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Highest Efficiency

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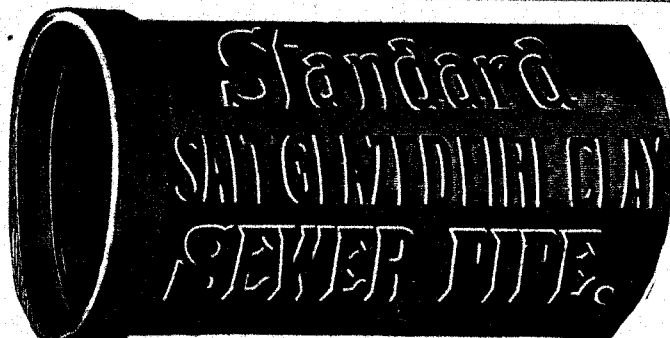
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This Machine Leads ; Others try to Follow!

The floor space required is so little that sufficient room can be spared in the smallest mills.

Its form of construction is such that

It is the most convenient to

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- Examine flour stocks.
- Examine separations.
- Examine sieves.
- Repair sieves, } Without removing spouts.
- Easily Balance.

## Some Advantages are :

Saves spoucing, saves elevators, saves conveyors, saves millwrighting.

Displaces 6 to 10 ordinary reels.

All parts are easy of access without leaving the floor.

(No step-ladders required).

All passages for stocks are straight, large, ample, will not choke, and communicate directly from sieves to outside.

There are no joints at edges of sieves for stock to leak through.

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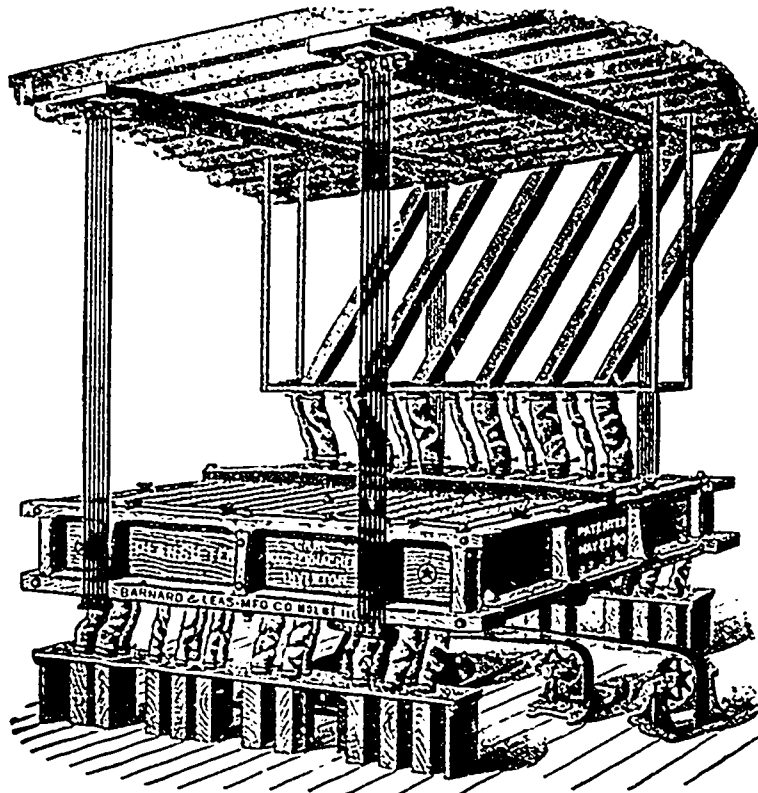
The Plansifter is perfectly balanced, so that it imparts no vibration to mill building.

Requires no bracing whatever.

Impurities all floating to the surface, are carried off and never again mixed with pure stock.

The Plansifter will be placed on trial on its merits, and the miller himself left to be the judge as to its performing all that is claimed. If not perfectly satisfactorily machine need not be kept.

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THE PLANSIFTER produces results far superior to any other machine or system.

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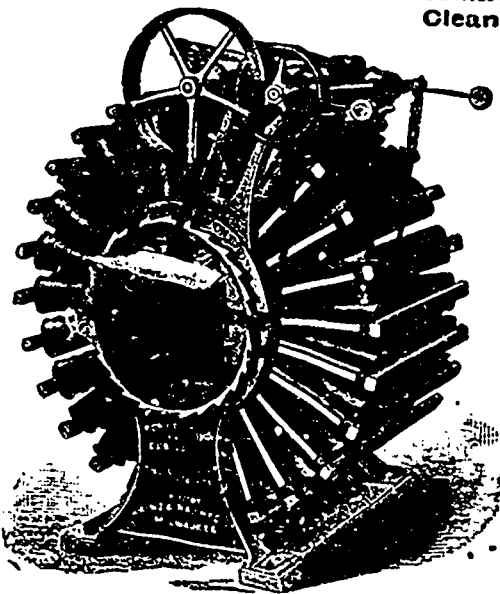
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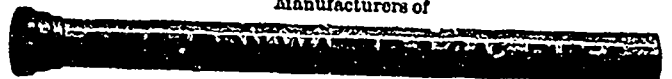
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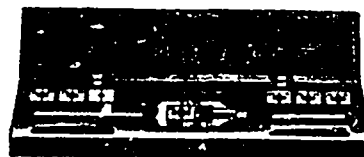
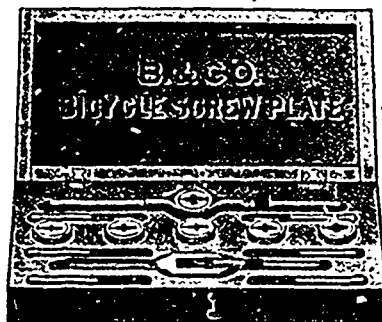
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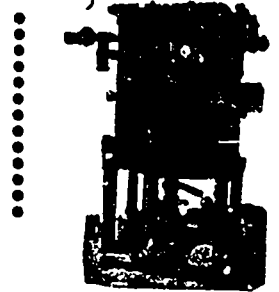
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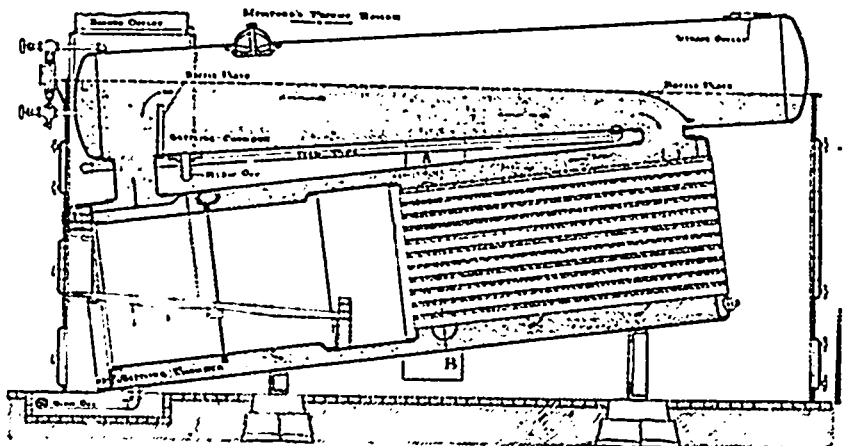
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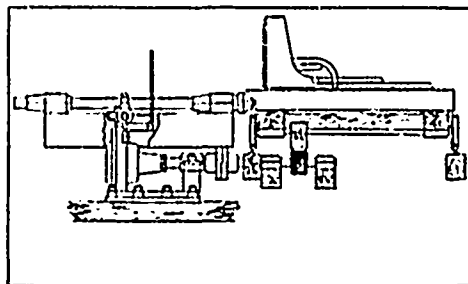
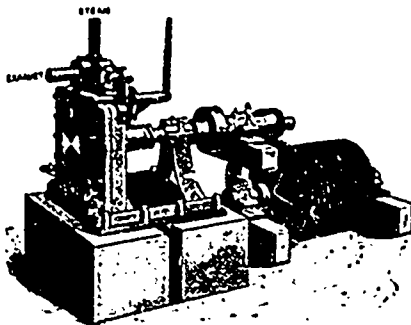
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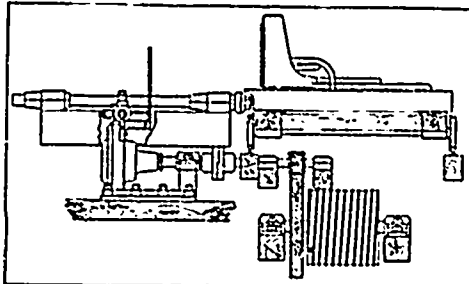
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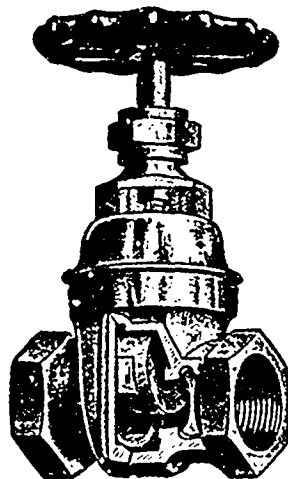
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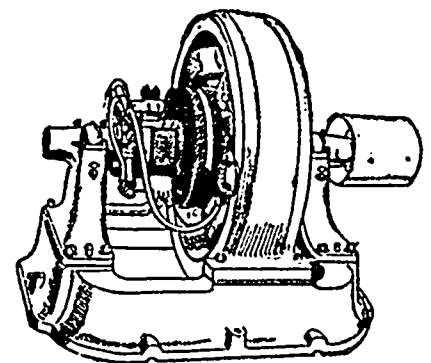
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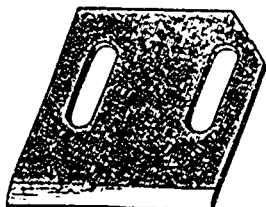
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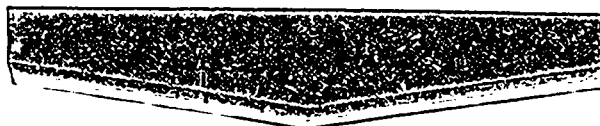
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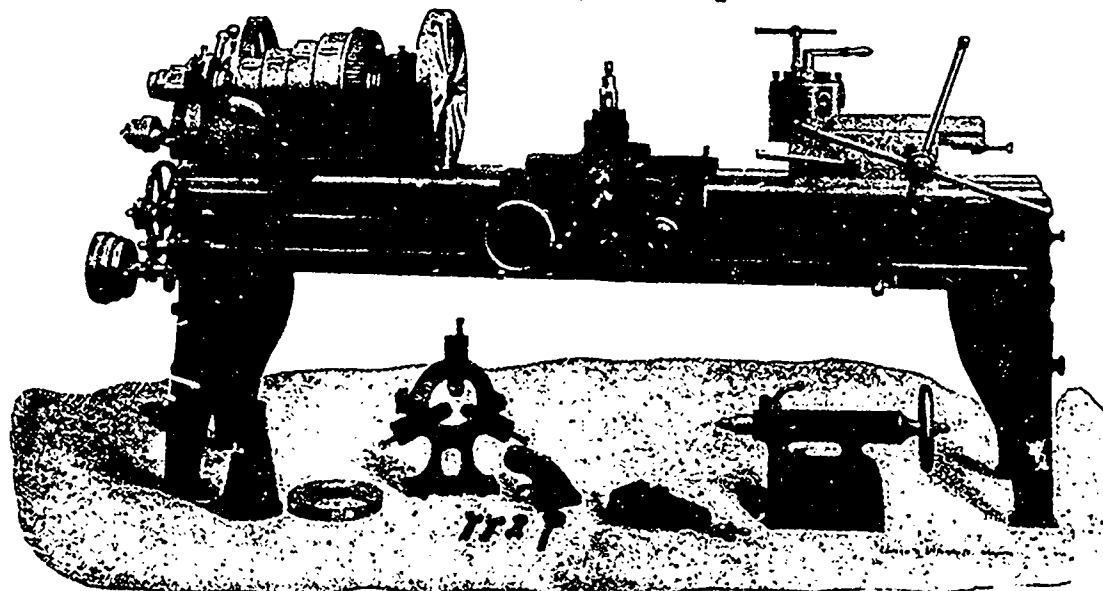
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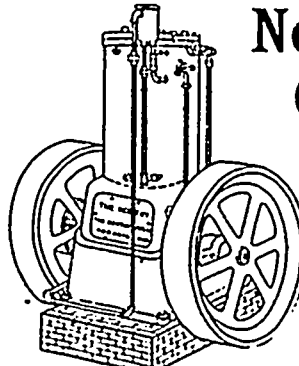
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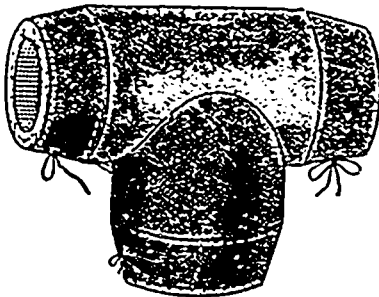
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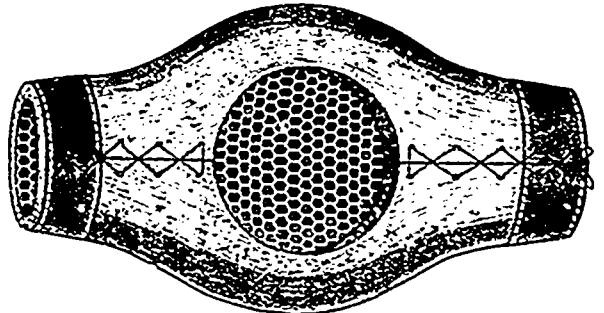
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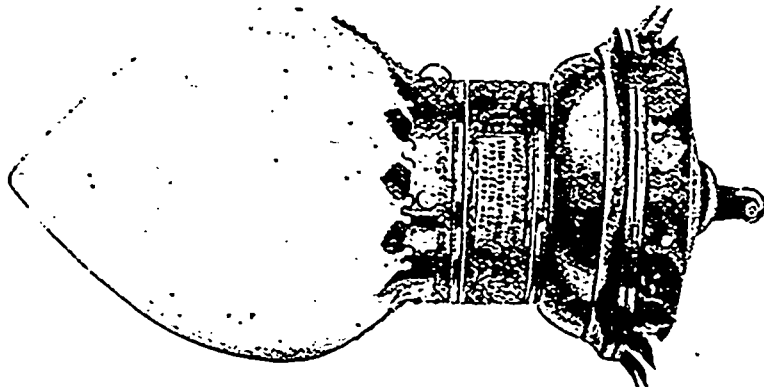
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CANADIAN EXPORTS OF MANUFACTURES.

Value of Manufactured Articles of Domestic production, exported from Canada during the year ended June 30th, 1895, 1896 and 1897, prepared expressly for THE CANADIAN MANUFACTURER by George Johnson, Dominion Statistician.

ARTICLES	1895	1896	1897
Agricultural Implements..	\$663,718	\$593,464	\$761,842
Books.....	59,014	59,056	80,549
Bread and Biscuits.....	16,423	19,208	16,530
Carriages, Carts, Wagons and parts of.....	54,153	97,241	44,723
Bicycles, and parts of....			312,805
Cottons.....	546,168	766,812	915,327
Clothing, Hats and Caps..	38,501	56,174	43,934
Cordage, Junk and Oakum	63,827	144,878	125,701
Furs.....	15,616	7,345	12,560
Glass.....	4,738	6,881	7,208
Gypsum and Lime.....	108,151	99,783	75,430
Extract of Hemlock Bark.	115,894	174,819	97,483
Explosives, &c.....	98,083	92,763	76,578
Household Effects.....	991,735	1,237,293	945,855
Iron, Scrap.....	6,010	8,986	5,030
Iron and Hardware.....	183,448	269,611	336,736
Leather.....	1,292,823	1,919,156	1,444,584
Boots and Shoes.....	74,241	75,919	97,148
Machinery.....	104,052	198,519	166,868
Musical Instruments.....	297,882	342,232	399,725
Oil Cake.....	94,224	121,424	195,039
Rags.....	63,819	33,702	78,564
Sewing Machines.....	15,201	29,830	14,354
Stone, Wrought.....	19,802	6,688	4,983
Salt.....	1,136	767	1,168
Soap.....	4,541	17,925	15,114
Sugar.....	112,354	3,008	76,235
Tow.....	92,148	93,195	84,728
Tobacco, Snuff and Cigars.	84,968	73,270	69,602
Woolens.....	71,942	62,393	47,884
*Wood.....	19,663,446	22,663,053	26,844,461
Ale and Beer.....	11,823	10,482	6,832
Whiskey and other Spirits	329,774	375,528	450,702
Ships sold to other countries	172,563	99,392	105,164
Other articles.....	672,158	716,129	755,034
<b>Total Manufactures..</b>	<b>\$26,144,376</b>	<b>\$30,476,932</b>	<b>\$34,715,480</b>

\*Includes Ashes, pot, pearl, leached and all other; Shingles, Box Shooks and Sawn Lumber of all kinds.

It will be observed in the above table that the item "Wood" does not give the names of the articles included in that item, and that the foot note does not give them in a satisfactory or exhaustive manner. To remedy this defect we herewith give the following table:

STATEMENT B.  
Showing the value of the principal articles of Manufactures of Wood exported from Canada during the fiscal years 1895, 1896 and 1897:—

ARTICLES.	1895	1896	1897
<b>Manufactures of Wood</b>			
Ashes, pot, pearl, leached and all other.....	\$123,222	\$110,092	\$101,590
Lumber, viz.:			
Battens.....	5,922	35,267	24,594
Deals, pine.....	2,311,915	3,037,791	3,266,087
" spruce and other..	5,271,898	5,579,746	7,094,485
Deal Ends.....	464,260	520,646	637,193
Laths.....	452,973	492,224	471,341
Palings.....	13,716	10,378	8,403
Pickets.....	26,255	25,793	35,532
Planks and Boards.....	7,407,584	\$,513,419	10,817,912
Joists.....	7,531	14,747	23,531
Scantlings.....	177,146	387,707	414,443
Staves, standard.....	3,153	2,828	94,906
" other and Headings	635,119	699,155	604,475
All other lumber, n.o.s...	632,130	653,001	315,660
Shingles.....	687,391	899,541	1,201,366
Shooks, box.....	121,487	72,111	56,435
" other.....	32,119	53,499	24,191
Barrels, empty.....	9,012	5,523	3,331
Household Furniture.....	97,005	75,447	115,863
Doors, Sashes and Blinds....	139,402	190,004	285,161
Matches and Match Splints.	172,153	195,836	151,276
Mouldings, Trimmings, &c..	26,378	18,118	16,121
Pails, Tubs, Churns, &c.....	7,026	11,602	12,789
Spool Wood and Spools.....	75,125	99,022	85,770
Wood Pulp.....	590,874	675,777	741,959
Other manufactures of.....	172,647	283,779	240,047
<b>Totals.....</b>	<b>\$19,663,446</b>	<b>\$22,663,053</b>	<b>\$26,844,461</b>

It is quite apparent to those who may make the comparison that there is a great difference between the values of all manufactured articles exported from Canada, as shown in Statement A, and that given in the Trade and Navigation Returns for the same years; and to facilitate that comparison we give the following:—

STATEMENT C.

The Trade and Navigation Returns give the following classifications of Exports from Canada during the fiscal years 1895, 1896 and 1897:

Year	The Mine.	The Fisheries.	The Forest.	Animals and their products.	Agricultural products.
1895	\$6,983,227	\$10,692,247	\$23,891,166	\$34,397,770	\$15,719,128
1896	8,059,650	11,077,765	27,175,686	36,507,641	14,083,361
1897	11,298,915	10,314,323	31,258,729	39,245,252	17,982,646

Year.	Manuf'rs.	Misc'ous.	Coin and Bullion.	Estimated amt not returned at Inld Ports.	Total Exports domestic.
1895	\$7,768,875	\$65,938	\$256,571	\$3,300,090	\$103,085,012
1896	9,365,384	109,265	207,532	3,329,053	109,915,337
1897	9,522,014	63,531	327,298	3,947,130	123,959,838

A NEW CLASSIFICATION.

For a number of years students of Canadian trade have observed that the classification of general items, or divisions of exports were, several of them, incorrect and misleading, and to remedy this erroneous classification, the statistician has made a new arrangement by which some special lines have been taken from the classes in which they were included, and placed in those to which they properly belong. Thus under the new classification the following articles have been transferred from "The Mine" and "The Forest" to "Manufactures." From "The Mine," salt and oil, refined, and from "The Forest," ashes—pot, pearl, leached and all other; and sawn lumber of all kinds, viz., battens, deals and deal ends, laths, paling, pickets, planks and boards, joists, scantling

staves and headings, other lumber, n.e.s., shingles, shooks—box and other.

## STATEMENT D.

Under this new classification the exports in the years named were as follows:—

Year.	The Mine.	The Fisheries.	The Forest.	Animals and their products.	Agricultural products.
1895	\$6,981,550	\$10,692,247	\$5,517,342	\$34,387,770	\$15,719,128
1896	8,056,020	11,077,765	6,067,741	36,507,641	14,083,361
1897	11,297,593	10,314,323	6,066,585	39,245,252	17,982,646

Year.	Manuf'rs.	Misc'os.	Coin and Bullion.	Estimated amt short returned at In'd Ports.	Total Expts. domestic.
1895	\$20,144,376	\$85,938	\$256,571	\$3,300,090	\$103,085,012
1896	30,476,959	109,265	207,532	3,329,053	109,915,337
1897	34,715,480	63,531	327,298	3,947,130	123,959,838

## STATEMENT E.

The difference in the value of exports of The Forest and of Manufactures according to the two classifications for the years under consideration is as follows:—

The Forest.		
	Old Classification.	New Classification.
1895	\$23,891,116	\$5,517,342
1896	27,175,686	6,067,741
1897	31,258,729	6,066,585
Manufactures.		
	Old Classification.	New Classification.
1895	\$7,768,875	\$26,144,376
1896	9,365,384	30,476,959
1897	9,522,014	34,715,480

For the three years under consideration the average value of exports of manufactures under the old classification was but \$8,885,424, while under the new classification the value was \$30,445,604, an increase of some 300 per cent. The average total exports for the three years was \$112,326,062 per year, of which, under the old classification, manufactures were credited with but about 7 per cent. while under the new classification the credit amounted to over 27 per cent.

## STATEMENT F.

The following statement shows the average value of the exports of Canadian products, for the fiscal years, 1895, 1896 and 1897, according to the new classification, and the percentage each class bears to the whole.

		Per cent. of whole.
The Mine	\$ 8,788,400	7.82
The Fisheries	10,694,800	9.321
The Forest	5,871,556	5.22
Animals and their products	36,714,554	32.326
Agricultural products	15,929,380	14.173
Manufactures	30,445,604	27.1
Miscellaneous	86,545	.7
Coin and bullion	263,800	.2
Short returns	3,525,423	3.14
Total exports	\$112,326,062	100.

Statement A shows the value of all manufactured articles exported during the years named.

Statement B shows the export value of manufactures of wood, in detail, including wood pulp.

Statement C gives the total value of exports of domestic produce from Canada, including coin and bullion, according to the several general classifications, according to the Trade and Navigation Returns.

Statement D gives the total value of all exports, enumerated in Statement C, modified according to the new classification.

Statement E shows the difference in the value of the exports of products of the forest and of manufactures, as

shown in the Trade and Navigation Returns and in the new classification.

Statement F shows the relative value of each of the several general classes of exports on the basis of the average value thereof for the years under consideration as compared with the grand total of exports for the same years.

## THE KLONDIKE PROBLEM.

Rumors from Ottawa indicate that the Government has under contemplation a new project for establishing railway communication from some point in British Columbia to the gold fields of the Yukon. Among other reports it is said that under this new scheme it is intended to aid it by a grant of 10,000 acres of land per mile.

If our Government and parliament would give due consideration to what is happening in the gold region of Western Australia, they would realize the impolicy of alienating any large portion of our gold fields. According to the London Statist of 30th April, there is over sixty millions of dollars invested in West Australian gold-producing companies, all of whose claims barely cover 5,000 acres. During the year 1897, over 789,000 ounces of gold were obtained from these claims, the value of the gold being over \$14,000,000.

It has been urged by some members of the Government that the grant of land, which it was proposed to hand over to Mackenzie and Mann, under the Klondike deal, was of a mere gambling value, under which the enterprising contractors were assuming a great risk. When it is seen that from less than 5,000 acres in Western Australia, over \$14,000,000 in gold was obtained in one year, it looks as if the Government had been taking all the big risk of staking 150 to 200 blocks of 25,000 acres each, some one of which may prove more valuable than the 5,000 acres in West Australia, against the petty cost of 150 miles of tramway, the chances being 200 to one in favor of the contractors. Gamblers would call this mighty long odds.

All agree that a railway to the gold fields must be built, but the funds for the work must be provided in some more judicious way than by placing the whole of our gold lands and the prosperity of tens of thousands of prospectors and others under the control of any company.

## THE BEET SUGAR INDUSTRY.

At a recent meeting of the Executive Committee of the Canadian Manufacturers' Association a resolution was passed endorsing the project herein below mentioned and recommending it to the attention of the Dominion Government. The reference being to the Maschinenfabrik Greinbroich, which is the title of a firm in Germany which has been very extensively engaged in the erection of beet sugar factories in various places in Europe, Asia and the United States. This concern recently supplied the machinery for the immense factory which Claus Spreckles has erected in California, having a daily capacity for working 3,000 tons of sugar beets. They have for many years entertained the project of establishing the beet sugar industry in Canada. They now advise that a syndicate is prepared to invest at once the foreign capital required for the construction and operation of a first-class beet sugar factory in some suitable locality in the

Province of Ontario, of the following capacity and on the following conditions:—

The factory to have a daily capacity for working 500 long tons of beets; the factory to be built of brick, and equipped with the very best modern and most approved machinery and so constructed as to dimensions of buildings and capacity of machinery, as to admit of an early and economical enlargement to 1,000 tons daily capacity. It is proposed that extensive cattle sheds shall be erected for the fattening of cattle from the by-products, pulp and molasses, which will furnish fodder for six months for about 4,000 head of cattle, and for twice that number when the capacity is enlarged to the extent anticipated. The cash capital required for construction and operation of the factory, and outbuildings connected with it, will be between \$400,000 and \$500,000.

The conditions on which the syndicate will furnish this capital are:—

That the technical part of the machinery will be admitted free of customs duty. This machinery is principally of a very intricate character and much of it of great weight. The weight for the 500-ton factory is a little over 900 tons. An engineer of the firm, who has investigated the matter, found that about one-third in value of the machinery can be advantageously obtained from Canadian workshops. That in addition to the conditions under the present tariff on imported sugars, the company shall receive a bounty on sugar made from Canadian beets during the first five years of operation, on every hundred pounds of sugar, in the proportion which such sugar bears to 100 degrees of purity:—

Season 1899-1900, \$1; 1900-01, 75c; 1901-02, 50c; 1902-03, 25c; 1903-04 25c.

As the tariff on imported sugars may be varied from time to time, and the requirements for bounty will vary accordingly, it is suggested that the rates of bounty may be established so as to meet this contingency. The present customs duty on West India sugars of ninety-two degrees purity is about fifty cents per 100 pounds. Add this to the above rates of bounty and make the respective years' bounties \$1.50, \$1.25, \$1, 75 cents, 75 cents, subject to a reduction of such rates of duty as may from time to time be leviable on West India raw sugars of ninety-two degrees purity. The average annual bounty for the five years is fifty-five cents per 100 pounds, or equal to fifty cents on sugar of ninety-two degrees.

Mr. Robert H. Lawder, of Toronto, who has given a great deal of careful and well-directed study to the question of the promotion of the beet sugar industry in Canada, and who is in correspondence with the German syndicate above alluded to, speaking of the encouragement of the industry in the United States, and the reasons why that industry should receive similar encouragement in Canada, says:—

"The conditions under the United States tariff and the legislative action of several States in the Union are much more favorable to the establishment of the beet sugar industry than they are in Canada. It is necessary to compare the tariffs on only two grades of sugars. Under the United States tariff, raw sugars of seventy-five degrees purity are subject to a duty of ninety-five cents per 100 pounds, and for every additional degree thirty-five one thousandths of one cent per pound. Refined sugars are subject to a duty of \$1.95 per 100 pounds. Under section five of the act, all sugars, raw, or refined, if imported from any bounty-paying country,

are subject to an additional duty equal to the net amount of such bounty. In the case of refined sugars of over ninety-eight degrees purity the combined duties on imports from Germany would amount to \$2.27, 12 per 100 pounds, and if from France, considerably higher. Under this legislation imports of refined sugars from the continent of Europe are practically excluded, and raw beet sugars are placed at a great disadvantage in competition with cane sugars.

"Under the Canadian tariff the duty on raw sugars not exceeding seventy-five degrees purity is fixed at forty cents per 100 pounds, with an additional duty of one and one-half cents for every extra degree. This would make the duty on sugar of ninety-two degrees sixty-five and one-half cents per 100 pounds. On refined sugars, on sugars above No. 16, Dutch standard in color, the duty is \$1.08 per 100 pounds for sugars of eighty-eight degrees purity, and one and one-half cents for each additional degree. On first quality of granulated sugar of ninety-nine degrees purity, the duty will be \$1.24½ per 100 pounds. But under a preferential feature of the tariff all raw sugars imported from the British West Indies and all refined sugars made from sugar produced in any of the British possessions are entitled to rebate in duty of twenty-five per cent. This reduces the duty on such sugars to about fifty cents per 100 pounds for raw, and ninety-three cents per 100 pounds for granulated, the duties in both cases being less than one-half of those which are levied in the United States.

"In addition to the advantages which are offered to the beet sugar industry under the United States tariff, many of the separate States have by their Legislatures granted special bounties in order to promote the industry, among others the States of New York, New Jersey, Ohio, Michigan, Iowa, Nebraska, Wisconsin, Washington, Oregon. These bounties are generally in the shape of bonuses of \$1 per 100 pounds on all sugar of ninety degrees purity, made from sugar beets grown in the State. The result of the sugar legislation has been that, during last season, nine beet sugar factories were in operation: in California, four; in Nebraska, two; New Mexico, one; Utah, one; New York, one. Three factories manufactured over 45,000 tons of sugar. Eight new factories are being erected for this year's operation: in California, four; in New York, one; in Michigan, one; in Oregon, one; in Utah, one; and it is estimated that the production of beet sugar will be 90,000 tons.

"In the colony of New South Wales, Victoria is to have a beet sugar factory. The Government loaned \$125,000 in aid of the enterprise. The organization is known as the Maffra Beet Sugar Company. The present capacity of the factory is 350 tons of beets daily, and later will be increased to 600 tons. "Sugar," London, November, 1897, reports that the factory would commence making sugar in April, and expects to turn out 5,000 tons of sugar for first 100 days' run.

"While the encouragements offered to the promoters of the beet sugar industry through Federal and State legislation offer great inducements for investment of capital than are now afforded or are solicited under the proposition of the syndicate now under consideration, there are some compensating advantages found in Ontario. Representatives of the firm through whom the present proposition is made have visited this Province in five different seasons for the purpose of determining its adaptability to sugar beet cultivation, and have assured themselves not only on this point, but on the willing-

ness of our farmers to engage in the cultivation of this crop to the extent necessary for the supply of the proposed factory, and at a price fully ten per cent. less than is required in any part of the United States. They are of opinion, that owing to the more equable climate of Ontario, a more uniform crop both as to yield and quality can be relied upon here than there; also, that, owing to the much greater experience of Canadian farmers in raising root crops, a much greater reduction in the future cost of production may be anticipated than in the United States. They have made minute inquiries as to price of labor and cost of all the materials used in the manufacture of sugar. Their idea is that a reliable, regular supply of good beets in every season, with a reasonable bonus on sugar, affords a fairer prospect of success than an irregular supply with a larger bonus. They feel confident that after five years' experience in sugar beet cultivation and in sugar manufacture, Ontario will be able to produce sugar at as low a cost as in any country in the world.

"Taking the present tariff on imported sugars, coupled with the bounty solicited for home-made sugar, the joint legislative encouragement is not so great as that which is accorded to the iron industry. The advantages afforded by the beet sugar industry will be greater and more evenly distributed.

"With an annual sugar consumption of 160,000 tons, and a constantly increasing consumption, the Dominion affords a market for the output of over thirty factories of the capacity now proposed. About one-half of the cost of sugar consists of the price paid to farmers for the beets. A most valuable feature of sugar beet cultivation is, that instead of reducing the quantity of other crops it increases their production. On this point The New York Shipping and Commercial List bears the following testimony:—'Mr. Geo. Essich, who is thoroughly acquainted with the results in Europe and California, in a paper on sugar beet culture, says the immediate profits derived by farmers are not the only advantages they derive, but they obtain further advantage through the improvement of the soil, owing to its thorough cultivation when under beets.' He shows that in the northern part of France, arrondissement Valenciennes, about 1,012,000 bushels was formerly the average wheat crop. After the beet industry was established the wheat output increased to 1,215,000 bushels, although the wheat acreage had been reduced twenty-five to thirty per cent. Still more striking, however, was the increase of feed for stock. Where, previous to the wheat-growing, only 700 oxen were kept, there was afterwards plenty of food for 11,500 oxen.

"The most expensive materials employed in the manufacture of beet sugar are coal, lime, coke, the daily requirements of which for factory of proposed capacity are:—Coal, sixty to seventy-five tons; lime, twenty-five to thirty tons; coke, about eight tons. Among other general advantages to be derived from the industry are:—Expenditure for labor and material and a large proportion of the machinery required for the construction, equipment and operation of the factories; large addition to the freight and passenger service of railway and other transportation companies; large increase of the business of machine and agricultural implement factories; large outlay in the erection of dwellings, etc., for the employes of the factory; rapid improvement in the value of all agricultural lands in the sections tributary to the factories; improved

market for the hay, straw and coarse grains required to mix with the beet refuse fed to cattle; a new market for store-cattle, and a very valuable adjunct to the dairying interests."

#### THE CITY HALL ELEVATOR SCANDAL.

One of the most disagreeable episodes in Toronto municipal affairs that has ever occurred, is that in which is involved the placing of elevators in the new City Hall now nearing completion, and in which the Mayor and Mr. Lennox, the architect and superintendent of the building are implicated. We all know that Mr. Lennox is one of those remarkable Canadians who cannot see that any good thing can ever come out of Canada, and who never suggests the use of any Canadian materials in the construction of any building that he may plan and make the specifications for; but no one, either political friend or foe of Mayor Shaw, ever supposed that for any reason whatever he would array himself, and exercise the power and authority in him vested, in the manner that he has, in the matter of these City Hall elevators. At a recent meeting of the Board of Control, called specially to receive the report of Architect Lennox on the elevator question, Mayor Shaw read the report, which was adverse to the acceptance of the offer of the Fensom Elevator Company, of Toronto, who were the lowest bidders, and in favor of the acceptance of the offer of an American concern, whose bid was \$2,500 higher. After reading the architect's report, the Mayor very promptly and unhesitatingly declared against the acceptance of the Fensom tender and in favor of the acceptance of the American tender at the larger price. The following extracts from Architect Lennox's report speak for themselves:

"So far as my own experience has taught me, I have no hesitation in saying that the American elevators must, as a class, be considered better than the elevators which, up to the present, have been constructed by Canadian firms.

"It has to be borne in mind that the American companies are backed up by large capital, and have fitted up the latest and most improved machine shops, and it is only natural that, where a firm is equipped in a superior manner and with better appliances for turning out work, they will do more perfect work than firms which are not so well equipped.

The position taken by Mr. Lennox is, that according to his experience, American elevators must be considered superior to Canadian elevators, and his reason for saying this is that American manufacturers are backed up by large capital and have their factories equipped with the very best and most modern machinery, which facts do not prevail with Canadian manufacturers, and therefore and for these reasons, the offer of the Fensom Company should be rejected and the American offer accepted.

It is quite possible that there are elevator building concerns in the United States who enjoy the use of larger capital and more extensive factories than any similar concerns in Canada; but it is not a fact that there are no elevator builders in Canada competent and prepared to turn out quite as good and useful elevators as any made anywhere in the world; and there are many elevators of Canadian construction in constant operation in Toronto, Montreal, and other cities in this country that demonstrate that fact. It is therefore outrageous that this ultra pro-American pair, the Mayor of the city of Toronto and the architect of the Toronto City Hall should proclaim the inability of our Canadian workmen to produce as good elevators as their American competitors.

Speaking editorially of this episode, The Toronto World says:—

What excuse does Mayor Shaw offer for his flagrant violation of principle which is recognized by Governments as well as by municipalities and all business concerns? He trumped up several of them, such as an alleged informality in the Fensom tender, the inability of the firm to do the work, and such like. But all his excuses were satisfactorily met, and finally he was obliged to come down to this one, that the tenders were all too high, including the lowest, and that none of them should be accepted. It is not alleged that there was a combine among the tenderers, and as four tenders were put in it is likely the city got the benefit of genuine competition. As a matter of fact the competition in this case was very keen, and it is only fair to assume that the price asked by the Fensom Company is a reasonable one. It is 8 per cent. less than the one next above it. This excuse as to the excessive cost is trumped up like the rest of them. It is merely put forward to prevent the Toronto firm getting the contract. It has been evident all the way through this elevator deal, that Mayor Shaw and Ald. Leslie are tied up in some way to the American firm. Why they should offer such strenuous and persistent opposition to Canadian and Toronto enterprise is a conundrum that may be difficult to prove, but it is not hard to surmise. The result of their continued opposition to Canadian enterprise has been the withdrawal by the Fensom Company for their tender. They feel that they cannot get justice from the Board of Control, and we sympathize with them. Mayor Shaw's policy is designed not only to injure a local firm in regard to this particular contract, but he is aiding and abetting the American Company in a scheme to destroy the whole Canadian elevator industry.

#### MEETING OF THE SHAREHOLDERS OF THE

#### CANADIAN MANUFACTURER PUBLISHING CO., Limited.

The Shareholders of The Canadian Manufacturer Publishing Co., Limited, are hereby notified that a General Meeting of the Company will be held on Monday, the 6th day of June, 1898, at the hour of 11 o'clock in the forenoon, at the Head Office of the Company, Room 408 McKinnon Building, corner Jordan and Melinda Streets, Toronto, for the purpose of receiving and considering a report from the Directors upon the affairs of the Company, to elect a Board of Directors for the ensuing year, and generally to consider other business of importance to the Company.

J. C. GARDNER,  
Secretary.

Dated this 20th day of May, A.D. 1898.

#### EDITORIAL NOTES.

PERSONAL.—Mr. C. P. Clark is no longer connected with THE CANADIAN MANUFACTURER.

Messrs. Hamlin & Ayers, Lachine Mills, Que., manufacturers of tweeds, blankets, flannels, cloths, yarns, paper and pulp felts, etc., who advertise their business in these columns, write us that they have received a good order for some of their products from Newfoundland through their advertisement in THE CANADIAN MANUFACTURER.

An eminent oculist has drawn the attention of the Postmaster General to the fact that the eyesight of many of the employes of the Post Office Department is being seriously impaired owing to the strain involved in reading imperfect

addresses placed on newspapers from the offices of publication. These addresses are often printed in very small and not very clear type, and not only is injury done to the eyesight of employes who have to read them, but the matter so addressed runs the risk of being misread. The handling of these publications it should be observed, frequently takes place under very imperfect artificial light. It is very desirable therefore, that addresses when printed should be in clear, bold type, and placed on a clear space on the wrapper, and that written addresses should be as plain and legible as possible. Some publishers are in the habit of using old newspapers as wrappers. This practice renders it very difficult at times to find the address, and the department strongly recommends its discontinuance.

Our British citizenship has been our great offence in the eyes of a neighbor unfortunately trained to look with aversion upon things British. But the moment our American friends have forsaken their life of isolated ease and security, and have plunged into international politics, they have discovered that their one true friend among nations, is the Britain whom they have been trained to dislike. Republican France, with whom there is a tradition of friendship, is Spain's chief backer. Germany, fatherland to millions of Americans, has been critical and scornful. Russia, a friend of many years' standing, has been cold, even hostile. But Britain has stood steadfastly by her daughter nation, has overborne every effort to succor Spain, and by the mouth of her outspoken, keen-phrased Premier has made a declaration of friendship which has exasperated Spain. The American is laying these things to heart. The Union Jack is seen in places where it would not have been permitted to float three months ago, British ensign badges are worn in the streets, "God Save the Queen" is sung in public gatherings. After making every allowance for the transitory character of the emotion of the moment, it is evident that there has been afforded to Americans a splendid object lesson as to where they must look for a friend in need. If, when the crisis is past, the old animosity reappears in all its virulence, one's faith in the gratitude, the good-feeling, nay, the common sense, of our neighbors would be shaken. We cannot believe that this great development will have so miserable an ending.—Toronto Globe.

Two-thirds of all the letters which pass through the post offices of the world are written by and sent to people who speak English. Only one quarter of these people, it is said, use English as their native tongue. The curious circumstance is explained by reason of the fact that commercial intercourse is largely in English, even among those who do not speak the language as their native tongue.

Anglo-Saxon unity, says The Toronto Globe, would be a momentous development in the world's history. It would be a compelling influence towards universal peace, and its effect would only begin with the furling of the battle flag. In the realm of immediate politics it would assure the success of the policy of the open door to the vast Chinese market, which in the next quarter century will revolutionize the trade of the world. It means much to Britain now in her splendid isolation; it will mean more and more to the United States as the years go by. The present is big with a development which may bless ourselves, bless our mother country, bless the world. Now, while Britain's practical sympathy is known to all Americans, the British soil nearest to them is Canada. The portion of the British Empire they know most about is Canada. The Britons with whose sentiments they will be in closest touch are Canadians. Let us, as Canadians, earnestly set ourselves to do our part in achieving this great result.



Our independence, our neutrality, has already proved a great potential advantage to them, and in the event of any untoward developments, might prove of immense service. Let us not allow resentments at wrongs done us in the past, largely in consequence of a state of feeling which we hope is passing away, to deter us from helping our mother country to achieve an end so vastly beneficial to all.

Speaking of the very pronounced sympathy of Canada with the United States in their struggle with Spain, The Toronto Globe says:—

Many Canadians feel that we have not been very well treated by the United States in the past. To give a list of our grievances at this moment would prove an unprofitable task, but they may briefly be summarized as a resentment at our desiring to lead a separate life under our own institutions and flag, and of a disposition to punish us for our independence, by refusing us any commercial advantage that legislative enactment can touch. Added to Governmental activity, there has been manifested a pitying and patronizing air, quite removed from the indifference of the by-gone period when Canada was an unconsidered fringe towards an unknown north. All this cannot be forgotten in an instant, and Uncle Sam's determination to evict Spain from a misgoverned colony cannot make Canadians wholly forget that he has been somewhat grudging of the right of a self-governing colony to remain of her own free will in touch with her mother country. Consequently, there is an undeniable critical element in the scrutiny which is turned upon the American conduct of the war. Prior to the outbreak of this war the United States had, by careful effort, succeeded in cultivating in Canadians a strong, deep-rooted resentment against themselves. Some years ago the sentiment entertained by the main body of Canadians towards the United States were friendly and admiring; a succession of unfriendly acts has bred a settled conviction that the great republic is not a generous-spirited nation, and a decided dislike to the American policy and the American Government—not, however, to the individual American has been one of the developments of the past few years in Canadian character. It is impossible to lay this aside in a moment. Men cannot suddenly get rid of a frame of mind induced by ungenerous treatment.

Mr. J. A. Brewster, of the live stock and dead meat firm of Poels, Brewster, Ramsden & Duckham, London and Liverpool, Eng., is in Canada and has given some valuable hints to Canadian cattle exporters. He says our cattle are excellent, and that they stand the long trans-Atlantic trip better than others. He suggests that the Canadian railway companies build a different style of stock cars, so that cattle in transit may be fed. This would obviate the depreciation which is caused by the present method of feeding, and which he estimates at \$5 per head. During the past year Canada exported 156,471 head of cattle. Mr. Brewster's estimate shows that on those cattle Canadian exporters lost \$782,355. The matter should be looked into carefully and steps taken to save this immense aggregate sum of money thus needlessly wasted.

Again we have to record an increase in the rate of pig iron production, says The American Manufacturer. Our regular blast-furnace report indicates that the furnace men are still turning out all they can. At the opening of the present month there were 195 furnaces in blast, with a weekly capacity of 235,937 tons. The report of the month preceding showed 194 furnaces in blast, with a weekly capacity of 229,823 tons. Therefore the totals this month show one more furnace in blast, with net increase of 6,114 tons in the

weekly capacity. Taking the furnaces according to the fuel used, we see that there are three more charcoal furnaces in blast, and the weekly capacity of that class has increased 1,214 tons. The anthracite furnaces have increased their weekly capacity 2,682 tons.

The question has arisen as to whether the space allotted to the Dominion of Canada at the forthcoming Paris, France Exposition, will be sufficiently large to meet the requirements of those who are invited to make displays there. It is said that the allotment to Canada is only 12,000 square feet, while the whole British Empire has been allotted 358,000 feet. In fact, when the space necessary for walks, alleys, etc., is deducted, there would be only about 9,000 feet of available space. The limited space given to Canada at the coming French event will be better realized when it is known that the Dominion had over 50,000 feet at the Philadelphia Centennial of 1876. Here are the figures. Manufacturers' building, 27,000, machinery hall 5,000, agricultural hall, 5,000, cheese and butter hall 5,000, lighthouse 3,000, women's building 1,000. Other space allotted to Canada exhibitors brought the total up to a figure exceeding 50,000 feet, and with this, the Dominion did herself so much credit, that General Hawley declared that Canada's exhibit equalled that of any six of the American Union. It is quite evident that with 9,000 feet at this country's disposal at Paris, the display which Canada made at Chicago and Philadelphia will not be repeated in Paris in 1900.

It is known that the Niagara tunnel authorities are steadily at work preparing plans for increasing the capacity of the electric plant on the Canadian side of the Niagara, but this is in reality little more than bluff meeting bluff, as it is stated without reserve that there is already available in the power house of the electric railway in Victoria Park, 1,000 horsepower that cannot be sold. When it was feared that no use would be made of the grant from Canada to the tunnel company a great outcry was raised, but when the power is offered it is not taken.—New York Electrical World.

Last year the Yukon country yielded \$3,000,000 in gold. This year, \$15,000,000 worth will be taken out. There is, Mr. Ogilvie says, at least \$100,000,000 to come. Four years ago, the Manitoba wheat crop, which is better than gold, was 17,000,000 bushels. This year it will yield 50,000,000 bushels. The Northwest is progressing in like proportion. Two years ago, the great coal and mineral territory along the Crow's Nest Railway could not be got at. This year, by October next, the line will be completed to Kootenay Lake, and a vast increase in development and in trade will take place. Three years ago there were men in Canada, shrewd fellows they thought themselves to be, who had little faith in the future of the Canadian Pacific Railway. To-day a proposition is on foot to vastly increase the efficiency of that line, and to, at an early day, provide for a double track from Winnipeg to the Pacific terminus. Meanwhile, it is intended to so increase the efficiency of the line, by needed works at various points, as to enable the C. P. R. trains to make the journey from Montreal to Vancouver in 100 hours. This is a rapid age, and Canada means to keep up with the procession.—London Advertiser.



bicycles should be light, strong and handsomely decorated. The Japanese being of small stature, the frames would require to be 22 to 23 inches, of course. For foreigners the ordinary sizes of frames in use in Canada would be suitable. There is absolutely no demand for ladies' wheels, except a few for the use of foreigners. The Japanese ladies have not yet adopted the European costume, and it would be impossible for them to ride a wheel wearing their native style of dress. The bicycles manufactured in Japan are considered inferior."

Another trade capable of very great expansion is the sale of flour. The Japanese are becoming exceedingly fond of flour bread instead of rice. Mr. Anderson says:—"The quantity imported during 1896 was upwards of 150,000 barrels, and nearly all from the State of California and the Territories of Oregon and Washington, U.S. It is shipped in forty-nine pound bags, four being equal to a barrel. There are certain brands, such as 'Golden Gate,' 'Sperry,' 'Golden Drop' and 'Crown,' which buyers favor on account of being well known. The increase during the first six months of 1897 has been enormous, and probably the imports this year will reach 225,000 barrels. There is no reason why Canadian millers should not secure a fair share of the flour trade, unless it be that the long inland railway freight may in some measure handicap them. To properly introduce I would advise the distribution of samples in half-pound bags to actual consumers as well as advertising in both the English and Japanese press. The San Francisco market should be a good guide as to prices that can be obtained."

#### ONTARIO MUNICIPAL STATISTICS.

The Ontario Bureau of Industries has issued its annual report on the municipal statistics of the province. Population in Ontario has increased at the rate of one per cent. a year. For 1897 it is estimated at 1,972,286. The figures for previous years are:—1896, 1,828,495; 1890, 1,917,544; 1895, 1,957,390. A steady decrease in municipal taxation since 1893 is chronicled. In four years the gross taxation has been reduced from \$12,512,660 to \$12,122,785.

The municipal bonded debt amounts to \$51,895,991, or \$26.51 per head of population. Interest on bonds and temporary loans total \$2,578,220.

There are 493 townships, 99 towns, 136 villages, 13 cities and 38 counties included in the list of municipalities. The total of township population is 1,112,900; of towns, 305,010; of villages, 133,442; of cities, 420,934.

The per capita taxation for cities is estimated as follows:—Toronto, \$16.15; Hamilton, \$10.74; London, \$10.13; Ottawa, \$9.08; Kingston, \$7.77; Guelph, \$9.03; Belleville, \$8.04; Brantford, \$7.60; St. Catharines, \$10.54; St. Thomas, \$8.24; Stratford, \$8.32; Chatham, \$8.78; Windsor, \$14.10. The average per capita tax in townships is \$3.86; in towns, \$6.57; in villages, \$4.19, and in cities, \$12.51.

The total municipal receipts are \$28,175,046, against disbursements of \$26,526,591. The assets are \$64,803,530, against liabilities of \$57,730,130.

#### FEEES FOR LETTERS PATENT.

A notice has been issued by the Provincial Secretary of Ontario, that the schedule of fees charged by his department for letters patent and supplementary letters patent, granted under the provisions of the Ontario companies act and acts associated therewith, will on and from the 16th of May be as follows:—

For letters patent—When the capital is \$1,000,000 or upwards, \$400; when it is \$500,000, but less than \$1,000,000, \$250, when it is \$200,000, but less than \$500,000, \$200; when it is \$100,000, but less than \$200,000, \$150; when it is more than \$40,000, but less than \$100,000, \$125; when it is \$40,000 or less, but more than \$20,000, \$75; when it is \$20,000 or less, \$50, when the charter is for a cheese or butter company, \$10, when the charter is for an educational

institution not to be carried on for the purpose or object of gain, \$10.

For supplementary letters patent where the capital is increased the fees to be according to the above list, but on the increase only.

For supplementary letters patent where the capital is not increased, \$50; for an order in Council changing the name of a company, \$25; for an order in Council accepting the surrender of a charter, \$50; for an order in Council, under R.S.O., cap. 130, ss. 5 and 6 (trustees' investment act), \$100, for an order in Council authorizing a company being accepted by the High Court as a trust company for the purpose of such court, \$100; for licenses to extra Provincial companies (a) to hold land, (b) to do business under the Ontario companies act and (c) to sell mining stock, etc., the fees to be according to the above list, and to be levied according to the capitals of the respective companies.

Mr. S. J. Britten, Toronto, the well-known manufacturer of Kola nuts chewing gum, has gone to England where he will establish a branch of his industry.

Mr. George H. Taylor, who for over a year has been the European manager in London of the Gurney Company, Limited, has severed his connection with that firm after ten years' service, and having had a successful career in London, has returned to Toronto, where he has assumed the management of the Toronto branch of the Gurney-Tilden Company, of Hamilton.

Mr. R. Hamburger, of Messrs. B. Singer & Co., Sydney, N.S.W., was in Toronto last week in the interest of his firm, and paid a visit to this office. His firm do a large commission business in Australia, and have secured the agency for quite a number of Canadian manufacturers who are desirous of extending their export trade in that direction.

Extensive shipments of sulphur are being made from Montreal to the United States, and American dealers have contracted in Europe for large supplies to be shipped via Canadian ports. It is claimed that as the sulphur is used in the manufacture of explosives, it is contraband of war, but the Collector of Customs stated that as the material was largely used in the manufacture of pulpwood he did not regard it as contraband.

A large glass manufacturing concern in Pittsburg, Penn., who are the inventors of the paragon jars, are desirous of locating a branch factory in Canada, and with that object in view they have placed the matter of organizing a joint stock company and locating the same with the Toronto Patent Agency, Toronto. The proposed company purpose capitalizing with subscribed stock of \$100,000, and will employ 200 hands. Negotiations are now being conducted with several Canadian cities, Woodstock offering the company to locate exceptional advantages and superior railway facilities.

A grain elevator with a capacity of 1,500,000 bushels has recently been completed at Manchester, England, by a Chicago contractor. The machinery and all the iron work in this building was produced in Chicago. The United States also furnished the pine and the heavy timber used in the building, all the skilled laborers, foremen and superintends were Americans. The building, which is the largest elevator in England, was completed in four months from the time the foundations were finished. The equipment includes complete and modern loading and unloading devices and conveyors. It is estimated that the appliances in use will permit the unloading of grain from vessels at the rate of 12,000 bushels an hour.

Agents of the Carnegie and other American companies are now in the English Midlands, it is said, offering regular supplies of American pig iron at prices from ten to twenty per cent. under those of Midland makers. One saleable brand, which is reputed to rank with Lincolnshire is being offered, carriage free, at 47s. 6d. per ton, and some large orders have been booked at this price. These American ironmasters would never have been able to compete in the British market if it had not been that their industry in its infancy, and even now, is strongly protected by the tariff. There is no reason why Canada should not be an exporter instead of an importer of pig iron, but that condition can never prevail except under similar tariff conditions.

The paper trade, it is said by an American contemporary, is beginning to feel the effects of the Spanish-American war excitement. For export grades there is a decreased demand, owing to a fear which is expressed regarding the safety of shipments in war time. It appears, too, that ninety-five per cent. of all the sulphur used in making sulphite pulp is imported to the United States from Sicily. As sulphur has application in the manufacture of gunpowder and other explosives it may be considered contraband of war. The price has already risen considerably and is still advancing. This condition should be Canada's opportunity.

The Pennsylvania Steel Company, whose works are at Steelton, Pa., and Sparrow's Point, Md., has just concluded a large contract with the Russian government for steel rails. The figures are given at 35,000 tons. They are to be shipped to Vladivostock, and are to be used in the construction of the Trans-Siberian railway. It is estimated that there are enough rails in this order to construct over 300 miles of road. The company have begun shipping a large steel rail order from Australia. There are some twenty thousand miles of railway track in Canada, but not one rail in all that length was made in this country. What Canada needs is a systematically adhered to policy that will encourage and build up our iron and steel industry.

Mr. King, representing the J. D. King Co., of Toronto, was seen by the Quebec Daily Telegraph while in that city some days ago, and interviewed relative to the report that he was on the eve of bringing his Toronto factory to Quebec. In reply to a question relative to the above, Mr. King said it was quite possible such a thing might occur in the very near future. Their factory was one of the oldest in Toronto, and for a number of years nothing but the most pleasant relations existed between their hands and themselves. Latterly, however, they had had considerable difficulty, and rather than have a continuance of such troubles they would remove the whole of their establishment to Levis. That town had recently granted them concessions which would greatly influence them in making this move. In fact, they are now negotiating to pay us our bonus in full, and have gone as far as to make us an offer of another bonus should we double the number of hands and enlarge our present factory, which is now taxed to its utmost.

The Bureau of American Republics, Washington, D.C., is informed by G. H. Miller, United States Consul at the Falkland Islands, that the Governor of that colony is asking bids for delivery at Port Stanley of about 200,000 feet of pitch pine and cypress lumber, to be used in the construction of government buildings, also 500 cases of 150 degree test best white oil, for illuminating purposes. Delivery must be made by November 1st next. Correspondence should be addressed to Hon. William Grey-Wilson, Governor, Port Stanley, Falkland Islands. A memorandum of the quantity and kind of lumber required may be obtained at the Bureau of

American Republics, Washington, D.C. All light and harbor dues are to be borne by the Government. Merchants should state the number of days allowed to discharge the cargo, also the demurrage per day for subsequent time consumed. A vessel drawing thirteen feet can come alongside the jetty at Port Stanley.

At the usual weekly meeting of the Wholesale Grocers' Association of Toronto, held May 6th, the question of a bounty on beet sugar was taken up and discussed at considerable length. It was stated that a firm of foreign capitalists proposed starting a beet sugar refinery in Canada, providing the Government would admit free of duty such machinery and apparatus as could not be manufactured in this country, and give a bounty of half a cent a pound for five years on the beet sugar produced. The association was heartily of the opinion that with all the conditions favorable to the production in Canada of the raw material, the industry should be encouraged, and a resolution conveying the sentiment of the association regarding the matter was passed, and ordered to be forwarded to the Government. This action was identical with that taken by the Executive Committee of the Canadian Manufacturers' Association, on May 5th, as reported in their May 6th issue of this journal.

Our esteemed contemporary, the Hamilton Times, divides manufacturers into two classes. First there are the Tory manufacturers. These are described as "red parlor plunderers," "robbers," "thieves" and "barnacles, pimples and warts on honest industry." The Grit manufacturers are honest, angelic beings, in whom there is no guile. But these honest chaps have been feeding at the same trough with the horrible Tories all these years. Their protection has been the same, and their selling prices have been the same. They took the same money from the people that the Tories took, and we have not heard that any of them had become conscience-stricken and had made restitution. When the protection on their products was threatened with reduction these good men went to Ottawa, just like the red parlor robbers, and begged that it be allowed to remain. They behaved in every respect precisely like the barnacles, pimples and warts on honest industry—except one. And on that one thing, and that only they have differed from the thieves and plunderers—they voted Grit.—Hamilton Spectator.

Mr. W. G. Parmelee, Deputy Minister of Trade and Commerce, has written us to the effect that the High Commissioner for Canada in London has suggested the advisability of manufacturers and shippers forwarding to him any of the illustrated catalogues, price lists, etc., used by them in their business. These would be kept on file in the High Commissioner's office for use in replying to inquiries relating to trade between Canada and Great Britain. We are glad of this opportunity to bring this matter to the attention of our manufacturers.

The Shultz Belting Company, of St. Louis, Mo., recently shipped a belt twenty-one inches broad and sixty-one feet long to Malmo, Sweden. They are now preparing to ship 3,000 feet to Sweden, 4,000 to Russia, and 300 feet of 14-inch double to Johannesburg, South Africa. Canada belt makers should endeavor to capture some of this foreign trade.

A new item of export appears in the custom house returns for Cherbourg, France, in 1897. Three hundred and eleven tons of fresh milk were shipped thence to England, the first consignment having left Cherbourg on October 1st last. During October 20,000 gallons were sent over; a similar quantity during November, and a little over 36,000 gallons during December, making a total of 76,383 gallons in three months.

An organization representing manufacturers of men's woolen goods is to be formed for the purpose of doing away with certain abuses in the trade. It will include mills located in New England and in the middle and western states, having a total capitalization of about \$50,000,000. The abuses complained of are causeless cancellation of orders and rejection of goods, and other groundless claims of wholesale clothiers.—Home Market Bulletin.

We also learn that a movement is on foot to consolidate the knitting goods industry of New York State. About thirty mills, manufacturing underwear, will be included in the combine, and will represent a capital of no less than \$20,000,000.

One of the greatest drawbacks that our woolen and knit goods manufacturers have to contend against is the senseless and tyrannical action of the wholesalers and jobbers who control the sale of those goods in first placing orders and afterwards withdrawing them. We commend to these manufacturers the action of the woolen goods manufacturers in New England, who represent investments aggregating some \$50,000,000, who are organizing to resist just such tyranny; and the action of the knit goods manufacturers in the State of New York, representing \$20,000,000 invested capital, who have organized for the same purpose. The wholesalers and jobbers of Canada, as in the United States, have the manufacturers by the throat, and are crowding them to the wall, and the manufacturers should, in self defence, organize and fight them to the bitter end.

The facts that are elsewhere given in this department regarding the value of manufactured articles of domestic production exported from Canada during the years 1895-96 and

'97 will, no doubt, be a revelation to many of our readers, for even among our manufacturers there are few who have any adequate conception of the extent of our rapidly growing foreign trade of this character. The statement should be carefully studied, particularly by those who are engaged in, or propose engaging in, export trade. We are indebted to Mr. George Johnson, Dominion Statistician, for this statement.

The fact that the Massey-Harris Company is enlarging its premises is accepted in Ministerial circles as a proof that free trade is doing good. And it must be admitted that the free trade which leaves the protection untouched is about the only sort of free trade that will build up industry.—Mail and Empire.

The Massey-Harris Company are doing a larger business at this time than ever before in its history, largely upon foreign orders.

Nearly all the governments of the world have declared their neutrality in the present war between the United States and Spain except the Hawaiian Republic. The latter seems to reserve to itself the right to give aid to the belligerents if it chooses to do so, which it is believed may assist the United States very materially in their naval operations in the Pacific Ocean. This may perhaps be a preliminary step to the annexation of the islands under war pressure.

Interruption in the cable service to Australia increases the conviction in the mercantile community that an alternative line should be laid, and not westward, but eastward, by way of the Pacific Ocean to Canada. The Premiers of the Australian colonies recently declared themselves favorable to the construction of such a line.

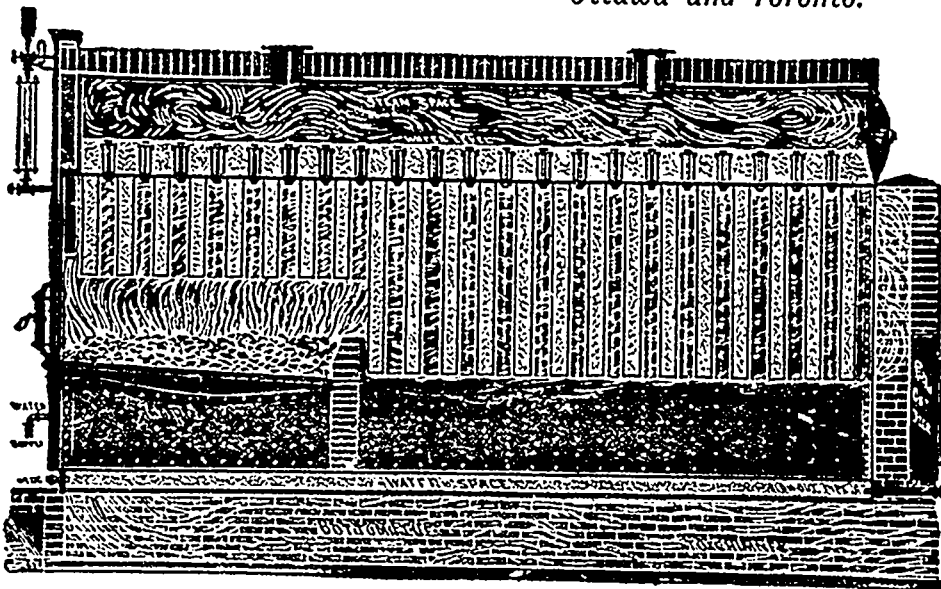
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## CAPTAINS OF INDUSTRY.

The following items of information, which are classified under the title "Captains of Industry," relate to matters that are of special interest to every advertiser 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, bolting, lubricants, machinery supplies, wood or iron working machinery, ventilating and drying apparatus; pumps, valves, packing, dynamos, motors, wire, arc and incandescent lamps, and an infinite variety of electrical supplies, chemicals, acids, alkalies, etc. It is well worth the while of every reader of the Canadian Manufacturer to closely inspect all items under the head of Captains of Industry.

Hamilton, Ont., is negotiating for the establishment of stock yards.

The Kent Canning Co., Chatham, Ont., have obtained a charter.

The Hepworth Mfg. Co., of Hepworth, Ont., have secured a charter.

The Ottawa Steel Range Co., of Ottawa, Ont., are starting in business.

A charter has been granted to the Finlay, Rose Co., of St. Thomas, Ont., Limited.

The Toronto Electric Motor Co., have obtained a charter.

The Yukon Fur Mfg. Co., of Toronto, have obtained a charter.

The Toronto Railway Co., of Toronto, Ont., have men at work on the extension of their line to Munro Park.

The Albany Club, of Toronto, Ont., will shortly enter upon possession of their new premises, 913 King Street East.

The Vankleek Hill Electric Co., Limited, of Vankleek Hill, Ont., have been incorporated.

Bay St. Paul, P.Q., is the reported location of a linen factory to be started shortly.

A stamp mill is to be erected at the Ruby mine, Vernon, B.C.

Messrs. Lefebvre & Company, of St. John's, Que., are putting an acetylene gas machine in their vinegar factory.

A felt factory is in negotiation with the city of Woodstock, Ont., for inducements to locate.

The Montreal Cotton Co., Valleyfield, Que., have ordered two 600 h.p. three-phase generators.

Messrs. Elliott & Hale are building at Nelson, B.C., an eighty-foot tug which will be used on Kootenay Lake, B.C.

A. F. Garret, Montreal, has purchased the Globe Woolen Mills of Montreal.

A fly-wheel, seventeen feet in diameter and forty-six inches in face, is about to be erected in the big mills of J. R. Booth, the Ottawa lumberman.

The Browne & White Co., of Kingsville, Ont., are shipping large quantities of blankets to Dawson City.

Horn Bro., Lindsay, Ont., are having a big addition built to their woolen factory. The extension will be 35x40 and two stories high.

The Norfolk Knitting Mills, of Simcoe, Ont., are putting in half-a-dozen new knitting machines.

Alex. Cowan, of Ballfuir, Rosshire, Scotland, is in Canada interviewing the various ministers of agriculture. Mr. Cowan is the owner of a large distillery and says that they have to secure barley from the continent. He thinks a good trade in barley might be established between Canada and Scotland.

The Hon. John Haggart, W. A. Allan, A. Charlevoix, Sir Sandford Fleming and R. G. Code of Ottawa, are applying for incorporation as the Canadian Electric & Water Power Company of Ottawa, capital stock \$100,000, for the purpose of establishing waterworks and manufacturing electrical machinery and electricity for the purposes of light, heat and power in the cities and towns of Canada.

The H. A. Christy Co., of Ontario, Limited, have been granted letters patent to manufacture bicycles in Ontario. Capital stock, \$10,000.

The Wm. Strachan Soap Co., of Montreal, are applying for a charter of incorporation. Capital stock, \$200,000.

D. O. Allport has leased the Burrill's Rapids, Ont., woolen mill for five years. Mr. Allport was superintendent for the Gilmour mill, Joliette, Que.

Leitch & Turnbull, of Hamilton, Ont., installed the handsome hydraulic elevator in the new building of The Hamilton Spectator. The car has a capacity of 1,800 pounds freight and is supported on six wire cables. The hydraulic pressure is maintained by an automatic pump, and the whole apparatus is a thing of beauty and joy forever.

The Bertram Ship Yards, Toronto, Ont., have five vessels in the stocks: two for the Prescott Elevator Company, one for the Richelieu & Ontario Navigation Co., and two for the C.P.R. Those for the Prescott Elevator Company are barges of 165 feet 6 inches length over all, 160 feet 10 inches length of keel, 30 feet beam and 13 feet moulded depth. The Richelieu & Ontario steamer has dimensions of 279 feet 4 inches over all, 270 feet 6 inches keel, 36 feet beam, and 14 feet moulded depth. Those under construction for the C. P. R. are stern wheelers, 162 feet 6 inches over all, 140 feet 6 inches keel, 30 feet beam and 5 feet moulded depth, for the Klondike trade.

The Victoria Machinery Depot Company, Limited, of Victoria, B.C., have been incorporated. They are licensed to carry on the business of iron foundries, mechanical and marine engineers, and manufacturers of agricultural implements and other machinery, tool makers, brass foundries, metal makers, boiler makers, mill-wrights, machinists, iron and steel converters, smiths, wood-workers, steamer owners, builders, painters, metallurgists, electrical engineers, water supply engineers, and to buy, sell, manufacture, repair, convert, alter, let on hire, and deal in steamers, machinery, implements, rolling stock, and hardware of all kinds, and to carry on any other business (manufacturing or otherwise) which may seem to the Company capable of being conveniently carried on in connection with the above, or otherwise calculated, directly or indirectly, to enhance the value of any of the Company's property and rights for the time being.

# INGERSOLL-SERGEANT Rock Drills

FOR MINES, TUNNELS AND QUARRIES

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

FOR ALL DUTIES.

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

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

Attention is called to an advertisement in another page in which the town of Louiseville, Que., offers very liberal bonuses to any manufacturers willing to establish their factories in that town; also a grant of land free of cost sufficient for the requirements of their business.

M. S. Blackburn, clerk of Camden township, Kent county, at Dresden, Ont., is inviting tenders for the construction of an iron bridge, 125 feet long with a six feet roadway over the river Sydenham at Dawn Mills Bridge, and also for the construction of two masonry piers to contain approximately 235 cubic yards. Tenders will be received for the whole work, and also for the iron and masonry work separate. Specifications, plans, etc., may be seen at the residence of Jas. B. Crafts, Dawn Mills, Ont.

We are in receipt of a handsome calendar from the E. B. Eddy Co., Limited, the big Hull, Que., manufacturers of matches, fibroware, woodenware, and paper goods. The calendar is finely printed in different colors, and the pictorial heading is different for each month, every page bearing handsome illustrations from the cities where the Company have branches. The calendar is a regular gallery of scenery from Ottawa, Montreal, Quebec, Toronto, Hamilton, St. John's, Nfld., St. John, N.B., Halifax, Winnipeg, Victoria, B.C., Vancouver, B.C.

We have had many inquiries as to burners for acetylene gas. There have been many difficulties to overcome in securing an effective burner. Some were complicated in construction and liable to get out of order. Some were so delicately made that they had to be handled as gingerly as egg shells. Some were given to smoking and some wouldn't burn enough gas to be of use. Col. D. M. Stewart, President of the D. M. Stewart Manufacturing Company, of Chattanooga, Tenn., has invented the Lava

Burner, which is claimed to successfully overcome all the difficulties that have hitherto been met with. The State Lumber Co., Chattanooga, Tenn.

Mr. H. Swackhammer, Acton, Ont., proposes the formation of a joint stock company with a capital of \$50,000 to operate a sole leather tannery at Guelph, Ont. We understand that Mr. Swackhammer will build a tannery in Acton if negotiations with Guelph are not consummated.

The Canadian Office and School Furniture Co., Preston, Ont. have secured a contract for nearly \$10,000 worth of work for McGill College, Montreal. Also a large order from Moncton, N.B., for the new Aberdeen school, including 1,100 desks, and an order of \$5,500 from the Toronto public schools.

The R. McDougall Company, Galt, Ont., have in contemplation the lengthening of its moulding shops and the addition of a second story to the same.

G. W. Malcolm, Macon, Missouri, has written the council of Dundas, Ont., asking what inducements the town would offer his company to locate there. The company manufacturers shears and scissors, and have a pay roll of \$1,000 a month at their Macon works.

The Manitoba Legislature has passed a bill to extend the Dauphin Railway to the North Saskatchewan River, a distance of about 140 miles.

E. T. Hutchings, wholesale saddler and leather merchant, Winnipeg, purposes building an extensive factory and warehouse in Winnipeg, to cost \$40,000.

The power of the large new dam erected at Keewatin, Man., will probably be utilized to operate a pulp and paper mill, which it is proposed to erect at that place with a capacity of 100 tons daily. A new flour mill is also talked off for Keewatin.

The Rat Portage Lumber Co., Rat Portage, Ont., will build a sash and door factory, and another large gang mill, at a cost of about \$13,000.

M. L. Tucker and others, Parrshoro, N.S., will build a pulp mill near that place.

J. M. Garland & Co., Ottawa, will erect a five storey warehouse, 66x66 feet, to be supplied with freight and passenger elevators, etc.

The Grand Trunk Railway Company have given an order for twelve new locomotives to be built in Canada.

The new reduction works at Keewatin, Ont., are in operation the result being that considerable bullion has been shipped east.

The Dickson Lumber Co., Lakesfield, Ont., are setting up a sawmill burner, built for them by the William Hamilton Mfg., Co., Peterborough, Ont.

Word comes from Dundas, Ont., that George Bertram, M.P., Toronto, purposes to join Mr. McMillian, of St. Catharines, Ont., in establishing in Dundas, a factory for the manufacture of saws, axes, files, iron bedsteads, etc.

Work on the Southeastern Railway, Manitoba, is to be started at once.

The William Hamilton Mfg. Co., Peterborough, Ont., are building a sawmill outfit of machinery, etc., with a capacity to cut 100,000 feet of lumber per day, for the C.P.R., to go to Cove Creek, N.W.T.

The McClary Mfg. Co., London, Ont., have just filled a \$7,000 order for stoves, granite ware, etc., for a California house to go to the Klondike.

The Zryd Gas Machine Co., Hespeler, Ont., has been incorporated to manufacture acetylene gas machines.

The C. Turnbull Co., of Galt, Ont., have let the contract for their new mill building to Kribs and Co., of Hespeler, Ont.

# THE Defiance Machine Works,

DEFIANCE, OHIO, U.S.A.

Established 1850

INVENTORS AND BUILDERS OF UP-TO-DATE NINETEENTH CENTURY

**AUTOMATIC Wood-Working Machinery**

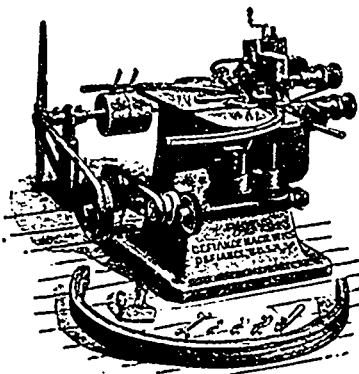
For Making

WAGON AND CARRIAGE WHEELS, HUBS, LUGS, RIMS, FELLOES, SHAFTS, POLES, NECK-YOKES, SINGLE-TREES, BARREL HOOPS, Etc., Etc.

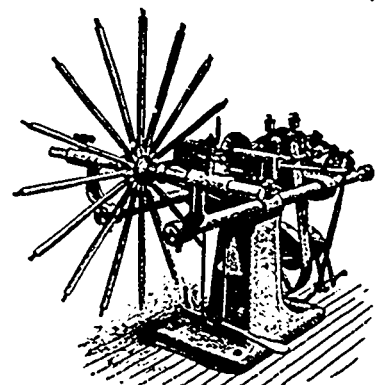
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RIM PLANING MACHINE.



WHEEL TENONING MACHINE.



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THE LONDON EMERY WORKS CO.,

10/12 VINE ST., CLERKENWELL, LONDON, E.C.

AGENTS WANTED. LONDON, E.C.

CLOTH AND PAPER.  
GLASS & FLINT PAPER.  
"Atlas Brand"

"FLORA" Knife Polish  
in 3d. Gd. & 1/2 Tins.

Ground, Washed & Flour

WHEELS of highest  
quality for general  
& special purposes.

Grinding Machinery.



The factories of the Truro Condensed Milk and Canning Co., Truro, N.S., were recently destroyed by fire, loss \$50,000. The company will immediately rebuild.

Hamilton, Ont. Y.M.C.A. building is to undergo extensive alterations this summer.

J. W. Meyers & Co., Listowel, Ont., will make an outlay of \$7,000 in improvements, new machinery, etc., in the flour mill, and will also build a 48x30 foot grain elevator.

St. Thomas, Ont., is about erecting school buildings to the value of \$36,000.

J. E. Bolcher, C.E., Peterborough, Ont., has prepared plans for a \$25,000 bridge at Mud Lake, Ont.

London, Ont., is inviting tenders for the construction and equipment of a \$70,000 hospital.

Rat Portage, Ont., is to have a new school building, for which plans and specifications have been prepared by architect E. F. Head.

A C.P.R. engine house will be built at Field, B.C., and three new engines will be kept there to help with the growing traffic over Big Hill.

The Bryan Mfg. Co., Collingwood, Ont., are building a large addition to their factory.

The Toronto Patent Agency of Toronto, are handling the affairs of a big glass company of Pittsburg, Pa., who are going to organize a company here to make a specialty. Woodstock, Ont., is offering many inducements for the location of the company which proposes to employ 200 hands.

The C.P.R. shops at Winnipeg are working overtime.

The following summary shows the mineral production of Nova Scotia for the year ending September 30th, compared with that for the year ending September 30th, 1896:—

	Year ending September 30, 1896.	Year ending September 30, 1897.
Gold.....ozs.	26,112	26,579
Iron ore.....tons	56,334	44,146
Manganese ore. "	129	100
Coal raised.... "	2,235,472	2,320,916
Coke made..... "	58,741	45,000
Gypsum..... "	130,489	125,000
Grindstones, etc., val	\$30,317	\$32,400
Limestone.....tons	31,171	25,000
Copper ore..... "	10	
Graphite..... "	175	

Sarnia, Ont., will bestow a bonus on a paving brick factory to be erected there.

Messrs. B. Bell & Son, St. George, Ont., are making additions and improvements to their factory. They have also erected a new store house.

Day's Mills, Algoma, Ont., offer a bonus for the erection there of a work-working, furniture or handle factory.

J. H. Connor's washing machine factory at Ottawa, was gutted by fire May 10th, loss about \$8,000.

A company is being formed in Chatham, Ont., to erect a tobacco factory, that will give employment to 25 hands. Mayor Pattison, of Chatham, can give further information.

The Diamond Glass Co., Montreal, will increase its capital stock to \$1,000,000.

The Greig Mfg. Co., Montreal, has been incorporated with a capital stock of \$12,500, to manufacture spices, etc.

The Montreal Grain Elevator Co., Montreal, has been incorporated with a capital stock of \$300,000, to build and operate floating grain elevators, etc.

# MACHINERY and EQUIPMENT FOR Mines

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**Canadian Rand Drill Co.,**  
MONTREAL.

**A. KLIPSTEIN & CO.**  
122 PEARL STREET, NEW YORK.

**Anilines, Dyestuffs and Chemicals.**

DELIVERY MADE AT NEW YORK, MONTREAL OR HAMILTON.

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HAMILTON, ONTARIO.

**Pure Chemicals**

Phosphorous,  
Sal. Ammoniac,  
Muriate Ammonia,  
Sal. Soda,  
Bicarb. Soda,  
Hyposulphite Soda, Epsom Salts.

**FINEST QUALITY.**

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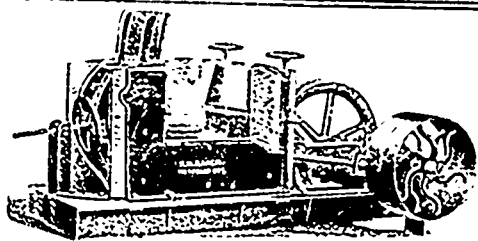
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**ABBEE IMPROVED CHILLED SHOT CO.**  
(LIMITED)  
NEWCASTLE, GREAT BRITAIN.

THIS SHOT IS NOW MADE BY A NEW PROCESS.  
Samples sent on application.

Read the following Reports on our New Make of Shot:—  
*Sporting Goods Review* states:—"The size and shape of pellets are good and are exceedingly hard. We understand that the demand for this shot has considerably increased and gaining in favor with sportsmen, to whom its excellence of manufacture appeals."  
*Arms and Explosives* states:—"For soundness and general regularity of surface the pellets possess a very high degree of excellence."  
W. W. GREENER, "the Great Authority on the Gun," speaks highly of Chilled Shot, and strongly recommends it in preference to soft shot.





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IRON FOUNDER and MACHINIST

Manufacturers of

WOOLEN MACHINERY,

Rotary Fulling Mills, Kicker 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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For Heads of 3 Feet to 2000 Feet.

ADAPTED TO MILLING AND ALL POWER PURPOSES.

Recent tests at Holyoke enable us to guarantee:  
The Largest Power ever obtained from a wheel of the same diameter. The highest speed ever obtained for the same power. The highest mean efficiency ever obtained when running from half to full gate. We guarantee also: A runner of the greatest possible strength. A gate unequalled in quickness and ease of opening and closing.  
Write for pamphlet, stating your Head.

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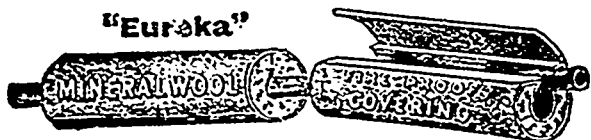
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OUR SECTIONAL PIPE AND BOILER COVERING

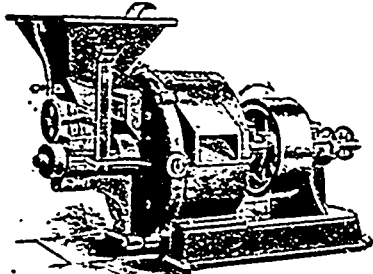
Almost Entirely Prevents Condensation of Steam when Passing Through the Pipe  
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ASBESTOS GOODS.

MINERAL WOOL.

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FRENCH BUHR AND ESOPUS STONES. *Send for Circular.*

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It will interest you.  
Our Prices will Please,  
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A HIGH-GRADE, MODERN WHEEL—ECONOMICAL

AND EFFICIENT IN THE HIGHEST DEGREE.

The best combination of hydraulic science with practical results now on the market. Complete Water Power Plants built and installed.

The JENCKES MACHINE CO.,

28 Lansdowne St.,  
SHERBROOKE, Que.

The Peterborough Canoe Co., Peterborough, Ont., are building a number of canoes for the United States Geological Survey to be used in Alaska.

Evans, Coleman & Evans, of Vancouver, B.C., are building a 275-foot extension to their wharf. A warehouse 60 feet wide will be erected the whole length of the extension.

The Bertram Engine Works Co., of Toronto, have secured the contract to build a steel grain-carrying propeller. The new boat will be 255 feet long and 43 feet beam.

T. Saunders, miller, Whitewood, N.W.T., has leased the flour mill at Wapell Assa.

A lot of new machinery has been put in the Lake of the Woods Milling Co's. mill at Kewatin, Ont.

Hon. John Haggart and associates are seeking incorporation as The Canadian Electric Water and Power Co., of Ottawa, to manufacture electric machinery, etc.

The large organ factory of Wm. Doherty & Co., Clinton, Ont., is rapidly approaching completion.

The Canada Tool Works, of Dundas, Ont., recently poured a casting weighing four tons which is to form part of a big steam hammer.

The works of the Ingersoll Packing Co., Ingersoll, Ont., are being equipped through out with electric light and appliances supplied by the Canadian General Electric Co.

The C.P.R. are having eight engines built for the Crow's Nest Pass Railway.

The Belle Bonheur Gold Mining Co., of Northwestern Ontario, headquarters at Ottawa, has been incorporated.

The British Lion Gold Mining and Development Co., of Ontario, headquarters at Owen Sound, Ont., have obtained a charter.

Joseph Chase, woollen manufacturer, Paisley, Ont., has been succeeded by T. Chase & Co.

The G.T.R. have effected considerable improvement by moving a number of old buildings from the yard at York Station, Ont. They have also put in new sidings at Bowmanville, Darlington and Belleville, and will put one in at Pickering.

Vivian & Son, Swansea, Wales, and the Elbois Metal Co., Burryport, Wales, will erect and operate Smelting Works in British Columbia.

It is said that a large body of most excellent emery has been discovered on the shore of Lake Winnipeg, Man.

The Caledonian Iron Works, Montreal, are repairing the steamer Rosedale at a cost of about \$25,000.

J. A. Mara, Vancouver, B.C., is building a steamer 520 feet long for the Yukon trade.

A large new engine house has been erected by the Quebec Central Railway at Newington, Que.

The Jenkes Machine Co., Sherbrooke, Que., have recently placed machinery as follows:—A No. 5 steam pump for the Centre Star Mine and a No. 6 pump for the Monte Christo Mine, B.C.; a fine stamp mill complete with steam engine and boiler for E. E. Pettigrew, Winnipeg, Man.; a double cylinder hoisting engine with boiler and all other appliances for Kenneth Mining & Development Co., Rossland, B.C.; one pair Crocker 45-inch turbines with all necessary installation for Electric Reduction Co., Buckingham, Que.; and a ten-stamp battery, two vanners, two ore feeders, Blake crusher, etc., for the British Columbia Gold Fields Co., of Toronto.

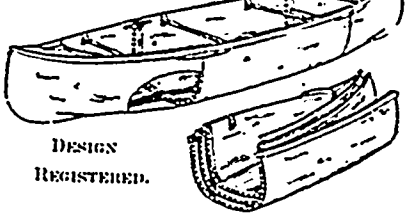
The Crossen Car Works, Coburg, Ont., are building the following cars:—For the C.P.R., 20 tourist cars with Pullman wide vestibules and standard steel platforms, automatic couplers, hollow brake beams, steam heating. Body of car, smoking room and kitchen, 14 berths, 28 seats upholstered in corduroy. Kitchen contains improved wrought iron range. The women and men's toilets are furnished with Tennessee marble washstands and overhead tanks. The berths are supplied with headboards, curtain rods, brackets, etc. Each car is lighted with 5 double-centro lamps besides the necessary side-bracket lamps. Double windows, with upper lights of beveled plate glass, monitor lights, flowered glass. The cars are equipped with Westinghouse quick action air-brakes, and air signals and Krupp's 40-in. steel wheels. Exterior finished in cherry and varnished, and interior in birch-stained mahogany. The interior trimmings are the latest design, finished in Persian Brass. For the Esquimalt & Nanaimo Ry., 10 Lehigh Valley Railway hopper gondola coal cars, with C.P.R. standard trucks, 60,000 lbs. capacity.

A. C. NEFF, Chartered Accountant. JAMES WOOD, Late Sec. The T. Eaton Co., Ltd.  
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**DEAN'S Sectional Canoe.**  
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 PATENTED UNDER THE CANADIAN PATENT ACT



The only Klondike Canoes carried by the Express Companies.  
 Bulkheads may be placed between the sections when bolted together, making each section a water tight compartment.  
 The only serviceable Portable Canoe made.  
 Write for catalogue and prices.  
**WALTER DEAN, Toronto, Can.**

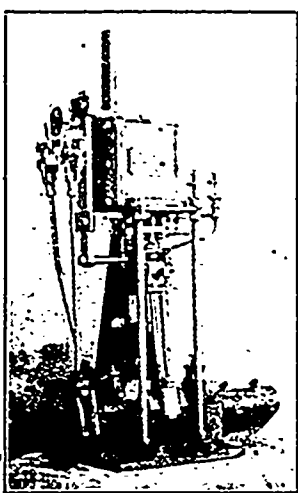
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**PATENT FOR SALE.**  
 Canadian Patent No. 53178, relating to apparatus for rapidly discharging cargo from vessels, whereby the necessity of shoveling grain, coal, etc., in small quantities is avoided.  
 Apply to  
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 Canada Elevator Works,  
 Queen and Peter Streets, Hamilton, Ont.  
 Patent Safety Hydraulic Hand and **POWER ELEVATORS**  
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**CARBONIZER** A neutral substance, harmless to animal fibre or tissue, while it destroys burrs, etc., as efficiently as acid. It leaves the wool in fine condition. Manufactured by the Merrimac Chemical Co., 13 PEARL ST. BOSTON.

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**WANTED**  
 Mechanics, Engineers and Firemen to enclose 20 cents in stamps for Working Model of Valve for Steam Engines.  
 Address, **H. F. LOWE, M.E.,**  
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Send for Catalogue and Price List to  
**THE JOHN MORROW MACHINE SCREW CO.**  
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**Royal-Victoria Life**  
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 5 King Street West, - TORONTO.

**DYE STUFFS** is the name of a neat little brochure published monthly by W. J. Matheson Co., 182 Front St., New York. As its name indicates, it is devoted to the interests of the dyeing industry in its various branches, and is filled with technical and popular information on the subject, and cannot but prove of great value to all woollen and other textile manufacturers. Following

is the contents of the last number of Dye Stuff that has reached this office:—Upon the diamine colors upon wool; use of diamine colors in dyeing union (cotton wool) fabrics; the valuable use of anthracenoacid brown G. for the dyeing and printing of woollen piece goods; dyeing of wool-and-silk mixed goods; the month's new colors—anthraceno acid brown S. W., pat, formyl violet 8 B., pat, dia-

mine red 10 B., oxy-diamine black A. M., pat, chrome leather black.

The Brockville Navigation Co., of Brockville, Ont., has been incorporated with a capital stock of \$16,000 to carry on the business indicated by the name.

The Burrow, Stewart & Milne Co., Hamilton, Ont., has been incorporated with a capital stock of \$250,000. Stoves, furnaces, ranges, scales, hardware, etc., are the products of this concern.

The capital stock of the Gaitshore-Thomson Pipe & Foundry Co., Hamilton, has been increased to \$60,000.

The capital stock of the Corticelli Silk Co. has been increased to \$125,000.

The capital stock of the Laurentide Pulp Co. has been increased from \$900,000 to \$1,200,000.

Messrs. Firstbrook Bros., box manufacturers, Toronto, are making an important addition to their factory. It is being built of brick, three stories high and basement, covering an area 150x80 feet, which will be equipped with the latest, best and most approved up-to-date machinery and appliances to be had.

Mr. W. T. Beattie, representing the Merrimac Chemical Company, of Boston, Mass., paid the office of THE CANADIAN MANUFACTURER a pleasant visit last week. Mr. Beattie has been, and is visiting Canadian woollen factories in the interest of his house, and is, we are pleased to learn, meeting with very gratifying success.

Mr. T. D. Wardlaw, Dundas, Ont., has adopted the chloride of alumina process of carbonizing in his woollen factory, introduced by the Merrimac Chemical Co., of Boston, Mass.

#### TO CANADIAN AGRICULTURAL IMPLEMENT MAKERS:

Well established firm wanted to take up the Sole Agency for a New Solid Woven Textile Threshing Belt of British Manufacture, for Canada, or part. Address—

Box No. 941, Sell's Advertising Offices, 167 Fleet Street, London, Eng.

#### CANADIAN

### Colored Cotton Mills Co.

1898—SPRING—1898.

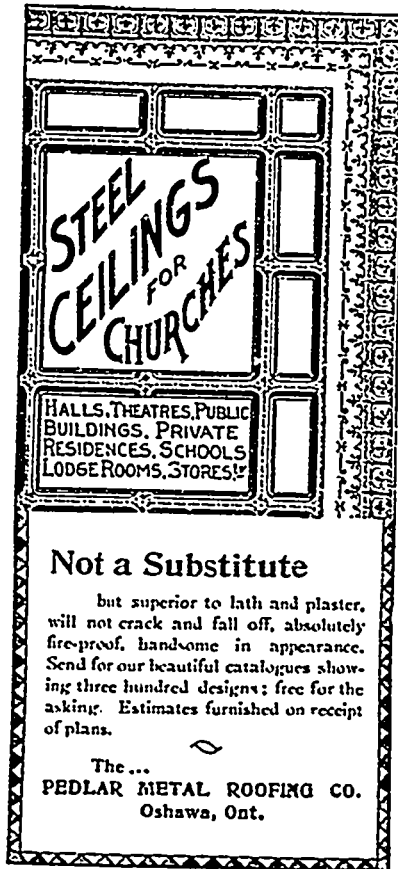
Cottonades, Tickings, Denims,  
Awnings, Shirtings,  
Flannelettes, Gingham,  
Zephyrs, Shirtings,  
Dress Goods, Lawns,  
Crinkles, Cotton Blankets,  
Angolas, Yarns, etc.

Wholesale Trade Only Supplied.

### D. MORRICE, SONS & CO.

AGENTS

MONTREAL and TORONTO.



**STEEL CEILINGS FOR CHURCHES**

HALLS, THEATRES, PUBLIC BUILDINGS, PRIVATE RESIDENCES, SCHOOLS, LODGE ROOMS, STORES

**Not a Substitute**

but superior to lath and plaster, will not crack and fall off, absolutely fire-proof, handsome in appearance. Send for our beautiful catalogues showing three hundred designs; free for the asking. Estimates furnished on receipt of plans.

The ...  
**PEDLAR METAL ROOFING CO.**  
Oshawa, Ont.

### MALCOLM MILLS CO.

Manufacturers of  
Fancy Twist Yarns, in Worsted, Silk, Cotton, etc. Polished Threads.  
Silk Nolle Yarns.  
Metal Threads and Tinsels.  
MILLS—Frankford, Pa.  
OFFICE—229 Chestnut Street, Philadelphia.

### PROGRESSIVE MANUFACTURERS

USE THE

### BLACKWELL UP-TO-DATE VARNISHES

For Finishing Pianos, Carriages, and Railway Coaches.

**BLACKWELL & CO., TORONTO.**

### Dominion Oil Cloth Co.

Manufacturers of ..

### OIL-CLOTHS of Every Description

Floor Oil-Cloth, Table Oil-Cloth,  
Carriage Oil-Cloth.

Enamelled Oil-Cloth,

Stair Oil-Cloth, etc.

Office and Works

Cor. St. Catharino and Parthonsals Ste.,  
MONTREAL, Que.

## Felts for Pulp Mills

20 years in the business —the first to make Felts in Canada; capacity 1,000 lbs. per day. All our Felts are woven endless, without a splice. Our Felts will last longer and make dryer Pulp. All up-to-date mills use our Felts. New mills, when in need, write for samples and prices.

**HAMELIN & AYERS, Lachute Mills, P.Q.**

## ELECTRIC REPAIR & CONTRACTING CO.

GEO. E. MATTHEWS, Manager. 621 LaGauchetiere St., MONTREAL TEL. 2177.

COMPLETE ELECTRIC PLANTS INSTALLED.

ELECTRIC APPARATUS OF ALL KINDS REPAIRED ON THE SHORTEST NOTICE.

Armatures Rewound for all Systems. Commutators Refilled.  
Write us, our Prices are reasonable and work good.

## FOR SALE!

Premises recently occupied by THE A. S. WHITING MANUFACTURING Co., CEDAR DALE.

Consisting of Valuable Water Privileges, Buildings, and about Twenty Acres of Land.

APPLY TO....

**H. R. LUKE, Oshawa, Ont.**

## BUSINESS BRINGERS.

Paying Pointers for Wide-awake Business Men who are Watching for Trade Opportunities.

A \$6,000 addition to the C.P.R. shops at Toronto Junction, Ont., is on the programme.

About \$20,000 will be expended by the C.P.R. in improvements at Owen Sound, Ont., this year.

The new C.P.R. station at Vancouver, B.C., is to be of Calgary sandstone and brick. It will be 190 feet long, and 60 feet wide, with tower 126 feet high. Estimated cost \$200,000.

Surveys are being made with a view to double tracking the C.P.R. line between Toronto and Montreal.

The C.P.R. will build at Black River, B.C., a sawmill with a capacity of 100,000 feet per day.

Solid stone arches will replace the wooden bridge on which the C.P.R. crosses the Kaministiquia river.

The Alberta Roller Mills at Calgary, N.W.T., have been sold to the Manitoba Grain Co., who will enlarge the mills and erect a big elevator.

Patrons of the C.P.R. will be glad to know that extensions are to be made to the Company's hotels at Revelstoke, Field, North Bend and Glacier, on the Pacific Division.

The contracts for the work on the Barton school, Hamilton, Ont., have been awarded. The building, which will be in every way a model, up-to-date schoolhouse, was designed by architect Charles Mills of that city, and will cost in the neighborhood of \$3,000.

C.P.R. stations will be built this summer at Moose Jaw, Sintaluta, Altona, Winkler, La Riviere, Rothwell, Elva, Pipestone, Reston, Pierson, Maple Creek and Dimonvie, on the western division.

The Canadian Pacific Railway Co. are building fifty compound consolidation locomotives. Mechanical Superintendent Atkinson has twenty-seven of these big engines in process of construction at the C.P.R. works, DeLormer avenue, Montreal.

The Department of Railways and Canals, Ottawa, are inviting contractors to make tenders for hydraulic lift locks at Peterboro, Ont. Plans and specifications of the work can be seen at the office of the Chief Engineer of Railways and Canals, Ottawa, on and after May 5, 1898, where forms of tender can be obtained by the parties tendering.

### ENTRANCE

and Leaving Candidates for next examination will hear of something to their advantage by sending name and address, name of teacher, and location of school, to the

### CENTRAL BUSINESS COLLEGE

OF TORONTO.

Send postal without delay and mention this paper.

The Present Session continues until July 1st, and members will be admitted at any time up to that date, and allowed to complete any Course selected after the holidays.

Write for particulars to—

W. H. SHAW, Principal.

### TORONTO MACHINE SCREW CO.



Manufacturers of  
Hexagon,  
Square and  
Head Cap  
Screws.  
Steel and Iron  
Set Screws.  
Hanger and  
Plumber Bolts,  
Studs, etc.



Send for Price List  
and Discounts.

109j Adelaide St. W., - TORONTO.

R. C. Jamieson. A. T. Higginson.

### R. C. JAMIESON & CO.

Manufacturers of

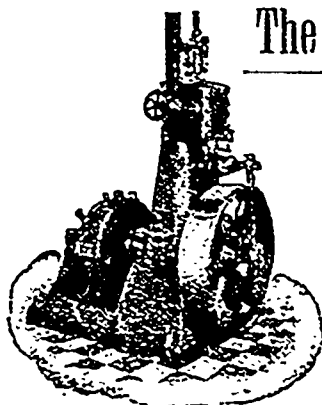
Varnishes and Japans.

Importers of Oils, Paints, Colors, Turpentine,  
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Glues, Gold Leaf, Bronze, etc.

OFFICE - 13 ST. JOHN STREET.

FACTORY AND WAREHOUSE - 23 to 29 ST. THOMAS STREET.

MONTREAL.



## The Whitelaw-Shepherd

### ...ENGINE...

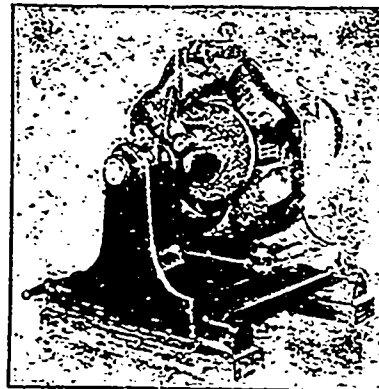
SIMPLICITY, COMPACTNESS,  
PERFECT REGULATION,  
ECONOMY,  
AUTOMATIC LUBRICATION.

For Electric Lighting Mills, Factories,  
and other purposes where Economy,  
close regulation and enduring service  
is required.

Manufactured  
by.....

R. WHITELAW, Woodstock, Ont.

## The Electrical Construction Co., OF LONDON, LIMITED.



### MULTIPOLAR MOTORS AND DYNAMOS

AND

Direct Connected Plants

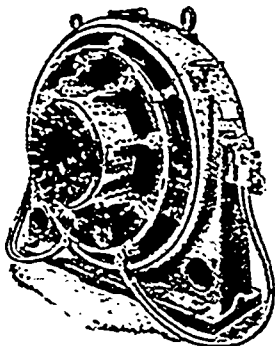
FOR IS LATED LIGHTING.

Head Office and Factory:

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769 Main Street,  
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TORONTO.



Westinghouse  
Direct Current,  
Direct Connected  
Generators,

The Standard to which  
all others are compared.

### Isolated Plants.

Most Perfectly Ventilated,  
Lowest Temperature,  
Most Efficient,  
Most Pleasing in Appearance.

The name of  
WESTINGHOUSE  
is a guarantee.

Least Attendance,  
Fixed Commutation Point  
—No Sparking,  
No Metallic Shell for Field Bobbins.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

New York, Boston, Chicago, Philadelphia, St. Louis, San Francisco, Buffalo, Syracuse, Atlanta, Tacoma,  
Mountain Electric Co., Denver. For Canada, Ahearn & Soper, Ottawa.  
Westinghouse Electric Co., Limited, 32 Victoria St., London.

100 K W  
Westinghouse Engine-Type  
Generator.

## KERR Water Motors

1/8 to 20 HORSE POWER.

Noiseless Running, Require No Attention, operated with water at a pressure of 30 pounds and upwards.

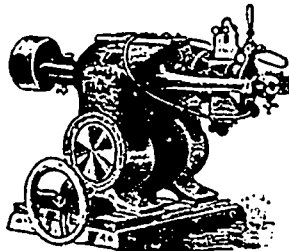


Reliable intending purchasers can have our Motors on trial by writing us, stating water pressure available, power required and class of work to be done. Our Motors are sold on their merits. Our prices are low. Enquiries solicited and cheerfully answered.

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**KERR WATER MOTOR CO.,**  
NIAGARA FALLS, CANADA.

## Jones & Moore Electric Company



Manufacturers

**DYNAMOS AND MOTORS**

1/2 to 100 K.W.

**SLOW SPEED MOTORS**

A SPECIALTY.

20 Light Dynamo, second hand, cheap.  
6 H.P. Motor, second hand, cheap.  
1/2 H.P. Motor, second hand, cheap.  
and several others.

22 Adelaide Street West, - Toronto.

The G.T.R. will build a new station at the Queen street crossing, Toronto.

Westmount, Que., will construct a contagious disease hospital to cost \$15,000, an incinerator to cost \$10,000, and municipal buildings to cost \$25,000.

The new block to be built in Vancouver, by C. H. Davies, will be three stories and basement, 90x60 feet, brick and stone, to cost \$30,000.

The Carborundum Co., of Niagara Falls, Ont., have purchased a site and will commence the erection of a building before June 1st.

A new Presbyterian church is to be built at St. John's, N.B., to cost \$2,000.

The Grey Nuns at Sudbury, Ont., will build a hospital 78x42 feet, two stories and basement, to cost \$10,000.

G. E. Fairweather, architect, Moncton, N.B., is preparing plans for remodeling the Central Methodist church at that place.

St. Peter's congregation, Toronto, will build a Roman Catholic church at a cost of about \$15,000.

David Ouellet, architect, Quebec, is preparing plans for a Roman Catholic church at Megantic, Que.

H. Staveley, architect, Quebec, is preparing plans for a parsonage for Chalmer's church, that city.

Loretto Abbey, a well-known Roman Catholic educational institution of Toronto, is being enlarged at a cost of about \$75,000.

A resolution has been passed by the Toronto School Board appropriating \$20,000 for repairs to city school buildings.

Improvements are to be made in St. Andrew's church, Perth, Ont., to cost \$10,000.

The I.O.O.F. at Essex, Ont., will build a large hall.

A large addition is to be made to the factory of the Simpson-Mesner Furniture Co., Berlin, Ont.

The new factory buildings of the Verity Plow Co., Brantford, Ont., will cost some \$50,000.

Park, Blackwell & Co., Toronto, will erect a new pork-packing factory at a cost of \$100,000.

The counties of Norfolk and Simcoe, Ont., will build a steel bridge 150 feet long over Big Otter Creek.

A new Catholic church is to be built at Sault au Recollet, Que.

Mr. Belcher, architect, Peterborough, Ont., has prepared plans for a large addition to the St. John's church schoolhouse to cost \$3,000.

The Dominion Government will build a lighthouse at Gull Harbor, Lake Winnipeg, Man.

A new saw mill is to be erected at Springhill, N.S.

The large reduction plant and laboratory of the Canadian Gold Fields Co., at Delora, Ont., was destroyed by fire May 8, loss about \$60,000.

The new rolling mills of the Ontario Rolling Mills Co., Hamilton, Ont., will soon be finished and in operation. The new works will be first-class and up-to-date in every respect.

## TO MANUFACTURERS.

The Town of Louiseville, P.Q., offers bonuses to the extent of \$100,000 (one hundred thousand dollars) to one or more manufacturers willing to establish their factories in the town. Also a grant of land, free of cost, sufficient for the requirements of their business.

APPLY TO—

L. A. PLANTE, Mayor, Louiseville, Que., or

H. FROST, Imperial Building, Montreal, P.Q.

Keep your Belts from Slipping and Preserve them by using

## STICK FAST BELT DRESSING.



REGISTERED.

Guaranteed to keep any Belt from slipping the moment it is applied; also to keep Belts from cracking.

This Dressing will save you power and money.

Give it a trial order. Hundreds of testimonials from users.

**H. R. RIDOUT & CO.,**

Railway, Mill, Foundry and Engineers' Supplies,

22 ST. JOHN STREET, MONTREAL.

## BAR IRON AND STEEL

Railway Spikes.

Pressed Spikes

Washers

Rhode Island Horse Shoes

Cut Nails

**ABBOTT & CO., - MONTREAL**

The time for receiving competitive plans for a city hall for Stratford, Ont., has been extended to June 15th.

Sewers are to be put down this summer on the principal streets of Brussels, Ont., and many of the wooden sidewalks are to be replaced by granolithic walks.

The town council of Orillia, Ont., is asking for tenders for a street lighting plant, power service and incandescent lighting plant. Particulars from the town clerk.

The city council of St. John, N.B., are considering a new system of heating for the almshouse. Hot water is favored.

Stewart Mulvey, secretary of the Winnipeg School Board will receive tenders for supplying school desks up to June 9th.

Plans for a new schoolhouse have been approved by the London, Ont., School Board, and tenders for its erection are to be invited at once.

The city council of St. Thomas, Ont., have adopted the plans of Neil Darrach for the new city hall. The second prize was awarded J. Z. Long & Son.

The School Board of Fergus, Ont., have asked the council to grant \$3,000 for remodelling the school building and putting in a better system of heating.

The Town Council of Owen Sound, Ont., will purchase a twelve ton road roller.

The principal streets of Niagara Falls, Ont., are to be paved with vitrified brick.

Victoria, B.C. will spend about \$15,000 in the improvement of its water works system.

D. Hamilton, Almonte, Ont., is asking for tenders for heating and ventilating apparatus for Martin street school.

Plans are being prepared for the Bank of Montreal for a three story fire proof building at Rossland, B.C.

Architect T. J. Rutley, Chatham, Ont., has prepared plans for a brick fire hall and council chamber for Bothwell, Ont. Town Clerk W. A. Scott is asking for tenders for the erection of the building.

William and Walter Stewart, architects, Hamilton, are preparing plans for remodeling and enlarging the Y.M.C.A. building at that city.

Powell & Carswell, architects, Chatham, Ont., are asking for tenders for the erection of a convent and schoolhouse at Tilbury, Ont.

The engineer of Quebec City has received instructions to prepare plans for a steel swing bridge to replace the old Bickell's bridge.

Tenders for an hydraulic lift lock at Peterborough will be received by Mr. L. K. Jones, secretary Department of Railways and Canals, Ottawa, up to noon on Tuesday, May 31st.

The Dominion Bridge Company, Montreal, have secured the contract for a new bridge at Windsor Mills, Que.

The Merchants Bank of Halifax, will soon commence the erection of a three storey building in Moncton, N.B.

The town council of Petrolia, Ont., will erect a new bridge over the creek on what is known as the blind line to cost \$1,000.

M. S. Blackburn, Dresden, Ont., wants tenders for an iron bridge 125 feet long.

The Privy Council at Ottawa has given its formal approval of the site for the proposed bridge across the St. Lawrence river at Quebec. The bridge is to have a clear span of 1,200 feet, and is to be 160 feet above high tide.

A large grain carrier to replace the Rosedale will be built at the Bertram shipyards, Toronto. She will be ready for the opening of navigation in 1899, and will ply between Fort William and Prescott, Ont.

Plans are being prepared by J. W. Siddall, architect, Toronto, for a three-storey brick factory for the Otto Higel Co., Limited.

The Draper Company, Hopedale, Mass., manufacturers of textile machinery, etc., are arranging it to have some of their specialties built in Canada.

Messrs. George F. Tuckett & Sons, Hamilton, Ont., manufacturers of tobacco, will erect another factory in that city.

THE - - - -

# WM. HAMILTON MANUFACTURING CO., Limited

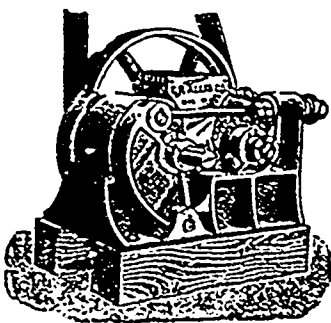
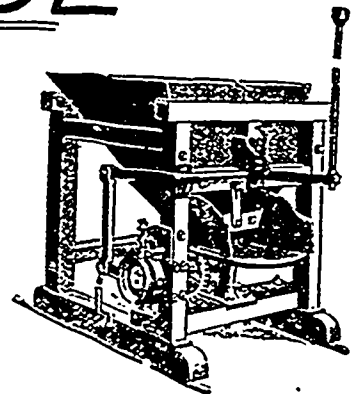
MANUFACTURERS OF

## THE "RELIANCE"

### Mining, Milling

AND

### Smelting Machinery



FOR THE DOMINION OF CANADA

(Under License from The E. P. ALLIS CO., Milwaukee, Wis.)

Crushers, Rolls, Jigs, Concentrators, Screens, Stamps, Pumps, Compressors, Hoists, Boilers, Engines, Water Wheels, Etc.

Branch Office . . . .

VANCOUVER, B.C.

 PETERBOROUGH, ONT.

It is reported that negotiations are now on foot between a leading manufacturing company of Ontario, and Messrs. J. and C. Hodson, of Montreal, for the acquisition of the fine property of the latter, situated in the town of St. Henri, along the canal bank. The Hodson property is one of the best manufacturing sites in the neighborhood, and the prospects of its being again occupied will be regarded with great satisfaction in St. Henri, the mill having been closed down for some three years past. It is intended, if the negotiations are concluded favorably, to establish a large rolling mill and iron

manufacturing industry, which will give employment to over 200 hands on the property.—Trade Review.

The Toronto Board of Control of the City Council have voted \$100,000 of city debentures to be issued for the erection of new school buildings in this city.

T. J. Blain, town clerk of Brampton, Ont., will receive tenders until July 1 for lighting that town by either gas or electricity.

Definite arrangements have been made for the remodeling and enlarging the building of the Young Women's Christian Association

at Hamilton, Ont. In addition to increased class room, it is decided to add a handsome lecture room or auditorium, with a seating capacity of about 450. The Y.W.C.A. has realized for some time the need of a gymnasium, therefore that department has received due consideration. The plans have not yet been completed, as the board is undecided whether to build so as to provide accommodation for other organizations, or to occupy the whole building as a technical school for girls.

Mr. L. Munro, architect, Caledonia, Ont., has prepared plans for a brick Presbyterian church to be erected at that place.

Sealed tenders endorsed, "Tenders for Drill Hall, Windsor, N.S.," will be received until Wednesday, May 18th next, for the erection of a Drill Hall at Windsor, Nova Scotia. Plans and specifications may be seen, and forms of tender and all necessary information obtained at the Department, and at the office of the Hon. M. H. Goudgo, at Windsor, N.S.

J. H. Kerr, Moose Jaw, N.W.T., will build a \$20,000 hotel. Plans, specifications, etc., by S. A. Clark, architect, Regina, N.W.T.

E. F. Hutchings, wholesale saddler and leather merchant, Winnipeg, Man., proposes building a mammoth factory and warehouse in Winnipeg this year, which, Mr. Hutchings says, will be the largest establishment of the kind in Canada. The cost is estimated at \$40,000.

The Ontario Tack Company, Hamilton, Ont., will build an addition to their works.

Manufacturers of wood-working machinery electric light and power machinery, belting and others, should note the fact that Messrs. Firstbrook Bros., Toronto, who are erecting a large brick addition to their box factory, will equip it with the best up-to-date plant and appliances to be had.

**C**ANADIAN  
**C**HEMICAL  
**C**OMPOUND  
**C**OMPANY

**C**ORRECTLY  
**C**OMPILED  
**C**HEMICAL  
**C**OMPOUNDS

**C**IVILITY  
**C**AREFULNESS  
**C**OMPLETENESS  
**C**ONTINUITY

## BOILER EXPLOSIONS

Are very often caused by scale and mud forming upon the fire sheets, and may be

Scale and Water Analyzed

**FREE.**

TRY US.

Factory....

66 RIVER STREET. CANADIAN CHEMICAL COMPOUND CO., TORONTO.

**PREVENTED**

By the Use of our

**ZINKOLENE.**



We are Beyond the Experimental Stage.



WE CAN SAVE YOU MONEY.

Offices.....

ROOMS 310 & 311 TEMPLE BUILDING, Phone 8047.

## THE OTTAWA PORCELAIN AND CARBON CO., Limited, OTTAWA, ONT. . . .

MANUFACTURERS OF

**CARBON POINTS** for all kinds of Arc Lamps, including Cored and Solid Carbon for Incandescent Circuits.

.....ALSO.....

**M**OTOR BRUSHES and Specialties in Carbon for Telegraph, Telephone and Electric Light Supplies.

**P**ORCELAIN INSULATORS, Cleats, Door Knobs, and all kinds of Pressed Porcelain for Electrical and Hardware Lines.

ALL GOODS GUARANTEED TO GIVE SATISFACTION.

# A Saving.

The first cost is not the test of an actual saving. The truly Economical Manufacturer knows this to be true. For instance, the cheap, trappy Pulley, by its inferior working qualities, is a source of loss to the user the moment it is

put in operation, and this loss continues all the time the Pulley is working. You do not get the full or proper results from your power plant. Higher price, though, is not always a sign of better quality, for instance—you may or may not have to pay more for

## "THE REEVES" PATENT WOOD SPLIT PULLEY

but in either case you are getting the best value on the market. Because with THE REEVES the saving is continual, in Power, in Time, in Shafting, in Belting, and last but not least, and as a result of all the other savings, a saving in Money. CAN YOU AFFORD TO BE WITHOUT "THE REEVES"? Is the best too good for you? WRITE TO-DAY FOR OUR CATALOGUE AND GET OUR PRICES.

Also COLUMBUS, IND.

REEVES PULLEY CO., Toronto, Ont.

**CORRESPONDENCE.**

Editor of the CANADIAN MANUFACTURER:

Sir,—In reply to your many enquiries, and for the benefit of the woollen trade at large I beg to cite the following facts as gathered during my experience in several large mills. There is always more or less trouble and expense in the wool department, dye house and finishing, from the effects of carbonizing with acid. In carbonizing wool with sulphuric acid, we learn that it does not improve the stock. We will get the most of the vegetable matter out, and we don't require to neutralize if we are dyeing acid shades; while on neutral shades we are obliged to neutralize, and unless it is properly done, which means a good deal of time, we will find a heavy waste of dyestuffs. Again we find that during the process of manufacturing the stock will not card or spin with such freedom as carbonized stock does. We will also find the soap account materially increased.

For underwear manufacturers who require a nice, white stock, it is impossible to get such after carbonizing with acid either in dry or wet process, for no matter how white the stock may appear, it will acquire a dingy yellow appearance in course of manufacture, caused by the atmosphere combining with acid left in stock.

To all who desire the best known process in the market to-day, I can but refer them to the Alumina process, or wool carbonizer as it is called by the Merrimac Chemical Company, of Boston, who are the manufacturers.

In contrast to the sulphuric acid process we find that the Alumina process leaves the wool much superior as regards strength and elasticity, besides leaving it beautiful and white, and kind to the feel—in other words it is, I believe, the only known process that leaves the stock in its most natural condition. It will spin to finer counts, and cloth made from stock carbonized by this process is found by actual test to endure a much harder strain than that done by acid.

Where this process is worked properly, it will be found that the goods have gained a higher lustre, and altogether more buoyant feeling. Had I time and space I might enlarge upon the superiority of the Alumina process, but will confine myself to the method employed. In the first place I may say you can handle the liquor without fear, as it has no effect on the hands or clothing, and the wear and tear of machinery is practically nothing, if the process is worked properly. It will not stain or burn the fabric, while acid has just the opposite effect, burning and stealing everything it comes in contact with.

To those who are now using the sulphuric acid process, no change is necessary, all that is required being an ordinary box or Cypress tank with brass bolts to hold the bath, the

liquor in which register from six to eight degrees Benneke, according to the vegetable matter the stock contains.

Allow the stock to remain in the bath until burrs are thoroughly saturated, or from thirty minutes to one hour, lift, and after allowing to drip, extract in ordinary extractor, "which will require a light coat of shellac and emory once a week or so" with a tub, pan, or tank underneath to recover the liquor. The best work is accomplished by first drying at a moderate heat, about 175 degrees, on table dryers, then if possible give a finish heat, or baking heat, of 240 degrees for about thirty minutes if a heat of only 200 or 210 degrees can be got, the time must be lengthened accordingly.

Immediately stock is taken from dryer it should be run through crushers and a duster, when will be found a nice pure, free, and perfectly clean stock, bright light and soft, no neutralizing is needed. Allow stock to cool before using. The above process has been in use in Europe and the New England States for a number of years. Anyone desiring to see the process, should apply at the offices of the Company, at 13 Pearl St., Boston, where they will be furnished with addresses of mills using the same.

Toronto, May 9, 1898.

B.

P. McArthur, of Westbourne, Man., will establish a sawmill at Winnipegosis, Man., the lake terminus of the Dauphin Railway.

**Factory for Sale.**

A large, convenient and well-located factory, situate on Barton street, Elgin and Mary streets in the

**CITY OF HAMILTON.**

With Engine, Boilers and Shafting, suitable for any purpose. Adjacent to G.T.R. railway track. For particulars apply to

**W. M. COCKBURN.**

11 Toronto Street, Toronto, or

**F. H. LAMB,**

63 King Street East, Hamilton.

**EMERALD-BOILER-OIL**

1-16 of an inch of Boiler Scale adds 15 per cent. to the fuel account. Emerald Boiler Oil gives the most perfect results with all kinds of water. It's a Pure Petroleum Extract. It is an effective agent for removing scale from Boilers.

"ATLANTIC RED" "BAYONNE" ENGINE.  
"CAPITOL" CYLINDER. "RENOVN" do.

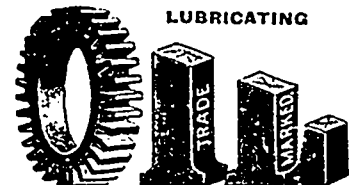
The Very Best that is Made.

All information and Samples Furnished Freely.

**The Queen City Oil Co., Limited,**

SAMUEL ROGERS, President.

TORONTO.



**INTERESTING TO MILL OWNERS.**

**OAK TANNED LEATHER BELTING.**

Lancashire Hair Belting.

ENGLISH CARD CLOTHING.

**D. K. McLAREN**

Manufacturer and Mill Furnisher,

**Montreal—Ottawa—Galt—Winnipeg.**

**WESTERN TRADE:—**

Our Mr. R. M. W. McLaren, in charge of Galt Branch, will be pleased to give quotations as well as receive orders.

**The Croftan Storage Battery Co.**

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The Columbia Flouring Mills Co., of Enderby and Vernon, B.C., have remodeled their Vernon mill to the Plansifter system and increased its capacity from 50 to 75 barrels per day.

Campbellford, Ont., is discussing a two per cent. loan of \$20,000 to Messrs. Dodds & MacPherson, who offer to convert the John Routh Woollen mill into a carpet factory if the loan is granted.

A power company are negotiating with the city of Toronto, Ont. They offer to supply power at \$40 per h.p., per year, running 24 hours a day, if they are guaranteed the consumption of 10,000 h.p.

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Wire Screens for Every Class of Material.

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

Special Attention given to Minor's Requirements.

**A NOVEL APPARATUS.**

The C.P.R. has equipped the sleeping car Winchester, which runs between Toronto and Montreal, with a system of electric light generated from the axle. The C.P.R. has been experimenting with various systems of lighting for some time, with a view of determining the one best adapted for use in the car service. The results procured from the apparatus used on the Winchester are said to be very promising. Although the current is generated from the car axle, there is no flickering or irregularity in the light. This regularity is brought about by the use of a system of storage, which maintains a regular current, no matter what the speed of the car may be, and stoppages are also provided for in this way. One great advantage in this electrical system of lighting, lies in the fact that the lamps can be brought into immediate requisition. On the transcontinental line, for instance, where there are numbers of snowsheds and tunnels to pass through, the process of lighting oil lamps is too slow to meet the desideratum of having instant illumination. With the electric system, on the other hand, an employe need only press a button when the train is about to plunge into the darkness of a tunnel, to set all the lamps aglow. The Winchester is the first car in Canada to be honored with the new electric system.

structure will be lighter and possibly more graceful, the length of the span and the lightness of the iron adding to the general beauty of the structure.

**NEW DYESTUFFS.**

Benzo Nitrol colors.—The demand for colors on cotton fast to washing, obtainable by as simple a method as possible, has led the Farbenfabriken Co., of Elberfeld, to the discovery of the after-treatment with diazotized paranitraniline.

The colors suitable for this process have been named Benzo Nitrol colors. Since in many dye-houses the preparation of diazotized paranitraniline was too troublesome a process, an endeavor has been made to simplify same, resulting in the discovery of a developer called Benzo Nitrol Developer, in paste.

The above developer only requires to be stirred up in cold water with a little acid to bring it into solution. This process is exceedingly simple, and the Nitrol Developer will facilitate the introduction of the Nitrol colors, producing fast shades previously beyond the reach of direct dyeing colors.

Benzo Nitrol brown, 2 R.—As a direct dyeing color, this new addition to the Nitrol group is not of any great value, but developed

with paranitraniline or Benzo Nitrol it gives a full reddish brown with all the advantages of Benzo Nitrol Brown G., viz., cheapness, fastness to washing, fullness of shade and fastness to light. In combination particularly this brown would prove very serviceable. It is equally as applicable as the old brands for dyeing loose cotton, hanks of piece goods, while for velveteen or mercerized piece goods, it can be employed for shades which, owing to the fullness of same overhand, were hitherto only obtainable with the assistance of basic colors.

Azo Fuschine G.N. extra.—This latest addition to the Azo group, resembles very closely in shade and properties, the well-known Azo Fuschine G., whilst in concentration and price it will be found considerably cheaper. To meet the demand for a cheap red level dyeing colors on wool, the Farbenfabriken of Elberfeld put upon the market last year and year previous, Azo Crimson L and S., and have now added to these colors a new homogenous product similar to the familiar Azo Fuschine, and which has been called Azo Fuschine G.N. extra. In every respect, this color resembles Azo Fuschine G., particularly in its level dyeing properties and exceptional fastness to light, and combines a low price with about double

**THE NEW BRIDGE ACROSS THE GORGE AT NIAGARA FALLS.**

Satisfactory progress is being made by the Pencoyd Iron Works of this city, in the construction of the new steel bridge across the gorge at Niagara Falls. This arch, which is being built to replace the suspension bridge erected in 1889, will be the largest of its kind in the world.

The distance between the cliffs at the point where the arch is to stand is no less than 1,268 feet. Of this space the main span of the new arch will occupy 868 feet, and will be connected to the cliffs by two approaching spans, the one on the New York State side to be 190 feet long, and that on the Canadian side 210 feet long. The width of the bridge will be a little over 49 feet, of which space 23 feet in the centre will be devoted to a double track for an electric road, and outside of the tracks on each side there will be a carriage way 8 feet wide, and beyond these, walks for pedestrians 3 feet wide and slightly raised above the level of the roadway.

The bridge will be a single deck structure and it will contain about 4,000,000 pounds of steel. The arch will be the fourth bridge erected on this site, the first having been a wooden suspension bridge, 10 feet wide, opened on January 2, 1869. This bridge was rebuilt in steel in 1887-88, but on the night of January 9-10, 1889, it was destroyed by a hurricane. It was immediately rebuilt and it is this suspension bridge that is now to give way to the arch. When the arch is completed the suspension bridge will be taken apart and removed to Lewiston, seven miles down stream, and there rebuilt to take the place of the old suspension bridge destroyed by wind, April 16, 1864.

The work of rebuilding the suspension bridge will of itself be a notable undertaking, and is expected to attract considerable attention from engineers. It is expected that the new arch will be completed during the early summer, before the heavy Niagara travel commences. As compared with the arch erected across the gorge last year for the Grand Trunk Railway's use, the new

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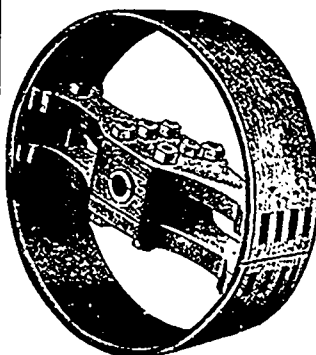
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58 Yonge Street, - **TORONTO.**

the strength of the G. brand. It is employed in producing the most delicate shades on yarns and ladies dress goods. Its shade is considerably affected by salts of chromium, aluminum or copper, the presence of which must be avoided in dyeing. Azo Fuschine G.N. extra is equally as adaptable as the G. brand for producing black and white effects on mixed goods and wool goods, as the silk remains almost perfectly white, whilst the red dyed wool when afterwards chromed is converted into a black (see card No. 559, 1896).

For samples of color, dyed shades, circulars and latest pattern cards address the Dominion Dyewood and Chemical Co., Toronto, sole agents in Canada for the Farbenfabriken, vorm. Friedr Bayer & Co., Elberfeld, Germany.

**THE STURTEVANT ENGINES.**

The B. F. Sturtevant Co., Boston, Mass., have sent us their illustrated catalogue, No. 103, having reference to the Sturtevant engines for electric light plants and general high grade work manufactured by them.

As we all know modern steam engineering practice demands an engine capable of sustained operation at high speed, possessing the utmost refinement in the matter of speed regulation, and developing the maximum horse power with the minimum of weight and floor space. For many years the Sturtevant Company have devoted themselves to the most careful design and development of an extensive line of simple, compact and absolutely high-grade engines to fulfil these requirements. That they have succeeded is best evidenced by a record of over six thousand engines of the various type built and sold since they entered this field.

These engines as represented in the catalogue, are unique in many features, are specially adapted for, and fulfil the requirements of, dynamo driving and similar refined and continuous work in which they have been most extensively employed, and for which they were distinctly designed.

They are manufactured in large lots by special tools, their parts are interchangeable and duplicates are always carried in stock, so that repairs may be made without delay.

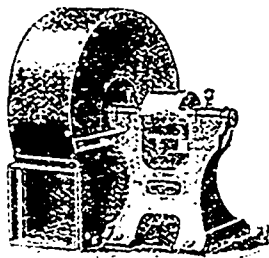
The engines enumerated and described in the Catalogue include the Sturtevant single valve upright engine; automatic and throttling engine; Sturtevant generating set, with single upright engine and multi-polar circular type dynamo; automatic double enclosed upright engine; single valve open type double upright engine; automatic compound enclosed upright engine; Sturtevant generating set, with double enclosed upright engine and bi-polar upright type dynamo; generating set with double enclosed upright engine and multi-polar circular type dynamo; generating set with double open-type upright engine and multi-polar circular type dynamo; Sturtevant side crank automatic horizontal engine; same with independent expansion valves; side crank throttling horizontal engine; centre crank automatic horizontal engine; Sturtevant generating set with centre crank horizontal engine and multi-polar circular type dynamo, and Sturtevant centre crank throttling horizontal engine.

The catalogue is gotten up in the best style of the printer's art, and we are requested to say that it will be sent free of charge on application to the B. F. Sturtevant Co., Boston, Mass.

**Hamilton Blast Furnace Co.**

HAMILTON, - - ONTARIO (Limited)

Manufacturers of

**HIGH GRADE  
PIG IRON**

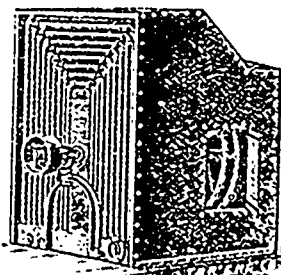
**Ventilating Steel-Plate  
Fans, Blowers and  
Exhausters.**

**WE** have on hand Fans of the Best American Makes, ranging from 15 inch to 72 inch. Also Second-hand Coil Heaters, with Fans to suit, from 1,000 feet to 5,000 feet of inch pipe capacity.

THE ABOVE ARE FOR SALE CHEAP.

Write for Prices and Send for Catalogue.

**McEachren Heating and  
Ventilating Co., GALT, ONT.**



**ELECTRICITY EXTRAORDINARY.**

At Great Falls, Mont., which has become the largest wool shipping point in the north-west, United States, great difficulty has often been experienced in disposing within a given time of the shearing of large shipments of sheep. This difficulty has now been amply met by the use of electricity. The trolley current has been utilized to drive the shearing machines. The installation of the simplest possible description. A street railway motor was taken from one of the cars, and the armature pinion was replaced by a small pulley, which was belted to the main overhead shaft. So little power was needed that two rheostats had to be put in the circuit to keep the sheep down. The foreman of the shearers, after only five minutes' instruction, took full charge of the motor, giving it all the necessary attention in oiling, starting and stopping. After the machines were started, the maintaining of a uniform speed was easy, and within half an hour the twenty machines were ripping off the fleeces at a rate which broke the record. The power was transmitted to the shears, which resemble horse clippers in their operation, through universal joints. In three weeks 16,184 sheep were sheared by the one motor, averaging nearly 100 sheep per day for each machine.

**"PAPYROLITH" FLOORS.**

Under the name of "papyrolith," a new flooring material has been put on the market. Papyrolith, or paper stone, is a description of papier mache, hardened and toughened for its special application. It is a chemical combination of vegetable fiber, paper pulp

and minerals, from which are produced a very tough material which has the advantages of the hardest wood and of stone, without the drawbacks of shrinkage of the one, and extreme coldness and inelasticity of the other. It is a non-conductor and impervious to water. It will not swell or dry up, and neither shrinks nor twists, as other substances of the same class will. It is laid in a liquid state and is like a thick paste or cement, so that on a sloping floor it will take the incline required and present a smooth face without joint or crack. For this reason it is well adapted for hospitals and school-rooms, as it provides no room in which hurtful bacteria germs can find lodgment. It will take any color, or any combination of colors desired. It is claimed to be fire-proof, and from its elasticity has an agreeable feel to the tread, and deadens sound considerably. Being unaffected by vibration, it is suitable for factories or work rooms where engine power is used. It is manufactured as a powder, and after being brought into the semi-liquid state by the addition of water, is laid, like cement, on a solid foundation of brick, concrete or wood. A coarse and a fine layer are used, the first being allowed to lie about twenty-four hours before the top dressing is spread and smoothed off with a trowel. The two applications are about half an inch thick when thoroughly beaten down.

Messrs. Bonney and Kennatt, who were formerly with the Eddy Co. in Hull, have established a paper mill in the big iron building just south of the street railway power house in Ottawa, Ont. They will employ about thirty hands.

**The Pulsometer**

**STEAM PUMP**

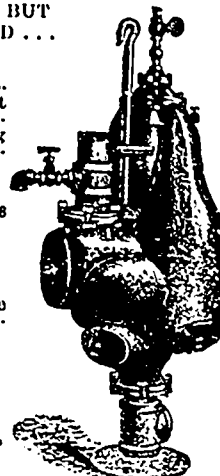
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The handiest simplest and most efficient steam pump for general Mining, Quarrying and Contractors' purposes.

Muddy or Gritty Liquids Handled without wear.

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Steam Pump Co.  
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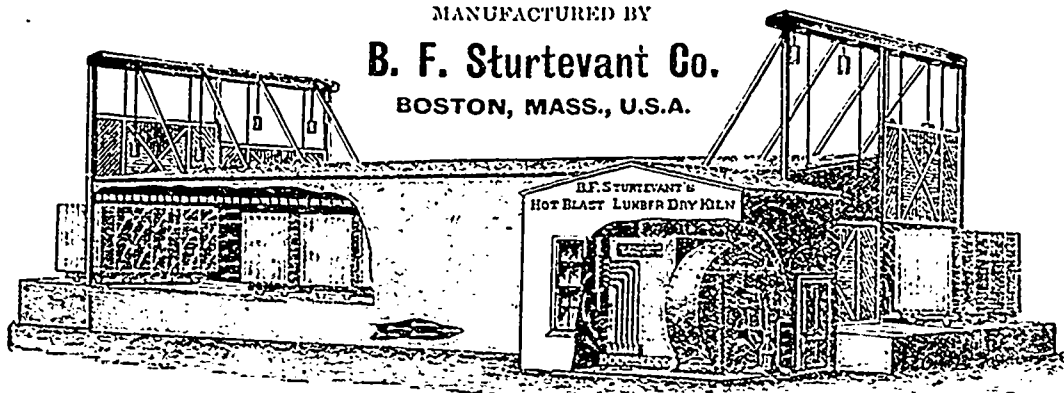
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Complete .  
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Absolutely  
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**QUICK DRYING**  
Economical in  
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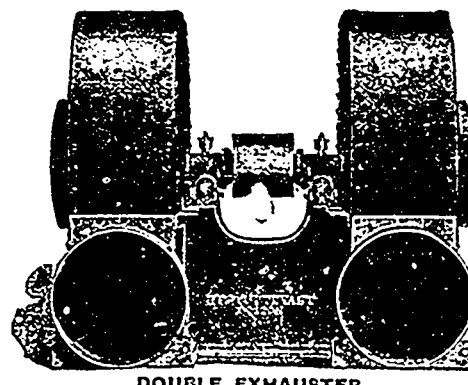
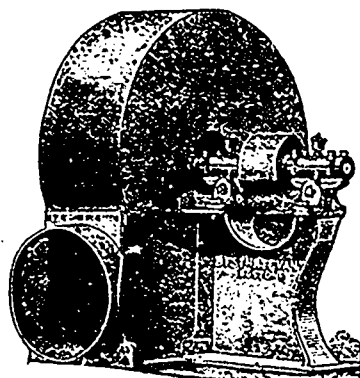
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For Removing Refuse  
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GENERAL CANADIAN AGENTS  
TORONTO, BRANTFORD, MONTREAL



**DOUBLE EXHAUSTER**

**CALCIUM CARBIDE IN CANADA.**

In part 1 of the report of the Ontario Bureau of Mines for 1898 Director Blue has the following interesting report on calcium carbide :

In several previous reports the Bureau has devoted considerable space to the subject of calcium carbide and acetylene gas. The account given in the Report of 1894 of Willson's method of producing the carbide, patented in that year, led to a large degree of public interest in the new illuminant, which also held out so bewildering a range of possibilities as a foundation for many useful compounds.

In the report for last year some of the difficulties were enumerated which hindered the general adoption of acetylene gas for lighting purposes, but since that time much progress has been made. Continued study of the properties of the gas and experiment with it, have evolved apparatus of various types for its generation and control, and the result has been that acetylene is now being rapidly introduced as a means of indoor lighting throughout the Province of Ontario. The field which seems specially open for it is that afforded by the smaller towns and villages, where gas plants are not already in existence and where the electric light is used, if at all, only in the form of the arc lamp for illuminating public streets. Here a system of lighting is welcomed which does not necessitate an expensive central plant or a costly equipment of mains, and which does not require a large number of consumers to ensure a reasonable low cost. The advantage possessed by acetylene in this regard is, that it provides an insulated method of lighting, which can be adopted by one person in a town or village, or even by a farmer on his homestead, without reference to any one else and without increase of cost. This feature of acetylene lighting has doubtless, in large measure, been the cause of the favorable reception it has had in Ontario during 1897.

There are now eight firms engaged in manufacturing acetylene generators in the province, as follows: J. Wallace & Sons,

Hamilton; The Niagara Falls Acetylene Gas Machine Company, Niagara Falls; Loishman & Maudrell, Woodstock; The Hamilton Acetylene Gas Machine Company, Hamilton; The Guelph Acetylene Gas Machine Company, Guelph; The Acetylene Lighting Company, St. Mary's; The Acetylene Lighting Company of London, Limited, London; and the Welland Acetylene Gas Machine Company of Welland. One of these firms reports having placed 94 of its machines since January, 1897, mostly in Ontario, but several also in the United States and Mexico. The plants range in size from 15 to 100 lights. They are used for the lighting of stores, churches, manufactories, rinks, and dwelling houses. Another firm mentions a few of their principal patrons, 35 in number; a third firm enumerates 55 places in which they have set up 186 machines, ranging in size from five to 150 lights, but having a total of 4,535 lights. The majority of these generators were put up in Ontario, mainly in the smaller towns, but a number of them went to other provinces of the Dominion, among them 41 to Winnipeg, while 10 are said to have found their way to Klondike. A fourth firm could give "an endless list" of their customers, if desired, but furnish 15 only, among whom are five churches and one Government institution; a fifth sends the names of 18 users of their machines. From the fact that acetylene has so far been introduced mainly outside of cities and towns having gas plants already in operation, it is probable that it has taken the place of coal oil in the majority of cases, and to a smaller extent that of the electric light.

As to the cost of installing the light, this varies with the style and capacity of generator employed. One of the firms named above quotes its prices for the several sizes as follows: 15-light \$40, 25-light \$45, 35-light \$50, 45-light \$55, 60-light \$70, 65-light \$85, 100-light \$115, 150-light \$145. On the other hand the Springfield Acetylene machine, made in Springfield, Mass., is advertised to sell at prices ranging from \$125 for a 10 light machine to \$450 for a 100-light one. This Springfield generator is situated wholly underground, which it is claimed reduces the danger and offensive

smell to minimum. Plants of other make are usually situated in the basement or collar of the building which they are intended to serve.

As to the cost of operating the light plant, this is dependent almost wholly upon the cost of the carbide of calcium, as the only other ingredient used in producing the gas is water. The carbide used in Ontario is manufactured wholly by the Willson Carbide Works Company, of St. Catharines, and costs three cents per pound, or, allowing for freight about 3½ cents. Messrs J. Wallace & Son, of Hamilton, state that by actual experiment and photometric test with carbide at \$60 per ton, the cost of the acetylene gas has been found to be 12 cents per 1,000 candle power hours. The Niagara Falls Acetylene Gas Machine Company, state that in practice with carbide at 3½ cents per pound they find they can produce a full 36-candle power light at a cost of three-eighths of a cent per hour. The Acetylene Lighting Company, of London, write that in their experience acetylene gas costs about \$6 per 1,000 cubic feet, or one cent per hour for 85 candle power; while the Hamilton Acetylene Gas Machine Company quote the words of their agent at Whyoming: "We started a B. & J. machine on 30lb. of carbide and kept a close watch on it, finding as a result that it gave 160 hours' light of 50 candle power. This reduced to cost means 320 hours' light of 25 candle power, at a cost of 90 cents, or seven twenty-fifths of a cent per hour for 25 candle power light." These several estimates vary a little, but not much.

By the law of Canada (Consolidated Statutes, 1886, Chap. 101) the quality of illuminating gas must be such that the light produced by a standard burner consuming five cubic feet of gas per hour, shall be equal in

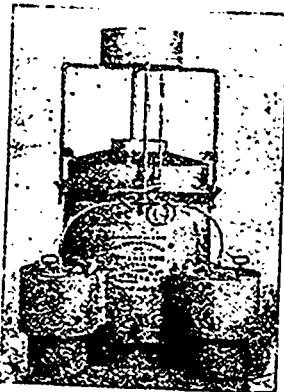
**The Acme Acetylene Gas Burners.**

Only Multiple burner ever invented. Any number of flames, from one upward, on a single burner tip. **Will not Carbonize.** Samples—single flame, 25 cents; three flames, 50 cents.

THE STATE LINE TALC CO.,  
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**Hamilton Acetylene Gas Machine.**

SIMPLE, ECONOMICAL, DURABLE AND SAFE.



Adapted for PRIVATE HOUSES, OFFICES, STORES, CHURCHES, or any building where a clear, bright and steady light is required.

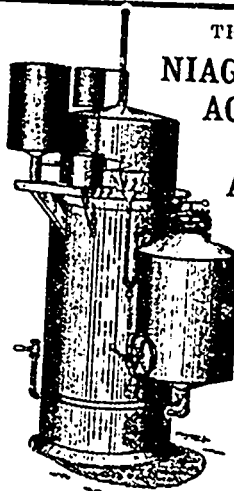
300 in use in Dominion of Canada.

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THE  
**NIAGARA FALLS ACETYLENE GAS APPARATUS**



Patented in Canada, United States and Great Britain.

This is the only machine perfectly automatic in its action, requiring little or no attention. Machines made in 10 Sizes costing \$15 and upwards.

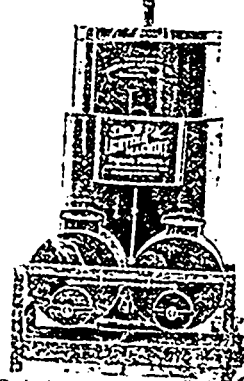
**Acetylene Gas the Coming Light.**  
CHEAPER THAN ELECTRIC LIGHT  
COAL GAS OR COAL OIL

For Private Dwellings, Business Houses, Churches, Public Halls and Offices.

For particulars write to the  
**NIAGARA FALLS ACETYLENE GAS MACHINE CO. LIMITED.**  
NIAGARA FALLS, ONT.

**Sun Lighting Machine.**

ACETYLENE GAS.



The Acme of Perfection in Lighting.

At the Minimum of Cost.

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

Write for Catalogue.

THE

**Acetylene Lighting Co.**

(LIMITED).

LONDON, ONTARIO.

intensity to that produced by 16 sperm candles of six to the pound, two candles being used together. Taking the estimate of the Hamilton Acetylene Gas Machine Company, as given above, to be approximately correct as to the quantity of light produced, and assuming the cost of carbide to be 3½ cents per pound, a comparison with illuminating gas equal to that furnished the citizens of Toronto, which is stated to be of 20.18 candle power, would work out as follows: One thousand cubic feet of coal gas burning for one hour would give 4,036 candle power and cost 90 cents, (Toronto price), while 1,000 cubic feet of acetylene burning for one hour would give 53,333 candle power and cost \$7.50. Ninety cents worth of acetylene would yield 6,400 candle power as compared with 4,036 candle power given by coal gas; hence acetylene at \$7.50 per 1,000 cubic feet is about equal in cost to 20.18 candle power coal gas at 57 cents per thousand feet. Or the comparison may be stated thus, taking the price of carbide to be three cents per pound as in the Wyoming experiment: Toronto gas costing 90 cents gives 4,036 candle power, and acetylene gas costing 90 cents gives 8,000 candle power, the ratio of efficiency being 100:198. This result may or may not be always borne out in actual use; but if ever the cost of carbide is reduced to \$20 or \$10 per ton, as may be possible when unlimited power is available to generate electricity, there can be then no doubt on the question of relative cost. Inquiry made from some of the users of acetylene, however, brings out the fact that even under existing conditions it is considered economical as well as satisfactory. Knox Church in Goderich may be taken as an example. The plant was installed when the building was re-modelled and enlarged in the summer of 1897. A 60-light machine, including 100 burners, was put in at a cost of \$170. The carbide costs 3½ cents per lb. delivered; 17 pounds supplies 82 lights with gas for two hours at a cost of about 55 cents. Since there is a short period of the year when little or no light is required, it is calculated that the expense of lighting the church, the auditorium of which measures 90 feet by 60, is about \$25 a year. "The gas" a member of the congregation says, "gives great satisfaction, many expressing the opinion that while the light is a very brilliant white light, it has none of the dazzling effects felt from electric light, and is much softer and easier for the eyes."

The only other point as to which some uncertainty exists is the explosive properties of the gas. In the liquified form, acetylene is certainly a substance requiring to be handled with care, but in its gaseous state it does not appear to be much more liable to explode than ordinary coal or water gas. The manufacturers of generating machines say there is but one way in which trouble can be caused, and that is by opening the generator while holding a light in the hand, and then only when the acetylene lights are in use, as generation of gas ceases almost immediately upon the turning out of the lights, owing to the automatic action of the machine removing the water from contact with the carbide. All machines are constructed with a waste pipe running into the open air, so that any surplus gas is conducted outside of the building. Explosions have taken place, but so far as can be learned not in greater proportion than similar accidents with other illuminating gas. One of the previously mentioned firms states that they exploded about 12 cubic feet of acetylene in a gasometer, and merely succeeded in making

a pretty loud report and throwing the gas holder out of the water. "We have frequently exploded smaller quantities," they say, "and in one case exploded about four feet or possibly five feet in a small room in which the coiling was hung with cobwebs. The cobwebs were not even singed, so we cannot see much danger of fire." The danger of asphyxia is less than with coal gas, for the reason that the burners, which are of a special kind, allow only from half to three, quarters of a cubic foot per hour to escape, while an ordinary coal gas burner passes from five to seven cubic feet per hour. Assuming the poisonous properties of the two gases to be equal, it is evident that the practical danger is much greater in the case of coal gas. Besides this, the very disagreeable and penetrating odor of acetylene would give unmistakable notice of a leak.

The product of the Willson Carbide Works Company, during the thirteen months ending December, 1897, was 574 tons of calcium carbide, valued at \$34,440, or \$60 per ton, and stated to be the equivalent of 86,053,725 cubic feet of coal gas. Of this quantity 745,817 lb. was exported, and 401,556 lb. was sold for consumption in Canada. The local use of the article is rapidly growing, as the following statement of the monthly sales of last year by the company for home consumption shows:

January	9,361 lb.
February	7,529 "
March	9,018 "
April	3,305 "
May	9,175 "
June	9,920 "
July	3,362 "
August	16,110 "
September	22,660 "
October	95,000 "
November	87,787 "
December	118,125 "

To produce 574 tons of calcium carbide, 768 tons of coke and 903 tons of lime were used, the value of the former being \$2,646.37 and of the latter \$2,707.39. The average number of workmen employed at the works was 30, and the amount of money paid out

for wages during the year was \$12,554.62. The works are situated on the old Welland canal at Merrittton, and power is procured from the three locks of the canal. The third lock was completed and put in operation January 15, 1898, thus placing 1,200 horse power in all at the service of the works.

THE CLIFF-WARDLAW ACETYLENE GAS MACHINE.

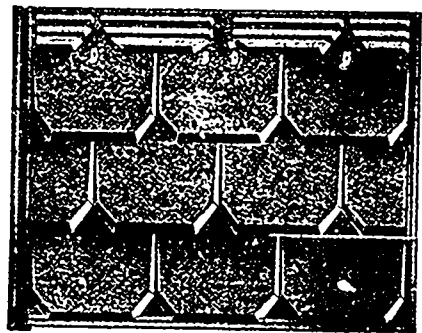
Mr. Thomas D. Wardlaw, of Dundas, Ont., writes the THE CANADIAN MANUFACTURER, that he is one of the inventors of the Cliff-Wardlaw Acetylene Gas Machine which will be placed upon the Canadian market at an early day, and regarding which Mr. Wardlaw says it is absolutely automatic in its operations; it regulates the water supply perfectly; it automatically removes the ash from the carbide so that at all times fresh carbide is exposed to the water; it twice washes the gas, whereby the gas is made comparatively cool as well, and removes every trace of foreign matter so that it is impossible to clog the burner.

Mr. Wardlaw says that he has been operating this machine all the past winter and until now, night and day, and that the burners used are as clean now as at the beginning. There is not a valve on either generator or holder, which fact renders it impossible for the most careless person to cause an accident. A fire might be built around the apparatus without fear of danger, as it is simply impossible for an explosion to occur. The gas is generated in a water sealed chamber, and if it escapes it can only do so by lifting the carbide holder and bubbling out through the water. A lighted match might be held in the generator with the top cover off and no explosion would occur. This, Mr. Wardlaw says he has done frequently. Another advantage of this machine is that at all times the ash is perfectly dry—never slushy—and is deposited in a bucket that may be lifted out of the machine to be emptied. Thus there is no unpleasant dirt in operating the machine,

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and there is no odor arising when it is in operation.

As soon as the company who are to manufacture this machine have completed their arrangements, photographs of it will be taken, reproductions of which, and a fuller description, will appear in this journal.

#### NOTE THE DIFFERENCE.

English manufacturers are always having drummed into them the superior manner in which the Americans pack their goods, and so forth. Let the subject be changed and a comparison made between the English manufacturer's representative and the representative of the American manufacturer. An example (the truth of which can be vouched for) A colonial house had been in the habit of ordering from a large English firm an article of hardware, the cost of which was about 10s. net, in quantities of about fifty at a time. Finding that the article was selling fairly freely, the manager of the house in question sent an order through the firm's colonial representative for 500. "That's a pretty fair order for us, isn't it?" said the manager to the representative, with a touch of pride. "Oh! that's not what our firm would call a big order to execute," said the representative to the manager as he glanced at the order somewhat contemptuously. "We often get an order for 1,000 of those at a time in England," continued he, in a tone of voice that as good as said, "I don't give a hang whether I get your order or not." "Cancel my order at once," promptly said the manager. "If your firm can afford to turn up their nose at a £250 order there are others who will not." Now if an American haggan had looked that order, what would he have done?

#### MUCILAGE.

"Mucilage" says the New York Sun, "is sold in a great variety of packages, from the familiar two ounce, cone-shaped bottles, of which millions are sold annually, to barrels containing forty-five to fifty gallons each. Mucilage is sold by the barrel to dealers who bottle it in packages of their own, and there are some large individual consumers that buy mucilage by the barrel, including express companies. There are many consumers that buy mucilage in various smaller packages, including half barrels, demijohns, stone jugs and boxed tins. Mucilage in bottles is put up in quarts, pints, half-pints, four-ounce, three-ounce and two-ounce, the commonest form of the two-ounce being the familiar cone above mentioned. Among the large buyers of mucilage in quart bottles are the great railroad companies, which get it in this form for convenient distribution to the various stations along their lines.

"Mucilage is exported to Mexico and various other Spanish-American countries, including those of South America, the exported mucilage being mostly in bottles, from quarts down.

"The mucilage that is sold in bottles is put up not only in various sizes, but in bottles of various forms as well, and there are many contrivances designed to make the use of mucilage more convenient. There have been issued, or applied for, hundreds of patents on mucilage bottles or brushes. There is, for example, a device for preventing the clogging of the neck of the bottle with mucilage; there are bottles without

#### THROAT AND LUNG DISEASES.

Cannabis Sativa, Dr. Stevens' East Indian Consumption Cure, Restores Health.

A great gain in medical knowledge was made with the discovery of the curative properties of Cannabis Sativa—Dr. Stevens' East Indian Consumption Cure—and its virtues in the treatment of consumption, catarrh, asthma and diseases of the throat and lungs have been thoroughly tested and proved. Catarrh and asthma of long standing which endangered the lives of the patient have been completely cured by its use. The first few doses relieve the distressing symptoms of these diseases and continued treatment cures them. This curative property has been demonstrated in thousands of cases, a typical case being described in the following letters:

W. A. NOYES, Rochester, N.Y.: PITTSBURGH, Pa., Oct 5  
 DEAR SIR: Some eight years ago I wrote you with reference to a preparation for the cure of catarrh and consumption in its local stage. I want to convey herewith my testimony for it. I had a very severe case one in which I became alarmed of catarrh in its worst stage. My throat was nearly as bad as the nasal passages in the way of eruption and mucus filled with blood and matter. At night it would cause suffocation, and sometimes would entirely unfit me for duty. You informed me where I could get the prescription truly prepared. I went and obtained it at a local drug store in Allegheny, Pa. After taking it for three months I was entirely free from the trouble, and thought I would wait until I would see if the cure would be permanent. I must say here that it has done more than I expected.

Yours truly, ROBERT S. CLARK.

PITTSBURGH, Pa., March 29th 1888.

W. A. NOYES, Rochester, N.Y.:  
 DEAR SIR: My interest in your remedy has grown very much. My health has never been better. The catarrh has not returned, for which I am extremely thankful.

Yours truly, ROBERT S. CLARK

Another letter shows the gratitude of another catarrh sufferer:

W. A. NOYES, VANCOUVER, B.C., Feb 26th, 1888.

DEAR SIR: The Sativa remedy is the best medicine I ever took for a cough or the catarrh. It cured the catarrh for me, and I can recommend it to any one troubled in that way.

Yours thankfully,

MRS. LEWIS CARTER.

To anyone suffering from any of the diseases indicated above a free sample of Dr Stevens' East Indian Consumption Cure—Cannabis Sativa—will be sent on application to W. A. Noyes, 820 Powers Block, Rochester, N.Y.

brushes, having a rubber or a sponge top which is made to serve as a brush. There are many kinds of brushes besides those made of bristles, including brushes of jute and of felt. There are brushes with the shank or handle made of glass, hollow, and with a rubber bulb at the top, by which the hollow handle of the brush can be filled with mucilage. From time to time, still, inventors submit to manufacturers of inks and mucilage yet other improvements in the mucilage package.

"Mucilage is made of gum arabic, of gum Senegal, of dextrine, and of a by-product that results in the manufacture of some chemical.

"Gum arabic has long been used for its sticking properties, but mucilage in its present form, and widely extended common use is essentially a modern production, dating back only about fifty years, or to 1845, at about which time envelopes with gummed flaps came into use. Before that time envelopes had been sealed with wafers. Manufacturers of stationers' supplies employed considerable numbers of men in making wafers, which were made and sold in many millions. The introduction of gummed envelopes practically killed the wafer trade. The far greater convenience of gummed envelopes was at once recognized, and they very soon came into general use, and after their introduction the manufacture of mucilage sold in bottles was begun. Some wafers are still used, a few for notarial seals, and some for sticking up bulletins, and so on, but the number now used is but trifling compared with the enormous number used fifty-odd years ago. They have been almost totally supplanted by the now commonly used mucilage."

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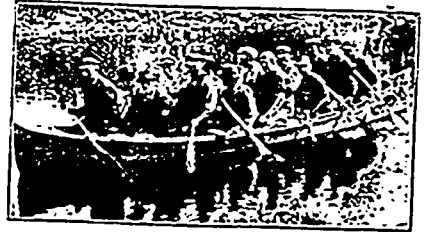
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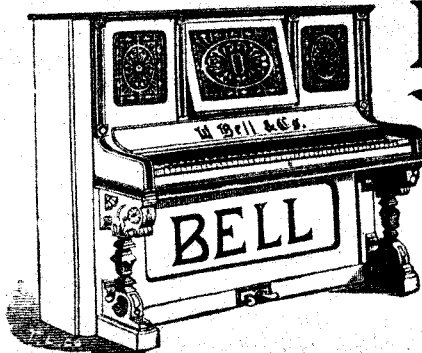
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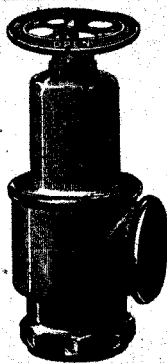
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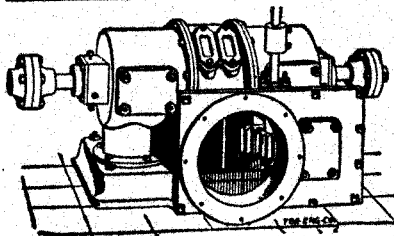
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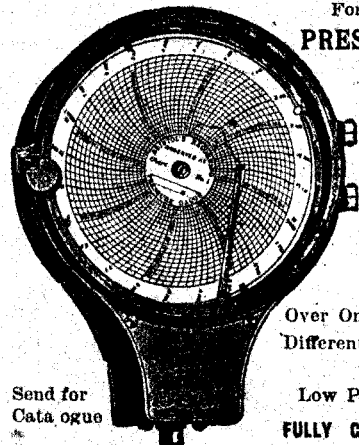
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