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**CANADIAN MANUFACTURER**  
AND INDUSTRIAL WORLD  
DEVOTED TO THE MANUFACTURING INTEREST OF THE DOMINION

Vol. 45.

TORONTO, SEPTEMBER 19, 1902.

No. 6

**ELEVATORS**  
...AND...  
**Conveying Machinery**  
OF EVERY DESCRIPTION  
**WILLIAMS & WILSON**  
320 St. James St.  
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For all TEXTILE PURPOSES  
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ROUGH OR FINISHED  
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High Grade Charcoal Pig Iron for Special  
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Wheels and other Chilled Castings.**SELBY & YOULDEN**

SOLE MANUFACTURERS IN CANADA OF

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**"CARROLL" PROPELLOR WHEELS**MARINE ENGINES and BOILERS, CAPSTANS,  
STEERING GEARS, DOUBLE and SINGLE DRUM HOISTING  
ENGINES.Mill and General Boiler and Engine Repairs  
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Proprietors,  
KINGSTON, ONT.

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**"Specials," Hydrants, Valves, Etc.**Offices: - - - **Canada Life Building,**  
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GALT, ONT., CANADA

Recently received the following Unsolicited Testimonial, which speaks for itself:

THE GOLDIE & McCULLOCH CO., GALT, ONT.

TORONTO, August 6th, 1902.

GENTLEMEN,—In our recent fire which as you know was a total wreck and of which we are sending you a photo by mail, we had two Goldie & McCulloch safes in which we kept all our books. They have come through the fire in remarkable shape, and we feel that our praise for your safes cannot be great enough. This fire was an extremely hot one, the locality in which these safes were being surrounded by hay and grain as well as large quantities of packages, barrels and boxes. We might say that everything was burned to a crisp, heavy iron being twisted and melted into frightful shape. We had almost given up all hope of being able to get the books and documents from the safes in such manner as to make them of any use to us, which we can assure you would have been a very serious matter. We were agreeably surprised, however, on reaching them. While we found the safes somewhat warped and bent on the outside, yet all our books and documents came out in such a manner that we can get everything from them all right. This without a doubt was an extremely hot fire, and the manner in which they came through it leaves no room for question as to the manner in which they are made and the stuff they are made of.

**WE MAKE** Wheelock Engines, Ideal Engines, Gas and Gasoline Engines, Boilers, Water Wheels, Pumps, Flour Mill Machinery, Oat Meal Mill Machinery, Oat Meal Steam Pan Kifus, Wood Working Machinery, Iron Pulleys, Wood Rim Split Pulleys, Shafting, Hangers, Gearing, Friction, Clutch Pulleys, Friction Clutch Couplings, etc., Safes, Vaults and Vault Doors.

Again congratulating you on the safes which you turn out, and trusting that we shall have the pleasure of purchasing from you when we again rebuild, as we know of none better, we are,

Your truly, P. McINTOSH & SON.

Catalogue and any other information on application

## THE IMPERIAL OIL COMPANY, Limited

Highest Awards at the World's Fair, Chicago, upon

### Lubricating, Water White Illuminating Oils, Paraffine Wax, Etc.

We manufacture all grades of oil, greases, soap stocks, candles, wool stocks, leather and tanners' oils, fuel gas, machine y, cylinder oils, &c. And solicit opportunity to compete against any oil on the market. Write for prices and samples.

Refineries at SARNIA and PETROLIA, CANADA. Merchandising Branches at:

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## MACHINE TOOLS

**FOR IMMEDIATE DELIVERY**

### NEW AND SECOND-HAND

IF YOU NEED A LATHE OR DRILL right away or are likely to in the near future, look over this list and write us.

All improvements that improve and labor-saving feature that save labor are embodied in our new machines, but we do not sacrifice the weight, quality of material and superior workmanship, for which the Bertram tools have always been noted, to experimenting with impracticable ideas and freak devices. This special attention to the vital parts is the secret of the durability and capacity for work of our machine tools. It is this which enables us to compete successfully with the best American makers.

The second-hand lathes are all Bertram make. Although, through good care when in use, they have never been in other than good condition, we have had them all overhauled and refitted, and they are amply capable of standing up to all work within their capacity for some years to come, and are equal to many lathes doing satisfactory work in the best shops of the country.

For any of the above machines write for full particulars to

**THE JOHN-BERTRAM & SONS CO.**  
Limited  
DUNDAS, Ont., Canada.

### NEW LATHES and DRILLS

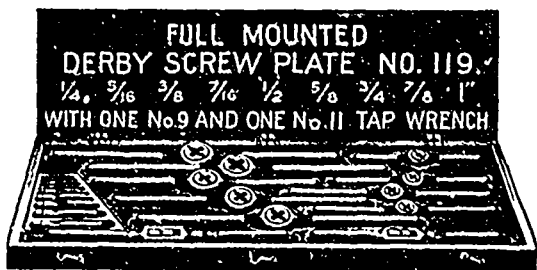
- One 40" Gap Lathe, 12 ft. bed.
- One 20" Turret Engine Lathe.
- One 16" Engine Lathe, 8 ft. bed.
- One 16" " " 6 ft. bed.
- Two 14" " Lathes, 6 ft. bed.
- Two 14" " " 8 ft. bed.
- One 12" " Lathe, 5 ft. bed.
- Four 36" Back Gear Drills.
- One 30" " " "
- Four 25" " " "
- Three 21" " " "
- One 20" " " Power Feed Drill.
- Six 20" Plain Lever Drills.

### SECOND-HAND LATHES

- One 56" x 20' Lathe, Rod Feed only.
- One 28" x 8' " Screw Cutting only.
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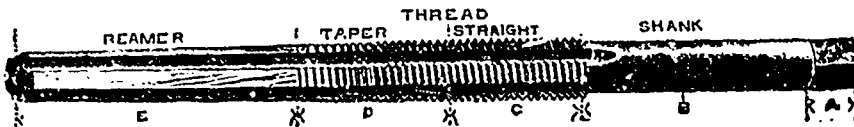
### SECOND-HAND MISCELLANEOUS

- One 24" Stroke Shaper, worm driven, in first-class condition.
- One 1" Double Bolt Cutter, Howard Iron Works, Buffalo make, capable of cutting bolts from 1/4" up to 1/2"



WE MANUFACTURE  
**STAY BOLT TAPS**, all diameters and lengths up to 94 inches.  
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 Regular and Full Mounted Reece and Derby Plates, Bicycle  
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## BRIGHT COMPRESSED STEEL SHAFTING

FROM 1/2 TO 6 INCHES IN DIAMETER. GUARANTEED STRAIGHT AND TRUE TO WITHIN 1/32 OF AN INCH.

Spring, Reeled Machinery, Tire, Toe Caulk, Sleigh Shoe, Angles, Special Sections  
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Tree Rails, 12, 18, 24 and 28 lbs. per yard

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**KNIVES,** For Wood-Working, Paper  
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ABSOLUTELY PURE

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**GENUINE EMERY**

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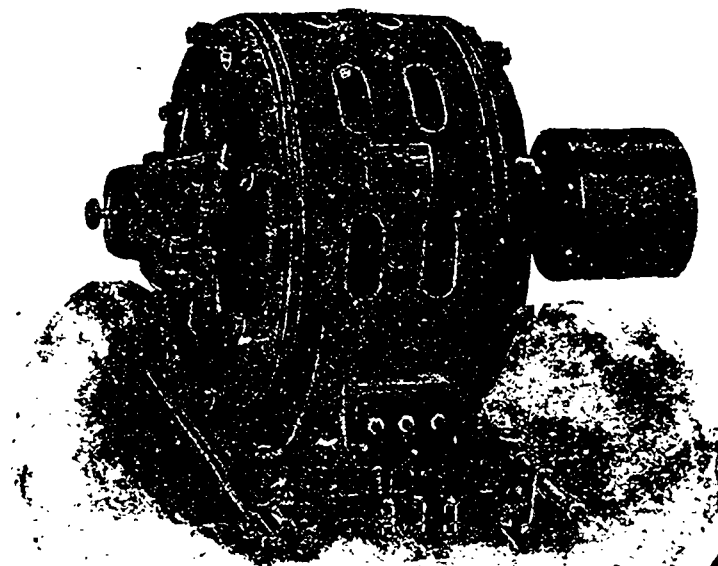
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Yarns of all kinds for Manufacturers' use.

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Dyeing of all Colors, including **GENUINE FAST BLACK.**

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Our Motors are the Standard of the World.

Send for Bulletin 822.

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MAGNET BRAND

MADE AT

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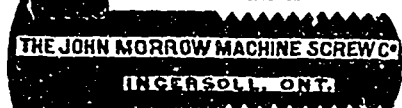
The OWEN SOUND PORTLAND  
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GEO. S. KILBOURN, Sec'y-Treas.  
Correspondence invited.

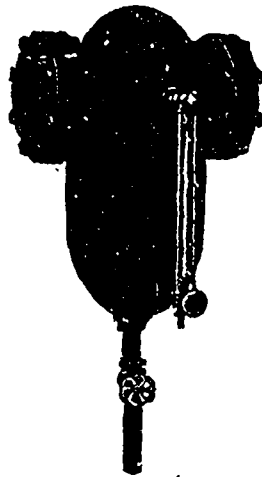
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Head Office, OWEN SOUND, Ont.

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List to



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Screws, Studs, Finished Nuts, etc.



## "Steam Separators that Separate"

THE . . .

## WEBSTER SEPARATORS

are sold on this guarantee; no sale, if they do not leave less than one per cent. of moisture in the issuing steam.

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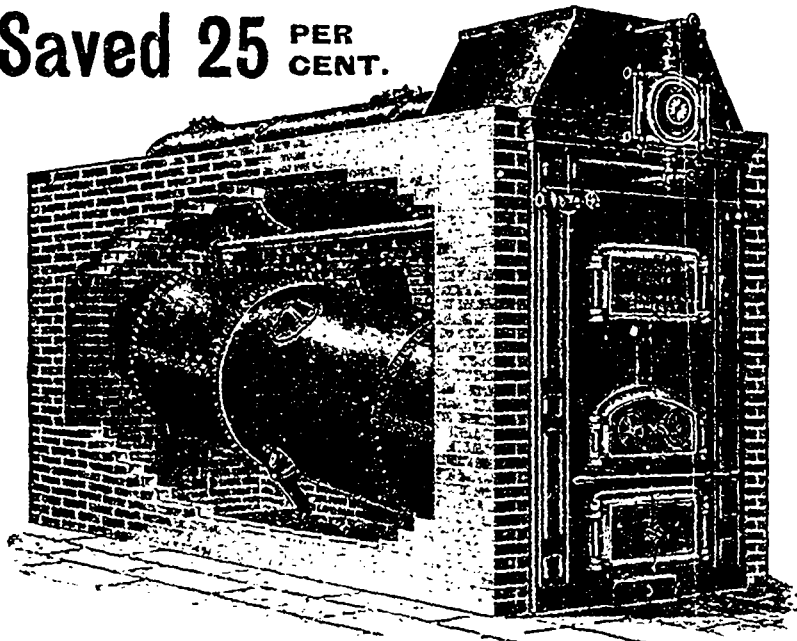
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DELIVERY MADE AT NEW YORK, MONTREAL OR HAMILTON.

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AGENTS,

Saved 25 PER  
CENT.



A CUSTOMER SAYS:— We are well pleased with the Mumford Standard Boiler purchased from you a year ago. It steams very quickly and we find, on comparing our coal bill with the year previous, that we have saved 25 per cent. although we are using considerable more power and have double the area to heat.

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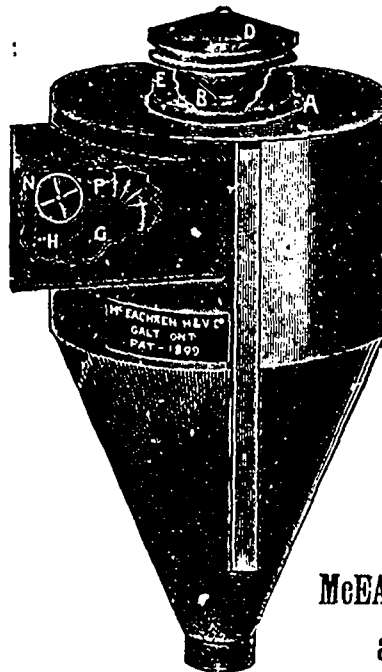
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For WOOD REFUSE



The air carrying the refuse enters the separator at the top and whirls around inside. The shavings being heavier than the air are carried by centrifugal force to the outer shell of the separator and they then take up a spiral path for the outlet at the bottom, the air passing out of the opening at the top.

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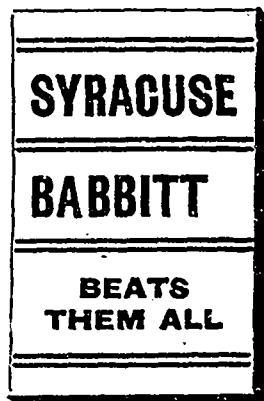
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ALL OTHER WHITE METAL MIXTURES**

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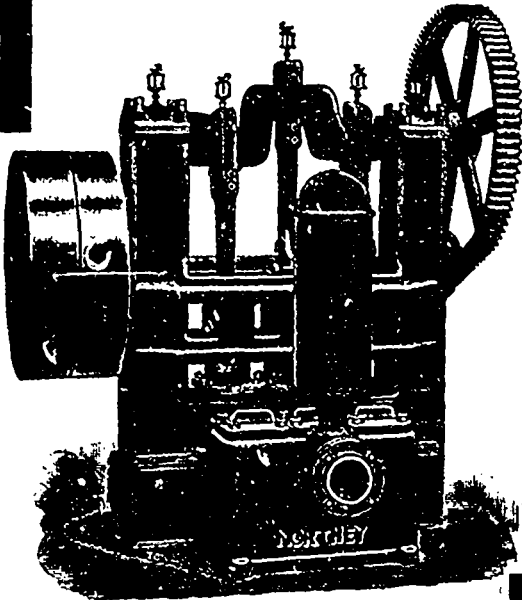
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Is a high class serviceable machine; it offers the best means of applying either steam, water or electrical power for pumping purposes. A special feature is the use of three cranks 120 degrees apart—ensuring a practically constant delivery. This pump, for Boiler Feeding, etc., and especially in connection with an electric motor, gives excellent results.

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Northey Gas and  
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a handy and economical  
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We Stock a Large Variety of SHADES  
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ALUMINUM, MIRROR, CELLULOID, PAPER, PORCELAIN,  
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Imperial Lamps and Helios Upton Enclosed Arcs Give BEST LIGHT with LEAST CURRENT  
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**The Canadian Manufacturer Publishing Co., Limited.**McKinnon Building, Cor. Malinda and Jordan Sts., Toronto.  
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*J. J. CASSIDY,* - - *Editor and Manager***IS THE TARIFF QUESTION A POLITICAL ONE?**

Never, in the history of Canada, of the United States or of any other country of which we have knowledge, was the fiscal system of that country discussed and decided upon other than political grounds. Certainly not in Canada. Some twenty-five or more years ago the manufacturers of Canada, many of them, found themselves in a position where, in the failure of the Government to give tariff protection to their respective industries, they would be forced out of business. There were then two political parties in the country as there are now, but neither of them were inclined to turn a favorable ear to the requests of the manufacturers; and it was not until some of them formed themselves into an organized body with the determination to do what they could to change the old order of things, that their voice was heard. The leaders of one party were afraid to touch the question, and the leaders of the other party dare not do it. The political affiliations of these manufacturers were not all in one direction, some adhering to the Tory party, some to the Grit. But they were agreed that without organized and concerted action no hope could be entertained that their wishes and interests could be regarded; and it was at this time that John A. Macdonald, who was then kicking his heels in the cold shades of the Opposition, observing his opportunity, took up the cause of the manufacturers, and with their assistance, led his party to victory. Had the Tory party of that day declined to make the tariff a party question, and had the Grit party avoided it as it had done before and has done even since, there would have been no National Policy of tariff protection. Was the tariff question at that time a political one? We think so.

We also appreciate the fact that ever since that time the tariff question has been the dividing line between Tories and Grits, in Parliament and out of it. That is to say that so it was until Sir Charles Tupper, while Premier, forgot that the organized element of Canadian manufacturers was the power that placed him where he was, with the result of a most disastrous defeat. He spurned away the ladder by which he had climbed to power, and the power spurned him and his party. His forgetfulness of the fact that the tariff question was a political one proved to be the cause of his downfall.

We are told by some who profess to voice the sentiments of the organization of manufacturers that it is not now a political organization; that it knows no political party, and that it is subject to no political leader; that its members stand above

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the plane of party politics, and cease to view with active interest the squabbles of politicians. In the past, we are told, the tariff was considered as a party question; that party politics has sufficient accompanying evils without throwing open to its temptations a national question upon the solution of which depends the future of the Dominion. But the question still forces itself upon manufacturers. How can they avoid active participation in it? We find one political leader in favor of the tariff and another against it. Shall those whose very existence depends upon a protective tariff, shut their eyes to the fact that those who seek to destroy it are organizing their forces and preaching their anti-protection doctrine, with the intent to an approach toward free trade as near as possible, and yet remain passive, with folded arms, and with utter indifference to their own best interests declare that the tariff is not a political one? Can their indifference effect the withdrawal of the tariff from politics? If this is the spirit that actuates manufacturers they are living in a fool's paradise.

The "Voice" tells us that this is no time for partyism; that in these days when foreign competitors are capturing our markets, (because of insufficient tariff protection of course,) we should not place a party label upon the tariff—in other words manufacturers should not affiliate with a political party in its effort to protect protection, nor combat another political party whose avowed object is to destroy it. This is a queer doctrine for manufacturers to preach.

If in the past the tariff has been considered a party question in which manufacturers took such great interest, according to the "Voice" they should do so no more, and if they should do so now it would fall very flat upon true Canadians. The newspaper, it tells us, that desires to maintain a high position in the estimation of the public, yet still advocates the same national policy as its party did twenty years ago, is a "back number." Perhaps so; but in our opinion, whether the "Voice" opposes the idea or not, the two very important political parties in Canada will continue to consider the tariff a political question, and to discuss it from radically different standpoints.

**CANADA'S INDUSTRIAL FUTURE.**

The industrial future of Canada is no longer problematic, the phenomenal development along nearly all lines during the past few years, having developed innumerable industrial establishments to enormous proportions. During this time

millions of capital has been invested in the iron and steel and allied industries, as well as in various other industrial work, and to-day Canada may be said to have fully entered upon an industrial development which is destined to place her in the front rank among the manufacturing countries of the world. This development is no longer confined to particular sections but extends from Vancouver on the Pacific to Sydney on the Atlantic, from the Lakes into the far north, every province being represented by important manufacturing interests either in operation or under course of development.

In order to give some comparative idea of the industrial development along various lines we may go back to the year 1870 when the total exports of the country amounted to \$73,573,490, and the imports for that year were \$74,814,339. Ten years later Canada exported commercial products to the value of \$87,911,453, while the imports for that year were valued at \$86,439,747. Coming down to 1890 we find the Canadian exports amounted to \$96,749,149, while the imports were valued at \$121,858,241. The increase in imports and exports for the decade of 1880-1890 showing a marked increase over the previous decade and indicating the beginning of the industrial prosperity which the country is enjoying to-day.

However, it was not until the past ten or twelve years that Canada's developments on a grand scale and along agricultural, manufacturing, mineralogical, and other lines began, as is shown by the wonderful growth of exports and imports for 1900 over 1890, the exports for 1900 being valued at \$191,894,723 and the imports at \$189,622,513. Thus it will be seen that within ten years the exports of the country were doubled while the imports increased about 60 per cent., a fact due to the growing population and consequent demand for all classes of commercial products rather than to any lack of progress in manufacture and production in this country.

The exports of Canada for 1901 amounted to \$196,187,632, a gain of \$4,692,909 over 1900, and for the fiscal year ending June 1902, according to the unrevised monthly statement of imports and exports just issued by the Government, amounted to \$211,640,286, showing a gain in our exports for the past two years of \$19,745,562.

Our imports for 1901 amounted to \$190,415,525, a gain of but \$793,012 over the previous year which shows that while Canada is developing her export trade to a remarkable degree, the country is also rapidly becoming self reliant in the matter of commercial products for her own consumption. The exports for the fiscal year 1902 amounted to a total of \$211,640,286.

Chief among the manufacturing interests now being developed in this country is the iron and steel industry, numerous great metal working establishments being now in operation, at different points in the country and with the vast deposits of iron ores, fuel, limestone and the other requisite raw materials Canada is certain to soon become a most important factor in these industries.

The wonderful possibilities in the way of water power development is well understood, and this cheap and efficient source of power for all the various lines of manufacturing is now in use at various points and in numerous instances power generating and transmission plants of this type are now being installed in different parts of the country to be devoted to various lines of industrial work.

Such manufacturing interests as the wooden ware industry, the pulp industry, the manufacture of Portland cement, ship-building, etc., are now well in hand, and at the same time the

agricultural resources of the country are receiving due attention. The unequalled facilities everywhere afforded by cheap water transportation, together with the stimulating effect of the extensive railway developments, gives this country about everything to be desired in the way of transportation facilities, and being possessed of undeveloped resources scarcely equalled by any country in the world, it may well be said that the industrial future of Canada is no longer problematic.

#### THE TORONTO FAIR.

The Toronto Industrial Exhibition of 1902 far surpassed all similar efforts both in points of attendance and in the scope of exhibits, practically the whole of Canada being represented. In many ways the Exhibition partook of an all-Canadian exhibit, the agricultural, mineral, manufacturing and commercial interests of nearly every province being in evidence, and altogether there was reflected the unusual prosperity being now enjoyed in the varied lines of human endeavor throughout the country. In many respects the Exhibition just closed surpassed these affairs in past years. New buildings gave increased space for exhibitors which was utilized to the best possible advantage; various special attractions were provided, and every facility for the comfort and convenience of the immense crowds was in evidence.

All departments of the exhibits were complete. From all parts of the country the varied agricultural products were on exhibition in the Agricultural Buildings, and it is doubtful if ever before were the agricultural interests and possibilities of Canada so fully brought before the public. In the matter of industrial manufacturing the exhibits at Machinery Hall afforded a close insight into what Canada has already accomplished, many of the leading Canadian manufacturers being represented. These exhibits included about all the important labor saving machinery in use in the world to-day, and the fact that such machinery is now manufactured in this country demonstrates that Canada has become a powerful factor in the manufacturing world.

It is doubtful whether more has been accomplished by any other factor toward showing to the world Canada's industrial progress than through this Exhibition. Aside from being attended by representatives from all sections of the Dominion, the Exhibition may in a way be styled an international affair, thousands of visitors from the United States being in attendance, and great as has been the industrial progress across the border, Americans who attend the Exhibition find no end of food for reflection, and are invariably impressed with the growing industrial importance of Canada. The world wide character of the Exhibition is seen from the fact that, while Canadian exhibitors predominate, and those from the United States hold second place, exhibitors from England, Germany, France, Holland, Norway, Spain and even Japan take this occasion to bring their products to the attention of the public.

The exhibits from the British West Indies were also quite extensive and of special interest in view of the growth of trade between those colonies and Canada, and of the efforts being made to form a close commercial union between these British American possessions.

The Exhibition gave an insight into the great diversity of Canadian industries, the hundreds of exhibits of various kinds showing the almost unlimited field here offered in the way of agricultural, manufacturing, and mineral development. To enter upon a detailed account of the various exhibits

would require a volume, but too much cannot be said in praise of the work of the Association.

#### AS TO WEST INDIAN IMPORTS.

Mr. Charles Pickford, who recently returned to Halifax, N.S., from the West Indies where he had been looking after the transportation interests of Pickford & Black, steamship owners, in a conversation with the Maritime Merchant, said that the only thing standing in the way of his concern securing as much of the trade between those islands and Canada as they want is the question of sugar imports. If Canada would take even fifty thousand tons a year and allow the producers a living profit, there is no reason why Canada should not sell them three or four hundred thousand barrels of flour every year. The Ogilvie Flour Mills Co. had placed forty or fifty thousand barrels of their flour in the islands in competition with Minneapolis millers, the bulk of which went out via New York, because Demerara and Trinidad merchants had to import their flour via that city, for it is there they have to sell their sugar. Mr. Pickford gave this fact as an illustration of the up-hill work it is to do business in the West Indian market unless Canada is prepared not only to sell to them but to buy from them also.

Concerning this very desirable trade between Canada and the West Indies, a great deal depends upon the sugar planters themselves and also upon the Pickford & Black Co. The duties upon Demerara and Trinidad sugars entering the United States is greater than upon the article entering Canada, and to the extent of the difference credit should be given to this country. It is true the difference in distance between the ports of shipment and the ports of entry are somewhat in favor of New York. Against which it should be remembered that the Dominion Government subsidize the Pickford & Black steamers, while United States steamers are not subsidized, which difference goes to equalize the cost of transportation.

Canadian refiners will not pay a higher price for West India sugar from purely patriotic motives than they have to pay for the product of other countries, and unless the article can be laid down at their works at equal price, no trading will be done. Canada has gone a long way to encourage the West Indian trade by low duties and steamship subsidies, but much must necessarily depend upon improved methods and private enterprise.

#### THE SAULT STE. MARIE CANALS.

The total traffic of the Canadian and American Soo canals for the month of August was 5,070,491 tons, an increase of 382,644 tons over the corresponding month for 1901, and 1,355,717 tons in excess of the tonnage for August, 1900. Of the total traffic of the two canals for last month the Canadian canal carried 638,868 tons, an increase of 344,683 tons over the traffic for the corresponding month for 1901, and 370,166 tons over August 1900. The registered tonnage of the vessels passing through the Canadian canal last month was 591,811, an increase of 320,358 registered tons over August, 1901, and of 271,717 tons over the same month for 1900. The number of lockages last month was 701, an increase of 68 over August, 1901, and of 215 over August, 1900.

The total east bound freight carried by the two Soo's in August last was 4,276,804 tons, of which the Canadian canal's share was 536,892 tons, or 12.56 per cent., against 209,042 tons or 5.49 per cent. in August, 1901, and against 185,913

tons or 6.23 per cent. in August, 1900. The total west bound freight carried by the two Soo's in August last was 794,187 tons, of which 102,966 tons were carried by the Canadian Soo, or 12.97 per cent., against 86,133 tons, or 9.76 per cent., in August, 1901, and against 83,779 tons, or 11.50 per cent. in August, 1900.

Taking the five months of the present season, the total freight carried by the two canals was, 1902, 18,163,288 tons; 1901, 13,156,275 tons, and 1900, 13,056,074 tons. Thus, 1902 shows a gain of 5,007,013 tons compared with 1901, and of 5,107,214 tons compared with 1900. The total freight carried by the Canadian Soo in the five months of the three years is; 1902, 2,814,546 tons; 1901, 1,958,533 tons; 1900, 1,247,281 tons; gain, 1902 over 1901, 856,013 tons; gain, 1902 over 1900, 1,567,265 tons. Compared with the United States Soo for the five months the Canadian canal carried 13 per cent. of the total freight in 1902; 12.06 per cent. in 1901, and 7.56 per cent. in 1900.

The registered tonnage of vessels going through the Canadian canals in the five months of each year was: 1902, 2,747,507 tons; 1901, 1,608,464 tons; 1900, 1,364,719 tons. This shows a gain of 1,139,043 in 1902 over 1901, and of 1,382,788 tons over 1900. The per cent. of Canadian to total of the two canals was 14.17 per cent. in 1902; 11.37 per cent. in 1901, and 9.53 per cent. in 1900. The number of passages made during the five months of 1902 by the two canals were 14,226, of which 3,265 were in the Canadian canal. Expressed in percentages, the passages through the Canadian Soo during the five months of 1902 were 22.95 per cent. Of the whole in 1901 they were 21.60 per cent., and in 1900, 15.25 per cent. which gains show that the traffic of the Canadian canal is growing very rapidly, a fact due to the commercial development of the Canadian North-West.

#### ONTARIO'S MINERAL PRODUCTS.

The value of the mineral production of Ontario has advanced from \$2,565,000 in 1900 to \$5,016,000 in 1901, an increase of nearly 100 per cent., this increase being largely due to the developments in nickel, copper, and iron. The production of nickel increased from \$756,000 to \$1,859,000; copper from \$319,000 to \$539,000, and pig iron from \$936,000 to \$1,701,000, while steel increased from \$46,000 to \$347,000, a gain of about 700 per cent. within a year.

Thus it will be seen that the nickel industry remains the most important of the mineral industries of the province in spite of the immense quantities of raw material shipped to the United States.

During the past ten years there has been mined in this province a total of 1,306,722 tons of nickel ore, of this production 1,245,422 tons having been smelted into matte containing 26,606 tons of metallic nickel, and 28,070 tons of metallic copper, which products computed at the selling prices of refined materials in the New York markets represents a combined value of \$27,500,000, or an average annual value of \$2,750,000.

The pig iron products of Ontario for 1901 amounted to 116,376 tons valued at \$1,701,703, a gain in production over 1900 of 53,954 tons, and in value of \$765,637. The production of gold in Ontario is decreasing, the production for last year being valued at \$244,000. Of the other metallic products of the province, cement, brick, petroleum, natural gas, etc., attained the enormous value of \$6,800,000 bringing the mineral production of the province for last year up to \$11,831,000, an increase of more than \$2,500,000 over 1900.

## LOOKING TO CANADA.

It is clear that commercial considerations have largely influenced the planters of Jamaica, who have asked that the island be united to Canada. Like other sugar-producing countries, says the Mail and Empire, Jamaica has been suffering from the depression caused by the bounty-fed industries of Europe. In Canada Jamaica sees a large and a growing market for its products. We import at present nearly eight million dollars worth of sugar, of which Jamaica supplies \$517,385, or about one-fifteenth. It is true that we give the island a preference of one-third, but that is not sufficient to compensate for the disadvantage at which the West Indies are placed. The Canadian duty, after deducting the preference, is still about 20 per cent. on British-grown sugar. The planters of Jamaica are shrewd enough to see that it would be an immense gain to them if by entering Confederation this duty were entirely removed. In some quarters it has been represented that Jamaica was disposed to look for relief to the United States. But there the sugar trust is so well entrenched that it is able to keep out Cuban sugar, and would have no difficulty in excluding that of Jamaica. At all events it is more natural and proper that a British country should look to another British country for a helping hand than that it should appeal to a foreign power. Jamaica, moreover, is of such strategical importance that it must be preserved as a British possession. It is the nearest important island to the proposed Panama Canal, through which a great traffic, largely British, will soon be flowing. It commands a central position in the Caribbean Sea, where European powers have many interests in American waters. Upon the prosperity of the island depends the loyalty of the people, who are principally black or colored. Of the population of 706,000 there are only fourteen or fifteen thousand white, so that only a small portion of the people look upon Great Britain as their Mother Country. The island has, however, been a British possession for nearly two hundred and fifty years. Its tropical products are admirably suited for exportation to a country like Canada, whereas its imports are mainly of the classes largely produced in this Dominion. Much might be said in favor of a commercial arrangement which would open the ports of both countries freely to each other, but the subject is hardly yet up for discussion in practical shape. The planters, though an important body of men, are not the Government of Jamaica. Their views will, no doubt, have much weight in higher quarters. Until the Executive opens the subject Canada will doubtless remain a disinterested spectator.

## A GREAT CANADIAN INDUSTRY.

The Toronto Globe gives some very interesting facts regarding a large and important industry just now being brought into existence in Hamilton, Ont., the particulars of which we here reproduce. The Globe says:

It is an evidence of agricultural, as well as industrial, prosperity in Canada that the International Harvester Co. is establishing extensive works at Hamilton, Ont. This company is a development of the Deering Harvester Co., of Chicago, and its establishment in Canada is a part of the scheme of consolidation recently carried out among the leading implement manufacturers of the United States. The buildings now in course of erection and rapidly approaching completion, give an idea of the magnitude of this new manufacturing concern. The first is a single story building, 90x432 feet, and the second is 90x360 feet, three stories high. The third is of two stories, 80x300 feet, and there are two more one-story buildings, one of which is 80x225 feet and the

other considerably smaller. The largest buildings will be for the malleable iron foundry and the forges. Although these buildings would accommodate a large manufacturing industry, it is the intention of the company to proceed with the duplication of their capacity by extending them to double their present length. For this purpose land has been purchased to the extent of forty acres, and this will be virtually covered by the buildings of the company, leaving only necessary roads and haulage ways between them. In addition to these buildings and extensions, contracts have recently been made for two buildings, one 700 and the other 500 feet in length by 100 feet in width. There will be about four miles of railway tracks, sidings and switches about the works. Progress is so far advanced that the managers confidently expect to commence work within two months with a force of 600 hands. This force will be rapidly augmented as the work advances, and the present outlook is for the permanent employment of from 1,000 to 1,200 men.

Discussing the matter from a political standpoint The Globe tells us:

If the tariff is precipitated into the arena of political discussion, this establishment of a branch of an American firm in Canada will no doubt be used as an object lesson on both sides of the argument. The protection advocates will point to it as a result of their system, and as a positive benefit which we would not have obtained without a restriction on imports. The free traders will argue that under their system the Deerings would have been forced to move to Canada long ago, as it would have been impossible for them to have manufactured under the costly system of protection in the United States and sold at free trade prices to the Canadian farmers. They will also point to the anomaly of the American and Canadian branches of the firm each asking protection against the other. What might have happened if something else had not taken place is an endless theme for argument. The only certainty in the matter is that the industry has been established under the existing circumstances.

Before the acceptance of Sir John A. Macdonald's fiscal theory of tariff protection to Canadian manufacturing industries, otherwise known as the National Policy, and at a time when only a tariff for revenue policy prevailed, the manufacturing enterprises of this country were in a deplorable condition; and it was in this very near approach to free trade and industrial depression that, according to The Globe, the large manufacturing concerns in the United States, would have been forced to move to Canada, seeing that it would be impossible for them to manufacture for the Canadian market under what it calls the costly system of protection in the United States. The fact is, we acquired no industrial establishments from the United States at that time and under those conditions; and it was not until the National Policy went into effect, and a bar interposed against the inflow of American manufactures, that American manufacturers found it to their interest to establish factories, foundries, machine shops, etc., in Canada. Protection did it.

## TARIFF TURMOIL.

The Globe has set out to minimize Mr. Tarte by ridiculing him. It had an article yesterday, says the Toronto World, the sum and substance of which was that he was the Busy Izzy of the cabinet. It says that if he is not the master of the administration he is the articulate organ thereof, and that his enthusiasm is eager and his energy exuberant; that his action is easy and incessant; that he could run every night for a year with a change of bill at each performance; that he is his own advance agent, his own bill poster, his own scene shifter, his own miracle worker, and that he could play the major part and half a dozen of the minor ones through an entire performance. It then goes on to say that he quarrelled

with the Post Office Department, that he undertook to run the Railway Department and the Marine Department, that he has now taken charge of the Finance Department and the Customs Department, and is settling on a revision of the tariff—Mr. Tarte has taken general charge of the entire administration. He is also, according to *The Globe*, an interesting and picturesque figure. And so *The Globe* goes on for over a column, making fun at Mr. Tarte's expense.

The World has little to say at the present moment in regard to this little incident which illustrates the existing condition of affairs in the Liberal party. If we have anything to say at all in the matter it is that Mr. Tarte declares he is protectionist, and Mr. Sifton declares he is a free trader, and that Mr. Tarte declares that he is expressing the views of the majority of the Liberal Government, and that Mr. Sifton claims to be doing the same thing. To our mind, this is a case where one must judge by results, and results are certainly that the Liberal party, which was pledged to free trade, has reserved, with some prunings, the National Policy, or Conservative tariff. In other words, the Liberal Government, judged by its tariff, is protectionist, and, judged by Mr. Tarte, he is telling the truth about it; judged by Mr. Sifton, the Liberal party is by profession a free trade party, but has failed to redeem its pledges.

Another feature of the discussion is that Mr. John Charlton, has seen fit to write to *The Globe* expressing his opinion on the Sifton-Tarte discussion. We read Mr. Charlton's letter to be that he is in line with Mr. Tarte.

The important part of the whole incident, so far, is that *The Globe*, and a number of politicians and other newspapers, are trying to drive Mr. Tarte out of the cabinet, because of his protectionist views. The fun is only beginning. Mr. Tarte out of office has a following; Mr. Sifton out of office couldn't get a seat for himself, let alone command a single follower.

#### EDITORIAL NOTES.

O. P. Austin, Esq., Chief of Bureau of Statistics, Treasury Department, has sent us his annual review of the foreign commerce of the United States, which is printed in the June summary of Commerce and Finance. The report contains a large number of tables of permanent reference value brought down to the latest available date. Among the most noticeable features of the report is a series of tables which show population, area, commerce, finance and production of the principal articles, decennially from 1800 to 1900, and annually from 1850 to 1902. These tables contain most valuable information in condensed and convenient form ready for reference.

According to a *Winnipeg, Man.*, special to the *New York Evening Post*, the extent of immigration into Manitoba and the North-West Territories from the United States is little understood in the east. Sir Charles Dilke's prophecy of twelve years ago that these fertile lands would become the wealth centre of the Dominion is already being fulfilled. For the year ending June 30, 1902, 19,570 persons from the United States took up homesteads in Manitoba and the North-West Territories, against 5,197 in the preceding year. Actual settlers number five times as many, as only heads of families can take up homesteads. In 1900 land along the Canadian Pacific was worth \$3 an acre; now there are few obtainable lots close to the line, while the price of the nearest is \$7 to \$8 an acre. An examination of *Winnipeg* hotel registers shows that 40 per cent. of the visitors are from the United States. It is said that the cheapness of land makes it possible to pro-

duce wheat and flour at less cost than in Minnesota or the Dakotas. Millers of Minneapolis and St. Paul are anxious to get Canadian wheat, and are advocating reciprocity with Canada with the idea of having the grain duty removed. This influx of Americans is proving of great benefit to Canadian development, especially in the line of capital, as the American settlers are bringing millions with them into the country.

The cablegram sent by Sir William Mulock from London, August 13, announcing that a contract had been effected for a monthly steamship service between Canada and South Africa was as follows:

Pleased to inform you, government has completed contract with syndicate composed of Allan, Elder-Dempster and Furness lines for service between Canada and South Africa. Sailings at least monthly with provision for increased frequency. Summer sailings, Montreal and Quebec; winter St. John and Halifax, African Ports Capetown, and two other ports. First sailing first week in October from Montreal. Ships will carry mail. Also supplied with cold storage. Contract five years.

The decision of the Master-in-Chambers in granting an injunction to the Metallic Roofing Co., of this city, restraining the striking Amalgamated Sheet Metal Workers from interfering with the operation of its plant meets with general approbation on the part of the public. The decision gives the manufacturers assurance that their operations are not to be interfered with, even by organized labor, the latter being treated the same as any other business organization and made fully liable to the course of law. The attempts of the trade unions to hold the manufacturers responsible without accepting any responsibilities themselves is not henceforth to be countenanced by law in this country, now that such organizations have been given a correct status.

To-day is the twenty-fourth anniversary of the inauguration of the National Policy in Canada. On September 17, 1878, Sir John A. Macdonald carried the country on that platform, the construction of which made Canada what she is to-day. And the best proof of the wisdom of that policy is found in the fact that those who were then its most violent opponents are now amongst its most ardent supporters. As the old "N.P." enters its 25th year, the majority of the Liberal party: as Mr. Tarte indicates, have learned to appreciate adequate protection for home industries, and a "Canada for Canadians" policy. What stronger vindication than this does the National Policy require?—*Toronto World*.

One man, and he a coal miner, with no special training as a financier, absolutely controls the disbursement of the \$2,000,000 a month that is paid out to the miners now engaged in a strike in Pennsylvania and West Virginia. The sum is contributed by the miners throughout the country to aid their brethren in their struggle. The man charged with this great trust is William B. Wilson, secretary-treasurer of the Mine Workers' Association of America.

W. R. Brock, M.P.—I believe Mr. Tarte has taken his line of action from a business point of view, and I wish we could have more business views on all questions and less striving for political advantage. To be permanently prosperous, situated as we are alongside of the United States, we must adopt the policy which has made Americans prosperous, that is, the assurance of a Canadian market for our own manufacturers. When we have secured the Canadian market, we can then make arrangements for an export business with our surplus manufactures, as Americans have done.



At the annual meeting of the Barnardo Old Boys' Society, held in Toronto a few days ago, it was announced that negotiations had been commenced with the Ontario Crown Lands Department with a view to establishing a Barnardo settlement in New Ontario. We protest. For years past Canada, and particularly Ontario, has been made a dumping ground for the offscouring and human waifs of the slums of London and other British cities, and the deportation of them to this country ought to be entirely abated. We don't want them.

At a representative meeting held in Kingston, Jamaica, September 6, sugar-planters of the island passed resolutions condemning Great Britain's neglect of the West Indies which is resulting in ruin to the sugar industry, setting forth the total inadequacy of the measures proposed by Great Britain for the relief of her West Indian sugar-planters, and calling for federation with Canada as the only means of retrieving the fallen fortunes of Jamaica. Although the subject has been much discussed lately, this was the first time a definite proposal for federation with Canada has been made.

Perhaps about a hundred municipal executives from cities and large towns in all parts of Canada were in convention in Montreal last week to discuss the general improvement and facilitation of every branch of the municipal administrations in which they are so intimately concerned. The Union of Canadian Municipalities, which was organized in Toronto last year, seeks this end by the following means: The perpetuation of the organization as an agency for the co-operation of Canadian municipalities in all questions pertaining to municipal administration; in particular the guidance and improvement of legislation, both of the Dominion and the provinces, upon municipal questions, and the betterment of municipal government, and the promotion of municipal interests generally; the holding of annual conventions for discussion, information and resolutions on the above subjects; the securing of united action for the protection of individual municipalities and municipal interests as a whole against legislative or other encroachment of corporations.

The Ottawa Citizen remarks: Retaliatory Germany exports \$11,000,000 worth of goods into Canada, and Canada exports \$1,300,000 worth to Germany. If the Dominion Government doesn't give that Germany a good hard slap for its impudence we'll never speak to it again.

The Halifax Herald says: It is likely that the Citizen greatly understates the case. We import goods "made in Germany" to a valuation of \$11,000,000; but it is little less than certain that we import a lot more German goods not so classed, which are taken over to Britain, there manipulated, and shipped to Canada as British goods and entitled to the British preference. While Canada is virtually and practically giving German goods a tariff preference, Germany is vigorously and vigilantly enforcing its highest tariff against Canadian products.

The mill property of the Canada Colored Cotton Mills Co., in Dundas, Ont., was sold by auction on Monday last, for \$9,100, the purchaser being Mr. G. C. Reid, Toronto. The property includes the mill proper, several detached buildings, a number of residences for workmen and eleven acres of ground. At the time the mill was in operation a few years ago its assessed valuation was about \$110,000; and at the time of its erection it was the largest and best equipped cotton mill in Canada. It is rumored that a new electric supply company is being formed to take over the premises;

and it is also said that a new concern is being formed which will obtain possession of it for use as a woolen mill.

At the recent annual meeting of the Canadian Manufacturer's Association, held in Halifax, N.S., the following resolution was unanimously adopted:

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

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

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

Speaking of hoodlums in labor troubles the Age of Steel says:

Mobs of boys in late years have been among the offensive auxiliaries in labor troubles. They are formidable for their insignificance as physical assets in street disturbances and their supposed irresponsibility. The law deals with them in a nurse-maid fashion, and it is to be feared that in many cases the spanking strap is missing at home, and as boy brains are easily ignitable, mischief is glorified into an heroic act and the lurid literature of the times abets the delusion. As a rule the modern boy knows little of self-restraint and apart from bed, board and boots, is as independent of parental authority as a Bedouin is of a magistrate he never saw. In many of our industrial centres his playground is the street, and his companions theimps of the gutter. If left to himself he spoils, and the making of a man or a citizen is not in him. Of such is the kingdom of Hoodlumism, and the social inheritance of petulant insubordination and short-haired, rock-throwing malcontents, or anarchists in embryo. It is to this mob of precocious youths that a large percentage of the outrages wrongly shouldered on unionism are due. Boys innocent of their wisdom teeth are often the real culprits who break the windows of street-cars, pursue a non-union man and his cat with vindictive brick-bats, put the match to coal breakers, and obstruct railway tracks with goose-grease or a violated switch. The veteran toiler who inherits a crooked thumb and has silver threads in his beard, is too often credited with the miserable wrong-doing of hoodlums. Every one familiar with the actual situation knows this, from the captains of police to the humblest deputy sheriff, and the gravity of the case is aggravated by the fact that hoodlumism is not limited to the slums. It is found in Congress, in military institutions, in church gatherings, and in political assemblages. We are being saturated with this malignancy, and all observers of social conditions can see the handwriting on the wall of the next generation. This may be emphasized in this country more than elsewhere, but the trouble is a long way from being local. The spectacle of boys in their teens and simply mannikins in knickerbockers, chasing motormen and smashing car windows as they have done in St. Louis and elsewhere; of messenger boys terrorizing others who were willing to work in Chicago, and of six thousand pit-lads in Great Britain preventing the raising of a round million tons of coal, are instances at which no sensible man can afford a super-sentimental excuse. What a man soweth he shall reap. If so many of our young men are becoming insubordinate and intractable, and instinctively ready for mischief when the opportunity offers, the causes, if not preventible, can be limited. In home training lies the cure, in the example of adults a valuable lesson, and in the administration of the law that can be wise without being sapless and sentimental, is the country's deliverance from the mobocracy scourge of hoodlumism.

## CAPTAINS OF INDUSTRY.

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

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

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

Messrs. Davis & Anderson, of Windsor, Ont., who represent the Asphalt Block Co., which desires to install an asphalt block plant at Sarnia or Point Edward, visited those towns last week in company with the chief officials of the Grand Trunk Railway and have decided to locate at the latter place, where a plant will be erected at a cost of \$65,000.

The Smith & McKeown Shirt Mfg. Co., of Montreal, has been incorporated with a capital stock of \$15,000 for the manufacture of shirts, collars, etc. The incorporators are Thos. F. Smith, R. H. McKeown, Geo. H. A. Montgomery, of Montreal.

The St. Gabriel Lumber Co., of Montreal, has been formed by H. M. Durant, of New York; F. P. McManus and L. M. Garrison, Jersey City; Victor E. Mitchell, Edouard Fabre and Montague Miller, of Montreal.

The arrival of a vessel in New York last week laden with a cargo of 8,400 tons of coke from Sydney, C.B., marks the beginning of an extensive export trade of Canadian coke to the United States, the Consolidated Gas Co., of New York, alone having already contracted for 25,000 tons of Sydney coke.

The Canadian Otis Elevator Co., of Hamilton, Ont., has been incorporated with a capital of \$250,000 to manufacture engines, dynamos, generators, pumps and all kinds of machinery incident to the manufacture, erection, building, furnish-

ing, equipping, construction, etc., of elevators and all kinds of hoisting machinery. Among the incorporators are W. D. Baldwin, of New York; Watson Jack, of Montreal; and Henry P. Douglas and Andrew Leitch, of Hamilton.

The Stohl Wagon & Farm Implement Co., of Harrisburg, Pa., is preparing to move to Toronto. President Martin A. Stohl and Secretary H. H. Estis were recently in Toronto arranging for the removal of the plant. The company to begin with will employ about 80 mechanics and laborers.

Through its manager, Mr. John J. Main, the Canadian Heine Safety Boiler Co., of Toronto, has secured from the Jacques Cartier Power Co., of Quebec, the contract for the installation of the large water tube boilers and the necessary equipment, including steam pump, steel smoke stack and piping in connection thereto. These boilers are to be of 500 h.p. each, and are to be placed in the company's new steam power house at St. Sauveur, Que. This plant, which is expected to be complete and ready for operation in a few months, will cost, including engines, in the vicinity of \$100,000. The plant is to be constructed as a reserve steam plant and will be kept in readiness to be utilized for emergencies. This company are installing the large boilers for the pumping station in Toronto, and another large boiler for the Toronto Electric Light

Works, which have already in operation over 3,000 h.p. of the "Heine" boilers.

The Nova Scotia Steel & Coal Co. will erect a large machine shop at Sydney Mines, C.B. The plant will be equipped with the most modern machinery, and will give employment to a large number of skilled mechanics.

The North Shore Power, Railway & Navigation Co. is rapidly completing its power plant at Seven Islands, Que. A large pulp mill is also under construction.

The ground wood pulp mill of the Belgo-Canadian Pulp Co. recently placed in operation at Shawinigan Falls, Que., is equipped with two Butterfield cutting-off saws, twelve 52 in. barkers, two splitters, pulp wood carrier, storage conveyor, twenty-four 16-in. grinders, thirteen 72-in. wet mills with rubber couch rolls and 26 ten plate screens manufactured by The Waterous Co., of Brantford, Ont.

The completion of the formation of the International Harvester Co., the new combination of the leading American harvester concerns, has resulted in a rearrangement of the work now under way for the extension of the plant of the Deering Harvester Co., at Hamilton, Ont. As soon as the Hamilton plant is increased to double its capacity, which work is now well under way, work will at once be begun on improvements which will double the increased plant and make it the largest of its kind in Canada, and will employ 1,500 men.

The plant of the Westinghouse Mfg. Co., at Hamilton, Ont., is to undergo improvements at once which will double its output. The company has purchased a large tract of land adjoining its present factory and will spend more than half a million dollars in improvements, adding the manufacture of electrical machinery and Nerst lamps to its present business of manufacturing air brakes.

The Yreka Copper Mining Co., operating the Comstock, Quatsimo Sound and the Yreka, Mount Richards, both in British Columbia, will install a ten drill compressor, a Pelton water-wheel, and a complete set of air drills. The company is now building an aerial tramway and proposes to install a complete smelting plant.

## Pneumatic Tools and Appliances ARE GREAT MONEY SAVERS.

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

### INGERSOLL-SERGEANT

PISTON INLET AIR COMPRESSORS FOR ALL DUTIES

THE JAMES COOPER MFG. CO. LIMITED

299 St. James St., Montreal

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

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

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.



The Dominion Steel Co. has just secured possession of all the rights and properties of the Dominion Coal Co., the transfer having been made at a meeting of the directors of the two companies held in Montreal a few days ago. The lease was accompanied by a check in favor of the coal company for \$1,200,000, being the amount of three-quarters of a year's rent, the steel company having operated the coal properties for that length of time. The directors present were: James Ross, president; Senators McKay and Cox, H. M. Whitney, W. B. Ross, H. F. Pearson, B. F. Pearson, J. E. Dimmock, Sir William Van Horne, J. D. MacLennan, Elias Rogers and R. B. Angus.

The Jones & Moore Electric Co., Toronto, have received an order from Robert Watson Co., wholesale confectioners, Toronto, for a 30 h.p. motor.

Messrs. Clark & Demill, says the Galt Reporter, though beginning in a small way, as did many others of Galt's prominent manufacturers of to-day, are entering their manufacturing career under most favorable auspices. Both are expert machinists and as such have served long terms in large shops and have occupied positions of responsibility. Coupling experience with energy nothing further is required. It is their intention as their business grows, to extend their buildings to the C.P.R. tracks. They manufacture all kinds of woodworking machinery.

The Jones & Moore Electric Co., Toronto, are installing a complete lighting

plant in the yards of The Peoples' Coal Co., Toronto.

The Chemists & Surgeons Supply Co., of Montreal, has been formed with a capital of \$40,000 by Chas. L. Wallers, Harold L. Woods and others, of that city.

The Imperial Pneumatic Tool Co., of Sherbrooke, Que., capital \$25,000 has been formed by Daniel Lawrence, Ernest Weber and others, of Sherbrooke, to manufacture and sell pneumatic tools and machinery.

Thos. Baird & Sons, of Ormstown, Que., has been incorporated with a capital of \$99,900 to carry on the present grain and business of the firm.

The Canadian Lake & Navigation Co., of Toronto, has been chartered with a capital of \$3,000,000 to engage in the shipping and shipbuilding industry.

The Dominion Grain Growing Co., of Ottawa, with a capital of \$100,000 will acquire the patent sprouting apparatus of Hans Frederic Rhode. Among the members of the new company are Henry Brake, John Kammer and H. F. Rhode, of Chicago, and Jas. F. Smellie, of Ottawa.

The Britannia Mfg. Co., of Halifax, N.S., of which James Anderson, recently with A. B. Boak & Co., of that city, is manager, is engaging extensively in the manufacture of textile materials.

The Sun Oil Refining Co., of Hamilton, Ont., have purchased an extensive pro-

perty in Halifax, N.S., where they will erect oil tanks, warehouses, wharves, etc., for the purposes of their business.

The Dominion Iron & Steel Co., of Sydney, N.S., have ordered their fourth blast furnace lining from the Portsmouth & Kentucky Fire Brick Co., of Portsmouth, O., of whom they have purchased several cargoes of steel works brick.

The Queen City Vinogar Works, Toronto, have placed an order with The Jones & Moore Electric Co., this city, for one 8 h.p. electric motor.

The Bourne-Fuller Co., of Cleveland, Ohio, have just let contracts for a building, 30 x 120 feet, to be erected adjoining their present warehouse. The new structure is to hold their stock of pipe, of which they carry a large quantity for steam, gas and water purposes.

A company headed by Harry McCoullvay, St. Johns, Newfoundland, has been formed with a capital of \$50,000 to manufacture oilskins, soap, candles, etc.

H. L. Hewson, of Amherst, N.S., is preparing to put into operation his woolen mill in that city.

The mill of the Barkor Lumber Co. at Burford, Ont., was totally destroyed by fire last week. Loss about \$3,000.

The A. C. Thompson Co., North Sydney, N.S., are about erecting what is claimed will be the largest works of the kind in that province for the manufacture of soil pipe, valves and all the smaller castings used in the plumbing trade.

## Is Thirteen Unlucky?

THE AMERICAN SHEET STEEL CO.

Have recently sent us their thirteenth order for



### CROSS OIL FILTERS

We claim that our Filters will save at least 50% on lubricating oil bills, by purifying waste oil so that it can be used over and over again.

Smallest size filters three gallons a day; largest size 500 gallons; all sizes between. Tell us how much oil you use and let us send you a Filter on 30 days' trial, to be returned at our expense if not satisfactory.

THE BURT MFG. CO.,

LARGEST MFRS. OF OIL FILTERS IN THE WORLD.

AKRON, OHIO, U.S.A.

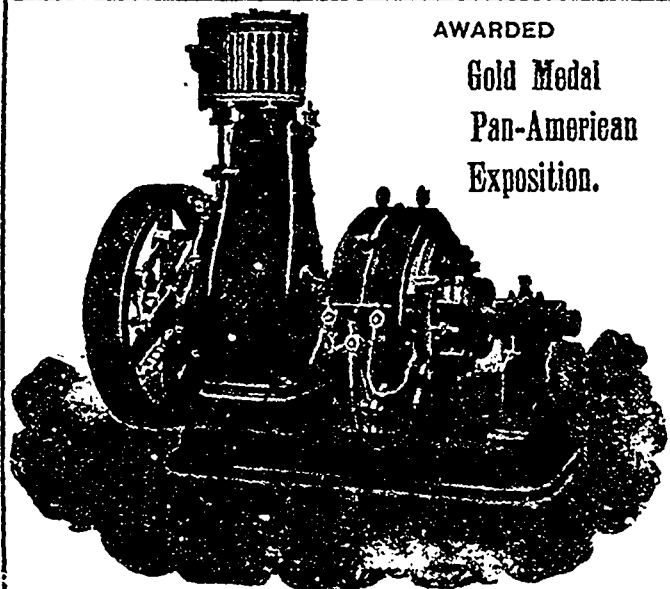
A complete stock carried by the

FAIRBANKS, CO., Montreal.

## BUFFALO HIGH SPEED ENGINES

HORIZONTAL  
VERTICAL  
BELTED

SIMPLE  
COMPOUND  
DIRECT CONNECTED



AWARDED

Gold Medal  
Pan-American  
Exposition.

BUFFALO FORGE COMPANY,  
BUFFALO, N.Y., U.S.A.

The Robb Engineering Co., Amherst, N.S., are in receipt of a letter from a customer which explains itself as follows:—"We are well pleased with the Mumford Standard Boiler purchased from you a year ago. It steams very quickly, and we find on comparing our coal bill with that of the previous year, that we have saved 25 per cent., although we are using considerable more power and have doubled the area to heat."

The Grand Trunk Railway is considering the matter of erecting a new depot at Woodstock, Ont.

The Snowshoe Gold & Copper Mines Ltd., of Snowshoe, B.C., will install a smelting plant with a daily capacity of 1,000 tons.

The Canadian Otis Elevator Co. have received their incorporation papers and are therefore now a strictly Canadian concern. The company is operated largely by Canadian capital, has Canadian directors, and their elevators are made in Canada.

Reports from Nelson, B.C., indicate that that section is about to be developed into an extensive petroleum field. Analyses made by Herbert Carmichael, public analyst for British Columbia, show abundance of petroleum shale southeast of Fernietown, and in fact all over the Crow's Nest Valley.

Messrs. Clark & Demill, Galt, Ont., have just completed some important additions and improvements to their works including a new foundry. Some of the new machinery includes a drill and a lathe, made for them by R. McDougall & Co., of Galt, Ont., and a gasoline engine made for them by the Goldie & McCulloch Co., that city, and a 10-foot planer, by the John Bertram & Sons Co., Dundas, Ont., and a lathe by J. J. Stevens, Berlin, Ont.

The Jones & Moore Electric Co., Toronto, are installing a 250 light dynamo for the Maple Leaf Woolen Mill Co., Markham, Ont.

St. Boniface, Man., will install an

electric light plant and a water system at a cost of \$115,000. T. Bertrand, secretary-treasurer of the city, should be addressed for information.

The Electrical Construction Co., of London, Ont., has been enjoying a remarkably prosperous career having grown in the past dozen years from a small concern to a leading position in electrical work in the country, now manufacturing nearly everything in the way of electrical machinery and supplies. The company has representatives in Halifax, Montreal, Toronto, Sault Ste. Marie, Winnipeg, Vancouver and other important cities.

The Federal Sugar Refining Co., of Canada, has been incorporated with a capital stock of \$6,000,000 and will engage in the manufacture of sugar from cane and beet root at Montreal. Claus A. Spreckles and Wm. Cook, of New York; Robt. D. McGibbon, Thos. Chase-Casgrain and Edouard Fabre, of Montreal, are the incorporators.

**CAMEL BRAND**  
**BALATA**  
**RUBBER**  
**BELTING**

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

**THE STANDARD**



**GOLD WATER PAINT**  
 WEATHER PROOF, FIRE PROOF  
 WHITE AND COLORS.

**MILL SUPPLIES**  
 Lubricating Oils and Greases  
 PAINT, PAINT OILS, ETC.

**W. A. FLEMING & CO.**  
 Montreal and St. John, N.B.

**THE CANADIAN PORTLAND CEMENT CO. LIMITED**

MANUFACTURE "RATHBUN'S STAR" BRAND

**THE LEADING CANADIAN PORTLAND CEMENT**

Capacity of Works—500,000 Barrels per Year

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

**TORONTO, ONT.**

SALES  
 AGENTS

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

Telephone Main 3987.

**MONTREAL, QUE.**

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER,

The Brandon Machine Works Co., of Brandon, Man., has applied for authority to increase its capital from \$40,000 to \$125,000.

The Meaford Mfg. Co., of Meaford, Ont., has installed a new two-room "Standard" moist air dry kiln, built by the Standard Dry Kiln Co., Indianapolis, Ind.

The C. Wilson & Son Ltd., has been incorporated at Toronto with a capital of \$200,000 to manufacture scales, fellings, etc. Among the directors are R. A. Wilson, G. L. Hillman and Rebecca Wilson, of Toronto.

The Beupre Power Co., with a capital of \$150,000, has been authorized to utilize and sell electric, hydraulic or steam power and to engage in the manufacture of pulp wood, paper, lumber, etc., at Beupre, Que.

The Vancouver Canning & Packing Co., Vancouver, B.C., has been incorporated with a capital stock of \$50,000 to acquire and operate the cannery and canning business in that city known as the Vancouver Canucry.

The expansion and development in all electrical lines is one of the most extraordinary and encouraging phases of the trade of the city, remarked an electrical engineer to-day. Montreal is supplying Canada, and large shipments of these materials are being made for Western Canada. The Northern Electric & Manufacturing Co., on Aqueduct street, which

employs over 400 hands, has been forced to build an extension, which will give work to an additional hundred men, and work is now proceeding on the extension.

The Shawinigan Water & Power Co's offer to light the channel between here and Quebec is, it is understood, now being considered by the Minister of Public Works, and a leading Liberal member of the Bar is pushing the project for the company. The companies supplying electricity state that they have increased their customers by at least 15 per cent. over last year. The new electric power station of the Montreal Light, Heat & Power on Prince and Wellington street, is about completed, and is already supplying voltage. This is said to be the most up-to-date power house on the continent, and has four of the largest transformers in the world.

The Silver Spring Brewery, Victoria, B.C., has been incorporated with a capital stock of \$20,000, to acquire and operate the business now carried on by the Silver Spring Brewery, that city.

The Canada Metal Co., Toronto, has been incorporated with a capital stock of \$20,000 to take over the business heretofore carried on by W. G. Harris, Toronto, as a manufacturer of metals and metallic compounds, etc. The provisional directors include W. G. Harris, Ada F. Harris and Frederick Harris.

The Renfrew Roller Mills Co. with head office at Renfrew, Ont., has been incorporated with a capital stock of \$50,000

to manufacture flour, etc. The provisional directors are Thomas A. Low, J. E. H. Barnet, Allan Carswell, J. B. McLaren and David Barr.

The Cornwall Furniture Co., Cornwall, Ont., has been incorporated with a capital stock of \$50,000 to manufacture furniture, etc. The provisional directors are J. E. Wilder, T. S. Aspinall, Andrew Edwards and Richard Larmour.

The Ottawa & Hull Power Co. has chosen as a site for its mill the famous Table Rock, situated on the Hull side of the Chaudiere Falls. Engineer Kennedy, of Montreal, is now working on plans to ascertain what water power can be developed. A conservative estimate places it at 25,000 h.p. A mill with machinery capable of utilizing all this power will be built. Plans are to be submitted to the directors of the company early next month, and work will be started forthwith. The output of paper will be placed on the English market.

The McLaughlin Carriage Co., of Oshawa, Ont., will erect another handsome three story factory building in that town at a cost of \$40,000.

Through Mr. P. E. Ryan, of Toronto, secretary and treasurer of the Ontario Government Railway Commission, bids are invited for the construction of 110 miles of the Temiskaming & Northern Railway.

The freight sheds of the Grand Trunk Railway at Welland, Ont., were destroyed by fire last week.

# IRON GROOVED PULLEYS

Spiral Steel Conveyor.

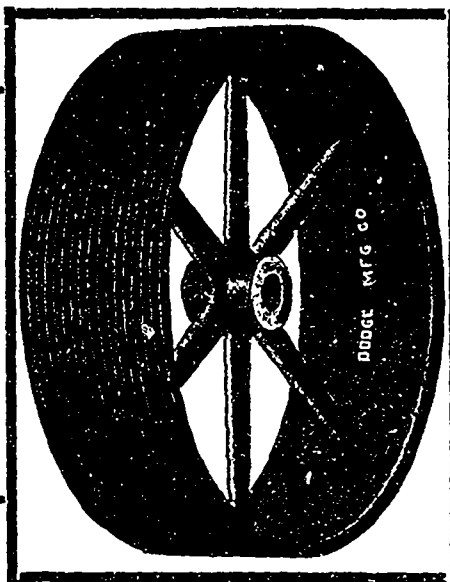
Elevator Buckets.

Detachable Chain.

Sprocket Wheels.

Belt Conveyors.

Friction Clutch Pulleys



Clutch Couplings.

Machine Moulded  
Iron Pulleys.

Steel Shafting.

Flange and Compression  
Couplings.

**..Improved Ball and Socket Adjustable Hangers..**

DROP AND POST, SAFETY COLLARS, ETC.

**Power Transmission Machinery. GRAIN HANDLING MACHINERY.**

SEND FOR CATALOGUE.

**DODGE MANUFACTURING CO., - TORONTO, ONT.**

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

The Huntsville & Lake of Bays Navigation Co., of Huntsville, Ont., will have built for their Lake of Bays service a fine large steamer, modern in every respect with accommodation for 500 passengers. The company have also decided to construct a dry dock on Lake of Bays where their steamers can be repaired.

The large coeprage works of W. H. Drader, at Chatham, Ont., were destroyed by fire September 4, loss about \$7,000.

The Standard Heating & Sprinkler Co., Montreal, has been incorporated with a capital stock of \$50,000, for the installation of heating plants, fire extinguishing devices, electrical systems, the manufacture of steam fitting and plumber's supplies and a general plumbing business. The charter members are:—James Cochrane, Henry Miles, L. D. Robertson, J. W. Blair, and F. J. Laverty, all of Montreal.

The Peddie Rifle Sight Co. has been incorporated with a capital stock of \$100,000, to manufacture the "Peddie Improved Vernier Sight" as well as guns, rifles and small arms. The charter members are:—Hon. J. M. Gibson, of Hamilton, Ont.; Hon. Robert Mackay, Lieut.-Col. F. C. Henshaw, Lieut.-Col. E. B. Ibbotson, all of Montreal; Col. John Tilton, Ottawa; Lieut.-Col. James Mason, Lieut.-Col. H. M. Pellatt, both of Toronto; and William Peddie, Montreal.

The British Monoline Co., Montreal, has been incorporated with a capital stock of \$100,000, to manufacture the Monoline Machine, and other machines used in printing. The charter members are:—Alphonse Kloh, of New York; R. D. McGibbon, F. H. Ward, S. R. McGibbon, and E. F. Surveyor, all of Montreal.

The Electrical Trade Association of Canada, with head offices at Montreal, has been incorporated with a capital stock of \$2,000 to collect statistical and other information useful to the trade, and to distribute it among the members of the association; to promote a cordial feeling among the members; to protect their mutual interests and to settle differences among them whenever possible, the operations of the company to be carried on throughout the Dominion of Canada and elsewhere.—The incorporators are R. E. T. Pringle, John Forman, George H.

Olney, J. A. Burnis, and W. V. Shaw, all of the city of Montreal.

J. I. Meikle is promoting a company for the manufacture of leather goods and novelties of all kinds at Port Arthur, Ont.

The Canadian Iron Co. has been organized at Youngstown, Ohio, with a capital of \$200,000. The incorporators are J. Craig Smith, Edward Ritchie, Grant S. Wiltstar, Grant L. Cleveland and Frank Brown, all of Youngstown. The company has acquired the property of the Abbot-Mitchell Iron & Steel Co., located at Belleville, Ont., 150 miles east of Toronto. The plant, which for the present is inactive, manufactures bar iron, bar steel, cut nails, horse shoes, railroad spikes, track bolts, washers, etc. The price paid was \$47,000. Pittsburg people will be interested with the incorporators and extensive additions are contemplated. The plant will be started as soon as necessary repairs can be made.—Iron Trade Review.

Messrs. A. McKillop & Sons, West Lorne, Ont., will immediately rebuild their extensive grist mills at that place, recently destroyed by fire.

The Saskatchewan Lumber Co., has been incorporated with a capital stock of \$500,000, to carry on lumbering and lumber trade, to manufacture furniture, doors, sashes, etc.; to manufacture pulp, pulp-wood, and paper, to generate electricity, operate mills, etc. The charter members are:—William Cowan, J. H. Sanderson, E. H. Moore, all of the town of Prince Albert; and Kenneth McDonald, and Hector McDonald, both of Ottawa.

The Cornwall, Ont., Furniture Co. are about erecting a three-story brick factory in that town.

When the Swift Co., of Chicago, enters into possession of the Fowler Canadian Co's packing house in this city, on next Monday, then will Hamilton, Ont., become the Canadian headquarters of the great packing industries of the United States, which have united their interests and immense financial resources. It is reported that C. F. Swift will be the president of the consolidated company; J. Ogden Armour, the head of the financial end of the enterprise; Michael Cudahy, chairman of the board of directors, and Edward A. Cudahy, general manager of the consolidated plants. The Lawrys and the Fearmans have made for Hamilton a wide reputation for the superior quality of hams, bacon and other pork products, and the entrance into the Canadian field of the great packing kings of the United States will be an added guarantee that the same high standard will continue. The Canadian end of the combine will have an open market in foreign countries where the United States packers find it difficult to get an entrance.—Hamilton Spectator.

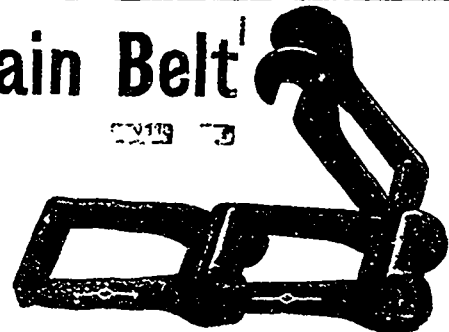
The Kemp Manure Spreader Co. has been incorporated with a capital stock of \$60,000 to manufacture manure spreaders and other farm implements. Among the incorporators are:—J. S. Kemp, of Newark Valley, N.Y.; A. J. McPherson, J. C. Makin, E. T. Dufton, Thomas Holliday and G. G. Hopkins, of Stratford, Ont. The works and head office of the company are at Stratford.

# Detachable Chain Belt

AND

## CONVEYING

## MACHINERY



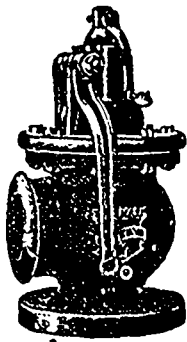
# WILLIAM R. PERRIN & COMPANY

TORONTO, CANADA.

**ROCK  
DRILLS**

**THE CANADIAN RAND DRILL CO**  
**SHERBROOKE, QUE.**  
 BRANCH OFFICES IN  
 MONTREAL, QUE. TORONTO, ONT. HALIFAX, N.S.  
 ROSSLAND, B.C. RAT PORTAGE, ONT. GREENWOOD, B.C.  
 VANCOUVER, B.C.

**AIR  
COMPRESSORS  
GAS**



A VALVE YOU CAN RELY ON — SEND FOR PRICES

## CROSBY STEAM APPLIANCES EXCEL

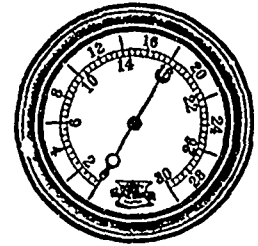
Steam Engine Indicators.  
Recording Gages.  
Revolution Counters.  
Pressure and Vacuum Gages.  
Lubricators, etc.



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

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

A TRUTHFUL GAGE IS THE ONLY GOOD GAGE



Meakins & Sons have been incorporated with a capital stock of \$100,000, to acquire the business of the present firms of Meakins & Sons, of Hamilton, Ont., and Meakins & Sons, of Montreal, and to manufacture brooms, brushes, and wooden-ware and all materials used in the same. The charter members include: C. W. Meakins, sr., Hamilton; C. W. Meakins, jr., of Montreal; and W. G. Meakins, of Hamilton, Ont.

Work is in progress on the foundation, structure, sluice ways and machinery supports on the site of the pulp and paper mill which Mr. J. R. Booth is to erect opposite his saw-mill, and about a quarter of a mile from the site of the Hull and Ottawa Power Co's mill.

Premier Peters, of Prince Edward Island, has announced that the Executive of the Local Government has entered into an agreement with a company of Can-

adian and American capitalists whereby the latter will erect and maintain for 30 years a cold-storage warehouse in each county in the Province, with sufficient capacity to accommodate and provide cold storage for all animal and agricultural products of the Island. The company will also erect large canning factories at various points. The company agrees to spend \$250,000 the first year and \$40,000 annually in wages for a period of 30 years. The Government will guarantee the issue of the company's bonds and the company will be exempt from all taxation.

The large grist mill of A. McKillop & Son, at West Lorne, Ont., was destroyed by fire August 31, loss about \$20,000.

The Algonquin Hotel Co., Dorset, Ont., are about building a spacious hotel at Dorset. The building is to be erected of wood, with metal covering, hardwood

flooring, etc. There will be required a steam boiler, engine, pump and complete electric lighting plant. Plans, specifications and information at the office of the architect, R. M. Ogilvie, Toronto.

George Reid's flour mill at Dunville, Ont., and all its contents were destroyed by fire, August 27, loss about \$8,000.

The Dominion Coal Co. are about to install a telephone system at their Sydney mines. There will be about 75 instruments in all, one at the bottom of each pit, one at every second landing and one in each manager's office.

The power house of the West Lorne, Ont., Electric Light Co., was destroyed by fire August 31, loss about \$2,000.

Mr. J. A. Culverwell, of Toronto, who has lately moved to Peterborough, is pushing ahead his various power schemes throughout the province. He is manag-

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ENGINE and MACHINE WORKS

GALT, - CANADA

## Wood-Working Machinery

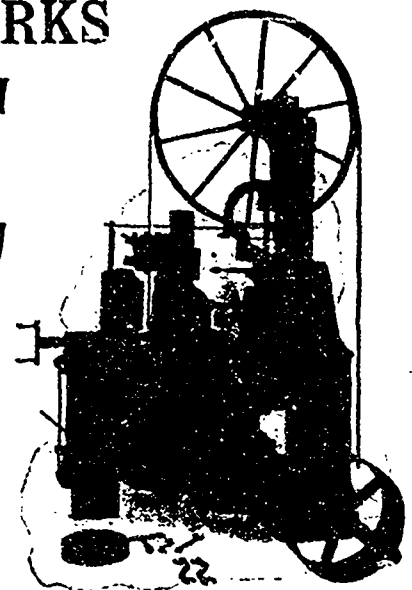
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ENGINES, BOILERS

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

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ing director of the Central Ontario Power Co. He formed a strong syndicate of Toronto and New York capitalists, and has purchased the Burleigh Falls power and also the Buckhorn Falls power, which are about 18 miles from Peterborough. Mr. Culverwell has also lately purchased power on the Trent Canal adjacent to Campbellford. The company which he represents will commence operations this fall, and will be in a position to sell power and light to Peterborough, Port Hope, and Cobourg. Mr. Culverwell says that there has been some delay in the completion of the company's plant, but now everything is progressing satisfactorily. He states the best engineers on the continent have given their report that the company will be able to deliver power to the adjacent towns cheaper than existing companies, although 18 miles away from Peterborough. Mr. Culverwell is satisfied his company can do this owing to the low cost at which the company will be able to install its plant. At present he controls some 20,000 h.p.

The Ontario charter of incorporation of The Nott Cycle & Motor Co., of St. Catharines, Ont., has been surrendered and therefore the company has ceased to exist.

A company has been organized to construct a mill to manufacture ground pulp, with a capacity of 25 tons of dry pulp per day, on the falls, about 3 miles from Rimouski, Que. As the country is very rugged, and the snow deep in winter, an aerial cable will be used to convey the output of the mill to the shipping point. If this mill proves a success, it will be enlarged to include the manufacture of sulphite pulp and paper. The company owns areas of spruce land for 200 miles along the shores of the St. Lawrence. Most of the timber in this district is cut in short lengths, to be manufactured into deal for the English markets. The side boards only go to the United States. This leaves a large part of the tree in the woods, which remains there to rot. The plan is to manufacture these tops into pulp.

The Canada Furniture Manufacturers have purchased the building known as "The Fair," on the corner of King St. east and Francis St., Toronto. The prem-

ises are in two parts, consisting of two buildings, connected by a gallery, and the numerous floors of each portion will offer ample space for the display of furniture and for the large offices required by the staff. A permanent furniture exhibition will be held here for the display to the trade of samples from the 21 factories owned and operated by the company.

The Sydney, N.S., Record says that the Dominion Iron & Steel Co. are commencing to build 100 additional coke ovens. There will be two units of 50 ovens each.

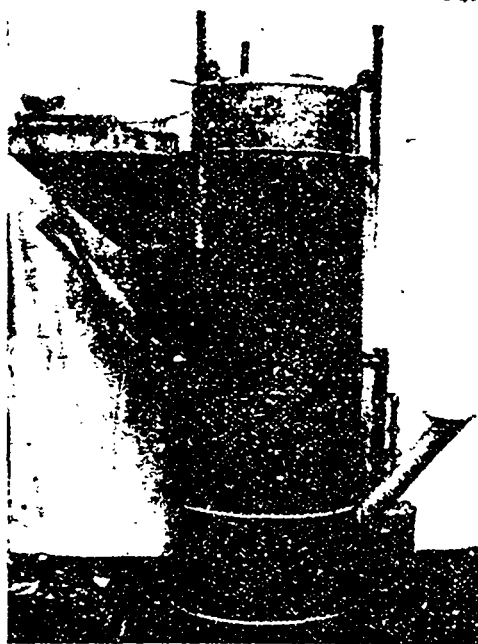
There is a good possibility that the Standard Paint & Varnish Works, of Windsor, Ont., will locate at London, Ont., says the News. The industry is a valuable one and employs 300 hands.

The plant of the Cramp Steel Works is commencing to assume a business-like shape, and there appears to be every prospect that a portion of it will be in operation before the winter sets in. A new office and store house have been erected in front of the main power building. Four of the big boilers are in position

and are being bricked in. All the foundations in the blooming mill machine shop, and pipe mill are completed, and the different machines will shortly be placed. There is an immense amount of machinery to be placed, but we believe it is the intention to complete the machine shop and pipe mill at once so as to operate therein before completing the installation of the balance of the plant.—Collingwood, Ont., Enterprise.

It is very likely should acceptable advantages be offered, that Quebec will, in the near future, add to her present manufacturing industries, that of jewelry. Mr. William Loeb, a jewelry manufacturer of Providence, R.I., is in the city for the purpose of interviewing the proper authorities with a view to ascertaining what advantages would be offered for the establishing of a jewelry factory in this city.—Quebec Telegraph.

The Frontenac Cereal Co. with head office at Kingston, Ont., has been organized with a capital stock of \$600,000 to manufacture cereal foods, etc. Included in the board of directors are Hon. Wm. Harty, president of the Canadian



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ESTIMATES AND PLANS SUBMITTED.

Electrical Fittings, Arc Lamps, Telephone Bells, Etc.

Locomotive Works and Captain Thomas Donnelly, of Kingston. The new company have purchased the plants of the Frontenac Milling Co. and the Kingston Elevator & Transit Co., both at that city, one having a capacity of 300 barrels of flour, and the other 350 barrels of corn meal per day, the intention being to increase the capacity of output to 800 barrels per day.

The Barker Lumber Co's mill at Burford Ont., was destroyed by fire September 4, together with a large quantity of dressed and undressed lumber. The loss will probably reach \$6,000 to \$8,000.

The old question, "Is thirteen unlucky?" is propounded by the Burt Mfg. Co., Akron, Ohio, who have just received their thirteenth order from the American Sheet Steel Co. for Cross oil filters. This record is eclipsed, however, by the American Steel & Wire Co., which last month placed their twenty-ninth order for filters with the Burt Co.

A company is being promoted in Winnipeg, Man., for what it is claimed will be the largest brewery in Canada.

The Ontario Works Building Co., Niagara Falls South, Ont., has been formed with a capital of \$40,000. The directorate includes J. S. Lovell, R. Gowans and R. Richardson, all of Toronto.

The Shuswap Shingle & Lumber Co., Shuswap, B.C., has been incorporated to carry on the business of shingle, saw mill, planing mill, etc., and manufacture of sashes, doors, etc.

The Laurie Lumber Co. has been incorporated in British Columbia with a capital stock of \$10,000 to operate saw, shingle, planing and lath mills in that province.

The Pacific Coast Lumber Co., of New Westminster, B.C., has been incorporated with a capital stock of \$500,000 to manufacture lumber and other wood products.

The Canadian Wood Working Co., of Yarmouth, N.S., has been formed to carry on the business of lumberers and timber merchants. The capital is \$40,000 and among the directors are John H. Killam, E. K. Spinney and C. W. Kaun, of Yarmouth, N.S.

The Rossland Power Co., has been incorporated at Victoria, B.C., with a capital of \$100,000 for the development of water power and operating electrical plants.

The Northern Lumber Co. has been incorporated under the laws of British Columbia with a capital of \$25,000 to acquire timber lands and operate saw mills.

The Canada Metal Milling Co., of Toronto, has been incorporated with a capital stock of \$50,000 by L. J. Cosgrove, D. O. Cameron and others of Toronto.

Considerable excitement has been caused at Sault Ste. Marie, Ont., by the announcement of a rich find of iron ore at a point four miles from the new Clergue steel plant. The mineral has been found in the country back of the "Soo" at various times during the past few years, and several mines are now in course of development, but that the ore extended so close to the town was not suspected. At the new find a shaft is being sunk to determine the value and extent of the deposit. The ore it is said runs about 60 per cent. iron.

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**A SPECIAL STEEL PLATE ENGINE FAN FOR STOKER BLOWING.**

Each year steel plate fans are successfully applied for new purposes. With each new application of the fan will come,



a little later, a new design which is especially suited for the object in view. The proportions and general design must

of necessity vary to obtain the most satisfactory results under the new conditions.

In the accompanying illustration will be seen a newly designed steel plate fan directly connected to a Buffalo single vertical fan engine with cylinder below shaft. This unit was built by the Buffalo Forge Co., Buffalo, N.Y., for J. W. Jackman & Co., London, Eng., to be used by the Underfeed Stoker Co. in conjunction with a mechanical stoking plant. It will be seen that the fan is designed for a small volume but comparatively high pressure air supply. It is of the full housing left-hand bottom discharge type, and is built as a blower, that is, having two inlets for the air, one on either side of the fan. The fan wheel is overhung. The single bearing next to the engine is lined with the best babbitt metal, and is of the standard Buffalo ring oiling type. Such bearings are essential for this service and the particular form which is employed on this fan insures the most thorough lubrication and cool running at sustained high speeds. Adequate provision is made for the cleaning and refilling of the oil chamber when occasion may demand.

The blast wheel is built up of the curved steel-plate blades bolted at their centre to the spider arms and at their edges they are riveted to the conical side plates; to secure additional rigidity these side plates are reinforced by heavy wrought iron bands. Wrought iron tee

arms cast into a heavy cast iron hub forms the spider. Because of the narrow width of the blast wheel there is but one spider necessary in this wheel.

The scroll and sides of the housing are, as the name indicates, built of heavy steel plates, bolted together and rigidly braced with angle iron and wrought iron bars. The engine, which is firmly braced to the fan housing, acts as a support for the blast wheel and furnishes two bearings for the crank shaft upon which the blast wheel is keyed and set screwed to the engine shaft. The mass of the blast wheel when revolving eliminates all necessity for a fly-wheel. The arrangement here shown and described results in a solid, compact and handsome unit, possessing many striking advantages over other constructions in which the alignment is too often destroyed by the strain due to the vibration of high speeds.

Such units, when built by the Buffalo Forge Co., are carefully brought to a running balance on the testing blocks before leaving the works. This procedure is essential for the best results. It may be added in conclusion that these fans are widely used in many varying situations. The particular type illustrated is very popular in central power plants for the purpose of mechanical draft in connection with stokers.

Rogers Bros. flour mill, two grain elevators and warehouse, at McGregor, Man., were destroyed by fire September 7, loss about \$30,000.

An Advertisement in . . .

**The Canadian Manufacturer**

DURING PROSPEROUS TIMES

WILL BRING GOOD RETURNS IN DULL SEASONS.

Don't let your customers forget you simply because you are rushed with work at present.



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& SONS**  
Brass Founders  
Solder and  
Babbitt Mfrs.  
...HAMILTON, ONT.

#### THE ELECTRICAL CONSTRUCTION CO.

The Electrical Construction Co., London, Ont., have recently filled the following orders:

One 60 h.p. motor to the Graham Nail Works, Toronto.

Six motors to the Toronto Engraving Co., Toronto.

One 6 h.p. motor to J. R. Booth, Sault Ste. Marie, Ont.

One 30 k.w. generator to Packard Electric Co., St. Catharines, Ont.

Two 12 h.p., two 8 h.p., one 6 h.p., one 3 h.p., and one 30 h.p. motors to the Winnipeg, Man., agency.

One 4 h.p. motor to F. B. Allen, Port Arthur, Ont.

Four motors to the Toronto Foundry Co., Toronto.

Two direct connected sets to the Collingwood Shipbuilding Co., Collingwood, Ont.

One 1 h.p. motor to L. Allcocks, Sault Ste. Marie, Ont.

One motor to the Western Publishing Co., Brandon, Man.

One 500 light dynamo to the Toronto Paper Mfg. Co., Cornwall, Ont.

One motor to the Ditzel Metal Co., Toronto.

One 6 h.p. motor to Darling Bros., Montreal.

Two 6 h.p. motors to John Starr, Son & Co., Halifax, N.S.

One 4 h.p. motor to Walsh Bros., Stratford, Ont.

One 10 h.p. motor to Frank Darling, Vancouver, B.C.

Two 10 h.p. motors and controller to Mail Job Printing Co., Toronto.

Three motors to the Electric Repair & Contracting Co. Montreal.

Two 40 k.w. generators to A. F. Nelson, Tilbury, Ont.

One 15 k.w. generator, one 4 h.p. motor to John Starr, Son & Co., Halifax, N.S.

One 8 h.p. motor to H. Ovens, Kingston, Ont.

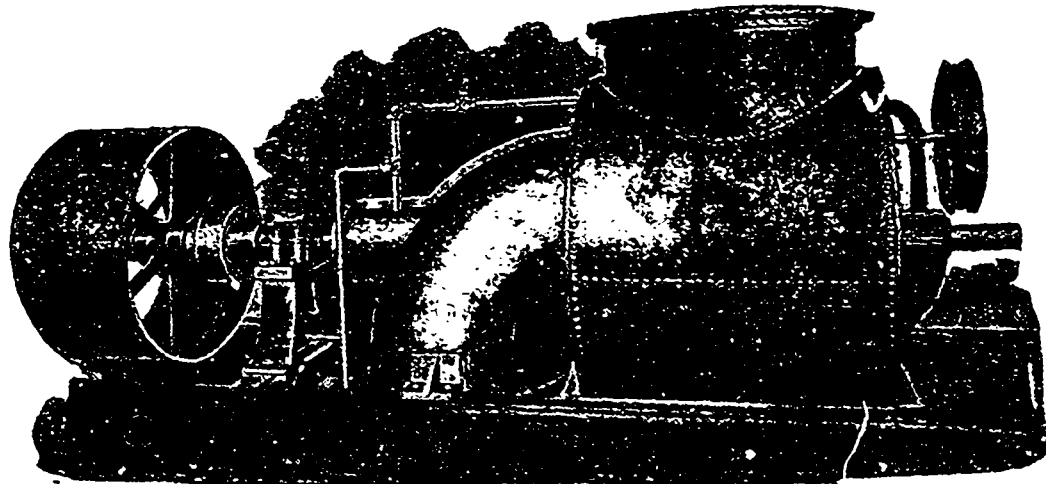
One 25 k.w. generator to Owen Sound Portland Cement Co., Owen Sound, Ont.

One 15 h.p. motor to Hoffmeister Bros., Vancouver, B.C.

Two 15 k.w. generators to West Lorne Electric Light Co., West Lorne, Ont.

**THE PACIFIC COAST LUMBER INDUSTRY.**—Blue ruin, according to the Vancouver, B.C., Province, is staring the shingle mill owners of the State of Washington in the face, if one is to believe the statements made in the circulars recently issued by the Washington Red Cedar Shingle Manufacturers' Association, to the freight agents of the railroads operating in that state.

The shingle men across the line want more freight cars, and wanting them very badly they are vigorously laying their demands before the railroads. It is claimed that because there are no cars the shingle mills of the state are losing \$15,000 a day, and should the shortage continue, the loss during the fall,



The above engraving represents a style of setting sometimes adopted in connection with our

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Our Bulletin No. 200 will interest owners of water power and prospective users. Free on request.

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it is claimed, will total not less than \$1,000,000.

In view of the fact that the lumber and shingle manufacturers of British Columbia have recently felt a shortage in the number of cars available for the eastern shipment of lumber and shingles, it is interesting to note the plight of the mills across the border. Mr. W. T. Stein, secretary of the British Columbia Lumber and Shingle Manufacturers' Association, stated this morning that while there is felt in this province a shortage of approximately 300 cars, the Canadian Pacific Railway has promised cars, and these are said to be now on the road West. Were the mills in British Columbia unable to secure cars for eastern shipments a large loss would result from the fact that lumber and shingles ordered from the Territories and Manitoba have to be shipped that they may reach their various destinations in time to permit building operations to be commenced before winter sets in.

Washington millmen claim that the shortage of cars in that state amounts to no less than 5,000, and that within 30 days another 5,000 cars will be needed. The secretary of the Red Cedar Association has addressed circulars to the Great Northern, Northern Pacific and the Oregon Short Line, pointing out the financial loss staring the mills in the face and praying for more cars. The Pacific Coast Lumber Manufacturers' Association has also taken the matter up with the railroads. As the lumber shipments from Washington eastward only last through September and October, it is pointed out

that if no cars are available during that period, financial embarrassment may be caused not only to Pacific Coast lumber firms, but also to eastern firms which have contracted for lumber, and need it to meet their trade.

But it is the shingle men of the State of Washington who are principally suffering. There are no fewer than 375 mills in the entire state, and all of them have been short of cars for weeks and weeks, some even for months. Many of the mills have been forced into closing because they have nowhere to store their product. Other mills have taken their shingles from the drying kilns and stored them in the yards where they have been wet by recent rains, and the result will be that all will have to be dried over again at great expense.

The shortage in cars all over the North-West Pacific coast has been caused by reason of the fact that the power of the railroads has been greatly drawn upon to handle the grain crops. It is said that railroads are making strenuous efforts to bring cars to the coast and that already many are en route, but of course it will be many weeks before the entire shortage felt in the State of Washington is relieved.

EXPERIENCE WITH BONUSED IRON WORKS.—Considering the fact that the city of Guelph, Ont., is negotiating with a Montreal concern for the transfer of their iron works to Guelph the Mercury says:

Inasmuch as Kingston and Belleville have had dealings with promoters of iron

companies, the Mercury wrote to reliable people in these places and received the following accounts of their experience. The lesson for Guelph seems to be that, if the financial standing of the promoters should be beyond question, and the city should be properly protected in case the business, from any cause, should not survive the term of twelve years, that the bargain is a good one.

From Kingston: We offered \$5,000 a year for twelve years, \$60,000 bonus for smelting works, to employ 100 men, taxes free except school rate, and secured grounds for \$9,000 to be a gift. The bonus by-law passed with a sweeping majority, but was never acted on. The promoters were sailing on wind, and the scheme collapsed.

Another by-law, for Montreal's Abbott iron works, was for \$50,000, I think, out-and-out, with stringent provisions as to security. This was not the kind of gift wanted, and, though the by-law passed by a large majority, the Abbotts took a Belleville offer instead and, with Mr. Mitchell, built on the strength of a bonus, ran a year, and failed. Belleville received the building back.

Your bonus looks sound—a royalty on production. There is little risk in that. Depends on how many years the production will last with 125 men. As to the actual expenditure on benefits received, \$40,000 should cover work of 125 men for eight years.

From Belleville: In 1898 negotiations were opened up between the Belleville Council and a Mr. Frank Mitchell, of

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 BATTLE CREEK MICH.

SMALL BOILER FEEDER  
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Undertake legitimate Detective business and Confidential Investigations for CORPORATIONS, COMPANIES, BANKS, MERCANTILE HOUSES, LEGAL FIRMS, or individuals in any part of Canada or the United States by experienced and Reliable operatives.

WE supply Detectives who are Mechanics, Clerks or Laborers to work in Factories, Warehouses, Storehouses, Mines, etc., in order to learn all going on in regard to Unions present or prospective, contemplated strikes, grievances, thefts or leaks of any kind, and all general information of value to the employer. We do not operate for rewards nor engage in divorce cases. Terms as reasonable as is consistent with good service. Patronage solicited.

ALEX. F. NOBLE, Principal.  
 A. E. NOBLE, Superintendent.

LONG DISTANCE PHONE.

Norwich, Conn., for the establishment of rolling mills here. The terms of an agreement first drawn up were the payment of a bonus of \$50,000, a free site, the payment of the duty on the plant coming over the line, and tax exemption for ten years. Before these terms were incorporated in a by-law to be submitted to the people, some public dissatisfaction arose regarding the payment of the \$50,000 bonus down, and a public meeting was held at which a resolution was passed requiring the bonus to be paid as follows: \$15,000 down and \$5,000 a year for seven years, on the consideration of the mills running for at least nine months in each year. The Mitchells then included the Abbotts of Montreal in their enterprise, and the Abbott plant was removed to Belleville, along with the Mitchell plant from Norwich. The firm became known as the Abbott-Mitchell Iron & Steel Co. No stipulation was made as to the number of hands to be employed, Mr. Mitchell insisting that he would not bind himself to any number. The site cost the city \$2,000. The by-law incorporating the above terms carried by a large majority, and the first sod of the building was turned in the fall of 1899 and the first iron was rolled the following January. A nail factory was also established, and the number of hands was at times as high as 150. The value of the buildings and the whole outfit has been placed at as high as \$140,000, but the present assessment is \$50,000. Through financial difficulties later on the mills were forced to close, after the city had paid \$15,000 down and

\$5,000, the first instalment. The balance of the bonus (\$30,000) now remains in the Bank of Montreal to the city's credit. The scrap on hand and manufactured material was sold by public auction, and the Trust & Guarantee Co., of Toronto, holds a mortgage against the plant for \$47,000. By the terms of the agreement, however, the city holds a lien against the plant, which prevents its removal from Belleville. Various negotiations have since taken place, but up to the present the mills have remained idle. At the time of writing the prospects are that American capitalists, who have lately secured an option on the mills, will take them over.

**EXTENSIVE SOURCE OF FUEL.**—The question is often asked, what are we going to do for fuel when the coal supply is exhausted? The answer cannot be given at the present day, though it cannot be doubted that as coal becomes scarcer and higher in price the wits of inventors and scientists will evolve some substitute or other, perhaps (and probably) not a fuel, but at least a substitute in the sense that by its use we shall be enabled to operate our factories and our railroads, and to keep ourselves warm in the winter. In the meantime, it is worth while to cast our eyes about to see what visible substitute may suggest itself. Peat has often been considered, and, while it is hardly probable that it will ever become a fuel of any great importance in the United States at large, its possibilities are worthy of attention. The appended

article from Railway Machinery will be found of interest in this connection:

Peat is partially carbonized vegetable matter, consisting of decayed moss, grass, sedge, etc., in which masses of fibrous roots are incorporated, the whole, when well dried, forming an excellent fuel. Large areas of the earth's surface are covered with swamps, morasses and bogs, from which peat can be obtained in practically unlimited quantities, and at small expense as compared to mining coal. Peat beds are sometimes found of great depth, even as great as forty feet, though this is unusual. The use of peat for fuel is common in many northern countries of the Old World, but its use in the United States is quite limited, especially for steam-making. One pound of perfectly dry peat has about the same calorific value as three-quarters of a pound of good coal. The chief bar to the use of peat for fuel is the difficulty of drying it, and unless it is dry a considerable part of its heat value is absorbed in evaporating the entrained water. In its natural state peat contains from 75 to 80 per cent. of water, and when air-dried it still retains about 25 or 30 per cent., so that air-dried peat has a calorific value only about one-half as great as that of coal, pound for pound.

It is practically impossible to dry peat in the open air, in many parts of the country, on account of the uncertainty of the climate; and in some places the natural humidity of the atmosphere is so great that the percentage of moisture cannot be reduced to much less than one-

# JAS. DOUGALL & SONS

LIMITED

Bonnyside Fire Clay Works,  
Bonnybridge, Scotland

BONNYSIDE

Trade Mark.

DOUGALL

Trade Mark.

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MANUFACTURERS OF

**Silica and Fire Bricks** for Steel and Iron Furnaces, Coke Ovens,  
Gas, Glass and Chemical Works.

**Best Scotch Ganister for Steel Furnaces and Foundries.**

**STOPPERS, NOZZLES and LINERS for Steel Pouring Ladles.**

Our goods have been, and are in use by all the leading Steel Works, Forges, Iron Foundries, Glass and Chemical Works and Gas Companies. Reports from these and some leading Canadian customers on application.

Direct shipments by quickest routes on lowest through rates to all Canadian points. Quotations promptly given on receipt of specifications.

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Sales Agent { **R. E. H. BUCKNER,**  
TORONTO

half its natural amount as removed from the bog. We understand that experiments have been made with various apparatus for drying peat, but that the results have not been generally satisfactory. Recently, however, tests have been made of a new peat-drying process at the University of Michigan, at Ann Arbor, with encouraging results. It is even predicted, as the result of these experiments, that the extensive peat beds of Michigan and other states will eventually become important sources of fuel for all purposes, peat becoming a rival of both coal and petroleum. The importance of a successful process for making peat a commercial fuel is unquestionably great, especially for parts of the country that are remote from coal mines, but which have extensive swamp lands from which peat can be obtained.

**A RICH COUNTRY.**—The Guelph Mining & Development Co., of Guelph, Ont., recently sent Mr. E. D. Clark as commissioner on a tour of inspection of certain gold and iron properties in New Ontario: and he has just returned from his mission bringing with him many fine samples from the Michipicoten properties of gold and iron. The company has sixteen gold claims located alongside of the celebrated "Grace" gold property, from which property he has brought samples from the 300, 200 and 100 foot level, and surface showings. The samples brought are rich in free gold. There are five stamp mills in the course of erection in the immediate vicinity of these claims. Some large sales have been recently made in this vicinity, one small group selling for \$60,000. The Guelph company claims to have the same lead running across three of their claims.

Mr. Clark also reports very favorably on the iron claims in that section. The great "Helen" iron mine is quite near to the Guelph claims. Seven steamers are constantly hauling the product of the "Helen" mine from Michipicoten harbor.

The Guelph company have just had their iron property surveyed, and they think that the property is an excellent one. The Clergue Co., have been drilling alongside of their claim, and have already gone through fifty feet of hematite iron of the finest quality. There is certainly a very bright future ahead of this gold and iron section.

The Canadian "Soo" has a population of about 15,000 at the present time, and all the industries are flourishing—the steel plant is in full swing, and the reduction works are being pushed ahead as fast as men can do it.

At the American "Soo" they are letting water into the new power canal, which has cost upwards of ten million dollars, and will be in full operation before winter. The Clergue Co., are building street railways at both the Canadian and American Soo, and also another power canal on the Canadian side.

The "Soo" section is certainly very rich in minerals, he says, and the railway has been completed for 50 miles west of the Soo. It is confidently expected that it will be completed to the Michipicoten

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— OF —

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We make them complete, including Cornices, Door and Window Caps, etc.—a most durable, economical, finish, giving fireproof protection, as well as fine appearance.

These, and our other improved metal building materials for exterior and interior use, are favorably known throughout Canada for their reliable merit—a merit we intend to maintain.

We can supply you with any kind of building requisites in Sheet Metal—trustworthy goods of the highest grade.

A look through our catalogue will prove particularly interesting to any one with building operations on hand.

## THE METALLIC ROOFING CO.

LIMITED

WHOLESALE MANUFACTURERS

TORONTO MONTREAL WINNIPEG

gold and iron section by winter, the only delay being the want of steel rails to complete the work to Michipicoten.

### OPPORTUNITIES.

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

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

846. A large commission and jobbing house in London, England, desires to be put in touch with Canadian manufacturers of proprietary foods similar to Quaker Oats, etc. They report a good opening there for such products.

847. A London firm of buyers for South African business houses desires to get into communication with Canadian shippers of hams, bacon, cheese, fruit, canned goods and produce generally.

848. A North of England firm using quantities of spade and shovel handles wishes to be placed in touch with Canadian exporters of these goods.

849. A London firm interested in a new process for treating iron sand desires to get into communication with owners of iron sand deposits in Ontario and Quebec.

850. A firm at Boulogne (France) wishes to correspond with one or two reliable Canadian shippers of apples of good quality.

851. A Middlesborough firm asks to be placed in communication with Canadian exporters of peas, beans, cheese, and other produce, from whom they could obtain quotations.

852. A Johannesburg (S. Africa) firm desires to secure agencies for Canadian natural and manufactured products and will be glad to hear from houses in the Dominion requiring such services.

## MARKETS.

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

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

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

TORONTO, September 19, 1902.

Without doubt the most interesting spectacle now being held up to the view of the Canadian public, and Canadian manufacturers particularly, is the divergent views of two prominent and most assertive members of Sir Wilfrid Laurier's Government. Mr. Tarte, Minister of Public Works, is declaring himself most strongly as in favor of high tariff protection for Canadian manufacturing industries, and, as a member of the Dominion Parliament, suggesting to the Ministry to build a series of block houses along our international boundary to prevent American competitors from letting out our life blood, and referring to Sir John A. Mac-

donald as his "revered leader"; while Hon. Mr. Sifton, Minister of the Interior, is canvassing the country in favor of a still further reduction of duties upon imports.

We also find the Retail Merchants' Association of Canada, who but a few days ago were in convention in Toronto, saying many unkind and ungenerous things against Canadian manufacturers, the Mayor of the city assisting them in their endeavors to drive out of business one of the most important and valuable features in our industrial and commercial life; while a speaker at the recent organization meeting of the Farmers' Association, offering a resolution to the effect that a

tariff for revenue only is best calculated to advance the interests of the country, and declaring that "the Barons"—the manufacturers—who are growing rich under the present tariff, were marshaling their forces to have it raised in order that they may collect more money from the farmers and mechanics.

We also find published what is claimed to be an authoritative announcement on behalf of an influential element among Canadian manufacturers, that "the newspaper that would maintain a high place as an expression of national opinion, yet which still advocates the same national policy as its party did twenty years ago, is a 'back number.'"

Queer things occur nowadays.

MONTREAL HARDWARE PRICES.—Following are the quotations in the principal lines corrected to date by the Montreal Star:

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

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

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

Ingot Tin—38c. a lb.

Lead—\$3.25 per 100 lbs.

Terne Plates—\$7.50 a box.

Lead Pipe—7c. for ordinary, and 8c. for composition waste, with 37½ per cent. off.

Iron Pipe—Black pipe, ½, \$2.40 per 100

## WHAT'S THE USE . . .

Of paying HIGH PRICES for FAST CUTTING STEEL if your machine will not stand the strain required to get results.

Our 20 and 26 inch. **ENGINE LATHES** have more power than any other, and we have the steel man beaten so far.

The R. McDOUGALL Co., Limited, - Galt, Canada.

## GREAT NORTHERN RAILWAY OF CANADA Offers Special Inducements to Manufacturers.

SPRUCE,  
PINE,  
BIRCH,  
ELM  
and  
MAPLE.



IDEAL  
PULP  
and  
SAWMILL  
SITES.

100,000 Horse-Power Development.  
J. G. SCOTT, General Manager, Quebec.

Shawinigan Falls, 110 feet High. "More Picturesque than Niagara."

GUY TOMBS, General Freight and Pass. Agent, Quebec.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

feet;  $\frac{3}{4}$ , \$2.65; 1, \$3;  $\frac{1}{2}$ , \$3.70; 1 inch, \$5.25; 1 $\frac{1}{2}$ , \$7.40; 1 $\frac{3}{4}$ , \$8.90; 2 inches, \$12.40; galvanized,  $\frac{1}{2}$ , \$4;  $\frac{3}{4}$ , \$5.05; 1 inch, \$7.25; 1 $\frac{1}{2}$ , \$10.10; 1 $\frac{3}{4}$ , \$12.15; 2 inches, \$16.70.

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

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

Antimony—10c. a lb.  
Timplates—\$4.25 for coke; \$4.75 to \$5.25 for charcoal.

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

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

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

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

Horseshoes—Iron shoes, light and medium patterns. No. 2 and larger, \$3.35; No. 1 and smaller \$3.60; snowshoes, No. 2 and larger, \$3.60; No. 1 and smaller, \$3.85; X.L. steel shoes, all sizes, 1 to 5, No. 2 and larger \$3.45; No. 1 and smaller, \$3.70; featherweight, all sizes, \$5; toe weight steel shoes, all sizes, \$6.25 f.o.b.

Horse Nails—Discount of 60 p.c. on oval heads, and 65 and 5 p.c. on counter-sunk heads; C brand, discount of 40 and 7 $\frac{1}{2}$  per cent.

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

Cut Nails—\$2.45 for small lots, and \$2.37 $\frac{1}{2}$  for car lots.

Building Paper—Tarred felt, \$1.70 per 100 lbs.; 2-ply ready roofing, 85c. per roll; 3-ply, \$1.10 per roll; carpet felt, \$2.25 per 100 lbs.; dry sheathing, 35c. per roll; tar sheathing, 45c. per roll; dry fibre, 50c. per roll; tarred fibre, 60c. per roll; O.K. and I.X.L., 65c. per roll; heavy straw sheathing, \$30 per ton; slaters' felt, 60c. per roll.

Cordage—Manila, 15c. per lb. for 7-16 and large; sisal, 12 $\frac{1}{2}$ c. per lb. and lath-yarn, 11c. per lb.

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

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

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

Fine Wire—The discount is 25 per cent.  
Brass and Copper wire—Discount 62 $\frac{1}{2}$  per cent.

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

Paints, Oils, Glass and Putty.—The market showed no changes this week, save that white lead has been sold cheaper than before owing to the keen competition. Trade is on the dull side owing to the season of the year. The following quotations are to retailers:

Oils and Putty—Turpentine, 68c. per gallon; linseed oil, raw, 77c., boiled 80c.; Newfoundland pure prime cod, 32c.; castor oil, 8 to 10c.; putty in bulk, bbls.,

\$2.90; in bladders, per 100 lbs. in bbls. \$2.25; bladders, in boxes, \$2.40; tins \$2.25 to \$2.65.

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

Leads and Paints—White lead, Government standard \$5 to \$5.25; exterior, \$4.75; No. 1 grade \$4.65; No. 2 grade,

## KINLEITH PAPER COMPANY

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AND SPECIALTIES

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MANAGING DIRECTOR.

## "GENUINE OAK" BELTING

More SOLID LEATHER to the Foot than any Belt made.

## "LANCASHIRE" HAIR BELTING

FOR EXPOSED SITUATIONS

## ENGLISH CARD CLOTHING

## D. K. McLAREN

Head Office and Factory, - MONTREAL.

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**BLAGDEN, WAUGH & CO.** 50 & 51 Lime St., London, E.C., England  
Telegraphic Address, "PHENOLATE, LONDON."

### TAR PRODUCTS. Refined Tar, Benzole, Solvent Naptha.

PITCH. Carbolic Acid (Crude and Crystall), Picric and Cresylic Acids.  
CREOSOTE. Grown Oil, Pyridine.

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

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

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

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## CAST IRON PIPE

3 in. to 60 in. diameter.

For Water, Gas, Culverts and Sewers

Special Castings and all kinds of

FLEXIBLE AND FLANGE PIPE.

WATER WORKS SUPPLIES

HAMILTON, ONT.



\$4.50; red lead, pure, in casks, \$4.50; in kegs, \$4.75; No. 1, in casks, \$4.25; in kegs, \$4.50; pure mixed paints, \$1.20 gallon.

**CANADA FURNITURE MANUFACTURERS' ASSOCIATION.**—The annual meeting of the Canada Furniture Manufacturers' Association was held in Walkerton, Ont., August 28, at which the following officers were elected for the ensuing year: Jas. Baird, Plattsville, president; H. B. Smith, Owen Sound, vice-president; A. H. Ellis, Ingersoll, treasurer; J. E. McDonnell, Toronto, secretary.

The chief business before the meeting was a discussion on how best to educate the people of Canada to buy Canadian furniture and do away with an erroneous opinion that Canadian goods were not as good as the imported article. It was pointed out that many retailers, with a view to catching a certain trade, represented much of their Canadian goods being imported. People of means, thinking they were obtaining a better class of furniture, would buy this at an advanced figure. As a matter of fact no furniture sold is superior to that made in the Dominion. A movement will be inaugurated to educate the people to know Canadian goods and insist on getting them.

A resolution was passed asking the furniture manufacturers to label all their goods "made in Canada," and thus protect the public and at the same time forward their own interests.

This association should be distinguished

from the Canada Furniture Manufacturers' Limited. The association is not incorporated and does not carry on business, but is simply an organization formed for considering matters of mutual interest to those engaged in the furniture business, being on the same basis, for instance, as the Canadian Manufacturers' Association.

**CANADA AND GERMANY.**—The order of the German Government obliging imports of American wheat to be accompanied by a certificate of the origin to prevent its admixture with Canadian wheat, has been in effect for some time, although not very rigidly enforced until lately. When Germany, in 1888, renewed by tentative agreement her favored nation treatment of goods from Great Britain and British colonies, exception was made of goods from Canada and Barbadoes. The result has been that ever since then wheat from Canada has been obliged to pay a duty of about 32 cents per bushel, while wheat from the United States, coming as it does under the minimum tariff, pays only ten cents per bushel. The difference in duty is also about 50 per cent. in the case of other grains. In 1897, before this discrimination went into effect, a single Canadian firm exported to Germany 1,767,397 bushels of grain via Montreal, and 1,549,842 bushels via Portland. The export continued to be considerable for a couple of years, until the German authorities got on to the fact that Canadian grain was being shipped as American grain through American ports.

Then came the order requiring all American grain to be accompanied by a certificate of American origin, and its enforcement has dealt a final blow to the export of Canadian wheat to Germany.

"It is not improbable," said a prominent official of the Government, "that while in England the Premier made further representations to the colonial authorities pointing out the advisability in Canadian interests of having our cereal products treated in Germany similarly to the cereals of other British colonies and the United States. There has been considerable correspondence with the Colonial Office on the subject. More than a year ago representations were also made to the German Government, through the consul-general in Montreal, to the same effect, the fact being pointed out that Canada imports from Germany three or four times as much as Germany imports from us, and also that the Canadian duty on German imports is less by 50 per cent. than the duty in the United States, although the latter enjoys most favored nation treatment in Germany, while Canadian products must pay the maximum tariff."

**CANADIAN CORUNDUM.**—The annual report of the Ontario Bureau of Mines for 1901, recently issued, shows that corundum, one of the newer additions to the list of minerals in Ontario, was produced during the year to the value of \$53,115, and iron pyrites appears for the first time, the annual yield being valued at \$17,500.

# To Manufacturers



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# Photo Engravings, Wood Cuts, Electrotypes

...ZINC ETCHINGS...

OR ANYTHING THAT YOU MAY DESIRE, FIRST-CLASS IN EVERY PARTICULAR,  
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## CANADIAN MANUFACTURER PUBLISHING CO., Limited, - TORONTO

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**CANADIAN SHIPPING.**—According to the annual report of the Department of Marine just issued, Canada stands eighth in point of ownership of vessels' tonnage among the nations of the earth, leading Spain, Sweden, Holland, Denmark, Greece, Japan, Turkey and other countries. Of course Britain still heads the list, the United States being second, then Germany, Norway, France, Italy, Russia and Canada. The total number of vessels on the register books of the Dominion on December 31, 1901, including old and new vessels, sailing vessels, steamers and barges was 6,792, measuring 664,483 register tonnage, being an increase of 57 vessels and an increase of 4,949 tons register as compared with 1900. The number of steamers on the registry books on the same date was 2,177 with a gross tonnage of 297,421 tons. Assuming the average value to be \$30 a ton, the value of the registered tonnage of Canada on December 31 last would be \$19,934,490. The number of new vessels built and registered in the Dominion of Canada during the last year was 335, measuring 34,481 tons register tonnage. Estimating the value of the new tonnage at \$4 a ton it gives a total value of \$1,551,645 for new vessels.

**CEMENT MARKET.**—With the upward bound in prices for Portland cement the spirits of the stockholders in the Canadian cement mills keep pace, and there is a prospect of good prices in cement for this year's operations. Last week the directors of the Grey & Bruce Cement Co. of Galt, met and advanced the price to \$2.20 and \$2.30 a barrel. This is a jump of 70c. from the spring quotations and it may yet advance. The full output of the company's mill is sold, orders having been accepted within the past few weeks for from ten to fourteen thousand barrels. Orders have to be declined almost every day. The capacity of the mill could be increased if labor could be secured to handle the materials. There is every prospect that the Canadian cement mills will have their full capacity taxed for many months to come.

**MANITOBA HARD WHEAT.**—We have received from the Winnipeg Free Press samples of Manitoba No. 1 Hard Wheat, which is recognized as the best wheat grown in the world. Accompanying are some interesting facts concerning Winnipeg and Western Canada, from which it is learned that the wheat growing lands of that part of the country have an area of 378,296 square miles, and that the wheat production of that section for last year amounted to 63,175,928 bushels.

**EXPORTATION OF WOOD PULP.**—The annual exportation of pulp from Canada to the United States amounts to 349,034 cords of wood, of the value of \$2,250,000, equal to 28 per cent. of their total consumption. Dr. Robt. Bell estimated the Canadian forests at 2,595,000 square miles, with 16,500,000,000 cords of spruce, while the conservative statements of the Dominion statisticians placed them at 1,400,000 square miles, producing 4,500 million tons of pulp.

# "SCIOTO" FIRE BRICKS

are the best, WHY NOT USE THEM?

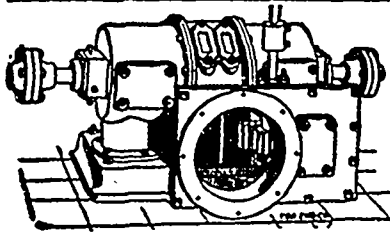
More extensively imported into Canada than any others made in the United States. One million now sold for Spring delivery to Ontario. Special inducements. Write to-day.

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One of the oldest firms in the States

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Horizontal Type.

## "LITTLE GIANT" TURBINE

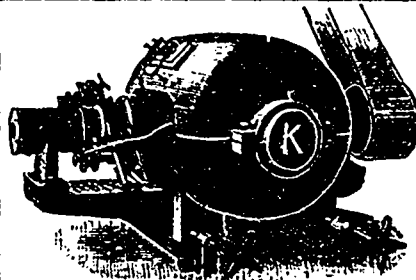
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HORIZONTAL AND VERTICAL  
BUILT IN 44 SIZES.

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

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

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



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Manufacturers of — TORONTO, ONT.

MULTI-POLAR MOTORS.

BI-POLE MOTORS

ALTERNATING CURRENT MOTORS.

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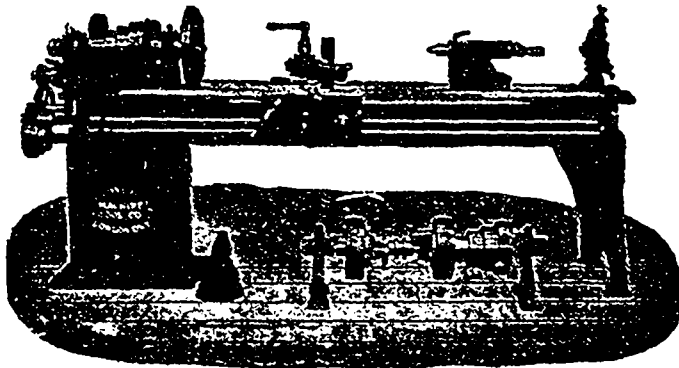
DYNAMOS for Incandescent and Arc Lighting.

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ELECTRIC CONTROLLERS for Elevators.

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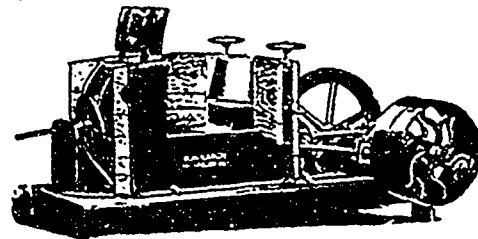
## The London Machine Tool Co., LONDON, ONT.



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LATHES,  
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BULL DOZERS,  
PUNCHES,  
PRESSES.



## H. W. KARCH

HESPELER, ONT.

### IRON FOUNDER and MACHINIST

Manufacturer of

WOOLEN MACHINERY,

Rotary Fulling Mills, Kieker Fulling Mills, Soaping Machines,  
Cloth Washers, Wool and Waste Dusters, Rag Dusters, Drum Spool Winders  
Reels, Spooling and Doubling Machines, Ring Twisters, Card Creels  
Dead Spindle Spooler for Warp or Dresser Spools,  
Patent Double-Acting Gig Dyeing Machines.

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Established



1799.

By Special Warrant.

**EXPORT TRADE**Canadian Merchants and Manufacturers  
desiring to do business with**GREAT BRITAIN, THE COLONIES  
or FOREIGN COUNTRIES**

will do well to consult

**KELLY'S DIRECTORY**

OF THE

**MERCHANTS, MANUFACTURERS and  
SHIPPERS of the World.**

(Endorsed by the British Government).

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

**Highest Award, Gold Medal, Paris, 1900**  
For further particulars, apply.

**Kelly's Directories Limited (London, Eng.)**

Dominion Branch—71 Victoria St., Toronto, Ont.

W. P. DENT, - Manager.

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

**A Few Extracts from Letters from British Consuls, etc.**

"I have to thank you very heartily for the copy of your Directory for 1901. I have always found it most valuable in supplying reliable information in answer to inquiries."—*H. B. M.'s Consul at Asuncion, Paraguay, Aug. 20th, 1901.*

"I am directed to thank you for the book and to express the opinion of this Consul that the work is one which cannot fail to be very useful to the commercial community."—*The Secretary of the Chamber of Commerce of Georgetown, Demerara, Aug. 15th, 1901.*

"I consider your Directory a most useful publication. Consuls are inundated with inquiries, which a reference to your work would have answered at once, and manufacturers would effect a large economy in wasted clerical work, postage and advertising, by purchasing the Directory."—*H. B. M.'s Consul at Amoy.*

"As a work of reference I consider it to be most useful. By keeping it up-to-date you are improving it in the best possible manner."—*H. B. M.'s Consul at Para.*

"I have to thank you for the two volumes of your work, which are very acceptable, as containing much useful information."—*H. B. M.'s Consul at Callao.*

"I beg to thank you for the copy of your Merchants Directory, which is a most useful work, and one to which I am constantly referring business people who send inquiries to this Consulate for the names and addresses of houses connected with different trades."—*H. B. M.'s Consul at Cadix.*

"I have the last copy of the Directory—a most useful work, but which I think is not consulted by exporters as much as it deserves to be, as I am constantly receiving letters asking for information which could be obtained from its pages."—*H. B. M.'s Vice-Consul at Pausandu.*

"I beg to inform you that I shall be very pleased to offer you every assistance in my power to facilitate your very interesting work for the benefit of commerce and industry."—*H. B. M.'s Consul at Jaffa.*

"I have duly received your valuable and useful Directory of Merchants, Manufacturers and Shippers for 1899, and beg to express my best thanks for same."—*British Vice-Consul, Spezia (Italy)*

"I am constantly receiving letters of enquiry for information that in most cases could be obtained in your Directory."—*British Consulate, Uruguay.*

"The only book consulted is Kelly's Directory."—*From British Consular Return, Riga.*

"Many of these inquiries would have been rendered superfluous by a reference to Kelly's Directory."—*Report from British Consul, Genoa.*

"The Directory has been of the greatest service to me in my former Consular posts, and will, I believe, be doubly useful here."—*B. C. Chicago.*

"We beg to express our appreciation of the thorough and exhaustive character of the Directory, which covers exactly the fields we desire to reach."—*Messrs. H. M. Anthony Co., New York.*

"The copy of Kelly's Directory has already been of great use to me."—*B. V. C. Thorshavn.*

"It is a Directory which is very often consulted by the Merchants of our town."—*B. V. C. Dedecatch, Turkey.*

"Your Directory was useful to me and the merchants in general."—*British Consular Agent, Teluan.*

**COMMERCIAL SITUATION IN AUSTRALIA.**

—The dominant factor in the existing situation in Australia is the drouth. Undoubtedly many of the reports regarding the extent and severity of the drouth now prevailing in most of the pastoral regions have been exaggerated, and the official representatives of the colony in Great Britain have done their utmost to reassure the public that there is no real occasion for alarm. At the same time, advices from numerous commercial sources indicate that the prolonged season of dry weather through which the commonwealth is now passing is one of the worst in its history. As far back as June an influential deputation waited upon the acting Prime Minister with the request that the fodder and grain duties be temporarily suspended. This step seemed to the authorities to be inadvisable, especially as certain of the grass-producing districts had been favored with moderate rains, rendering imports less urgent. Statements regarding the rainfall for the present year thus far appear to indicate a partial breaking of the drouth, although the fact that the ground was abnormally dry renders it difficult to judge from cabled reports regarding the quantity of rain that may have fallen in a certain district what the effect upon the grass will be. Many well-informed observers state that water is not needed in the stricken districts, artesian wells supplying all that is required, but that the serious effect of the drouth lies in its destroying the grass. This results in heavy shipments of "drouth" fodder to the districts affected, but as most of this fodder is still being raised within the bounds of the commonwealth, the country as a whole are not being impoverished to the extent that it would were the requisite supplies being imported. The fact is that Australia is a very large country, and the drouth, though widespread, is by no means universal. In Queensland last year 87,000 acres of wheat produced an average crop of 19 bushels per acre, and agricultural conditions in various districts in this and other colonies are far from being desperate. That the drouth is affecting the sheep breeders very seriously cannot, however, be denied. At the last meeting of the New South Wales Sheep Breeders' Association it was stated that owing to the drouth the number of sheep in Australia had been reduced from 62,000,000 in 1891 to 41,000,000, while exports of wool had fallen from \$67,500,000 in 1900 to \$30,000,000 last year. These figures, though unofficial, have not as yet been seriously disputed.

The conditions of the leading financial institutions in Australia, on the other hand, indicate very clearly that the country is far from being ruined, however serious the situation in the sheep growing districts may be. The banking reports for the half year ending June 30 show that the banks have continued to make a highly favorable showing. One of the leading financial institutions in the colony, with branches in every important city and town, showed net profits for the half year of £121,213. This enabled the directors to declare a dividend at the rate of 8 per cent. per annum besides placing

£25,000 on the bank's reserve fund and carrying over a balance of £36,213 in prudent recognition of the continuance of the drouth. Another bank declared a dividend at the rate of 10 per cent., while carrying forward £25,391. Other reports also make a favorable showing, and, taken together, indicate a thoroughly sound financial condition in the colony in spite of the serious adverse influences existing.

The Australian Senate completed its tariff debate late in July and the measure returned to the lower house with many amendments, the majority of them embodying reductions from the rates of duty originally imposed. It is hoped that it will be possible to draft a final set of tariff schedules at an early date, but in the meantime the tariff must continue to

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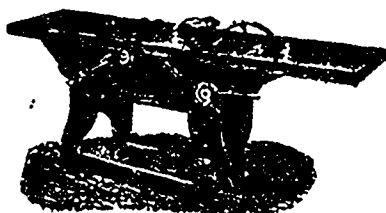
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Prices and description furnished on application.

be a somewhat serious impediment to trade. Merchants have by this time become accustomed to the abnormal situation created by the peculiar, though perhaps unavoidable, provision making each clause effective as soon as passed, while amendments also went into force as soon as voted. At the same time the law still leads to a great deal of confusion and disturbance in import trade circles. The policy of the Government in prosecuting even technical violations of the customs laws is especially deplored as frequently placing highly reputable firms in an attitude of having intentionally sought to defraud the Government when the errors complained of were really due either to the oversight of clerks or to simple inability to secure official copies of the customs decisions. The Sydney Chamber of Commerce recently passed a series of resolutions protesting against further changes of the customs regulations and against prosecutions in cases where it was obvious that there had been no attempt to deceive the Government officials or to defraud the revenue.—Dun's Review.

**THE UNITED STATES IRON AND STEEL INDUSTRY.**—The Iron Trade Review has taken some pains to gather information concerning new iron and steel works in the United States now under way or soon to be started, which is certainly very interesting. It shows that the industry is not only an important factor to its own wonderful prosperity, but that a very large additional capacity in blast furnace and steel plants, and in various lines of finished material, will be active by the middle of next year, while some of it will help to swell production in the late months of this and the early months of next year. It alludes to the fact that while the programme of the United States Steel Corporation for the enlargement of its capacity in certain lines has not yet been made public, it is known to involve an expenditure of several millions of dollars, and will furnish a volume of work that will be a distinct stimulus to the iron-working and engineering trades while it is in progress.

An exact summation of the capacity represented by the new construction in various lines is difficult, but a brief summary of the exhibit is given as follows:

Blast furnaces now under construction in the United States, 34, with estimated annual capacity of 4,300,000. Blast furnaces now being remodeled and enlarged, or soon to be reconstructed, 12. Additional capacity thus provided, about 600,000 tons a year. Total estimated addition to blast furnace capacity, all expected to be available before the end of 1903, 4,900,000 tons a year.

Open hearth furnaces under construction, 103, with an annual capacity of about 2,700,000 tons. Open hearth furnaces planned, 15, with about 400,000 tons annual capacity. Open hearth furnaces building for steel foundries, 21, with about 200,000 tons annual capacity. Total additional open hearth capacity available by close of 1902, about 3,300,000 tons.

New sheet mills under erection, 67, with annual capacity of 200,000 tons.

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Describe your requirement and we will supply a fire brick in shape and quality to suit.

Mention whether you burn coal, coke, gas or oil.

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O. A. ROCQUE, Orleans, Ont.

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

JOHN DRYDEN, Minister of Agriculture.

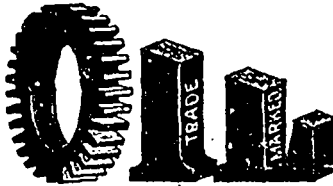
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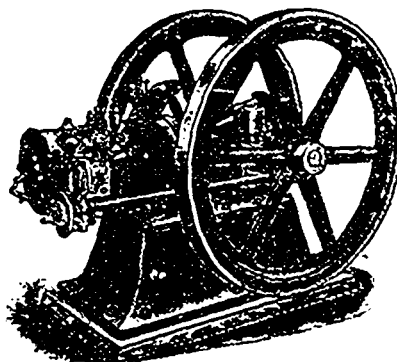
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New tin plate mills under construction by independent interests, 59, with an annual capacity of 120,000 tons.

The list of miscellaneous finishing mills under construction includes 5 modern plate mills with annual capacity of 500,000 tons, and new tube, bar, hoop, wire and structural mills of a capacity difficult to estimate, but judging from the capacity of connected open hearth furnaces, probably equivalent to 1,250,000 to 1,500,000 tons of finished material a year.

**TIN PLATE.**—The American Metal Market quotes the following tin plate prices: Bessemer steel, 100 lbs. can sizes if in stock.....\$4.05 a 4.10 Basis.

8 lbs. coating charcoal ternes,		
20x28.....	8.10 a	8.20
Bessemer steel, 14x20, 107 lbs.	4.50 a	....
Bessemer steel, 14x20, 100 lbs.	4.35 a	....
Bessemer steel, 14x20, 95 lbs.	4.30 a	....
Bessemer steel, 14x20, 90 lbs.	4.25 a	....
American Charcoal Tins—		
Allaway grades, 14x20, 107 lbs.	5.50 a	....
Melyn grades, 14x20, 107 lbs.	6.25 a	....
American Charcoal Ternes—		
Worcester grades, 14x20,		
107 lbs.....	4.45 a	....
Worcester grades, 14x20,		
100 lbs.....	4.30 a	....
Worcester grades, 20x28,		
214 lbs.....	8.90 a	....
Worcester grades, 20x28,		
200 lbs.....	8.60 a	....
American plates, f.o.b. mill futures—		
Coke tins, 14x20, I.C.....	4.25 a	....
Coke tins, 14x20, 100 lbs....	4.10 a	....
Coke tins, 14x20, 95 lbs....	4.05 a	....
Coke tins, 14x20, 90 lbs....	4.00 a	....
Charcoal terne, 20x28, I.C..	8.20 a	....
Charcoal terne, 20x28, 200 lbs.	7.90 a	....

**AFRICA NEEDS MACHINERY.**—South African advices state that the scarcity of native labor in Natal is having the effect of causing planters and farmers to have recourse to labor-saving machinery to an extent not previously known in the colony. As a consequence this is creating an opening for agricultural and other appliances which should be attentively watched by our manufacturers. The plow is now used for planting sugar cane on the Natal coast flats, where the loose nature of the soil has been usually held to be unsuited to its use. There is also some talk of using steam plows, especially on the Isipingo flats. Any specially suitable design of plow for this purpose would certainly meet with hearty welcome. Cane-cutting by machinery is also a desideratum long looked for, and any device responding to requirements would be readily taken up. At present the most promising implement of the class known is the pneumatic cane cutter used in Queensland, the introduction of which into Natal would certainly be profitable provided it answers requirements. In some Natal sugar factories the Timewell bag-filling, weighing and sewing machine has been introduced with marked success, and its general adaptation is only a matter of time. Complaint is made of the filter now commonly used for filtering sugar juice as being both expensive for labor and up-keep, and trials are being

made of sand filters, but some of those imported have not yielded the result desired. In this department manufacturers would do well to take fresh stock of the whole question, with the view of improving patterns in use or the substitution of others.

**TARIFF OF ORANGE RIVER COLONY.**—The following abstract from the customs union tariff of the Orange River Colony, now in force, comprises all of the articles likely to be exported in any considerable quantities from this country to that. The alphabetical arrangement of the original tariff is followed, but the numbers of the clauses are omitted, two or more clauses being frequently combined for the sake of brevity.

**Specific Duties.**—Ale, beer and cider exceeding two per cent. proof spirit, in vessels containing 1 quart or less, 1s. 6d. per gallon; in bulk or wood, 1s. 3d. per gallon.

Animals; (a) mules or geldings and cattle for slaughter, £1 10s. each; (b) sheep for slaughter, 5s. each.

Beads known as "Kallir Beads," 3d. per lb.

Bicycles, etc., £12 10s. per £100.

Blasting compounds, 3d. per lb.

Butter and substitutes therefor, 3d. per lb.

Candles, 2d. per lb.

Cement, 6d. per 100 lbs.

Cheese, 3d. per lb.

Chicory and substitutes for coffee, 6s. 8d. per 100 lbs.

Roasted coffee, same rate; raw 6s. per 100 lbs.

Cocoa or chocolate, unsweetened or combined with milk, 1d. per lb.

Condensed or preserved milk, 4s. 2d. per 100 lbs.

Coal, coke or patent fuel, 3s. per ton of 2,000 lbs.

Confectionery, including sweetened cocoa or chocolate, jams, candied preserves, etc., 18s. per 100 lbs.

Cereals, including barley, maize, oats, millet, rye, wheat, beans and peas, in the grain or crushed, flaked, ground, hulled, malted, etc., 2s. per 100 lbs.; wheat flour or meal, 4s. 6d. per 100 lbs.

Fish, cured, dried, etc. 1d. per lb.; fodder, not including bran, 1s. 6d. per 100 lbs.

Fruits, preserved, 18s. 9d. per 100 lbs., dried, 2d. per lb.

Gunpowder, 6d. per lb. and 7½ per cent. ad valorem additional.

Guns and firearms, single barrelled, £1 each; double barrelled, 15s. per barrel, with 7½ per cent. ad valorem additional in each case.

Meats, fresh, cooked, preserved, etc., including lard, fats, soups, etc., but not extracts and essences, 2d. per lb.; fresh beef, including chilled or frozen fresh beef, 1d. per lb.

Matches, 2s. per gross of boxes containing 100 or less, with 2s. additional per gross for each additional 100 in boxes;

fuses, vestas, etc., same rates for boxes containing 50, and same increase for each additional 50 in boxes or packages.

Oils, not essential, 3d. per gallon; essential or perfumed, £20 per £100; fish oil, 1s. per gallon.

Picks and hoes, Kaffir, 6d. each. Pickles and other condiments, 2d. per lb.

Pistols and revolvers, 5s. each. Salt, rock, 2s. per ton; common, not including refined or table salt, 5s. per ton.

Spirits, perfumed, £1 per gallon; liquors and cordials, 15s. per gallon; other sorts same rate.

Sugar, not refined, and all produce of cane, 3s. 6d. per 100 lbs.; refined sugar, and all saccharine products not cane, 5s. per 100 lbs.

Tallow and substitutes therefor, 4s. 2d. per 100 lbs.

Tobacco: cigars, 6s. per lb. and 7½ per cent. ad valorem additional; cigarettes and snuff 4s. per lb.; manufactured and cut, 3s. 6d. per lb.; not cut, 3s.; not manufactured but stemmed, 2s. 6d.; not stemmed, 2s. per lb.

Vinegar, in quart vessels, 1s. per gallon; in larger vessels or bulk, 6d. per gallon; concentrated extract 6s. per gallon.

Vegetables, pickled or preserved, 2d. per lb.; onion, not preserved, 1d. per lb.

Wine, claret, not exceeding 20 per cent. of proof spirit, 6s. per gallon; all

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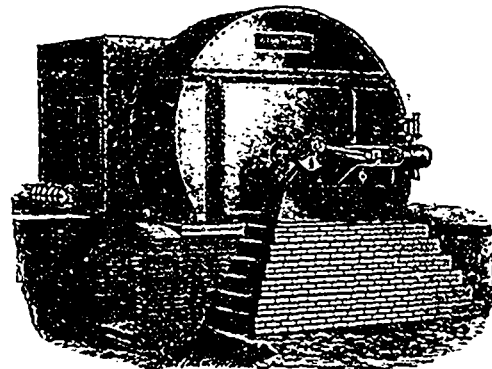
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No scattered steam piping.  
Utilizes exhaust steam.*



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other, but not exceeding 50 per cent. of proof spirit, 9s. per gal. Wine exceeding 50 per cent. is classed as spirits.

Wood, unmanufactured, other than teak, 1d. per cubic foot; planed or grooved, 1½d. per cubic foot; teak, 3d. per cubic foot.

Free List.—The following articles are admitted free: Agricultural implements and machinery; ambulance materials for recognized associations or hospitals; anchors or chain cables; animals living, except mules and geldings and cattle or sheep for slaughter.

Arms and ammunition for Government or Colonial forces.

Asbestos and packing and boiler compositions.

Atlases, maps, etc.

Bags, except paper bags, and bagging or sacking in the piece.

Bands and belting for machinery, binding twine, boiler tubes, bolting cloth and mill silk.

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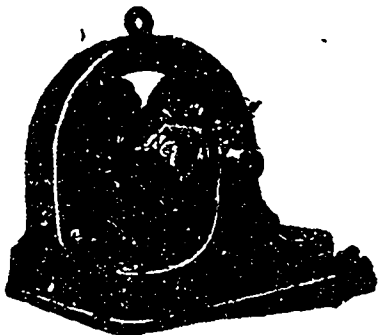
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MODERATE and SLOW SPEED OF HIGH EFFICIENCY.  
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Band instruments for organizations but not for individuals.

Bones, feathers, hair, wool, and other animal products in unmanufactured state.

Books and periodicals; bookbinders' requisites; engravings, etc.

Bottles and jars and boxes, whether empty or filed with suitable articles.

Brass and copper and composition metal in bars, ingots, plates or sheets, including perforated, but otherwise unmanufactured.

Church decorations and furnishings imported for or by any religious body.

Coir, candlewick, cotton, and other fibres, unmanufactured.

Corks, also shavings, sawdust and any other packing material.

Fire escapes and fire hose.

Fresh fruit and fruit evaporators; glue; hair cloth and springs for furniture; ice.

Iron and steel; angle, bar, channel, hoop, rod, plate, sheet or T, plain, including perforated and galvanized; rough and unmanufactured, not including corrugated sheets.

Lead, bar, pipe and sheet; leather, patent, enameled, morocco and pigskin.

Machinery of all kinds and spare parts and appliances, but not including electric cable or wire, or electric posts or lamp posts.

Metal of all kinds in ingots, bars or pigs.

Mining buckets, trucks, etc.; packing or lagging for machinery.

Printing paper; pipes and piping of all kinds, but not including cocks or taps.

Printing inks; potash and soda; printing machinery and supplies.

Public stores of all kinds and railway supplies, comprising rails, sleepers, fasteners, girders, iron bridge work, culvert tops, locomotives, tenders, ballast trucks, freight and passenger cars, trolleys, engine water tanks, turn-tables, and permanent or fixed signals.

School furniture and requisites.

Seeds and bulbs; sheep dip; sprayers for live stock or plants.

Staves, steam launches; thread for boot and shoe makers, saddlers, sailmakers, etc.

Tin and zinc; telegraphs and telephones.

Tramway construction requisites, comprising: rails, sleepers, fasteners, iron gates, girders, bridge work and culvert tops.

Vegetables, fresh, except onions and potatoes.

Water boring apparatus; wine presses and pumps.

Wine, spirits or beer for officers in imperial military forces.

Wool, straw, hay and forage presses; wire and wire netting; posts and all other articles used in agricultural or railway fencing; wire rope.

Ad Valorem Duties.—A special duty of 20 per cent. ad valorem is collected on the following articles:

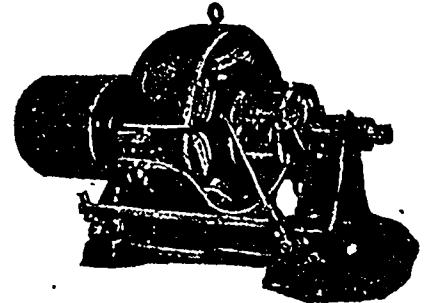
Blankets and sheets of wool or cotton, and apparel made from blanketing or baize.

Bonbons or fancy confectionery; playing cards.

Carriages, carts, coaches and wagons, including parts.

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ELECTRICAL CONTRACTORS



DYNAMOS, TELEPHONES, SLOW  
SPEED MOTORS, MOTORS, SUPPLIES,  
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We manufacture Direct Current Machinery in  
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THOMAS G. IRVING, Gen'l Manager Western Canada,  
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Extracts and essences; medicinal preparations; perfumery, cosmetics and drugs, and toilet soaps.

Fireworks; shawls; and soups.

A general duty of 7½ per cent. ad valorem is levied on all articles not enumerated in the list of specific or ad valorem duties or in the free list.

**PITTSBURG METAL MARKETS.**—The demand for raw and finished iron and steel materials in Pittsburg is quiet. The matter of importing English Bessemer in order to make up the shortage of the domestic product is being considered. Foundry iron is scarcely obtainable, but forge and basic are rather easy. We quote prices as follows: Bessemer, \$21.50 to \$22, valley; forge, \$21.25 to \$21.75, Pittsburg; No. 2 foundry, 1903, \$22.50 to \$23; prompt, \$24.50 to \$25; basic, \$20.80 to \$21.05, Pittsburg.

**STEEL.**—Transactions in steel are light, domestic billets being quoted at \$31, and sheet bars at \$32.50 to \$32.75. Foreign billets are offered at \$29, and sheet bars at \$29.80, while basic open hearth bars are quoted at \$30.60.

**MUCK AND SKELP.**—Standard local grades of muck bar are held at \$36, while eastern muck is offered at from \$35 to \$35.50. We quote skelp as follows: Iron grooved 2.10c.; sheared 2.10c. to 2.15c.; steel, grooved, 2.15c.; sheared, 2.15c. to 2.20c.

**NICKEL.**—Nickel at present is quoted from 40 to 47 cents per pound for large quantities down to ton lots, according to size and terms of order, the price for smaller lots according to quantity, running as high as 60 cents per pound.

**QUICKSILVER.**—The New York price continues \$48 per flask for large orders, with a slightly higher figure for small lots. In San Francisco prices are steady, and the quotation is \$45.50 to \$46.50 per flask for domestic orders. For export orders \$44 per flask is quoted. The London price remains £8 15/0 per flask, with the same figure quoted from second hands.

**PLATINUM.**—Market is \$19 per oz. in New York. London prices are about on a parity with our market. Chemical ware best hammered metal from store, is quoted at 73¼c. per gram.

**STATUS OF THE BLAST FURNACE INDUSTRY.**—The total capacity of furnaces in blast in the United States and Canada on September 1, 1902, was 335,189 tons which is 1,276 tons less than the weekly capacity on August 1 and 15,701 tons less than the weekly capacity on June 1. Furnaces in blast on September 1, represent a total yearly output of 17,430,000 tons, so that unless there is some decided increase in output during the next four months the estimated figures of over 18,000,000 tons output this year are not likely to be realized.

**SOUTH AFRICAN TRADE.**—Messrs. Smith, Clark & Co., manufacturers' agents, merchants and general importers, Port

Elizabeth, Cape Colony, South Africa, are successors to the business of G. Glenison Smith, of that place, who has become well known to many Canadian exporters through his advertisement in THE CANADIAN MANUFACTURER. Regarding this change, Mr. Smith writes us that it has largely increased the capital of the concern, who are now in a position to im-

port goods direct, as well as to act for exporters on a commission basis. They will continue to make a specialty of Canadian lines, and will at all times supply enquirers with information regarding the South African market. Mr. Smith will remain in Port Elizabeth, while Mr. Clark will conduct a branch business at Capetown and perhaps at Durban.



**WE BUILD THE BEST**

**TRUCKS**

Of every description on the Slingsby Patent Sliding Wheel Principle. Tell us what you need.

**H. C. Slingsby for Canada**  
TEMPLE BUILDING, MONTREAL

Largest Truck Works in the World.  
Main Factory—BRADFORD, ENGLAND.  
Canadian Factory—MONTREAL.

**DIXON'S** DOES TWO THINGS

**SOLID Belt Dressing.**

AND DOES THEM THOROUGHLY

STOPS THE BELT FROM SLIPPING.

PLEASES THE MAN WHO USES IT.

NOTHING EQUALS IT..

SAMPLE SENT FREE. SEND FOR ONE.

**JOSEPH DIXON CRUCIBLE CO.,** JERSEY CITY, N.J. U.S.A.

All interested in South and Central American Trade should read

**THE SOUTH AMERICAN JOURNAL**

Founded 1863

The recognized organ of South American interests and business in the Anglo-Saxon World.

SUBSCRIPTION - - 25s. PER ANNUM.

Specimen copy post free; also the pamphlet, "South America as a Field for Enterprise," giving much information with regard to the countries, moneys, weights, measures, mails, etc.

OFFICES

**DASHWOOD HOUSE,**  
New Broad Street,  
LONDON, E.C.; ENG.

**Canadian . . . .**

**Manufacturers**

WHO WISH TO ADVERTISE IN THE

**BRITISH MARKET**

ADDRESS

**Ratcliffe's Advertising Agency,**

ADVERTISEMENT CONTRACTORS,

**1 LOMBARD COURT,**

LONDON, ENGLAND

Established 1849

SOLE AGENTS CONTRACTORS FOR H. M. Board of Trade "Labor Gazette." (Official Organ Labor Department, Board of Trade). "London Chamber of Commerce Journal." (Official Organ London Chamber of Commerce, Incp.), Etc., Etc.



**ALUMINUM.**—The following quotations in ton lots of aluminum are made in New York: No. 1 ingots for remelting 33c. per pound; nickel aluminum casting metal, 33; casting alloy, 27; rolled aluminum sheets, 37 and up.

**LEAD.**—The London markets quote lead at £10 18/9. The St. Louis market is firm; Soft Missouri 4.00 to 4.02. The demand for lead in New York is very active, prices, however, do not change. We quote 4.15 for spot delivery in carloads.

**COPPER MARKETS.**—Late reports from London show that the foreign copper market is quite active, the price ranging from £53½ to £53 8-9, a gain over prices earlier in the week. The New York copper market is strong and heavy sales are reported. Standard copper is quoted at \$11.50; electrolytic copper, \$11.75; Lake copper, \$12.00.

The Canadian Government has contracted with Messrs. Elder, Dempster & Co., Furness, Withey & Co., and the Allan line for the running of a line of steamships from Montreal and Quebec to Cape Town and one or two other ports. The vessels are to be fitted with refrigerating machinery and the sailings are to be monthly.

**SOUTHERN PIG IRON MARKETS.**—New York reports show that sales of No. 2 Southern foundry iron have been made as high as \$23 to \$24 per ton f.o.b. Birmingham. While the statement goes

around that Southern furnaces have no iron for sale for delivery this year, we frequently hear of some of the low grade numbers being freely offered to consumers on the basis of \$17 per ton, f.o.b. Birmingham. This is particularly true of No. 4 and gray forge.

**COPPER AND LEAD.**—Late reports from New York show that the copper market is easier; Lake \$12 to \$12.25; electrolytic, \$12 to \$12.10; casting, \$11.75 to \$12; standard, \$11.50 to \$11.75. London easy, £53 17s 6d. Lead unchanged in New York. London lower at £10 17s 6d.

**RUBBER MARKETS.**—The following are the latest New York quotations on old rubber: Old rubber boots and shoes \$7; pneumatic bicycle tires, \$5.37½; solid rubber wagon and carriage tires, \$6.75; white trimmed rubber, \$9; heavy black rubber, \$4.25; fire and air brake hose, \$2; garden hose, \$1.25; matting, \$1.05; red rubber, free of red packing, \$7.

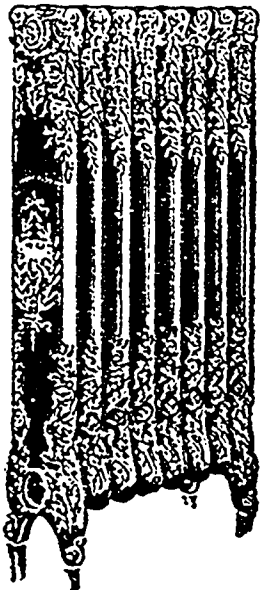
**LIVE STOCK EXPORTATIONS.**—The exportation of live stock from Canada for the fiscal year ending June 30 amounted to \$13,739,113, of which sum \$10,704,875 went to Great Britain, \$2,168,349 to the United States, and \$865,889 to other countries. The gain of the live stock exports for the past year was \$1,537,518 over 1901.

**THE PACIFIC CABLE.**—Mr. R. E. Peake, a member of the firm of Clarke, Forbes & Taylor, the engineers to the Pacific Cable

Board, was in Toronto last week, accompanied by Mr. F. R. Lucas, engineer-in-chief to the Telegraph Construction & Maintenance Co., the contractors for the new Pacific cable. Together with Mr. T. Clarke, chief electrician for the contractors, they are now en route to join the cable steamer Colonia at Esquimalt. The Colonia has in her holds 3,540 miles of cable for the section between Barclay Sound and Fanning Island. The section from Fanning Island to Fiji is now on board the Anglo and will be laid immediately after the completion of the Fanning Island section.

**COKE.**—Late reports from Chicago show that the price of coke has advanced to the unprecedented figure of \$12 to \$13 per ton. One consequence of the advance is that small foundries are threatened with ruin, or at least, with being forced to close down until prices shall drop. Even at this advanced price, however, all orders cannot be supplied. This is due to the same cause that explains, in part, the jump in price, the car famine that has existed for some time. Dealers say the railroads are diverting cars which otherwise would be used for coal, to the meat, produce and grain traffic, which is exceedingly heavy and which pays better than hauling fuel.

**ONTARIO'S AGRICULTURAL PROSPERITY.**—Returns for the season show that the agricultural products of Ontario will reach a total value of \$200,000,000 for 1902, as against a total of \$60,000,000 for Manitoba and the North-West.



Send for Catalogue on up-to-date Heating.

WARM UP YOUR

Buildings

WITH

“Safford Radiators”

They are the triumph of the century.  
In demand the world over.

Made in countless sizes and every possible shape, and in a variety of styles, plain and ornamental, sufficient to suit the most exacting.

**THE DOMINION RADIATOR CO., Limited,**  
TORONTO

HEAD OFFICE, - - DUFFERIN STREET





**CASTINGS (Brass)**—Duty 20%.  
21 to 25 cents per lb.

**CASTINGS (Phosphor Bronze)**—Duty 20%.  
22 cents per lb.

**CASTORS**—Duty 30%.  
Bed, 55% discount.  
Plate, 55%  
Truck, Payson's, 60% discount.

**CEMENT**—Duty 12½ cents per 100 lbs.  
Belgian, Portland, \$2.50 to \$2.75.  
Canadian, hydraulic, \$1.35 to \$1.60.  
Canadian, Portland:  
Hathbun's, "Star," \$2.35 to \$2.75.  
"Beaver," \$2.10 to \$2.50.  
"Ensign," \$1.50 to \$2.30.  
The smaller figures represent car load lots, and the larger less than car loads, f.o.b., Toronto.  
English, Portland, \$3.

**CHALK**.  
Carpenters', colored, 15 to 75 cents per gross.  
Crayon, 14 to 18 cents per gross.  
Red, 5 to 6 cents per lb.  
White Lump, 60 to 65 cents per 100 lbs.

**CHAIN**—Duty 5%.  
Brass, Jack, 30% discount.  
Iron, Jack, 25% discount.  
Safety, 55

**CHISELS**—Duty 30%.  
Calking, Socket, Framing and Firmer.  
P.S. & W. Extra, 60, 10 & 5% discount.  
Warnock's, 70% discount.

**CLEAVISES**—Duty 30%.  
Screw, \$2.50 per doz.

**CORD**—Duty 25%.  
Sash, Silver Lake (A), 50 cents per lb. (B), cents per lb.  
Baltic, 25 cents per lb.  
Hercules, 30 cents per lb.

**COTTON DUCK**—Duty 2½%.  
36 in. wide, 33 cents per yd.  
48 in. wide, 45 cents per yd.  
60 in. wide, 57 cents per yd.

**CROW BARS**—Duty 30%.  
5 cents per lb.

**CRUCIBLES**.  
Dixon's, 7 cents per number.

**DRILLS**—Duty 25%.  
Blacksmiths' \$5 to \$15 each.  
Jardine's, \$7.50 to \$20 each.

**DYNAMITE**.  
30 to 50 cents per lb.

**EMERY**.  
Coarse, 5 cents per lb. Fine, 7 cents per lb.  
Emery Cloth—Duty 25%. Beader & Adamson, 40% discount. Emery Hones—Duty 25%. \$3 to \$5 per doz. Emery Steels—Duty 25%. \$2 per doz. Emery Wheels—Duty 25%. 65% discount.

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

**FENCING**.  
Barb Wire, \$3.00 per 100 lb.

**FENCING (Wire)**—Duty 15%.  
Galvanized, barb, f.o.b. Toronto, \$3.05.  
Galvanized, plain twist, f.o.b. Toronto, \$3.05.  
Mesh, 5½x10½, 20 rod rolls 55% discount, Can. list.  
" 4 x8, 20 " 55 & 5%  
" 3 x8, 20 " 55 & 5% "

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

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

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

**FLUE SCRAPPERS**—Duty 30%.  
Engineers' Favorite, 40% discount.

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

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

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

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

**GLASS**—Duty 20%. (Window).

**GLASS LAMP CHIMNEYS**—Duty 30%.  
Common Crimp, per doz. 0.43 cents.  
" " " A, 45 "  
" " " B, 65 "  
" " " C, 50 "  
" " " D, 75 "  
Lead Glass, " " " " "

**FRUIT JARS**—Duty 30%.  
Standard pints, \$7.25 per gross.  
quarts, \$7.75 per gross.  
half gal., \$10.00 per gross.  
Imperial pints, \$7.75 per gross.  
quarts, \$8.75 per gross.  
half gal., \$12.00 per gross.

**GLUE**—Duty 25%.  
Cabinet, sheet, 12 to 13 cents per lb.  
Common, 8½ to 9 cents per lb.  
Gelatine, 22 to 30 cents per lb.  
Strip, 18 to 20 cents per lb.  
White, extra, 18 to 20 cents per lb.

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

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

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

**HALTERS**—Duty 30%.  
Leather, 1 in. strap, \$3.75 to \$4 per doz.  
Leather, 1½ in. strap, \$3.15 to \$5.20 per doz.  
Rope, ½, \$9 per gross.  
Rope, ¾ to 1, \$11 per gross.  
Web, \$1.87 to \$2.45 per doz.

**HAMMERS**—Duty 30%.  
Blacksmiths', 10 cents per lb.  
Carpenters', Madol's, \$6.40 to \$8.75 per doz.  
Carpenters', Warnock's, \$4 to \$7.50 per doz.  
Machinists', 25 cents per lb.  
Sledge, 10 cents per lb.  
Tack, 60 cents to \$1.20 per doz.  
Tinner's, \$1 to \$2.50 per doz.

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

**HANGERS**—Duty 30%.  
Barn Door, round groove, \$1.50 to \$6.50 per doz.  
Parlor door, \$3 to \$6 per set.

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

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

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

**HINGES**—Duty ½ cents per lb., & 25%.  
Heavy T and strap, 4 in., 6 cents per lb.  
" " " 5 in., 6 " " "  
" " " 6 in., 6 " " "  
" " " 8 in., 5 " " "  
" " " 10 in., 5 " " "  
Light T and strap, 65 & 5 off.  
Screw hook and hinge, 6 to 12 in., \$1.50 per 100 lbs.; 14 in. up, \$3.50.  
Spring, \$12 per gross pairs.

**HOOKS**—Duty 30%.  
Brush, \$7.50 to \$9.  
Reaping, 50, 10 and 5% discount.  
Malleable, wardrobe, \$1.50 to \$2.50 per gross.  
Wire, \$1.25 to \$2

**HORSE NAILS**—Duty 30%.—See Nails

**HORSE SHOES**—Duty 30%.  
Lt. Mod. & H., \$3.40 per keg.  
Snow, \$3.35 per keg.  
Steel, \$3.30 to \$5.25 per keg.  
Too weight steel, \$4.15 per keg.

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

**INJECTORS**—Duty 30%.  
Pemberton, 65% discount.  
L. J. C., 65% discount.

**IRON**—See Metals.

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

**KNIVES**—Duty 30%.  
Butcher, \$2 to \$3 per doz.  
Pocket, \$1 to \$3 per doz.

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

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

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

**LANTERNS**—Duty 30%.  
Cold Blast, \$7 per doz.  
Dashboard, cold blast, \$9 per doz.

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

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

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

**LINES (Cotton)**—Duty 25%.  
Chalk, \$2 to \$3.60 per gross.  
Wire, clothes, \$2.50 to \$1.50 per M ft.

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

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

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

**METALS**.  
Ingots.—Aluminium, 35 to 50 cents per lb.  
Antimony, \$19.50 per 100 lbs.  
" Copper, " English, " 18 cents per lb.  
" " Bar, 25 cents per lb.  
" Tin, " Lamb & Flag, " 32 cents per lb.  
" " Stralts, 32 cents per lb.  
" " Bar, 33 cents per lb.  
Zinc, 6 to 6½ cents per lb.; sheets, 7 cents per lb.  
Babbit Metal (duty 10%).  
Lewis, 7 to 10 cents per lb.  
Magnolia, 25 cents per lb.  
Spooners' Coppertin, No. 2, 12½ cents per lb., finest, 25 cents per lb.  
Syracuse Smelting Works, dynamo, 29 cents per lb.; special, 25 cents per lb.

**Sheets, Black, Duty \$7 per ton.**  
" 10—\$2.65, 100 lbs.  
" 12—\$2.75 "  
" 14—\$3.10 "  
**Sheets, Black, Duty 5%.**  
" 17—\$3.10, 100 lbs.  
" 18—\$3.20 "  
" 20—\$3.25 "  
" 22—\$3.30 "  
" 24—\$3.50 "  
" 26—\$3.75 "  
" 28—\$4.00 "  
**Sheets, Tinned—7½ cents per lb., base price.**  
**Sheets, Galvanized Iron.**  
" 17—\$3.50 per 100 lbs.  
" 18—\$3.90 "  
" 20—\$3.90 "  
" 22 to 24—\$4.10 per 100 lb.  
" 18 to 21—\$4.50 "  
" 22—\$4.25 per 100 lb.  
" 23—\$4.50 "  
" 16—(Queen Head), \$3.90 per 100 lb.  
" 18-24—(Queen's Head), \$4.15 per 100 lb.  
" 25—\$4.40 per 100 lb.  
" 28—\$4.65 "  
**Sheets, Corrugated—Galv., \$4.50 per 100 sq. ft.**  
**Shafing, Bright Steel,—\$3.50 per 100 lb.**  
**Shingles, Galv. Iron, Ordinary, \$4.50 per sq.**  
" " " Medium, \$5.45 "  
" " " Best, \$5.80 "  
" " " Painted Steel, Ordinary, \$3.15 per sq.  
" " " " Medium, \$3.35 "  
" " " " Best, \$5.80 "

**Iron (duty \$7 per ton).**  
" Bar (Common),—\$1.95 @ \$2.05.  
" Bar, " Swedes,—" \$1.50 per 100 lb.  
" Refined Bar,—\$2.00 per 100 lb.  
**Iron, Planished Sheet (duty 5%)**  
" " A—\$6.00 per 100.  
" " B—\$5.00 "  
" Russia—\$10.00 per 100 lb.  
**Pig Lead (duty 15%).—Domestic, \$3.75 per 100 lb;**  
pigs, imported, \$4.25 per 100 lb.; bars, \$5 per 100 lb.; sheets, \$3.50 per 100 lb.  
**Soilder bar (duty 25%).—1st, refined, 18 cents per lb.;**  
half-and-half, 15 cents per lb.  
**Iron, Pig (duty \$2.50 per net ton). No. 1 foundry track, Toronto, \$21, No. 2, \$20.50.**  
**Iron, English Horse Shoe.—\$2.85 per 100 lb.**  
**Iron, Band.—\$2.05 per 100 lb.**  
**Iron, Hoop.—\$2.90 per 100 lb.**  
**Beams, Steel.—\$2.75 per 100 lb.**  
**Rods.—Brass, 24 cents per lb., base price.**  
**Rails, Small Steel.—\$3 per 100 lb.**  
**Steel, Cultivator.—\$4.50 per 100 lb.**  
" Channel,—\$3 to \$4 per 100 lb.  
" " Firths,—12 cents per lb.  
" " Crescent,—9 cents per lb.  
" Cant Hook,—7½ cents per lb.  
" Machinery (in the rough).—\$2.25 per 100 lb.  
" Machinery,—\$2.75 per 100 lb.  
" Mild,—\$1.90 per 100 lb.  
" Sleigh Shoe,—\$1.90 per 100 lb.  
" Spring,—\$3.00 per 100.  
" Tire,—\$2.05 per lb.  
" Too Caulk,—\$2.20 per 100 lb.  
**Steel, Blister.—12½ cents per lb.**  
**Steel, Hammer.—7 cents per lb.**  
**Steel, Decarbonized Sheet—7 cents per lb., base.**  
**Tank Steel Plate (duty \$7 per ton).—\$-16, \$2.60 per 100 lb.**  
**Plate, Steel Boiler (duty 10%).—1 and larger, \$2.50 per 100 lb.**  
**Steel Boiler Heads (duty 10%).—\$2.60 per 100 lb.**  
**Canadian Plate.—All dull, 32 sheets, \$3 half polished, \$3.10.**

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



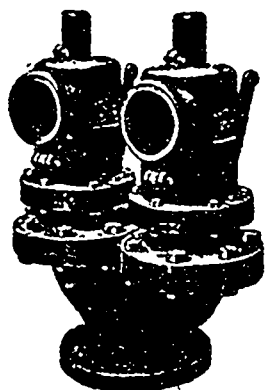
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