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Vol. 40.

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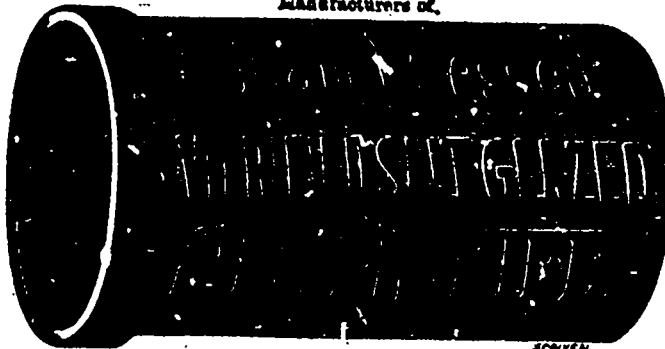
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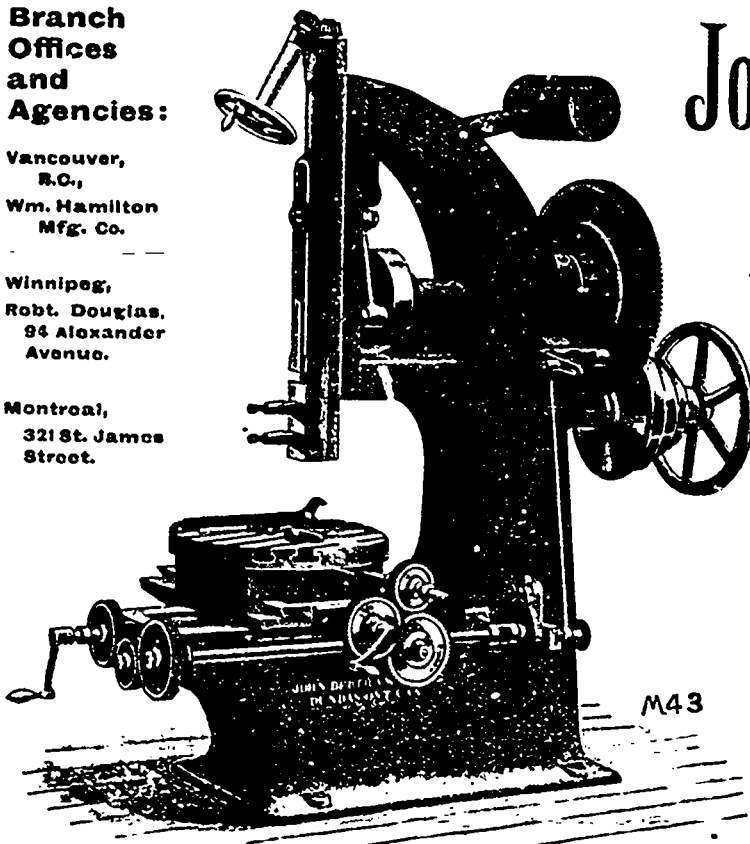
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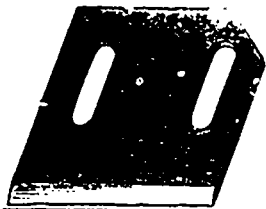
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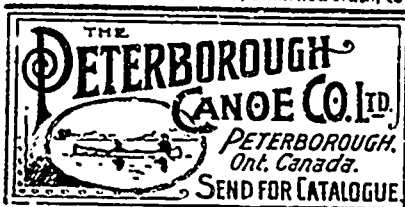


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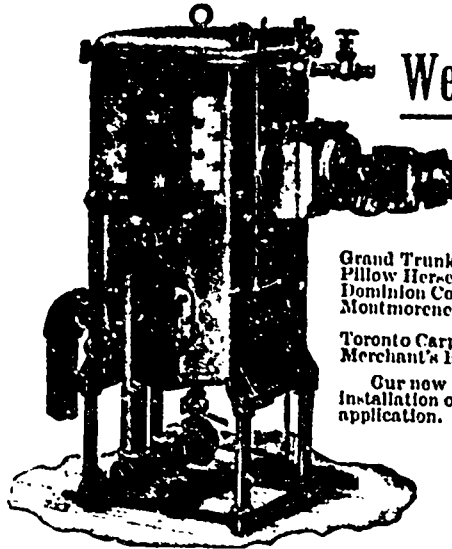
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Our new Catalogue explains the saving to be effected by the
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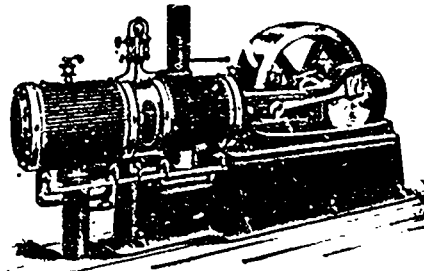
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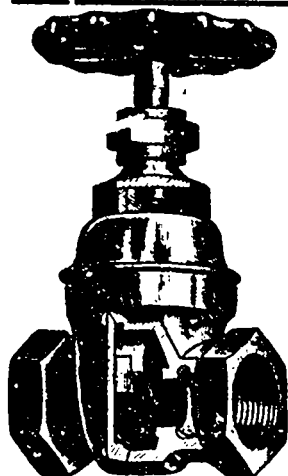


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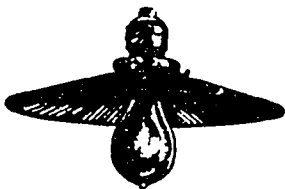
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PUBLISHED ON THE FIRST AND THIRD FRIDAYS OF EACH MONTH

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 ALL OTHER COUNTRIES IN POSTAL UNION, EIGHT SHILLINGS
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The Canadian Manufacturer Publishing Co., Limited.

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

J. J. CASSIDEY, Editor and Manager.

FRANK B. WHITE COMPANY.

The Fisher Building, CHICAGO. 150 Nassau St., NEW YORK.
 Represent the Advertising Department of THE CANADIAN
 MANUFACTURER in the United States.

OUR TARIFF EDITION.

The first issue in July of THE CANADIAN MANUFACTURER will be the initial number of our forty-first volume, the paper having been established in the year 1880. To celebrate its entrance upon a new decade the next issue will contain the tariffs of Canada, United States, Great Britain and Newfoundland, all exact reproductions copied from official documents of the countries alluded to, and will include the indexing observed in the originals. This will be the third time the tariffs of these countries have been reproduced in this journal, although on several other occasions very full and accurate synopses of the Canadian and other tariffs have been published in it. In our issue of August 6, 1897, the tariffs of Canada, United States, Great Britain and Newfoundland were reproduced with the utmost accuracy and detail, and as great care was taken in the binding of it, the cover being of extra weight, and the paper upon which it was printed of the best quality; and from the uniqueness of the publication, and because of the valuable information contained therein, it was highly prized by those into whose hands it came who were interested in the import and export trade of the country; and it is yet to be found in many offices and counting houses, more or less worn through constant use. The edition which will be issued next month will embody a feature not contained in our 1897 edition, in that with each of the tariffs given will be a reproduction of the official index of it, by which easy reference may be had to any article mentioned in the tariff, a general index in the first page of the book showing the page upon which each tariff is begun and the page upon which the index to it is begun. The amount of advertising to be contained in the edition indicates the estimation in which our friends hold it.

TORONTO OR BUFFALO, WHICH?

The following is the text of a circular sent out by the Canadian Manufacturers' Association under date of June 6, to a number of manufacturers:—

The question as to whether Canadian manufacturers should exhibit to any great extent at the Pan-American

Exposition to be held next year in Buffalo is one of considerable importance, and it is desirable that our manufacturers should not exhibit there at all, or else exhibit there in such numbers as to convey a proper impression of the condition of manufacturing industries in Canada, that is, there must be some understanding as to the policy to be followed by our manufacturers. I write, therefore, to ask you what is your opinion in case the grants asked for are given by the Dominion Government, the Toronto City Council and other bodies, to have a grand Dominion exhibition in Toronto next year. Do you think that our manufacturers should exhibit largely both at Buffalo and at Toronto? Or do you think that they should confine their energies entirely to Toronto, and to there make a representative showing for Canadian manufacturers?

It would appear from this circular that the questions agitating the Association are as to whether Canadian manufacturers are or are not to make a united effort to exhibit at the Pan-American Exposition; whether they are or are not to thus exhibit at the Toronto Fair, and as to the probability of certain grants being made looking to converting the Toronto Fair into a Dominion Exposition.

The issuing of this circular precisely four months after the last annual meeting of the Association, which was held February 6, is somewhat remarkable in view of the fact that at the annual meeting the following resolutions were passed:—

Whereas the Pan-American Exhibition to be held in Buffalo in 1901 will attract thousands of visitors from Great Britain and other European countries in addition to the hundreds of thousands of United States citizens who will attend:—

And whereas it will be of great advantage to Canadian manufacturers and to the Dominion of Canada generally to have the tourists visit Canada and see our capabilities and resources:—

And whereas this object can be attained in no better way than by inducing them to visit the Toronto Industrial Exhibition.

Therefore be it resolved that this Association impress upon the officers and directors of the Toronto Industrial Exhibition the following.

1. That united effort should be made to have the Exhibition of 1901 on a larger and more comprehensive scale than usual, and truly representative of the agricultural, mining and manufacturing products and resources.

2. The advisability of using every effort to induce European and United States visitors to the Pan-American Exhibition to come to Toronto and inspect Canada's great Fair.

3. The imperative necessity of large modern buildings suitable for the proper protection and exhibition of Canadian art, manufactures and industrial products.

4. The advisability of holding the Exhibition of 1901 for a longer period than two weeks.

5. The necessity of securing the co-operation and financial assistance of the corporation of the City of Toronto and the Governments of the Province of Ontario and the Dominion of Canada.

And it is further resolved that this Association pledges its hearty co-operation and assistance to the officers and directors of the Toronto Industrial Exhibition Association in regard to these matters.

No doubt every effort is being made by the Industrial Exhibition Association and its friends to have the 1901 Fair of magnificent proportions, and held under the most favorable auspices, and they certainly have reason to expect the most hearty co-operation and support of the Canadian Manufacturers' Association, as solemnly and without solicitation pledged at the annual meeting in February.

The Association circular raises the question as to whether the Toronto Fair people will really be in any better condition than they are now to offer inducements to exhibitors in the way of new buildings, improvements and repairs of old ones, and the introduction of sanitary conveniences so absolutely essential to health and comfort. Without these the Fair will prove a failure, and if the money to make them is not forthcoming from the Dominion Government, the Toronto City Council and other bodies, or some similar source, the improvements cannot be made.

It is now in order for the Industrial Exhibition Association to say what is being, or to be done, looking to retaining the attendance of the manufacturers of agricultural implements who threaten to withdraw because of insufficient accommodation.

THE AMERICAN IRON AND STEEL INDUSTRY.

We are in receipt of the Annual Statistical Report of the American Iron and Steel Association, just issued by the Association, of which Mr. J. M. Swank is general manager. This report forms, we are informed, perhaps the most complete statement ever issued by the Association, having reference to the statistics of the iron and steel industries of the United States for 1899 and preceding years, including a brief review of their present condition; and statistics of the iron ore, coal and coke, shipbuilding industries of that country, and also statistics of the Canadian and the European iron and steel industries. A descriptive circular having reference to the report says:—

"Full details are given of the production of the various forms of iron and steel in the United States in 1899 and immediately preceding years, the shipments of iron ore from the Lake Superior and other mines, the imports of Cuban and other iron ore, the production of coal and coke, the imports and exports of iron and steel, the production and imports of manganese ore, the prices of iron ore and coke and of iron and steel, the tonnage of iron and steel vessels built in 1899, immigration in 1899, etc., etc. The separation of basic pig iron from other pig iron and the separation of acid from basic open-hearth steel, which was commenced a few years ago, is continued in the present report. Full statistics are given of Bessemer, open-hearth, crucible and miscellaneous steel castings. Statistics of the production of tinplates from the beginning of the industry in this country and of the imports of tinplates for a long series of years are also given."

In addition to giving full statistics of the American iron and steel industries the report gives details of the production of iron and steel, iron, ore and coal in all foreign countries in 1899 and immediately preceding years. Canadian statistics for 1899 are full and complete. A valuable feature of this report is the presentation of a large number of tables which give the production of pig iron, Bessemer and open-hearth steel, steel rails, etc., in the United States and in other countries for many years. For reference purposes this report will be invaluable to all iron and steel manufacturers.

The report contains seventy-seven pages, and is well printed on good paper. It will be sent by mail in a strong flat envelope to all who may order it, thus insuring its receipt in perfect condition. Price, \$3, or twelve shillings six pence, per copy. Checks and money orders should be made payable to James M. Swank, 261 South Fourth street, Philadelphia, Pa.

That portion of this report which has reference to the

Canadian industry was published in the June 1 issue of THE CANADIAN MANUFACTURER

THE CANADIAN PULP INDUSTRY.

"Pulp Wood of Canada" is the title of a most entertaining and beautifully illustrated booklet written by George Johnson, Esq., F.S.S., (Hon.) Statistician of the Dominion Department of Agriculture, just issued by the Government, printed by direction of the Canadian Commission for the Paris International Exhibition and intended for distribution at that Exhibition.

Whatever Mr. Johnson does in a literary way is well done, as is shown in this little book, in which he tells us of facts regarding the forest wealth of Canada not readily obtainable by the average reader, and which shows that in regard of our natural resources for the manufacture of paper no other country is so favored.

In the opening chapter allusion is made to the early history of paper and to the country—Egypt—in which it was first made, reciting the different materials of which it was made, and comparing them with the presence of such materials in Canada; and allusions are made to the paper industry of many other countries. Statistical tables show the growth of the pulp and paper industry in Canada, and it is noticeable that no mention was made of the industry in the census of 1871, only thirty years ago, and giving a list of the pulp and paper mills in this country at this time. The list shows that there are now thirty-five pulp and fiber mills in operation in Canada with a total capacity of about 1,100 tons per day, the largest having a capacity of 250 tons in each 24 hours and the second largest 170 tons, the others ranging from 100 to 10 tons capacity. The amount of capital invested in these is between fifteen and twenty million dollars. "This development," says Mr. Johnson "has taken place not only because it has been demonstrated that Canadian spruce is the very best quality for the purpose, but also because Canada is the possessor of the largest spruce forests in the world, and, in addition to quantity and quality of material, possesses advantages in the wide distribution of water power and in the conditions of the labor market, all of which combined, give her undoubted pre-eminence for the production of paper." Some twenty-five photo engraved pictures of some of the mills, and the waterfalls that supply them with power, illustrate the work.

AS TO SUGAR.

The transfer of sugar production from the plantations of the tropics to the farms of the temperate zone is illustrated by some figures recently published by the United States Treasury Bureau of Statistics. They show that ninety-five per cent. of the sugar crop of the world was, in 1840, supplied by sugar cane, a tropical product, and but five per cent. from beets, a product of the temperate zone; while in 1899 but thirty-four per cent. of the world's sugar supply was from cane and sixty six per cent. from beets. How much of this is due to the disappearance of slave labor which existed in all cane-producing territory at the beginning of the period under review is left to the consideration of economists and sociologists; but it is a fact that the world's cane-sugar crop of 1899 would little more than supply the demands of the United

States alone after deducting the home consumption of the countries in which it was produced. The total cane sugar crop of the world, as estimated by Willett & Gray, of New York, is given as 2,862,000 tons, and with a few exceptions "includes local production for home consumption wherever known," while the figures of the Bureau of Statistics show that the total sugar importations of the United States in the calendar year 1899 were 1,964,170 tons; so that, if all the cane sugar product of the world in 1899 were massed together and the local consumption of the countries of its production deducted, the remainder would little more than equal the importations of the United States alone in that year.

It is not to be understood from this, however, that the United States does in fact import all of the world's surplus of this sugar. On the contrary, the consumption of beet sugar in that country is steadily increasing, and was, in the fiscal year 1899 greater than that of any preceding year, with the single exception of 1897, when the imports were abnormal by reason of expected changes in the tariff law. The total imports of beet sugar in the fiscal year 1899 were 723,336,352 pounds out of a grand total of 3,517,950,689 pounds; so that beet sugar, having captured the markets of Europe, is now supplying one-fifth of the imports into the United States.

If it were not that the soil and climate of Canada were quite as well adapted to the growth of the sugar beet, and if it were not that plenty of capital is available with which to establish factories for the manufacture of beet sugar, it would make but little difference to Canada what country produced our sugar, or whether it were the product of cane or beets. We know, however, that the soil and climate and natural conditions of southern Ontario and Michigan are substantially the same, and that many millions of pounds of beet sugar are produced in that state annually, giving employment to millions of dollars capital and to thousands of farmers in the production of the beets, and other thousands of workmen in converting them into sugar and placing it upon the market. For a number of years this journal has shown the advantages that would accrue to Canada by the establishment of the beet sugar industry, but, strange to say, no Conservative Government ever did anything to encourage it except in a most desultory and half-hearted manner, entirely inadequate to accomplish the object; and the most that the present Government has yet done (or proposes to do) is to place in the non-dutiable list of imports machinery not of a class made in Canada, to be used in the manufacture of beet sugar. The recent efforts put forth by the Toronto Board of Trade to create some enthusiasm in the matter and to induce both the Dominion and the Ontario Governments to offer some substantial inducements towards the establishment of the industry, seem to have miscarried.

An analysis of the sugar question as applied to Canada is interesting. During the fiscal year ending June 30, 1899, our imports of unrefined sugar not above No. 16 Dutch standard, amounted to 233,013,977 pounds valued at \$4,963,808, upon which duty was collected amounting to \$1,554,991. Of this the quantity imported under the preferential tariff was 26,623,401 pounds, valued at \$514,720, upon which \$116,525 duty was paid, the countries of origin being Great Britain, Australasia, British Guiana and British West Indies.

The balance of our imports and sources of origin were as follows:—

	Pounds.
Belgium	67,513,242
China.....	8,862
Danish West Indies.....	100,893
Dutch East Indies.....	6,776,751
Dutch West Indies.....	1,702,930
Germany.....	117,602,660
Peru.....	3,766,405
Philippines.....	5,150,540
Spanish West Indies.....	1,010,092
United States.....	2,758,181
Total pounds.....	205,390,576

The sugar imported from Belgium and Germany—185,115,902 pounds—was undoubtedly beet sugar, against only 20,274,674 pounds for all other countries, which was, presumably, cane sugar; and the fact that the sugar requirements of Canada were met by such large quantities of beet sugar from countries no better adapted for the production of the article than Canada, indicates the immense amount of capital that should be employed in the industry in this country, but is not, and the large amount of labor that should be performed by Canadian farmers and workmen, but which is now performed by Belgians and Germans.

DEPARTMENT STORES AND TRUSTS.

The attempt of the government of the city of Chicago to check the growth of the so-called department stores, has been defeated by the Supreme Court of the State, which has declared void the city ordinances bearing upon the subject. The effort to handicap enterprise by the imposition of restraining laws is exciting much interest wherever agitators endeavor to bring about the infliction of such laws. The Textile Record discusses the matter in this way:—

In the United States no legislation is possible which shall forbid a man who has ten things to sell, to enlarge his operations so that he shall sell twenty things. Nor would such legislation be desirable if it were possible. It is to the interest of the nation, as a whole, that the freest possible scope should be given to the energy and ability of individuals within the boundaries of good morals. No doubt there is hardship for some small dealers of narrow talents by the absorption of so large a portion of the retail trade of a great city by the merchants who conduct business upon a vast scale. So also was there hardship for the multitudes of men who, all through this century, have had their labor displaced by labor-saving machinery. But that the whole human race has gained by the introduction of labor-saving devices, will not be denied; and it is a further fact that in the long run individual laborers have found steadier and more profitable employment through the enlargement of productive operations caused by the improved machinery. The department store not only contributes to the convenience of millions of purchasers, but it performs the more attractive service of reducing the cost of the distribution of fabrics to the masses of the people. The whole tendency of modern commerce is in this direction. The middleman is being squeezed out everywhere; and the producer and consumer are being brought closer and closer together. The natural result of such a process ought to be, and probably it is, that the producer obtains more while the consumer pays less. Thus, if legislation could indeed impose a check upon this movement, we should have to obtain the consent of both producers and consumers that the middleman should be permitted to live at their expense after his existence in that particular manner has been demonstrated to be unnecessary. Surely such consent could not be secured.

The fate that has befallen the Chicago ordinances against department stores, will also be encountered by state and

national legislation against the combination of producers to maintain prices. There is not power anywhere, that we know of that can restrain two woolen mills, or ten woolen mills, from putting themselves under a single ownership and direction and being operated as one concern. Nor is there power enough to restrain manufacturers from fixing for their wares what prices please them and refusing to sell for less. Such combinations may be assailed by removing the tariff duties from their products, or they may be attacked when they resort to unfair means to injure their rivals; but the union of several ownerships into one ownership must be beyond reach of prohibition unless the right of a man to use and dispose of his own property is to be denied. Admitting as we do, that in some instances the creation by such means of vast monopolies is hurtful to the people, the assertion may be made with confidence, first, that in very few cases can combinations of this kind have anything resembling a monopoly; and, second, that the operation of combinations of manufacturers will be, in the long run, to give the people commodities at lower cost.

FAR OFF FIELDS LOOK GREEN.

It is interesting to notice the efforts being put forth by our American friends to capture trade from the States of the American continent lying to the south of them, as shown in their efforts to boom the Pan-American Exposition to be held next year at Buffalo, and how little effort they make to cultivate the trade of the only other country on the continent—Canada. According to an official publication recently issued by the United States Treasury Department of the entire export trade of that country during the fiscal year ending with June 30, 1899, 11.49 per cent. was with all the countries on the American continent, including Canada, whose proportion was 57.6 per cent. of the whole, all these other countries receiving but 42.4 per cent.

The distribution was as follows:—

Canada.....	7.30 per cent.
Mexico.....	2.08 " "
Argentina.....	.78 " "
Central American States.....	.40 " "
Venezuela.....	.23 " "
Columbia.....	.25 " "
Chil.....	.17 " "
Peru.....	.11 " "
Uruguay.....	.10 " "
Ecuador.....	.07 " "
Total.....	11.49 " "

In other words, of every \$11.49 worth of merchandise the United States exports to all other countries on the North, Central and South American continents, \$7.30 is taken by Canada against \$4.19 by all the other countries.

EDITORIAL NOTES.

The Engineering and Mining Journal of June 9 published the full tables of mineral and metal production of the United States in 1899 as prepared for the "Mineral Industry," Volume VIII. The total value of this output as estimated at the mines or places of production was \$1,211,361,861—an amount unexampled in the history of the United States or of any other country. This total, however, necessarily includes certain duplications, which amounted to \$92,581,031, making the total net value of mineral production \$1,118,780,830. This compares with a corresponding value of \$799,518,033 in 1898, showing an increase in 1899 of

\$319,262,797, or 39.9 per cent. This enormous increase was in part due to an increase in quantities, and in part to the great advance in values of iron, steel, copper, and other metals. The United States last year was the greatest producer of coal, salt, iron, copper, silver and lead in the world, and was also a leader in the production of many of the less important metals. The value of its mineral production now far exceeds that of any other country. Of the total in 1899, crude ores and minerals contributed \$580,836,032; metals reduced from domestic ores, \$496,057,320; secondary products—such as alum, white lead, soda, etc.—\$63,996,969; while the value of metals smelted or refined from foreign material was \$70,171,540. The extent of the production is shown by the figures which include 252,115,337 short tons of coal, 13,400,735 long tons of pig iron, 581,319,091 pounds of copper, 217,085 tons of lead, 129,675 tons of zinc, 57,126,834 ounces of silver, and \$70,096,021 in gold. The most important single item of production was coal, which furnished 25.4 per cent. of the total value. Iron was second, forming 20.9 per cent., copper third, with 8.3 per cent.

An alleviation of some of the hardships which shippers have been experiencing at the hands of the railways is expected in the near future. It is stated that the officials of the roads are at present earnestly reviewing the freight rate difficulty with a view to revising the regulations, and prominent merchants express themselves as satisfied that the question will receive a fair consideration. Who will get the credit of having finally influenced the railways to move seems likely to cause some jealousy. The Manufacturers' Association claim a large share of the honor, and the Board of Trade claims that it did the deed. On the one hand the Board of Trade is accused of having wasted years in indolence, but members of that body say that it is not, nor never has been, the custom of their organization to make a fuss over the results they attain. They allege, too, that the Manufacturers' Association have bungled every move they have made in the freight rate matter. They made an appointment to meet the Minister of Railways and railway delegates and then failed to send a representative, much to the disgust of the Minister.—Toronto Evening Star.

Our new contemporary Farm Machinery, of Saranac, Ont., very plaintively enquires "What do Threshermen in Canada Need," and tells them as follows:—

What do Canadian threshermen need? This is a question asked recently by one of them. We answered that they need organization. They need organization, not for the purpose of antagonizing their farmer patrons, but for the reason that they are wholly to blame for the present unprofitable condition of the threshing business. They need organization for social as well as business reasons, and because with organization comes co operation and profit in the place of blind competition and yearly loss. They need organization to enable them to plan the economies that come of a better understanding of their requirements, and they need organization to show them the value of associated interests as against warring interests.

We would also make a suggestion. All Canadian manufacturers of farm machinery appreciate the importance of exhibiting their goods at the annual fairs, particularly at the Great and only Toronto Industrial. To do this to the best advantage they should without delay perfect their organi-

THE CANADIAN MANUFACTURER

ESTABLISHED IN 1880.

Devoted to the Development of Canadian Trade,
Foreign and Domestic.

THE INTERNATIONAL BUREAU OF COMMERCE

... OF CANADA ...

In connection with The Canadian Manufacturer, works to attain this end.

Any inquiry addressed to THE CANADIAN MANUFACTURER will result in placing the writer, if he so desires, in communication with Manufacturers, Buyers or Sellers of any sort of merchandise in Canada or any other country.

Merchants, Importers, Exporters, Boards of Trade, Chambers of Commerce and Commercial Organizations in any part of the world are invited to make full use of the facilities afforded by THE CANADIAN MANUFACTURER whenever they may desire information about any article produced in Canada, Tariff Law, Customs Regulations, Routes of Transportation, etc.

We especially request Canadian manufacturers to send us lists of the different lines of goods produced by them so that we may address to them special letters of inquiry as soon as information is received by us.

We have information, principally from buyers, that is valuable to manufacturers who desire to increase their trade in the British and foreign markets, that will be furnished on application. If you find any item in this list (which is changed every issue), that you are interested in, write to us. If you see an item that does not interest you but would be of value to some friend, kindly inform him or us.

ARGENTINA.

Clothing.
Hosiery. | Paper and Stationery.
Silverware.

CHINA.

Pianos, Organs,
Repairs—action, etc.
Wood and Metal Mouldings,
Piano Timber,
Wood working Machinery (hand
and foot power.)
Musical Instruments. | Piano Hinges.
Bicycles.
Polishes.
Wire Nails.
Blued Tacks.
Sole Leather.
Printing Papers.

CUBA.

Advertising Signs (in Colors on
Embossed Tin).
Toys and Games.
Plated Jewelry.
Perfumery (2).
Stationery.
Fine Hardware.
Refrigerators.
Machinery.
Electrical Goods.
Hosiery and Underwear.
Bicycles.
Wire Fence Material.
Electrical Medical Apparatus.
Dairy Appliances. | Fine Carriages.
Building Lumber.
Stoves and Ranges.
Ham and Bacon.
Butter and Cheese.
Artificial Butter.
Malt Liquors.
Wrapping Papers.
Twines and Bags.
Groceries.
Confectionery.
Wines and Liquors.
Canned and Bottled Goods.
Flour.

DENMARK.

Shoes.
Sarpots and Rugs.
Hosiery and Underwear.
Upper and Sole Leathers.
Oil Cloths and Linoleums.
Machinists' and Blacksmiths' Tools.
Carriage Hardware.
Vehicle Parts. | Axles and Springs.
Factory Supplies (all kinds).
Horse Shoes.
Bar Steel.
Metal-working Machinery.
Wood-working Machinery.
Shafting.

EGYPT.

Furniture (all kinds). | Gas and Electric Fixture.

GERMANY.

Trunks.
Cheap Memo. Books.
Carpenters' and Machinists' Tools.
Household Hardware.
Cutlery. | Furniture.
Clothing and Hosiery.
Hats and Caps.
Underclothing.
Musical Instruments.

GERMANY—Continued.

Paper (all kinds).
Fishing Tackle.
Flour.
Pork Products.
Wines and Liquors. | Malt Liquors.
Confectionery.
Drugs and Chemicals.
Patent Medicines.

GREAT BRITAIN.

Wash Boards.
Cycle Accessories.
Brass Bird Cages.
Brooms.
Broom, Hammer and Pick Handles.
Household Novelties.
Hardware and Woodware.
Spring Shades, Rollers and Fittings. | Lustral Wire Goods.
Electrical Instruments.
Trunks.
Jewelry.
Toilet Articles.
Electric Light Fixtures.
Rattan Furniture.
Silverware.

INDIA.

Merchant Iron.
Axes.
Locks.
Flour Sieves.
Chemicals.
Sulphuric Acid. | Cigarettes.
Umbrellas.
Blotting Paper.
Printing Paper.
Furniture.
Toys.

MEXICO.

Fine Carriages.
Bicycles.
Window Shades.
Upholstered Hardwood and Rattan
Furniture.
Billiard and Bar Fittings.
Drugs.
Wooden Dishes.
Hosiery and Clothing. | Hats and Caps.
Boots and Shoes.
Musical Instruments.
Writing Paper and Envelopes.
Blank Books.
Folding Boxes.
Kindergarten Supplies.
School Slates (Wood and Wire
Frames).

NORWAY.

White Goods (Shirting, Drills and Sheetings).

PORTO RICO.

Wire Nails.
Flooring Tiles.
Brick Machinery.
Emery Cloth.
Shoes.
Writing Paper and Envelopes.
Barbed Wire and Fence Material.
Flour. | Hams and Bacon.
Pork and Lard.
Butter and Cheese.
Artificial Butter.
Canned and Bottled Goods.
Wines and Spirits.
Malt Liquors.

RUSSIA.

Household Hardware.
Cutlery.
Bicycles and Accessories.
Milling Machinery.
Jewelry.
Toys and Games.
Printing and Wrapping Papers.
Writing Paper and Envelopes. | Bags.
Twine.
Folding Boxes.
Wooden Dishes.
Blank Books.
Stationers' Supplies.
Photographers' Supplies.
Hardware, Tools, Etc.

URUQUAY.

Bicycles.
Bicycle Accessories.
Automobiles.
Cotton Denim.
Builders' Hardware.
Carpenters' and Machinists' Tools.
Bar Iron and Steel.
Power Pumps. | Metal-working Machinery.
Wood-working Machinery.
Milling Machinery.
Shafts, Hangers and Pulleys.
Valves and Pipe Fittings.
Wire Rope.
Dynamoes and Electrical Goods.
Agricultural Machinery.

Preserve this Bulletin for Reference—it will not be Duplicated.

If You want Information, Ask for It.

Address,

THE CANADIAN MANUFACTURER, Toronto, Canada.

zation and apply as such organization for membership in the Toronto Industrial Exhibition Association, which would give them some voice in the election of directors who now manage the Fair not always in the best interest of exhibiting manufacturers.

Major Beattie, M.P., in a speech delivered in the House the other day, said he favored a protection wall against all countries outside the Empire so high that a maxim gun could not shoot over it. While this is somewhat extreme, still a protection wall as high as any erected against us is the kind we should have and maintain, and a majority of the people of Canada would hold up both hands in favor of such a policy.—*Petroleum Advertiser.*

The Department of Trade and Commerce have received a report from Mr. Tripp, Canadian merchantile agent in Trinidad, in which he speaks with grave anxiety of the sugar trade. At the present sugar costs £9 to £10 a ton, and sells at £12, but whether this can be kept up in the face of foreign bounties, is doubtful. Mr. Tripp says the general feeling in the colony is one of deep regret that Canada's offer, which would have secured the future of the trade, has not been accepted; and that all feel that in refusing it and accepting the United States' offer, which may never be ratified, the colony has thrown away the substance for the shadow.

A movement is on foot in Montreal for the organization of a Business Men's League, the objects of which are defined by Henry Miles, vice-president of the Montreal Board of Trade, as follows: To advertise Montreal; to bring people to Montreal; to agitate for the improvement of Montreal, in the respect of clean streets, beautified squares and parks. It is proposed to get up a handsome pamphlet, descriptive and illustrative of Montreal and surroundings. Editions of 50,000 or 100,000 will be arranged for and the earlier circulation will be to the travelling class in the United States. The cost of this will to a certain extent be borne by the advertisers in the publication. The membership fee will be \$5.

OPPORTUNITIES FOR CANADIAN TRADE.

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

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

265. The addresses of Canadian manufacturers of round wood dowels are asked for by a London importer.

266. A London paper agent who has had experience in handling the product of Canadian mills, desires to get into communication with manufacturers in the Dominion who desire to open up an export trade.

267. Enquiry has been received respecting copper deposits in Canada which have not yet been worked to any extent.

268. Information is desired regarding firms engaged on a large scale in quarrying sandstone in Canada.

269. A merchant in the north of England who can place exporters of canned apples, tomatoes, lobsters, etc., in communication with large distributors of such foods, will be glad to hear from Canadian firms doing business in those lines.

270. Quotations are asked for by a Toronto correspondent for "Excelsior" which can be exported extensively from Canada.

271. A Liverpool firm desires the names of Canadian importers of salammioniac for fertilizing purposes.

272. A London fruit broker would like to hear from Canadian shippers of apples who wish to utilize his services.

273. An application has been received for the names of the principal tanners in Canada.

274. A firm in Manchester ask to be furnished with a list of houses engaged in the canning industry in Canada.

275. A commission agent at Charkoff, Russia, desires to correspond with Canadian firms wishing to be represented there.

276. A London buyer of mineral ore such as manganese, copper, zinc, silver, lead, pyrites, cobalt, wolfram, antimony, platinum, asbestos, copper matte, etc., wishes to hear from parties in Canada having any to dispose of. He is also open to purchase first-class mining and industrial properties, while as an exporter he is interested in portland cement, hydraulic lime, tiles, bricks, iron and steel goods.

277. A manufacturer of Glaziers' diamonds wishes to introduce his goods to the Canadian market and asks for assistance in this direction.

278. A firm who buy large quantities of tallow would be glad to hear from Canadian houses who could sell such goods or purchase for them.

279. Enquiry has been received from St. John, N.B., for names of British manufacturers desiring to purchase box boards, cloth boards, and other similar wood goods.

Transfer Ornaments,

AMERICAN MADE.

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TRADE MARKS, DECORATIONS, NAME PLATES, ETC.

For HARDWARE, BICYCLES, VEHICLES, POTTERY, FURNITURE, etc.

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CAPTAINS OF INDUSTRY.

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

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

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

The Jones & Moore Electric Co., Toronto, are supply the electric plant and equipment, and doing the wiring for the new woolen mills of Messrs. Dick, Ridout & Co., at Coburg, Ont.

E. A. Holme's grain elevator at Hargrave, Man., was destroyed by fire June 7, loss about \$2,500.

The Burt Mfg. Co., Akron, Ohio., inform us that the industrial trusts in that country are ordering largely of cross oil filters for their respective works. Among their recent shipments are oil filters for the Carnegie Steel Co., the American Steel Hoop Co., the American Steel Co., the American Sheet Steel Co., and their fourteenth order for the American Iron Plate Co.

The planing mills of Mr. Sparling, Dunnville, Ont., were recently destroyed by fire. Loss about \$1,400.

Messrs. Price Bros. & Co.'s large lumber establishment at St. Etienne du Saguenay, Que., was recently destroyed by fire, together with about 300,000 feet of lumber. Loss about \$400,000.

Ottawa contractors have closed contracts for the supply of 4,500,000 bricks with the Empire Brick Works, St. Jean des Chaillon. It is expected that over 30,000,000 bricks will be used in building operations in Ottawa this summer.

The elevator of the Northern Elevator Co., Oakville, Man., which was recently destroyed by fire, will be rebuilt.

The Union mines in British Columbia recently made a shipment of 200 tons of coke to a Whatcom, Wash., foundry, which was so

satisfactory that the order was repeated. A shipment of 300 tons is now on the way to Japan.

The property owners of Owen Sound, Ont., have voted favorably on a by-law to grant Mr. W. H. Merritt, formerly of Strathroy, and his associates \$15,000 in return for their establishing there a table and furniture factory to employ 150 hands. A by-law to grant \$6,000 to the Parkhill Basket Mfg. Co., Parkhill, Ont., has also been voted on favorably in consideration of their establishing a factory at Owen Sound, Ont.

The Great West Cold Storage & Provision Co. will erect large storage warehouses at Winnipeg, Man., and Vancouver, B.C.

Messrs. A. C. Leslie & Co., iron and metal merchants, Montreal, have sent us a beautiful little manual of useful information intended specially for the metal trade. It gives the weight of bar steel per lineal foot for all ordinary sizes; the weight of flat bar steel per foot; the weight of hoop iron of ten-foot length in pounds, specifying the weight of different gauges; weight of angle steel in pounds per lineal foot; the weights and dimensions of standard channels, also of standard angles with equal and unequal legs; weight of sheet iron in different gauges; usual limits of size for Scotch or English sheets and plates, etc. The physical properties of steel are alluded to in tables showing the tensile strength and ductability of milled steel required by various English authorities, also American makers' standard tests; and tables are given having reference to wrought iron pipe, lap-welded pipe, iron and steel boiler tubes, weight and strength of coil chain, weight of iron wire, weight and strength of wire rope, net and gross weights

of tin plate, etc. This little book has been highly praised by many in the trade, and Messrs. A. C. Leslie & Co. will have pleasure in sending it to manufacturers free of charge.

The West Lorne Electric Light Co., West Lorne, Ont., has been incorporated with a capital stock of \$2,000. The provisional directors are J. A. McKillop, D. McPherson and Thomas Wrong, all of West Lorne.

The Gash Point Lumber Co., Fort Francis, Ont., has been incorporated with a capital stock of \$30,000, to carry on a saw-milling business, etc. The provisional directors are D. Mosher, Wm. Campbell and R. Lockhart, all of Fort Francis.

During the past winter the B. F. Sturtevant Co., of Boston, Mass., has been perfecting its designs and completing its full line of electric propeller ventilating fans for moving air against moderate resistance. These range in ordinary sizes from eighteen inch to sixty inch and are provided with direct connected enclosed electric motors. In order to meet the summer demand for these fans the electrical department of the Sturtevant Co. is being worked to its full capacity and even then cannot keep up with orders.

The Jones & Moore Electric Co., Toronto, are supplying the electric plant and equipment of the large steam grain barge being built at the Bertram ship yards in this city.

Canadian cotton mills are still loaded up with orders. This prevents any shading, and keeps the market well cleaned up. Our mills are doing a very nice business with the Chinese markets. Now that the end of the war is in sight they are looking for business in South Africa. The trade in South Africa will call for special lines of cotton goods, but the Canadian mills have been so successful in meeting the export demand for other quarters that there is no doubt they will be able to ship to South Africa when that rich field is ready for them to exploit.

The card index system of office work has grown to such an extent in Canada that the Canadian Typewriter Exchange, Toronto, have lately installed special machinery for the cutting of cards in all the shapes desired. This work has heretofore been done in the United States.

The Canadian Pacific Railway will erect new offices at Owen Sound, to cost \$5,000.

A new station will be erected at Guelph, Ont., by the Grand Trunk Railway.

Tenders are asked for adding to the building and rescating Knox Church, Guelph, Ont., and of putting in a pipe organ, the whole to cost \$8,000.

INGERSOLL-SERGEANT Rock Drills

FOR MINES, TUNNELS AND QUARRIES

PISTON INLET **Air Compressors** STRAIGHT LINE
 DUPLEX and
 COMPOUND.

FOR ALL DUTIES.

... COMPLETE MINE EQUIPMENT ...

JAMES COOPER MANUF'G CO., Limited, - 299 St. James St., Montreal.

Other Offices - - - ROSSLAND, B.C. RAT PORTAGE, ONT. HALIFAX, N.S.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

H. Bartholomew's saw and hoop mills, Vanessa, Ont., were recently destroyed by fire. Loss about \$5,000.

Mr. James Grant, the well-known woolen manufacturer at Chesley, Ont., informs us that he has taken into co-partnership with him his son, Mr. J. Robert Grant. The address of the new firm will now be James Grant & Son. This means new life to an old and well-established concern that has always been characterized by vigorous and progressive business principles.

The Gananoque Harness Works, Gananoque, Ont., were destroyed by fire recently. Loss about \$5,000.

Messrs. J. C. Wilson & Co.'s pulp mill at St. Jerome Que., was recently destroyed by fire. Loss about \$10,000.

Messrs. Hughes & Long's planing mill, Brandon, Man., was recently destroyed by fire.

The can shop and machinery of A. C. Miller & Co.'s canning factory was destroyed by fire recently. Loss about \$2,500.

The total value of the Canadian catch of fish for the year 1898 amounted to \$19,667,126, a decrease of over \$3,000,000 as compared with the unprecedented yield of 1897, but near the average of the previous eight years. This amount is sub-divided by provinces as follows:—

Provinces.	Value.	Increase.	Decrease.
Nova Scotia	\$7,226,035	.....	\$861,312
New Brunswick	3,849,357	.....	84,778
British Columbia	3,713,101	.....	2,125,761
Quebec	1,761,440	\$21,420	.....
Ontario	1,443,632	143,810	.....
Prince Edward Is.	1,070,006	115,257	.....
Manitoba & N.W.T.	613,335	.....	25,061

The value of the leading fisheries was as follows:—

Kinds of fish.	Value.	Increase.	Decrease.
Lobster	\$3,827,939	\$102,674	.....
Salmon	3,159,306	.....	\$2,520,863
Cod	2,996,683	.....	912,511
Herring	1,867,454	.....	111,623
Mackerel	691,591	97,285	.....
TROUT	693,826	158,954	.....
Haddock	681,557	.....	200,926
Whitefish	622,173	.....	29,256

The Montreal Toilet Supply Co. have installed in their new premises at 290 Guy street, that city, the Dwinell Combustion System, under their boiler plant, which, it is claimed, is a perfect smoke preventer, and which effects a great saving in fuel and labor.

The fine new hotel Brant, which is being built on the site of the old Brant house, at Hamilton Beach, is rapidly nearing completion, and will be ready to receive guests about June 15. The outside work has been finished, and workmen are busy on the interior. The hotel, when finished, will be the

finest and best equipped summer hotel in Canada, and is bound to bring hundreds of tourists to this vicinity. It is four stories high and has 150 guest chambers. Rapid transit from floor to floor is assured by a large electric elevator accommodating thirty persons. One of the most novel features of the new structure will be its roof garden and summer theatre, which will be a great attraction in itself. The hotel will be lighted throughout with electricity from the Cataract Power Company's wires, and it is the intention of the company to run a supply wire into and through Burlington village past the new hotel to supply customers in that village.—Hamilton Spectator.

The manufacture of glucose from corn starch has greater proportions in this country than is generally known. Ten years ago it was estimated that a thousand tons of glucose sugar were manufactured daily. A large part of this was in liquid form, but the whole product entered into use in brewing, confectionery, syrup and jam-making, etc., really taking the place of that quantity of cane sugar. We now learn that the consumption of glucose in England is largely increasing, having risen from 81,000 tons in 1897 to 95,000 tons in 1898. In England glucose is used for the same purposes as in this country, and very largely as an adulterant of cane sugar syrups. With 100,000 tons per annum this year in England and 350,000 to 400,000 tons thus used in the United States, we find a total of about half a million tons of glucose sugar infringing on the old field of cane sugar. With glucose attacking the cane sugar industry on one side by its cheap product for adulteration and substitution, and with saccharine attacking it on the other side as an injurious chemical adulterant of three hundred times the sweetening power of sugar, we may learn the better to appreciate some of the difficulties that cane sugar has in holding its own in the industrial world.—Louisiana Planter.

Mr. Louis Simpson, late manager of the mills of the Montreal Cotton Co., at Valleyfield, Que., was in Toronto a few days ago with a view to obtaining encouragement in the building of a large cotton mill in this city. Mr. Simpson addressed the Toronto Board of Trade on the subject as a result of which the following resolution was passed by the Council of the Board:—Moved by A. E. Kemp, and seconded by A. E. Ames:—That this meeting is of opinion that the city would be warranted in granting a free site and exemption from taxation for a term of ten years, with the right to renew, in order to induce the location here of a cotton mill industry, employing in the neighborhood of one hundred hands. The following were appointed a committee to confer with Mr.

Simpson as to the best means to be adopted to further the establishment of this industry:—A. E. Ames, Chairman; M. McLaughlin, W. E. H. Massey, S. Caldecott, J. W. Flavell.

The Magnolia Metal Co., manufacturers of Magnolia Metal, Magnolia liner and solid journal bearings, Camelia bronze and brass work, etc., whose head office is at 266-267 West Street, New York, inform us that they have opened a branch office at San Francisco, Cal., under the management of Messrs. Chas. E. Moore & Co., engineers, who will have branch houses at Los Angeles, Cal., Seattle, Wash., and Honolulu, H.I. Messrs. Moore & Co. will have the exclusive agency for Magnolia Metal in the states of California, Oregon, Washington, Montana, Nevada, Idaho, Arizona, Utah and New Mexico, and also the Hawaiian Islands. As Messrs. Moore & Co. are well known engineers throughout the territory named, the connection will undoubtedly be a valuable one to the Magnolia Metal Co.

Slate pencils were formerly all cut from solid slate just as it is dug from the earth, but pencils so made were objected to on account of the grit which they contain, and which would scratch the slate. To overcome this difficulty an ingenious process has been devised by which the slate is ground to a very fine powder, all grit and foreign substances removed, and the powder bolted through silk cloth in much the same manner as flour is bolted. The powder is then made into a dough, and this dough is subjected to a very heavy hydraulic pressure, which presses the pencil out the required hape and diameter, but in lengths of about three feet. While yet soft the pencils are cut into the desired lengths and set out to dry in the open air. After they are thoroughly dry the pencils are placed in steam baking kilns, where they receive the proper temper. Pencils made in this manner are not only free from all grit, and of uniform hardness, but are stronger than those cut out of the solid slate. For these reasons they have superseded the old kind. Over 25,000,000 of these pencils were made and sold in 1899 by one American concern in Chattanooga, Tenn.

Messrs. A. C. Leslie & Co., Montreal, have recently been appointed by the Standard Chain Co., of Pittsburgh, Pa., as their agents for Canada, except for the provinces of Ontario and Quebec, where Mr. Alexander Gibb, of Montreal, represents the company. The Standard Chain Co. controls fifteen factories in various parts of the United States, making a most complete range of wire chains for traces, cow ties, etc., in addition to the standard grades of coil chain, crane chain, bridge chain, etc.

JOHN HANCOCK BLDG., BOSTON, November 6, 1899.

N. ENG BRANCH CLING SURFACE MFG. CO.

We have been using Cling-Surface for seven months and are now running our dynamo and other belts slack. We take pleasure in saying that Cling-Surface is giving the best satisfaction. JAMES STACKHOUSE, Supt.

Cling-Surface Does These Four Things :

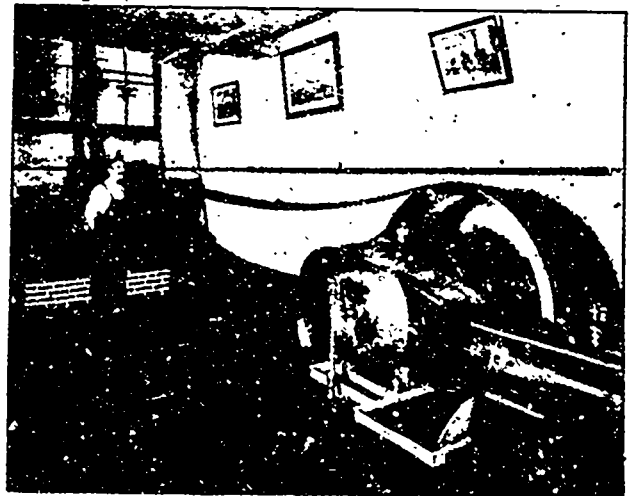
- 1.—STOPS SLIPPING.
- 2.—INCREASES POWER.
- 3.—RELIEVES INITIAL TENSION.
- 4.—PRESERVES THE BELT.

If it fails to do these you Pay Us Nothing.

CLING-SURFACE MFG. CO.

N. Eng. and E. Can. Branch. 120-126 Virginia Street,
170 Summer St., Boston. BUFFALO, N.Y.
New York Branch: Chicago Branch:
253 Broadway. 225 Dearborn St.

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The rapid strides which mechanical draft is making is a substitute for chimney draft are well exemplified by the statement recently made by the B. F. Sturtevant Co., of Boston, Mass., the pioneers in the introduction of the fan in the place of a chimney—to the effect that their sales of apparatus for stationary boiler plants were last year over three times those for the year before and that they now amount to nearly 1,000 h.p. per day, about equally divided upon stationery and marine plants. It is also interesting to note that in a number of the technical schools of the country experimental mechanical draft apparatus has been installed principally for the purpose of instruction and that numerous graduating theses are concerned with the investigation of this subject.

The Minister of Railways has decided to make several important additions to the Intercolonial Railway, including powerful engines and passenger and freight cars of the very latest design. He also intends to relay portions of the line with 80-pound rails, and 20,000 tons of steel rails will be ordered for the purpose.

Mexico will soon have an inter-oceanic railway of her own which in some respects will be a rival and competitor with more northern lines. It is called the Tehuantepec Railway, and crosses the narrowest part of Mexico just north of Yucatan, where the distance between the two seas is only about a hundred miles. This road was projected and the surveys made as long ago as the year 1851, but internal turbulence and the instability of government delayed its construction until recently. There is a good harbor at either terminus of the line, that on the Gulf of Mexico being seven hundred miles from New Orleans. It is expected that the road will be open for traffic in less than three years, when it will offer an alternative route from Pacific points to American and European ports on the Atlantic. The reduction of the length of the land haul by this line will, as compared

with the North American transcontinental lines, be enormous while as compared with the Panama route the sea distance between the western and eastern ports of the United States and Canada is reduced by thirteen hundred miles.—Montreal Witness.

We wonder if the following which we noticed in the Monetary Times is to be placed with that class of news termed "too good to be true." We would like very much for the sake of Antigonish and to satisfy a longing curiosity to see the coal. We would be quite content to have a view of the smaller seam. Three seams and of so great a thickness are not to be met with, even in this land of minerals, every day:—Mining Engineer Pushie who is interested in the Nova Scotia Coal, Iron, Copper & Railway Co., which holds a large number of areas at Antigonish, says the company is building two blast furnaces and a copper smelter and will also build thirty miles of railway. He claims they have seven, eight and nine feet seams of coal, and seven seams of iron ranging in width from three feet to twenty-two feet.—Halifax Mining Record.

The statement by Mr. H. M. Whitney at the annual meeting of the Dominion Coal Company shows the continuous development of the Nova Scotia coal fields. The sales of the company have increased during the past year to the extent of 400,000 tons. Notwithstanding this gratifying increase in the output, the net results were somewhat unfavorably affected by an accident in one of the more important mines, which increased the cost of production, and, by delaying steamers, added to the cost of freights. The requirements for the year beginning May 1, 1901, will be not less than three million tons, all of which is under contract or can be sold at very satisfactory prices. To supply these increased requirements three new mines are being opened. The financial statement for the year shows net proceeds of \$746,926, leaving, after renewals, interest, dividends on preferred stock, etc., a balance of \$190,139.

ZANZIBAR ANTI-RUST PAINT.

The Garfield Oil Co., Cleveland, Ohio, have sent us a circular having reference to the black "Zanzibar" anti-rust paint made by them. They speak of it as being the very best paint to be used on water, gas and oil tanks, coal cars, freight cars, oil tank cars, water and gas mains, sewer pipes, purifier covers of receivers, evaporators, clarifiers, carboys, electric light and power poles and underground conduits, roofs of every description, gutters, copings, paper mills, bleaching mills, pulp works, gas works, smelting works, tanks, sugar refineries, iron buildings, structural iron works of every kind, girders, iron and wood bridges, ship bottoms, railway stations, piers, fences, siding, stacks, fence posts, trestle work, window caps, etc.

Speaking of its properties the makers say: It is elastic—One important quality essential to a good roof paint. By a special chemical process the ingredients are so combined as to produce the highest possible elasticity, making the paint absolutely free from cracking and preventing any separation of the ingredients. It will not scale, peel off, chalk or crack. It is spark proof—especially desirable, therefore, for use on gram elevators, mills, factories and business blocks of all kinds, smoke stacks, etc. Practically an absolute security from fire. It is water proof.—It fills the cracks, pores and seams, and renders any surface to which it is applied absolutely impervious to water and the ravages of the weather. It enters the fibres of the wood and prevents destruction by worms and borers. Particularly serviceable for ship bottoms, decks, hulls, trestle-work, bridges and underground conduits. It is rust proof.—Black Zanzibar Roof Paint not only prevents rust, but it kills and arrests decay. It lengthens the life of any roof or other surface on which it is used, whether iron, tin, canvas, wood or felt.

For further particulars enquire of the Garfield Oil Co., Cleveland, Ohio.

W. A. FLEMING & CO.

MILL SUPPLIES

CAMEL BRAND BELTING

HOSE of all kinds

DRIVING ROPE

BELTING of all kinds



771 CRAIG STREET, MONTREAL.

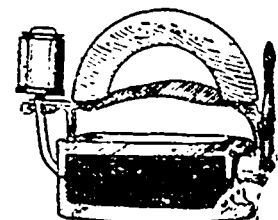
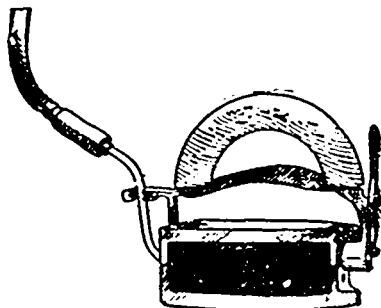
ONE AGENT ONLY IN EACH TOWN WANTED

WRITE US FOR PARTICULARS ABOUT

“PERFECTION”

Self-Heating Sad Iron

Something New. Sells Well.



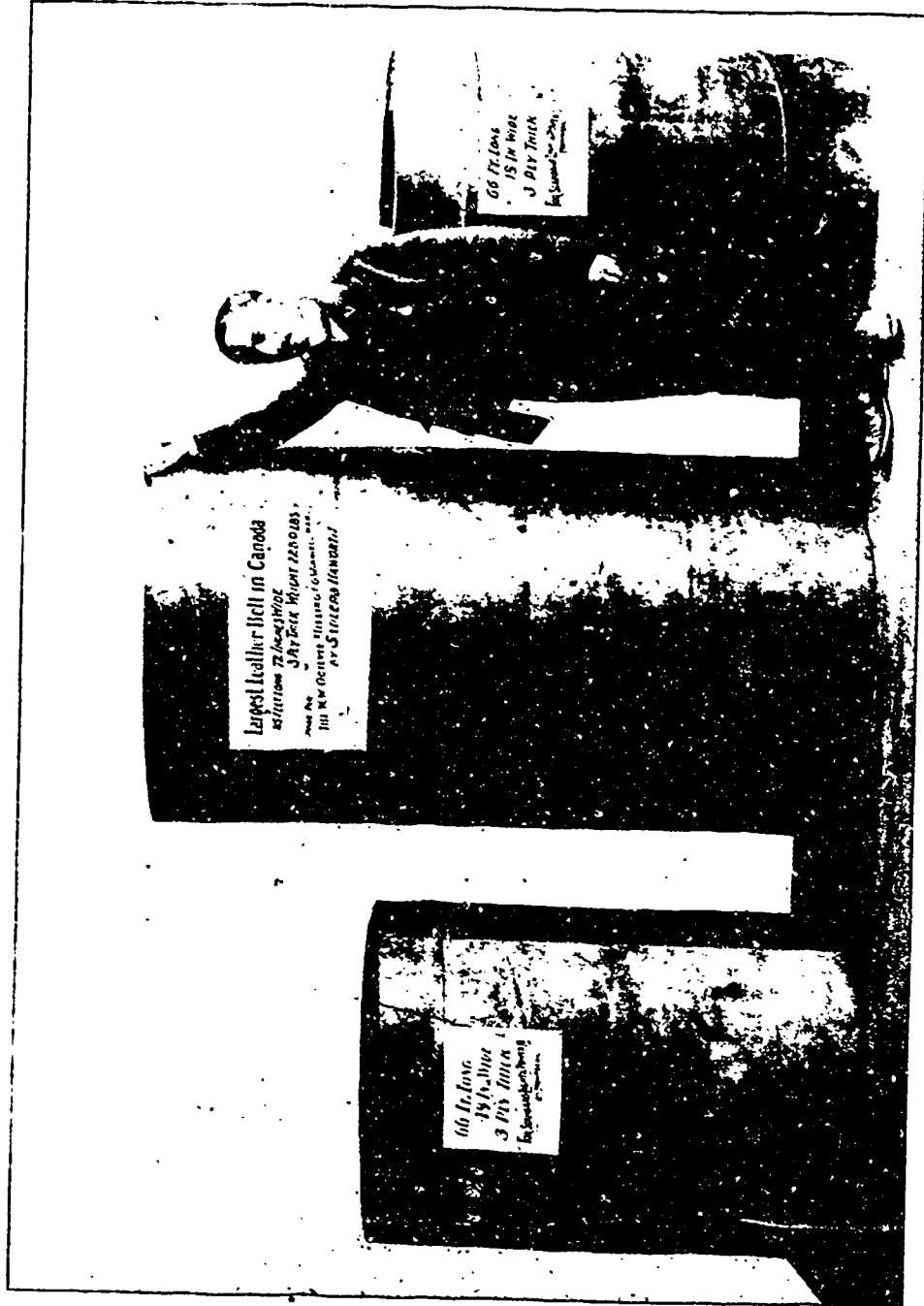
The EDWARDS SAD IRON CO., Confederation Life Building, Toronto, Canada.

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SADLER & HAWORTH,

MANUFACTURERS.

72 INCHES
 WIDE
 3 PLY THICK
 115 FEET LONG
 THE
 LARGEST
 LEATHER
 BELT
 EVER MADE
 IN
 CANADA.



BELTS
 FOR EVERY
 KIND
 OF WORK,
 ANY
 WIDTH,
 LENGTH
 OR
 STRENGTH
 REQUIRED.

MONTREAL and TORONTO.

THE GASPE, QUE., OIL FIELDS.

At a recent meeting of the Canada Petroleum Co., held at Manchester, Eng., the following interesting statements were made regarding the work now going on in their territory under the direction of this Company:

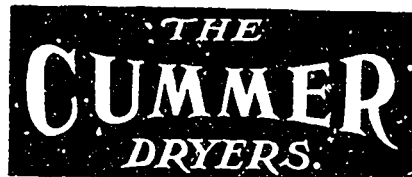
The Chairman having explained the formal character of the meeting, said that Mr. Bagnall would present an interesting report. The directors had thought it wise to obtain an independent opinion from an expert in oil wells, and accordingly Mr. A. B. Walker, of Gaspe, had furnished them with his views with regard to their property. Mr. Walker said that thirty-one wells had been drilled and two more were being drilled. Nearly all the wells visited by him showed such indications that he was of opinion that if the Gaspe oil field was handled in a practical way it would develop into a paying and successful property. He had advised drilling on a number of new wells.

Mr. Walter G. Bagnall, J.P. (managing director of the company), who has recently visited Canada, then gave his report of the properties as follows:—I visited your properties on June 5, and was accompanied by Mr. William Lees, of Manchester, a director of the Bagnall Oil Co. and of the Mercantile Bank of Lancashire. I also cabled one of our representatives to secure an oil expert from the Pennsylvania oil fields. We en-

gaged Mr. A. B. Walker, principal of one of the first companies to successfully operate the Bradford oil field. Mr. Walker has since then drilled and sunk wells in most of the oil fields of the United States, and is connected with oil properties in West Virginia, Ohio, and Indiana. He was Sheriff of McKean county, the county whose principal town is Bradford, Pennsylvania, for three years, vacating that office last year. From many independent quarters I was assured, and I am myself thoroughly convinced, that it would be impossible to secure a more reliable oil expert than the one whom we engaged. We made several surveys of the properties to verify the statements made by the vendors at the time this company was formed. We unanimously agreed that the said statements were more than justified. We found oil continuously on lands extending between twenty four and twenty-five miles. Most of the wells had produced considerable quantities of oil, and hundreds of barrels of oil were lying about. We consider that at least 2,000 barrels had been lost from wells Nos. 11 and 27 before the same were controlled. Well No. 11 is now plugged down; but the oil and gas forces itself through the two foot pine plug. Well No. 27 is now arranged for pumping, and we saw pumped between 300 and 400 barrels. We are decisively of opinion that the property will prove a successful oil-produc-

ing country, and that we shall have ready for export a cargo of refined petroleum products within the next nine months. Being thoroughly satisfied that the oil was of excellent quality, and that it was there in large quantities, we at once arranged that pipe-lines should be laid and the refineries erected. I applied to the municipalities for powers to lay the pipe-lines from our properties through the settled districts to the harbor at Gaspe. The powers were granted free of charge, and the pipe-line will be complete within the next three months. To facilitate quick erection and exploitation I connected the producing districts by telephone with the Gaspe offices, the resident manager's house, and the cable and telegraph offices. We also have contracted for the refineries to be erected at Gaspe, and the same should be delivered there within seven weeks, and the erection completed within three months. We commenced four new wells immediately surrounding well No. 27, and the directors have been recommended to drill four wells around No. 11; also that sites should be selected and the foundations laid for twenty additional wells along the oil-bearing line between wells No. 11 and 27. This is to enable the erection of derricks and the drilling of wells to be continued during the winter months.

We have given the transport of the oil from the wells to the refineries very careful



FOR Mechanically Drying Everything

THE F. D. CUMMER & SON CO.,

HUNDREDS IN OPERATION.

CLEVELAND, OHIO.

John R. Barbor, President.

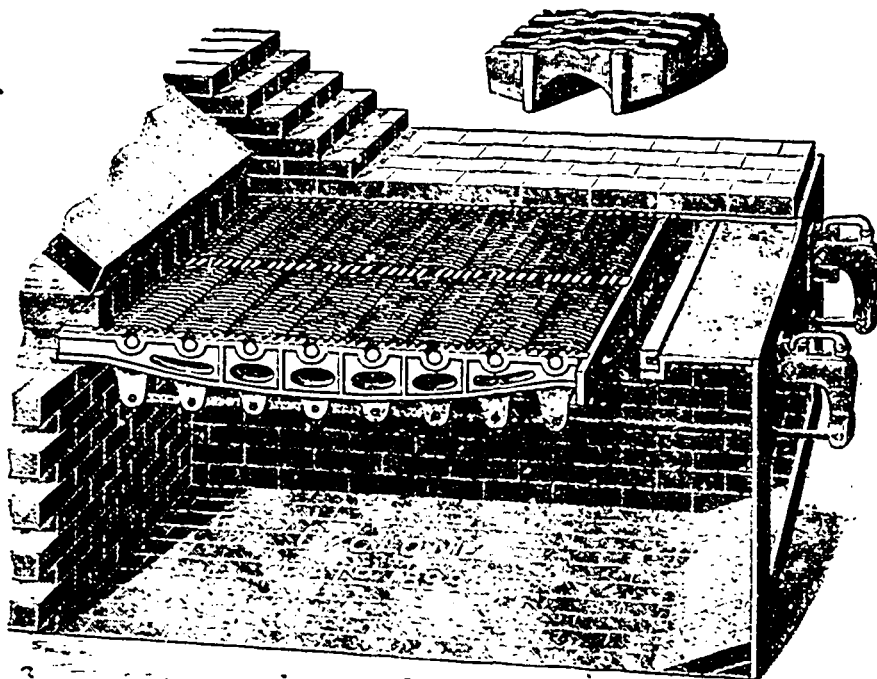
Geo. E. Chatter, Sec.-Treas.

Henry Truesdell, Bus. Man.

THE CYCLONE GRATE BAR

Economy of Fuel and Increased Boiler Efficiency Guaranteed.

~ Cut shows construction of the Grate. No alteration of Plant necessary. ~



Simplicity, Durability, Economy.

Burns the Cheapest Fuel with the Best Results.

A BOY CAN OPERATE IT.

Send for Descriptive Circulars and Testimonials.

COPY OF TESTIMONIALS.

TORONTO, Jan. 12, 1900.

THE CYCLONE GRATE BAR CO., (Limited), Toronto.

DEAR SIRS: We deem it only fair to you to express the appreciation and satisfaction which we have in using your Grate Bar.

As a fuel saver we think it is the only Grate with any merits in this respect, and for operating it is perfect.

Wishing your Company every success

We are, yours truly,

"SEAMAN, KENT & Co.

W. G. BLACKGROVE,

Gen'l Agent for Ontario, Office, 10 KING ST. WEST, TORONTO, CAN.

Manufactured by...

Cyclone Grate Bar Co. Limited,

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consideration, because after an oil field is proved to be a successful oil-producing country, the transporting and manipulating of the oil is a most important factor in making a field a financial success. We shall be able to bring our oil from the wells through the pipe-lines to the refineries and tankages, and ship the same from the port at Gaspe, at a cost, including the refining of the product, of less than three-eighths of one penny per gallon. We have been most successful in placing our contracts on very favorable terms, and despite the fact that the iron, steel and pipe markets have advanced during the past three months over one hundred per cent., the total cost will not exceed fifty per cent. of the amount we had originally decided must be spent upon these erections. We were so convinced that this oil field has a successful future that we approached the Canadian Government to secure assistance to bring the property in direct communication with the Canadian railway system, and I interviewed Sir Wilfred Laurier and the responsible Ministers of the Dominion Government with the object of securing their help. I am pleased

to say the Government substantially supported our request, and they have voted this session subsidies for the construction of the railway from Gaspe to Paspébiac. This railway will pass through the oil properties and will give an outlet for our products to all parts of Canada and the United States. The Government have also decided this session to erect wharves and harbor facilities at Paspébiac, the ocean port of the Atlantic and Lake Superior Railway Co. This railway company possessed the line that connects our oil properties and the proposed new railway with the Intercolonial and Grand Trunk Railways, and the control of it would be beneficial for the successful development of the oil fields. It is being reorganized under the control of an English majority of a new board of directors, and I am glad to say that this reorganization scheme has already met with such approval in England, since my return, that I am able to announce the survey through the oil property has been made by competent engineers. The contract for the construction has been let; steam excavators and plant are upon the land, and men are being

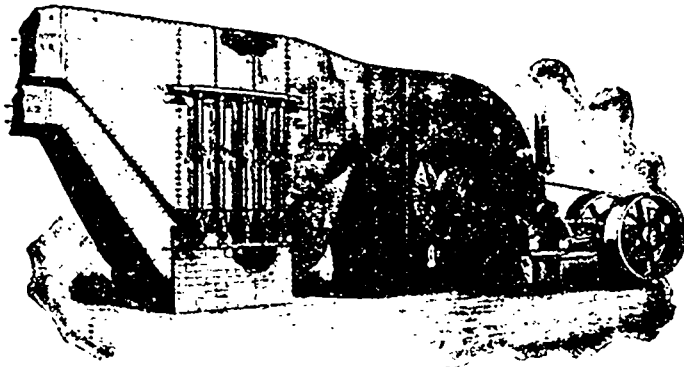
engaged to construct the line. I believe twenty miles of the section from Gaspe can be constructed this year, and the connection with Paspébiac completed within twelve months. I am convinced the future of our company will be a successful one and I hope to return to Canada in October next to personally superintend the first shipment of refined petroleum products from Gaspe. I am glad to know that so many Lancashire men are supporters of this company, because throughout the whole of Canada I noticed the present prosperity of the Dominion had been steadily advanced by the business capability, commercial organization and judicious expenditure of capital possessed by companies directly connected with Manchester and its Ship Canal. I firmly believe the developments of the Canada Petroleum Co. and the construction of the proposed railway through the valuable wood-pulp districts of Gaspesia will further develop profitable enterprises, increase the prosperity of the Dominion, and unite closer the Mother Country with her nearest colonial possession.

The chairman referred with satisfaction to

THE BUFFALO FAN SYSTEM

OF
HEATING and VENTILATION

For PUBLIC and INDUSTRIAL BUILDINGS

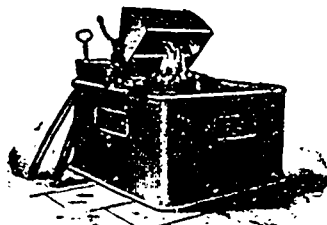


Type of Apparatus for Double Duet Installation.

Buffalo Forge Co.,
BUFFALO, N.Y.

Canadian Representative,

E. A. WALLBERG,
410 Temple Bldg.,
TORONTO



Buffalo Down-Draft Forge.

SEPARATORS FOR EVERY SERVICE

Our new Catalogue shows a very complete line of Separators designed to cover special requirements for large steam storage, extreme high pressure, extra water capacity, etc.

AUSTIN SEPARATORS

Are guaranteed, and are without a rival for eliminating condensation from Live Steam and removing oil grease and other impurities from exhaust.

Hundreds of testimonials in our new catalogue. Write for it.

AUSTIN SEPARATOR CO.
38-40 Woodbridge St.
DETROIT, MICH., U.S.A.

The B. GREENING WIRE CO., Limited



MANUFACTURERS
OF



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

WIRE ROPE

of every description and for
all purposes
HAMILTON, ONT.
and **MONTREAL, QUE.**

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the report presented by Mr. Bagnall, and said that it held out to them the prospect of a reasonable dividend. They would only have to wait a few months before they had some oil up the Ship Canal. At the present time their greatest profit would be in selling oil in Canada. Most of the oil sold there came from the United States oil fields, and there was a duty of five cents in their favor. All they could do now was to wait patiently for the development of the property.

Mr. Bagnall, replying to a question as to why the oil could not be brought immediately to Manchester, said the price in Canada would give them a profit two or three times greater than they would make by exporting to England. They would, however, be able to compete in Manchester when the time arrived, and would be able to deliver oil at a pound a ton less than any other company in the world.

ORGANIZATION OF THE CANADA WOOLEN MILLS, LIMITED.

The shareholders' meeting of the Canada Woolen Mills, Limited, was held at the head office, 110 Wellington street west, Toronto, on June 6. The following gentlemen were elected to the Board: Messrs. John Shuh, late President of the Waterloo Woolen Mills; Geo. F. Benson, Montreal; A. W. Brodie, Hespeler; Timothy Eaton, Toronto; W. D. Long, Hamilton; Geo. Randall, Waterloo; Reuben Millichamp, Toronto.

Mr. Shuh, late President of the Waterloo Woolen Mills Co., was elected President, pending the return to Toronto of Mr. W. R. Brock, who is now out of the country. It is understood that Mr. Shuh, owing to ill health, will retire in Mr. Brock's favor.

Mr. W. D. Long, of Hamilton, of Messrs. Long & Bisby, was elected Vice President. The Executive Committee consists of Messrs. Brodie, Mcrloy and Millichamp. They will have entire charge of the operations of the Company.

The mills owned by this Company are the Brodie Mill at Hespeler, Ont.; the Waterloo Woolen Mills at Waterloo, Ont.; the Maple Leaf Woolen Mills at Markham, Ont.; the Lambton Woolen Mills at Lambton, Ont.; the Hawthorne Woolen Mills at Carleton Place, Ont.; and the Gillies Mill at Carleton Place, Ont. Both of the latter properties will be run by one system from the water power owned by the Company.

Messrs. Millichamp, Coyle & Co., Toronto, are the selling agents.

POWDER'S NEW RIVAL.

Liquid oxygen it is called, and it is claimed for it that it will do its work more quickly, safely and economically than the miners favorite "black jack." This new product is the result of scientific discoveries made by Professors Dewar and Lennox, two famous chemists connected with the Royal Institution of London, a body which carries great weight and authority.

A company has been formed to make practical use of the discovery by manufacturing the explosive. Mr. Wm. Cook, the general manager of the firm, has been in Cape Breton, and we understand arrangements have been made with the Dominion Coal Co. whereby a plant for the manufacture of the explosive will be erected in the centre of their coal field if the tests shortly to be made in Britain realize the expectations of the promoters. It is probable that a practical miner of strong commonsense and intelligence will go over to England to

witness the tests and to become conversant with some of the details of manufacture. If everything goes well he will return and superintend operations in Cape Breton. The company seems to have every confidence in the stuff they intend to manufacture as they will not only build the factory or whatever kind of work it may be but run it for a series of years and then when it is an established success sell out, if the Dominion Coal Co. so desire. In view of the probability of its coming into use at the mines of Cape Breton in the near future, it may be well to give a short account of this new competitor to powder. — Oxygen combined with the proper nitrogenous material, makes the most powerful explosive for blasting purposes known to physics. It has the especially valuable property of expanding in all directions, thereby shattering large bodies. This feature is of great importance in coal mining, as it prevents the breaking of coal into small particles. It absolutely eliminates the danger which is at present incurred by the handling of powder or dynamite, as it cannot explode until fired by an electric spark, or, if preferred, by an ordinary fulminating cap, which is applied only the instant before the cartridge is inserted in the hole.

Another important feature for miners, which is controlled by this Company, is an air compressor, which will do equal work with any other compressor of American manufacture, and with one-half the expenditure of h.p.

The Company is preparing to establish a large factory in Canada, in which all their compressors and liquifiers will be manufactured. Their first machines are being built under positive guarantee as to capacity by Messrs. Lennox, Reynolds & Fyfe, Limited, London, England.

THE BEST PIPE THREADING and CUTTING-OFF MACHINES

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

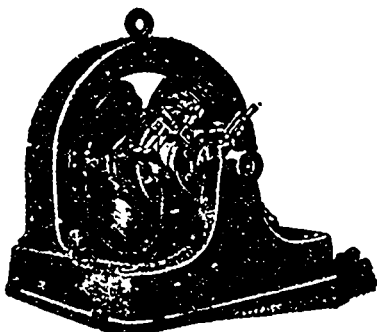
Also Manufacturers of a FULL LINE of **ADJUSTABLE STOCKS and DIES** and Water, Gas and Steam Fitters' Tools.

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COMMUTATORS REFILLED.

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Bar Iron, Steel, Boiler Plate Tubes.

MACHINIST TOOLS, PIPE FITTINGS.

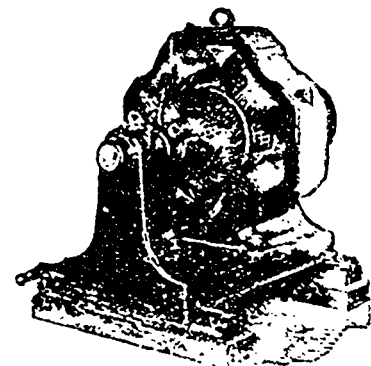
A COMPLETE STOCK OF STOCKS and DIES. PIPE VICES.

STILLSON & TRIMO WRENCHES.

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MULTIPOLAR MOTORS & DYNAMOS

And Direct Connected Plants for Isolated Lighting. Repair Work a Specialty

HEAD OFFICE AND FACTORY:

No. 90 YORK STREET, London, Canada.

760 Main St., Winnipeg.

42 York St., Toronto. 131 Granville St., Halifax

For some months, or until its Canadian works are producing machines, the Company will only be able to take care of two additional contracts, each of which must cover a group of mines, so situated that a central plant can supply each group with the necessary explosives. A most liberal and straightforward contract is issued, in which, at its own expense, the Company agrees to erect a plant, and furnish the explosives ready for use—and at a price ranging from ten to fifteen per cent. less than that which the mining companies are to-day paying. The explosives can be easily graded in force

from the highest per cent. dynamite at present in use down to common black powder, and equal, if not superior, results positively guaranteed, as against the explosives now in use. The Oxygen Co. takes the burden entirely upon itself, and the miners are not put to any expense whatever. — Halifax Mining Review.

NOVA SCOTIA'S MINERALS.

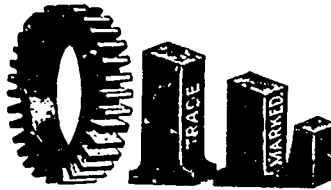
The development of the mineral wealth of Nova Scotia continues at a pace that fully sustains the most roseate estimates of the

investors. The splendid opportunity afforded by contiguous coal and iron deposits is now appreciated by men capable of exploiting it, and the iron will soon afford the best possible market for the coal. The Montreal Herald publishes an interview with Dr. Kendall, M.P.P. for Cape Breton County, in which he describes the work that has been accomplished, and gives a forecast of the future of these industries. In 1892 Mr. H. M. Whitney of Boston became interested in coal properties in Cape Breton, Hon. W. S. Fielding, then Premier of Nova Scotia, being instrumental in promoting the formation of Mr. Whitney's company. The project was bitterly opposed by the Conservative press, but fortunately the predictions of ruin to the coal mining interests have not been fulfilled. The slow expansion which had marked the output of coal since 1880 gave place at once to development on a gigantic scale. Instead of a long winter of idleness the men were employed continuously, and there was a great increase in the

"Capitol" Cylinder

"RENOWN"
ENGINE

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RELIABLE WELL-KNOWN BRANDS.

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THE...

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LIMITED

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TORONTO, CANADA.

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The Diamond Machine & Screw Co.
Manufacturers of TORONTO, Limited.

MACHINE SCREWS and BICYCLE PARTS OF EVERY DESCRIPTION.

HAHN'S LATEST IMPROVED WATCHMAN'S TIME DETECTOR

This Clock is adapted for six or twelve stations, and the keys are all different, ranging from 1 to 6, and 1 to 12, instead of as in the old style Time Detectors, which mark either by holes or an impression on the dial, being the same for all stations.

For Circulars, prices and further information address
A. NANZ & CO., Room No. 45, Graham Building, 127 Duane St. NEW YORK

This Clock received the First Prize at World's Fair.

The Canadian Canoe Co., Limited, P.O. BOX 107, PETERBOROUGH, ONT.
Manufacturers of all kinds of

CANOES AND SKIFFS Canoes for Paddling, Sailing, Rowing and Prospecting
Skiffs for Rowing and Sailing.

A FULL STOCK OF PADDLES, OARS, FITTINGS, ETC,
Write for Catalogue J. Correspondence Solicited.

SAVE THE DROPS

WANT SIX MORE

GENTLEMEN, — We have created the Filter, running through some of the very rank oil that comes from our spindle boring, etc., and find it all right. Please forward six (6) more at once. Very respectfully, The Lodge & Shipley Machine Tool Co. Cincinnati, Ohio.

THE CROSS OIL FILTER

Is in the largest power plants and shops in the world because it stands just such tests as the above. Experiment at our expense. Your Supply Man will send you one on approval. If not satisfactory, we pay the freight.

THE BURT MFG. CO.,
Akron, Ohio, U.S.A.

atalogue 26.

SPECIAL MACHINE

For Packing Soda, Baking Powder, Coffee, Chicory and all Powdered or Granulated Materials,

In Packages of from half ounce to six lbs.
For Flour and Other Cereals,
Six to fourteen lbs.

Ask us about this Machine.

T. H. & A. H. DRYDEN
TORONTO

Dominion Oil Cloth Co.
(LIMITED)
Manufacturers of....

OIL-CLOTHS of Every Description

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

Office and Works
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MONTREAL, Que.

number of hands employed and a general advance in wages.

Last year the wage bill was more than \$400,000 higher than at any time when the old companies were operating the mines. In December last a contract was made to supply 800,000 tons a year to the Everett Gas & Coko Company, a quantity about equal to the entire output of the mines in 1892. Messrs. Mackenzie & Mann, who are developing a coal area in Cape Breton, are of opinion that when their railway is completed and there are barges on the St. Lawrence carrying 2,000 tons it will be profitable to ship coal as far west as Toronto. The presence of iron, coal and limestone has afforded exceptional advantage for the development of the iron industry. About two and a half million dollars have been expended since August last, and within another year several millions more will be used up in development work and the erection of plant. Mr. Arthur J. Moxham, the manager of the iron works, is a man of radical views, and is a member of some advanced Liberal clubs in Britain. As an earnest of his principles he has advanced the scale of wages in the iron works, and the effect has been so marked that the leading collieries have followed his example. The prosperity of the iron and coal districts is thus widely diffused, and the miners are extensive consumers of every line of produce. The growth of this new industrial community will mean a commercial revival in the Provinces by the sea.—The Globe.

CANADIAN TRADE IN MINING MACHINERY.

Notwithstanding the substantial and very marked increase in the output of home manufactures of mining, milling and smelting machinery, the remarkable growth of the mineral industries of the country is very well exemplified in the steadily increasing trade our mines are building up with other countries. During the fiscal year ended June 30, 1899, our mines imported free of duty, machinery of a value of \$209,800, as against \$207,737 imported in 1898, and \$128,780 brought in in 1897. Of the free entries the United States provided \$283,492, Great Britain, \$16,308; and Germany \$1,100. Ontario took \$142,216; Quebec, \$26,621, Nova Scotia, \$24,243; New Brunswick,

\$21,200, Manitoba, \$1,080, British Columbia, \$88,911, North West Territories, \$10,926, and the Yukon, \$5,591. These figures, however, give but an approximate idea of the importance of our mining industry to the trade of the country, for we find in the Trade and Navigation returns numerous entries of machinery and supplies which are not classified in the tariff items relating to mining. Here are a few culled at random from the statistics published by the Customs Department, for the year ended June 30 last.—Diamond drills (not including motive power which is dutiable) \$9,692; stamp

mills, \$33,780, copper plates, \$148,594; chrome steel shoes and dies (from United States), \$16,741; wire rope, \$416,158; explosives (giant powder, nitro, etc.), \$443,829; blasting powder, \$133,729; cyanide, \$15,728. As in former years the bulk of this trade has been done with the United States, but there is no reason whatever, particularly now that the preferential tariff has been materially increased in their favor, that our British manufacturers, with a little more push and enterprise, should not get a larger share of this business.—Canadian Mining Review.

YOUR OPPORTUNITY

Splendid FACTORY BUILDING (stone) for sale at THOROLD, ONT., and special advantages connected with it and the town.

1. **Factory has free Water-power for all time.**
2. **Factory has free Heating.**
3. **Exemption from Taxes will be given.**
4. **Town of Thorold has special Act to bonus. If bonus carried by the people, not necessary to go to Legislature for confirmation.**
5. **Electric Railway connecting Thorold, Merritton, St. Catharines, practically making one city.**
6. **New Electric Railway built from Niagara Falls, passing close to Factory in Thorold, running to Merritton, St. Catharines and Port Dalhousie.**
7. **Grand Trunk Railway and O. P. R. connection, also water communication.**
8. **Factory is now fitted up as a Casket Factory, but machinery would be suitable for a Furniture Factory, and building is adapted for other manufacturing business.**
9. **Few Factories possess such advantages, viz: Free Water-power, Free Heating, and Free from Taxes, practically nothing to pay but wages.**

Stone, 81 x 50, 3 stories and basement. Addition, stone and frame, 3 stories, 52 x 40. Ample grounds for additional room for yards or Additions. Enquire of

ADVERTISER P.O. BOX D, Thorold, Ont.

ANTELOPE

ONE AGENT WANTED IN EVERY TOWN

Are Made in Canada by Canadian Workmen,

BICYCLES

AND WE ARE NOT CONTROLLED BY ANY BICYCLE TRUST

Can Make Prompt Deliveries.

Write for Catalogue and Full Particulars.

Manufactured by JAMES LOCHRIE,

TORONTO

PLEASE MENTION THIS PAPER

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AGRICULTURAL IMPLEMENTS AND MACHINERY FOR SYRIA.

A correspondent of the British Trade Journal in Syria, favors that paper with observations gathered through a long and close intimacy with farmers in nearly every part of Syria which should be of much value to Canadian manufacturers of agricultural implements who would like to sell goods in that country. His remarks are as follows:

Ploughs.—The right plough for this district would meet with an unlimited sale; but those who would gain the Syrian markets must bear in mind the following points: 1. The ox—which is the animal mostly employed for ploughing—is here very small and weak, so that the ordinary English ploughs offer too great a resistance to be available for oxen: this alone has done more to discredit their use than any other cause. I would advise that ploughs destined for this country should be light, with wooden handles and beams, if possible, not requiring more strength to work than that of a Syrian ox, or two oxen, as the case may be. The ox is about as strong—or perhaps not quite—as an English pony. 2. The greater part of the land contains stones of various sizes, weighing from one quarter to two or

three pounds each, in extraordinary abundance, and this not on the surface only, but to the depth of the furrow, generally from five to nine inches, rarely deeper. If English ploughs are to supersede those of native make, they must in some manner avoid the jerking up or throwing out of the shares when coming in contact with stones, which alone is sufficient to confirm the agricultural classes in their indifference to English ploughs. 3. The peasantry are apathetic and suspicious of innovations. They distrust all that they do not understand, and are most careful in their outlay of money. For such it is of no use supplying gaudily coloured placards, or, in view of their illiterate state, long and technical descriptions in languages which they do not understand. They must have machines on the spot, which, when necessary they can see working. In no other way can their distrust and incredulity be successfully combated. The firm who would control the markets of Syria must have samples, at least, on the spot. 4. The peasantry must be fully satisfied that, in case of accident or breakdown, the repairs can be promptly effected. There must be active, capable agents on the spot, with spare pieces in stock, if English ploughs are to compete in the market. 5. Samples

must be kept in stock till the goods are so well known as no longer to require this, and the representatives must be prepared to sell the samples themselves if demanded, or accept orders on the strict understanding that the goods to be supplied to the buyers shall not differ in the slightest detail from the samples. 6. The goods must be cheap; at least as cheap, if not cheaper, than the native article, otherwise the farmers will stick to their old ploughs, in the conservative manner so common to tillers of the soil. I am of opinion that for an English firm to gain a footing in the market, to become known and appreciated, it must be prepared to work at the beginning for the most slender profits. A few months would establish a reputation never afterwards shaken, and the goods once adopted by the farmers would be tenaciously clung to. Such a firm might, later on, command its own prices and fear no rival, but to reach this point, its goods must be known, tried, and preferred and that can only be done by selling very cheaply at first. Until now the only ploughs in general use here are those of native make, single-furrow ploughs, of antediluvian appearance and qualities, but which sell by thousands. Whilst agents are ignorant of native wants, neglect to investigate the

THE BEST IS NONE TOO GOOD

The largest machinery builders in Canada and United States use our Babbitt Metal.

Is this not sufficient proof of its superiority over other anti-friction metals?

If the largest users are satisfied with our Babbitt Metals, why should it not suit you?

We can furnish you with numbers of testimonials.

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NICKEL
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IRON AND STEEL
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Manufacturers of

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COLUMBIA
PHOSPHOR TIN
AND ALL OTHER
WHITE METALS

SYRACUSE SMELTING WORKS,

WILLIAM and ST. THOMAS STREETS,

MONTREAL

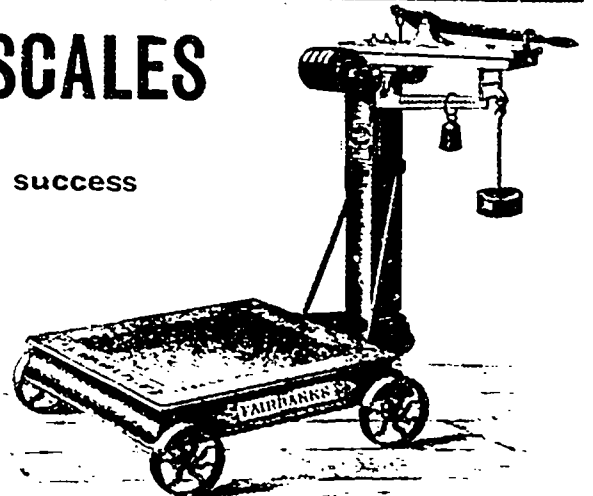
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Good Scales are as essential to your success as accurate Bookkeeping.

Our Montreal Stock is Complete.

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THE FAIRBANKS COMPANY,
MONTREAL.



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causes which operate against the machines they sell, and have no regular and close contact with the farmers and landlords, they will scarcely ever be able to build up a permanent and lucrative trade.

Steam Ploughs and Steam Engines.—These, if well introduced, would meet with constantly increasing sales; but in this respect, also, there are certain considerations to be taken into account: 1. Both plough and engine must be thoroughly reliable and cheap. 2. This country being entirely destitute of coal, the engine must be constructed to work by straw, reeds, brushwood, etc., or by petroleum. 3. They must be able to drag, say, a four-furrow plough much more rapidly than an ox, or a team can drag a single-furrow plough, and not be in the least inconvenienced by stony ground. 4. The consumption of fuel and water must be moderate. 5. The engine must not be so heavy as to cause its wheels to sink into the soft red earth which predominates here, even during and after the heavy rainfalls. 6. The same engine, when not needed for ploughing, must be able to work a threshing machine from the fly-wheel.

Threshing Machines.—Driven by such engines as above described, threshing machines would create a trade for themselves throughout Syria, for the grain is now trampled out by oxen, or beaten by hand flails,—provided always that the quantity of work done would be proportionately much greater than that which the outlay in water, fuel, labor, and installation could obtain if spent in employing oxen and manual labor. For it must always be borne in mind that unskilled manual labor is surprisingly cheap in these parts. I feel very confident of the success of threshing machines here, but would impress upon English firms the necessity of stating, in every instance, the exact working capacity per hour of each machine.

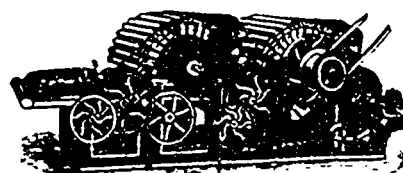
Binders, Mowers, and Reapers.—Of these I cannot speak with any amount of certainty until they have been tested much more generally on the spot. Till now they are rarely employed, notwithstanding the wise measures taken by his excellency Raif Pasha, Governor General of Aleppo, to countenance and facilitate their introduction and use. The stony nature of the ground might, it is suggested, be prejudicial to their working in a satisfactory manner. This, as I have said, can only be demonstrated or disproved by trials on the spot.

Clod Crushers, Horse Rakes, Haymakers, Harrows, and Hoes.—These machines are beginning to find their way here, but not from England. These facts may be turned to very profitable account by those firms who wish to gain for their implements a new and important market.

To facilitate trade, makers would do well to quote prices in piastres, calculating the pound sterling at 110 piastres "gold" or 138 piastres "commercial currency." Goods

intended for Aleppo, Alexandretta, Antioch, Deir Mossul, Diarbekir or Berajik should, whenever possible, be quoted c.i.f. Alexandretta. Those for Beirut and Lebanon, and Damascus, c.i.f. Beirut, and those intended for Mersina and Adana, c.i.f. Mersina. This would greatly aid to encourage purchasers who at present have the idea that the charges for freight, packing, etc., are so heavy as to severely handicap the introduction of English implements.

A. S. PARKER, NEW TORONTO



Dealer in Wollen Waste. Gar. etting a Specialty

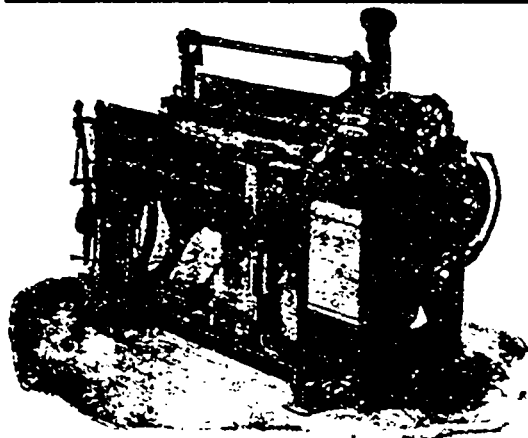
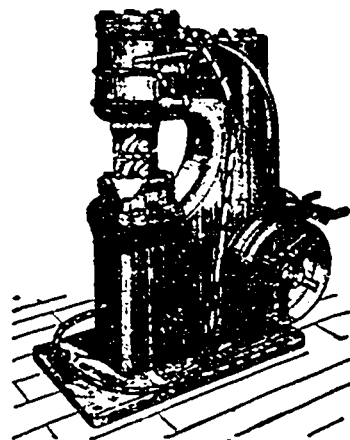
The Yeakley Vacuum Hammer.

Canadian Patent November 9, 1897.

is now Manufactured and for Sale by the undersigned Sole Proprietors of the Canadian Patent:

George Brush

EAGLE FOUNDRY, MONTREAL.



THE NORTHROP LOOM.

There is only one Profitable Plan—**BUY NORTHROP LOOMS**

With them the Future is Assured.

They are no Experiment.

Thousands have been running in the United States, and a large number are now in Canada. Sales steadily on the increase.

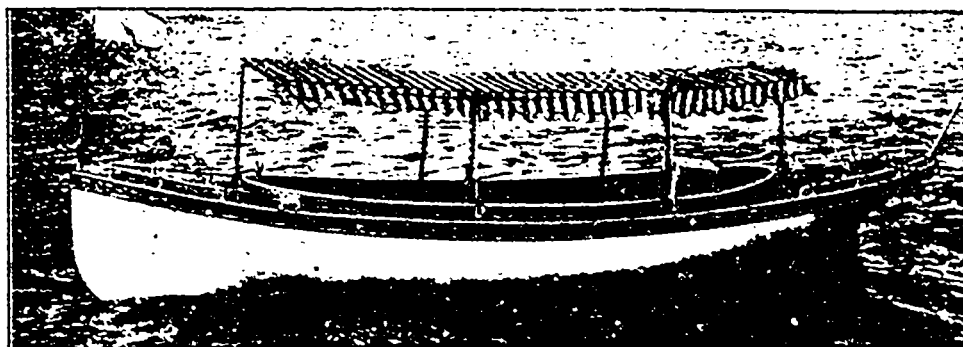
“The Mills that refuse their opportunities will find their future utility serving as picturesque ruins in the landscape.”

We also Manufacture the Best Warper at present Known—also Spoilers.

Write for particulars and quotations. Address—

The NORTHROP LOOM CO. OF CANADA, Ltd.

VALLEYFIELD, P.Q.



Gasoline and Steam Launches

The latest styles. Ask for prices.

Dean's Canoes

are known the world over

SEND FOR CATALOGUE

WALTER DEAN, - Toronto.

CUSTOMS STATISTICS.

Hon. William Paterson, Minister of Customs, has adopted a new method for the compilation of statistical returns to be issued monthly, so as to give a comprehensive idea of the trade of the country, goes into force on July 1. On and after that date the statistical record books and returns of imports and exports, heretofore kept and prepared at the various ports of entry in Canada, are, in respect of import and export entries, to be kept, prepared and aggregated at the statistical branch of the Customs Department in Ottawa from the customs entries and papers connected with the entries. The regulations made by order-in-Council for the carrying out of the scheme provide as follows:—Export entries in duplicate for statistical purposes shall be delivered to the collector of customs at the last port in Canada through which goods for exportation pass outwards for places beyond the limits of Canada when exported by land, and at the port where laden on the exporting ship, if the goods be exported by water—each such port being herein designated as “the port of exit from Canada.” Goods not liable to any export duty, other than such as are exported under customs or excise bonds, shall be reported and entered outwards at the port of exit from Canada in duplicate, in accordance with the form schedule “A,” approved by order-in-Council November 15, 1897. Goods exported under customs or excise bonds and goods liable to export duty shall be reported and entered for export in accordance with the special forms prescribed therefor. All goods laden at an inland port or place in Canada consigned as for exportation shall be accompanied by an export entry, prepared in duplicate and signed by the owner of the goods exported or by his agent, in the presence of a subscribing witness, in the prescribed form, except as to goods under customs or excise bond or subject to export duty. Such entries for export shall

be delivered by the carrier of the goods to the collector of customs at the port of exit from Canada, and shall serve, in respect of such goods, in lieu of the entry for export heretofore required to be made at the nearest customs house. The penalties provided in the customs act and the acts in amendment thereto in respect of goods exported, carried or conveyed, contrary to any regulations made by the Governor-in-Council, shall apply, in respect of all exported goods which have been exported, carried or conveyed without delivery of the export entry thereof, to the collector of customs at the port of exit from Canada. Railway companies, steamship companies, express companies and other carriers engaged in the exportation of goods are required to strictly observe the law in respect to the export entry of goods carried by them for export from Canada, taking particular care that the quantities and values of the goods exported are accurately stated. The collector at the port of exit shall number entries consecutively, and shall keep a register thereof in the form prescribed by the Minister of Customs. He shall forward by mail promptly, addressed to the Commissioner of Customs, Ottawa, for compilation, one copy of each export entry as received from day to day, numbered consecutively as aforesaid, and plainly marked with the stamp of the port of exit.

GREAT BRITAIN'S COAL CHAIN.

A glance at the map is enough to see that England, alone of the nations, has an absolutely unbroken chain of colonies round the globe. Gibraltar and Malta control the greatest of all trade routes, the Mediterranean. With England in Egypt, Port Said is neutral. Perim is, therefore, the first British coaling station of the second class on the road to the East. It is a bare rock at the southern entrance of the Red Sea. Then comes Aden, a peninsula and town on the southwest coast of Arabia and

east of Babel-Mandeb. Singapore is another great coaling station. Hong Kong was ceded to the British in 1841.

Labuan, a self-supporting colony on the northwest coast of Borneo, is another important coaling station. It lies half-way between Australia and China and Australia and Malaysia. While Hong Kong and Singapore depend on England for their coal supplies, Labuan, with North Borneo, possesses inexhaustible stores of its own. Then come Port Kennedy, or Thursday Islands; Brisbane, the capital of Queensland; Lyttleton, the chief port of Canterbury; New Zealand, Wellington and away in the wilderness of the Southern Pacific lie the Fiji islands. Between them and Sydney stretches 1,900 miles, and between them and Vancouver over 5,000 miles. Another naval base is Esquimaux at the extremity of Vancouver Island. St. Lucia is a leading coaling station in the West Indies.

Continuing our route, we come to Trinidad, which island lies about sixteen miles east of Venezuela. Port of Spain is its capital. Then comes the Falkland group. They have been English more than once, French, Spanish, Dutch and Spanish-American. Durban is the port and coaling station of Natal. Besides the ten thousand tons of coal annually which constituted Natal's Jubilee gift to the Empire, any of Her Majesty's warships can, without cost, be coaled either within or without the bay.

The “Seychelles” are a dependency of Mauritius, from which they are distant 934 miles. Mahi is the coaling station in the Seychelles. Planted directly in the Atlantic trade route is St. Helena, an island of volcanic origin, lost in a waste of waters. It presents to the sea perpendicular cliffs from 600 to 2,000 feet high. It is a coaling station of considerable importance. It will thus be seen that nearly every strategical position of importance on all the great trade routes of the world is in the hands of the British.—Philadelphia Record.

FINE CRUSHING and GRINDING MACHINERY

STURTEVANT MILL CO.,

Send for Circular.

104 Clayton St., Boston, Mass.

Shafting—Hangers—Pulleys

FRICION CLUTCH PULLEYS AND COUPLINGS

Rope Transmission of Power.

HANDSOME ILLUSTRATED CATALOGUE ON APPLICATION.

DODGE MANUFACTURING CO. OF TORONTO, Limited, - - TORONTO.

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SLAUGHTER HOUSE BY-PRODUCTS

Considering the rapid growth of the meat packing industry in Canada, we reproduce a portion of a paper on Slaughter House Industries and their By-Products, presented by P. D. Armour, the well-known Chicago packer, before a recent meeting of the National Cattlemen's Convention. He said:

To you, who are familiar with the main facts of both the cattle and packing house interests, it is unnecessary to go into all the details that might prove interesting to novices. You all know that a 1200 pound steer, live weight, will give to the packer from 650 to 700 pounds of dressed beef, and you are also aware that in the earlier history of the packing industry most of the difference was lost. Not only was most of it lost, but the disposal of a good deal of it was a source of actual additional cost to the packer. The by-products now saved are not in every instance carried to the finished article, but raw materials for manufacturers, both at home and abroad, are saved and utilized to an extent little dreamed of in the earlier days of the packing business.

Packers then either were not aware of or they did not appreciate the value of what is generally termed "offal," the chief consideration with them being the disposal of it at the least possible expense. In Chicago blood was allowed to run into the river, but it was more difficult to dispose of the heads, feet, tankage and other waste. This refuse was generally hauled out on the prairie and buried in trenches. This was the custom when some people first appreciated its value, and it was dug up from the trenches and taken to the factories for conversion into glue, oil, tallow and fertilizer.

The time then soon came when, instead of pay to get rid of it, packers found those who were glad to accept it free of cost, and there seemed to exist a mutual understanding that the problem of disposing of it had been solved. Small factories sprung up in the neighborhood of the stock yards, and from the blood and offal were produced fertilizers that met with ready demand from the east.

This resulted in a business so remunerative that there soon appeared active competition for the raw material, and the packers,

taking advantage of this condition, were able to sell it instead of giving it away. No packer up to this time had recognized the advantage of handling this product himself, and it was not until 1877 that one of them decided to engage in the manufacture of fertilizer ingredients.

It was soon seen by some others that the utilization of this product meant the cheapening of the other products that entered into food consumption, enabling them to sell their beef at a closer price, and to develop a large business on a more secure foundation than their less economical neighbors. And to this great principle of utilization of packing-house offal may be attributed the gigantic strides with which the great provision and dressed-beef business of Chicago has been built up during the last twenty years.

Besides the packer and consumer, every cattle grower has participated in the benefit, because every steer has been made more valuable. To begin at the beginning of the methods pursued in the great packing plants of the present day, you will note that after rigid federal and state inspection of the animals they are slaughtered. Then the horns are cut off close to the head, and the pith is removed from the horn and goes to the glue-pot, while the horn itself is dried, sorted into various grades and shipped to the

manufacturer. After being pressed into flat plates these are manufactured into combs, buttons and ornaments of many kinds. The tips of the horns are made into mouthpieces for pipes and the scraps are utilized by florists as a fertilizer.

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Note also the further saving effected by the utilization of the bones. The knuckles are removed from the feet, and the shanks of the animal, after boiling and cleaning, are used in the manufacture of knife handles, tooth brushes, buttons and various articles in which ivory and bone are used, and it is very difficult to distinguish the hard bone from ivory, it being susceptible of a very fine polish. The scraps are used by the manufacturer of bicycles and screws for casehardening steel, and are also used for poultry food.

Besides this, from the blood, by a chemical process, the albumen, which corresponds to the white of an egg, is extracted, and is used for the fixing of colors in calico printing and also in the finishing of leathers. This manufacture of blood albumen is a comparatively new industry in the United States, although in Europe it has been carried on for many years. And now from the blood, after the albumen has been extracted, comes the fertilizer. This is composed of pieces of meat, bones, etc., not available for food, which are boiled under high pressure to extract the grease and glue, the residue being then dried. Thus all portions of the animal that may not be utilized for food or for commercial manufacture find their way back to the farm in the form of fertilizer.

The white hoofs are shipped to Japan and to Europe to be made into buttons and ornaments of many kinds. Glues, gelatine, isinglass, etc., are also produced by the saving effected in the methods of the modern packer, as they are manufactured from that portion of the hide not used for leather, from sinews, cattle heads, cattle feet, calves' feet, etc. The tallow and grease are made into various grades of soap. Glycerine, a part of the fat that will not saponify, going to the bottom of the soap kettle with lye, is now saved, and crude glycerine, dynamite glycerine and chemically pure glycerine are made from this material. The hair is manufactured into felt, the cheaper grades being used for the insulation of refrigerator cars, ice boxes, under carpets, etc. The better grades are used in the manufacture of horse blankets, saddlery, felt boots, hats, etc. The tails of the cattle are used for manufacturing curled hair, combined with horse hair, which is imported largely from Russia and South America.

One of the most valuable products of the steer is oleo oil, which is pressed from the fat, and is largely shipped to Europe, where it enters into the manufacture of margarine. It is, chemically, butter fat, the fat found in butter. It is also used in this country in the manufacture of oleomargarine or butterine. The United States Government taxes the

manufacture of oleomargarine two cents per pound, which is equal to a tax of seventy-five cents to one dollar per head on every steer killed at the large packing centers, and, besides this, many of the States have measures inimical to this industry. Both the Federal and State laws affecting the manufacture and sale of this article are examples of discriminative legislation adverse to the cattle interests of the country.

SHIPBUILDING IN CANADA.

The Cleveland, Ohio, Marine Record thus refers to the investment of American capital in the Canadian shipbuilding industry:—

Letters patent have just been issued by the Ontario Government incorporating the "Cramp Ontario Steel Co., Ltd.," with a capital of \$5,000,000. Two of the Philadelphia Cramps (Charles D. and William M.), late of the William Cramp & Sons Shipbuilding Co., Philadelphia, Pa., are on the directorate. It is understood that arrangements have been completed for the flotation of the company in the United States, and that building operations will commence at Collingwood, where the mills are to be located this summer. The town of Collingwood has granted a bonus of \$115,000 and a free site of fifty acres on the harbor, with water lots, wharf privileges and other terminal facilities.

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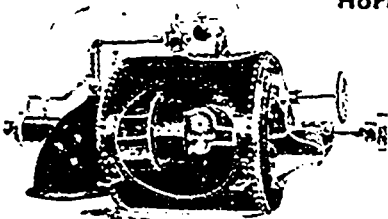
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Notice how complete and compact this arrangement is, and how easily it may be installed. Can you use anything of this kind? Your inquiries will receive prompt attention.

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It is the intention of the company, in conjunction with the Collingwood Shipbuilding Co. and the Collingwood Packing Co., to explore for natural gas around Collingwood, with a view to securing cheap fuel. Prospects of success are good, as one well has been supplying a house in Collingwood with light and fuel for some fifteen years.

The steel company intends erecting a first-class modern steel plant, consisting of one 250-ton per diem blast furnace, casting machines, three open-hearth furnaces of thirty tons capacity each, a blooming mill, and a rolling mill, capable of rolling structural steel, rails and sheets for shipbuilding and boiler purposes.

It is also understood that the company are securing 5,000 acres of coal lands in the coking regions of Pennsylvania and West Virginia, and that they will make their own coke, so as to be independent of the American combines with respect to fuel.

Capt. McDougall, of whalback fame, is at present erecting at Collingwood, along with local capitalists, one of the finest steel shipbuilding plants on the Great Lakes, and this yard will furnish a market for a portion of the output of the steel plant.

The company have the offer of an ore supply for all their requirements for five years from Canadian mine owners.

It is understood that several prominent Canadians will be associated with the Cramps on the Board of Directors, so that the company will be to all intents and purposes a Canadian company.

The Province of Nova Scotia is also fully alive to its shipbuilding advantages in connection with the modern steel plant recently established there, mainly by American capital, and it appears that, at the session of their Legislature, recently prorogued, an Act was passed for the encouragement of shipbuilding and manufacturing. Its provisions are: "On and after the first day of May, 1901, all machinery, stock in progress of manufacture and manufactured, plant and tools in actual use in any establishment in the Province of Nova Scotia, established for the manufacturing of ships of iron or steel, or any combination of metals of like character, or for the manufacturing in iron or steel,

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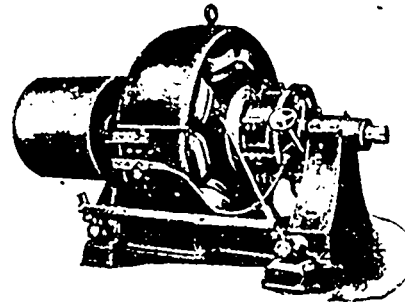
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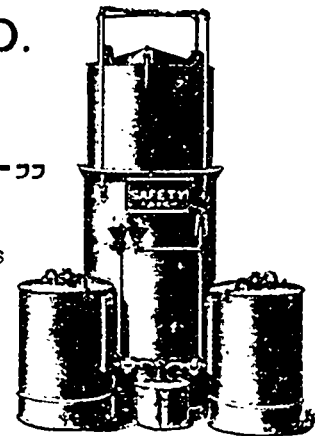
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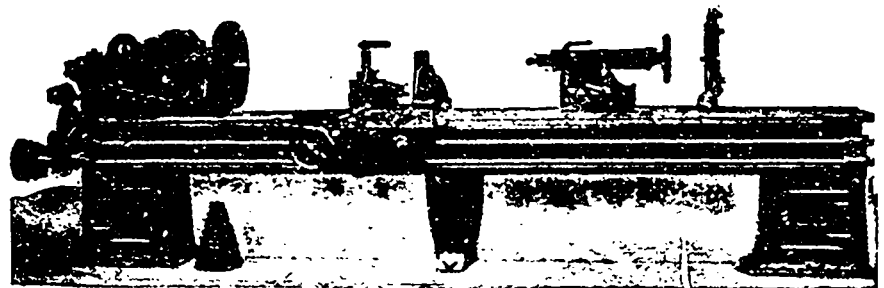
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shall be exempt from taxation for any purpose excepting for school, sewer or water rates, but said manufacturing establishment shall pay in lieu thereof a license fee equal to one per cent. of the assessed valuation of its real estate. All ships or shares in ships of iron or steel or any combination of metals of like character built in the Province of Nova Scotia shall be exempt from taxation for any purpose whatsoever for a period of ten years from the time this Act shall come into force in any town, city or municipality."

THE WASTEFULNESS OF CHIMNEY DRAUGHT.

In a recent editorial discussion of the question of the various methods for the utilization of waste heat, the "Engineer"

considers among other features the wastefulness of the usual method of producing draught by the ascent of heated air in a chimney.

Taking the boiler as the wasteful member in a steam plant, its efficiency varies from 60 per cent. in a bad boiler to 80 per cent. in a very good one, these proportions of the heat produced by the combustion of the coal being realized in steam available for the engine in each case.

The difference may be said, without greatly stretching the truth, to go up the chimney. It is not to be disputed that much of the waste heat might be caught and utilized, but there are reasons why it is not so caught. In the first place the gases must be hot when they go into the chimney, or there will not be a draught.

As a matter of fact a draught got in this

way is the most expensive possible, save one. The exception is a steam jet in the chimney. A fan can be run for about one-tenth of the power represented by the waste heat required to command a good draught. A tall chimney will cost from \$5,000 to \$25,000—very much more than will a fan plant. But the fan is not used and the chimney is, largely because it is essential to discharge the products of combustion high up in the air over the roofs of surrounding houses. This necessity must be taken into account in so far as factories are concerned, but it does not hold good of steamships; yet we believe that in most cases a chimney stack 100 feet high would be sufficient, because with a fan, combustion could be more easily controlled than is possible with a chimney, to the end of preventing the giving off of smoke.

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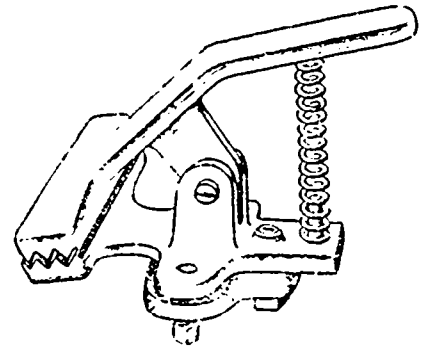
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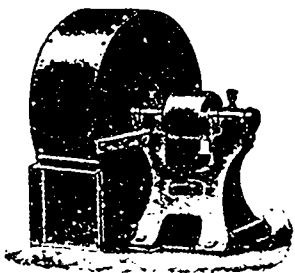
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Mordant produces a black on
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Black for fastness,
but at a much
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SOMETHING COOL FOR A HOT DAY.

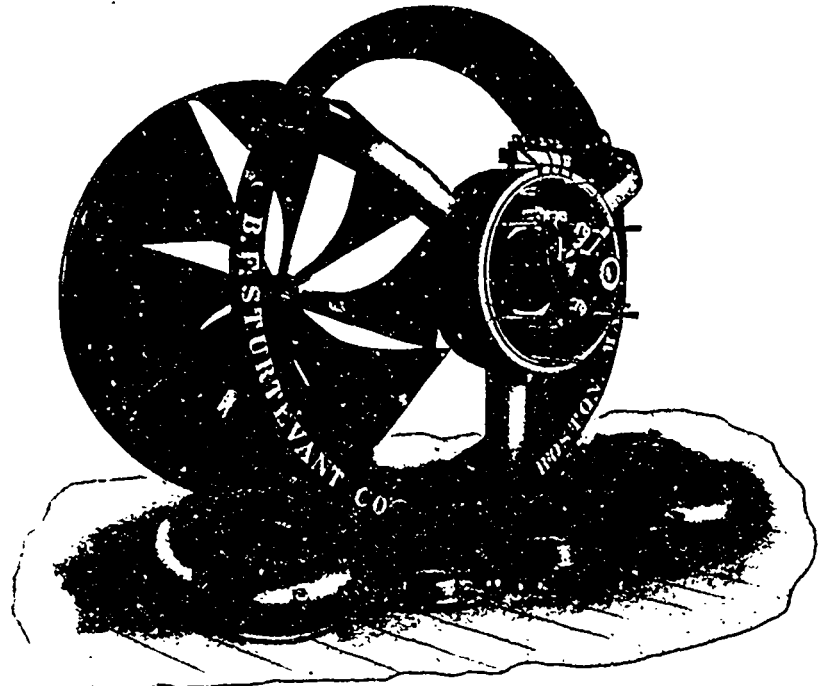
In the hot days of summer we realize most vividly how much we are dependent on the movement of air to secure our comfort. It is not enough, however, to merely agitate the air with a fan, but in most cases we are distinctly dependent upon a change in the atmosphere within the room, which can only be secured by forcing in the air or by withdrawing it by positive means and permitting a fresh supply to enter to make good the loss. For the purpose of securing such results an electric ventilating fan, like that shown in the accompanying illustration is almost invaluable. It may be attached to an opening in the wall and arranged to force into or draw directly from the room, or it may be connected to a system of air ducts through which movement is maintained.

The illustration serves to show a special type of electric ventilating fan built by the B. F. Sturtevant Co. of Boston, Mass., which is especially designed to meet the above conditions.

The fan, as its title indicates, is driven by an electric motor. This motor is of the bi-polar type entirely enclosed so as to protect it from dust. The end plates with removable centres, as shown in the illustration, serve to enclose the motor and still leave its parts readily accessible. One of the difficulties in designing an enclosed motor is to provide for the ready distribution of the heat generated by its operation. This end is secured in this type of motor first by careful designs so that a temperature rise of only 60 deg. F. marks the limit at a run of ten hours, and second, by the cooling effect of the large volumes of air continually

drawn across the surface of the motor casings by the action of the fan. The motor is rigidly held and accurately centered within a tripod support which is attached to a

and can be readily attached where desired and electric connection made. These electric fans are built in sizes ranging from 18 inches to 120 inches in diameter, driven by



cast iron ring. This ring contains the fan wheel which is designed to deflect the air in to line with the parallel shaft.

The entire apparatus is shipped complete

motors ranging from 1-6 h.p. to 14 h.p., according to size, and handling from 2,000 cubic feet per minute in the smallest plant up to 175,000 in the largest.

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WEATHER
FANS**

**DUST PROOF ELECTRIC MOTORS
CARRIED IN STOCK
READY FOR OPERATION**

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New York Philadelphia Chicago London

THE COMING OF ALUMINUM.

The coming age will be the age of aluminum. It is only seventy years since this wonderful metal was discovered by Woehler, and the aluminum industry scarcely forty years old, commands already the attention of the entire world. Such rapid growth has not been recorded in the history of civilization before. Not long ago aluminum was sold at the fanciful price of \$30 to \$40 per pound, to day it can be had in any desired amount for as many cents. What is more, the time is not far off when this price, too, will be considered fanciful, for great improvements are possible in the methods of its manufacture.

The absolutely unavoidable consequence of the advance of the aluminum industry will be the annihilation of the copper industry. They cannot exist and prosper together, and the later is doomed beyond any hope of recovery. Even now it is cheaper to convey an electric current through aluminum wires than through copper wires; aluminum castings cost less, and in many domestic and other uses copper has no chance of successfully competing. A further material reduction of the price of aluminum cannot but be fatal to copper. But the progress of the former will not go on unchecked, for, as it ever happens in such cases, the larger industry will absorb the smaller one; the giant copper interests will control the pigmy aluminum interests, and the slow-pacing copper will reduce the lively gate of aluminum. This will only delay, not avoid, the impending catastrophe.

Aluminum, however, will not stop at downing copper. Before many years have passed it will be engaged in a fierce struggle with iron, and in the latter it will find an adversary not easy to conquer. The issue of the contest will largely depend on whether iron shall be indispensable in electric machinery. This the future alone can decide.

While it is impossible to tell when this industry revolution will be consummated, there can be no doubt that the future belongs to aluminum, and that in times to

come it will be the chief means of increasing human performance. It has, in this respect, capacities greater by far than those of any other metal. I should estimate its civilizing potency at fully one hundred times that of iron. This estimate, though it may astonish, is not at all exaggerated. First of all we must remember that there is thirty times as much aluminum as iron in bulk available for the uses of man. This in itself offers great possibilities. Then, again, the new metal is much more easily workable, which adds to its value. In many of its properties it is parmental, which gives it additional worth. Its electric conductivity, which, for a given weight, is greater than that of any other metal, would be alone sufficient to make it one of the most important factors in future human progress. Its extreme lightness makes it far more easy to transport the objects manufactured. By virtue of this property it will revolutionize naval construction, and in facilitating transport and travel it will add enormously to the useful performance of mankind. But its greatest civilizing potency will be, I believe, in aerial travel, which is sure to be brought about by means of it. Telegraphic instruments will slowly enlighten the barbarian. Electric motors and lamps will do it more quickly, but quicker than anything else the flying

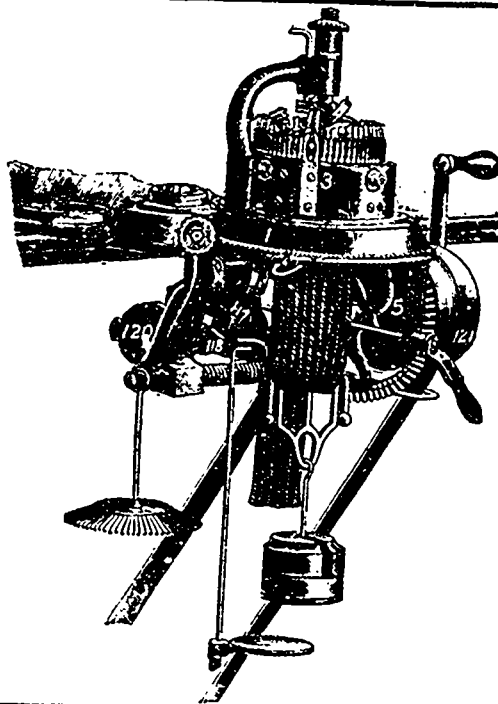
machino will do it. By rendering travel ideally easy, it will be the best means for unifying the heterogeneous elements of humanity. - Nicola Tesla, in Century Magazine.

TO DEVELOP CANADIAN IRON ORE.

Powell & Mitchell, of Marquette, Mich., have the contract for developing a seemingly inexhaustible deposit of iron ore for the Lake Superior Power Co. in the Michipicoton district in Canada, just across Lake Wa Wa, from the scene of the recent gold excitement, says the Sentinel, of L'Ause, Mich. A vessel load of machinery was recently shipped from Marquette to the new field, and Capt. Henry McDermott, of Iron Mountain, has been engaged to superintend the erection of the same and the development work in general.

It is claimed that this is the greatest deposit of hematite and limonite yet discovered. The site of the mine is fully fifty miles from the Canadian Pacific road and is reached by going by steamer from the "Soo" to Michipicoton Bay, where an ore dock has been built, and thence twelve miles by railroad up to the mine.

In getting the road in, a cut of thirty feet deep had to be put in through solid iron ore,



Seamless Hosiery

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WE have been hard at it for nearly 1/3 of a Century.

We have had Success.

Our Customers have had Success.

Why? MERIT and SUPERIORITY in our Machines tells the story CATALOGUE FREE.

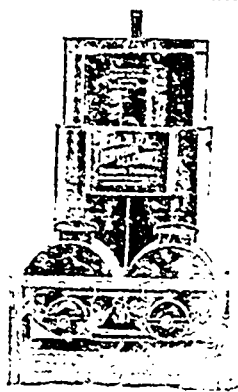
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Manufacturers,

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The Acme of Perfection in Lighting.

At the Minimum of Cost.

Suitable for any place where Artificial Light is required. Dwellings, Stores, Churches, Factories, Hotels, Street Lighting, etc.

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THE **Acetylene Lighting Co.** (LIMITED). LONDON, ONTARIO.

The Packard Electric Co., Limited.

MAKERS OF

Lamps and Transformers

All Electrical Supplies furnished promptly at lowest market prices.

Sole Agents for SCHEEFFER RECORDING WATT METERS ST. CATHARINES, ONT.

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and there is a face above the railroad of fully ninety feet and of still more above the water on Lake Wa Wa, the deposit being entirely free from overburden for a width of 300 feet, with an additional fifty feet from which there will have to be some stripping. The big deposit has been traced 680 feet in the power company's land, and is known to extend much below the level of the lake water, although Powell & Mitchell's contract only calls for the removal of the ore above the water level.

The dock, as it will be used this season, is a temporary affair about 600 feet long, but the permanent structure will be 800 feet long and ninety-six feet wide, while some wonderful changes from the usual forms of ore dock architecture will be forced by the smallness of the bay, which will make it necessary to load from one side of the dock only.

The mine is located in a small basin, with Lake Wa Wa on one side, and hills rising on the other three sides to a height of fully 500 feet. Right adjoining the big find, Pickands, Mather & Co., of Cleveland, have been busy with a drill for the larger part of the past winter examining the property with a view to purchase. Most of the ore will go to Canadian furnaces, although with such a breast of it to be thrown down by the blasts it could be sold at a profit even when paying the duty necessary in order to find a market in the United States. The ledge is solid enough so that there will be very little trouble in drilling, and the ore before going to the docks, as is the custom nowadays with all hard ores, will be run through No. 8 Gates crushers.—Cleveland, Ohio, Marino Record.

The cost of Advertising is probably not so much as you may have thought. Plans and Prices will be cheerfully submitted by the E. DESBARATS ADVERTISING AGENCY, MONTREAL.

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Empres, - - \$35 00	Williams, - - \$30 00

Special Rental Terms on above Typewriters.

The Canadian Typewriter Exchange
45 Adelaide St. East, TORONTO.

THE CROSS OIL FILTER.

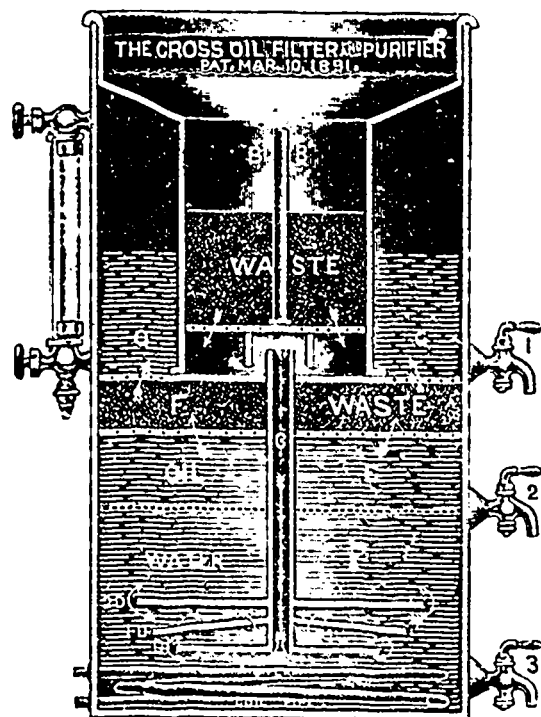
The accompanying illustration is of the Cross Oil Filter, manufactured by the Burt Mfg. Co., Akron, Ohio.

Regarding this absolutely indispensable adjunct to every engine room and machine shop, the makers say.

Every user of lubricating oil appreciates the fact that the larger portion of all the oil he buys is not consumed by the machinery on which it is used, but passes through, and but for the fact that it becomes filled with dirt and grit, could be used again. Because of the dirt and grit in it, however, it is thrown away as waste oil. This waste frequently amounts to from 50 to 75 per cent. of the oil used, thus \$50 to \$75 of every \$100 invested in oil is thrown away. The lubricating properties are not affected in the least, and if the impurities can be eliminated the oil can be used over and over again with perfect safety. With a Cross Oil Filter at hand, oil may be used over and over again. There is no waste and every dollar's worth of oil is used up. When it is remembered that this means a saving of from 50 to 75 per cent. and often more in the expenditure for lubricating oil, it is obvious that the Cross Filter is an investment which pays large dividends. It is, in fact, a necessity to every user of oil who has an eye to economy and cannot feel justified in throwing money away.

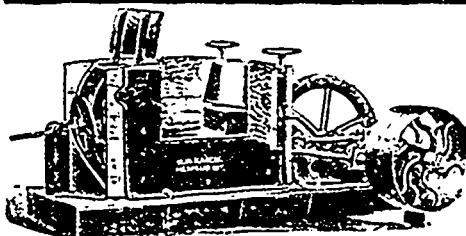
The illustration shows the construction of the filter. It is made of extra heavy galvanized iron, all joints soldered, lapped and

riveted. It is neatly painted and decorated in gold, with polished brass fittings and bosses and nickel-plated rim, making the filter an ornament to any engine room. All inside work is rigidly braced and reinforced. The "Special" filters are fitted with a cover



having nickel-plated handles; also with a gauge to show amount of filtered (pure) oil in reservoir.

For further information write The Burt Mfg. Co., Akron, Ohio.



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H. W. KARCH

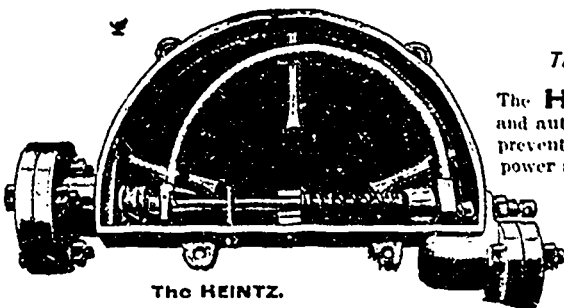
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A line by mail will bring descriptive booklet B., proving interesting to all steam users.

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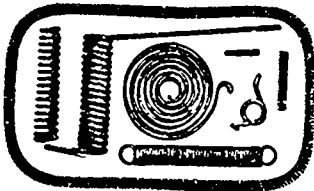
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OUR AUSTRALIAN TRADE.

SYDNEY, N.S.W., May 8, 1900.

The Editor CANADIAN MANUFACTURER, Toronto.

DEAR SIR,—While in Canada somewhat recently I remember that in writing to your paper I laid stress on the transport connection between Canada and Australia as being one which should engage the attention of manufacturers.

It will interest your readers to know that the German line of steamers which have hitherto been running a four-weekly steamer service to this port have recently decided to increase the service to a three-weekly one. Doubtless this increase is on a tangible (Cash Receipts) basis and it is worth the consideration of manufacturers who wish to compete to devise means of transport which shall go near at any rate to place them on an equal footing in that respect.

For Canada to run a direct line of steamers open to carry freight as expeditiously and cheaply as the North German Lloyd Company run from Germany, may be written off as impossible at the present time, but if Canada wants to send goods here it has to be attended to in some way.

Conversationally, I urged, while in Canada, that perhaps the appointment, by the Dominion Department of Commerce, of a commercial man with a good knowledge of shipping in New York (through which port Canadian goods must principally filter), would be of great advantage.

Such a man with official and other expenses would probably cost \$3,000 or \$4,000 a year, and he could accomplish much.

He would be entirely an official and paid sufficiently to be a trustworthy and disinterested man in the discharge of his duties which would consist roughly in—

1. Registering the names of manufacturers who enrol themselves (paying a fee of say \$25 per annum), for the purpose of advising them monthly of sailings from New York. Rates of freight, etc
2. Being generally in a position to give advice and obtain information desired by manufacturers.

Details of some such scheme would be well worth working out I think and in a measure Canada could begin to control her own means of transport.

With the growth of Imperial feeling which is so apparent here and in Canada, there come the commercial opportunities which should not lose their legitimate weight and attention. Yours faithfully,

C. BOWES THISTLETHWAYTE.

The vinegar works of Messrs D. H. Wilson & Co., Toronto, were damaged by fire, to the extent of about \$5,000, on May 19

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 Manufacturers of

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 One Wheat Scourer and Smutter.
 One Half chest of Reels, 18" x 30".
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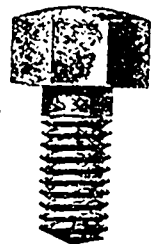
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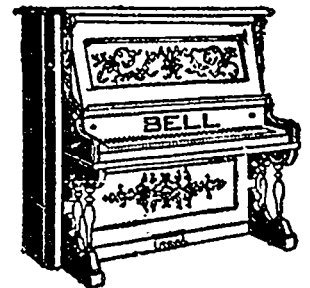
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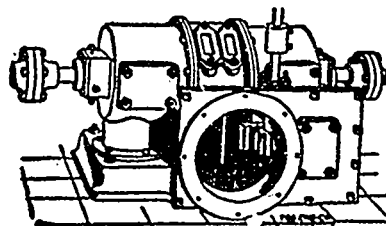
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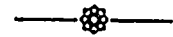
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