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SEE ADVERTISEMENT, PAGE 322

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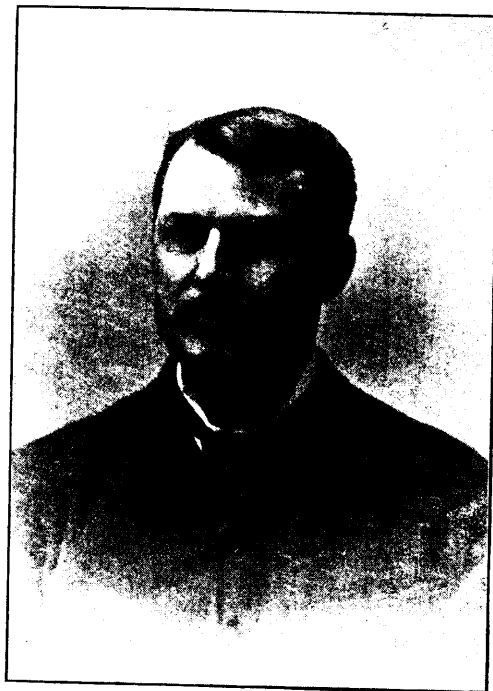
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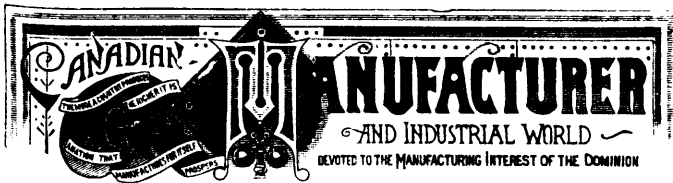
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63 Front Street West, Toronto.

SIXTEENTH ANNUAL MEETING.

OF THE

Canadian Manufacturers' Association.

REPORT OF PROCEEDINGS.

THE sixteenth annual meeting of the Canadian Manufacturers' Association was held in Toronto, April 16th.

There were present, W. K. McNaught, First Vice-President ; Frederick Nicholls, Secretary ; George Booth, Treasurer ; Jos. Simpson, William Christie, P. W. Ellis, J. J. Cassidey, Samuel May, E. C. Boeckh, George Smith, A. W. Lee, G. W. Beardmore, P. Freysing, C. E. Pease, A. E. Kemp, R. W. Elliot, A. J. Parker, Wm. Pender, Toronto ; C. A. Birge, Hamilton ; W. H. Storey, Acton ; Thomas Cowan, J. Bisset Thom, Galt ; Isaac Waterman, T. H. Smallman, London ; M. B. Perine, Doon ; John Bertram, Dundas ; H. E. Walton, Gananoque ; George Lang, Berlin.

In the absence of the President, Mr. Bennett Rosamond, the First Vice-President Mr. W. K. McNaught, assumed the chair. The minutes of the last regular meeting were read and approved.

The Secretary, Mr. Frederic Nicholls, made his report, in which he alluded to the work that had been done by the Association during the past year, the important effects of which were seen in the general result of the Parliamentary elections held in March. His report was adopted.

The Treasurer, Mr. George Booth, presented his annual report which showed the Association to be in good financial condition. Report adopted.

ELECTION OF OFFICERS.

The following officers were elected for the ensuing year :

- President--W. K. McNaught, Toronto.
- First Vice-President--John Bertram, Dundas.
- Second Vice President--P. W. Ellis, Toronto.
- Treasurer--George Booth, Toronto.
- Secretary--J. J. Cassidey, Toronto.

EXECUTIVE COMMITTEE.

- Chairman.....Frederic Nicholls.....Toronto.
- Secretary.....J. J. Cassidey....."
- Ex-Officio.....W. K. McNaught
- American Watch Case Co. "
- John Bertram
- John Bertram & Sons. Dundas.
- P. W. Ellis
- P. W. Ellis & Co....Toronto.
- George Booth
- Booth & Son....."
- R. W. Elliot.....Elliot & Co.
- Mnfrs Chemicals....."
- Edward Gurney....E. Gurney & Co.
- Stove Founders....."
- William Christie...Christie & Brown.
- Mnfrs Biscuit....."
- John F. Ellis.....Barber & Ellis Co.
- Mnfrs Stationery....."
- John Taylor.....Dominion Dyewood Co.
- Mnfrs Chemicals....."
- H. Heintzman....Heintzman & Co.
- Mnfrs Pianos....."
- Samuel May.....Dodge Wood Split Pulley Co.
- Frederic Crompton.Crompton Corset Co
- Mnfrs Corsets....."
- H. B. Warren....Gutta Percha & Rubber
- Mnfg Co....."
- Robert Watson....R. & T. Watson.
- Mnfrs Confectionery...."
- Robert Crean....Ontario Straw Goods Co.."
- E. C. Boeckh....Chas. Boeckh & Sons.
- Mnfrs Brushes, etc....."
- Daniel Lamb....Mnfr Glue....."
- P. Freysing.....Freysing & Co.
- Mnfrs Cork....."
- Thomas McDonald..Queen City Galvanizing
- Works....."
- F. J. Phillips....Cobban Mnfg Co.
- Mnfrs Moulding, etc...."
- C. E. Pease.....American Rattan Co.
- Mnfrs Rattan Furniture.."
- C. D. Massey.....Massey Mnfg Co.
- Mnfrs Agl Implements.."
- Thomas Robertson..Robertson Bros.
- Mnfrs Confectionery...."
- A. E. Kemp.....Kemp Mnfg Co.
- Mnfrs Metal Goods....."
- J. A. Parker.....Acme Silver Co.
- Mnfrs Silver Ware....."
- S. B. Brush.....Brush Corset Co.
- Mnfrs Corsets....."

L. J. Cosgrave.....	Cosgrave Brewing & Malt- ing Co.....	Brewer..	Toronto.
Wm. Pender.....	Elrick & Co. Mnfrs Combs.....	"	"
Charles Knees.....	Mnfr Leather.....	"	"
Eugene O'Keefe.....	O'Keefe & Co. Brewers.....	"	"
Wm. Stone.....	Toronto Lithographing Co.	"	"
W. G. Gooderham..	Gooderham & Worts. Distillers.....	"	"
T. D. Graham.....	Mnfr Nails.....	"	"
Jos. Simpson.....	Mnfr Knit Goods.....	"	"
H. N. W. Bryant..	Bryant & Gibson. Mnfrs Sauces, etc.....	"	"
Jas. W. Corcoran..	Canada Printing Ink Co..	"	"
James Morrison....	Brass Founder.....	"	"
B. Rosamond.....	Rosamond Woollen Co....	Almonte,	Ont.
H. N. Baird.....	Baird & Co. Mnfrs Woollens.....	"	"
W. H. Storey.....	W. H. Storey & Son. Mnfrs Gloves.....	Acton,	Ont.
J. Y. Shantz.....	J. Y. Shantz & Son. Mnfrs Buttons.....	Berlin,	Ont.
H. J. Bird.....	Mnfr Knit Goods.....	Bracebridge.	
Robert Henry.....	A Watts & Co. Mnfrs Soap, etc.....	Brantford.	
J. S. Hamilton.....	Pelee Island Wine Co....	"	"
J. G. Farwell.....	Dominion Organ and Piano Co.....	Bowmanville.	
John Turnbull....	Cornwall Woollen Mnfg Co.	Cornwall.	
A. G. Watson.....	Canada Cotton Mnfg Co. Mnfrs Cottons.....	"	"
Wm. Rosamond....	Cobourg Woollen Co. Mnfrs Woollens.....	Cobourg.	
M. B. Perine.....	Perine & Co. Mnfrs Knit Goods.....	Doon.	
S. Lennard.....	S. Lennard & Sons. Mnfrs Knit Goods.....	Dundas.	
C. C. Cleveland....	J. L. Goodhue & Co. Mnfrs Leather Belting..	Danville Que.	
Wm. Henderson...	Ontario Worsted Co. Mnfrs Woollens.....	Elora.	
Wm. Bell.....	Bell Organ & Piano Co. Mnfrs Musical Instru- ments.....	Guelph.	
James Goldie.....	Miller.....	"	"
Thomas Cowan....	Cowan & Co. Mnfrs Machinery.....	Galt.	
C. Shurly.....	Shurly & Dietrich. Mnfrs Saws.....	"	"
John Goldie.....	Goldie & McCulloch. Mnfrs Machinery.....	"	"
Adam Warnock...	Galt Knitting Co. Mnfrs Knit Goods.....	"	"
Peter Hay.....	Mnfr Machine Knives....	"	"
Robert McGregor..	McGregor, Gourlay & Co. Mnfrs Machinery.....	"	"
Thom A. Bisset...	Cant Bros. Co. Mnfrs Machinery.....	"	"
J. R. Barber.....	Wm. Barber & Bros. Mnfrs Paper.....	Georgetown,	Ont.
D. F. Jones.....	D. F. Jones Mnfg Co. Mnfrs Agrl Implements..	Gananoque.	
Wm. Byers.....	Gananoque Spring & Axle Co. Mnfrs Springs and Axles	"	"
H. E. Walton.....	Gananoque Carriage Co. Mnfrs Carriages.....	Gananoque.	
James Watson.....	Strathroy Knitting Co. Mnfrs Knit Goods.....	Hamilton.	
B. Greening.....	Victoria Wire Works. Mnfrs Wire Goods.....	"	"
C. A. Birge.....	Canada Screw Co. Mnfrs Screws.....	"	"
A. E. Carpenter...	Ontario Canning Co. Mnfrs Canned Goods....	"	"
John Calder.....	John Calder & Co. Mnfrs Clothing.....	"	"
Hon. W. E. Sandford.	W. E. Sandford & Co. Mnfrs Clothing.....	"	"
F. F. Dally.....	F. F. Dally & Co. Mnfrs Patent Medicines.	"	"
Alex. Gartshore...	A. Gartshore & Co. Pipe Foundry.....	"	"
T. D. Murphy.....	Hamilton Whip Co. Mnfrs Whips.....	"	"
J. M. Young.....	Hamilton Cotton Co. Mnfrs Cottons.....	"	"
A. W. Brodie.....	Mnfr Woolens.....	Hespeler.	
F. J. Leigh.....	Canadian Locomotive & Engine Co.....	Kingston.	
Isaac Waterman...	Imperial Oil Co., Mnfrs Oils.	London.	
T. H. Smallman....	Canada Chemical Co. Mnfrs Chemicals.....	"	"
John White.....	London Hinge & Bolt Works.....	"	"
Robert Mitchell...	Robert Mitchell & Co. Brass Founders.....	Montreal.	
Geo. W. Sadler....	Robin & Sadler. Mnfrs Leather Belting..	"	"
A. W. Morris.....	Consumers' Cordage Co. Mnfrs Cordage.....	"	"
Wm. Angus.....	Wm. Angus & Co. Mnfrs Paper Pulp.....	"	"
John McFarlane...	Canada Paper Co. Mnfrs Paper.....	"	"
S. Davis.....	S. Davis & Sons. Mnfrs Cigars.....	"	"
A. McArthur.....	A. McArthur & Co. Mnfrs Paper.....	"	"
J. A. Pillow.....	Pillow-Hersey Mnfg Co. Iron Rolling Mills.....	"	"
Graham Fraser....	Nova Scotia Steel Co....	New Glasgow,	N.S.
John Cowan.....	Oshawa Malleable Iron Co..	Oshawa.	
T. D. Craig.....	T. D. Craig & Sons. Mnfrs Leather.....	Port Hope.	
F. Outram.....	Globe File Works. Mnfrs Files.....	"	"
W. H. Law.....	Central Bridge Works....	Peterboro'.	
James Hendry....	Auburn Woolen Co. Mnfrs Woolens.....	"	"
George Pattinson..	Ferguson & Pattinson. Mnfrs Woolens.....	Preston.	
George Clare.....	Clare Bros., Stove Founders..	"	"
H. Stroud.....	Stroud & Co. Mnfrs Carpets.....	Paris.	
Wm. Chaplin.....	Welland Vale Works. Mnfrs Edge Tools, etc..	St. Catherines.	
S. Collinson.....	Whitman & Barnes Mnfg Co. Mnfrs Agrl Machinery....	"	"
Louis Côté.....	L. Côté & Bro. Mnfrs Boots and Shoes..	St. Hyacinthe, Que.	

A. Paton.....Paton Mnfg Co.
 Mnfrs Woolens.....Sherbrooke, Que.
 Hiram Walker.....H. Walker & Son.
 Distillers.....Walkerville.
 James Hay.....James Hay & Co.
 Mnfrs Furniture.....Woodstock.

REPRESENTATIVES TO TORONTO INDUSTRIAL EXHIBITION ASSOCIATION.

W. K. McNaught. | R. W. Elliot.
 George Booth. | Samuel May.
 J. J. Cassidey.

RESOLUTIONS.

The following preamble and resolutions, moved by Mr. W. K. McNaught and seconded by Mr. R. W. Elliot, were unanimously adopted :

Whereas, The questions of limited and unrestricted reciprocity of trade between Canada and the United States having been for some months past very fully discussed throughout the country, in consequence of which the mind of the general public has been enlightened regarding these questions ; and

Whereas, At the Parliamentary elections held in Canada in March last the sentiments of the electors were declared strongly against unrestricted reciprocity ; and

Whereas, A very large majority of the manufacturers of Canada, engaged in almost all branches of manufactures, having invested in them an immense amount of capital, and giving employment to many thousands of Canadian workmen, are strongly opposed to allowing free access to the Canadian market to any foreign manufacturers ; therefore

Resolved, That the Canadian Manufacturers' Association is most decidedly opposed to any change in the policy of the Dominion Government which would subject Canadian manufacturers to the unequal competition of any foreign manufacturers.

Resolved, That this Association would most strongly object to any arrangement being made by the Dominion Government with any other Government by which there would be any trade discrimination whatever against Great Britain.

Resolved, That the existing National Policy of Protection to Canadian manufacturing enterprises is well suited to the needs of this country and has proved of advantage to all classes of our people ; therefore, this Association now places itself upon record as opposed to unrestricted reciprocity with the United States in manufactured products.

VOTES OF THANKS.

A vote was passed thanking the retiring officers for the faithful manner in which they had discharged their duties.

A vote of thanks was tendered Mr. George Booth, the treasurer, for the interest he had always taken in the Association in looking after its finances.

A special vote of thanks was tendered to the retiring secretary, Mr. Frederic Nicholls, who had declined re-election because of the press of other business which rendered it impossible for him to give that attention to the duties of the

office which it requires. The Association, however, congratulated itself that Mr. Nicholls would be Chairman of the Executive Committee.

W. K. McNAUGHT.

At the last annual meeting of the Canadian Manufacturers' Association, held in Toronto, April 16th last, W. K. McNaught, who was their first vice-president, was unanimously elected president of the Association, a deserved tribute to the worth and integrity of one of the most energetic and successful manufacturers in Canada.

Mr. McNaught was born in the village of Fergus, Ont. September 6, 1845, his father, the late John McNaught, having immigrated to that place from Dumfriesshire, Scotland. In 1850 Mr. John McNaught established himself in the town of Brantford, where he engaged in the manufacture of carriages on a large scale, and was one of the most prominent business men of the place; and it was in this town that W. K. McNaught received his education in the Public and High Schools.

In 1859 business reverses decided Mr. McNaught, sr., to start a farm in Huron county, and although but a lad of fourteen, from the day of his arrival on this farm W. K. McNaught performed the work of a man, and in this occupation he spent seven years of practical pioneer farm life.

In 1866 young McNaught left the farm to take a course of study in an American commercial college, thinking, like many other young Canadians, that the cities of the United States offered better returns for enterprise than anything in this country. This was before the National Policy had developed our manufactories and attracted to our own cities the young blood that formerly looked to the United States for their future. Just at this time Canada was again threatened by a second Fenian invasion and his patriotic impulses led him to locate in Toronto instead of Buffalo, and join the Queen's Own Rifles with the expectation of going to the front in the defence of his country and the British flag. He was a member of this regiment six years. In 1867, after completing his course in the British American Commercial College, he entered the Military School in Toronto, then being conducted by officers of the 17th Regiment of Foot. He passed a successful examination in this school and received his certificate, and afterwards served for several years as a Lieutenant in the 12th Battalion York Rangers, "retaining rank" when retiring therefrom.

Mr. McNaught has always been a strong supporter of, and believer in healthy out-door sports. Perhaps no person in Canada has done so much for Canada's national game of lacrosse as he has. He occupied the arduous position of Hon. Secretary of the National Lacrosse Association of Canada for six years, and was four times elected its President. His book published in 1875, "Lacrosse, and How to Play It," is still recognized as the standard work concerning this manly and fascinating sport.

In May of 1883 Mr. McNaught accompanied the Canadian Lacrosse Team on its emigration lacrosse tour through England Ireland and Scotland, spending the entire summer in that country. This tour was organized under the joint patronage of the English and Canadian Governments, and during its progress the team distributed 500,000 copies of interesting illustrated literature, drawing attention to Canada as a desirable

field for emigration. In addition to this Dr. W. Geo. Beers and Mr. McNaught delivered addresses on "Canada" in many cities and towns of the United Kingdom.

In 1868 Mr. McNaught entered the employ of the late Robert Wilkes, wholesale jeweler, of Toronto, occupying successively the positions of clerk, traveller, manager of a department, and foreign buyer in New York.

In 1877 Mr. McNaught entered into partnership with the late John Zimmerman, forming the firm of Zimmerman, McNaught & Co., wholesale jewelers. Two years later Mr. W. G. H. Lowe was admitted as a partner, and the firm name changed to Zimmerman, McNaught and Lowe; Mr. McNaught having charge of the financial part of the large and successful business, the interests of the concern requiring frequent visits to Europe. In November, 1884, he purchased a half interest in the watch case factory of Mr. R. J. Quigley, and the following year the business was merged into the American Watch Case Company, of Toronto, of which Mr. McNaught is secretary-treasurer, and R. J. Quigley, manager. At the time of the organization of this company it gave employment to some thirty workmen, but at this time there are 120. The manufacture of watch cases in Canada is practically the outgrowth of Canada's National Policy of protection to manufacturing industries; and although the tariff imposes a protective duty of 35 per cent. upon importations of such goods, those made by the American Watch Case Company are sold fully as cheap in Canada as similar goods are sold for in the United States.

In 1879 Mr. McNaught began the publication of *The Trader* which at first had but eight pages, but now contains 68, with handsome colored cover. It is the organ of the Canadian jewelry trade, and reaches every jeweler from Halifax to Vancouver. Mr. McNaught is sole editor of this beautiful and meritorious journal. The Canadian Jewelers' Security Alliance is an association of jewelers whose object it is to hunt down and bring to justice any who many burglarize or rob jewelry stores. Mr. McNaught was the organizer of this alliance and its first secretary. In 1890 he was selected by the Jewelers' section of the Toronto Board of Trade to represent their interests in the Council of the Board, and served a year in that capacity.

In his earlier life Mr. McNaught was a Liberal in politics, and a believer in tariff for revenue only, but in 1883, observing the benefits which Canada was receiving from the National Policy, he changed his views, and has ever since given a hearty support to that policy. Intensely British Canadian in his views, he is a firm believer in the ultimate independence of Canada and that she will in the not distant future become a great and independent nation, but maintaining such close relationship with Great Britain as to make Imperial Federation a fact in effect if not in name.

AS REGARDS RECIPROCITY OF TRADE.

ABOUT all the expressions which have been made regarding reciprocity of trade between Canada and the United States have been from the standpoint that Canada needs the American market for her surplus products, these being chiefly of agriculture, the fisheries, the mines, and the forest; those in favor of unrestricted reciprocity urging that certain Canadian

manufactures also require that outlet; while on the other hand it is contended that Canadian consumers should be allowed to obtain American products at their cost in that country and without the payment of duty. These arguments have led the Americans to imagine that all the benefits arising from any system of reciprocity would accrue to Canada and therefore they object to any but unrestricted reciprocity, believing that that would be but the forerunner of annexation, which would soon follow.

Without discussing the probable and inevitable result of unrestricted reciprocity, involving in the first place tariff discrimination against Great Britain, and in the second place total and final political separation from her, it can be shown that even under existing circumstances Canada is not as dependent upon the United States as many suppose; and that a limited reciprocity would be quite as much in the interests of that country as of this. One of the prominent features of the McKinley bill is the increase in the height of the tariff wall along the Canadian frontier. According to the *American Economist* the legislators who stand for the principle of protection in framing the American tariff bill pronounced a stiff duty on Canadian products essential to the policy of protection, and that to abolish these duties on Canadian products would be a change of front on the tariff question. Says the *Economist*:—"The things which Canada would expect to come into the United States duty free under any reciprocity treaty, every one of them would come into direct competition with an American industry." It does not seem to occur to the advocates of unrestricted reciprocity in either country, or to the opponents of it in the United States, that Canada has more to offer as a market for American products than she asks for in asking for access to the American market for her own products.

The interchange of merchandise between Canada and the United States, and the balance of trade in favor of the latter country was as follows in the years named:

Year.	Imports into Canada.	Imports into U.S.	Balance of Trade.
1886-87	\$44,795,908	\$37,847,277	\$6,948,631
1887-88	46,440,296	42,924,554	3,515,742
1888-89	50,029,419	42,738,074	7,291,345
1889-90	52,291,973	40,522,810	11,769,163

The exports of Canada to the United States include such products as grain, lumber, etc., sent there for export to other countries, while the imports into Canada from the United States include only merchandise imported for actual home consumption. To make this comparison more exact, as regards the year 1889-90, to the balance of trade in favor of the United States of \$11,769,163 should be added the produce imported from the United States for export fully \$8,000,000, to which should also be added the coin and bullion sent from Canada to the United States, included in the above mentioned \$40,522,810 which amounts show the actual balance of trade between the two countries last year to be \$22,208,445 in favor of the United States.

The proportion of imports free of duty in the interchange of merchandise between the two countries was as follows in the years named:

Year.	Into Canada from U.S.	Into U.S. from Canada.
1886-87	31.75 per cent.	31.31 per cent.
1887-88	41.65 "	30.01 "
1888-89	42.07 "	31.48 "
1889-90	41.53 "	30.82 "

From which it will be seen that the average rate of duty levied upon dutiable imports from Canada into the United States was very much higher than that levied upon dutiable imports from the United States into Canada.

Following is an analysis of the imports of manufactured goods imported into Canada from the United States made with a view of ascertaining the proportions of such goods which may be termed "moderately" or "highly protected" in that country, but which are, nevertheless, sold to Canada at prices which compete with those of Great Britain. According to the Dominion Trade and Navigation Returns the total value of manufactured and unmanufactured merchandise imported into Canada from the United States during the fiscal year 1889-90 was as follows :

Dutiable.....	\$18,652,610
Free of Duty.....	4,300,887
Total.....	\$22,953,497

Of this merchandise the following proportions were protected in the United States by custom duties as follows :

Varying from 45 per cent. upwards, value.....	\$8,026,000
" " 35 " " but under 45%.....	2,547,450
" " 25 " " " " 35%.....	1,783,600
" " 20 " " " " 25%.....	5,529,470
Less than 20 per cent.....	766,990
Total.....	\$18,652,610

Nearly 80 per cent. of the manufactured goods imported from the United States were of the "protected" class, the duty varying from 20 per cent. upwards, and over 46 per cent. were "highly protected" by duties varying from 45 per cent. upwards. It will be noticed that by far the largest portion of our imports is of the very highly protected class. Canada imported more largely of the following descriptions of goods from the United States than from Great Britain:—Hardware, including metals and manufactures thereof; gutta percha, rubber and leather and manufactures thereof; books, stationery and wall paper; drugs, dyes and chemicals, and miscellaneous and fancy wares other than dry goods.

Under these circumstances it is clear that any concessions intended to increase the commerce between Canada and the United States should come from the latter country. Existing relations showing conclusively that that country occupies the position of greater advantage.

Canada is inclined, however, to make some further moderate concessions, but she will not give away all she has and sacrifice all she hopes to be for any measure of reciprocity. If the United States does not meet her in a spirit of fairness; if that country insists upon sacrifices that Canada cannot accept; and if the McKinley barrier is maintained against the entry of Canadian products into the American market, Canada can and should re-coup herself by the imposition of duties that would discriminate in favor of commercial friends and against commercial foes. The nearly \$20,000,000 of American manufactures imported into Canada should be made to pay as high a duty as the United States imposes upon similar Canadian manufactures when imported into that country. If this were done offers for reciprocity would come from that side.

THE CANADIAN MANUFACTURER
\$1.00 PER YEAR.

A DISCRIMINATING TARIFF NECESSARY.

SPEAKING of reciprocity between Canada and the United States the *American Economist* says :

Reciprocity with Canada would be a thing quite different from reciprocity with Brazil. Canada produces very little, if anything, which we need but cannot ourselves produce. Unrestricted reciprocity with her would indeed be a surrender of the principle of Protection. One of the prominent features of the new tariff bill is the increase in the height of the tariff wall along the Canadian frontier. The legislators who stand for the principle of protection in framing a tariff bill, pronounced a stiff duty on Canadian products essential to the policy of protection. To abolish these duties not would be a change of front on the tariff question. The principal items in Canada's exports to the United States were last year in round numbers as follows :

Horses.....	\$1,500,000	Barley.....	\$5,000,000
Cattle.....	59,000	Wheat.....	109,000
Rye and oatmeal.....	150,000	Lumber.....	8,000,000
Coal.....	2,000,000	Mackerel and Salmon.....	700,000
Beans.....	1,000,000	Eggs.....	2,000,000
Sheep.....	1,000,000		

These are, of course, the things which Canada would expect to come into the United States duty free under any reciprocity treaty she would be willing to make. Every one of them would come into direct competition with an American industry. The farmer especially would be hurt.

The *Economist* might have been more precise in its figures, thereby making a better showing for its side; and to assist it in its argument we show the value of importations into the United States from Canada in 1890 of such articles as it alludes to, as follows :

Farm animals—horses, cattle, swine and sheep....	\$2,832,739
Grain and products—flour, oatmeal, etc.....	5,522,794
Coal.....	2,309,064
Products of the forest.....	10,247,640
Products of the fisheries.....	2,850,528
Eggs.....	1,793,803

Total value of these selected articles.... \$25,556,568

The American duty upon these articles is as follows :

Horses.....	\$30 per head to 30 per cent.
Cattle.....	\$2 @ \$10 per head.
Hogs.....	\$1.50 per head.
Sheep.....	.75 cents @ \$1.50 per head.
Barley.....	.30 cents per bushel.
Oatmeal.....	.1 cent per pound.
Rye flour.....	½ " " "
Wheat.....	.25 cents per bushel.
Wheat flour.....	.25 per cent.
Beans.....	.40 cents per bushel.
Cabbage.....	.3 cents each.
Eggs.....	.5 cents per dozen.
Peas, green.....	.40 cents per bushel.
Peas, split.....	.50 " " "
Peas, dried.....	.20 " " "
Potatoes.....	.25 " " "
Apples.....	.25 " " "
Bacon and ham.....	.5 " " pound.
Poultry, dressed.....	.5 " " "
Coal.....	.75 " " ton.
Timber, squared.....	½ " " cubic foot.
Boards, plank, etc., hemlock, whitewood, basswood.....	\$1.00 " M ft.
Boards, white pine.....	1.50 " " "
Boards, other.....	2.00 " " "
Lumber, planed.....	.50 cents @ \$1.50 per M ft.
Shingles.....	.20 @ .30 per cent.
Fish, fresh, ½ cent @ 1 cent per pound.	

On the other hand Canada imports largely of these same lines of products from the United States, the value of the imports in 1890 being as follows :

Farm animals—horses, cattle, swine and sheep.....	\$819,091
Grain and products of	2,642,258
Coal.....	8,124,686
Products of the forest.....	1,197,567
Products of the fisheries.....	515,271
Eggs.....	91,773

Total value of these selected articles.... \$13,390,646

The Canadian duty upon these articles is as follows :

Horses.....	20 per cent.
Cattle.....	30 " "
Hogs, live.....	2 cents per pound.
Sheep.....	30 per cent.
Barley.....	15 cents per bushel.
Oatmeal.....	½ cent per pound.
Rye flour.....	50 cents per barrel.
Wheat.....	15 " " "
Wheat flour.....	75 " " "
Beans.....	15 cents per bushel.
Cabbage.....	not mentioned.
Eggs.....	free.
Peas.....	10 cents per bushel.
Potatoes.....	15 " " "
Apples, green.....	40 cents per barrel.
Bacon and hams.....	3 cents per pound.
Poultry.....	20 per cent.
Coal } anthracite.....	free.
} bituminous.....	60 cents per ton.
Lumber, hardwood.....	free.
" softwood.....	20 per cent.
Fish.....	20 @ 30 per cent.

The *Economist* lays stress upon certain lines of merchandise of which the United States last year imported from Canada to the value of \$25,556,568, and because Canada has such things to sell the United States imposes almost prohibitive duties upon them. But last year Canada bought from the United States more than fifty per cent. as much of these very items as she sold there—valued at \$13,390,646—upon which the Canadian duties were only about half as high, as will be seen by reference to the respective tariff rates quoted.

The balance of trade last year between Canada and the United States was \$11,769,163 in favor of the latter country. Of course this is because Canada buys far more than she sells to that country; and while our American friends are very willing to sell to us, and to enable them to do so the duties we impose upon their products are not very high, they are not very anxious to buy from us, and to impede and retard this commerce they impose duties upon what we have to sell, represented by a duty of five cents per dozen on eggs. The *Economist* says: "Canada produces very little which we need but cannot ourselves produce;" that "unrestricted reciprocity with her would be a surrender of the principle of protection;" that "one of the features of the new tariff is the increase in the height of the tariff wall along the Canadian frontier;" and that "the legislators who stand for the principle of protection in framing a tariff bill pronounced a stiff duty on Canadian products essential to the policy of protection. To abolish these duties would be a change of front on the tariff question."

We do not think that Canada will forever put up with this inequality in trade and hostile legislation. The percentage of duty on value of merchandise imported into Canada for consumption in 1890 was 21.20 per cent, while of the dutiable imports from the United States—\$18,652,610 all but \$766,090 worth would have paid more than 20 per cent if the trade had been the other way—if the merchandise had gone from Canada to the United States.

How then is it possible for Canada to make any further concessions to secure larger trade with the United States? Our

duties are as low as possible consistent with the demands of the Government for revenue; and all Canadian produce is confronted at the border with the McKinley tariff that imposes a duty of five cents a dozen on eggs. And by the same device our manufactures are also shut out from that market. Last year we imported from these American manufactures to the value of \$18,652,610; and if this merchandise had been going the other way, the American duty would have been as follows:

\$8,026,000.....	duty varying from 45 per cent. upward.
2,547,450.....	duty varying from 35 per cent. to 45 per cent.
1,783,600.....	" " " 25 " " 35 "
5,529,470.....	" " " 20 " " 25 "
766,090.....	" less than 20 " " 25 "

The American price for enlarged trade relations is annexation; are Canadians prepared to pay it? The Canadian remedy for this state of things is the imposition of duties upon American products equal to what the United States imposes upon Canadian products, while the tariff as to the rest of the world remains substantially as it now is.

EDITORIAL NOTES.

IN 1890 the United States exported sewing machines and parts to the value of \$2,793,780.

CANADA is represented by some as not being a consumer of raw materials, but of all our imports from the United States last year, 41.53 per cent was admitted free of duty.

IN 1890 the United States exported as follows :

Carriages and horse cars.....	\$2,056,980
Passenger and freight cars for railroads.....	2,689,698
	\$4,746,678

IN 1890 the United States exported as follows :

Molasses and syrup.....	\$936,233
Sugar, brown.....	12,518
Sugar, refined.....	1,901,386
Candy and confectionery.....	179,276

CANADA is represented by some as being the producer of raw materials which it is desirable to sell in the United States, but of all our exports to that country last year but 30.82 per cent. was admitted free of duty.

A NEW ENGLAND Yankee is beating the McKinley bill, or thinks he is, in the following way:—He has a farm, a part of which is in Vermont and a part in Canada. On the American side he has poultry houses in which his hens lay their eggs, and on the Canadian side are his storehouses from which his chickens are fed.

IN the fiscal year 1889-90 the proportion of imports into Canada from the United States, free of duty, was 41.53 per cent., while the imports into the United States from Canada, free of duty, was only 30.82 per cent. This is a feature of our trade relations with the United States that Canadians would do well to study.

GREAT BRITAIN is already showing great anxiety as to the results of reciprocity between the United States and Brazil. What will merry old England have to say about reciprocity

between American and Canada?—*St. Louis Stoves and Hardware Reporter.*

Don't fret, sonny, about what may never happen. Your next Presidential elections is too near to allow your politicians to consider the reciprocity question.

CERTAIN Canadian manufacturers of agricultural implements desire to have free access to the American market, believing that they could "hold their own" in competition with American manufacturers. During the year 1890 the United States exported agricultural implements as follows:

Mowers and reapers and parts thereof	\$2,092,638
Plows and cultivators and parts thereof	878,784
All others and parts thereof	884,288
	\$3,855,710

THE exports of the United States in 1890 of leather and manufactures thereof were as follows:

Buff, grain, split and upper leather	\$4,249,110
Patent, or enameled	226,879
Sole	6,420,134
All other	279,028
Boots and shoes	662,974
Harness and saddles	238,952
All other manufactures of	361,770

Total.....\$12,438,847 ♦

If the duties upon sugars were removed the Government would sustain a loss of revenue of about three million dollars annually. It could not well afford to sacrifice this sum, but it could be recouped by increasing the duties upon other articles. The duty on pig iron might be increased to say \$7 per ton, and the duties upon American manufactures of metals, gutta percha, rubber and leather, books and stationery, drugs and chemicals, etc., advanced to as high a rate as that imposed by the American tariff on similar goods. This would recoup the treasury and make Canadian industries exceedingly lively. A discriminating tariff against American manufacturers would fill the bill.

THE Imperial Bank of Canada, the headquarters of which are at Toronto, have just established a branch at Rat Portage, Ontario for the greater accommodation of its customers in that section. In addition to the mother bank and its several branches in this city, there are now branches established at Essex, Fergus, Galt, Ingersoll, Niagara Falls, Port Colborne, St. Catharines, St. Thomas, Sault Ste. Marie, Welland, Woodstock, and Rat Portage, in Ontario, and in the North-West at Winnipeg, Brandon, Portage la Prairie, Calgary, and Prince Albert. The Imperial Bank has an established agency in London, England, "Lloyd's Bank, Ltd.," with which deposits may be made for credit with head office or any of its branches.

GENERAL BOOTH is working vigorously at the scheme explained in "Darkest England." A match factory at Old Ford is approaching completion, and the poor women and girls whom it is intended to employ there will be able to earn more than the existing rate of wages for similar workers. The "Darkest England" match will be well boomed, and the design will be prominently brought before the public so that none need be imposed upon by foreign or sweated counterfeits. An attempt to counterfeit it has already been made. The eight hours working-day has been adopted in every part of General Booth's scheme.—*Toronto Globe.*

According to the teachings of the *Globe* the British people will be fools if they buy the "Darkest England" match if they can buy any other any cheaper. "Cheapness," according to the free trade idea, is the thing most to be desired in this life.

THE exports of wood and manufactures thereof from the United States in 1890 were valued as follows:

Firewood	\$16,746
Boards, deals and planks	9,974,888
Joists and scantlings	381,640
Hoops and hoop poles	59,978
Laths	24,951
Paling and pickets	30,653
Shingles	111,926
Box shooks	118,557
Other shooks	766,607
Staves and headings	2,476,857
All other lumber	1,355,141
Sawed timber	3,384,847
Hewn timber	1,381,747
Logs and other timber	1,680,346
Doors, sash and blinds	320,840
Mouldings and other house furnishings	116,295
Empty barrels	425,278
Household furniture	3,088,902
Woodenware	360,515
All other	2,197,815
Total	\$28,274,529

THIS journal has never been opposed to a limited reciprocity with the United States.—CANADIAN MANUFACTURER.

Define what you mean by limited reciprocity. How far are you prepared to follow Sir John Macdonald beyond reciprocity in natural products?—*Montreal Herald.*

Answer. Whereas, a very large majority of the manufacturers of Canada, engaged in almost all branches of manufactures, have invested in them an immense amount of capital, and give employment to many thousands of Canadian workmen, are strongly opposed to allowing free access to the Canadian market of any foreign manufacturers; therefore we must strongly object to any change being made in the policy of the Dominion Government which would subject Canadian manufacturers to the unequal competition of any foreign manufacturers. We also strongly object to any arrangement being made by the Government with any other Government by which there would be any trade discrimination whatever against Great Britain. The N. P. is well suited to the needs of Canada. Here we stand.

A FEW days ago the following item appeared in the Montreal papers:—

Norah Capper, an English girl, who had stolen \$300 worth of cigars from Mr. Samuel Davis, her employer, received a very severe sentence to-day before Judge Dugas. The young woman, who is about 18 years of age, stated that she had served several months in an English prison for theft, and that the chaplain had sent her to Canada. Norah added that she had been in jail twice since her arrival in Canada, so the judge decided that this time she must go to the penitentiary for three years.

This is a specimen of the juvenile waifs and strays that the prison chaplains and Barnardos of England are foisting upon Canada, and, if we are not misinformed, with the knowledge and consent of the Canadian Government who profess to think that this class of immigration is "very desirable." The religion of the clerical gentleman in England engaged in this nefarious business is quite questionable. The patriotism of

the Canadian Government who encourage such immigration is—we won't say what; but the refuse of the slums of London should be kept out of Canada.

THE Welsh tin-platers, it is reported, will close their works for the month from July 1st, being forced to restrict their output in consequence of the new American tariff law. This is regarded by a Conservative journal as a proof of the "approach of the time when great Britain will seriously consider the desirability of extending and developing her markets in the colonies by means of preferential duties, rather than persist in the hopeless battle of free imports versus heavily-taxed exports." How the Welsh tin-platers will be helped by taxing their food, the journal does not condescend to explain.—*Globe*.

The *Globe* delights to point to any stoppage of work in Canadian factories as an evidence of a failure of the principle of protection, but it does not attempt to explain why its argument fails when the stoppage occurs under free trade. The fact is, under protection in the United States—protection that really protects—an immense tin plate manufacturing industry is fast springing into existence, and to that extent is curtailing the demand for Welsh plates. A result of the establishment of this new American industry will be the emigration of the idle Welsh tin-plate workmen to the United States. We suggest to the *Globe* that it might be better for these workmen to have their food taxed, earning wages with which to pay for it, than to go hungry, having no wages with which to buy even cheap bread.

A FEW days ago the following press telegram was sent out from Gloucester, Mass.:

Great difficulty is experienced in getting crews for the fishing fleet. A large number of vessels have no men, and are unable to sail. While prospects for fishing are brighter than for some years, and high prices prevail, men from the Provinces do not come here as in past seasons. The principal cause is said to be the development of the lobster fishery in the Maritime Provinces, and greater attention being given to boat and trap fishing.

Here's a pretty kettle of fish. It has heretofore and always been claimed that Gloucester had the finest fleet of fishing vessels in the world: and in discussing the supply of mackerel, allusion was always had to the probable quantity supplied by the Gloucester fishing fleet. This fleet, too, was always considered as a nursery which would supply seamen for the American navy, whenever that country had a navy, and their services should be required. But now and alas! a large number of vessels of this far-famed Gloucester fleet are now chafing idly at their moorings in the harbor, all ready to sail, but unable to do so because Canadian seamen from New Brunswick and Nova Scotia don't materialize as usual. In other words, a large and important American industry is at a standstill because Canadian workmen cannot be had to carry it on. The alien labor law was passed to prevent Canadian and other foreign labor obtaining employment in the United States. That market was to be preserved to Americans, and now no competent Americans are to be found to man a fleet of fishing vessels, and American breakfast tables must be sans mackerel. And to make a bad matter worse, we are told that the reason for this condition of things is because the Canadians who heretofore sought employment in Gloucester fishing vessels now find better and more remunerative employment at home.

A TELEGRAM from Ottawa, a few days ago, stated that enquiry at the Department of Agriculture had elicited the information that there is no truth in the reported intention to restrict juvenile immigration into Canada, promoted by benevolent individuals. On the contrary, the Department thinks that this class of immigration, under the inspection now practised, is very desirable. If this report is correct—if it is really the opinion of the Dominion Government that the waifs and strays of the slums of London—such miserable wretches as that pious saint Barnardo is foisting upon Canada are "very desirable" additions to our population, it is high time the true sentiments of the country regarding the matter should be made known to them. In our issue of April 17 we showed at length just what sort of beings the children are whom Barnardo and others are sending to Canada; and from the description published in Barnardo's own paper, *Night and Day*, and from his own pen, we have the evidence of the fact that these children are of the very worst possible description, born in sin, reared in iniquity, surrounded by besotted vice, tainted in blood, and accustomed to all the hideousness and contamination that is worse where they came from than anywhere else in the world. It may be true that when they are sent to Canada it is after having gone through a soap and water process which has removed the slime and filth of the gutters that had attached to them; and it may be they have clean clothes upon their bodies; but all the scrubbing that Barnardo can bestow upon them cannot remove the moral slime and filth with which they are imbued; and it is this class of immigrants, we are told, the Dominion Government consider "very desirable." A document recently published by the Ontario Government shows that within the last twenty years about eighteen thousand of these waifs and strays have been received in this Province alone, our anathema being due to Barnardo for having contributed more than three thousand of them. It is time a stop was put to this making a dumping ground of Canada of the spawn of the London slums.

BEYOND question Great Britain has lost immensely through free trade, and not the least among her losses may be that of the prosperous intelligent and liberal minded people at the north of us. That Canada will ever become an integral part of the United States we very much doubt. Indeed we fail to see the desirability on either side for such a union. But we do sometimes look for a complete separation from the Mother Country, politically as well as commercially, and no surer way of bringing about this result can be had than that of building up on this continent a people whose prosperity comes from a policy totally at variance with that of Great Britain.—*Cleveland Iron Trade Review*.

There are those in Canada and elsewhere who have hoped that the difference in the fiscal policies of the two countries would surely lead to a separation of Canada from Britain, and that that difference, and the similarity of policies of Canada and the United States would as surely lead to annexation. These hopers have been workers and prayers that such might be Canada's destiny; but whatever influences may have been drawing in that direction have been counteracted by the course of recent events, and that consummation is farther away than ever. In fact it has entirely disappeared under a revulsion of feeling on the part of all true lovers of Canada. Anglo-Saxons may be led by argument, but they cannot be dragooned nor forced; and those who have sought and are yet seeking to place Canada in a false and ridiculous light in the eyes of the

world, hoping that thereby they can drive her to accept annexation as the only refuge from the ills they persistently insist besets her, make a vital mistake in estimating the character of Canadians. The crisis through which Canada is now passing is not drifting her away from her love for and allegiance to the Crown. Passing, as it were, through fire, she will emerge therefrom with stronger feelings of self dependence and independence, but these will accentuate the love Canadians have for the Mother Country and their desire to maintain political connection with her. If Britain understands her own best interests she will do much to strengthen and encourage these feelings of affection. Canada is the brightest jewel in the British crown, and the integrity of the British Empire cannot be maintained unaided by Canada. If Britain appreciates the situation and governs herself accordingly well and good. Perhaps, however, our contemporary is a prophet.

In our last issue mention was made of the fact that Mr. Frederic Nicholls, Secretary of the Canadian Manufacturers' Association, had sent out a circular to a number of manufacturers, asking if they would be willing to have such goods as they make enter Canada from the United States free of duty, in consideration of the United States receiving goods similar to theirs on the same terms. One of these circulars was sent to the St. Lawrence Manufacturing Company, of Prescott, Ont. manufacturers of the Corbin disk harrow, of which Mr. J. S. Corbin is president. The *Toronto Globe* has been favored by Mr. Corbin with a copy of his reply to Mr. Nicholls in which he complains of the duty he has to pay upon the materials entering into the construction of his harrows; that he is an American who has had large experience in the United States and therefore knows that under unrestricted reciprocity he could successfully meet the competition of American manufacturers, and that he is now restricted to a shoe string shaped country which he wants shortened. Alluding to Mr. Corbin the *Globe* says:—"The advocates of unrestricted reciprocity recognize and emphasize the fact that they have with them some of the best manufacturers in Canada," the inference being that Mr. Corbin is one of these. Of course Mr. Corbin is entitled to his views on the subject, but we deny that he is a representative Canadian manufacturer. The specialty in which he is engaged in manufacturing is protected by patents both in Canada and the United States; and we believe he is largely interested in the manufacture of the Corbin disk harrow in that country. Of course he does not desire to maintain factories in both countries when, if unrestricted reciprocity prevailed, all of his trade could be supplied from one; which means that immediately upon the announcement of such an arrangement Mr. Corbin and his works at Prescott would cease to be a factor in any Canadian manufacturing industry. The fact is, there are concerns in Canada engaged in manufacturing good similar in character to those of Mr. Corbin, and with whom he finds it impossible to compete, and this is what makes him tired and sick. His successful competitors do not whine for unrestricted reciprocity, nor because other Canadian manufacturing industries are protected. They sell harrows to the farmers cheaper than Mr. Corbin can do and cheaper than Mr. Corbin could possibly do from his American factory under free trade with that country. It is not far across the St. Lawrence river from Prescott to Ogdensburg.

In our issue of December 19th last was published the following:

Fish caught by Canadian fishermen in Canadian waters when entering the United States pay a duty of three-quarters of a cent per pound, while fish caught by American fishermen in Canadian waters enter the United States duty free. If this sort of reciprocity is kept up, all fishing craft employed in the business will be forced to become Americanized, to the detriment of an important Canadian industry. All licenses to fish in Canadian waters expire, we believe, with the current year. Let the Dominion Government thereafter impose an export duty of three quarters of a cent per pound upon all fish caught in Canadian waters and shipped to any country imposing a duty upon fish. Impose the duty.

Just as long as Canada allows her fishing interests to be broken up and destroyed by American fishermen, backed by unfriendly tariff laws, just so long will these interests suffer. As we suggested in December, the way to remedy the evil our lake fishermen are now suffering from is to impose an export duty upon fish caught in Canadian waters by other than Canadian fishermen. That the Dominion Government are listening to our suggestion, and are likely to act upon it, is shown in a telegram sent out from Ottawa a few days ago, which was as follows:

It is reported that the Minister of Marine and Fisheries has in contemplation the introduction of a bill into Parliament, at the coming session, imposing an export duty upon fish caught in the inland waters of Canada, in boats or with tackle owned by others than British subjects. Under the McKinley Bill Canadian fish dealers have to pay three-quarters of a cent per pound upon fresh fish shipped to the United States, while the American fish companies can ship fish caught in Canadian waters to the United States without any exaction of this kind. This means a heavy discrimination against Canadian fish dealers. It makes it impossible for them to compete against American fish companies, and must eventually lead, as it has to a large extent already, to the fish industry of the great lakes getting entirely into the hands of Americans, except so far as the immediate requirements of our own country are concerned. Licenses to fish are secured by Canadian fishermen, and then these men have been known to lease their boats, tackle and appliances to the American companies, and in this way assist in creating an American fishing monopoly in Canadian waters. The situation is anything but an inviting one for the Canadian consumer, and the impression is deepening that the Department should take prompt action in the matter. One method suggested for overcoming the difficulty of leasing or mortgaging Canadian boats to United States fishing companies is to make it a misdemeanor for a fisherman to practically transfer his license to a third party—and he a foreigner—as stated, and confiscate boats and catch as a penalty for any infraction of the law.

There is no reason why this important Canadian industry should not be preserved for Canadians. The legislation that imposes a heavy duty upon fish caught by Canadians, while fish caught by Americans pay no duty, is of the most unfriendly character, seeing that most of the fish caught in the inland lakes for the American market are taken in Canadian waters. It is sincerely to be hoped that Minister Tupper will introduce his bill imposing an export duty as suggested. Impose the duty.

MR. DANIEL STERN, of the *American Artisan*, Chicago, has sent us "The Tinsmiths' and Sheet Metal Workers' Pocket Reference Book," in which is published a mass of facts that cannot but be of the utmost value for those for whom it is intended. It is convenient to be carried in the pocket, and if any man can avail himself of all the facts contained in it he will be an encyclopædia of most useful and practical information.

SPECIAL ADVERTISEMENTS.

Advertisements will be accepted for this location at the rate of two cents a word for the first insertion, and one cent for each subsequent insertion. Subscription \$1.

"TRIUMPH OF THE AGE." Attention is called to the advertisement of The Eno Steam Generator Company, Limited, on page 307 of this issue. This Generator is being adopted by the leading manufacturers in Canada and the United States. Every steam user should investigate its merits.

AGENTS wanted to sell and handle on commission in Quebec City and vicinity, all sorts of new and second-hand machinery, engines, boilers, pumps, agricultural implements, belting, hose, safes, saws, files, bolts, machines and tools for shoe factories, etc. Address with references, J. L. O. VIDAL & SON, City of Quebec.

FOR SALE, in Kent County, Michigan. The Buchanan Mill property consisting of a first class lumbering mill the extensive water power in connection with it, including the entire power furnished by the river, with real estate on both sides of sixteen acres, situate one mile from Main Street of Lowell, a rich farming country surrounding an excellent location for paper mill, furniture factory, woolen mill and the many uses that require power. Also a splendid home and farm of 87½ acres with buildings, fruit, evergreens, etc. For further information call at the premises of JAS. R. BUCHANAN, Lowell, Michigan.

FOR SALE, A VALUABLE CANADIAN PATENT.—The Trenchholm Improved Perpetual Hay Press, patented 1882, has been manufactured in New Brunswick for nine years, and stands without a rival in the Maritime Provinces. As it has not been introduced in the Upper Provinces, the purchaser can, if he manufactures there, get practically a complete control of the business in Canada, as this machine is cheaper, stronger, earlier running and more durable than any other Press of its class, and is well protected by patent. Full investigation invited. Terms easy. Write for particulars to A. J. TRENHOLM, Sussex, N.B.

A RISING TOWN.—The Town of West Toronto Junction possesses exceptional residential and business advantages, and promises to speedily become the chief manufacturing centre of the Dominion. This town has the following railways, viz: Grand Trunk Main line (Carlton West Station); Northern Division of the Grand Trunk (Davenport Station); The Toronto, Grey and Bruce, and Credit Valley, and Ontario and Quebec Divisions of C.P.R., and Belt Line Railway (now in progress). The town offers to large manufacturers free sites, water at cost and exemption from taxation. Any information regarding the same will be given upon application to ROBT. J. LEIGH, Town Clerk, or D. W. CLENDENAN, Mayor.

WEST TORONTO JUNCTION ENTERPRISES.—The ten large factories which have located at West Toronto Junction during the past three years are all doing large trades. The "Barnum Iron and Wire Works," the "Toronto Rolling Mills and Forging Company," and others about to locate will swell the

paying industries of the town and augment its population. A large number of fine residences and business blocks have added to its appearance and to its facilities for supplying the peoples' wants. A perfect fire alarm system (the "Gaynor"), and an efficient system of water-works, both now in operation, with sewers, electric lights and improved streets now contemplated, will add to the protection and the comfort of the people and their houses. Free sites, free water and exemption from taxes are inducements offered to first-class manufacturers, and it is now acknowledged by all that Toronto's western suburb, with its great continental railway connections, is destined to be among the most prosperous cities of Canada. Dr. Carleton is Chairman of the Factory Committee.

THE *Street Railway Journal*, of New York, has sent us a beautiful engraving in which is shown a view of Brooklyn Bridge from the offices of that journal in the World Building.

It is not yet too late to take a hand in the great *Dominion Illustrated Prize Competition*, and try for one of the hundred prizes which will be distributed among the subscribers to that splendid journal. The first prize is \$750 in gold, and the list includes a Heintzman piano, Bell, Karn and Cornwall organs, gold watches, etc., the lowest prize being valued at \$5. On receipt of twelve cents in stamps, the publishers, the Sabiston Litho. & Publishing Co., Montreal, will send to any address a sample copy of the journal and full particulars.

THE *Bulletin of the American Iron and Steel Association*, of which Mr. James M. Swank is editor, comes to us in an entire new dress, and looking as fair and handsome as an Easter bonnet. The *Bulletin* is just what its name indicates—the organ of the most important and influential association of manufacturers in the United States. Mr Swank is general manager of the association, and the facts that are set forth in the *Bulletin* from time to time, and for which he is voucher, are of the utmost value to those who seek for truth in that direction. Mr. Swank is doing a grand service for the iron industries of his country.

THE publishers of the *London Advertiser* have just made an important change in the publication of their favorite weekly, the *Western Advertiser*. Instead of appearing once a week as a twelve-page paper, it is now issued in eight-page form twice a week—on Tuesdays and Fridays—which is a gain to the reader of four pages, or twenty four columns each week, of later and more complete news than formerly. The subscription rate is only \$1.50 per annum, or 75 cents for six months, including that charming monthly publication, *Wives and Daughters*, for the same term, which, if ordered separately, would cost 50 cents per annum. Samples free by addressing—Advertiser Printing Co., London, Ont.

Good Housekeeping for May illustrates what a journal of its class should be, covering well the various departments of household economy. The practical papers on culinary matters, like Mrs. Parloa's "Ten Mornings in the Kitchen," is being supplemented by sensible suggestions relative to retaining and regaining health, both of mind and body. Among other good things in this number is the original "Mother Goose" and "her numerous goslings," which is treated in a historical and reminiscent way. The attractive adornment of the home is always a prominent feature in this most excellent magazine; and it is this variety of interest, peculiar to every issue, which has made and keeps the remarkable popularity attaching to it. Clark W. Bryan & Co., Springfield, Mass.

THE home life of Queen Victoria is described by Lady William Lennox in *The Illustrated American* for the week ending May 2nd. The reader is taken into castles and palaces out of visiting hours, and is shown what a queen is like when not hedged in by divinity, but considered simply as a woman. Another article devoted to women is entitled "Women Explorers in Africa," and gives an account—apropos of Mrs. French Sheldon's expedition now under way—of the adventures of women travellers in the Dark Continent. The most interesting of these was the beautiful and hapless Mlle. Tinné, who could find no rest in civilization but was drawn again and again into the wilderness until at last she perished. An amusing study of provincial (in the South is given under the title "Two Southern Belles. Senator Carlisle, of Kentucky, is taken up as a possible President, and the scene of the dinner to celebrate the passage of the Copyright Act is shown from a flash-light photograph.

EVEN that annual bugaboo, house-cleaning, loses its terrors before *The Ladies' Home Journal's* happy faculty for turning things bright side out. It must be a dull housewife indeed who cannot find encouragement and substantial help in the cheery words of Maria Parloa, Christine T. Herrick, Helen Jay, and Isabel A. Mallon in the May number, every corner of which is pervaded with the breeze and sunshine of spring, from the dainty verses of Clinton Scollard, Annie Isabel Willis, Mary L. Storer and Madeline S. Bridges, to Eben E. Rexford's flower talks and Mrs. Mallon's page for "The Girl Who Graduates." Another feature of special interest to girls is the very suggestive article on "The Care and Dressing of the Hair," with numerous illustrations. That the series "Unknown Wives of Well-Known Men" should be so popular is not remarkable, when it contains such excellent portrait-sketches as that of Mrs. Chauncey M. Depew; and another popular chord is struck in presenting the question of woman in medicine, the women physicians being ably championed by Dr. Phoebe J. B. Wait, while Dr. George F. Shrady speaks strongly for "The Man's View." In the first chapters of "A Soul From Pudge's Corners" Jessie F. O'Donnell gives promise of a story of exceptional strength, well worthy of a place near "A Golden Gossip," which is unquestionably among Mrs. Whitney's finest work. The charming personality of the Abbe Liszt is well preserved in Etelka Willheim Illofsky's reminiscences; Mr. John Stephenson tells of the first horse-car, built by himself; and the bright suggestions for summer gowns are not the least among the good things of an especially clever number. Issued at \$1 a year, or 10 cents a copy, by the Curtis Publishing Company, 433-435 Arch Street, Philadelphia. Pa.

DR. ANDREW D. WHITE deals with a particularly interesting episode of the "Warfare of Science" in his paper on "Miracles and Medicine," which opens the May *Popular Science Monthly*. He shows how tales of miraculous cures grew and multiplied in the middle ages, and how the art of medicine was repressed by ecclesiastical jealousy and greed. One of our newest industries is described in this number by Frederick A. Fernald in an article on "Ice-Making and Machine Refrigeration," with pictures of an ice-factory, a rink of artificial ice, a cold-storage room, etc. An article by Sheridan Del'pine explains methods of "Fortifying Against Disease." An illustrated account of "Some Games of the Zuni" is contributed by John G. Owens, several of these sports being intensely exciting. A possible solution of the great educational problem of the day is suggested in the description of "An Experiment in Moral Training," given by Dr. Mary V. Lee. The conclusion of "Professor Huxley on the War-Path," by the Duke of Argyll, is printed in this number. Mrs. K. B. Claypole describes some forms of minute vegetation, with illustrations, in "My Garden on an Onion." A survival of the human weakness for charms and magic is shown by Lee J. Vance, who writes on "Evolution of Patent Medicine." The history of "The French Institute" is sketched by W. C. Cahall, M.D., giving especial attention to its Academy of Sciences. The strange story of "The Mexican Messiah" is told by Dominick Daly, who believes that this personage was an Irish missionary. Some of Froebel's stimulating ideas are set forth in a paper on "The Education of Children." There are a sketch and portrait of Captain Niels Hoffmeyer, a Danish meteorologist of much ability. Attention is called in the Editor's Table to some of the wonders of electricity under the title, "The Youngest of the Sciences," and the weakness of recent attempts to discredit "The Doctrine of Natural Selection" is pointed out. New York: D. Appleton & Company; 50 cents a number, \$5 a year.

THE HURONTARIO SHIP RAILWAY.

THERE was a well attended meeting in Toronto a few days ago of engineers and capitalists for the purpose of discussing the scheme of Mr. E. L. Corthell, C.E., of Chicago, for a ship railway connecting Collingwood, on Georgian and Toronto. Extracts were read from Mr. Corthell's paper on "An Enlarged Waterway Between the Great Lakes and the Atlantic Seaboard," a synopsis of which has already appeared in these pages. It was stated that the great question for consideration was the practicability and possibility of building the proposed railway; whether a depth of twenty feet of water could be obtained from Toronto to the seaboard, and if the revenue to be derived from the project would be sufficient to pay the interest upon the investment.

Mr. David Blain, who has taken an active part in promoting the scheme, undertook to reply to this important question, and stated that after carefully considering this point, and after consulting the best engineering authorities, he had no hesitation in stating that the scheme was not only feasible, but that in less than two years the railway would pay a handsome dividend. He said: To Canadians,

and especially to the citizens of Toronto, the scheme is of great importance, coming as it does from a citizen of the United States, who considered the whole subject without interest or prejudice on behalf of the producers and consumers, and placed the uncolored facts before the country. Those who seek to promote any one of the schemes he has outlined must be prepared, on general and special grounds, to justify the expenditure and show wherein it is superior to all the others. This will render necessarily a free discussion, not only of the particular route referred, but a notice of all the other projected lines. The city of Toronto and the city of Montreal are specially interested in the Hurontario Ship railway. Montreal, it is true, would derive benefit from almost any of the other schemes, but not to the same extent as from the last named work, which would bring the upper lake freights into lake Ontario. We all know to what extent canals have been employed in the past to overcome obstructions in the water ways. This paper by Mr. Corthell maintains that under certain conditions a ship railway may be advantageously substituted for a canal; that it can be built of any capacity at less cost, be more easily, more speedily and more cheaply operated, and be made to answer all purposes better than a canal, and with equal safety to shipping. To sustain this proposition, we have to rely on the scientific skill of the profession for the present, as it must be confessed that their is yet nowhere in actual operation a ship railway on the plans of the magnitude now contemplated. Vessels have been taken over land repeatedly. They are daily taken from their native element, carried a distance, repaired and again returned to the water with perfect safety. Mr. Corthell has given the subject more consideration than perhaps any living engineer, and he recommends the ship railway instead of the canal, without the slightest doubt in his mind of its entire success. Mr. William Smith, the engineer of Aberdeen harbor, has patented a means whereby the vessel in transit is water-borne and also whereby a train carrying a vessel can be conveyed along a road with ordinary grades and curves. Messrs. Reed and Kempple, two of the most favorably known engineers in Great Britain, have examined these patents, their application and working capabilities and have reported them a complete success. Vessel owners need not hesitate to risk their vessels, as the railway company being common carriers would be liable in damages for any injury to the vessels or their cargoes. The most satisfactory testimony, however, will shortly be obtained. The Chignecto ship railway, planned and superintended by Mr. Ketchum, is now drawing towards completion. It is hoped that this pioneer work will be finished by the fall of the present year, when vessels of 1,200 tons burden, loaded, will be carried overland from the St. Lawrence to the bay of Fundy. There seems, therefore, to be no reasonable doubt that a ship railway can be substituted for a canal with perfect safety and a saving of time and expense to the carrying trade. The question to be solved is, will it pay to construct works that will give a depth of 10, 14, 20 or 30 feet of water? Will the trade yield a satisfactory return on the expenditure? If a Government work, to be used free of toll, will it yield a return to the country equal to the outlay? If the country calls for 30 feet depth, the engineer says, as a matter of course the country furnishing the money can have 30 feet or any depth demanded. The United States government have adopted a policy of 20 feet for all their channels and harbors. If we desire to obtain the advantages nature has given us and be abreast of the times, we too must have 20 feet on both river and canal between Kingston and Montreal. There are those who now demand the same depth above Montreal as below it, 27½ feet. I have never contemplated the regular ocean fleet ascending above Montreal. The inland and ocean navigation, I think ought to be treated as two distinct systems, the maritime and coast trade being treated as part of the inland system. With 20 feet of water there is no doubt the lake vessels could stand the coast and maritime ports. They could then take down ore, flour and other products to any port of eastern Canada, or the United States, and bring back coal, fish, building material, manufactured or other articles required inland. With 20 feet depth on the St. Lawrence we would be independent of the States, and with the import duties we impose we could turn out our own coal and iron the products of our own people. No nation can remain long independent that cannot produce its own iron. The author's paper in calling for 20 feet, I think, should meet with the approval and obtain the support of the entire country. The carefully prepared estimates of these works are only \$27,000,000.

Mr. Blain, continuing, said that in his opinion there were only two routes practicable, the old route by St. Clair and the Welland canal, which would have to be enlarged at a cost of \$25,000,000, and the Hurontario ship railway, left for consideration and comparison. The questions raised by these subjects are of the most vital importance to the city of Toronto. If the old route be continued, Toronto will be simply an inland town, lying off to the right of the

great commercial highway on the north shore of the lake, to be visited occasionally by vessels directed to call for cargoes, and to that extent the city would be benefited by the improvements of the waterways. But Toronto would in no sense be specially benefited more than Hamilton, Cobourg or Port Hope. If the Hurontario ship railway be constructed, then Toronto will be in a sense at the head of deep water navigation; at a point of transfer from water to land, and from land to water—a city with the greatest future possibilities on the great highway between the producers and consumers, the domestic and foreign markets that must increase in population and wealth, and every material comfort of the people. The same may be said of Montreal, for this route is the only one which must admittedly bring the upper lake freights into lake Ontario, from which they can hardly escape, except by way of Montreal. In instituting a comparison between these routes we find that the Hurontario route is shorter than the Welland route by 278 miles.

Comparing the routes in time by the author's rate of speed used by him throughout, we have the Welland route from 75 miles south-east of Mackinac to Kingston, 65 hours and 31 minutes; by the Hurontario, from same place, 31 hours 8 minutes, or less than half of the time. From Kingston to Sarnia, Lake Huron by Welland, 54 hours and 11 minutes; from Kingston to Georgian Bay, Lake Huron, 19 hours and 57 minutes. Mr. Blain next spoke of the volume of freight which would pass over the railway from Collingwood to Toronto. He said that if accurate returns were available it might appear that the lake trade has now reached 40,000,000 tons annually, and is daily increasing. At the point in Lake Huron, the proper beginning of the Hurontario route, there passes not less than 25,000,000 tons of freight yearly. The Sault and Chicago alone send on about 20,000,000 tons. This point is only 3,770 statute miles from Liverpool, or 350 further than New York city. From this point, under favorable conditions such as can be easily obtained, freight can be profitably carried to Liverpool for \$2.66 per ton, or about 8 cents per bushel for wheat; while by all rail from Chicago to New York it costs \$6.74, or over 20 cents per bushel, delivered in Liverpool. If the North-West supplied Britain with 100,000,000 bushels, which it could easily do, there would be an annual saving on this item alone of \$12,000,000. The saving on this single item in four years would more than pay for the entire cost of the works from tide water to the head of the lakes. If this road were constructed it must command the trade. The trade in this case means the great volume of freights moving from west to east and from east to west along the great artery from the seaboard to the centre of North America and return. The cities of the Dominion would everywhere profit by it. Some portions of the millions of horse power now annually going to waste on the St. Lawrence could be profitably utilized and factories everywhere along its banks would flourish. Toronto and Montreal would then become great centres of trade, manufactures and shipbuilding. Then our lake fleet, instead of being swept from the waters as now, would increase beyond our anticipations. It must be apparent to all that the contention for 20 feet of free open navigation from the upper lakes to tide water, including the construction of the Hurontario project as a necessary link, is well founded, and that these works are essential to the interests of the great North-West of both the United States and Canada, and ought to be completed to the required dimensions at the earliest possible day. In these works, and in these only, lies the remedy for the present congested condition of the carrying trade. By these only can the producers and consumers be relieved from unnecessary and burdensome charges for the transport of the commodities required to supply the markets, both domestic and foreign.

THE MARCH OF PROTECTION.

PRESS despatches state that in an after-dinner speech a few days since, Lord Salisbury declared that protection in the United States had been checked by the people in the late elections. It seems that this opinion is shared in by a large number of those who do not wish to see our country industrially free. How much truth there is in the idea, is shown in an investigation recently made by the American Protective Tariff League. This organization recently sent out letters asking opinions as to the cause of the political change last November. About 1,000 replies were received, and in these there was but one expressing the belief that the elections were a defeat for the cause of protection. The impression that increased prices were caused by the new tariff law is being corrected throughout the country, as since the elections prices have fallen back to their normal condition. It has been plainly shown that prices of hardware, kitchen utensils, mechanics' supplies, building

materials, different grades of cotton goods, drugs, linen thread, groceries and notions generally instead of advancing are lower under the new tariff than they were a year ago. This is illustrated particularly in woolen goods. The duties on these were more largely and uniformly increased, both as to the raw materials and the finished product, than on any other schedule of the new bill. Yet prices under the new tariff are lower than those quoted in the same line last year.

The New York *Tribune* not long since obtained prices current of the leading houses in the various departments of trade for September, 1890, and January 15, 1891, and compares them to discover what, if any, has been the effect of the McKinley law on prices.

The tables show actual selling prices on September 1st, more than a month before the new tariff went to effect, and when it was generally believed that the bill would not pass, in comparison with retail prices after the new duties had been in force for more than three months. Out of 951 quotations obtained, only 90, or less than 1 to 10, were found to have been changed in any way, upward or downward since September, 1890, until February, 1891. Out of 298 quotations obtained from four of the best known dealers in groceries and canned goods twenty-two show lower prices under the new tariff. Out of 276 quotations of boots and shoes, from several dealers, only one reported any advance whatever in prices. The others reported thirteen changes out of 240 quotations, the changes being all reductions in price. Out of 202 quotations of hardware, tools and implements only seven showed advances. In glassware and cutlery only five quotations out of forty-eight show any advance, and those are articles not of common use, excepting the larger sizes of window glass. The smaller sizes are unchanged, and nearly all tableware and household goods.

Out of 128 quotations of clothing, underwear, blankets, cotton goods, table linen and carpets, changes are found only in nineteen, of which there are reductions in seven quotations for clothing, one of blankets and one grade of carpets, nine in all, while there are advances in five quotations for underwear, in three for table linen, one of carpets and one of cotton goods.

This accounts for the fact that the protective sentiment is rapidly increasing, despite the recent rejoicings of some who believed that the great cause of American labor could be permanently kept back by the short-lived deceptive schemes of politicians.

The English authority already mentioned should take a glance over Europe, and see the growing disposition among the nations to keep out foreign imports and promote native industries. Russia, that during the past ten years has successfully adopted protectionist measures, is now making further efforts to protect native manufactures, while France and Spain are following the same lead. Italy is so guarded by a protective tariff that most English manufacturers have given up any attempt to send goods thither, and some British firms have opened establishments in Italian towns for the manufacture of goods they cannot export. Austria-Hungary introduced a tariff in 1887, which increases the duties on most cotton goods, locomotive machinery and metals. Roumania has made several increases, covering a large number of articles, and Switzerland is abandoning its free-trade policy. This is a continued tendency in nearly all countries to increase their protective duties, and the termination of many commercial treaties during this year and the next will show the growth of the protectionist sentiment on the European Continent.—*American Manufacturer.*

STRIKES AND THEIR COST.

An official report upon the strikes and lock outs of 1889, compiled by Mr. J. Burnett, Labor Correspondent of the British Board of Trade, has just been issued as a Parliamentary paper, and contains facts and figures which are well worthy of careful consideration. Some of the conclusions drawn by Mr. Burnett have been disputed already by one of the trade union secretaries, but for the practical purpose of estimating the cost and incidence of strikes the facts and figures of the report hold good. During the year 1889 there were strikes in 3,164 establishments, the number of distinct strikes being 1,145. Of that total 9.7 per cent. were among miners, 9.34 per cent. in the ship-building trades, 8.5 per cent. in the engineering trades, and 7.5 per cent. among dock and wharf laborers. Most of the strikes were due to claims for higher wages. Of the total number 48.3 per cent. were successful, 31.5 per cent. were partially successful, 10.7 per cent. failed, and in the remainder the results are not known. There were forty-five strikes in opposition to proposed reductions of wages, and one-fourth of them were successful, whilst twenty failed wholly. As many as twenty strikes were due to the sympathy of one body of workers not actually involved with those directly engaged in the struggle. Mr.

Burnett states that in the 304 strikes which were successful, 93,524 persons were concerned, and in the 272 partially successful strikes 175,476 persons were involved. In the 171 strikes which failed, 40,472 persons were concerned. In arriving at settlements of the disputes 62.3 per cent. were solved by means of conciliation, and in 4.2 per cent. arbitration was resorted to after the conciliation. As regards the total number of persons involved in the whole of the strikes, the statistics are not absolute, but it is known that in 930 strikes there were 344,840 persons directly and indirectly concerned. As to the duration of the strikes, details are furnished of 840, in which the aggregate number of days lost was 15,000. The average duration per strike was 18.6 days, which gives an aggregate loss of 3,730,000 working days, which, at 3s. 6d. per day, would be a loss of wages alone of £662,000. A fuller calculation and an allowance for the much higher rates of wages received by many of the strikers would in all probability more than double the total just given. In regard to the losses inflicted upon the employers, it is shown that in 216 instances only, the value of the fixed capital laid idle was £14,480,962, while in 169 instances the rateable value of the property laid idle was £268,684. In 233 cases the estimated outlay caused through the stopping and re-starting of the works was £169,212. In ten cases it is stated that £6,517 was paid by organizations of employers in support of firms whose men were on strike. On their part the trade unions in 369 strikes paid £63,636. There are in Mr. Burnett's report many other figures of considerable interest, but those we have quoted serve to give an approximately accurate idea of the heavy bill paid by the country in respect of the wages agitations of last year. That bill, moreover, cannot be deemed to be complete without a large addition for the loss of business—temporary or permanent—resulting from these serious disturbances of our labor market, and by the higher selling prices necessitated by the augmented cost of labor. On several occasions we have pointed out the losses caused in this way, and have expressed the hope that some day strikes will be wholly prohibited. The trade union leaders take credit to themselves, in criticising Mr. Burnett's report, for the general advances in wages which they have secured by means of the strikes, but they do not deprecate such violent methods of negotiation, and appear to be satisfied to resort to what is virtually brute force rather than to assist in the constitution of a proper tribunal for dealing with all labor disputes as they arise.

CHEAP MERCHANDISE MEANS CHEAP MEN.

In a recent speech, characterized by familiar dullness and clumsiness of expression, Mr. Cleveland "indignantly repudiated" the proposition that "cheap merchandise means cheap men." But when merchandise is cheapened by the processes of free trade that is what it does mean, whether Mr. Cleveland repudiates the assertion or accepts it. If he will read the book written by General Booth, of the Salvation Army, which has created such a stir in England, he will find there, from an impartial authority, how cheap men are in that country. Booth shows that in a population of 37,000,000 there are at least 2,000,000 out-and-out paupers and probably a million more only a little less helpless. Mr. Chamberlain says that there is a population equal to that of London (4,000,000) in this condition. Many of these are persons who have been driven from the farms by the decay of British agriculture under the destructive competition of the United States, and others are persons who have been forced to idleness because Englishmen have sought abroad at low prices fabrics which might have been made at home. Ireland is a cheap country, but four millions of her people have fled from her shores within forty years, and famine is impending for those that remain. Belgium is a cheap country, where girls and dogs do the work which we do with horses. India is one of the cheapest countries in the world. Labor there may be had for four cents a day, but the Indian peasant is hardly a man, and a famine which scours the people out by the million brings wholesome relief to the land when it comes. Human life is the cheapest of all things in these cheap countries. No American who has any sense or any humanity ought to fail to implore a merciful Providence to save his country from such results of cheapness as these.

There is a kind of cheapness that may be had by other and better means. We have gained it by protecting our industries and our people, and we shall gain more of it if we shall be wise enough to continue that policy. No free trader will admit that he can perceive it, but the difference is vast between cheapening products by cheapening men and cheapening products by stimulating the inventive powers of men by paying them high wages.—*Philadelphia Manufacturer.*

Manufacturing.

This department of the "Canadian Manufacturer" is considered of special value to our readers because of the information contained therein. With a view to sustaining its interesting features, friends are invited to contribute any items of information coming to their knowledge regarding any Canadian manufacturing enterprises. Be concise and explicit. State facts clearly, giving correct name and address of person or firm alluded to, and nature of business. Subscription \$1.

MR. WALTER BLUE, Sherbrooke, Que., is going into the manufacture of clothing for the wholesale trade.

MR. R. CRAIG, Nanaimo, B.C., is making large additions to his carriage factory.

MR. FRANK ROWLIN'S fertilizing factory at Hamilton, Ont., was destroyed by fire April 26th, loss about \$7,000.

MR. E. A. PIPER, Oak Lake, Man., who has heretofore manufactured harness, will also manufacture boots and shoes.

THE woodenware and Chinese toy factory of the J. R. McLaren Manufacturing Company, Montreal, was destroyed by fire April 26th, loss about \$25,000.

THE Westminister Foundry Company, New Westminster, B.C., are making another large addition to their buildings to accommodate their rapidly-increasing business.

MESSRS. J. T. WESTON & Co., manufacturers of stoves, furnaces, etc., Tilsonburg, Ont., are merging their business into the Weston Stove Manufacturing Company with a capital stock of \$40,000.

MESSRS. E. LEONARD & SONS, London, Ont., have recently supplied a steam engine, boiler, etc., to Mr. John Anderson for driving the ten-stamp crusher at his gold mine at Lake Catcha, N.S.

THE Dominion Leather Board Co., of Montreal, have bought the water power and plant of the McNevin estate at the Back River, and are moving their leather board and asbestos works there from Cote St. Paul.

MESSRS. YOUNG BROS., Almonte, Ont., are manufacturing a fulling machine, for woolen mills, which gives general satisfaction. This firm also makes a specialty of manufacturing cloth washers and wool pickers.

MR. J. H. FALCONER, of Messrs. Badgerow and Falconer, of Toronto, was in Victoria, B.C., a few days ago with the object of choosing a suitable place for the establishment there of a branch chicer, vinegar and pickle factory.

MESSRS. W. BOULTER & SON, proprietors of the Bay of Quinte Canning Factory, at Picton, Ont., have recently been making considerable shipments of their goods to Europe. A 1,000 case lot of galler apples has just gone to London, Eng.

THE cathedral stained glass, manufactured by the London, Ont., Glass Company, was placed in the windows of the Pandora avenue Methodist church yesterday. The glass costs, laid down in Victoria, upwards of \$1,000.—Victoria, B.C., *Colonist.*

ON Saturday night last, Sayward's saw mill was lighted up with electricity, the light being produced by a private plant. It is a decided success, and enables a double shift of men to run the mill both day and night.—Victoria, B.C., *Colonist.*

MESSRS. HENRY & SMITH, of Ottawa, have closed a contract with the Dominion Government for the construction of a Howe truss bridge across the Old Man River at Macleod, Alberta. The estimated cost of the bridge is \$30,000, and construction is expected to occupy six months.

MESSRS. READ & Co. are to rebuild the Port Elgin Woolen Mills immediately. They have the greater part of the lumber on the spot, and will commence building operations as soon as the frost will permit. The main building is to be about 140x40 feet.—Moncton, N.B., *Times.*

THE Montreal Cotton Company are putting in sixty new looms, half of which are already in operation. They are also to put in this year seventeen new revolving top flat cards. They recently added some new finishing machinery, and are making a second extension of their dyehouse.

MESSRS. JAMES HAY & Co., Woodstock, Ont., have contracted with the Singer Sewing Machine Company to manufacture all the cabinet work required for all the Singer sewing machines to be manufactured in Canada, the contract to extend over a period of five years. Credit this to the N.P.

THE cabinet-making shops of the Canadian Pacific Railway Company at Montreal were destroyed by fire April 20th, loss about \$80,000. The burned building was 150x75 feet, two stories high. A great deal of valuable woodworking machinery was destroyed, and 350 hands thrown out of employment.

THE Cant Bros. Company, of Galt, have issued a well got up catalogue of their various woodworking machines. It contains eighty pages of illustrated particulars of the various machines required by all engaged in this industry. We observe that the firm has been awarded four medals at the Toronto Industrial Exhibition.

THE main building of the Hawthorne Woolen Mills at Carleton Place, Ont., is a heavy stone structure 120 x 55 feet, four stories high with boiler and engine house and dye house attached. There are also three large storehouses close to the mill, one for storing finished goods, one for dyed and prepared wools, and one for raw stock.

MR. ALEX. EWEN, of New Westminster, B.C., is about to begin the erection of a new salmon canning establishment on Lion Island near that place. This makes the third new cannery to be erected on the Fraser the present year, the other two being those of the Lulu Canning Company, on the main river, and Rowan Bros., on the North Arm.

MESSRS. GRAHAM FRASER, of New Glasgow, R. G. Leckie, of Londonderry, and a Swedish ironmaster named Sjos'tdt, with other gentlemen, have just purchased the entire plant of the Cathdin Iron Works in Maine. The plant will be transferred en bloc to East River, Picton, where the company will carry on iron works employing about 300 men.

MESSRS. THEO. H. EATON & SON, Windsor, Ont., the "Old Dye-wood Warehouse," which has been established fifty-three years, call attention to the fact that they are importers and manufacturers of pure dyewoods, dyeing drugs, solid and fluid extract of logwood, fustic, indigo, pure hematine, etc., and are sole agents for Canada and the United States for the celebrated "Crown" aniline dyes.

MESSRS. WOODS & GAMBLE, of New Westminster, have on exhibition at their office a number of samples of British Columbia slate, which appears to be a very superior article, and those who know something about the matter say that the samples are fully equal to the best Welsh slate. A successful slate quarry should be one of the most valuable and best paying institutions of the country. — Vancouver, B.C., *Commerce*.

MESSRS. LEMON, GONNASON & Co., Victoria, B.C., have got their new sash and door factory into operation, giving employment to twenty-five men. The main building is 90 x 54 feet, and the entire premises covers an area of 40,000 square feet. The works are equipped with a full outfit of modern machines and machinery, included in which is a 12-inch moulding machine which is claimed to be the largest in the Province.

THE business of the Royal City Planing Mills Company, Limited, at New Westminster and Vancouver, and the Hastings Saw Mill Company, Limited, of Vancouver, have been acquired by the British Columbia Mills Timber and Trading Company, and will in future be carried on under that name. The Royal City Planing Mills make lumber, shingles and boxes, and have machinery to make doors, sash, and interior wood-work.

BARON H. DE SORAS, of Lyons, France, who recently started sheeping ranching near White*wood, has been so struck with the possibilities of woolen manufacturing in the Canadian North-West, that he has gone home to France to purchase a plant for a woolen mill, which he proposes to erect at Richelieu Ranche near White-wood. He says there are 20,000 sheep between Whitewood and Regina, and wool of excellent quality can be supplied to the mill at a very low cost.

MR. ALEX. EWEN is about to begin the erection of a new salmon canning establishment on Lion Island, adjacent to the old cannery on the Fraser. The dimensions of the new building will be almost equal to those of the old one, and Mr. Ewen's facilities for packing will thereby be nearly doubled. This makes the third new cannery to be erected on the Fraser the present year, the other two being those of the Lulu Canning Company, on the main river, and Rowan Brothers, on the North Arm. — Victoria, B.C., *Colonist*.

THERE was an increased production of petroleum in Canada, according to the report of the Inland Revenue Department for the twelve months ending December 31, 1890, as compared with the two previous years. In 1890 inspection shows a total of 236,768 barrels of forty-five gallons each, and 44,196 cases of twenty gallons each. In 1889 the total number of barrels inspected was 220,960, and cases, 38,344; while in 1888 the number in each case was still less, there having been 217,587 barrels and 23,928 cases inspected.

MESSRS. PARKE, DAVIS & COMPANY, manufacturing druggists. Walkerville, Ont., have been very busy shipping large consignments of their goods. Last week some of the largest shipments yet made since the firm started have been to Victoria, B.C., Montreal, Quebec and to Frederickstown and St. John's, N.B. As this firm is getting more and more widely known as one of the largest firms in their line of business in the west, its volume of business is increasing by leaps and bounds; large orders are yet on file and will be filled as fast as possible. — *Mercury*.

MESSRS. LEE & McCALLUM expect to start the first of next week with the dredge *Wolverine* to commence work on their \$30,000 contract at Bay City, Mich., deepening the channel in the Saginaw River. In consequence of the American marine regulations, which will not allow Canadian tugs to work in American waters, the firm have been obliged to purchase an American tug, and this week they acquired the Ingram at Buffalo, which will come to Port Colborne in a few days, and with the Golden City will hitch to the dredge and proceed to the scene of operations. — *Welland Telegraph*.

THE Globe Furniture Company, of this town, have shipped two large carloads, over the C. P. Railway, of furniture of their manufacture, to the Pandora Avenue Methodist Church, in Victoria, B.C. This is one of the largest orders this firm has executed, and for neatness of design and execution excelled all previous work turned out. They have also shipped furniture for a church situated on the rocky promontory at Lunenburg, Nova Scotia, thus goods manufactured in our town will have the winds of the Atlantic on the east, and Pacific on the west, blowing upon them. — Walkerville, Ont., *Mercury*.

SEVERAL months ago, as announced in this journal at the time, the extensive foundry and hardware manufacturing works of Messrs. H. R. Ives & Co., at Longueuil, Que., near Montreal, were destroyed by fire. When the fire occurred a new steam engine had just been placed in position, there was a full stock of fuel and other materials on hand, and one building was filled with the latest machinery for manufacturing purposes. These works should not be considered with the firm's extensive works in the city of Montreal. Mr. Ives has now made arrangements to rebuild the Longueuil works, which will be operated as an entirely separate concern, and will give employment to about 125 hands.

THE Edison General Electric Company have begun the erection of another building at their works at Peterborough, Ont., which will be the compounding shop. This structure will be the same length as the machine shop, 272 feet, but only half as wide, fifty feet. The mason work on this building will be started in a short time. As soon as the foundation for this second building is completed, the ground will be broken for a third, the wire shop. This will be of the same dimensions, 272 x 50 feet, as the compounding shop. Both buildings will be pushed to completion with all possible speed. A large boiler, of 100 horse power, will be substituted for the present one, which is used in the building operations.

ONE of the simplest although perhaps the most interesting exhibits in the mechanical section of the Glasgow East End Industrial Exhibition is a circular planing saw, which cuts and planes all kinds of wood by the same action as an ordinary circular saw, producing a beautiful smooth surface, equal to hand-planing, with little additional power and no more labor than is required for ordinary sawing. The invention is applicable to all kinds of circular sawing, and has already been adopted by some of the principal railway companies in their carriage and wagon building departments with the best results in the saving of labor and expense. There is no planing required, which should be invaluable to pattern-makers, cabinet-makers, packing-case makers, carriage and wagon builders, agricultural implement makers and all workers of wood generally.

A NOTABLE feature in the domestic industries of St. John and many other parts of New Brunswick is the knitting of hosiery, mitts, tuques, etc., from homespun yarn. The wool from which the yarn is made is the native wool of New Brunswick, which though coarse in texture, is probably not surpassed for strength and wearing qualities. The goods are made in some cases by hand work on old fashioned knitting needles, and in others by household knitting machines. Mr. T. Partelow Mott, manufacturer of woolen goods in St. John, is said to employ about 200 women and girls in this work, many in the country coming in and getting a stock of yarn and returning it in the shape of made up goods, for which they are paid by the piece. With some of the workers it is a business, with others it is a means of recreation or profitably spending their spare hours.

THE cotton mills, nine in number, from Halifax, N.S., to Brantford, Ont., under the control of the Dominion Cotton Mill Association, which had not been running steadily, or, rather, some of them not on full time, when they came under the company's control,

are, company officials report, gradually becoming fully employed, and a few weeks will see them all operating at their maximum capacity. It is the intention to run at once two of these mills exclusively, or as nearly so as possible, on work for the China trade, which affords, it is stated, at present an almost unlimited market for the class of goods sent. The first steamship for the new C.P.R. line of vessels will leave Vancouver for Shanghai freighted, in greater part, with Canadian cotton, about the middle of next month. The mills at Hochelaga are now employing 1,600 hands, and by the end of the present month the association's mills will aggregate about 4,000 hands.

The factory of the Manitoba Wire Co., Winnipeg, is a scene of busy activity at present, and Manager Chisholm is pushing the work to turn out orders for the spring trade. This is one of the most important and prosperous industries of the city. The business has been steadily increasing, and it looks as though this spring's trade will exceed any previous season. The business has grown to such an extent that it has been found necessary to increase the buildings. A storage warehouse has been erected just across the street from the factory, which will hold a few hundred tons of wire, the size being 60 x 40. This is an iron building. The main factory has been enlarged by an addition of 60 feet, making the full size 100 by 160 feet. About \$4,000 worth of new machinery has been put in. The principal product of this factory is the well-known barb wire, the Winnipeg article being the genuine lock barb, and claimed to be the best manufactured. — *Winnipeg Commercial*.

MESSRS. MORTON, ALEXANDER & MORTON, Winnipeg, Man., are now under full swing with their new shoe factory operated in connection with their tannery, and the *Commercial*, in publishing quite a lengthy description of the works, says:—"First, experiments were made with harness leather, and when this proved successful, calf was next tried. Mr. Morton has a secret process for calf, and he claims that his leather of this class is unequalled anywhere. It will wear better than French, is softer and more pliable, and equal in appearance. All other classes of leather are manufactured, but harness and calf are the principal kinds made. Furs are also tanned for robes and other purposes, and quite a number of cow hides have been tanned with the hair left on, for the manufacture of overcoats. A good hide makes a splendid overcoat for rough wear, and they are becoming quite popular. Deer and moose skins have also been prepared for the manufacture of mitts and gloves, and this is a branch which will probably be extended considerably, in both tanning the skins and working them up into mitts, etc.

The E. B. Eddy Mfg. Co., of Hull, Que., now manufacture indurated fibre pails, buckets and various vessels used in textile factories and similar establishments. Indurated fibre ware is warranted to be all in one piece without joint or seam, and is the only line of ware (not metallic or earthen), which can be truthfully claimed to be seamless, and which does not require hoops. This ware is saturated with a hardening material which makes it very durable as well as elastic, and renders it impervious to moisture, hot or cold. It is superior to wood, paper, tin and iron ware in these particulars; it will not shrink or swell; will not taint water, milk or other liquid; cannot leak, water-soak or rust; has no hoops to drop or rust off; being seamless, bottom cannot drop out; has no paint or varnish to wear off; does not require paint or varnish to preserve it; is proof against hot and cold water, kerosene, benzine, and naphtha; it is lighter than a wooden pail, and will not soak, thus becoming heavier. Indurated fibre ware is fitted with the best trimmings, brass ears, coppered or tinned bail wire, and hard wood enameled handles.

The newest thing in nails is a twisted wire nail, which is a cross between a screw and an ordinary plain wire nail. This idea is of English origin, and it is supposed to represent as great an improvement upon the plain wire nail as that useful invention is over the old cut nail. As is well known, the common cut nail tears and crushes the fibres of the wood as it is driven, and its tapering shape destroys the greater portion of its holding powers when it is partially withdrawn. The plain wire nail being pointed and smooth does not crush the wood fibres as the cut nail does, but presses them aside. As the diameter of the nail is the same throughout its length, it fits as tightly and holds as firmly when partially drawn as when driven home. The twisted wire nail not only crushes the fibres of the wood less than the other two forms of nail, but by its screw shape possesses a much greater holding power than either of the other forms. Quite similar to this screw modification of the wire nail is the recent American idea of making a wood screw that will drive nearly as well as a nail and yet can be withdrawn by means of a screw-driver as readily as any screw.

On Friday afternoon last some interesting experiments were made at McFardridge's wharf with the new explosive, Roburite, now manufactured in Halifax by the "Canada Explosives Company, Limited." The hull of the old steamer sunk in the dock was being broken up under the superintendence of Captain Sheridan, the noted diver, and roburite was used to do the work. About six or seven pounds of roburite, in a clay jar, were placed by a diver in the hold at the stern and connected by a wire with a battery. When all was ready Captain Sheridan fired the charge by simply touching a button, and instantly a tremendous volume of water was forced into the air, accompanied by broken planks, timbers and the stump of a mast. A second and smaller charge was then fired with similar results, leaving little to be seen of the hull but broken timbers; proving the tremendous power of the explosive. Roburite is destined to be largely used for wrecking purposes, as it is perfectly safe to handle. For mining purposes it is destined to meet a felt want, and when it is once in general use there will be an end to the deadly accidents that now so often occur through the use of dynamite and other explosives.—Halifax, N.S., *Critic*.

AMONG the uses for aluminum are the following: At fifty cents per pound the new metal will compete with copper at seventeen cents, the latter being 3.56 times as heavy as an equal bulk of aluminum. But the electrical conductivity of aluminum, that is ninety-eight per cent. pure is only seventy-five per cent. that of copper, so that one-third more area would be required to do the same work. A reduction of forty-five per cent. in weight of motors for electric cars can be secured by using the new metal, which in itself is no small advantage, seeing that the latter promise to come into extensive use in the near future. The coating and lasting qualities of aluminum far surpass those of tin, and it will cover three times as much surface for equal weights, making it necessary to sell tin at sixteen cents per pound in competition with the other at fifty. Nickel at seventy cents would no longer be used for plated ware or coinage, the new metal being much cheaper and cleaner. We expect to see it sell at \$200 to \$300 per ton, and at these figures it will be the cheapest metal next to iron and steel. The price must fall lower and lower as the facilities increase for making the material and the market adapts itself to the absorption of larger quantities of the new metal.

PERHAPS the most extensive sugar bush to be found in the Dominion is that owned by Mr. L. H. Lawrence, of West Shefford, Que., in the county of Shefford. This gentleman carries on the business of maple sugar and syrup making on a most scientific scale, and his works are the resort of a great many strangers who come for miles to see the different methods employed in the various processes of manufacture. Mr. Lawrence taps about 5,000 trees each season, and the present year has been an unusually productive one for the industry in question. Last week he put up and shipped from eighty to 100 gallons of syrup per day, and it required ten fires to boil the sap, so freely did it come from the trees. Mr. Lawrence employs a large number of men, besides a large number of labor-saving inventions, and has fitted up near his bush a tin-shop, where cans, buckets, spouts, evaporators and other articles needed for sugaring are made. He is also an extensive farmer, and although keeping from sixty to seventy cows, it is said that he claims to be making considerably more money from his sugar bush than from his cows. This particular section of Shefford is wonderfully productive in maple sugar, and Mr. Lawrence has a brother whose business is almost as extensive and profitable as his own. In fact, tens of thousands of dollars are made every year in the prosecution of this industry.

A FEW days ago several members of the Dominion Government visited the several factories of the E. B. Eddy Manufacturing Company, at Hull, Que., near Ottawa. The name of E. B. Eddy is familiar to the public from one end of Canada to the other, but few people have any idea of the extent of the enterprises which Mr. Eddy has built up at Hull, and which gave constant employment to over 2,500 hands. The visitors first inspected the pail and tub factory, the machine shop and then the match factory. In the latter establishment the Ministers learned that the average daily output was 22,000,000 matches. The indurated fibre ware factory was quite a surprise to the visitors, but the great attraction of the visit was the sulphite fibre works, which have been in operation about eighteen months. By a simple process of treatment with sulphuric acid the wood of the spruce tree is converted into sulphite fibre, from which the finest qualities of paper are made. The product from the works which average 300 tons monthly, finds a ready market in Canada and the United States. The company is, however, beginning to be handicapped by the Americans coming over here and buying up all the available Canadian spruce, and it was

strongly urged to-day that the Government impose an export duty on spruce, for the encouragement of home industry.

THE New Glasgow Iron, Coal and Railway Company (Limited) have issued \$500,000 of eight per cent. first preference shares, and we are glad to know that four-fifths of the issue is already taken up. The whole issue of ordinary shares (\$500,000) is held by the founders. In view of the amount of preferred shares already taken up, the directors have felt themselves warranted in contracting for the furnace plant. They will also now arrange for the immediate construction of the railway and the further equipment of the iron mines, and we are assured that the first furnace will be producing iron before the end of the present year. Only one furnace will be built this year. But it is the intention of the company to begin a second furnace as soon as the first is in operation. These two furnaces will embody the very best proven modern ideas for the cheap and rapid production of pig iron and will suffice to produce an amount of pig equal to all now imported. This company hold large areas of iron ores of fine quality. They also hold two very large deposits of limestone, both the lime and ore being tapped by their own railway, the total length of which is only about twelve miles. They also have two fine coal seams in the Marsh district, and not more than ten miles from their furnace site. In short, they are extremely well situated as regards raw material, and we confidently expect that they will, within a short time, displace the bulk of the imported pig. It certainly looks as if unless the consumption of pig iron in Canada is increased very largely that this company will be able to meet the entire Canadian demand for some time. The directors are: John F. Stairs, M.P., Halifax, President; Graham Fraser (President of Nova Scotia Steel and Forge Company, New Glasgow), Vice-President; William Jacks, Glasgow, Scotland; Frank Ross, Quebec; George F. McKay, New Glasgow; J. Walter Allison, Halifax; Harvey Graham, New Glasgow.—*Enterprise*.

THE John Doty Engine Company, of Toronto, have just shipped a fore and aft compound surface condensing engine, with cylinders 20 x 20 inches and 36 x 30 inches stroke, and a three-furnace Scotch boiler 12 feet in diameter, 12 feet long, and carrying 127 pounds of steam, to Halifax, Nova Scotia. They are also building a steel paddle-wheel steamer 125 long, 23 feet beam, to be equipped with a diagonal compound engine with cylinders 18 inches and 34 x 48 inches stroke, and two cylindrical boilers to carry 125 pounds of steam. This steamer is all being set up in their yard, and when finished will be taken down and shipped by rail to Lake St. John, Quebec, where she is to be riveted up and completed. She is a passenger excursion steamer, to run in connection with the Quebec & Lake St. John railway. They are also building a pleasure yacht, 65 feet keel, 11 feet beam, with engine 10 x 12 inches, and scotch boiler 66 inches in diameter and 8 feet long, for Lake Simcoe, which will be completed in their yard and transported to Lake Simcoe on cars. They are also building a fore and aft compound jet condensing engine, and a square double furnace marine boiler, 10 feet in diameter and 16 feet long, for tug *Charlton*. Also two square double furnace boilers, each 8 feet 2 inches in diameter by 14 feet long, and allowed 130 pounds of steam, for the Richelieu and Ontario steamer *Corsican*. These two boilers are made with steel plates manufactured by Lukens, of Coatesville, Pa., and are, according to the *Iron Age*, the largest area of plates ever rolled in the world. They are also building a square double furnace boiler, 11 feet in diameter, 15 feet long, to carry 125 pounds of steam, for the propeller *Isaac May*; also a pair of twin-screw fore and aft compound surface condensing engines, with two double furnace scotch boilers 8 feet in diameter and 12 feet long, for the new passenger steamer building at Vancouver, B.C. The engines are 14 and 26 inches by 18 inches, and they are building another, same size, for a steamer at Nanaimo, B.C.

THE Navy Department is about to enter into a contract with Carnegie, Phipps & Co., of Pittsburgh, for 6,000 tons of armor plate of various thicknesses, for the armored vessels now in construction. All the details of the contract have not yet been arranged, but it is understood to be about the same as those in the contract made with the Bethlehem Iron Works, in 1887, by Secretary Whitney, and that the total amount will be in the neighborhood of \$3,500,000. The total amount of the contract with the Bethlehem company is \$3,610,707.50, and the average price is over \$500 per ton. The contract with Carnegie, Phipps & Co. was made necessary by the unforeseen delays encountered by the Bethlehem company in putting in their plant, which have thus far prevented them from making any plates for delivery. It will probably be late in the coming summer before they will be able to deliver plates in any quantity, and by that time Carnegie, Phipps & Co. will also be delivering plates, so that the Department will receive about 1,000

tors per month—500 under each contract. The policy pursued by Secretaries Whitney and Tracy has resulted in building up two establishments in the United States capable of turning out armor plate of any dimensions, and the Bethlehem company, which has made most of the forgings for the heavy steel guns of the navy, will also soon be prepared to turn out completed guns of any calibre, as well as engine shafting and other forging. A few years ago, the armor for the *Maunomah* had to be bought abroad, and the forgings for the first steel guns were bought abroad, but since then the United States has made such rapid progress in the development of steel fabrication that at least one European nation is at present negotiating for a possible armor contract in the United States—*Pittsburgh Dispatch*.

THE EDISON WORKS AT PETERBOROUGH.

SPEAKING of the extensive works new being erected at Peterborough, Ont., the *Review* of that place says:—

Through a severe Canadian winter the Edison Company has been pushing its work of construction ahead and now the first of the fifteen buildings which will be erected on the company's thirty acres is about ready for the roof. This building which is so near completion is a monster machine shop and now that the walls have been reared and the timbers placed in position its mammoth proportions are more striking than when the foundation was being laid. The building is 20x100 feet and is two storeys in height, the second storey being planned on the inside in gallery fashion. Between four hundred and five hundred thousand bricks were laid in building the walls, which rise from a foundation which for solidity could not be surpassed. This building itself has a striking appearance as it stands alone, but what is it when compared with the solid block of fifteen immense buildings which the company intend to erect before they cease their building operations? There will be another building erected the same size as this one, while thirteen of the remainder are the same length but not so wide, being only 50 feet in breadth. The magnitude of the works can now be imagined by the visitor to the site, when he maps out in his mind's-eye the ground that will be covered by the entire buildings when completed.

Mr. Martin, the company's engineer in charge, is making preparations to commence operations on another building to the east of the one now almost finished. The company's orders are to push the work ahead. This second building which will be started as soon as the frost leaves the ground and building material can be placed on the site, will be the wire shop and will cover an area of 100x70 feet.

At present there are about one hundred men working at the first building and these will be put on the erection of the wire shop as soon as possible. This second building will require between three and four hundred thousand bricks for its walls and will be built on the same substantial plan as the first. Now that the arrangements for the G. T. R. siding into the works have been completed, and the railway men will push the construction with all possible speed, the Edison company will have no difficulty in laying down their material expeditiously and conveniently.

The Sherbrooke works will move here next month, so that the machine shop will have to be completed as quickly as men can do it. The company's lease at Sherbrooke expires in April and as no short renewal can be obtained they will have to come on to Peterborough at once.

NEW TORONTO.

REFERENCE has frequently been made in these pages to Mimico, or New Toronto as it is now called, a new manufacturing site about seven miles west of the city. The place was started only last summer, and at this time there are four large establishments in operation there. Thomas McDonald's Queen City Galvanizing Works. James Morrison's brass works, Sheridan Bros' foundry and the Interior Decoration Company's works. The fifth factory, the steel works, is nearly ready to start. This is a new industry in Canada. Where sheet steel will be stamped into different utensils by ponderous machinery, one machine alone weighs sixty-five tons. The sixth factory is now being put up by A. McRoberts and others for the manufacture of metallic shingles. It will be put up with all possible speed and before the summer is over will be employing from fifty to seventy-five hands. Keith & Fitzsimmons, manufacturers of plumbers' supplies, have ordered materials for their factory and will begin the work of building almost immediately. This will make

the seventh factory, and all of these are to be in operation this summer. In addition to these there are three others to be built later on—one by Arthur Kitson of Philadelphia, one by P. J. McNally of the Toronto Lead and Color Company and one by D. Keith, sr., who is now in England making arrangements therefor.

The new town is now considered as resting on a solid basis. The Mimico Real Estate Security Company has over \$300,000 invested and the value of the factories so far erected will probably amount to another \$200,000. The site is one of the best in the country. It is close to Toronto; it slopes gently to the lake, thus making a sewer system easy of construction, and the situation is healthful and picturesque. The factories have two great advantages over competitors in the same lines. Their taxes are almost nothing and their railway service is perfection itself. A spur line to the factories passes the rear of each. Coal can be unloaded and the manufactured goods loaded at the very doors of the factories. The saving of cartage and taxes in a year means a great advantage in the cost of manufacturing and a corresponding advantage over competitors in the markets. The spur line is being pushed forward and is now within 200 yards of the factory buildings. But the factories are not dependent alone on the railway for shipping facilities. Their spur line will connect with a wharf on Lake Ontario, where vessels will touch regularly. The first navigation communication has already been opened in a ferry service between the suburb and the city.

The establishment of these factories has awakened the surrounding district into life. Within a radius of 700 yards of the factories no fewer than forty-six buildings have been erected within the last few months and forty more houses are under contract. All of the completed houses are either sold or rented and others are spoken for as fast as they are started.

ELECTRIC LIGHT.

NORTH SYDNEY has now in operation an electric light system not surpassed by any town in the province. On Wednesday night last the streets were lighted for the first time with the electric fluid. The system has given the utmost satisfaction, and the great advantage now enjoyed by having the town lighted by electricity, can be felt by all citizens of the place. The contract for lighting the town was awarded to the Canada Electric Co., of Amherst, N.S., and for the efficient manner in which the work has been performed, the company is certainly entitled to the highest praise. Messrs. Bliss and Casey, who have been superintending the working of the electric plant, are first-class electricians and men that understand the business thoroughly.—*North Sydney Herald.*

The above system is the largest initial plant of incandescent lighting ever started in the Maritime Provinces outside of St. John and Halifax. It has a capacity of 650 16 c. p. lights. There are at present 300 commercial and 50 32 c. p. street lights connected and running, and more are being turned on daily. The street lamps are spaced from 120 to 200 feet apart and are suspended by cable over the streets from eighteen to twenty feet high. Over seven miles of heavy copper wire was used for the mains and the regulation is such that the light is uniform throughout the system—lamps over a mile from the station burning as brightly as those a few feet away. The largest number of lamps taken by any one firm is that of Messrs. Voughts Bros., who have fifty-four lamps distributed through the four flats of their large store. The Methodist, English and Presbyterian churches are adopting it, and the

probability is that the station will be running at its full capacity in a few months. The plant has been carefully planned with the view to future extension. The station is a large two-story building having a spacious dynamo room 45 x 50 and 16 ft. high, allowing room for six dynamos and three engines. The electric plant consists of two No. 8 dynamos capable of running 325 lbs each. The switches, regulators and indicating apparatus are mounted on a neat cherry cabinet near the dynamos giving the attendant easy and complete control over the system. The electrical apparatus throughout was manufactured by the Canada Electric Co., at Amherst.

The steam plant was supplied and erected by A. Robb & Sons, Amherst, N.S., and consists of one 50 h. p. Automatic cut off engine, two 50 h. p. Monarch Economic boilers, Independent steam feed pump injectors, etc. The boilers are especially adapted to use Nova Scotia slack coal, and they produce their full rate of horse power with the greatest ease and at the same time ensures the greatest possible economy in fuel. The engine is of the American high speed type, the speed being governed automatically by a governor located in the driving wheel; so arranged that the steam is expanded in the cylinder, on an average three-quarters of each stroke, so that steam is only drawn from the boiler during one-quarter of the stroke.

A similar plant, including two 70 h. p. Monarch Economic boilers and 50 h. p. Automatic engine, installed by A. Robb & Sons, in the Amherst electric station made a saving of 1,300 lbs of coal in eight hours over their first plant, consisting of brick-set boiler and ordinary high speed engine. Messrs. Robb have employed an American expert in engine building and intend extending their works so as to manufacture more extensively an improved automatic engine and the Monarch Economic boiler, the patents for which are worked in Canada by them and in the United States by the Union Iron works of Erie, Pa. These two concerns the Canada Electric Co., and A. Robb & Sons, are both located in the town of Amherst, and are to be congratulated on the push and enterprise which enables them to complete a contract for electric lights like that in North Sydney, which is a credit and satisfaction both to the town and the manufacturers.

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SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Indian Supplies," will be received at this office up to noon of SATURDAY, May 9, 1891, for the delivery of Indian Supplies, during the fiscal year ending June 30, 1892, consisting of Flour, Beef, Bacon, Groceries, Ammunition, Twine, Agricultural Implements, Tools etc., duty paid, at various points in Manitoba and the North-West Territories.

Forms of Tender, containing full particulars relative to the Supplies required, dates of delivery, etc., may be had by applying to the undersigned or to the Indian Commissioner at Regina, or to the Indian Office, Winnipeg.

Parties may tender for each description of goods (or for any portion of each description of goods), separately or for all the goods called for in the Schedules, and the Department reserves to itself the right to reject the whole or any part of a tender.

Each tender must be accompanied by an accepted cheque in favor of the Superintendent General of Indian Affairs, on a Canadian Bank, for at least five per cent. of the amount of Tender, which will be forfeited if the party tendering declines to enter into a contract based on such tender when called upon to do so, or if he fails to complete the work contracted for. If the tender be not accepted, the cheque will be returned, and if a contract be entered into for a part only of the supplies tendered for, an accepted cheque for five per cent. of the amount of the contract may be substituted for that which accompanied the tender; the contract security cheque will be retained by the Department until the end of the fiscal year.

Each tender must, in addition to the signature of the tenderer, be signed by two sureties, acceptable to the Department, for the proper performance of the contract based on his tender.

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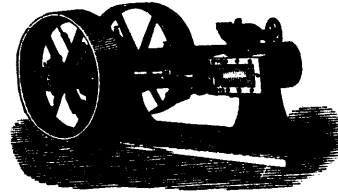
L. VANKOUGHNET,

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Department of Indian Affairs,
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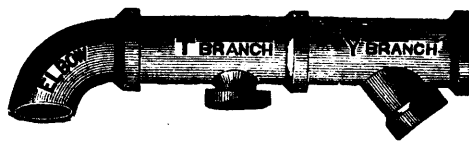
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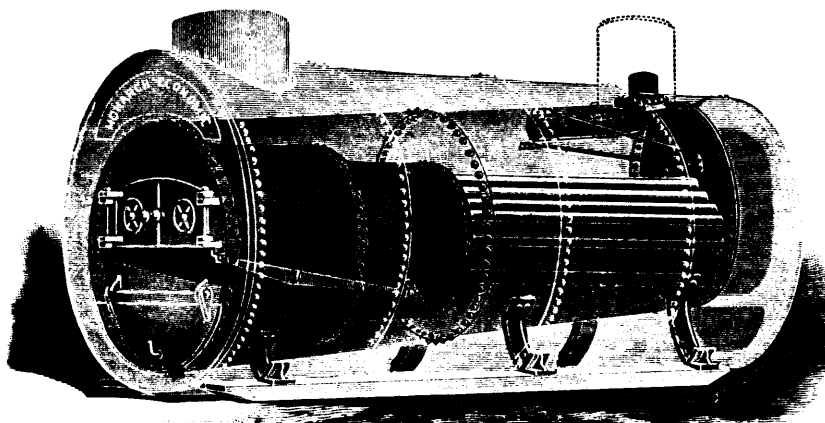
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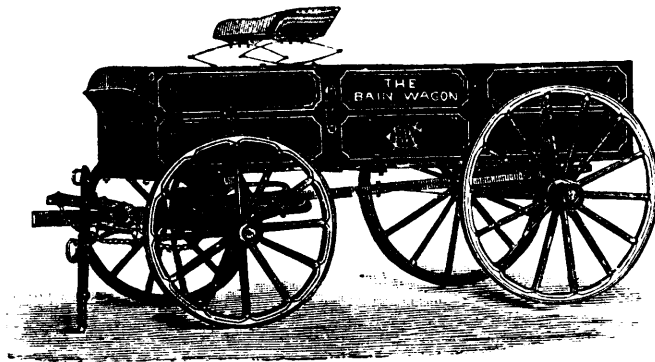
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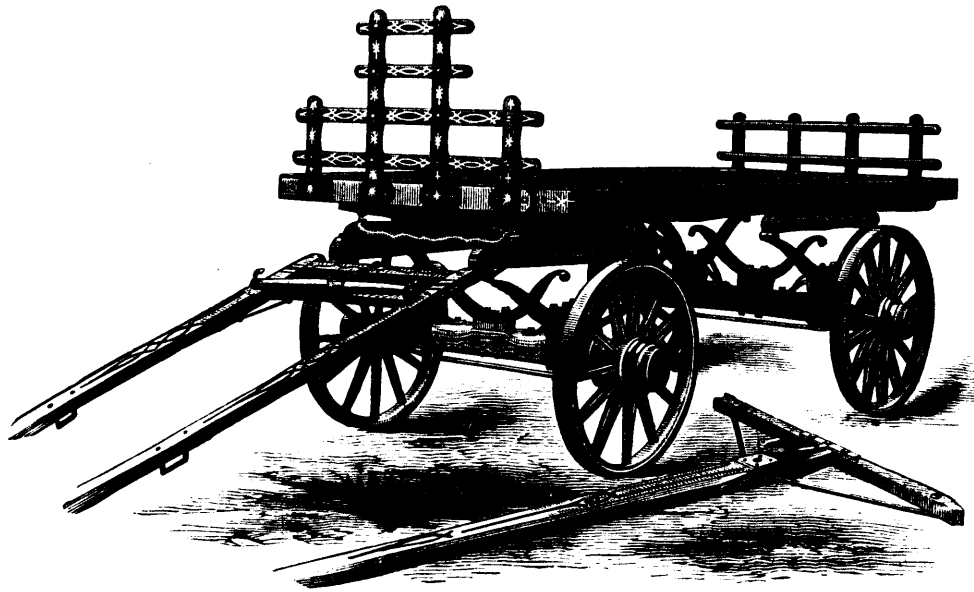
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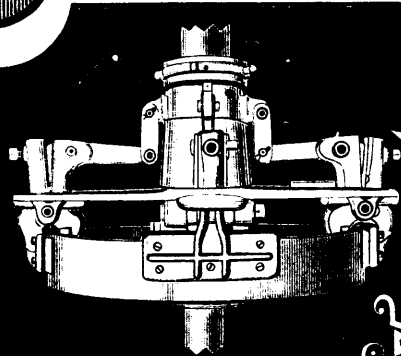
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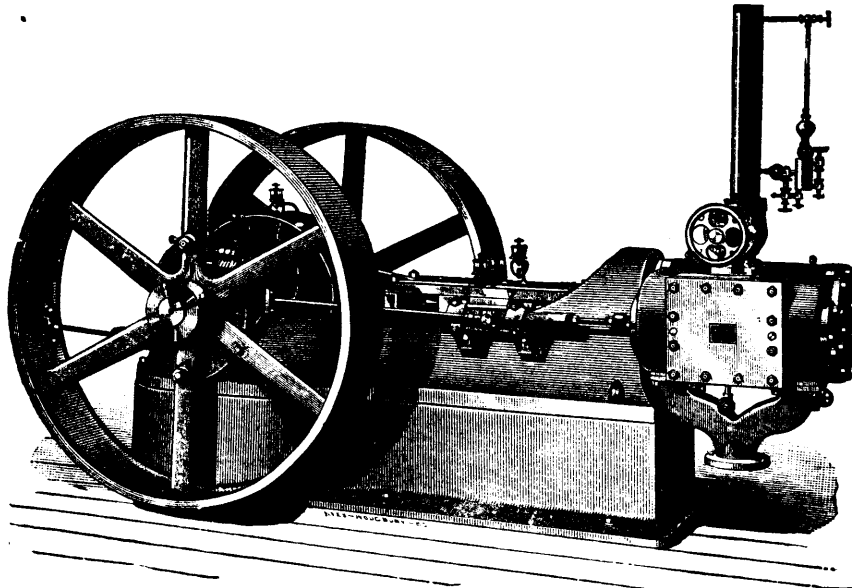
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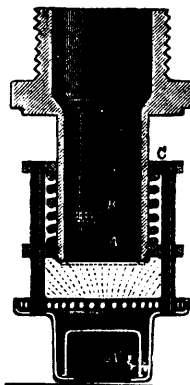
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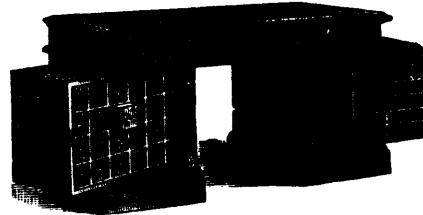
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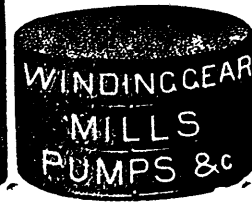
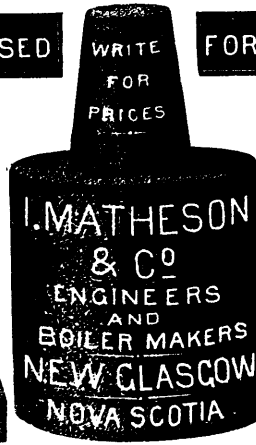
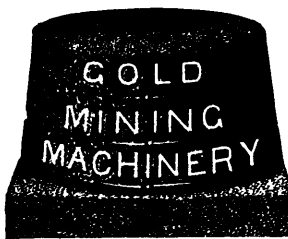
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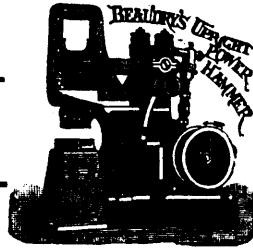
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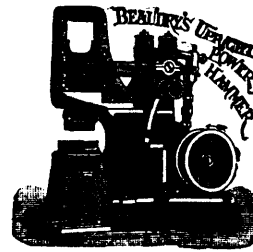
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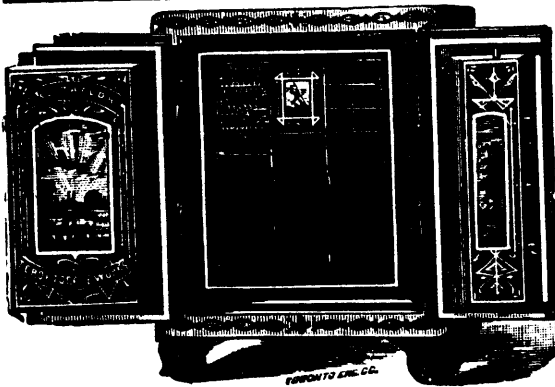


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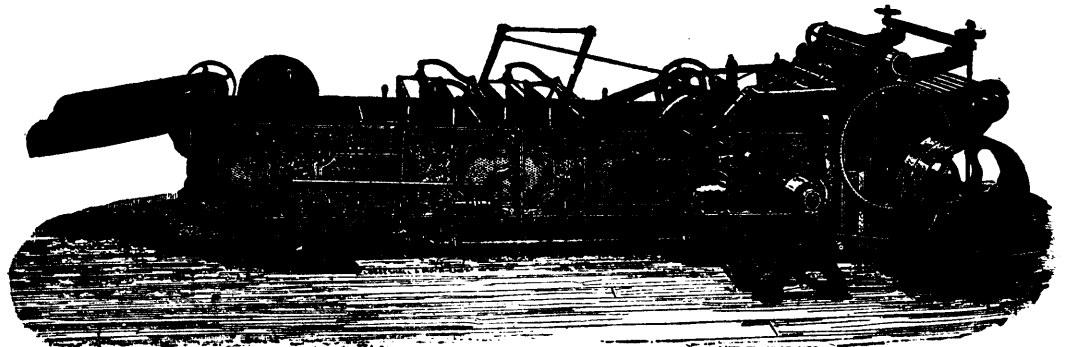
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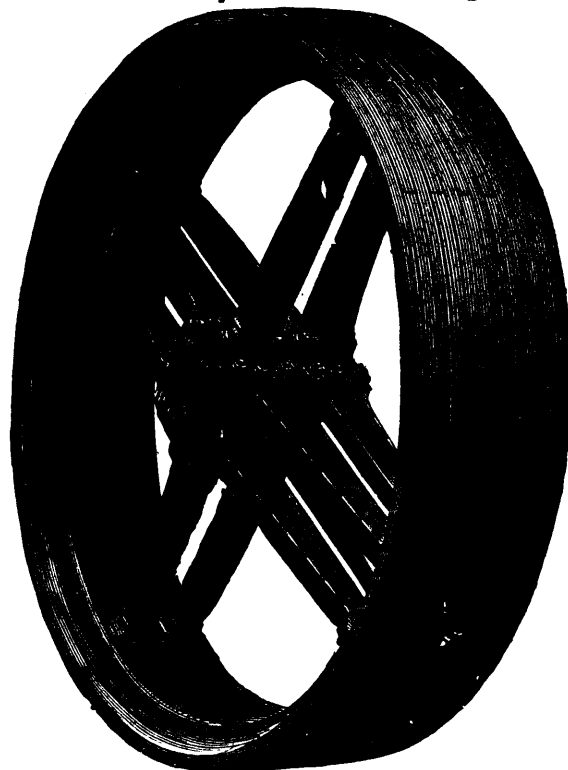
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DEAR SIRS,—In reply to your favor asking how we like your split pulley, we would say: We are very much pleased with them. We are using about seventy of them, from 25 in. face by 48 in. diam. down to 9 in. diam., every one of which is giving satisfaction. We don't have to take down our shafting to change a pulley or put on a new one. We are not troubled with set-screws breaking or slipping; for these and various other reasons we prefer your pulley to any other we know of.

Yours truly, FIRSTBROOK BROS.

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We remain, yours truly, McDONALD, KEMP & CO.

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GENTLEMEN,—We have given the Wood Split Pulley a thorough test in our works, and we are well pleased with their working, and can recommend them to our customers and others requiring pulleys.

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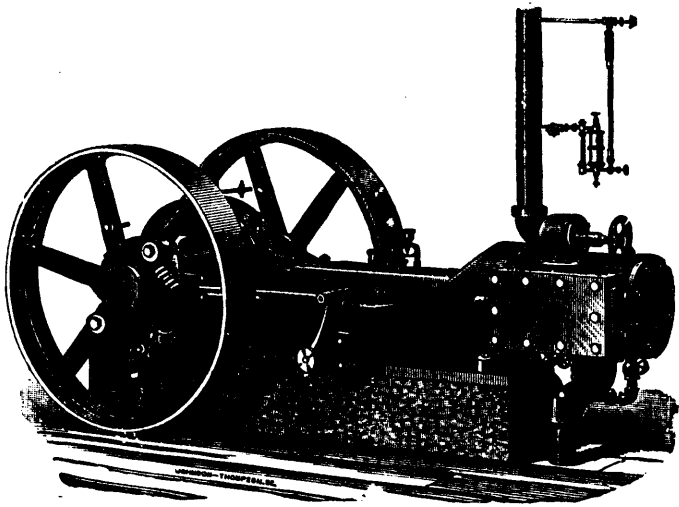
West Toronto Junction.

GENERAL OFFICES.—

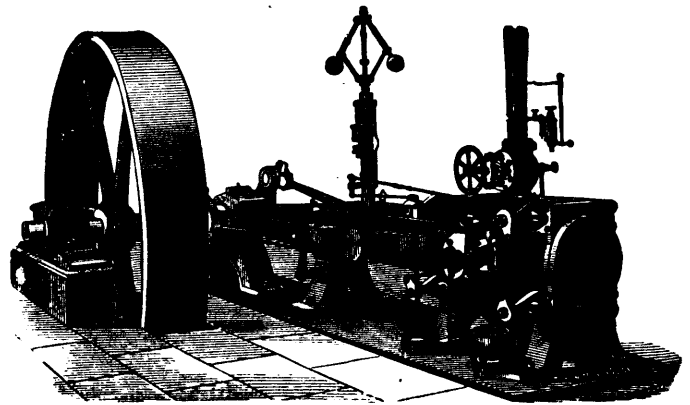
83 King Street West, City.

TAKE NOTICE.—Our List of Prices for the Dodge Patent Wood Split Pulleys is for all Split Pulleys.

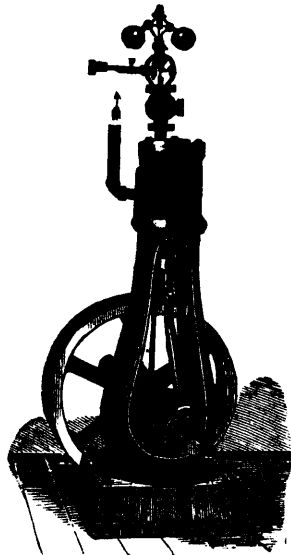
We beg you will note this fact when comparing our List with others which are for Solid Rim, and not for Pulleys in halves.



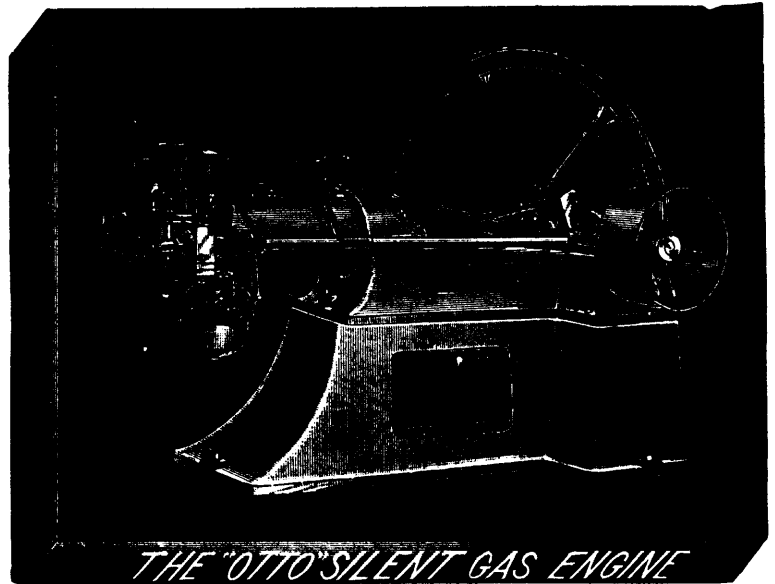
Armington & Sims Electric Light Engines



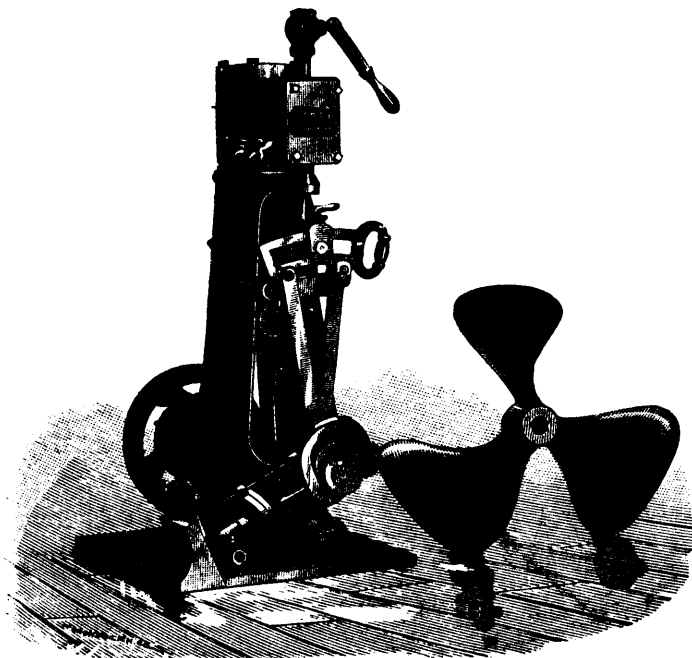
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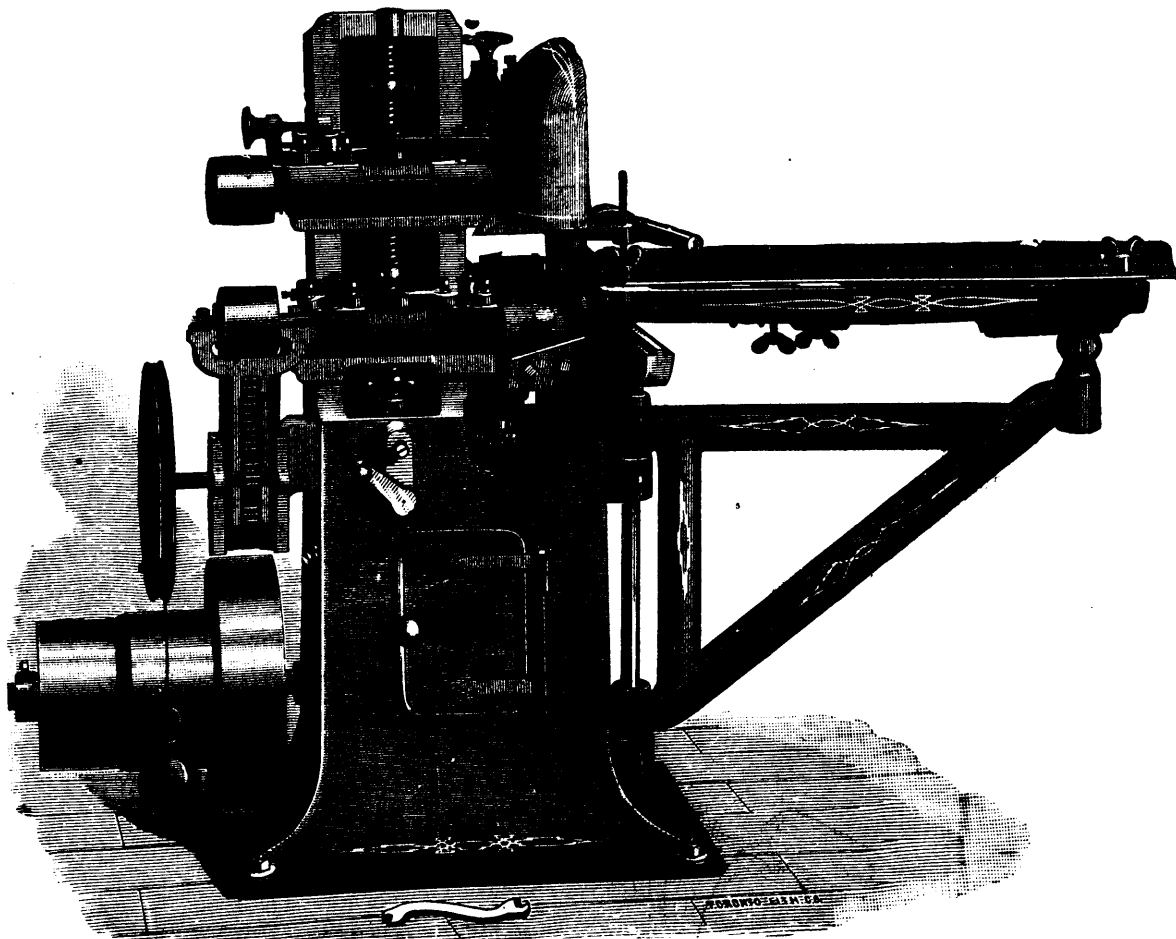
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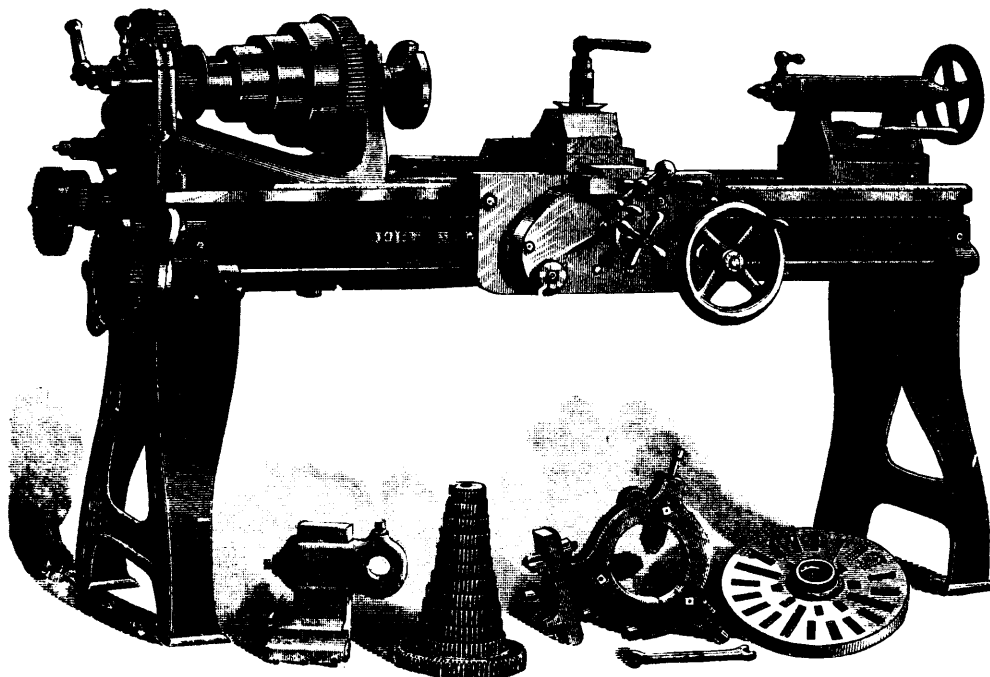
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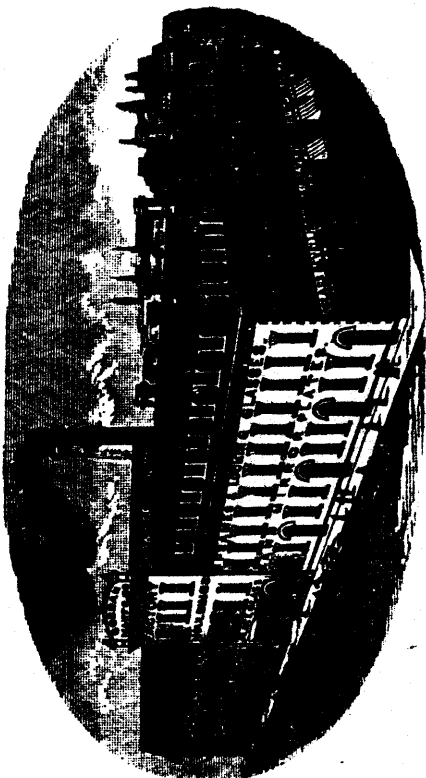
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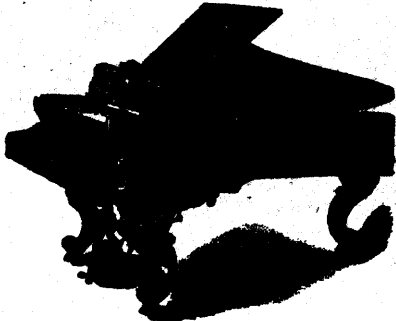


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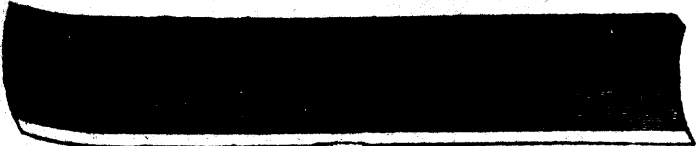
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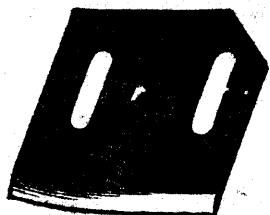
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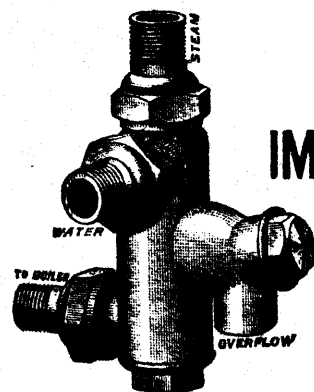
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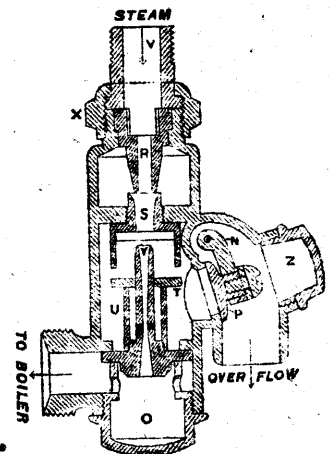
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