Loss about \$50,000.

The Delaware & Hudson Railroad are building a road from Rouse Point, N.Y., to St. Constant, Que., a distance of 27 miles, which will open up a section that has poor railway connections. It is stated that the Rutland Railroad Co. will use the road, which will shorten the route to Montreal 14 miles.

The premises of the Canadian Rubber Works, Montreal, were damaged by fire November 10. Loss about \$10,000.

The Montreal Street Railway Co., Montreal, are considering an increase in their capital from \$7,000,000 to \$9,000,000.

The Quebec Railway, Light & Power Co., Quebec City, will erect a three story depot.

The Singer Mfg. Co., St. Johns, Que., will erect a large sawmill in connection with their plant there.

The construction of a ship canal 180 feet wide and 20 feet deep is in prospect; surveys are about to be made, and construction will probably begin this year, which will connect St. Johns, Que., with Longueuil just across the river from Montreal, a distance of 22 miles, and will shorten the present canal and river route 78 miles. The Richelieu River at St. Johns is considerably above the level of the St. Lawrence at Longueuil and numerous locks will be necessary, which will form a splendid water power for the growing enterprises of that section.

E. C. Joyal, Limited, Montreal, have been incorporated with a capital of \$20,000, to manufacture medicines, chemicals, etc. The charter members include H. E. Joyal, H. N. Chauvin, Montreal, and E. C. Joyal, St. Louis, Que.

The Crescent Turkish Bath Co., Montreal, will erect a four story Turkish bath building at a cost of about \$100,000.

T. Prefontaine, Montreal, will erect a sash and door factory there.

The congregation of the Presbyterian church, Moncton, N.B., will erect a new church building.

Several buildings, including the McMillan Building, Grand Falls, N.B., were destroyed by fire November 5. Loss about \$30,000.

The Smart-Turner Machine Co., Hamilton, Ont., are supplying Mr. Edward Partington,

St. John, N.B., with one of their centrifugal pumps.

The premises of the Ungars Laundry, Dyeing & Carpet Cleaning Works, St. John, N.B., were destroyed by fire recently.

The Scott Lumber Co., Fredericton, N.B., are erecting a new lath mill.

The premises of the Roman Catholic Church, Grand Falls, N.B., were destroyed by fire November 5. Loss about \$60,000.

The brush factory of W. E. King, St. John, N.B., was destroyed by fire November 3.

The Smart-Turner Machine Co., Hamilton, Ont., are supplying one of their duplex pumps to Messrs. Duncan & McLellan, Campbellton, N.B.

The Nova Scotia Steel & Coal Co., New Glasgow, N.S., intend erecting extensive additions to their plant at Sydney Mines, N.S.

The waterworks system, Parrsboro, N.S., are considering the extension of the waterworks system.

A new post office will be erected at Stellarton, N.S.

The grand stand at the Exhibition grounds, Halifax, N.S., was destroyed by fire November 13. Loss about \$6,000.

The Dominion Iron & Steel Co., of Sydney, N.S., state that they can manufacture cement from slag much cheaper than it can be manufactured of marl in Ontario. They are going after the Northwest market.

The Sydney Cement Co., Sydney, N.S., will erect a large plant.

Messrs. Hattie Bros., Stellarton, N.S., will erect a new carriage factory.

Messrs. Thompson & Sutherland, New Glasgow, N.S., have purchased a site and will erect a large building.

Mr. E. F. Stevens, Halifax, N.S., has ordered a duplex pump from the Smart-Turner Machine Co., Hamilton, Ont.

A waterworks system will be installed at Summerside, P.E.I.

Chas. Midwinter, Winnipeg, Man., will erect a large pickle factory at Portage la Prairie, Man.

The B. Gardner Co., Winnipeg, Man., will erect a new clothing factory.

The A. R. Rogers Lumber Co., Winnipeg, Man., have been incorporated with a capital of \$500,000, to manufacture lumber, timber, etc. The provisional directors include A. R. Rogers, G. H. Rogers, F. M. Prince, Minneapolis, Minn.

The Pitner Lighting Co., Winnipeg, Man., have been incorporated with a capital of \$75,000, to manufacture lamp lighting machinery, etc. The provisional directors include S. A. McGaw, Goderich, Ont., D. L. Pitner, W. E. McGaw, Winnipeg, Man.

The Dominion Lumber & Fuel Co., Winnipeg, Man., have been incorporated with a capital of \$40,000, to manufacture lumber, timber, etc. The provisional directors include W. A. Scott, Port Arthur, Ont., D. J. McDonald, F. A. Scott, Winnipeg, Man.

The lumber mill of the Canadian Northern Railway Co., Mistatin, near Swan River, Man., was destroyed by fire November 3.

P. Lechtzier, Winnipeg, Man., will erect a large hotel and apartment block there.

Western Fire Clay Products, Limited, Winnipeg, Man., have been incorporated with a capital of \$600,000, to manufacture cement, plaster, lime, etc., The provisional directors include H. W. Hollis, C. S. Tupper, and J. A. Stevenson, Winnipeg, Man.

The Western Commercial Co., Winnipeg, Man., have been incorporated with a capital of \$20,000, to carry on a printing and publishing business. The provisional directors include J. M. Wemyss, S. A. M. Culp and H. J. Reid, Winnipeg, Man.

Messrs. W. J. Copp & Son, Fort William, Ont., stove manufacturers, have appointed Messrs. McDonald & Voigt their agents in Dauphin, Man.

The Western King Garment Co., Winnipeg, Man., have been incorporated with a capital of \$50,000, to manufacture hats, caps, rubber, leather, wearing apparel, etc. The provisional directors include D. K. Elliott, R. Driscoll, and J. Clark, Winnipeg, Man.

The Commercial Cement Co., Winnipeg, Man., have been incorporated with a capital of \$150,000, to manufacture cement, etc. The provisional directors include W. P. Alsip, Winnipeg, Man., O. Babcock, A. S. Dinnie, Grand Forks, North Dakota.

The Joseph Youngheart Co., Winnipeg, Man., have been incorporated with a capital of \$18,000, to manufacture boots, shoes, hats, rubbers, etc. The provisional directors include J. Youngheart, Montreal, S. N. McKay, and H. N. Whitla, Winnipeg, Man.

The Department of Public Works, Ottawa, invite tenders up to November 28, for the construction of a public building at Edmonton, Alta.

The Presbyterian Church being erected in Wolseley, Sask., when completed, will cost about \$25,000.

The Stephens Paint Co., Winnipeg, Man., are erecting a warehouse in Calgary at a cost of about \$30,000.

The Moose Jaw Carriage Works Co., Moose Jaw, Sask., are erecting works there.

An electric light plant is being installed in Calgary, Alta., at a cost of about \$100,000.

The Tudhope Carriage Mfg. Co., Orillia, Ont., have purchased land in Edmonton, Alta., and will erect a branch factory there.

Messrs. Elsom & Wheelock, Moose Jaw, Sask., will erect a large warehouse.

Messrs. Greenshields, Montreal, Limited, intend establishing a branch in Calgary, Alta.

A new school will be erected in Calgary, Alta.

An eight room school will be erected in Regina, Sask., at a cost of about \$35,000.

The Massey-Harris Co., Toronto, will erect a warehouse in Humboldt, Sask.

The J. H. Ashdown Hardware Co., Winnipeg, Man., will erect a branch warehouse in Calgary, Alta.

An electric light system will be installed at Macleod, Alta.

The premises of the Mormon church, Tabor, Alta., were destroyed by fire recently. Loss about \$3,000.

The Walters Lumber Co., Strathcona, Alta., will erect a saw mill at Edmonton, Alta., at a cost of about \$15,000.

The Oddfellows, Calgary, Alta., will erect a Temple Building at a cost of about \$60,000.

The Fort Steele Brewing Co., Fernie, B.C., invite tenders up to December 18 for the construction of a fire proof brewery with a capacity of about 30,000 gallons per year.

The Vancouver Engineering Works, Vancouver, B.C., will erect a foundry building.

Messrs. Hood Bros., Spokane, Wash., have purchased 13,000 acres of timber lands on Crazy Creek, B.C., about ten miles west of Revelstoke, from the Eagle River Lumber Co., for the sum of \$175,000. The new owners purpose to commence at once, the construction of a railway from the main line of the Canadian Pacific Railway to the holdings, which is a distance of about three miles, and next spring the erection of a first class and up-to-date mill and other commodious buildings will be commenced.

The Y.M.C.A., Vancouver, B.C., are erecting an addition to their building at a cost of about \$3,500.

The ratepayers of Vancouver, B.C., will vote on a by-law to raise \$47,000, for the erection of an addition to the Lord Roberts School.

The City Council, Victoria, B.C., have passed a by-law to raise \$300,000, for the improvement of the water system.

A bridge will be built at Grand Forks, B.C., at a cost of about \$4,000.

The corporation of Kamloops, B.C., have ordered a duplex, outside packed pump from the Smart-Turner Machine Co., Hamilton, Ont.

## FINANCIAL.

The Canadian Bank of Commerce have started the erection of new bank building in Carman, Man.

The Sovereign Bank have opened a branch at Brome Corner, Que.

The Royal Bank of Canada have opened a branch at Mazanillo, Cuba.

The Canadian Bank of Commerce have recently opened a branch at Stony Plains, Alta.

A branch of the Royal Bank of Canada has been established in Hanover, Ont.

The Royal Bank will erect a bank building in Pembroke, Ont.

The Home Bank of Canada have opened a branch at Melbourne, Ont.

The Northern Bank have recently opened a branch at Beausejour, Man., also a branch at Rathwell, Man.

The Home Bank of Canada have closed their branch at Shedden, Ont.

The Bank of British North America will erect a building in Hamilton, Ont.

The Union Bank of Canada will erect a bank building at Pincher Creek, Alta.

During this year Canadian banks will distribute \$700,000 more in dividends than in 1905, thirteen banks having increased their dividends during 1906. It is expected that before the year is out two more banks will announce a new stock issue.

The Bank of Montreal will erect a six story bank building at Ottawa.

The Canadian Bank of Commerce, Ponoka, Alta., are improving their building there.

The Metropolitan Bank have purchased property in Streetsville, Ont., and will erect a branch there.

The Union Bank will erect a branch building in Fort William, Ont.

The Bank of Commerce will erect a bank building at Nelson, B.C.

The Royal Bank will erect a new building on King Street, Toronto, having a frontage of 50 feet and a depth of 110 feet.

The Imperial Bank have opened a branch at Athabasca Landing, Alta.

The Northern Bank have opened a branch office at Macoun, Sask., also a branch at Pipestone, Man.

The Canadian Bank of Commerce have recently opened a branch at Fort William, Ont.

The Royal Bank of Canada have opened a branch at Dominion City, Man.

A sub-agency of the St. Jerome branch of the Merchants Bank has been opened at St. Jovite, Que.

The Union Bank have purchased property in Brandon, Man., and will erect a bank building.

The Royal Bank of Canada have secured premises at Bowmanville, Ont., and will open a branch. They will also establish a branch office at Chippawa, Ont.

The Metropolitan Bank will erect a new bank building at Kew Beach, Toronto.

## THE CANADA FORGE CO., LIMITED.

A typical illustration of the industrial expansion now going on in Canada is furnished by the establishment of a forge plant at Welland, Ont., under the style of the Canada Forge Co., Limited. A few years ago the demand for the lines to be made by this company would not have warranted the establishment of such a plant but the demand has been growing so fast in recent years that the building of a first-class forge plant by this company seems to come at the psychological moment.

This company was recently incorporated with Thos. J. Dillon, who was formerly superintendent of the Titusville Forge Co., Titusville, Pa., as president and manager; John L. Emerson, as vice-president, and Frank Hesch, as secretary-treasurer. Other directors are E. O. Emerson, E. O. Emerson, jr., J. T. Dillon, the last mentioned being the president of the Titusville concern.

The company have made arrangements for the erection of their plant in Welland. The construction and equipment of the buildings is now under way and they will be rushed to completion as rapidly as possible. The company expect to be ready to manufacture their product by the middle of January next. This will be a complete forging plant and will be modern in every particular and will be equipped with special machinery and equipment devised at the Titusville plant. In the equipment of this plant Canadian builders are given preference.

The product of the company will be forgings of all descriptions, particularly high grade open-hearth steel crank shafts and connecting rods for marine and stationary engines, either steam or gasoline type. These forgings will be made in either rough or finished state, from 10 to 10,000 pounds, and later to as high as 40,000 pounds.

A special department for taking care of

forgings for steam shovel and dredge work is being established, while steps are being taken to make steamship forgings and blacksmith work such as propeller shafts, built up marine cranks, connecting rods, etc. A special quality of spindles for machinery of all kinds will also be made.

An important reason for the establishment of a plant in Canada was the saving of duty, but a cause just as vital was the desire to be in position to make more rapid deliveries of either small or large orders from engine builders. This will put the Canadian buyer in position of being able to buy as the forgings are needed and in such quantities as is most satisfactory to him.

## ONTARIO CLAYWORKERS' CONVENTION.

The Ontario Clayworkers' Convention is to be held in Toronto on December 12, 13 and 14. The officers are making great efforts to have a programme which will be so full of interest and value that every brickmaker in Ontario will feel it well worth while taking it in. Full details concerning the convention will be published in the December 7 issue of THE CANADIAN MANUFACTURER.

## WANTS TO BUY CANADIAN GOODS.

Clarence J. Etienne, Esq., Gran, Couva, Trinidad, B.W.I., writes to THE CANADIAN MANUFACTURER that he is opening a provision business and asking for the names of Canadian manufacturers and wholesale dealers in butter, cheese, pork, beef, flour; also of the wholesale fish merchants of British Columbia. Any of our readers interested might write Mr. Etienne.

## NEW ELECTRICAL HOUSE.

The Shedrick, Rigby Co., 157 Craig Street West., Montreal, have been incorporated to carry on the business formerly carried on by C. E. Shedrick, Sherbrooke, Que. The business will be conducted on a much larger scale, than heretofore, the following lines being carried,—electrical measuring instruments of every description, electrical heating and cooking apparatus of all kinds; Shedrick's electric light controller or flat rate meter; electrical scientific and experimental work; nickel, copper and brass plating, oxidizing, lacquering, etc. The company will also be Canadian agents for the Whitney Electrical Instrument Co.

## A PROOF OF CANADIAN PROGRESS.

The Canadian Pacific Railway Co. continue to steadily increase their earnings. For the last ten days of October they totalled \$2,453,000, an increase of \$528,000, the largest increase for a like period ever reported. Last year's increase for the same ten days was very large, being \$394,000, so that the increase for these ten days over 1904 is this year, \$922,000. The month's earnings, \$6,918,000, are far the largest ever recorded. The increase for October, 1905, is \$1,215,000, and over 1904, \$2,193,000. For the four months since July 1, earnings total \$25,209,167, the increase over 1905 being \$5,207,683, and over 1904 \$7,390,219.

The gain in Canada's postal revenue is astonishingly large. For October it amounted to \$660,796 a gain of \$150,441, and \$286,847, when compared with the same month in 1905 and 1898.

# OFFICE METHODS AND APPLIANCES.

A Review of the Latest Suggestions in Office Systems and Supplies for Manufacturers.

## Keeping Tab on the Salesman.

While it is a safe rule that it is dangerous to allow any man to represent any firm on the road unless he can be depended on for loyalty, for reliability, and while a firm may have an ideal staff of salesmen as far as these qualities are concerned, it is possible that there will be a constant leakage of trade, without apparent cause or influence.

To this end it is highly desirable that some central authority shall be in full touch with what each representative is doing and with his relations with each customer. The one test of relationship between salesman and customers is the size of the order secured. There are, of course, exceptions to this rule, but this is the one test which must be applied when a salesman's value is being considered.

Therefore, the most effective way to keep tab on a salesman's work is to keep accurate

This is explained by the traveller and he gets an order during May. But during June and July no orders are received and it develops that a trouble had arisen, which if it had been explained earlier could have been remedied sooner. However, better late than never and the result of the consultation and the subsequent action regarding this firm is seen in the orders received during August, September and October.

Another card shows the business done with a buyer who only comes in the market four or five times a year but who buys in large quantities. It is seen that an order was secured from him in February, but nothing more appears when the August trips are being planned. The traveller is astounded that it is so long since the last order was secured from this customer. It seems

Name <i>Brown &amp; Jones</i>		Address <i>Peterboro</i>											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1906	\$1575	\$1042	\$420		\$1635			\$2036	\$1030	\$1925			
1907													
1908													
1909													

SPECIMEN CARD USED BY DOUGLAS & RATCLIFF

account of the volume of business secured by him.

Douglas & Ratcliff, paper dealers, Toronto, have originated and adopted a card index system for this purpose which has proven an unqualified success with them and which seems suitable for many classes of manufacturers.

The corner stone of the system is a card similar to that shown in the accompanying illustration. It will be noted that the card provides space for totals for each month in 1906, '07, '08 and 1909. This not only gives at a glance the orders secured during the recent months but will enable a comparison of business secured next and the following years with the volume closed this year.

The amounts are entered on the cards at the end of each month by the accountant, a card being prepared for each customer. Before each traveller starts out on his trip one of the firm goes over the route with him—not in a fault finding mood. It is, in short a consultation between the salesman and his employer, both desiring to build up a strong list of satisfied customers, one as anxious as the other to find the most effective method of winning each buyer's confidence and patronage.

For instance, a traveller has opened up an account with Brown & Jones, Peterboro, who buy frequently. He secured orders during January, February and March. When May comes it is noted that he missed a sale during April.

like only a week or two ago since he had such a nice chat with Mr. C— after that order had been given.

Oh, yes, he had called since but just to drop in and say, "Anything for me to-day?" Now he goes out determined to get a good order—and it comes in before half the week is out—this order making the work necessary to sustaining such a system not only worth while but a profitable institution.

### CANADA'S FIRST BUSINESS SHOW.

Business men visiting the Business Exhibition which is to be held in the Royal Scots Armory, Montreal, in the week from December 10 to 15, will have an opportunity of examining at leisure and having explained in detail to them the features of the modern office appliances which are proving such a convenience in office work in all parts of America.

The success of the show is already assured by the fact that the great majority of the spaces available have been taken by manufacturers eager to place their lines before the Canadian business show.

"We will have," said Col. J. W. Ritchie, manager of the show, to THE CANADIAN MANUFACTURER, "almost every device for the rapid execution of office, store and factory work.

"Adding machines, more rapid and more accurate than any living man; time recorders, which mark with absolute correctness the

exact time of arrival of every employee; calculating machines which in a twinkling give correct answer to any calculating problem; addressing machines even more rapid than a printing press; duplicators that turn out sheets of manuscript like the falling of autumn leaves; book-keeping systems which make the book-keeper realize how much tedious and useless labor the old-fashioned methods have involved—office appliances including most of the new ideas in accounting will be demonstrated to the visiting business man.

"Among the typewriter exhibits will be seen the newest and latest improvements in office necessity. Moreover, the show will be the scene of a speed contest for championships; also cash prizes and medals. First there will be an international contest in which Miss Fritz, who won the world's championship at Chicago and New York, will be one competitor; then there will be 'Canadian' and 'French' championship contests."

Among the exhibitors will be:—

The Underwood Typewriter Co., Toronto.  
The Martel Stewart Co., Montreal.  
Abner Laboratory Co., Philadelphia, Pa.  
Day Time Register Co., Montreal and Syracuse, N.Y.

Raphael Tuck & Sons, Montreal.  
Canada Cabinet Co., Montreal.  
Business Systems, Limited, Toronto.  
Rolla L. Crain Co., Limited, Ottawa.  
Liberari Busherman, Montreal.  
Canadian Oliver Co., Montreal.  
Hammond Typewriter Co., Montreal.  
Columbia Phonograph Co., Toronto and New York.

Beck Duplicator Co., New York.  
L. C. Smith & Bros., Montreal.  
The Calculagraph Co., Montreal.  
Toilet Laundry Office Supply Co., Montreal.

Hawley Time Register Co., Montreal and Syracuse.

Davidson Mfg. Co., Montreal.  
Ring Clip Paper Co., Providence, R.I.  
Burroughs Adding Machine Co., Toronto and Detroit.

Elliott Addressing Machine Co., New York.  
Henry Morgan & Co., Montreal.  
Latham Machinery Co., Chicago.  
De Forest Wireless Tele. Co., Montreal.  
Canadian Ink Co., Montreal.  
Canadian Tag & Label Co., Montreal.  
H. Lamontagne & Co., Montreal.

"Other firms are to be seen regarding the matter during the next few weeks," concluded Col. Ritchie, "and expect to allect the last few spaces very soon."

Col. Ritchie has had much experience with industrial and commercial exhibitions, having managed several in England and the United States as well as in Canada.

### MAKING TYPEWRITER RIBBONS.

The Carters' Ink Co., Boston, Mass., who have been making inks for almost half a century have started making an extensive line of typewriter ribbons and carbon papers. Grand & Toy, Limited, and O. B. Stanton, Toronto, and the Wilson Stationery Co., Winnipeg, handle this line.

# Trade Paper Advertising.

BY CONVERSE D. MARSH, IN PRINTERS' INK.

It is easy enough for anyone to record the fact that trade paper advertising has made material advances during the past ten years, and has made specially marked improvement during the past five years.

I do not believe that, notwithstanding all that has been done, a tithe of what is possible has been accomplished.

House organs flourish; special methods of advertising have increased appropriations to the detriment of the trade press, and back of all this, the large manufacturers throughout the country—capitalists who control—give scant attention to the question of trade paper advertising, and secretly have little respect for it. Nor do these prime factors in the advertising appropriations believe that their interests can be materially advanced by liberal publicity in the chosen organs of their trade.

The impulse of every large publisher will be to rise up and dispute this statement; but if he does so, let our friend, the disputant, review the fact that trade paper advertising expenditures by our large manufacturers are but minute, fractional portions of the total sum expended for selling the factories' products.

In several instances of which I have knowledge, the large manufacturing corporations spend, for advertising appropriations, less than one-tenth of one per cent. of their gross sales!

Large fortunes are being made by publishers in the field of general publicity, while comparatively small ones are earned by publishers in the specialized or trade journal field.

The makers of the popular magazines can complacently cross their legs and say that this it not only as it should be, but that it is inevitable, while, on the other hand trade paper publishers do not seem to have had the spirit to make matters better for themselves. They, too, believe that the comparatively small position that they occupy is a reasonable one.

Things are not reasonable, merely because they exist.

The complacency of the big brother may be all right, but I do not believe the acquiescence of his financially lesser kindred is.

A little seething unrest should stir the gentle soul of the trade paper owner.

Why should the monthly, or weekly, created to amuse people, be a wonderful money maker while mainly it advertises cheap, inconsequential things, while the trade paper, the serious exponent of heavy financial interests, is relegated to an obscure corner in the congregation of publications?

The popular magazine reaches hundreds of thousands, where the trade paper reaches tens of thousands, but the goods offered for sale, and really sold, through the influence exerted by many trade papers, largely exceeds the volume of trade sold through the influence of the prominent, popular magazines.

If Postum Post was at the head of some great steel company, wouldn't we see the fur fly in the advertising he did, say in the Iron Age or the Engineering Record?

If the General Electric Co. was owned by

the Uneda Biscuit crowd, what a serious factor advertising in the Electrical World would become.

In the steel and iron business of this country I venture to say that the proportion spent in advertising to influence sales would be but an infinitesimal part of one per cent. of the amount of the sales.

Without the means of breaking into the archives of the gentleman who is swaying American breakfast destinies from the magical precincts of Battle Creek, I do not think I will be gainsaid in my estimate that nearly one-half of his total revenue is expended for publicity.

The sales of the General Electric Westinghouse, and the Allis-Chalmers interests alone, in the electrical world, must in combination represent over one hundred millions of dollars per annum.

I wonder, if the gentlemen controlling these electrical giants combined, are spending the insignificant sum of fifty thousand dollars per year with the trade papers?

Can it be that the seller of trifles, logically should spend hundreds of thousands of dollars, whereas, the really large business interests, having a much wider field, think they have exhausted the possibilities when they have expended a few pitiful thousands?

Does the reason for this lay accusingly at the door of either the trade paper publisher, or his customer, or should the burden of accusation be shared impartially by both? Somebody has got to shoulder it.

To my mind, neither the publisher, nor his advertiser, have yet grasped the latent opportunities that exist in trade paper publicity. It is the duty of the publisher to show these possibilities to the manufacturer if the latter cannot spare the time to study them himself.

In some lines, one single trade publication reaches practically every buyer in the field—every man who can influence an order—and yet the advertiser with millions of dollars of possible sales, is content to merely play with the trade paper advertising proposition.

What likewise shall be said of the lack of advertising by the thousands of smaller manufacturers of machinery who could be benefited even more than the few large manufacturers by a greater amount of, and more intelligent, publicity?

Speaking broadly, I don't believe that the presidents and boards of directors of our average manufacturing corporations, give five minutes' heed a year to trade papers, or what the trade papers can do for them. They are content to spend a few thousand dollars in advertising account and let it go at that. They show that they have no respect for their publicity departments, because the salaries of the managers of such departments are invariably the lowest paid heads by many thousands of dollars of any departments maintained, and the advertising counsellor is indeed a rara avis.

They think enough in other directions about making sales, but no single force in the trade paper field has yet grappled with them, struck them squarely between

the eyes, and made them sit up and take notice that a great force was at their door—a wonderful force and factor that could be utilized in increasing their sales. Because in the multitude of their duties the heads of manufacturing organizations omit any consideration of advertising, will the publishers of the trade press be content to maintain the position allotted them?

Let the trade paper brother gird up his loins, and himself carry the war into Africa, if I may be allowed to so quickly shift my suggestion.

In plain, practical, every-day English, I would say that it is up to the trade paper publisher to himself devise selling plans through publicity, and bring them to the attention of his customers, big and little.

Then too, let him make his reading columns more attractive to the real people who buy the kind of goods that his advertisers have to sell. This makes an abrupt termination but it contains enough of thought to induce me to cease writing.

## "PETERING."

Some things begin small and get bigger. Others begin big and get smaller, writes John Hopkins Denison, of Boston. In the first class are babies, kittens, diseases, build-ings, sins, potatoes, and family squabbles, also several other things. These all begin small and get bigger. In the second class are anticipations, plum puddings, enthusiasms, resolutions, honeymoons, boastings, and flannel underclothes. These begin big and get smaller.

There is also a class of things of which you really cannot tell which they are going to do—grow or shrivel, swell or shrink, increase or diminish. In this class come men, stocks, bonds, nations, social schemes, agitations, revolutions. They may begin small and get bigger, or begin big and get smaller. Some start with a whisper and end with a roar of artillery. Others start with a blare as of fifteen German bands and end like the song of a sickly mosquito. Some start like a snail and finish like an express train. Others start like a race horse and end up like a tired mule.

Now the latter class is peculiarly American. We like to start big in America. When we set out for Klondike we like to announce it in the papers in big headlines, and have a brass band escort us to the station. When we start a club we like to begin with a \$50,000 building, with double-back-action pulley-weights and enameled bath-tubs. If we don't start it big we are sure it will not be a success.

But we have also a strong tendency to peter. In fact, Peter ought to have been special apostle to the Americans, for I am sure he would have understood us. He proclaimed his courage and enthusiasm with the intrepidity of a Napoleon, and in a day or two was chased from the field by a servant girl. He petered. He petered so everlastingly that that particular kind of a performance has come to be known by his name whenever it occurs. And it is of quite frequent occurrence.

Most men peter more or less. When they start on a race they feel a strong temptation to spurt on the first lap. Then when the excitement really begins they have to lie down and gasp. When a man starts in public speaking he usually wants to tell all he knows



in his first speech, and quite often he succeeds. Then when the crowd hear his next effusion they all agree that he has petered. We lay plans for the biggest cathedral on earth, and after a few months' building we roof over the foundation and hold a prayer meeting for the help of heaven to get us out of debt. We start for the moon, but when we get up about 100 feet we sit down on a chimney-top and think. We soar up toward the sun and get no farther than up a tree. We start to turn the world upside down, and end by thinking ourselves lucky if we get our dinner cooked the way we want it. We lift up our 200 pound burden like a feather, but we set it down on the first mile-stone. We start with three cheers and end with an apology. We do our best work before noon. In short, we peter.

Now, this is the discouraging thing about life. And our only hope in life is based upon those things that do not peter. If babies began big and kept growing smaller it would certainly make a hopeless job of it for us all. If our knowledge was large to start with, and grew less and less every day we went to school, we could scarcely blame our teachers for being discouraged. If our love for our friends petered out more and more every time

we saw them, our social intercourse certainly would not be a joy forever.

Peter never was a success until he stopped petering. Nor will you and I succeed until we do likewise. The man who tries to distance competitors in the first ten minutes, and leaves his exhausted body in the road for them to carry the rest of the journey, is in no sense a success. In taking up a burden it is a mistake to take up one so heavy that after the first day you have to drop it upon another's shoulder.

Never peter. Grow, increase in everything you undertake. It does not matter how small you start, but it does matter how small you grow. Rather than lift a 300 pound weight the first day, and then have to come down to 250 the next, and 200 the next, it is better to begin by lifting one potato the first day, and two the next, and three the next, and so on. By the end of ten years you would be able to lift 3,650 potatoes, which might be more than 1,000 pounds. In everything that you do begin as small as you please, but see that to-day's record is better—a tiny bit better, anyway—than yesterday's. Be a little stronger, a little more courageous, a little more faithful, a little nearer God, this week than you were last.

## The Future as We See It.

BY THE  
BUSINESS  
MANAGER.

### EXTENSIONS INEVITABLE.

Is there a sane man in Canada, with any knowledge of business conditions, who has not been impressed with the wonderful development that is now going on in this country and who is not full of faith in the industrial future of the country?

If there is, he had better wake up. The forward movement is so rapid, so far-reaching and so relentless that he who doubts and is content with business conditions as they are will be crowded to the wall or crushed beneath the weight of competition and the force of more modern methods.

The industrial expansion of Canada does more than present opportunities. He who studies and analyzes the onward march must see that while the coming of a new industry may add to the prosperity of a town, a village or a city, and while it may make more convenient the purchase by other manufacturers of the lines it produces, it may at the same time make competition so severe for existing concerns with less modern equipment that the latter will be compelled to remodel their plant or be "squeezed out." Or it may be that the new concern, by more aggressive salesmanship and by more vigorous advertising may take the cream of the business and so make a "back number" of a firm that was formerly "the only one of its kind in Canada."

What is the need of the hour? What protection shall the existing concern seek to safeguard him from the newcomer?

By adopting modern methods, by building a plant and by equipping it with machinery which shall be so up-to-date that no competing firm will have an advantage there. By studying the modern methods of production, with the inauguration of cost systems, etc. By putting energy, life, vitality into the selling force.

How many firms there are who devote practically all their energies to production and leave the selling to a few salesmen or a selling agent in Montreal and Toronto! These men must realize, sooner or later, that modern business demands more than this—that half the profits of a manufacturing firm come from the selling end, from getting the best value for the goods produced.

When Canadian manufacturers realize this there will be more intelligent advertising done than at present, not necessarily more money spent in some cases but more thought given to it and better results secured from it.

A manufacturer said to the writer a few days ago, "I never give any more time to advertising than I have to." He looked upon it as a necessary evil—and he never made a greater mistake. In the first place it is not necessary. A firm can get along without it. One can get along without collar and necktie. But he who does without them has his limitations. In the second place it is no evil. It is a selling force: an influence, which, if properly directed, is of tremendous power. It is an investment which yields splendid returns if properly looked after.

An advertisement which remains unchanged, month after month is like a grape vine which is not pruned down each fall. It will continue to bear fruit but in nothing like the proportions that would be the case if it were properly looked after.

Firms who do not advertise bear some resemblance to the "Man with the Hoe," in that they are getting along each year without it and not realizing the possibilities ever presented to them if they were more alive and vigorous, more buoyant and aggressive. Generally they are bowed down with the weight of years of detail and haven't had time to study a new force like advertising.

### AN OBLIGATION APPRECIATED.

Such conditions: great possibilities not properly appreciated, are detrimental to the growth not only of the manufacturers themselves but of the trade papers which serve them.

This throws upon the trade papers—we feel it is placed upon THE CANADIAN MANUFACTURER—an obligation to study the needs of each advertiser and to place its services at the disposal of the latter to the fullest extent.

So we have taken a step towards meeting this obligation by establishing an "advertisement writing" and an "art" department. We are now prepared to look after the copy of any of our advertisers and to prepare designs, have cuts made or to do any of the work incidental to the preparation of copy for any advertiser.

Moreover if any advertiser would like the co-operation of this department in the preparation of booklets, circulars, etc., we are at their disposal. We have a superb collection of advertising literature, sent us by Canadian and American firms and from these a suggestion would probably come that would be of utmost value to those who seek our assistance.

This service is free, our purpose being to develop an increase in intelligent interest in and recognition of advertising as a force in modern business.

### A CASE IN POINT.

It is now a month since we announced that our big special Tariff Issue was under consideration. How many firms have fully considered the advisability of using this issue for a special advertisement? We have received orders for fourteen full pages and sixteen half pages; also some orders for smaller spaces in addition to the regular advertising carried by us. Five or six firms have notified us that they are unable to use this issue.

But how about the others? Many have probably decided to wait till a representative of the paper calls upon them—leaving their decision till then. Is that wise—particularly in view of the fact that special positions—facing Canadian tariff reading matter—are being rapidly allotted?

We have not yet started our regular canvass for advertising for this issue; we are waiting for the completion of proofs of our cover design before doing this. And when we do we must start at some centre and work outwards from there. Probably by the time we have reached some of the more distant spaces will be gone and those who decide to advertise at the last moment will find that the choicest positions, which they could have now, have all been taken.

We maintain that there can be no question in the mind of any advertiser as to the value of this issue. It is well known that the last Tariff Issue of THE CANADIAN MANUFACTURER (issued in September, 1903) is still used by manufacturers all over Canada for reference. Any issue of a trade paper, with a recognized standing and circulation like THE CANADIAN MANUFACTURER, which is so valuable as a work of reference, is an unquestionably effective advertising medium.

Furthermore we have announced that this issue will be sent to all Boards of Trades, public libraries, etc., throughout Canada,

# MODERN MANUFACTURING



You must concede that a system which will take care of the details of every department and guide the records to an intelligent consummation—showing any leakage and allowing you to know at a glance how your business progresses—is something most necessary to a modern manufacturing plant.

To be able to design such a system in detail, great experience is required. Our lengthy connection with the largest manufacturing concerns here and in Great Britain has given us that experience, and guarantees our work.

We desire to talk to you about the Copeland-Chatterson Systems—to acquaint you with what we have devised to expedite the handling of your particular business. A card will bring one of our experts your way and it will put you under no obligation to us.

## The Copeland-Chatterson Co. Ltd.

Devisers and Manufacturers of Systems for Business

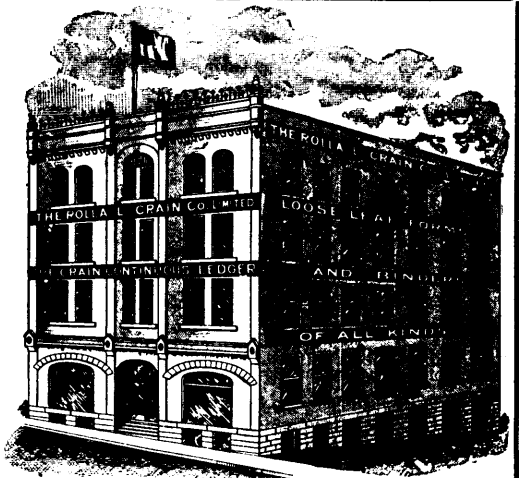
General Office: Toronto

Works: Brampton, Ont.

Montreal	Liverpool, London & Globe Bldg.	Ottawa	- -	14 Citizen Building
Winnipeg	- - 141 Bannantyne Ave. East	London, Eng.	- -	43 Cannon St. E.C.
	European Factory	- -	- -	Stroud, Glou., England

# Price Tells Quality Sells

The **CRAIN CONTINUOUS LEDGER** is the recognized standard in Canada to-day. No other binder has stood the same test. The Crain Stock Continuous Ledger with five different rulings to choose from, is the cheapest on the market for the quality of goods. In this Ledger outfit we supply our best current binder—the end screw, giving direct pressure. It is being imitated but not duplicated.



## The Crain Patent Foldover Invoicing System

Has become an absolute necessity in any wholesale or manufacturing establishment.

**WE MANUFACTURE AND DEVISE SYSTEMS FOR ANY KIND OF BUSINESS**

WRITE DEPT. H FOR SPECIAL INFORMATION



*THE* **Rolla L. Crain Co.**  
LIMITED.  
OTTAWA, CANADA.

Toronto Office,  
18 TORONTO ST.

Montreal Office,  
74 ALLIANCE BLDG.

Winnipeg Office,  
11 NANTON BLOCK.

to leading importers in Britain, South Africa and Australia and will be on sale for general circulation by the leading news-dealers in the chief Canadian cities.

This means that, in addition to our regular circulation, which includes leading manufacturers in all branches of trade in Canada, the paper will have a circulation of exceptional value to most advertisers.

Thus the issue combines unique value for reference with unusually large circulation. It will be, further, the most attractive issue of this paper ever sent out, the cover design is a reproduction of a water color drawing. The issue will be well printed on good paper. Several of the advertisers are using beautiful plates or illustrations. Moreover the rates are low—lower than the rate for ordinary issue of many Canadian trade papers.

Circulation, reference value, attractive appearance, low rates.

What are you going to do about it? Leave your decision till all the choice spaces are taken—or decide now?

### SCIENCE OF MODERN BUSINESS BUILDING.

"Business building is man building," declared Mr. A. F. Sheldon, of the Sheldon School of Salesmanship, Chicago, in an address before the Canadian Club, Toronto, on Monday.

"By the term, 'business building,' I mean, so adding to a business already begun that each customer is made the first link in an endless chain to bring more.

"Business building implies the getting of business, but the getting of it in such a way that it is continuously added to by the influence of those already dealt with. There was a time when the business of trade was looked down upon and shunned as an occupation unworthy of refined intellects or gifted natures. That day is now passed by in the march of progress, and the business man is coming to be looked upon more and more as a professional man. A profession is a science practiced, and a science as we have seen, is organized truth—classified common sense.

#### "THE COMMERCIAL UNIT."

"The commercial unit in each business community is the business house or concern, be that an individual business, a partnership or a corporation. The unit in the business house is the individual. Make each individual right, and the institution as a whole will be all right. System, order, is one of nature's first laws. Great men and great institutions reflect these laws, but you may have the best mechanical systems which the thinking, remembering and imagining powers of man can invent, and still they will be a failure in operation unless the man or men and women back of the system is right. If it were not for 'man' there would be no business. Make the man right and his business will be right. The work of making the man right, the problem of self development, of scientific, human culture, is the problem of problems, not alone in business, but in all walks of life.

#### "THE STUDY OF SELF."

"Each individual in business, employer or employee, should study self to the end of developing individual power to the highest possible degree. Man is a bundle of wonderful possibilities, these being looked up in the

positive faculties, body, mind and soul. Success of the permanent and increasing kind is not a matter of luck or chance. It is governed by natural law. The discernment and observance of these laws is a big problem. We can but touch upon it here, and here are a few thoughts which each of us as business builders should consider.

"First—Efficiency of the individual depends upon the degree of supervision his work needs.

"Second—Supervision is made necessary by reason of two classes of errors: 1st, errors of omission; 2nd, errors of commission.

"Third—Errors of both kinds are traceable to the negatives in human nature.

"Carefulness (the positive) has as its negative, carelessness, truth and falsehood; honesty and dishonesty; faith and doubt; ambition and indifference; energy and laziness; intelligence and ignorance; strength and weakness; health and sickness; activity and inactivity, and so it goes; every thing in the analysis of man in all his faculties and qualities. His errors are all traceable to his negatives.

#### "LIGHT CHASES DARKNESS."

"Fourth—The negatives are banished as the positives are developed—just as darkness must go when the light comes.

"Fifth—The positives are developed through two processes: first, education—drawing out—plus instruction, filling in. Together these processes constitute true education, which is a life-long process.

"Sixth—First, the result of these combined processes as applied to man's body is endurance. Second, the result as applied to his objective mind, is ability or intellectual capacity. Third, the result as applied to his sensibility, or the emotion side of his mentality is reliability, and, as applied to the will, the result is action. Endurance plus ability plus reliability, plus action, equals man with a big 'M'—the kind of men and women needed in every business, everywhere. Do not say it cannot be done.

"When Burbank can make the thornless cactus, the pitless plum, and the fadeless flower, it is time for the human plant to awaken to the fact that he need not go through life a slave to the influences of heredity, or environment. But these play a part in the life of each, but a knowledge of the laws of mental and physical growth, plus the conscious application of them the problem of self-development, make present environment more potent than heredity, which is but the sum of all past environment.

#### "THE TRUE SOLUTION."

"The solution of business building is, in final analysis, man building. It pays to cultivate the human plant. Witness the institution which has not only a credit department, a buying department, a selling department, a shipping department, etc., with all the regular departments, but which has also a humanity department, the object of which is to cultivate the human plant, and you will witness an institution destined to progress along the lines of natural law, one in harmony with the eternal laws of progression.

"Kubelik has been asked what had contributed to his success as a violinist. Hard work, constant practice, was the reply. There are hundreds of violinists who wish they

were Kubeliks, but who are not doing the hard work, the necessary hours of practice.

"There are too many men who have their wish bone where their back bone ought to be.

"I should have had a raise before now," said a young man to me a few days ago, "and I'll be d --- before they get any more work out of me."

"Like many another, that man is ruining his eyesight looking for a raise when he should be looking for more work. Do the work and the raise will come.

"How many salesmen have you?" I asked a business man a few weeks ago.

"Two."

"I thought you had several."

"I have several order takers but only two salesmen, men who initiate business getting," he replied.

"The business world needs men who think, who can be depended upon, who have courage to dare and to do."

### AN EXCEPTIONAL CONTRACT.

The heaviest individual order for concrete machines in the world was negotiated recently by the Ideal Concrete Machinery Co., South Bend, Ind., with a large eastern concern, which deals extensively in concrete machine and construction supplies, the order amounting to the magnificent sum of \$250,000.

The figures tend to show the wonderful sentiment that is developing throughout the country in favor of concrete as a building material. The recent disasters at Buffalo, N.Y., and at San Francisco have contributed largely to the movement in this direction as in both instances the buildings of concrete were the only ones to resist the ravages of the destructive elements.

The Ideal Concrete Machinery Co. have made rapid strides since their location in South Bend about two years ago. The company are doing an extensive business in foreign countries. The United States government has constructed the Provincial building at Zamboango, P.I., of "Ideal" blocks, and the engineer reports very favorably on the appearance. Other big contracts have been received for export shipments.

It is a peculiar function of a fan blower that instead of always delivering a fixed volume of air, regardless of requirements, it automatically increases the volume as the resistances are decreased. On the other hand, if the blower be in operation with a fairly free outlet, in excess of its capacity area, and that free area be decreased, the pressure produced will immediately rise, thus tending at once to overcome the increased resistance. Therefore, if a certain maximum pressure is known to be required, the fan may be so speeded as to give this at such times as the conditions demand; while at other times when less pressure or volume of air is required proper manipulation of the blast gate will economize power.

The Harbison-Walker Refractories Co., Pittsburg, Pa., have taken over the selling organization of the Portsmouth Harbison-Walker Co., and in the future all brands of brick, etc., made by the Portsmouth Harbison-Walker Co. will be sold by the Harbison-Walker Refractories Co. direct from their Pittsburg offices.

# Don't Miss This

*The Top Notch of . . .  
Aggressive Publicity*



## Royal Scots' Armory

### Dec. 10-15, 1906

# Canada's First Business Show

We bring the buyers to you. All you will have to do is book orders.

A few spaces left, better secure one quick.

Business men will look here for the best devices and appliances.

## Courage is 99 per cent. of Success

Address :

**CANADA BUSINESS SHOW COMPANY**  
79 Alliance Bldg., MONTREAL, P.Q.

# The Manufacturing Account.

By HOWARD R. WELLINGTON.

In recording the transactions of a manufacturing enterprise it should always be borne in mind that the manufacturing end and the selling end of a business are not one and the same, but each department must stand on its merits.

A great deal is said to-day about, and a great deal of time spent on, cost systems, and it is undoubtedly true that our more modern factories are installing up-to-date cost records and accounts, which will enable the manufacturer to arrive accurately at the actual cost of the finished product, on which cost the selling price is based. There are usually three essential parts which enter into the cost of any article, viz.:

1. Cost of material.
2. Cost of labor.
3. Proportion of general expenses.

As to the first essential, this can be estimated with reasonable accuracy, although we may find frequently that considerably more material may be actually used than is estimated; as to the second essential, this can be ascertained accurately, especially if the labor is done by piece work; as to the third essential, this item is the most difficult to estimate for various reasons, for instance, the non-productive labor, such as foremen, carters, etc., may vary considerably from year to year. Then again, such items as rent, insurance, power, heat, light, etc., may be changeable, so that it is almost impossible to lay down any hard and fixed rule of the percentage to be added to the cost for general expenses, in fact, this can only be ascertained with fair accuracy by past experience and it depends largely on the nature of the business.

The following illustration will show how a manufacturing account would appear at the end of a period, when it is desired that the different departments or factories, as the case may be, should be kept entirely separate, showing the net loss or gain on each:

especially as to the percentage to be added to cover general expenses. It will be noticed from the illustration that two of the three factories or departments show a loss on the total quantity of manufactured goods for the period; this means that the estimated costs of certain lines of goods manufactured have been too low and the loss must therefore be absorbed by the selling end of the business, to offset this loss is the gain on the third department which goes to show that the costs on the goods turned out by this factory are about right.

When selling prices are based on the estimated costs of a factory, and are, on account of the keen competition of to-day, cut down as fine as possible in order to secure business, it is a serious misfortune to have the manufacturing account show a balance on the wrong side.

In the illustration shown the merchandise account has been sub-divided into "Purchases" (total of raw materials bought), and "Output" (total of manufactured goods turned out by the factory at estimated cost prices).

A separate account is kept for "maintenance" to which is chargeable all repairs to machinery and plant in order to keep these up to the mark and in perfect running order. On the debit side, there appears the stock of raw materials at the beginning of the period, the purchase of material for the period, the wages paid, and the general factory expenses such as rent, light, heat, foremen's salary, etc., and also the cost of maintaining the plant in good condition. On the credit side appears the output at estimated cost, and the stock on hand at the end of the period, the difference showing the loss or gain on manufacturing, as the case may be.

As to placing a value on the inventory, there is a difference of opinion, for instance, at the time of stock taking a certain raw

If the value of certain material is increased one year, usually the next year must suffer in consequence. It is difficult to set and rule for the government of prices to be placed on stock, but it has been found that the more satisfactory way is to price the material on the inventories at the price paid for such material and allow each year to stand on its merits.

## PROSPERITY IN BRITISH COLUMBIA.

United States Consul A. E. Smith, of Victoria, B.C., transmits the following report on the output of coal, lumber, and minerals of the island of Vancouver during the past year. He writes:

"The principal product of Vancouver Island is coal, of which there were mined during 1905, 993,899 tons. Of this amount 380,332 tons were sold in Canada, 427,698 tons exported to the United States, and the remainder used for local consumption. The amount of coke produced was 15,661 tons, of which 5,410 tons were sold in Canada and 4,300 in the United States, including Alaska, while 5,950 tons were added to stock. In 1904 the mines turned out 1,023,013 tons of coal and 19,371 tons of coke. The total coal sales show an increase of 24,000 tons, or 3 per cent. over 1904. The sales to the United States amounted to 53 per cent. of the total, most of which was disposed of in the Californian market, the remainder going to Alaska, where the recent developments in metalliferous mining seem destined to produce a constantly increasing market for this article.

"Of the two smelters the one at Crofton was not in operation during 1905, but 'blew in' on January 6, 1906, and is treating ore from the Britannia and other coast mines. The returns from the Tye smelter at Ladysmith was in blast 164 days of 24 hours each, and produced 38,960 tons of smelted ore. The value of the ore smelted, less refining charges, was \$506,600. The copper product of the island in 1905 was 3,437,236 pounds, a decrease of 2,523,357 pounds from 1904.

There are six lumber mills in operation in this district, the capacity of which is 430,000 feet per day. Four others are built and another building, which will be in running order in a few months, including the new shingle mill, said to be the largest in the world. In 1904 the quantity of lumber turned out on the island was 40,249,818 feet; in 1905, 43,564,712 feet.

"The Victoria brickyards in 1905 turned out 7,500,000 bricks. The manufactures of drain tile amounted to \$90,000 and the product of Portland cement was valued at \$150,000. Large quantities of stone have been cut from Nelson and adjacent islands, the value of which was \$100,000.

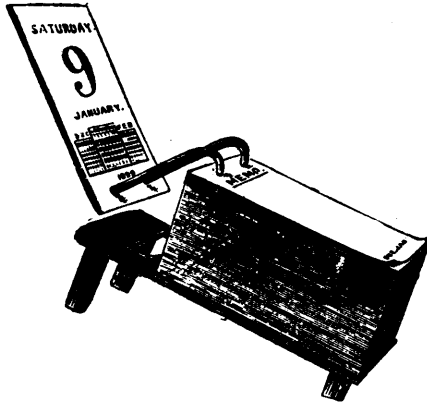
Last year the reduction works at Canso, N.S., handled 1,300 tons of dog-fish and produced therefrom 9,000 gallons of fish oil and 200 tons of "fish scrap." Some of the fish scrap in its unfinished state was sent to the experimental farms at Truro, Nappan, N.S., and Ottawa, and tests made there to discover its efficiency as a fertilizer, have, so far as can be ascertained, proved very satisfactory. The conversion of "fish scrap" into a fertilizer is one of the probable early additions to the allied fishing industries of Canada.

	Totals.	Factory A. or Department A.	Factory B or Department B.	Factory C or Department C.
October 1, 1905, stock on hand....	\$100,000	\$30,000	\$40,000	\$30,000
Purchases of materials.....	150,000	60,000	50,000	40,000
Wages.....	90,000	40,000	30,000	20,000
General Factory expenses.....	30,000	15,000	10,000	5,000
Maintenance of plant.....	5,000	2,000	2,000	1,000
Output.....	\$275,000	\$96,000	\$97,000	\$82,000
Stocks, October 1, 1906.....	90,000	45,000	30,000	15,000
Loss on manufacturing....	Loss 10,000	Loss 6,000	Loss 5,000	1,000 Gain.
Totals.....	\$375,000 \$375,000	\$147,000 \$147,000	\$132,000 \$132,000	\$97,000 \$97,000

If the costs of the goods as manufactured are figured accurately the manufacturing account should balance at the end of the period when the inventory of stock on hand is taken, but this rarely occurs as it is practically impossible to estimate costs precisely,

material has advanced considerably in price, and it may seem only fair to increase the value of such material in stock to the current market value, but on the other hand, during the next period, the value of the same material may drop, then what is to be done.

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# The Purchasing Agent.

By IRA ENOS.

With its wide-reaching branches and its many-times-divided departments, the modern business institution has found it wise to centre authority in men specially trained for specific work.

Inasmuch as the purchasing of supplies, of machinery and materials entail great study and constant oversight the inevitable result has been the purchasing agent. And of these there are many and various, good, bad and indifferent. Some are won with a smile and a cigar: others are subtle and farsighted. Some are reasonable and fond of the "square deal"; others are haughty and insolent.

And of all types of the purchasing none are more disliked, none more short-sighted and none less likely to do the best work for his house than the "mean" one—the fellow who is ever seeking to cut prices a few cents below the quotations given him. As a rule such a one is not above "a little crooked work" to get two firms to cut against each other.

Such a buyer is a deception and a snare for his house. When he first assumes authority he will probably attract attention to his success at securing lower quotations from weak-kneed firms with whom the house has been dealing—or from even more weak-kneed competitors. But as the months go by, if the house were in close touch with what is going on they might be surprised to learn that many of the strongest and most independent houses have quit seeking business through this "penny-wise, pound-foolish" buyer, and that inferior materials and supplies are being bought—at lower prices probably, though possibly not.

An instance of this was related to the writer by the Montreal manager of one of the most successful firms in Canada. This manager had enjoyed the confidence and patronage of one of the largest buyers in their line in Montreal and had, in recognition of appreciation of such confidence, given the firm the benefit of every fluctuation in the market.

Enter a new purchasing agent with a reputation as a close buyer. The first notification of his appointment reached the manager, who told the story, in the shape of a notice that an important contract was cancelled "unless the price quoted can be reduced" to a somewhat lower figure.

The reply was that the contract would be considered cancelled and that the firm would not quote again. The new purchasing agent at once sent out specifications for the supply of the materials needed.

Evidently the quotations received were a surprise to him for soon he was back to the firm whose contract he had cancelled so abruptly, asking for its renewal.

It seems this lesson was not enough for he, instead of recognizing the confidential relations between his house and this firm asked for tenders from three or four other houses as well as this one. Again the old firm refused to quote. Not only that but the manager called on the purchasing agent's house and frankly informed them that in the future they would not quote on standard lines and that when their own specialties

were required they should expect to pay more than had been charged them in the past.

The house saw the point. The manager of the supply house was informed that the new purchasing agent would get his instructions that the confidential relations between the two houses were to be recognized and goods bought direct without tenders.

The moral is partly for the purchasing agent, partly for the salesman who has to sell through him. To the former the lesson is clear that 'tis well to recognize a "square deal." At this same time it demonstrates that the manufacturer who makes his goods up to the highest standard, who sells at a reasonable price and who gives a regular customer every advantage as to price and quality, need not fear meanness, sharpness nor close buying by any purchasing agent.

## THE MECHANICAL TIME RECORDER.

To fill the continued and increasing demand for an instrument which makes a graphic record of variations and the time of such variations, of mechanical movements, The Bristol Company, Waterbury, Conn., have placed on the market the instrument illustrated here, to which they have given the name Mechanical Time Recorder. A circular chart revolves by clock work at uniform speed, while the pen moves over the chart an amount proportional to the motion to be recorded.

The chart is 8 inches in diameter, being the same size as on the well known Standard Bristol Gauges.

Clock movements can be supplied for complete revolution of chart once in 15 minutes, 1 hour, 2 hours, 3 hours, 4 hours, 6 hours, 8 hours, 10 hours, 12 hours, 24 hours or 7 day. Thus it will be seen that the speed may be selected to give best results under all commercial requirements.

The pen arm is rigidly attached at its lower end to a shaft which is turned by a short arm projecting through a slot in bottom of the case.

The lever shown in the cut projecting to the right is clamped to the short arm by a thumb nut. Special attention is called to the fact that this lever is adjustable and can be clamped to the arm at any convenient angle.

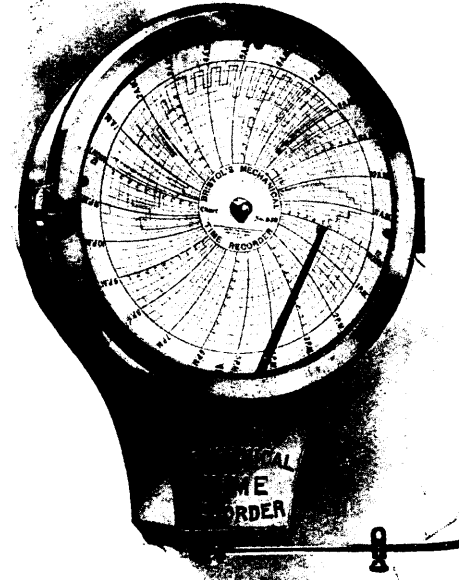
The motion to be recorded after being properly reduced, if necessary, is imparted to the lever which in turn transmits it to the pen.

The total scale on the chart is usually taken proportional to the total motion to be recorded. Reduced motion, if necessary, can easily be arranged by the aid of pulleys, levers or other reducing devices.

Fine adjustments can readily be made by applying the motion at the proper point along the lever, and to facilitate this, a metal attaching piece is provided, which is adjustable on the lever arm and secured in any position by thumb nut. It will readily be seen that by the aid of the adjustable lever arm and the adjustable slide on the arm, the instrument is most conveniently

adapted to record motions of all amounts and directions.

Total deflection of the pen is obtained by turning the lever through an angle of about 21 degrees or 5 inch motion at its outer end.



This instrument can readily be used to record the rate of motion and position of sluice gates, turbine or engine governors, gate valves, etc. It is also adapted for recording the rise and fall of liquids in tanks, rivers, reservoirs and fore bay.

In the gas industry it can be used to check up the operators and thus prevent the "blowing" of the holders either day or night. Its applications are, however, so many and varied that it is difficult to mention them, even for a single industry.

## THE SOUTHERN CALIFORNIA NEW TRAIN.—BEST ROUTE.

The Los Angeles Limited, electric lighted, new from the Pullman shops, with all latest innovations for travel comfort, leaves Chicago 10.05 p.m. daily, arrives Los Angeles 4.45 p.m. third day via Chicago, Union Pacific & North-Western Line and The Salt Lake Route. Pullman drawing room and tourist sleeping cars, composite observation car, dining cars, a la carte service. For rates, sleeping car reservations and full particulars, apply to your nearest agent or address B. H. Bennett, 2 East King St., Toronto.

The Pintsch Compressing Co. have secured license to do business in Ontario, building, operating and maintaining works, etc., for the compressing, manufacturing and supply of gas after the Julius Pintsch patents, and to make necessary devices, etc., for the supply of this gas for lighting cars, steamboats, etc.

A despatch from Guelph, Ont., states that the Sussex Mfg. Co., Sussex, N.B., have an option on the plant of Taylor & Mackenzie, Guelph, Ont. If the deal goes through they will, in consideration of certain concessions, increase the plant and the staff from the 12 men now employed to 35 or 40 men.

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# YOUR FACTORY COST SYSTEM.

## What Is Its Basis?



**THE CALCULAGRAPH**  
**DOES NOT GUESS**  
**DOES NOT ESTIMATE**  
**DOES NOT FORGET**  
**DOES NOT MAKE CLERICAL ERRORS**

As the stability of a building depends on the soundness of its foundation, so a factory cost system depends on the accuracy of the records on which it is based.

If you depend on your workmen for these records they must be full of errors—not necessarily intentional.

## THE CALCULAGRAPH

is a machine which makes original records of working time with absolute mechanical accuracy.

Such records make a reliable foundation for, and are adaptable for use in connection with, any system of finding costs of factory products.

The **CALCULAGRAPH** is the only machine in the world which mechanically subtracts the time of day a workman begins from the time of day he stops and prints his actual working time.

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**COR. GUY & NOTRE DAME STS. = = MONTREAL**

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Are you looking for the method of copying your letters by which you will

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**PREVENT MISTAKES**  
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**AT LEAST EXPENSE**

We have this method, the machine you are looking for; twenty times as fast as the old letter book; saves half the cost of the carbon copy way; better, cheaper, quicker than any other machine.



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**Phone, M. 3467.**

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# TALK TO "THE MAN WHO BUYS" WITH A SMALL "AD." ON THIS PAGE

## FACTORY LOCATIONS.

The following Canadian municipalities are offering inducements to secure manufacturing establishments. Inquiries should be addressed to the Mayor, Town Clerk or Board of Trade of the respective cities:

- Barrie, Ont.
- Brantford, Ont.
- Hamilton, Ont.
- Peterborough, Ont.
- Regina, N.W.T.
- Sherbrooke, Que.
- Toronto, Ont.

## SITUATION WANTED

A young married man with 12 years' office experience in two large manufacturing firms, and at present occupying a confidential position, is open for engagement as office manager or other responsible position. Can furnish best of references. Address: "Confidential," Box 12, CANADIAN MANUFACTURER, Toronto.

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## THE BEST GASOLINE ENGINE

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THE CANADIAN MANUFACTURER

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FILE and RASP MANUFACTURERS AND RE-CUTTERS.

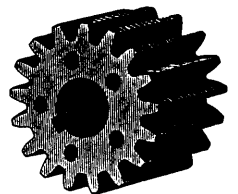
A trial order solicited. Write for terms. C. P. MOORE, PROPRIETOR.

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AIR HOISTS  
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"Everything in Air Machinery."



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**TENTH EDITION**

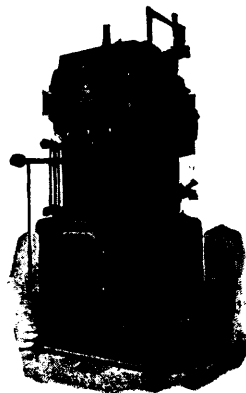
Dixon's latest book, "Graphite as a Lubricant," tenth edition, explains the modern practice of graphite lubrication and quotes experiments by scientific authorities and experiences of practical men.

GET FREE COPY 33-C.

**Joseph Dixon Crucible Co.**

JERSEY CITY, N.J., U.S.A.

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**T**HIS is the day of by-products. In many important lines of business the profit now lies in what used to be thrown away.

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The wasters cannot successfully compete with the savers.

**WEBSTER FEED WATER HEATERS and HEATING APPLIANCES** have made economy a fine art. In many businesses their saving has swung the balance over from the "Loss" side to the "Profit" side.

Webster Steam Appliances now hold undisputed the highest place in steam engineering economy.

MANUFACTURED BY

**DARLING BROTHERS, Limited**  
 TORONTO — MONTREAL — WINNIPEG

# Classified Index for Lines Sold by Advertisers

All advertisers are invited to send in full list of lines sold by them. We desire to keep this index thoroughly up-to-date, but this will be impossible unless each advertiser sees to it that he is represented under each heading he is entitled to.

<p><b>Abrasives</b> Williams, A. R. Machinery Co., Toronto.</p> <p><b>Accountants</b> Neff &amp; Postlethwaite, Toronto. Viau, Henri, Montreal.</p> <p><b>Acids</b> Canada Chemical Co., London, Ont. Canada Process Co., Toronto. Nichols Chemical Co. of Canada, Montreal.</p> <p><b>Air Compressors</b> Allis-Chalmers-Bullock, Limited, Montreal. Canada Foundry Co., Toronto. Canadian Rand Drill Co., Sherbrooke, Que. Darling Bros., Montreal. Smart-Turner Machine Co., Hamilton, Ont.</p> <p><b>Alum</b> Nichols Chemical Co. of Canada, Montreal.</p> <p><b>Aluminum</b> Northern Aluminum Co., Pittsburg, Pa. Syracuse Smelting Works, Montreal.</p> <p><b>Angles, Beams and Girders</b> Bourne-Fuller Co., Cleveland, Ohio. Canada Foundry Co., Toronto. Hopkins, F. H. &amp; Co., Montreal. Nova Scotia Steel &amp; Coal Co., New Glasgow, N.S.</p> <p><b>Aniline Colors and Dyewood Extracts</b> Benson, W. T. &amp; Co., Montreal. Brunner, Mond &amp; Co., Norwich, England. Canada Chemical Mfg. Co., London, Ont. Canada Process Co., Toronto. Cassella Color Co., New York City. McArthur, Corneille &amp; Co., Montreal. Nichols Chemical Co. of Canada, Montreal. Winn &amp; Holland, Montreal.</p>	<p><b>Annealing Muffles and Furnaces (Wire)</b> Leslie, A. C. &amp; Co., Montreal. Turner, Vaughn &amp; Taylor Co., Cuyahoga Falls, Ohio.</p> <p><b>Antimony</b> Syracuse Smelting Works, Montreal.</p> <p><b>Anvils and Vises</b> Hopkins, F. H. &amp; Co., Montreal. Leslie A. C. &amp; Co., Montreal.</p> <p><b>Architects</b> Parke, R. J. Toronto. Vogel, C. H., Ottawa.</p> <p><b>Automatic Gear Cutting Machines</b> Becker-Brainard Milling Machine Co., Hyde Park, Mass.</p> <p><b>Axles</b> Hopkins, F. H. &amp; Co., Montreal. Nova Scotia Steel &amp; Coal Co., New Glasgow, N.S.</p> <p><b>Babbitt Metal</b> Petrie, H. W., Toronto. Syracuse Smelting Works, Montreal.</p> <p><b>Banks</b> Bank of Hamilton, Hamilton, Ont.</p> <p><b>Bar Iron and Steel</b> Bourne-Fuller Co., Cleveland, Ohio. Hopkins, F. H. &amp; Co., Montreal. Leslie, A. C. &amp; Co., Montreal. London Rolling Mills, London, Ont. Union Drawn Steel Co., Hamilton, Ont.</p> <p><b>Belt Dressing</b> Petrie, H. W., Toronto. Sadler &amp; Haworth, Montreal and Toronto. Williams, A. R. Machinery Co., Toronto.</p>	<p><b>Belt Fasteners</b> Bristol Co., Waterbury, Conn. McLaren, D. K., Montreal and Toronto. Petrie, H. W., Toronto. Williams, A. R. Machinery Co., Toronto.</p> <p><b>Belting (Cotton)</b> Dominion Belting Co., Hamilton, Ont. McLaren, D. K., Montreal and Toronto. Petrie, H. W., Toronto. Sadler &amp; Haworth, Montreal and Toronto.</p> <p><b>Belting (Leather)</b> McLaren, D. K., Montreal and Toronto. Petrie, H. W., Toronto. Williams, A. R. Machinery Co., Toronto.</p> <p><b>Belting (Rubber)</b> Gutta Percha &amp; Rubber Mfg. Co., Toronto. McLaren, D. K., Montreal and Toronto. Petrie, H. W., Toronto.</p> <p><b>Belting and Supplies</b> Bristol Co., Waterbury, Conn. Dominion Belting Co., Hamilton, Ont. Gutta Percha &amp; Rubber Mfg. Co., Toronto. Jeffrey Mfg. Co., Columbus, Ohio. McLaren, D. K., Montreal and Toronto. Petrie, H. W., Toronto. Williams, A. R. Machinery Co., Toronto.</p> <p><b>Blast Furnace Brick</b> Dunbar Fire Brick Co., Pittsburg, Pa. Elk Fire Brick Co., St. Mary's, Pa. Hamilton Facing Mill Co., Hamilton, Ont. Harbison-Walker Refractories Co., Pittsburg, Pa. Pennsylvania Fire Brick Co., Beech Creek, Pa. Queen's Run Fire Brick Co., Lock Haven, Pa. Stowe-Fuller Co., Cleveland, Ohio.</p>
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(CONTINUED).

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Sheldons, Limited, Galt, Ont.  
Sturtevant, B. F. Co., Boston, Mass.

**Boiler Compounds**

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Canada Process Co., Toronto.  
Hamilton Facing Mill Co., Hamilton, Ont.

**Boiler Inspection**

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

**BOILERS (See Engines and Boilers)****Bolts and Nuts**

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Morrow John Machine Screw Co. Ingersoll, Ont.

**Brass Founders**

Hamilton Brass Mfg. Co., Hamilton, Ont.

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Pedlar People, Oshawa, Ont.

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Canada Foundry Co., Toronto.  
Conduits Company, Limited, Toronto.  
Expanded Metal & Fireproofing Co., Toronto.  
Gartshore, John J., Toronto.  
Hopkins, F. H. & Co., Montreal.  
Metallic Roofing Co., Toronto.  
Pedlar People, Oshawa, Ont.  
Sheldons, Limited, Galt, Ont.

**Burlap (Decorative)**

Dominion Oil Cloth Co., Montreal.

**Business Methodizers**

Viau, Henri, Montreal.

**Cables**

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

**Canada Plates**

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

**Caps**

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**Cast Iron Pipe**

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

**Castings (Grey Iron, Malleable Iron and Brass)**

Jenckes Machine Co., Sherbrooke, Que.  
Kerr Engine Co., Walkerville, Ont.  
McDougall, John, Caledonian Iron Works Co., Montreal.  
McKinnon Dash & Metal Works Co., St. Catharines, Ont.  
Maxwell, David & Sons, St. Mary's, Ont.  
Smart-Turner Machine Co., Hamilton, Ont.

**Cement Machinery**

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

**Centrifugal Pumping Machinery**

Morris Machine Works, Baldwinsville, N.Y.  
Smart-Turner Machine Co., Hamilton, Ont.

**Chain Making Machinery  
(Welded Coil Chain)**

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

**Channels**

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

**Charcoal Pig Iron**

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

**Chemicals**

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

**Chemists**

Heys, Thomas & Son, Toronto.

**Clay Working Machinery**

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

**Coal, Coke and Charcoal.**

Bourne-Fuller Co., Cleveland, Ohio.  
Hamilton Facing Mill Co., Hamilton, Ont.

**Coal Cutting Machines**

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

**Coal Tipples**

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

**Coil Chains**

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

**Coke Oven Brick**

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

**Collection Agency**

Petrie, H. D., Hamilton, Ont.

**Concrete Mixers**

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

**Condensers**

Smart-Turner Machine Co., Hamilton, Ont.

**Conduits (Interior)**

Conduits Company, Limited, Toronto.

**Contractors' Machinery**

Allis-Chalmers-Bullock, Limited, Montreal.  
Gartshore, John J., Toronto.  
Hopkins, F. H. & Co., Montreal.  
Jenckes Machine Co., Sherbrooke, Que.  
McDougall, John, Caledonian Iron Works Co., Montreal.  
Smart-Turner Machine Co., Hamilton, Ont.

**Contractors' Plants**

Allis-Chalmers-Bullock, Limited Montreal.  
Hopkins, F. H. & Co., Montreal.  
Jenckes Machine Co., Sherbrooke, Que.  
Petrie, H. W., Toronto.  
Smart-Turner Machine Co., Hamilton, Ont.  
Williams A. R. Machinery Co., Toronto.

**Conveying Machinery**

Allis-Chalmers-Bullock, Limited, Montreal.  
Babcock & Wilcox, Limited, Montreal.  
Canada Foundry Co., Toronto.  
Jeffrey Mfg. Co., Columbus Ohio.  
McDougall John, Caledonian Iron Works Co. Montreal.  
Perrin, William R. & Co., Limited, Toronto.  
Smart-Turner Machine Co., Hamilton, Ont.

**Copper Materials**

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

**Corrugated Iron**

Metallic Roofing Co., Toronto.  
Pedlar People, Oshawa, Ont.

**Covers**

McCullough-Dalsell Crucible Co., Pittsburg, Pa.

**Cranes (Electric and Hand Power)**

Smart-Turner Machine Co., Hamilton, Ont.

**Crayons**

Lowell Crayon Co., Lowell, Mass.

**Crucibles**

Dixon, Joseph, Crucible Co., Jersey City, N.J.  
Hamilton Facing Mill Co., Hamilton, Ont.  
McCullough-Dalsell Crucible Co., Pittsburg, Pa.  
Syracuse Smelting Works, Montreal.

**Crucible Caps**

Hamilton Facing Mill Co., Hamilton, Ont.  
McCullough-Dalsell Crucible Co. Pittsburg, Pa.

**Crucible Covers**

McCullough-Dalsell Crucible Co. Pittsburg, Pa.

**Cutter Grinding Machines**

Becker-Brainard Milling Machine Co., Hyde Park  
Mass

**Dashes**

McKinnon Dash & Metal Works Co. St. Catharines,  
Ont

**Dies (Socket, Sewer Pipe and Tile)**

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

**Directories**

Kelly's Directories, Limited, Toronto

**Draw Benches (Wire)**

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

**Dredges**

Allis-Chalmers-Bullock, Limited, Montreal

**Drill Chucks**

Krug & Crosby, Hemilton, Ont.

**Drills**

Allis-Chalmers-Bullock, Limited, Montreal.  
Canadian Westinghouse Co., Ltd., Hamilton, Ont.  
Petrie, H. W., Toronto.

**Drills (Pneumatic and Rock)**

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

**Drop Forgings**

Globe Machine & Stamping Co., Cleveland, Ohio

**Drop Forging Dies**

Globe Machine & Stamping Co., Cleveland Ohio.

**Dry Kiln Apparatus**

Sheldons, Limited, Galt, Ont.  
Sturtevant, B. F. Co., Boston, Mass.

**Dust and Shavings Separators**

Sheldons, Limited, Galt, Ont.  
Sturtevant, B. F. Co. Boston, Mass.

**Dye Stuffs and Chemicals**

Benson, W. T. & Co., Montreal.  
Brunner, Mond & Co., Northwich, England.  
Canada Chemical Mfg. Co., London, Ont.  
Canada Process Co., Toronto.  
Cassella Color Co., New York City.  
McArthur, Corneille & Co., Montreal.  
Nichols Chemical Co. of Canada, Montreal.  
Winn & Holland, Montreal.

**DYNAMOS (See Motors and Dynamos)****Electric Meters and Transformers**

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

**Electric Mine Locomotives**

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

**Electrical Repairs**

Keystone Engineering Co., Toronto.

**Electrical Supplies**

Allis-Chalmers-Bullock, Limited, Montreal.  
Bristol Co., Waterbury, Conn.  
Canadian General Electric Co., Toronto.

# CLASSIFIED INDEX.

(CONTINUED).

Canadian Westinghouse Co., Ltd., Hamilton, Ont.  
Electrical Construction Co., London, Ont.  
Forman, John, Montreal.  
Jones & Moore Electric Co., Toronto  
Keystone Engineering Co., Toronto.  
Packard Electric Co., St. Catharines, Ont.  
Toronto & Hamilton Electric Co., Hamilton, Ont

## Elevators and Conveyors

Allis-Chalmers-Bullock, Limited, Montreal  
Darling Bros., Montreal.  
Jeffrey Mfg. Co., Columbus, Ohio.  
Jenckes Machine Co., Sherbrooke, Que.

## Elevator Insurance

Canadian Casualty & Boiler Insurance Co., Toronto.

## Emery and Emery Wheels

Forman, John, Montreal.  
Hamilton Facing Mill Co., Hamilton, Ont.  
Petrie, H. W., Toronto.

## Engineers (Chemical)

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

## Engineers (Civil)

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

## Engineers (Consulting)

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

## Engineers (Contracting)

Babeock & Wilcox, Limited, Montreal.  
Canada Foundry Co., Toronto.  
Darling Bros., Montreal.  
Electrical Construction Co., London Ont.  
Fensom, C. J., Toronto.  
Keystone Engineering Co., Toronto.  
McDougall, John, Caledonian Iron Works Co., Mont-  
real.  
Robb Engineering Co., Amherst, N.S.

## Engineers (Electrical)

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

## Engineers (Mechanical)

Allis-Chalmers-Bullock, Limited, Montreal.  
Babeock & Wilcox, Limited, Montreal.  
Darling Bros., Montreal.  
Electrical Construction Co., London, Ont.  
Fensom, C. J., Toronto.  
McDougall, John, Caledonian Iron Works Co., Mont-  
real.  
Hunt, Robert W. & Co., Chicago, Ill.  
Kerr Engine Co., Walkerville, Ont.  
Marion & Marion, Montreal.  
Robb Engineering Co., Amherst, N.S.  
Sheldons, Limited, Galt, Ont.  
Smart-Turner Machine Co., Hamilton, Ont.

## Engineers (Mill and Hydraulic)

Fensom, C. J., Toronto.  
Smart-Turner Machine Co., Hamilton, Ont.  
Vogel, C. H., Ottawa.

## Engineers (Mining)

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

## Engineers and Contractors

Jeffrey Mfg. Co., Columbus, Ohio.  
Jenckes Machine Co., Sherbrooke, Que.  
Smart-Turner Machine Co., Hamilton, Ont.

## Engines and Boilers

Allis-Chalmers-Bullock, Limited, Montreal.  
Babeock & Wilcox, Limited, Montreal.  
Canada Foundry Co., Toronto.  
Goldie & McCulloch Co., Galt, Ont.

Hamilton, Wm. Mfg. Co., Peterborough, Ont.  
Hopkins, F. H. & Co., Montreal.  
Jenckes Machine Co., Sherbrooke, Que.  
Morris Machine Works, Baldwinville, N.Y.  
McDougall, John, Caledonian Iron Works Co., Mont-  
real.  
Petrie, H. W., Toronto.  
Robb Engineering Co., Amherst, N.S.  
Sheldons, Limited, Galt, Ont.  
Smart-Turner Machine Co., Hamilton, Ont.  
Sturtevant, B. F. Co., Boston, Mass.  
Williams, A. R. Machinery Co., Toronto.

## Engravers

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

## Exhaust Fans

Hamilton Facing Mill Co., Hamilton, Ont.  
Sheldons, Limited, Galt, Ont.  
Sturtevant, B. F. Co., Boston, Mass.

## Exhaust Heads

Darling Bros., Montreal.  
Sheldons, Limited, Galt, Ont.  
Sturtevant, B. F. Co., Hyde Park, Mass.

## Exhausters

Sheldons, Limited, Galt, Ont.  
Sturtevant, B. F. Co., Hyde Park, Mass.

## Factory Sites

(See Factory Locations, page 31.)

## Feed Water Heaters

Babeock & Wilcox, Limited, Montreal.  
Darling Bros., Montreal.  
McDougall, John, Caledonian Iron Works Co., Mont-  
real.  
Pittsburg Filter Mfg. Co., Pittsburg, Pa.  
Robb Engineering Co., Amherst, N.S.  
Smart-Turner Machine Co., Hamilton, Ont

## Feed Water Purifiers

Pittsburg Filter Mfg. Co., Pittsburg, Pa.

## Files

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

## Fillet (Pattern)

Hamilton Facing Mill Co., Hamilton, Ont.  
Sadler & Haworth, Montreal and Toronto.

## Filters (Oil)

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

## Filters and Filtering Systems (Water)

Babeock & Wilcox, Limited, Montreal.  
Jenckes Machine Co., Sherbrooke, Que.  
McDougall, John, Caledonian Iron Works Co., Mont-  
real.  
Pittsburg Filter Mfg. Co., Pittsburg, Pa.

## Financial

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

## Finials

Metallic Roofing Co., Toronto.  
Pedlar People, Oshawa, Ont.

## Fire Brick and Clay

Dunbar Fire Brick Co., Pittsburgh, Pa.  
Elk Fire Brick Co., St. Mary's, Pa.  
Hamilton Facing Mill Co., Hamilton, Ont.  
Harbison-Walker Refractories Co., Pittsburgh, Pa.  
Pennsylvania Fire Brick Co., Beech Creek, Pa.  
Queen's Run Fire Brick Co., Lock Haven, Pa.  
Stowe-Fuller Co., Cleveland, Ohio.

## Fire Escapes

Darling Bros., Montreal.

## Fireproof Partitions

Metallic Roofing Co., Toronto.  
Pedlar People, Oshawa, Ont.

## Flour Mill Machinery

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

## Forges and Blowers

Canada Foundry Co., Toronto.  
Hamilton Facing Mill Co., Hamilton, Ont.  
Sheldons, Limited, Galt, Ont.  
Sturtevant, B. F. Co., Boston, Mass.

## Founders

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

## Foundry Facings and Supplies

Hamilton Facing Mill Co., Hamilton, Ont.

## Fuel Economizers

Babeock & Wilcox, Limited, Montreal.  
Sturtevant, B. F. Co., Hyde Park, Mass.

## Furniture (Lodge, Opera and School)

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

## Galvanizing

Ontario Wind Engine & Pump Co., Toronto.

## Galvanizing and Tinning Machinery and Furnaces (Wire)

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

## Gas and Gasoline Engines

Economic Power, Light & Heat Supply Co., Toronto  
Morrison, T. A. & Co., Montreal.  
Smart-Turner Machine Co., Hamilton, Ont.

## Gauges (Recording Pressure)

Bristol Co., Waterbury, Conn.

## Gauges (Steam)

Petrie, H. W., Toronto.  
Williams, A. R. Machinery Co., Toronto

## Gauges (Water)

Babeock & Wilcox, Limited, Montreal

## Generating Sets

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

## Generators

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

## Gloves, Mittens and Moccasins

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

## Government Notices

Factory Inspectors.  
Minister of Agriculture.

## Graphite

Dixon, Jos. Crucible Co., Jersey City, N.J.  
Hamilton Facing Mill Co., Hamilton, Ont.  
McCullough-Dalsell Crucible Co., Pittsburg, Pa.

## Hack Saws

Krug & Crosby, Hamilton, Ont.

## Hames.

McKinnon Dash & Metal Works Co., St. Catharines.

## Hardware

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

## Heating and Ventilating Apparatus

Darling Bros., Montreal.  
Sheldons, Limited, Galt, Ont.  
Sturtevant, B. F. Co., Boston, Mass.

## Hoisting Engines

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

## Hoists (Chain and Pneumatic)

Allis-Chalmers-Bullock, Limited, Montreal.  
Canadian Rand Drill Co., Sherbrooke, Que.  
Hopkins, F. H. & Co., Montreal.

## Hose (Fire and Pneumatic)

Gutta Percha & Rubber Mfg. Co., Toronto.

## Hydrants

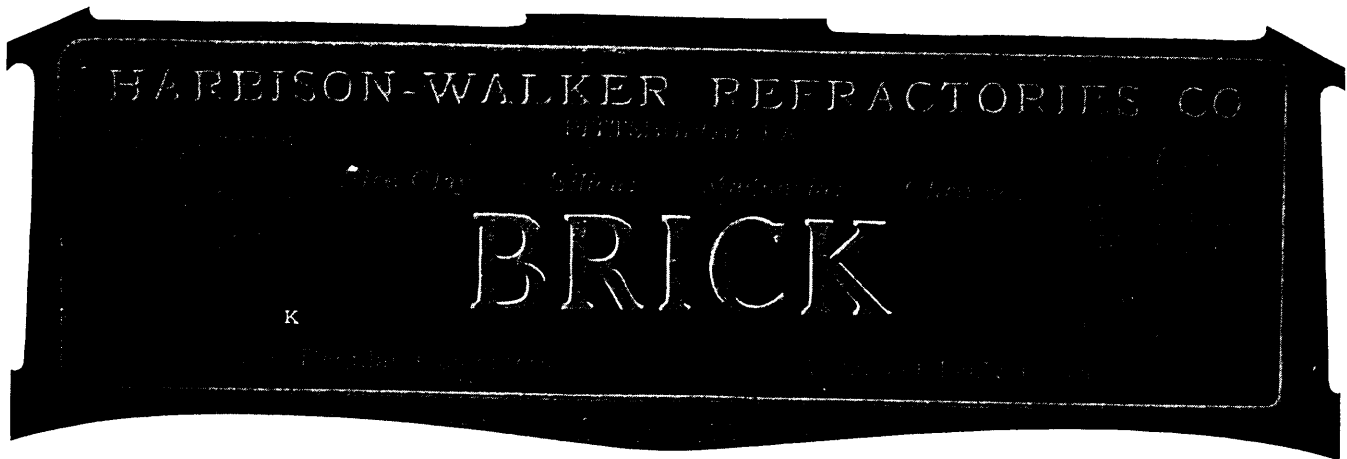
Kerr Engine Co., Walkerville, Ont.  
Jenckes Machine Co., Sherbrooke, Que.  
McDougall, John, Caledonian Iron Works Co., Mont-  
real.

## Hydraulic Accumulators

Jenckes Machine Co., Sherbrooke, Que.  
McDougall, John, Caledonian Iron Works Co., Mont-  
real.  
Smart-Turner Machine Co., Hamilton, Ont.

## Hydraulic Machinery

Canada Foundry Co., Toronto.  
Darling Bros., Montreal.  
Hamilton, Wm. Mfg. Co., Peterborough, Ont.  
Jenckes Machine Co., Sherbrooke, Que.  
McDougall, John, Caledonian Iron Works Co., Mont-  
real.  
Perrin, William R. & Co., Limited, Toronto.  
Petrie, H. W., Toronto.  
Smart-Turner Machine Co., Hamilton, Ont.



The money you waste, every year, in faulty crucibles, would pay for the McCullough-Dalzell kind, and leave a handsome profit besides.

McCULLOUGH-DALZELL CRUCIBLE COMPANY, PITTSBURG, PA.

**D**O you realize how difficult it often is for your salesman to get an interview with the heads of manufacturing firms—with the men who buy? This paper is an ever-welcome salesman. Why not get the benefit of its influence?

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# CLASSIFIED INDEX.

(CONTINUED).

## Insulated Wires and Cables

Phillips, Eugene F., Electrical Works, Montreal.

## Iron and Steel Specialties

Armstrong Mfg. Co., Bridgeport, Conn.  
 Bourne-Fuller Co., Cleveland, Ohio.  
 Canada Foundry Co., Toronto.  
 Leslie, A. C. & Co., Montreal.  
 London Rolling Mill Co., London, Ont.  
 Lysaght, John, Limited, Bristol, England and Montreal.  
 Metallic Roofing Co., Toronto.  
 Nova Scotia Steel & Coal Co., New Glasgow, N.S.  
 Pedlar People, Oshawa, Ont.  
 Petrie, H. W., Toronto.  
 Union Drawn Steel Co., Hamilton, Ont.

## Injectors

Canada Foundry Co., Toronto.  
 Hamilton Brass Mfg. Co., Hamilton, Ont.  
 Williams A. R. Machinery Co., Toronto.

## Iron and Steel Inspection

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

## Lamps—Electric

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

## Lathes

Petrie, H. W., Toronto.  
 Williams, A. R. Machinery Co., Toronto.

## Lathes (Wood-working)

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

## Linoleum

Dominion Oil Cloth Co., Montreal.

## Lubricators

Hamilton Facing Mill Co., Hamilton, Ont.

## Machinists

Goldie & McCulloch Co., Galt, Ont.  
 Krug & Crosby, Hamilton, Ont.  
 Robb Engineering Co., Amherst, N.S.  
 Smart-Turner Machine Co., Hamilton, Ont.

## Machinists' Supplies

Armstrong Mfg. Co., Bridgeport, Conn.  
 Butterfield & Co., Rook Island, Que.  
 Goldie & McCulloch Co., Galt, Ont.  
 Gutta Percha & Rubber Mfg. Co., Toronto.  
 Hopkins, F. H. & Co., Montreal.  
 Jeffrey Mfg. Co., Columbus, Ohio.  
 Morrow, John, Machine Screw Co., Ingersoll, Ont.  
 Petrie, H. W., Toronto.

## Machine Tools

Becker-Brainard Milling Machine Co., Hyde Park, Mass.  
 Darling Bros., Montreal.  
 Petrie, H. W., Toronto.

## Malleable Castings

McKinnon Dash & Metal Works Co., St. Catharines, Ont.  
 Smith's Falls Malleable Castings Co., Smith's Falls, Ont.

## Marine and Stationary Engines and Boilers

Allis-Chalmers-Bullock, Limited, Montreal.  
 Jenckes Machine Co., Sherbrooke, Que.  
 Smart-Turner Machine Co., Hamilton, Ont.

## Mechanical Draft

Babcock & Wilcox, Limited, Montreal.  
 Sheldons, Limited, Galt, Ont.  
 Sturtevant, B. F. Co., Boston, Mass.

## Metal Doors

Metallic Roofing Co., Toronto.  
 Pedlar People, Oshawa, Ont.

## Metal Stamping

Globe Machine & Stamping Co., Cleveland, Ohio.  
 Metallic Roofing Co., Toronto.  
 Pedlar People, Oshawa, Ont.

## Metallurgists

Mills, S. D., Toronto

## Mill Machinery and Supplies

Allis-Chalmers-Bullock, Limited, Montreal.  
 Armstrong Mfg. Co., Bridgeport, Conn.  
 Becker-Brainard Milling Machine Co., Hyde Park, Mass.  
 Darling Bros., Montreal.  
 Gartshore, John J., Toronto.  
 Goldie & McCulloch Co., Galt, Ont.  
 Gutta Percha & Rubber Mfg. Co., Toronto.  
 Hamilton Brass Mfg. Co., Hamilton, Ont.  
 Hamilton, Wm. Mfg. Co., Peterborough, Ont.  
 Hay, Peter Knife Co., Galt, Ont.  
 Hopkins, F. H. & Co., Montreal.  
 Jeffrey Mfg. Co., Columbus, Ohio.  
 Jenckes Machine Co., Sherbrooke, Que.  
 Morrow, John, Machine Screw Co., Ingersoll, Ont.  
 McDougall, John, Caledonian Iron Works Co., Montreal.  
 McLaren, D. K., Montreal and Toronto.  
 Petrie, H. W., Toronto.  
 Robb Engineering Co., Amherst, N.S.  
 Smart-Turner Machine Co., Hamilton, Ont.  
 Spence, R. & Co., Hamilton, Ont.

## Milling Cutters and Machines

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

## Miners' Lamps

Allis-Chalmers-Bullock, Limited, Montreal.

## Mining Machinery

Allis-Chalmers-Bullock, Limited, Montreal.  
 Canadian Rand Drill Co., Sherbrooke, Que.  
 Gartshore, John J., Toronto.  
 Hamilton, Wm. Mfg. Co., Peterborough, Ont.  
 Hopkins, F. H. & Co., Montreal.  
 Jeffrey Mfg. Co., Columbus, Ohio.  
 Jenckes Machine Co., Sherbrooke, Que.  
 McDougall, John, Caledonian Iron Works Co., Montreal.  
 Perrin, William R. & Co., Limited, Toronto.  
 Petrie, H. W., Toronto.  
 Williams, A. R. Machinery Co., Toronto.

## Motors and Dynamos

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

## Moulding Sand

Hamilton Facing Mills Co., Hamilton, Ont.

## Moulders Supplies.

Hamilton Facing Mill Co., Hamilton, Ont.

## Municipal Filtration Plants (Water)

Pittsburg Filter Mfg. Co., Pittsburg, Pa.

## Nickel

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

## Nozzles

McCullough-Dalsell Crucible Co., Pittsburg, Pa.

## Office and Bank Fittings

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

## Oils and Lubricants

Dixon, Jos. Crucible Co., Jersey City, N.J.  
 Hamilton Facing Mill Co., Hamilton, Ont.  
 Imperial Oil Co., Petrolia, Ont.  
 Queen City Oil Co., Toronto.

## Oil Cloth

Dominion Oil Cloth Co., Montreal.

## Paints and Colors

Berry Bros., Walkerville, Ont.  
 McArthur, Cornelle & Co., Montreal.

## Paper Manufacturers

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

## Patents

Budden, Hanbury A., Montreal.  
 Fetherstonhaugh & Co., Toronto.  
 Marion & Marion Montreal.

## Patterns (Wood and Iron)

Maxwell, David &amp; Sons, St. Mary's, Ont.

## Perforated Metals

Globe Machine & Stamping Co., Cleveland, Ohio.  
 Greening, B. Wire Co., Hamilton, Ont.  
 Metallic Roofing Co., Toronto.  
 Pedlar People, Oshawa, Ont.

## Personal Accident

Canadian Casualty &amp; Boiler Insurance Co., Toronto.

## Phosphorizers

McCullough-Dalsell Crucible Co., Pittsburg, Pa.

## Pig Iron

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

## Pipe (Riveted, Iron and Steel)

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

## Pipe Threading Machines

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

## Pipes and Tubes

Bourne-Fuller Co., Cleveland, Ohio.  
 Canada Foundry Co., Toronto.  
 Montreal Pipe Foundry Co., Montreal.

## Plaster

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

## Plates

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

## Plumbago

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

## Pneumatic Tools

Allis-Chalmers-Bullock, Limited, Montreal.  
 Canadian Rand Drill Co., Sherbrooke, Que.  
 Hamilton Facing Mill Co., Hamilton, Ont.

## Pointer Rolls (For Rods and Wire)

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

## Power Plants—Equipments

Allis-Chalmers-Bullock, Limited, Montreal.  
 Babcock & Wilcox, Limited, Montreal.  
 Canadian General Electric Co., Toronto.  
 Canadian Westinghouse Co., Ltd., Hamilton, Ont.  
 Darling Bros., Montreal.  
 Economic Power, Light & Heat Supply Co., Toronto.  
 Electrical Construction Co., London, Ont.  
 Goldie & McCulloch, Galt, Ont.  
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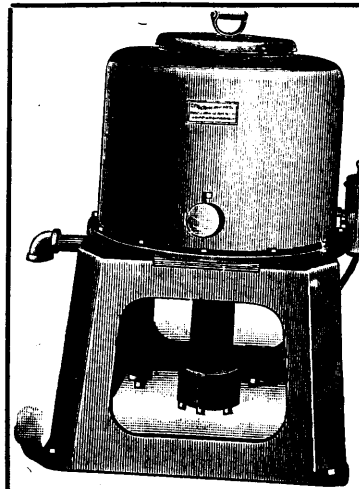
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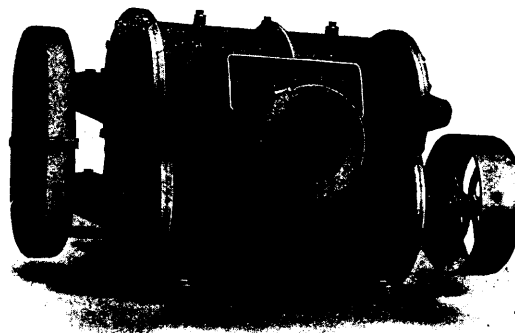
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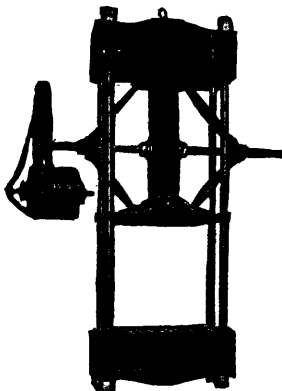
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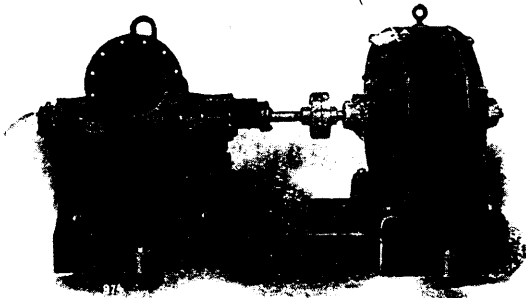
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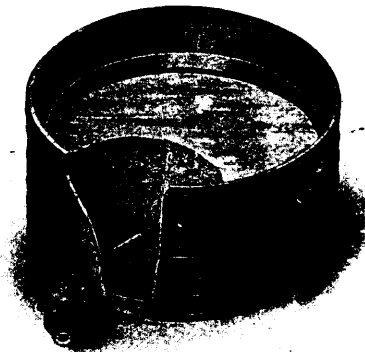
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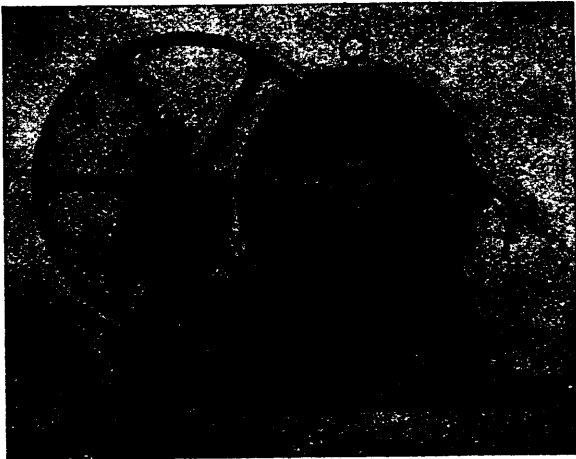
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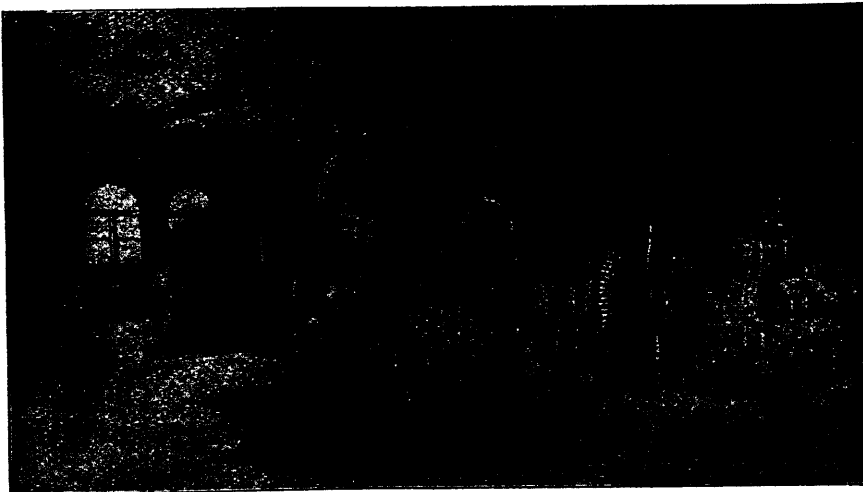
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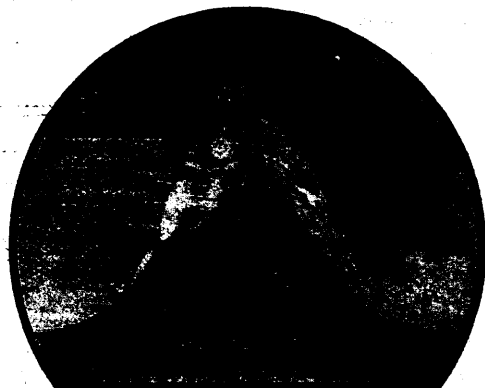
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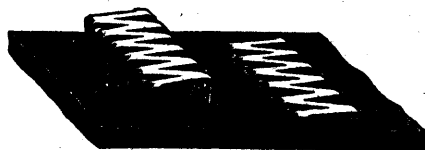
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