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# THE CANADIAN MANUFACTURER

## DEVOTED TO THE MANUFACTURING & MINING INDUSTRIES OF THE DOMINION.

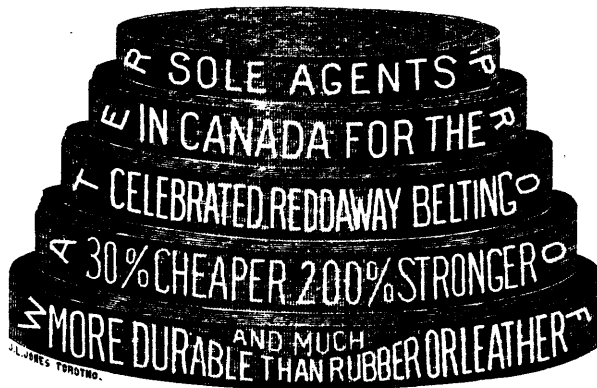
# INDUSTRIAL WORLD.

Vol. 5.

TORONTO, SEPTEMBER 24, 1886.

No. 18.

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&  
SCLATER,  
MONTREAL.**



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OF ALL KINDS.**

Files and Rasps, finest quality;  
Fire Hose, cotton rubber-lined, for  
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Hand Fire Engines.

Stitched Cotton Belting.

Railway, Mill, and Engineers' Supplies.

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The largest manufacturers in the world of  
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Rubber Belting from 1 to 72 inches wide.

Hose, for conducting, suction and steam.

Packing, Cloth Insertion and pure.

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A full Stock always on hand.

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T. R. MERRITT,

Vice-President.

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Rest -

\$500,000

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Transfers Monies by Telegram to Winnipeg and  
Brandon.

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62 LOMBARD STREET,

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A general Banking Business transacted.

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Supply complete outfits of Machinery for Railway  
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TRACTS taken and fulfilled at shortest notice. Tenders  
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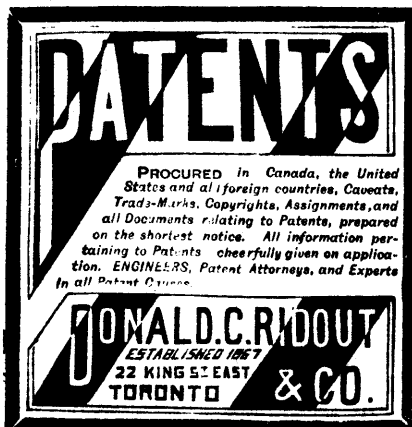
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 Madder, Cutch  
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 147 to 151 Commissioners Street,  
**MONTREAL,**

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**PURE OLIVE OIL.**  
**WINTER-PRESSED LARD OIL,**  
**EXTRA FINE SPINDLE OIL,**  
 and a full assortment of other  
**LUBRICATING OILS.**  
 Also  
**CHEMICALS,**  
**DYESTUFFS,**  
**DYEWOODS,**  
**EXTRACTS,**  
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Are Sole Agents in Canada for  
**SOCIETE ANONYME**  
 DES  
**MATIERES COLORANTES ET**  
**PRODUITS CHIMIQUES,**  
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**A. POIRRIER AND G. D'ALSACE,**  
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Prize Medal, London Universal Exhibition, 1862.  
 Gold Medal, Paris Universal Exhibition, 1867.  
 Grand Diploma of Honor, Vienna Universal Exhibition, 1873.  
 Medal and Diploma, with Highest Commendations, Philadelphia Centennial Exhibition, 1876.

Maintain large stock, replete with all the new and improved colors. Will be pleased to furnish quotations with samples and directions for use.

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 MANUFACTURERS OF  
**Woollen Mill Oils and Soaps.**  
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 & SEND FOR PRICES AND CIRCULARS.

**New York Dyewood, Extract**  
**and Chemical Co.**  
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 All kinds of  
**DYE STUFFS.**  
 Dye Woods, Extracts, Cutch, Indigo, Gambier, Cudbear, Cochineal, Sumac, and Liquid Extracts of Dyewoods.

**MIDDLETON & MEREDITH,**  
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**CHEMICALS AND DYE STUFFS,**  
 Sal Soda, Soda Ash, Bleaching Powder, Caustic Soda, Bi-Carb. Soda, Chlorate of Potash, etc., etc.  
 Extracts Indigo, Sumac, Fustic, etc., Gambier, Cutch, Sumac, etc., Acids,  
**ANILINE DYES,**  
 Brooke, Simpson & Spiller's. Full Assortment on hand.  
**PHOSPHOR BRONZE. SILICATE CLOTH.**

**PILLOW, HERSEY & CO.,**  
 Manufacturers of every description of Cut Nails, Tacks, Brads, Railway and Pressed Spikes, Horse Shoes, Carriage, Tire and other Bolts, Coach Screws, Hot Pressed and Forged Nuts, Felloe Plates, Lining and Saddle Nails, Tutting Buttons, &c., &c.  
 The Hardware Trade, Shoe and Leather Finding Dealers, and Boot and Shoe Manufacturers, will find the Largest and Best Assortment and Greatest Variety of above Goods always in stock, and can rely on orders being rapidly executed, our facilities for doing so being unequalled.  
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**Card Clothing Works,**  
**York St., Dundas.**  
**W. R. CRAY & SONS,**  
 PROPRIETORS,  
 MANUFACTURE EVERY DESCRIPTION OF  
**Card Clothing and**  
**Woolen Mill Supplies.**

# THE CANADIAN MANUFACTURER

DEVOTED TO \*  
THE MANUFACTURING & MINING INDUSTRIES,  
OF THE DOMINION. \*  
AND THE INDUSTRIAL WORLD.

VOL. V.

TORONTO, ONT., SEPTEMBER 24, 1886.

No. 8.

## CAUSE AND EFFECT.

It is a common enough remark, and a true one, that improved demand for commodities causes prices to rise. But although this is true, yet it is not the whole truth. It requires to be supplemented with the statement that reflex action as well as direct action has to be considered, and that a rise in prices made every day, and we may call it a commercial truism, so familiar that it would be superfluous to enlarge on it. But the latter part causes an improved demand. The former remark you may hear of the truth is seldom present to the minds of commercial men, we do not often hear it asserted and maintained; and hence it is necessary to bring it into the foreground, and to invite public attention to see this *supplementary view* of the truth regarding a rise in prices. So far we speak with regard to demand only. Not that we would leave supply out of the calculation, but merely that we would on this occasion ask special attention to one important point in the whole general question as to the rise and fall of prices.

In one familiar way this supplementary truth is certainly implied, though not directly stated. We often hear it said that no one wants to buy on a falling market, while on a rising market everybody rushes in to bid. If you think this out a little, it will carry you to the logical conclusion that a rise in prices causes demand to increase. Therefore this second part of the truth, as we call it, is by no means wholly absent from the public mind. But we go so far as to say this much, that with most people it is so overshadowed by the more familiar part—that improved demand causes a rise in prices—as to be practically lost sight of.

Take these two things, a rising market on one hand and an improved demand on the other, we may ask which of the two is the cause and which the effect?—but as long as we do not get beyond this we are on the wrong track. The truth of the matter is that they are reciprocally cause and effect to each other; and it is this particular point in the whole question which requires special recognition at the present time. For the general commercial movement has just now reached that stage in which rising prices are operating powerfully to increase demand. At the same time there is an improved demand, which may be said to have come of itself, as it were. But what requires our special observation to-day—is the operation of rising prices in causing increased demand. We shall be the more impressed with this fact the more closely we study from day to day the commercial news of the world. Prices are rising, slowly but surely; the turn of the tide has come. And as prices rise, the eagerness to buy will increase. Such is the outlook.

## "BUFFALO HORNS."

To our excellent contemporary the *Canadian Gazette* (London, England) we are indebted for many and significant intimations of how Canada's exhibit of manufactures is regarded "at home." We make one most remarkable selection:—

"The *Huddersfield Courier* remarks: 'Coming back to the main building, we pass through the showily decorated New Zealand Court; pausing barely to glance at the skilfully prepared skeletons of fish (the great blue shark, ribbon fish, and electric ray), and at the Rimu wood furniture, which proves that in this Colony the useful by no means excludes the ornamental, and so we enter the noble court devoted to Canada. Space fails us to enlarge on the exhibits crowded into this large and well-fitted hall. At the ends tower two trophies, the one at the eastern extremity being formed of agricultural and horticultural produce, implements, and so forth, fair to view, good and encouraging to contemplate—such cereals, such splendid fruit. At the opposite end rises a massive structure, dedicated chiefly to furs. The upper part, the Hubbard Trophy, displays the large and small game—including moose, buffalo, bear, and the rare Rocky Mountain sheep; while in the lower portion, under the special patronage of Her Royal Highness the Princess Louise, Messrs. Renfrew, of Quebec, exhibit a very fine collection of furs. Inside are chairs with legs and arms formed of polished buffalo horns.'

Our Huddersfield contemporary knows all about flannels, and on other textile manufactures ought to be pretty well posted. Still, what most strikes his eye in the Canadian department is the buffalo horns, and some other things of that kind. For his compliments to us for cereals, fruit and implements—the latter with the very slightest mention—all thanks. But it is evidently the moose, the buffalo, and the bear, that are most in his mind's eye when thinking of Canada.

Another English journal, from its name evidently an authority on matters mechanical, sees things in quite a different light:—

*Invention* speaks as follows of the Canadian agricultural machinery: "The Canadian Section of agricultural implements is one of the most striking features of the Exhibition at South Kensington; but the comparative cheapness is even more striking. For instance, the difference is stated to be not less than £3 on rakes, reapers and mowers, and as much as £15 on threshers. The exhibitors have received numerous orders, and our implement makers will have to bestir themselves if Canadian competition is not to become formidable."

Wonder if the Yorkshire people are yet prepared to concede that Canada can produce tweeds, and flannels, and blankets, as well as buffalo horns? Not yet, perhaps, we should say; but they must come to it by-and-by. The important point to which we would direct their attention is this—That Canada's National Policy is *permanent*: it has come to stay.

## IMPROVEMENT OVER THE BORDER.

THE indications of a great improvement in the state of trade over the border are becoming more marked every week. Textile works of all kinds are now going full time, with quick sales for all the goods made. For lumber and other building material there is a large demand, and all the building trades are fully employed. Railway people find that to keep up with the times they must spend a great deal of money; and, as a consequence car shops, locomotive shops, and railway shops of all kinds have more than they can do. The lake vessels are now doing a better business than for a number of years past. And the prediction is even ventured that there will be "dollar wheat" on the market before New Year's Day.

It is in the heavy iron trades, however, that the greatest improvement of all is to be seen. Some interesting facts, showing the magnitude of the change for the better now going on, will be found stated in an article from the *American Manufacturer*, also in another from the *Railway Review*, both of which we copy in another column.

Something like this, though on a smaller scale, we might have been witnessing in Canada to-day, if— That is, if we had only had had the courage, some years ago, to impose sufficient duties on iron and steel. We might at all events have made the venture as far as rails are concerned, in which case we would now have been making at home all the rails that Canada wants, and there would literally have been "millions in it" for the country. But the truth must be told, we have not wholly emancipated ourselves from the delusion of free trade; the old "glamour" still rests upon our eyes to a considerable extent. Looking at the immense success attending the protectionist venture made by our near neighbours, it seems remarkable that their success did not embolden us to try a full measure of National Policy, including protection to iron-making as well as other important industries. Let it be hoped that the remarkable *further proof* afforded by present experience over the border may ere long give us courage to make the effort.

## FOREIGN TRADE AND THE CANADIAN PACIFIC RAILWAY.

IF before this there were good reasons why the Dominion Government should take effective measures for promoting the sale of Canadian products in markets beyond sea, these reasons are now greatly reinforced by the commercial event of the day—the opening up of railway communication across the continent on our own territory. Whatever may have been merely talked about then, the time for action has surely come now. And the appointment of Mr. Woods as Canadian Agent-General for Australia is a tangible recognition of the fact. Already the arrival of tea ships from China and Japan direct, and the forwarding of their cargoes east by the C.P.R. mark the beginning of a commercial revolution.

It will not be very long ere there will be a line of new Canadian steamships regularly crossing the Pacific ocean! but this is not all, for soon there will be a new Atlantic line too. The result we may hope will be that our shippers having goods to send across the Atlantic will be able to get rates as favorable as those from New York or Boston. Now is the time, surely, for our merchants and manufacturers to bestir themselves more than ever before, in the effort to secure markets abroad for our products. And, further, for the Government to aid their enterprise to the fullest extent which is legitimately possible.

## EXPORTS OF BRITISH TEXTILES TO THE UNITED STATES.

THE following tables show what the export of British textile goods were to the United States during the first seven months of these three years respectively—1884, 1885, and 1886. The first table gives *quantities*, the last one, *values*.—

	1884.	1885.	1886.
Raw wool, lbs. . . . .	4,710,800	2,961,000	5,341,300
Woollen fabrics, yds. . . . .	3,287,500	2,736,800	4,020,100
Worsted fabrics, yds. . . . .	22,753,900	19,501,000	26,793,000
Cotton piece goods, yds. . . . .	35,793,500	32,492,200	31,054,700
Jute yarn, lbs. . . . .	4,733,000	7,204,100	11,820,900
Jute piece goods, yds. . . . .	71,196,000	63,236,100	63,036,000
Linen yarn, lbs. . . . .	356,200	261,200	465,700
Linen piece goods, yds. . . . .	44,426,200	41,425,700	52,065,600
Silk broadstuffs, yds. . . . .	85,878	390,705	235,212

## VALUES, POUNDS STERLING.

	1884.	1885.	1886.
Goods of silk only, other than broadstuffs. . . . .	£ 30,584	£29,942	£42,582
Apparel and slops. . . . .	59,317	55,112	51,971
Haberdashery & millinery . . . . .	181,453	94,358	120,669

The most remarkable figures are those which tell of the enormous increase in the exports from Great Britain to the United States of *jute yarn and linen yarn*. What these figures mean is that the manufacture of woven fabrics of jute and linen respectively is greatly expanding in the States. In other words, our neighbors are buying English yarns instead of English piece goods. Business men, but especially those engaged in any of the textile manufactures, will be at no loss to see the drift of the change now going on.

## OUR CARD BASKET.

THE following is a list of those who have favored us with a call since the date of our last issue:

George McAvity, of Messrs. T. McAvity & Sons., brass founders, St. John, N.B.; W. H. Nolan, of the Machinery Supply Association, Montreal; Samuel Lennard, of S. Lennard & Sons., hosiery manufacturers, Dundas; J. B. Armstrong, of the J. B. Armstrong Manufacturing Co., Guelph; Alexander Woods, Agent General from Canada to Australia; Thomas D. Wardlaw, knit goods manufacturer, Galt; W. Stahlschmidt, of W. Stahlschmidt & Co., manufacturers of office furniture, Preston; T. McIlroy, jr., of the Gutta Percha & Rubber Manufacturing Co., Toronto; Clarence H. Dimock, of the Windsor Foundry Co., Windsor; N. S. T. Barnard, President Hart Emery Wheel Co., Hamilton; James Goldie, miller, Guelph; Messrs. West & McLean, proprietors the J. & J. Taylor Safe Works, Toronto; Fred. Doty, of the John Doty Engine Works Co., Toronto; Chas. S. McNair, manufacturer of house furnishings, Toronto; Louis P. Kribs, the *News*, Toronto; R. Rabjohn, iron founder, Toronto; R. Mortley, the *Merchant*, Toronto; John Livingstone, trustee, Joseph Hall Works, Oshawa; W. W. Laidlaw, machinist, Galt; C. A. Birge, of the Dundas Screw Co., Dundas; Frank D. Shallow, proprietor of the *Moniteur du Commerce*, Montreal; George Booth, of George Booth & Son., coppersmith, Toronto; James Cheeseworth, of the *Dairyman*, Montreal; J. Johnstone, J. Boyle Patterson, R. Rabjohn, Thomas Tomlinson, A. Metcalf, J. Munn, J. Tralore, W. Blatchford, J. Potts, W. H. Hamilton, iron founders, Toronto.

**BUSINESS IN THE UNITED STATES.**

Our Philadelphia correspondent writes:

The manufacturers of dress goods of cotton, wool, and silk, and of carpets, hosiery, and all kinds of knit goods have looked an unusually large number of orders. Jobbers say they were never busier. Manufacturers are crowding capacity. Wool sales last week in Boston, New York, and Philadelphia were nearly five million pounds. Buyers are stocking up rapidly. Goods will not advance much this fall or winter.

The boot and shoe manufacturers have about all the business for the next four months they can conveniently take care of. Factories here and all through New England turned on full time this week. Telegraphic orders are frequent. Ladies' and children's shoes are exceptionally active.

Ladies' cloaks and suits will be exceptionally handsome this fall and winter: 3000 hands are working overtime to get up stocks to fill orders in time.

House builders are crowded with contracts in nearly all the larger cities. Building labor is scarce. The urgent demands for dimension stuff has crowded prices up in Chicago and eastern buyers have begun to stock up with white and yellow pine. The lumber outlook is very encouraging and if building activity does not fall off prices must improve.

Business men generally anticipate quite a rushing business in all staple articles. Manufacturing capacity is being increased in nearly every branch of industrial activity. Next year double the amount of bridge building will be done, and for house building we have it on the authority of the best posted architects, builders and investors in Boston, New York, Philadelphia and Chicago, that the coming year will be one of exceptional activity. The secret of the strength of the general situation is that production is once more behind consumption, that capital is more abundant than the opportunities for its investment, and that the rate of interest must therefore decline.

The labor question is practically settled. The Chicago Courts will likely conclude not to hang the Chicago Anarchists. Co-operative enterprises are springing up in many States. State Assemblies of the K. of L. are being organized. The order is growing rapidly and arbitration methods are gaining in acceptance. There will be comparatively few strikes this winter but a general movement for shorter hours is probable next spring unless the leaders of the Knights can in the meantime be induced to take a stand against it.

Our latest telegraphic advices all point to an improving demand and to better days for labor and capital. No reaction is probable. Our enormous manufacturing capacity will continue to run full time.

D.

**SILVER NEAR PORT ARTHUR.**

There is great excitement over valuable silver discoveries near Port Arthur. The mines are located thirty eight miles westward. At present the Ontario Government is engaged in making colonization wagon roads throughout the region. Last year the Dominion Government gave a subsidy of \$3,200 per mile for colonization railways, and the Ontario Government has promised a similar sum. The work of construction will be commenced this autumn, the road running from Monillo, on the Canadian Pacific Railway, to Silver Mountain, a distance of thirty miles. The silver discoveries have so far been made at Silver Mountain, Rabbit Mountain and Silver Creek. At each of these places crushing mills are either erected or in the course of erection. The richness of the silver surpasses anything yet discovered, with the single exception of Silver Islet, which, in the course of a few years, yielded many millions of dollars.

Wheat producers in the United States ought not to fear Australian competition, which has been held up to them occasionally as something very formidable. As a matter of fact, the wheat output in Australia is a decidedly uncertain quantity. Some years you see it, and in other years you don't see it. There is a deficiency there this year of 22,000,000 bushels, instead of a big surplus for export. In India, too, there is a great falling off. Neither India nor Australia is a dangerous competitor. The Canadian North-West is a possible future competitor in wheat. *Pioneer Press.*

The average yield of wheat per acre in Missouri has run down from twenty five bushels per acre on virgin soil to eleven and a half bushels, the average in the state for the past ten years; but Prof. Sanborn says in his last bulletin that, according to his observation and experience, it is not the wheat that is running out, but the farms, and sometimes the farmers. "We can run wheat in again," says the professor, "by running our fertility back."

**Rice Lewis & Sons,**

**HARDWARE**

**AND IRON MERCHANTS,**

Toronto.

**Bar, Sheet, Hoop, Band Iron,**

**Steel and Iron Plates.**

**Patent Cold Rolled Shafting.**

**FOUNDRY AND MILL SUPPLIES.**

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**DODGE**

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Write for Circulars and Price List.

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THE  
**Canadian Manufacturer**  
 AND INDUSTRIAL WORLD.

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EDITOR: FREDERIC NICHOLLS,  
*Secretary Canadian Manufacturers' Association.*

This Journal has won for itself an acknowledged position amongst Trade Journals and is recognized as the representative industrial paper of Canada. All the various industries of the country are represented in its columns, and it has been for years the fearless and consistent advocate of those reforms which were indispensable to the success of the Manufacturers. It now reaches nearly every mill and factory in the Dominion, and its influence is constantly increasing.

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## Editorial Notes.

It is much to be regretted that the Halifax Sugar Refining Company has had to go into liquidation at last; after a hard struggle for existence. Perhaps it may happen this time as it has often happened before. The Company will go out of existence, one or two of the creditors will be found to own the whole, and the works will be started again with plenty of capital behind.

In English iron trade circles there is talk of "overflow orders," for steel rails from the United States. The price mentioned for a recent order of this kind, which was taken by a Welsh firm, is 72s. 6d. per ton, or say \$17.40 per ton. The rails will probably be taken out as ballast, and the American duty will bring the cost up to something over \$34. But some American roads want rails very badly just now, and must have them immediately, hence these "overflow orders" to England.

This is *Bradstreet's* opinion:—Reports as to the intentions of the Canadian Pacific Railway with respect to the constructions of lines to important railway centres in the United States illustrate how rapidly the necessities of commerce are bringing Canada and the United States closer and closer together. This tendency must continue until closer political relations will be compelled. The real interests of both countries are bound up in such progress. The fact that untrammelled commercial intercourse exists over such wide areas on both sides of the boundary line is a prodigious influence in the direction of lessening the barriers to international communication.

At a meeting of the Philadelphia Iron Trade Association, held in Philadelphia on the 15th inst., the price of bar iron was advanced one-tenth of a cent per pound, or \$2.00 per net ton. This advance is considered significant, and if it can be maintained will doubtless favorably affect the manufactured iron trade in other parts of the country. There has been an active demand for manufactured iron for several months past, but this has had but little, if any, effect on prices, and the same is true of merchant steel. This has been somewhat of an anomaly, and the present advance in Philadelphia seems to be nothing more than a necessary consequence of the present condition of the trade in finished iron.

THERE is no change, says the *American Manufacturer*, in the situation in the nail factories at Pittsburgh. Every factory in the city is idle, and yet there is neither a strike nor a lockout. The manufacturers simply say that they cannot run and pay more than the nail mills of other cities in the west, and until they can get the same rates they must remain idle. At the same time, however, they claim that they would be perfectly authorized to make a demand, notwithstanding the scale which was signed with the Amalgamated, as those whom the Amalgamated committee represented, if not indeed some of the committee themselves, have returned to work at the manufacturers', or Cincinnati scale. The situation is a novel one in the history of the iron trade wages, and the outcome of it will be watched with interest.

All Manufacturers are invited to become members of this Association. Full particulars will be furnished on application to the Secretary.

At the present time, when all Canada is wondering what great things the Pacific Railway is going to do next, *Bradstreet's* letter from San Francisco, which we copy on another page, will be interesting. The writer is fertile in suggesting reasons why the Canadian company should find it impossible to do a paying American business. But let us note one main fact which he himself partly admits. Transcontinental rates have so far been enormously high—the highest in the whole United States, we think it would be correct to say. On these very high rates there is a big margin for cutting into, and this, it appears, the Canadian Pacific is going to do. Read over well the letter of the San Francisco correspondent, and you will get the impression that, while saying there is no cause for fear, he is still very much afraid.

REFERRING to this year's rise in wool prices, the *United States Economist* recently said:—Those who saw the wisdom of buying Cape and Montevideo at 45c. to 50c. for the scoured pound, while money sought shelter in safety at the lowest interest rates known to the oldest merchants, acted wisely and well. When Montevideo wools got down to 22c. to 24c. a pound, we almost begged of the mills not to let the opportunity slip, but very few listened to our counsel, and to-day they greatly regret it. No good or choice Montevideo can be secured in New York or Boston short of 28c. to 30c. a pound duty paid. Mostly all the foreign clothing wools, Cape and South America, here, Newport, and in Boston, have been re-shipped or bought for Canada or foreign countries at 15 to 25 per cent. higher prices than current values in the United States.

An American contemporary thinks that many strikes might be avoided if the course just pursued in the Hanway mills at Cohoes, N.Y., were generally adopted. The men wanted more pay, but the company told them squarely and frankly that they could not afford an advance, and that they were already paying as much as mills in their line at Fall River and elsewhere. The men did not believe it, whereupon the manufacturers offered, if the men would select a reliable man to travel about the mills and look up the subject of wages, to pay all his expenses, and to raise the wages if they were not as high as paid elsewhere. A boss weaver has been on the inquiry mission, and has returned to Cohoes with the statement that the wages there are as high as any paid in the country, and that his fellow-workmen have no cause to complain.

#### BOOK NOTICES.

CANADA—STATISTICAL ABSTRACT AND RECORD. Published by the Department of Agriculture, Ottawa, 1886.

In bringing out this valuable Abstract and Record, the Minister of Agriculture has done the country good service. To give our readers an idea of what is aimed at, and the large design which it is intended to follow up, we cannot do better than copy the introduction:—

This work is intended to furnish information respecting the Government, population, finances, commerce and general statistics of the Dominion, and to form an authentic reference book for all persons interested in such matters.

The sources of the information used in this work, in so far

as relates to Canada, are official; and, for the most part, from Departmental reports. The tables have all been carefully prepared, and most of them are entirely new; much of the information contained in them not having before been published in Canada. Great care has been taken with the calculations, which have all been made in the Statistical Office of the Department of Agriculture, and it is believed they will be found correct. But it is possible that in so many figures, errors may have crept in, typographical or otherwise; and it is hoped that if any such should be detected, they will be reported to this office.

There being no means in Canada by which the changes in the population between the census years can be ascertained with any degree of accuracy, no attempt has been made to estimate such changes, except for the purpose of certain calculations, and for this the population of the Dominion has been logarithmically estimated for each fiscal year since Confederation. The figures thus obtained, as given on page 104, are those which have been used in all calculations throughout the book. The populations of the several Provinces since 1881 have been estimated in the same manner.

The financial, commercial and most of the other tables are brought to the close of the fiscal year, 30th June, 1885. On some subjects, however, information is given to 31st December, 1885, and with reference to the Canadian Pacific Railway, to 2nd June, 1886.

The figures relating to the United Kingdom, British Possessions, and foreign countries, have in most cases been taken from the Statistical Abstracts prepared by Mr. Robert Giffen, of the Imperial Board of Trade. Reference has also been made to the Statesman's Year Book, Victorian Year Book (published by Mr. H. H. Hayter, the Statist of the Government of Victoria, Australia, the method of which has been largely followed, as well as that of the Canadian Year Book, formerly published), the American Almanac, and Whitaker's Almanac.

It is proposed, in future yearly additions, still further to elaborate the tables, and other modes of presenting information in this work, in such a way as to present in, if we may so speak, a digested form and plain to be seen at a single glance, facts of importance respecting Canada, which can now only be found in numerous Blue Books and Departmental Reports, not always conveniently or easily accessible to all.

First come Preliminary Remarks of a general character. Then sixteen chapters, under the following heads:—Legislative, Population, Finance, Trade, Railways and Canals, Post Office and Telegraphs, Criminal Statistics, Immigration, Marine and Fisheries, Militia, Arts and Agriculture, Dominion Lands, Banking, Insurance, Mortuary Statistics, Loan Companies. Lastly, a copious Index makes the whole very convenient for reference.

PROFIT SHARING BETWEEN CAPITAL AND LABOR.—Six essays by SEDLEY TAYLOR, M.D., late Fellow of Trinity College, Cambridge, England. Price 15 cents, by mail. J. Fitzgerald, Publisher, 108 Chambers St., N.Y.

The question of the division of the profits of industrial enterprises commands attention everywhere, as probably affording the true solution of the problems involved in the relations between Labour and Capital. The work before us, written by a well informed student of political economy, gives a very full account of the methods of dividing the profits between employer and workman in several departments of industry—manufacture, agriculture and commerce. This valuable book will be read with profit by every one, and its exceedingly low price places it within the reach of all. Sent post free by the publisher on receipt of price.



## Business Notes.

G. H. GORDON, jeweller, Amherst, N. S., left suddenly owing about \$3,500.

JOHN H. McLEAN, a small general dealer at Moose Creek, has assigned, his liabilities being principally in Montreal.

THE Sheriff is in possession of Paquette's shoe factory at Ottawa. W. E. Browne holds a lien on the plant and is foreclosing it.

DERUCHE & HUNLEE, grocers, Cornwall, have assigned to W. A. Caldwell of Montreal. The liabilities will not exceed \$2,000.

MURRAY & GAFFNEY, plumbers doing business on Queen st. west, are reported to have left the country. The assets will not satisfy the rent.

THE Sheriff was in possession of the clothing stock of J. Hemigan, Hamilton, but the matter has been settled and he says he will be able to pay in full.

THE stock of James Ramsay & Co., of Brampton, was sold out by auction on the 14th inst. The liabilities amount to \$15,400 and the estate will pay 50c. on the dollar.

THE stock of W. E. Paine, Petrolia, has been closed out by creditors, realizing 62½c. on the dollar. The assignee of the John Cook Estate, Sarina, has disposed of the stock.

CREDTORS have taken possession of the millinery stock of Mrs. M. Pass, of Guelph, and given her a discharge. The liabilities amounted to \$3,000, with assets nominally the same.

R. McCLINNEY, lumber dealer and storekeeper at Kagawong, is reported missing. He has disposed of all his assets and owes upwards of \$20,000. The Henry estate (which he bought out) are creditors for \$11,000.

THE liabilities of G. B. Gordon, general dealer, Sunderland, are \$5,500, of which \$1,000 is preferred; assets \$3,500. The stock is to be sold and estate wound up. Gordon commenced the business three years ago and at that time had \$2,000.

GEORGE & JOHNSON, general dealers at Bancroft, have closed up their store and abandoned the business. They have been struggling for the past two years and the trade has found the firm very slow pay. They owe considerable, said over \$10,000.

BEING unable to meet his bills, Joseph Reyeriff, shoe dealer of Ridgetown, offered to compromise at 50c. on the dollar, which was rejected and an assignment has been made to the Sheriff. D. McLean, of Toronto, is the principal creditor. The stock is chattel mortgaged for \$1,000.

A. W. HETGER, fancy goods dealer, Lindsay, has assigned to Hodgson & Summer, of Montreal, who are his principal creditors. Liabilities amount to about \$3,000, and assets the same. The estate is not likely to pay more than 30c. on the dollar, as the stock is the accumulation of years.

At a meeting held by the creditors of A. C. Larose, of Ottawa, the actual deficit shewn was \$16,000. He offered 25c. on the dollar secured, which was not accepted, and a demand for an assignment was made. This was agreed to, Andrew Forbes, of Russell, Forbes & Co., being appointed assignee.

THE Halifax Sugar Refinery Co. of Halifax, N. S., have decided to go into liquidation, having suspended payment in August last. The Company was incorporated in 1883 under the Companies Act of England and Nova Scotia, single liability of stockholders. They commenced operations in Oct '84, and although they worked steadily during 1885, and pushed the business actively the results were not satisfactory. In July '86 the company made a trust-deed conveying reality and personality to George E. Franklyn, James C. Fraser, and Polgrave Simpson, to secure the sum of £10,000 in debentures, amounts advanced and to be advanced by these persons since which the refinery has been closed down. The capital stock of the Company was £125,000 sterling.

## MONTREAL TRADE REPORTS.

(Gazette, Sept. 17.)

### DRY GOODS

The value of the imports of cotton, hats, etc., silks and woollens for the month of August was \$941,007, against \$781,002 in August, 1885, and \$870,435 in 1884. The total value of the imports of these articles for the eight months ended August 31 was \$5,932,157, against \$5,583,810 in 1885 and \$5,170,951 in 1884. The dry goods market has continued fairly active, and a good distribution of most seasonable fabrics has taken place. Mail orders have come in with some degree of freedom, while a fair number of buyers has been on the market to make personal selections. Prices on some lines of goods have developed a hardening tendency. In domestic manufactures there has been an advance of 10 to 15 per cent. on colored cottons, and the higher range may be said to be fairly established on all lines of cotton goods. Foreign woollens continue to show a very firm temper. Cashmeres and similar fabrics have advanced, but in domestic goods no actual change has taken place although higher prices are talked of. On the whole, the dry goods trade has a firm and healthy tone, but with occasional complaints of keen competition.

### IRON AND HARDWARE

The value of the imports of iron, steel, brass, copper and other metals for the month of August was \$392,216, against \$273,382 in 1885 and \$297,181 in 1884. The total value of the imports for the eight months ending August 31 was \$2,546,412 against \$1,989,197 in 1885 and \$2,116,764 in 1884. These figures furnish an approximate idea of the improvement that has taken place in the iron and hardware trade this year, which is all the more gratifying when it is recollected that prices are low. There has been a good steady business done in most descriptions of iron and hardware goods during the week, and the general feeling has continued healthy.

(Herald, Sept. 21.)

### WOOL.

The continued firmness of the London market is reflected on this one and imported wools are held at an advance, sales of Cape having been made at 17c. and 17½c., but these prices could not now be repeated. Domestic is very firm and active. We quote for imported Cape 16½c. to 18c.; Natal, 18c. to 21c.; Australian, 20c. to 30c.; Domestic A super 28c. to 29c.; B super 25c. to 25c.; Assorted, 21c. to 22c.; fleece, 21c. to 23c.

### COTTONS AND WOOLLENS.

There is no change to note in cottons, which are much the same as last week. Both cotton and woollen manufacturers are now fully settled down to the conclusion that an advance in prices must take place. Woollen manufacturers have now received pretty much all their orders for spring goods, and the colored and white cotton mills are busy booking their orders for them, and seem to find no difficulty in getting them, notwithstanding the re-arrangement of price lists.

### DRY GOODS.

Prices of all descriptions of goods are firmly maintained and in some departments, woollens especially, advanced prices are the order of the day. Stocks, we should judge, are not large or excessive in any department. The combination among the cotton men has not, so far as we are able to learn, materially advanced the price of any line of cotton goods, but with any rise in the raw material, and that is expected owing to the extraordinary upward movement in wool, prices in that event will be advanced. Travellers are preparing for, and some are now actually on the sorting up trip. Our city friends report more than an average week's trade. Remittances are complained about, but some seem to comfort themselves with the idea that preparation for the 4th proximo is the reason why.

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MANUFACTURERS OF

**Patent Lap-Joint, Star Rivet**

## LEATHER BELTING

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### PHOENIX BELT OIL

*The Only Perfect Belt Dressing.*



**I**T will make the leather more durable.  
 It will effectually prevent the slipping of the belt.  
 It does not affect the cement which holds the laps together.  
 It does not increase the stretching of the belt and thus render it narrower.  
 It makes the leather perfectly water-proof. Belts dressed with this oil can be and are run in places where the temperature reaches 160 to 175 degrees, while in the other extreme, we have endorsements from owners who run their belts in ice houses. Indoors or out, in any kind of weather, wet or dry, hot or cold; belts thoroughly dressed with Phoenix Oil will always run satisfactorily.

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 SEND FOR PRICE LIST AND CIRCULARS  
 And our Latest Pamphlet on Belting.

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*Best Belt Surface, Lightest, Strongest, Best Balanced, and Most Convenient Pulley in the World.*

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*The hole in every pulley can be readily bushed to fit any sized shaft. Bushings furnished with each pulley. Guaranteed to give from*

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# 70 PER CENT. LIGHTER THAN CAST IRON

*And 50 per cent. Lighter than Wrought Iron or Steel Pulleys.*



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S. R. STINSON, General Manager.

*C. I. RICE, AGENT, CHICAGO, ILL. Dear Sir: Replying to your favor, will say that after using the Dodge Wood Split Pulley for a year or more we are satisfied they are a good thing, if not the best Pulley made, and shall use them hereafter in preference to any other we know of.*  
NEWTON WAGON CO.

*We have sold these pulleys for one year, and they have been put to every kind of service, and their popularity is wonderful. We refer to the following users for proof of the above statements: Pillsbury & Hulbert Elevator Co., Minneapolis; R. M. Pratt & Co., Elevators; Northern Pacific Elevator Co.; The Pacific Elevator Co., Minneapolis; Harvester Works; Minneapolis School Furniture Co.; M. & S. L. P. R. Co.; Willford & Northway; Washburn, Crosby & Co.; St. Paul Electric Light Co.; St. Paul Roller Mill Co.; Minneapolis Brick Co.; N. W. Mfg. & Car Co., Stillwater, Minn., and very many others.*

*W. H. DODGE, PRES. DODGE MFG. CO., MISHAWAKA, IND. Dear Sir: I have a number of your Patent Wood Split Pulleys in use here at the World's Fair and Cotton Centennial Exposition, driving dynamos for Electric Lighting. They are doing heavy work, and are held upon the shaft by the compression of wood on iron. They hold firmly, and do not slip. I have watched with a great deal of interest the many Pulleys of your make running at this Exposition; and I think them the best Pulley I have ever seen. I believe them to possess the following points of merit over any other Pulley: All Pulleys being split or in halves; best belt surface; best shaft fastening; best method of utilizing Pulleys to shafts of different sizes; best balance; lightest on the shaft; strong, and I believe durable. I heartily recommend them.*  
S. H. GILMAN, Chief Consulting Engineer.

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# THE DODGE WOOD SPLIT PULLEY CO.,

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**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.**

## CANADIAN MANUFACTURES AT THE GREAT EXHIBITION.

The following is from the continued report in the *Canadian Gazette* (London, England, Sept. 2nd), of the Great Exhibition:

### MUSICAL INSTRUMENTS.

The musical exhibits which occupy a large space in the central gallery, give to the Canadian Section a distinct feature among other sections of the Exhibition. Indeed, it may almost be said that the only exhibit of musical instruments in the whole Exhibition is made by Canada, for the others may be counted on one hand. South Australia, for instance, has three small exhibits of musical compositions; Malta sends a collection of violins, guitars, and instruments of that class; New Zealand contributes a pianette and set of highland bagpipes; while Cyprus and British India show us what native musical instruments are like. It is not, of course, to be supposed that the piano and organ are unknown in the Antipodes, at the Cape, and in other British colonies, though it may safely be inferred that in no other part of the Empire, excluding Great Britain, has this branch of manufactures reached so high a stage of development as in Canada. Of pianos the Canadian Section contains specimens shown by six leading manufacturers, all of them from Ontario. The cabinet work in most of these is unsurpassed, and much credit is due both on account of the tastefulness of design and finished workmanship. As to tone, touch, and general interior workmanship, there are pianos in the Canadian Section that will rank with any that are manufactured. Of organs some very fine specimens are shown, remarkable alike for their purity of tone and general excellence.

The first exhibits, commencing at the eastern transept, are the organs of Messrs. W. Bell & Co., of Guelph, Ontario, housed in a handsome stand. As many as sixteen instruments are shown. Four of them are double manual organs, and two of them have pedals, while the golden pipe-tops give them a highly finished appearance. Another excellent organ has nine sets of reed with two sets of pedals, and is supplied with the well-known Scribner patent qualifying tubes, which gives to the tone a most pleasing pipe-like quality. Several of the organs have received high praise from London musical critics. The President of the London Organ School declared their pedal touches to be little less than perfect, while the general quality of tone must, he said, be considered most satisfactory. Dr. Turpin, of the College of Organists, after a personal inspection, sent several professors to see the organs, and these expressed themselves much pleased with the instruments. The enterprise of Messrs. Bell has already made their productions known in Great Britain and Europe, while a visit to the stand at the times of the daily recitals will show how much they are in favor with the general public at the Exhibition. The woods of the organs are Canadian, and in many instances of a choice character. Another important collection of organs is shown by Messrs. W. Doherty & Co., of Clinton, Ontario. The exhibit comprises eight cabinet organs, including the "cathedral," "chapel," and "boudoir" organ, each of good design and having fourteen stops. Cheaper styles of organs are also shown, including a student's pedal organ, upon which considerable praise has been bestowed by competent critics. Messrs. D. W. Karn & Co., of Woodstock, Ontario, show ten different styles of cabinet organs, most of which are handsomely encased. As yet the organs of this firm are little known in England. Thanks, however, to the present Exhibition, a permanent agency has been formed here, and considerable sales are already reported. Another organ exhibit is made by Mr. W. Gates, of Halifax, Nova Scotia. One of these classes of organs is well suited to popular demand, and is generally used in the Maritime Provinces of Canada, while others secured a high place at the Philadelphia Exhibition. The Huntington Organ Company, of Huntington, Quebec, show a cabinet and other organs varying in size and finish, while the Uxbridge Cabinet Organ Company show parlor organs of different designs.

In pianos some most important exhibits are made. That of Messrs. Mason & Risch, of Toronto, comprises nine pianofortes, each after a different style. One of the most elegant is perhaps the upright grand piano, known as "The Princess Model." The case is in solid Canadian cherry-wood, worked into a design of the Queen Anne style, and treated in olive-green tints and gold finish. The whole of the exhibits of the firm have, however, received well-merited commendation in the course of the Exhibition. Dr. W. C. Selee, organist in ordinary to Her Majesty at Hampton Court Palace, declares them to be fine in quality of tone, most excellent in touch, and the damping power perfect—a feature which, he adds, he has met with only in these pianos. Another authority, Mr. C. S. Jekyll, organist of Her Majesty's Chapels Royal, has been several times to the Exhibition and inspected the various pianos. He testifies to their "superiority," and adds: "For beauty of tone, and the excellence of mechanism and workmanship, I consider these instruments of high-class production." And he even goes so far as to class Messrs. Mason & Risch among the first manufacturers of the world. But above these gentlemen stands the late Dr. Franz Liszt, whose commendation was of the highest character, though it can hardly be said to be exaggerated in any material sense. It should perhaps be added that no little taste is shown in some of the cases of the instruments in this stand. The employment of color is somewhat of an innovation, though the effect is, it must be confessed, entirely pleasing. Another leading exhibit is that made by Messrs. Heintzman & Co., also of Toronto, in whose stand are arranged five upright and two grand pianos. A distinct feature of these instruments is the important improvements they contain. The action, it will be noted, is in many instances far more simple and less liable to get out of order than is often the case with pianos of these classes. The touch of most of the instruments is also described by authorities as light and elastic. All the instruments have a full iron frame, and, indeed, the cases generally are worthy of notice as being of a substantial while elegant character. It appears that these pianos have been very highly spoken of here, and it may fairly be said that they seem fully to merit these good opinions. Messrs. Heintzman have also reason to congratulate themselves upon the practical outcome of their display. The Exhibition has proved a desired means of introduction to the English market, and a good business with Great Britain and Europe is now anticipated. Messrs. R. S. Williams & Son, of Toronto, exhibit seven pianos, square, grand and upright. One instrument was designed specially for the Exhibition, and is a most creditable production, both as regards its artistically designed case and the fullness of its tone. The pianos of this firm are widely known in Canada, especially among the French Canadians. Many inquiries have been made in the course of the present Exhibition, and a satisfactory market is anticipated here. Messrs. Newcombe & Co., of Toronto, have six pianos—four uprights and two grands. A feature of these instruments is the duplicate veneer arrangement, one layer being in straight and the other in diagonal lines. By this means any injurious results from the extreme climatic conditions met with in the Dominion are counteracted, while the effect of changes of climate upon the instrument is greatly lessened. To both the grand and semi-grand classes of instruments shown by this firm considerable merit of tone and appearance attaches. The Lansdowne Piano Manufacturing Company of Toronto exhibit six upright pianos after different styles. At local exhibitions this make of piano has taken a leading place, while more practical testimony to their general excellence is the ready sale they have in the Dominion and the United States. By the Dominion Organ and Piano Company, an interesting exhibit is made of seven instruments. At the Philadelphia Exhibition the jury declared the instruments shown by this Company to possess "a pure and satisfactory tone, simple and efficient stop-action, an elastic touch and good general workmanship." There can be little question that a like good opinion would result from a similar official inspection of the present display. Mention must also be made in this class

of the "technicon" which Mr. J. Brotherhood shows in the exhibit of Messrs. Hointzman. The invention is as ingenious as it is simple, and well calculated to fulfil its mission of strengthening and developing the pianist's hand by a judicious schooling of the muscles of the fingers, wrist, and forearm.

### THE CANADIAN PACIFIC AND CALIFORNIA.

(Bradstreet's San Francisco Letter, September 3.)

THE opening of the Canadian Pacific Railroad has naturally attracted some attention in San Francisco, where it has even been viewed with alarm as another possible power for diverting the Pacific coast shipping trade from that port. The new line has in view the establishment of a fleet of steamers running to China and Japan, and another line to Australia via Honolulu. From present appearances the American railroad companies have the most to fear from the competition, as the Canadian line is taking California freight to Chicago and Missouri river points, via Port Moody and St. Paul, at 50c. a hundred pounds. At such rates there is no difficulty in obtaining freight, but it is problematical whether it will pay the company to offer such inducements to California shippers for any length of time. The immediate result may be a reduction on the part of the American lines, and a fight for supremacy, but if the latter win then the California shippers who now avail themselves of the cheap offerings will be made to suffer later on. The most probable outcome of the fight will be a permanent reduction in freights on our American lines.

It seems likely that the most important factor in the Canadian Pacific carrying trade will be the tea transportation from China and Japan. With connecting steamers on the Pacific and Atlantic, the greater proportion of the Suez route tea trade will be transferred to the Canadian route to supply the English market in addition to Canada's own requirements. But it is doubtful whether the New York market will be supplied via Canada. In two months and a half - from August 1 to November 15, 1885 - the Suez Canal tea traffic amounted to 24,000,000 pounds. But after the tea shipments are over there will not be a large amount of carrying trade from China or Japan to England. The greater volume of business would probably be in the other direction during a whole year, English manufactures being shipped to the Orient. The present rate of tea freight from Japan to New York via San Francisco is 2c. a pound, which leaves a good margin of profit, and the first and second shipments of new season's teas cost from 3c. to 5c. a pound for transportation. These figures will stand considerable cutting before running at a loss is involved, and the next season will see the early crop-teas delivered in New York at a much less cost than formerly. The establishment of frequent and direct communication between Canada and San Francisco will be the means of finding an outlet for many Californian agricultural products which are at present debarred from the northern market.

From competition in the Australian trade, San Francisco has nothing to fear at the hands of the Canadian Pacific. Seventy-five per cent. of this trade consists of exports from this country of American machinery, manufactures and products which will always be in demand and which cannot be obtained elsewhere. Our imports from Australia are limited in quantity and value, and are not likely to increase with our present tariff. The last steamer sailing from San Francisco to the colonies took freight to the value of \$140,000, besides a full passenger list. The only chance of the Australian business being lost to this country would be in a transfer of the colonial mail service to Canada, as, without the subsidy now granted to the steamers for the mail transportation, they would be unable to run on a paying basis. But there is no prospect of a change being made in this respect to a more northern line. The existing service is in every way satisfactory, and has so been reported upon by Sir Julius Vogel, the Postmaster-General of New Zealand. If any change be effected at the expiration of the present contract

it will be to shorten the distance traveled by sea, and thus quicken the time by a longer overland travel, which is always faster than that on the ocean. The American route is the quickest and most popular for New Zealand. The number of passengers is increasing, and the mails are delivered in London or New Zealand quicker than by any other route. This is shown by the following table, which gives the average number of days occupied in transporting the mails by the different routes:

	SAN FRANCISCO	DIRECT.	SUEZ
London to Auckland, N.Z. . . .	37.85	47.92	46.58
London to Wellington, N.Z. . . .	39.46	45.61	47.31
London to Dunedin, N.Z. . . . .	40.92	44.54	46.65
Auckland to London . . . . .	37.15	42.15	46.59
Wellington to London . . . . .	39.31	40	46

And not only is this the quickest New Zealand mail route, but it is also the most economical for that colony, and stood in the unusual position of having a credit balance of £422 12s. 4d. at the end of June, as compared with a debit balance of £7,736 10s. 7d. at the expiration of the previous twelve months. This was an exceedingly satisfactory showing, and, combined with the shortening of the time in the present contract, the superiority and punctuality of the steamers has tended to increase public opinion in the colonies in favor of the San Francisco service. An ocean service extending into higher latitudes and of longer duration would not be popular, neither could the actual time between New Zealand and London be shortened by the Canadian Pacific route. Therefore San Francisco need not be alarmed at any competition for Australian business from that source.

### A NEW JERSEY STRIKE ENDED.

THE outcome of the strike of the ironworkers at the foundry of R. D. Wood & Co., at Millville, New Jersey, can not be very satisfactory to the labor organizations. The firm made the issue directly against the Knights of Labor, and the men seem to have accepted the situation and severed their connection with the order. It is probable that the defeated organization has in this case reaped the legitimate fruit of allowing itself to be controlled by its hot-headed demagogues instead of by men of sense and cool judgment. For legitimate purposes laborers may be properly organized, but when such organization undertakes to control and manage the business of the persons or firms for whom their members work there can be but one result - sooner or later they must meet with disastrous defeat. No business can prosper in which its proprietors are not allowed to make contracts and carry them out. When workmen interfere to prevent the carrying out of proper business contracts such workmen must give way to men who will study the interests of their employers. If labor organizations antagonize legitimate business interests such antagonism will prove more fatal to the organizations than to anybody else. The Millville episode contains a loud warning to the labor organizations not to wreck their usefulness by demanding too much. Laborers have their rights, but so have employers, and it will be the part of wisdom for the laborers to recognize the fact that employers are not enemies, to be driven from business. - *Chicago Exchange*.

M. M. KLEIN and A. Berg have been studying the action of sugars on the corrosion of boilers, and find that sugar in water has an acid reaction on iron, which dissolves it, with a disengagement of hydrogen. The quantity of iron dissolved increases with the proportion of sugar in the water. The salt of iron formed is the acetate. A neutral decoction of malt also corrodes iron with disengagement of hydrogen; but glycerine and mannite are without action on the metal. These results are worthy of note in sugar refineries and places where sugar sometimes finds its way into the boilers by means of the water supplied. The experimenters in question also find that zinc is strongly attacked by sugar, copper, tin, lead and aluminum are not attacked.

# Iron and Machinery

## CANADA IRON MEN FOR PROTECTION.

(Iron Trade Review, Cleveland, Ohio.)

If Canada does not soon enter upon a national policy calculated to foster and build up an iron and steel industry within its borders worthy the name, it will not be for want of a flood of light and literature on the subject. We have referred on several occasions to the cogent arguments of Mr. J. H. Bartlett, of Montreal. Now comes the leading industrial journal of Canada, the *Canadian Manufacturer* (Toronto), with a plea for Protection for its own sake, and not for revenue only. Hear it:

"Canada imports every year large quantities of charcoal iron, every ton of which could be and should be made at home. Our advantages for the economical production of charcoal iron are certainly not surpassed, probably not equalled anywhere else in the world. It so happens that in Ontario, where the iron ore is, the material for charcoal is too, and in quantities practically inexhaustible. For, in the rough, rocky districts, where iron ore most abounds, and which are of no use for agricultural purposes, the timber growing there, if all taken off, would soon be replaced by a new growth, provided only that cattle and fire be kept out. But besides our import of charcoal iron, we bring in from abroad ship-loads and car-loads of iron of other and inferior kinds. Now, those who ought to know do say that, were we for many important purposes to use Canadian charcoal iron, instead of this inferior imported iron, we should be gainers every year to a large amount by the change. The country would gain by using its own charcoal iron, worth \$10 a ton, instead of inferior iron brought in from abroad, at \$20. Be this as it may, however, it is surely the merest folly for us to continue sending money out of the country for charcoal iron, when we ought not only to be making all we want ourselves, but also a surplus for exportation.

"But there is something in the way that stops us—there is a lion in the path which appears to us so terrible that we dare not advance. The old free trade superstition still throws its baleful shadow across the land, and hinders us from doing many a thing that we might easily do did we but know our own strength, and did we understand what our opportunities really are. Had we the courage to put upon all imported iron specific duties, calculated on the basis of twenty-five per cent. of the value, we should in a few years afterwards find ourselves nearly independent of imported supplies altogether."

The *Montreal Star*, too, is of the decided opinion that duties on iron and steel "must be high enough to insure a home market to the Canadian manufacturers of iron and steel, or it will not be effective." "A half policy," it is convinced, "will probably prove a failure." These remarks are called out by a report that a special agent of the Dominion Government had recently visited the iron districts of Pennsylvania with a view to obtaining information which should aid the authorities in framing a new policy of home protection. The fear that the new policy would not go far enough inspired the *Star* to give out the above note of warning.

Whether Canada has all the elements for the successful manufacture of iron and steel within her own confines at an economical figure remains yet to be demonstrated; but if we are to believe reports of experts regarding the deposits of iron ore recently developed in Peterborough and Haliburton counties, the problem need not long go unsolved. A recent brochure prepared by the Secretary of the Bureau of Industries (for a copy of which we are indebted to Mr. T. D. Ledyard, of Toronto), referring to these deposits, makes the following statement: "as to the probable cost of making iron in Canada:

In proximity to these deposits are generally tracts of hardwood from which charcoal could be obtained as cheaply as on any part of the continent; limestone for flux is plentiful, labor

is cheap, and many of the mines are easily accessible. These are important advantages for the local manufacture of iron and steel. In the opinion of competent authorities a furnace, having its own ore property, and being conveniently situated, should be able to obtain its ore at a cost of not more than \$1.25 per ton. With the latest improvements in charcoal blast furnaces, seventy bushels of charcoal will smelt a ton of pig iron, the whole cost of which will not then be over \$10 a ton. Even with iron at the very lowest this leaves a large margin for profit. Then by adding Clapp Griffith converters to the furnace, this pig iron can be converted into steel ingots at a cost of \$4 a ton additional, making a marketable article of steel at a cost of \$14, the present selling price of which is \$35 per ton, and for which there is a large demand."

Certainly, if the Dominion Government can satisfy itself that the above statements are approximately true, it would be the height of folly for it to maintain for a single day longer a policy so mimical to its own best interests as that which now prevails. Nor would the United States, even though a large exporter of iron and steel to Canada, have just reason to complain should the latter country follow in a line of policy which we have found so satisfactory and successful.

## EXTENDED USES OF STEEL IN CONSTRUCTION.

The *American Manufacturer* has the following in its English correspondence:—

Evidences all point to the circumstance that before many years are over steel sleeper manufacture will be largely extended at English works. An important field for the steel sleeper, apart from railway construction, lies in the direction of colliery and ironworks tramways above and below ground. Prominent among the firms who are pushing the colliery sleeper business are the Tredegar Iron and Coal Company, Limited, and this week they have exhibited for the first time (on the Staffordshire iron trade exchanges) their new corrugated sleeper for these special purposes, which I was able to inform you a month ago they had patented.

### A NEW CORRUGATED STEEL SLEEPER.

The sleeper has been patented by their general manager, Mr. James Colquhoun, and when intended for underground colliery tramways weighs, with its two steel keys and clips, only 16½ lb. For surface tramways the size and strength is increased. The corrugations are deep, and extend on each side throughout the entire length of the sleeper, which has also stamped in it two projecting fangs, at either end of which enable it to become very firmly attached to the ballast, thus preventing any movement when loads are passing over sharp curves. The cost of the new sleeper runs to no more than one shilling apiece, which makes it much more economical, considering the cost of maintenance, than a wooden sleeper.

### NEW STEEL RAILWAY CHAIR.

The steel sleeper business has brought a new steel railway chair just now to the front. It is the invention of Mr. Thomas, C.E., of the Brecon and Merthyr railway, and railway men speak highly of it, particularly for its extreme simplicity.

### IRON AND STEEL FOR SHIPBUILDING.

The Institution of Naval Architects have this week been holding a conference in Liverpool, and have been advancing views and making recommendations which are encouraging to the makers of steel and iron for shipbuilding. A fleet for the carrying of petroleum in bulk must, it was urged, be at once started by the British shipbuilders for carrying the Russian and American product. Next there must be fast transatlantic exclusively passenger steamers with twin screws, triple expansion engines, and forced draught appliances. That the conference will promote reforms in the commercial steam navy of

this country, and consequently augment the demand for the needed steel and iron, there can be no manner of doubt.

#### SCOTCH STEEL AND AMERICAN BRIDGE CONTRACTORS.

Scotch mild steel makers have a lot of work to overtake before they come to a standstill. For example, Messrs. Colville & Sons, Motherwell, have an order for some 4000 tons of plates, angles, bars, &c., for the railway bridge work which Messrs. Arrol & Co., of Glasgow, have to execute for Australia, on account of the American contractors, and it is stated that the Steel Company of Scotland have also a quantity of steel to be made for the same bridge. One or two of the steel firms are, however, working from hand to mouth, the orders being so few. The price for steel ship plates is £6 5s per ton, but it is scarcely possible to get it. Best boiler plates are about £6 15s per ton

#### A RAILWAY CAR MADE OF STEEL AND PAPER.

THE *Chatham Planet* describes at length a new railway car, the invention of a Canadian master car builder, Mr. T. L. Wilson. A truck has been designed and patent applied for. The car truck frame will be constructed entirely of rolled channel steel, jointed as in the car frame. Every part is uniform in size, and interchangeable, and no wood used in its construction whatsoever. All bolts used in the truck frame are of one length and diameter. It will be seen at once that only bolts of one size will be required to be kept at any stations for repairs, and in case of a breakage or collision the parts damaged can be supplied by the simple use of a wrench without removing the truck to a repair shop. The advantages to be derived over the old pattern are that there is a lighter, stronger, more durable and less expensive truck. We may state here that the car and truck in question have been adopted for use on the contemplated underground railway in New York. The same inventor, Mr. T. L. Wilson, not long ago invented and patented a SAFETY TRUCK LOCK, designed to prevent trains from leaving the track while in motion, through broken rails, open switches, or other causes. This invention is very simple in contrivance, and is attached to the main bolster of the truck and extending up and past the main bolster of the car, and can be placed on any car at a very small expense. It has been tested on every railroad in Canada, the trials being successful in every case and witnessed and certified to by all the chief officials. Trains, with the inventor and train-men on board, were run at the rate of 20 to 30 miles an hour into open switches and along tracks with rails displaced, without leaving the track or receiving injury, which would have been suicidal under other circumstances. A company with a subscribed capital of between \$200,000 and \$300,000, has been formed in New York to operate it in the United States. With fire-proof cars and the safety appliance the recent disaster on the C. P. R., by which the first through train from the west was burned by bush fires, would have been avoided. That was caused by the rails spreading from the intense heat. Equipped in the way we mention the train would have been kept on the track until the danger was passed and the cars would not have caught fire. In all probability, in fact we have reason to believe, that large works will be established in some town or city of Canada, and the United States, for the construction of cars on this principle. As there is but little doubt that they will intine be generally adopted, a large and thriving industry will result, second not even to that established by Pullman, of Pullman car fame.

#### BESSEMER STEEL IN THE UNITED STATES.

(Chicago Railway Review.)

The American Iron and Steel Association, which is the most excellent authority, officially announces that "this country will make more Bessemer steel, more Bessemer steel rails and more open hearth steel in 1886 than in any previous year," and further, "that this country will make more pig iron in 1886 than in any previous year in our history." These statements are

based upon the statistics for the first half year, and upon the orders placed for the future, together with requirements known to be in the market. It appears that never before have we made so large a quantity of Bessemer steel in six months as during the first half of this year, and the half year's production of Bessemer steel rails has only once been exceeded—in 1882. It is true, moreover, that never before has our country produced so much pig iron, in the same time, as during the first six months of 1886, and that, prior to 1879, no whole year's total of pig iron production reaches the aggregate of the first half of this year.

These facts are most significant. The iron and steel trade has long been closely watched, as a barometer of general commercial conditions. With this enormous interest active, we are taught by past experience, that the whole commercial fabric of our nation must be also active. No better sign of the times has been wanted than that which tells us that iron and steel interests are busy. We can let this sign tell its story now, with the supporting facts that the clearing house returns are continuing to indicate increased volumes of business as compared with last year, that railroad earnings continue to grow larger, and that from nearly all sources come reports of a most decidedly better feeling in trade circles. We are evidently entering upon a period of *bona fide* renewal of "good times." If we can conservatively enjoy these bettered trade conditions and avoid the danger of the hazardous, but seductive, "booming" spirit we will all be enabled to roll up comfortable finances by the close of 1887.

#### THE BESSEMER COMBINATION.

(American Manufacturer.)

A YEAR ago the 12th of last month the Bessemer steel rail manufacturers of the United States entered into a combination, having as its object the regulation of the output of rails, to the end that there might be a stop put to overproduction and the consequent ruinous competition and prices. This combination was entered upon with a great deal of doubt as to its ultimate outcome. While there was a nominal agreement, it was well understood by those present that the assent of certain mills was a conditional one, and if the state of the market and of demand justified them, they would not feel themselves bound.

The result of the combination, however, has been far more beneficial to the rail manufacturers than even the most sanguine dared hope. A maximum of production for 1885-6 was fixed, but so great has been the demand that this, by authority of the Executive Committee, was extended again and again, until it reached nearly double the original figure. Prices of rails, notwithstanding this increase in the limit of production, have steadily advanced. A year ago they were quoting at \$26.50 to \$27; to-day at \$34 to \$35 at the works. The result of the combination has been so beneficial to the steel rail manufacturers that at their meeting held at Long Branch recently, at which every rail-making company in the country was represented, it was agreed to continue the association for another year, the allotment for the next year being, it is understood, a million tons to start with, but with power in the Executive Committee to increase this if deemed wise.

The outcome of this combination of American steel rail manufacturers is in marked contrast to that of the European combination. That has gone to pieces, and rails have reached a price lower than ever known before. Whereas under the conservative action of the American combination, prices have been advanced, and not only has the rail business been profitable, but all kinds of iron and steel products have been toned up by the success of the steel rail men in maintaining prices. It is, of course, understood that the organization that met at Long Branch does not attempt directly to fix prices. Each company makes its own price, but the agreement to restrict production, and a faithful adherence to the same enables manufacturers to get fair prices, and justifies each in the belief that his prices will not be cut by his fellows.

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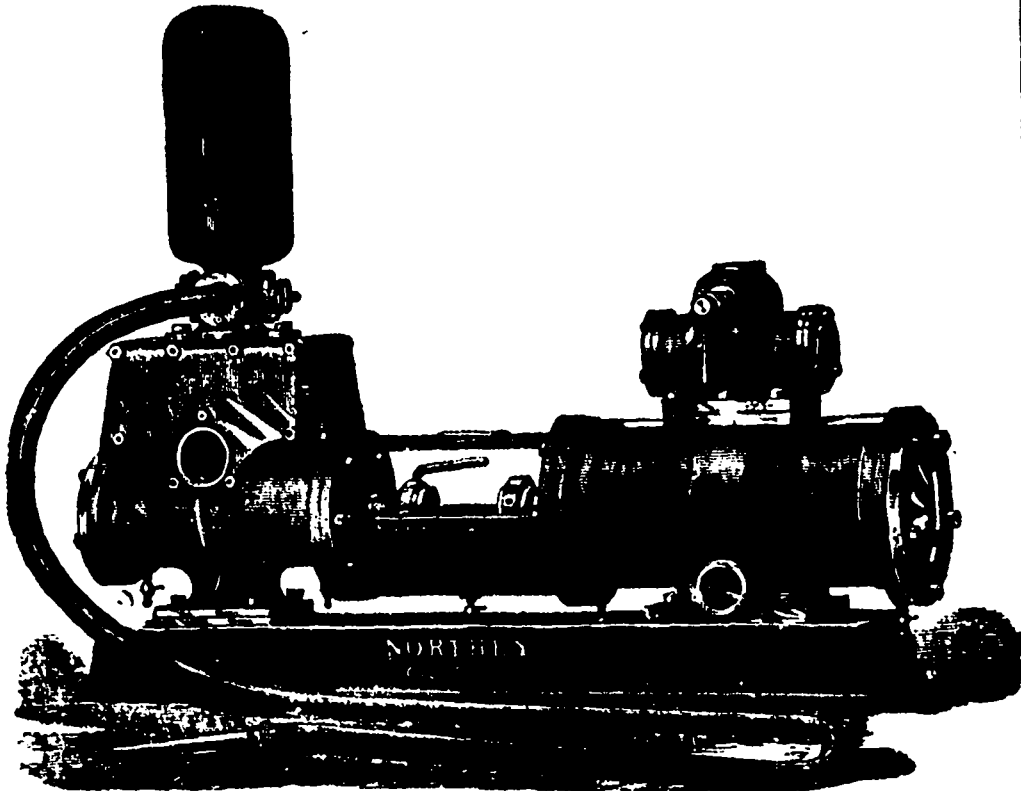
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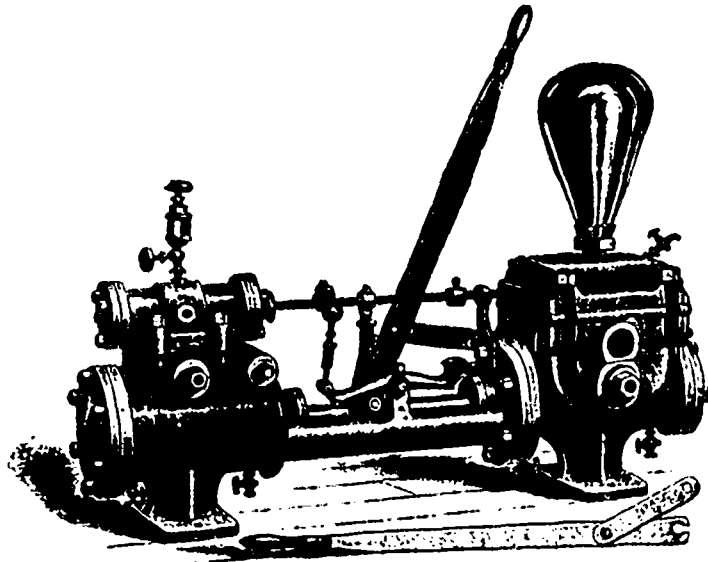
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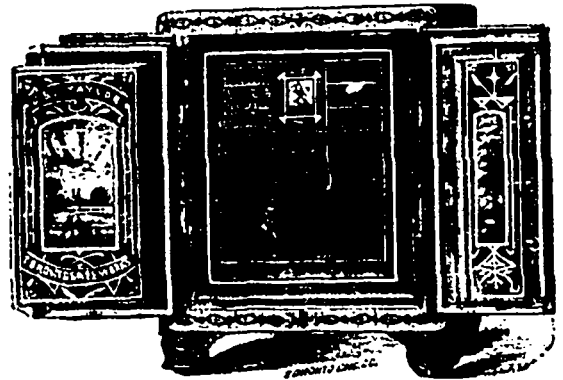
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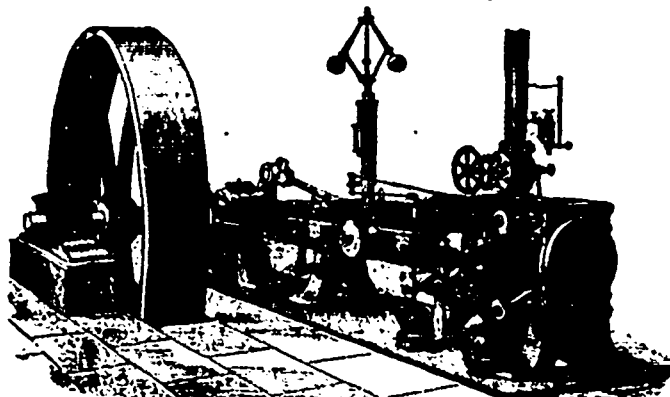
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## Textiles.

### LONDON WOOL SALES.

THE London wool sales of Friday, September 17th, are thus reported by cable: -

There was a good attendance at the wool sales to-day. The demand was active. Prices are hardening, especially for scoured wools, and values are 5 per cent. better than the earlier quotations of the series. The details of the day's sales are:

Victoria, 1,900 bales - Scoured, 1s. 1/2d. to 1s. 9/4d.; do locks and pieces, 1s. to 1s. 6d.; greasy, 7d. to 1s. 2 1/2d.; do locks and pieces, 6 1/2d. to 11 1/2d.; fleece, 2s. 1d. to 3s.

New South Wales, 2,200 Bales - Scoured, 11d. to 1s. 8 1/2d.; do locks and pieces, 10d. to 1s. 8 1/2d.; greasy, 7d. to 1s. 1 1/2d.; do locks and pieces, 3 1/2d. to 10d.

South Australia, 500 Bales - Scoured, 1s. to 1s. 9 1/2d.; do locks and pieces, 11d. to 1s. 11 1/2d.; greasy, 8d. to 1s.; do locks and pieces, 4d. to 7d.

Queensland, 200 Bales - Scoured, 11d. to 2s. 1 1/2d.; do locks and pieces, 9d. to 1s. 6 1/2d.; greasy, 8 1/2d. to 10d.

Tasmania, 700 Bales - Greasy, 9d. to 1s. 2d.; do locks and pieces, 6d. to 8d.; fleece, 1s. 1d. to 2s. 1 1/2d.

New Zealand, 5,000 Bales - Scoured, 11d. to 1s. 11d.; do locks and pieces, 9d. to 1s. 10d.; greasy, 7d. to 1s. 1 1/2d.; do locks and pieces, 4d. to 1s.

Cape of Good Hope and Natal, 600 Bales - Scoured, 11d. to 1s. 7d.; greasy, 7d. to 11d.

At the wool sales on Monday, Sept. 20th, competition was brisk and prices were firm. The details of the day's sales are:

Victoria, 2,700 Bales - Scoured, 9 1/2d. to 2s.; do locks and pieces, 9 1/2d. to 1s. 6d.; greasy, 7 1/2d. to 1s. 2d.; do locks and pieces, 5 1/2d. to 10 1/2d.; fleece, 1s. 4 1/2d. to 1s. 9d.

New South Wales, 2,000 Bales - Scoured, 10 1/2d. to 1s. 11 1/2d.; do locks and pieces, 10 1/2d. to 1s. 5 1/2d.; greasy, 7d. to 1s. 1 1/2d.; do locks and pieces, 7d. to 9d.; fleece, 1s. 4d. to 1s. 7d.

Tasmania, 300 Bales - Scoured, 1s. to 1s. 5d.; greasy, 9 1/2d. to 1s. 2d.

New Zealand, 2,400 Bales - Scoured, 11d. to 1s. 11 1/2d.; do locks and pieces, 8 1/2d. to 1s. 9 1/2d.; do locks and pieces, 4 1/2d. to 8 1/2d.; fleece, 1s. 2 1/2d. to 1s. 6d.

Cape of Good Hope and Natal, 2,700 Bales - Scoured 11 1/2d. to 1s. 8d.; greasy, 5d. to 9 1/2d.; fleece, 9 1/2d. to 1s.; snow white, 1s. 6d. to 1s. 8 1/2d.

### LARGE AND SMALL WOOLLEN MILLS.

(Bradstreet's.)

THE manager of a small woollen factory in Massachusetts was quoted in our recent report on the condition of the woollen industry as having said that "in dull times the great manufacturing corporations have a decided advantage over the smaller woollen mills in that they can go right on manufacturing, notwithstanding losses, and are able to secure the very best machinery, which the smaller concerns are often unable to do." Commenting on this statement the *Boston Journal of Commerce* says that it is of doubtful truth as regards the manufacture of any kind of woollen goods, and fancy cassimeres in particular. "What we call a small mill," it is said, "is one not exceeding six sets of machinery in size. A large mill is one with twelve or fifteen sets of machinery, and above. A six-set fancy cassimere mill will keep one man, with his corps of overseers and superintendents, thinking pretty actively to follow the demands of trade and not make a number of mistakes. It takes a right smart man to run a six-set mill on fancy cassimeres and have the results come out as they should. If small mills cannot

compete with large mills, the cause will usually be found in the relative disparity of capital." This conclusion seems to be a virtual admission of all that was asserted in the original article. The *Journal of Commerce* says forcibly: "The weakness of a small mill, as occasionally demonstrated in our midst, is not to be found in its size, rather is it in a lack of a proportional amount of capital. Insufficiency of capital is the bane affecting the success of our small woollen mills. Frequently they are taken and run with very limited money credit, depending for prosperity upon a practical familiarity with the duties required, a good character, and much luck." This concedes much of the case with respect to the relative advantages of the large concerns. It is only fair to say, however, that small mills generally have the personal direction of competent heads, while large ones run the risks of corporate control.

### CURRENT NOTES.

(Kahlow's German Trade Review.)

#### THE WOOLLEN INDUSTRY.

WE have already referred to the gratifying improvement which has come over this industry of late. The price of rough wool had sunk to an unusually low level, and slackness had begun to characterize all branches of the industry. For several weeks, however, the price of wool has been on the increase, and the effect on manufactures has been very satisfactory. From January 1st to June 30th the imports of woollen cloths and stuffs amounted to 6,308 double centners, and the exports were 89,908 double centners. During the same period the imports of woollen plushes amounted to 116 double centners, the exports to 5,263 d. c., though during the same period of 1885 the exports were only 2,213 d. c. It may be hoped that the gratifying impetus which has been given to the woollen industry will extend to other industries.

#### HOW STRIKES WORK.

(Boston Manufacturers' Gazette.)

AMSTERDAM, N.Y., is an important centre of the knit-goods industry, but the great whistles, that for months have reminded operatives of their duty, have been silent during the week. History is rapidly repeating itself among those who work in mills and all other kinds of industrial establishments. Some months ago the tanners and curriers at Salem and Peabody locked themselves out upon some "point" of principle germane to the secret organization with which they are connected, and to-day 300 of them have returned to work, and 400 non-union hands have come in beside; but there are from 1,500 to 1,700 men still out; but many of the shops, it is reported, have all the help they want. According to the advices from Amsterdam, about a week ago the spinners employed in Schuyler and Blood's knitting mill refused to work with a newly-promoted "second" hand, a Knight of Labor, but not a member of the Spinners' Assembly. The manufacturers gave their employees until last Monday in which to change their decision. After it was ascertained that the spinners had decided to continue the strike, the foremen of departments in the several mills were instructed to run the material out and make ready for a shut-down. With one exception, the shut-down is general. The Spinners' Union, backed by the Knights, represents nearly 6,000 persons, and the Manufacturers' Union recognize this as a test case, and prefer to fight it out rather than be dictated to. Business is flat. Merchants, quick to grasp the situation, are busy curtailing expenses, notwithstanding that the Fall trade opened encouragingly. Nothing is talked of but the shut-down. To the operatives it means a fortnightly loss of nearly \$50,000.

A METAL that expands in cooling is made of lead nine parts, antimony two parts, bismuth one part. This alloy can be advantageously used to fill small holes and defects in iron castings.

## Milling.

### CURRENT NOTES.

(From the American Miller, Chicago.)

#### DOLLAR WHEAT.

THE "bulls" have lately been asserting that wheat would sell for a dollar before Jan. 1. We are not sanguine on that point; but the "bull liars" certainly make some strong points and present some strong figures which prove that "Hope springs eternal in the human breast," whether it proves that wheat will sell for a dollar or not. Mr. Walker, of New York, states that the United States can spare for export 125,000,000 bushels of wheat during the year now opened, of which amount 100,000,000 bushels will be available for Europe, and 25,000,000 bushels for other countries. He says:—

The importing countries of Europe will probably require, in case consumption shall be normal, with present prospects for the output of the European wheat crop of 1886, at least 300,000,000 to 310,000,000 bushels, of which about 121,000,000 bushels will be obtained from the exporting countries of Europe, leaving 179,000,000 to 189,000,000 bushels to be obtained from exporting countries outside of Europe, of which 100,000,000 bushels will be obtainable from the United States, Atlantic and Pacific Coasts. India, Chili, Argentine Republic, Australia, Canada, Egypt and Persia will contribute to the supply of the remainder.

As we have remarked before, we have gone out of the prophecy business, which has been very poor for several years; but it looks as if the burden of proof devolved upon the bears.

PROF. COOK thinks that one chief cause of the demoralization of wheat prices, the opening of new territory in the Northwest, will soon right itself if the present system of cropping there is continued. "Inexhaustible fertility" is a phrase that looks well in the land circular of a railroad company, but continuous cropping of wheat will lay it out sooner or later unless fertilizers are used or rotation in crops practised. An intelligent and wealthy miller in Southern Illinois remarked to the writer in 1882 that a failure of wheat in his county had never been known. "It will raise wheat every year for fifty years to come." It was almost a total failure last year. That is what the Northwest will come to sooner or later.

FLOUR MILL insurance does not seem to succeed any better in Germany than it has in Great Britain. The Magdeburg Fire Insurance Co., which is the millers' company through an arrangement made with the directors of the company, claim that so far it is out of pocket \$200,000 by the arrangement. Last year the premiums were in excess of the losses, which gives ground to hope that the Magdeburg Co. has learned how to discriminate between risks. The failure to do so is what has caused the conspicuous failure of mutual mill insurance in Great Britain, while discrimination and close inspection of risks have made mutual mill insurance in America a grand success.

It would seem, unless all indications are deceptive, that our prophecy of a return of better times is being fulfilled. It is certain that a better tone pervades business generally, and in many branches the improvement has been very marked. In mill furnishing there are certainly greater manifestations of activity than have been visible for a long while, while all concerns report orders as fairly numerous, and inquiries as lively. We again repeat our hackneyed advice to millers to buy what they need now, before the inevitable rise in the price of machinery comes.

## Lumber.

### IMPROVEMENT SIGNS.

(From the Lumberman's Gazette, Bay City, Michigan.)

THE signs of an improvement in the condition of the industries of the country are everywhere visible. They are referred to by the press in the east and the west, and doubt is no longer justifiable. Whether the betterment will be permanent or is but a reaction from a long period of depression, there is no denying the increasing activity in all branches of business. There is no index that points more unerringly to the condition of the business affairs of the country than the demand upon the transportation facilities of the great lakes. When trade is dull and the industries stagnant the vessel interests languish, but when a revival comes there is a quick demand upon the means of transportation. The rapid increase of lake freights demonstrate the expansion of business in a way that leaves no room for question. The advance of grain, ore and lumber freights can have no other explanation. The vessel men are in a condition of exhilaration, and some of them predict a further advance, putting the limit of grain freights at 10 cents and lumber at \$3. These figures may not be realized, but the confidence with which they are predicted is an indication of the force with which business is expanding. The long looked for revival may not be here, but the volume of business is undergoing a great increase and there is greater activity in all the industries.

### A THRIVING VILLAGE.

SCOTSTOWN AND ITS INDUSTRIES—THE PULP MILL TO BE ENLARGED.

SCOTSTOWN, Q., September 16.—This thriving little village in the township of Hampden, Compton county, is situated on the Salmon river, and has about 500 inhabitants. It is a centre for lumber and has two lumber mills owned by Messrs. Parker & Jencks, which are at the present time running night and day, and giving employment to some eighty-five people. One of these, is a steam clapboard mill and turns out upwards of 10,000 boards per day. They make thirty-one grades of clapboards, and ship mostly to Boston. The other is a water-power board mill and turns out 35,000 feet of lumber per day, which is shipped mostly to Portland. The Scotstown Chemical Pulp company have their mills here. Your correspondent through the kindness of Mr. Arkley, their manager, had the pleasure of a trip through the mills and witnessing the process of reducing wood to pulp, which was very interesting. These mills were erected in 1884 and are run night and day, and give employment to thirty five persons. At present they turn out three tons of dry pulp per day, but the proprietors are increasing their capacity so that in the course of a month they will be able to turn out over twice the present quantity. The pulp from this mill has a nice long fibre, and is the finest your correspondent has ever seen. There are only two pulp mills in Canada doing a shipping trade, although some paper mills manufacture some of their own pulp. These three mills comprise the principal industries of the place. There are two churches, nine stores, a post-office and two good hotels in the village, and these have mostly grown up during the past few years.—*Montreal Gazette.*

AN ingenious process for giving silver surface to iron is a recent Austrian invention. It consists in first covering the iron with mercury and then depositing the silver by the galvanic process. By heating to 300 degrees C. the mercury evaporates and the silver layer is deposited.

## Miscellaneous.

### CANADIAN PLUCK.

WHAT SKILL, CAPITAL AND ENTERPRISE WELL DIRECTED CAN ACHIEVE.

OF all Canadian manufacturers whose fame has reached the four quarters of the globe possibly none is so familiar a household word as that of W. Bell & Co., the famous organ manufacturers of Guelph, Ont., who finding Canada to circumscribed for their operations spread out their enterprising arms to such an extent that at present they have extensive branch warerooms in London, Eng., New York, Sidney, N.S.W., Germany and in every country where the English language is spoken. The secret of the success of Messrs. W. Bell & Co., lie in the excellence of their manufactures. Beginning in a very small way, turning out an old fashioned antiquated style of a melodian in 1862, the output then being one a month, which in a short time increased to one a week, then to one a day. While the popularity of the melodian lasted they were enabled to increase their capacity until half-a-dozen per day was reached. Discarding the melodian on the advent of the organ the firm have ever maintained its position in the face of the keenest and most determined opposition that it was possible to give any concern; against all comers and countries the Bell organ has held the lead, until the daily output of these elegant instruments has reached the enormous number of thirty per day, each regular working day being twelve hours. This year an effort is made to reach a total of *ten thousand* for the current year. The company's catalogue embraces a variety of twenty instruments manufactured in the two mammoth factories operated by them in Guelph.

Mr. W. J. Bell, a member of the firm reached Victoria last night by the Mexico having come by way of Chicago, Denver, Salt Lake City and San Francisco. Mr. Bell is yet a young man, about twenty-five years of age. Notwithstanding his youth there are indeed but few whose travels have been as extensive as his, or so eminently successful. Taking control of the outside department ere he attained his majority, he has built up a trade for the company such as but few concerns enjoy, and certainly none is so short a period, Mr. W. J. Bell has control of the European and foreign business, with headquarters at 58 Holborn Viaduct, London, the very centre of the metropolis of the world. Occasionally he may take a run to the Australasian colonies, to America, to the continent or wherever else the extensive ramifications of the company may call him. He will remain in Victoria till to-morrow evening; thence he will cross to the mainland and east by the Canadian Pacific. Having to be in London early next month his visit to this province is necessarily brief. "Billy," as Mr. Bell is familiarly known, still claims that the Bell organ is, and shall continue to be the best organ in the world. If skill, experience, large facilities and a thorough familiarity with the markets of the world can achieve this W. Bell & Co., assuredly can accomplish it.

### THE APPRECIATION OF GOLD.

By an Onlooker.

IN their third report, published at the end of July, the Royal Commission on dull trade recommended that a special commission should be issued by Her Majesty for the purpose of investigating the silver and other questions connected with the monetary dearth from which trade appears to be suffering. It is time that something of the kind was done, if only for the purpose of clearing up the hazy ideas most people have about the appreciation of gold and the depreciation of silver. The

latter metal is far too abundant. The former is becoming scarcer in the world's markets every week, although there are many who cannot understand how gold can be scarce when it can be borrowed so cheaply. The late Mr. Jevons was greatly puzzled by this problem. "The really knotty point remains unexplained," he once wrote, "that is, the exact relation of gold (i.e. money) as a commodity on sale to gold (money) as the most perfect form of free capital." It is certain that high prices and a high bank-rate go together, and the converse is also true, that low prices and a low rate of discount are generally found together. When prices are falling trade contracts. Men drop the least profitable parts of their business, and as this process goes on fewer bills are created. The banks are but seldom appealed to for discounts and advances. The supply of loanable capital increases, and, as it increases, the rate of discount drops. When prices are high, more money is required to carry out the same amount of business, and the manufacturer, instead of contracting his operations, increases them. More money is wanted from the banks than usual, and the available supply of loanable capital becomes smaller. Side by side with this natural process many people believe that there is another going on, and that the actual quantity of gold in the world has become too small for the world's wants. If this be the case it is easy to see that every branch of human industry must be affected. Take the case of agriculture. It is impossible materially to reduce the cost of producing corn in an old country, or, for that matter, in a new one. In good times and in bad times the farmer spends about the same amount of strength and money on his land. If, then, the value of gold has increased—which is almost another way of saying that if prices have fallen—the farmer feels the drop more keenly even than the trader, because, unlike the trader, the farmer cannot reduce the cost of production. Every form of trade suffers as it is suffering now. This is not the first time that a scarcity of gold has led to commercial depression. Between 1809 and 1849 prices fell in the ratio of 100 to 41, with, of course, a rise in the value of money and consequent depreciation of labour and its produce to the extent of 49 per cent., or about three-fifths. Writing at the beginning of the depression in 1830, Mr. Jacob said that "in this country, where the cultivators of the soil are a class of capitalists distinct from proprietors their capitals have generally been diminishing; whilst the decline of the mines has been proceeding, and whilst the application of their produce to other purposes than those of coin are increasing." The result was universal depression—depression not confined to Europe. The cultivators of land in North America asserted that the prices of their produce yielded them no profit. It was the same in South America, and in the East and West Indies. If the mass of commodities increased at a greater rate than the metals we should expect that prices would decline, but if these metals increased faster than the whole of the other commodities an advance in the prices of commodities would follow generally. M. de Laveleye attributes the long adversity which befell Europe and America for a dozen years after 1819—at the beginning of which period England has resumed specie payments and demonetised silver—to the scarcity of gold. Writing of England, he observes that "this period of 1820 to 1830, which ought to have been one of unparalleled prosperity, was characterized, on the contrary, by cruel distress." The fall of prices was so severe that Brougham proposed to reduce taxation proportionately, and in 1822 the idea was even put forward of reducing in most monetary contracts the sovereign from twenty shillings to fourteen. The distress of the labouring classes was manifested in England by bread riots, by threatening Chartist processions, and by demands for help addressed to Parliament. Armed repression had repeatedly to be resorted to, and in the United States things were just as bad. Assuming the scarcity of gold to be the cause of most of our present troubles, I confess I see no remedy in bimetalism when the price of silver is dropping every day, but a thorough inquiry into the whole question could not fail to be productive of enormous good.

The form in which a scarcity of gold makes itself visible to the eye is in a universal glut of commodities. The things which men exchange for money are more plentiful than money. In no other sense can it be said that their is over-production, for it cannot be pretended that more commodities are being produced than mankind could absorb if it had the means of doing so. If production was too great the remedy for the evil would be the curtailment of that production, but this is an impossible remedy. The farmer and the manufacturer who have rents to pay, plant to keep up, and customers to keep together must go on, and their workpeople, who otherwise would starve, have to go on working, although in many cases at reduced wages. A writer in the *Daily News* observed two years ago that "a manufacturer, whose concern is by no means a large one—400 looms and 18,000 spindles—tells me that unless he was losing 50*l.* a week (2,600*l.* a year) it would not be worth his while to stop, for a closed factory is a veritable white elephant. There is first of all the loss of capital lying idle, and on cottages, the rent of which cannot be collected; then the mill must be watched and warmed, the roof kept watertight, and the machinery free from rust; and, when all this is done, the start must be a time of trouble and confusion—the oil is stiff on the wheels and bearings, the rooms are cold and damp, yarns and cloth in operation are deteriorated, workpeople are scattered, and weeks may elapse before a shattered organization can be restored and a mill brought once more into satisfactory working order." All this trouble and cost need not be increased until it can be shown, as it never has been yet, that there is over-production in any other sense than that the world's means of exchange have not kept pace with the world's production of commodities. I do not, as I have said, believe that the remedy is to be found in bimetallism—at least, not for the present—and I am not quite sure that whether there is a permanent remedy of any kind. The question is, however, well worth examination by a Royal Commission, and I hope such a body will be promptly appointed.— *British Trade Journal.*

Hot alum is the best insect destroyer known. Put it in hot water and let it boil until all the alum is dissolved. Apply hot, with a brush, and all creeping things are instantly destroyed without danger to human life or injury to property.

In making a sort of bread known as Maryland biscuit it is necessary to violently pound the dough for a long time. This is all right in Maryland where the work is done on the ground floor, but in New York apartment houses persons attempting this industry are requested to desist, for fear of bringing down the building.— *Mechanical Engineer.*

VARIOUS tests of the new French horseshoe, which is made entirely of sheep's horn, show its value for horses used in towns and known to have an unsteady foot on pavements. Horses thus shod have been driven at a rapid pace on the pavements without slipping. Besides this advantage, it is said to be more durable and but a trifle more expensive than the ordinary horse shoe.

THE difficulty that is experienced in some chimneys with a strong down draught is said to have been entirely obviated by an English device. It consists of a number of grooved rings placed over each other with spaces between, and made of metal or clay. The grooves are so shaped that when the wind strikes them it is so deflected that it draws air up the chimney, and in this way effectually prevents down draught.

ACCORDING to the calculations made by a scientific writer lately, it requires a prodigious amount of vegetable matter to form a layer of coal, the estimate being that it would really take a million years to form a coal bed a hundred feet thick. The United States has an area of between 300,000 and 400,000 square miles of coal fields, 100,000,000 tons of coal being mined from these fields in one year, or enough to run a ring around the earth at the equator five and one-half feet wide and five and one-half thick, the quantity being sufficient to supply the whole world for a period of 1,500 to 2,000 years. When the coal is burned for illuminating purposes, the estimated waste is some ninety per cent.; in the heating of houses, sixty-seven per cent is lost.

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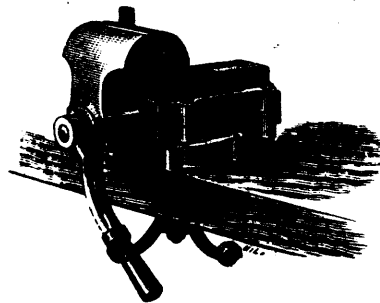
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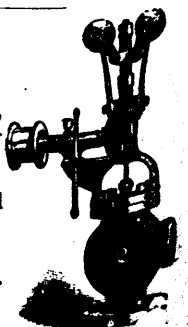
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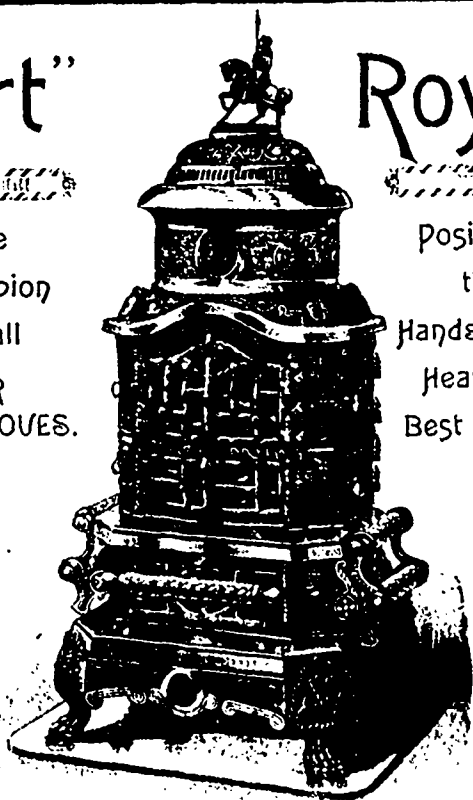
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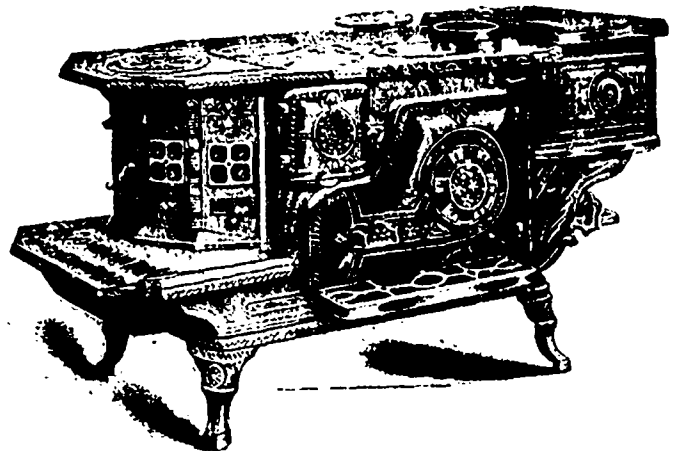


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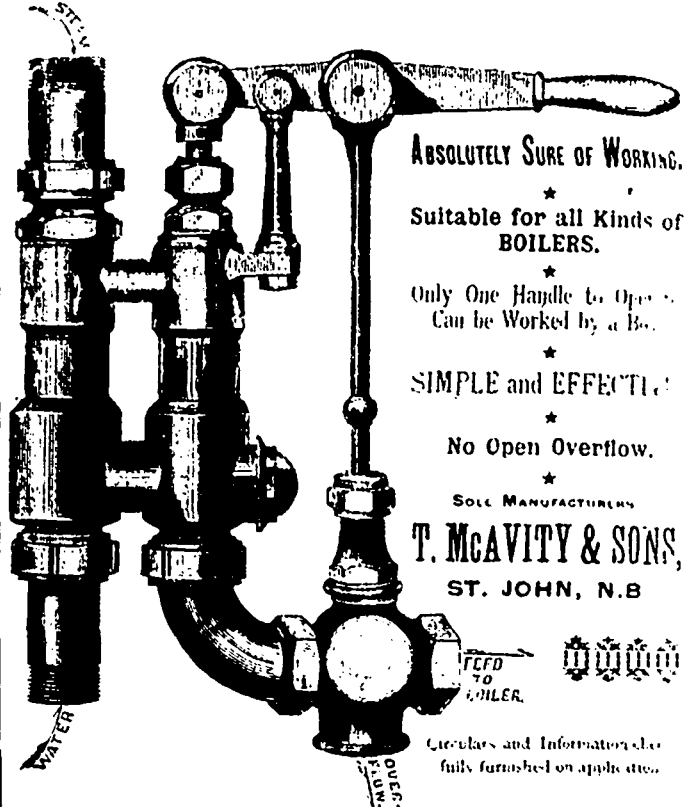
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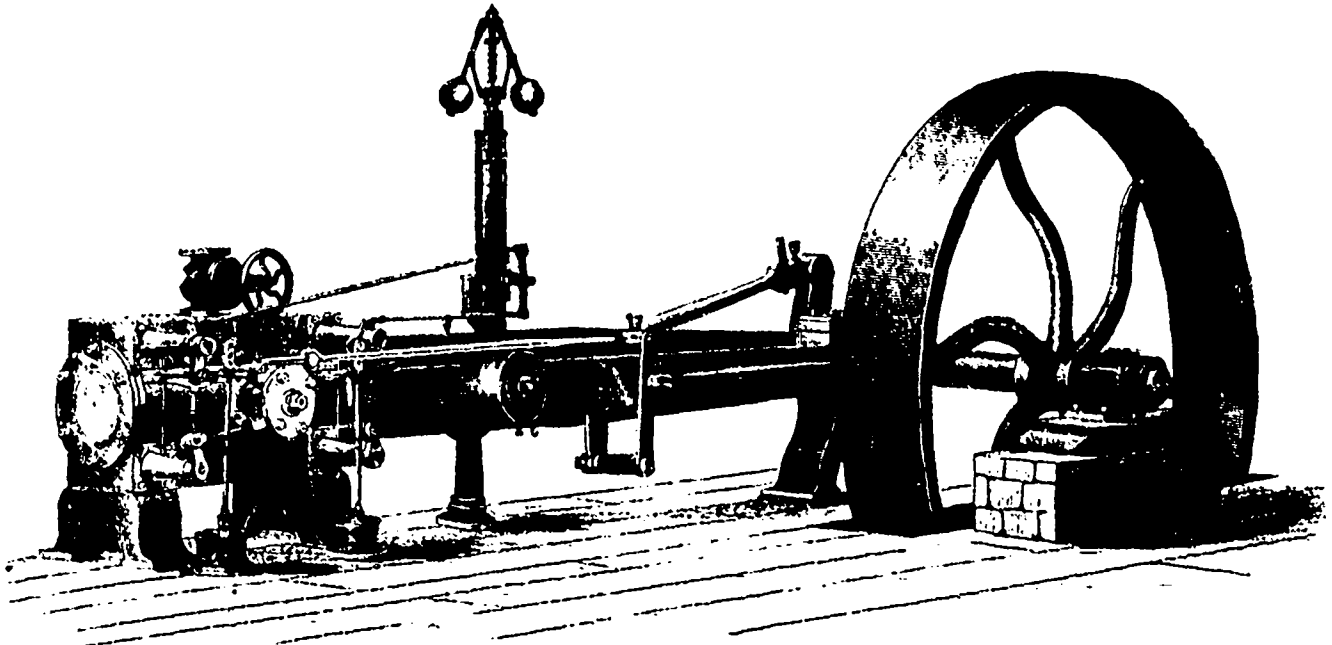
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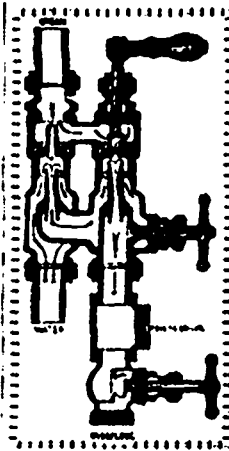
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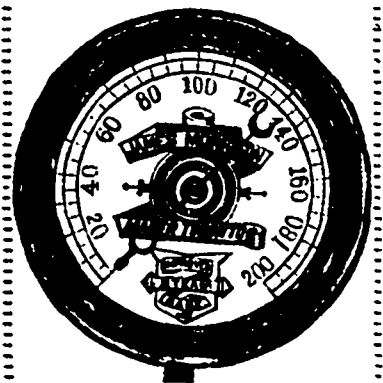
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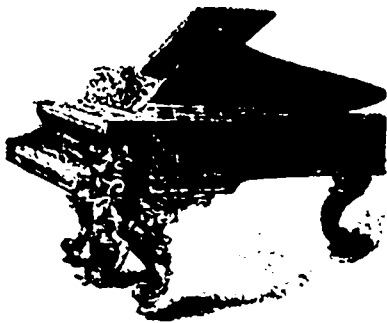
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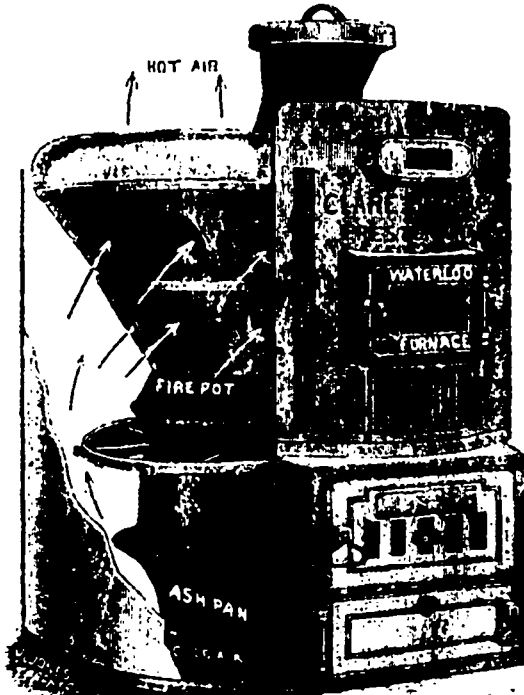
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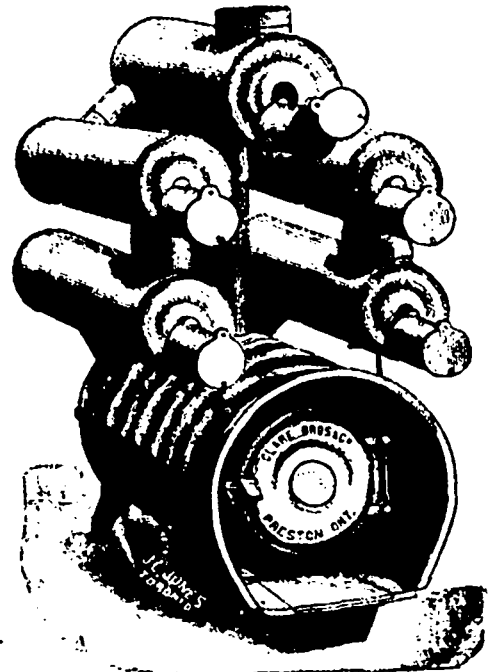
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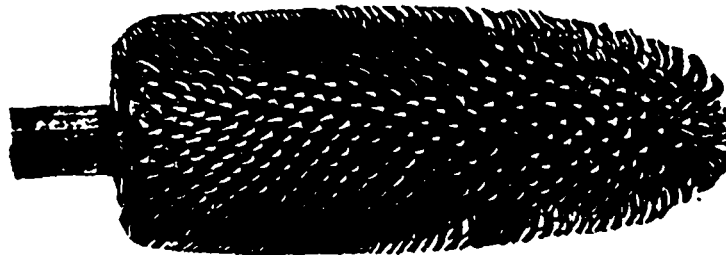
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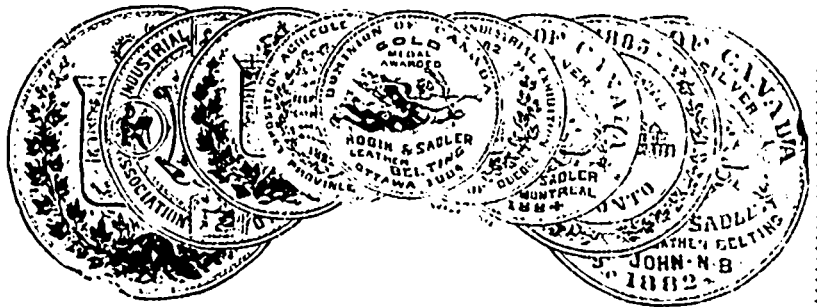
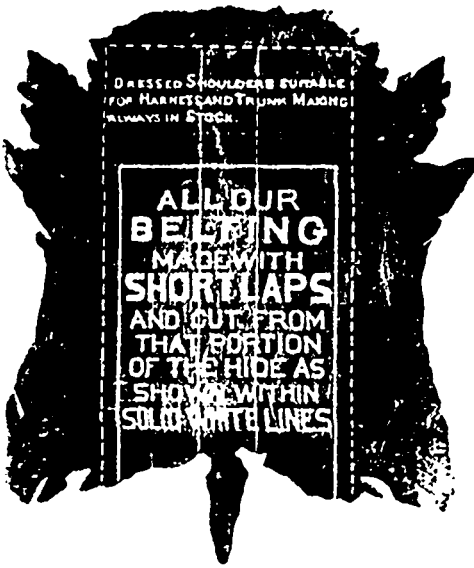
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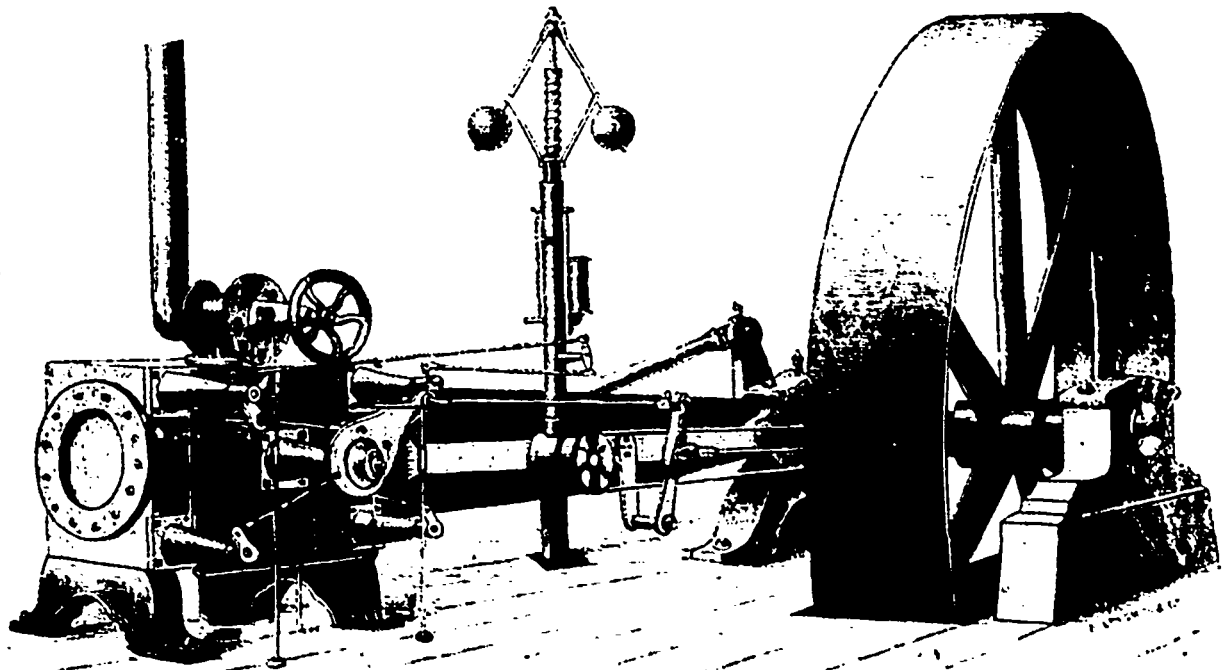
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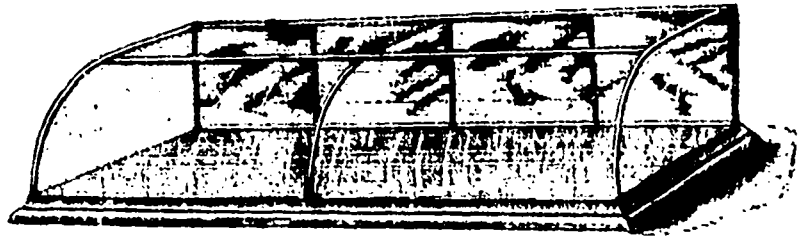


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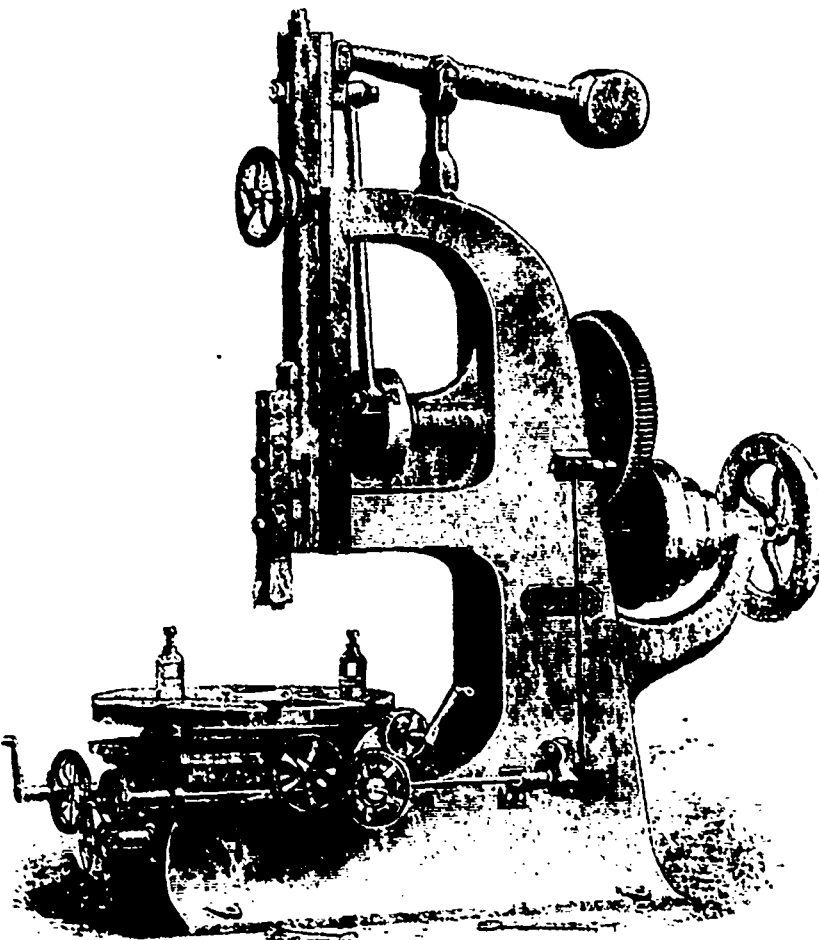
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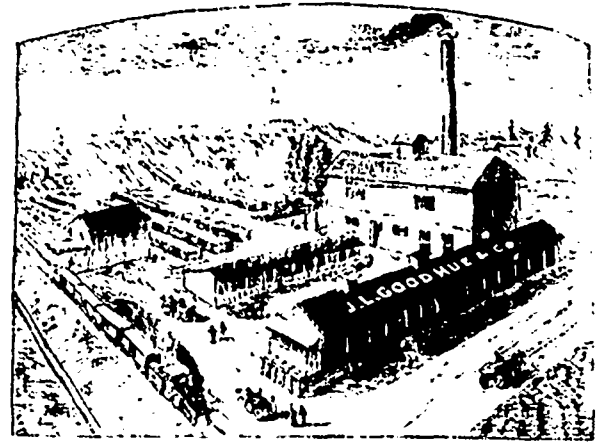
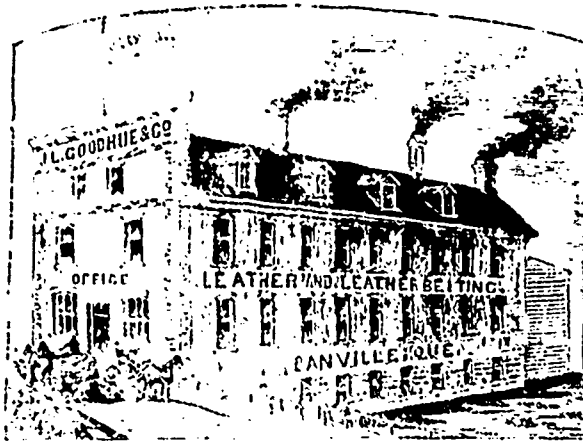
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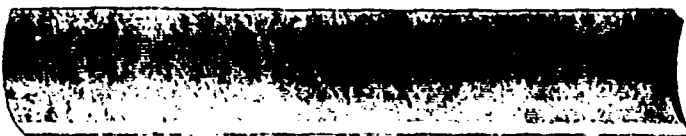
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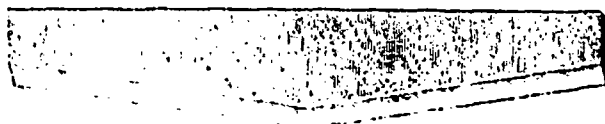
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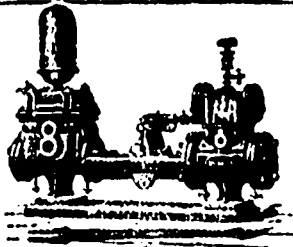
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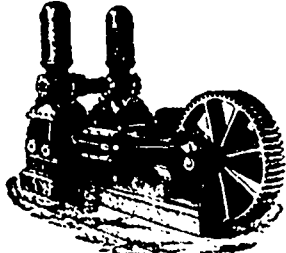
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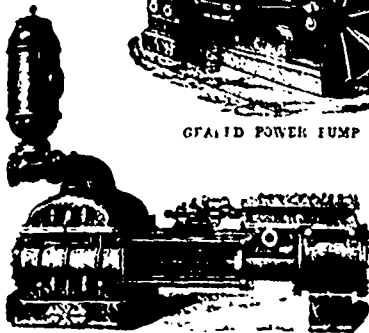
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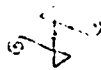


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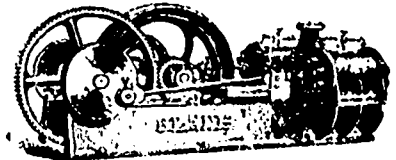
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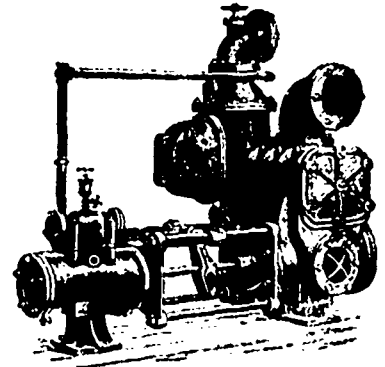
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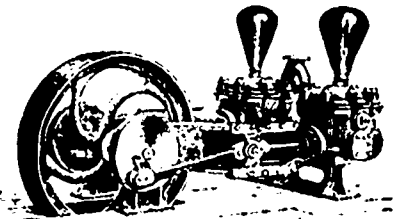
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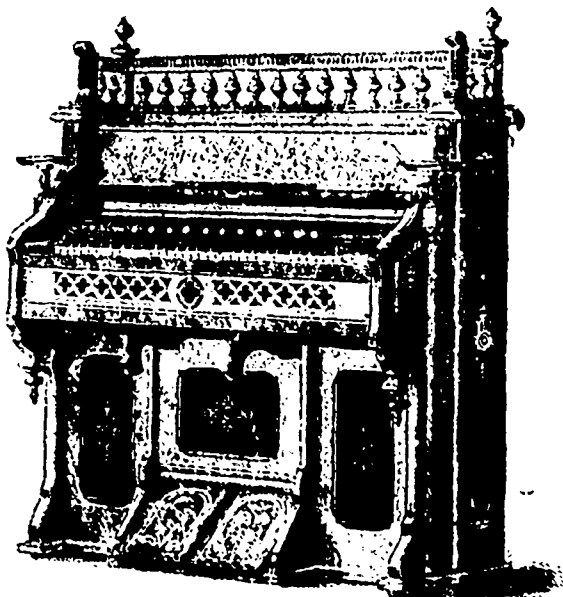


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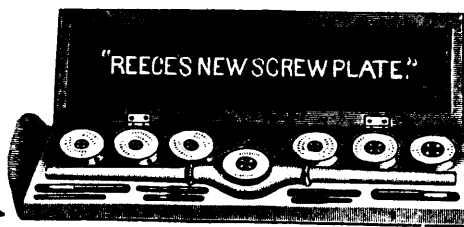
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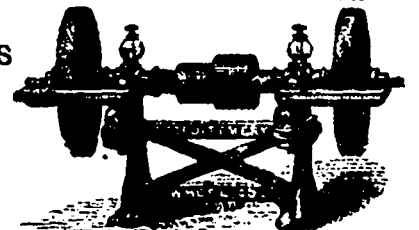
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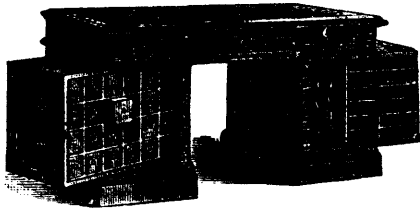
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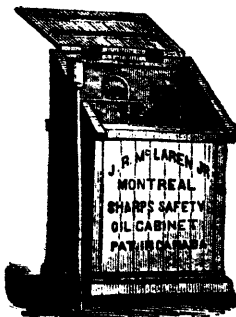
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