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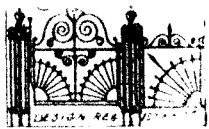
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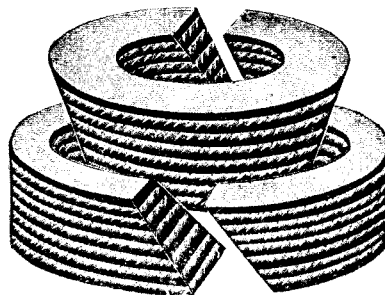
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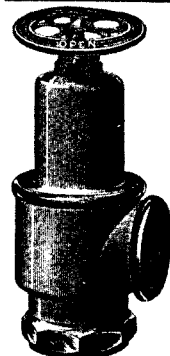
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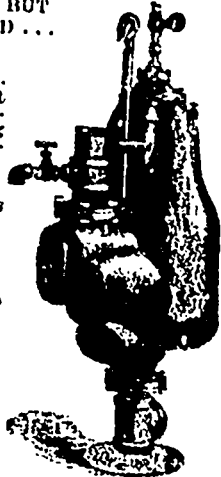
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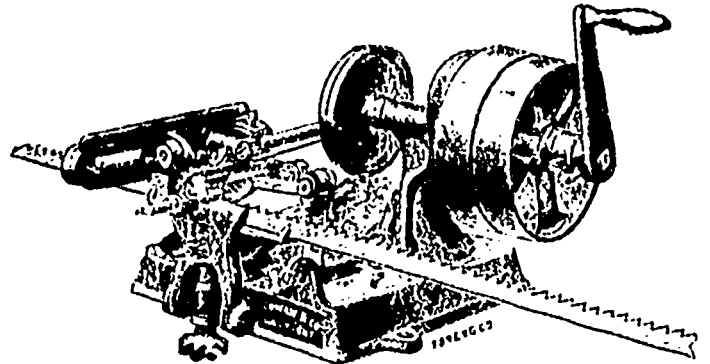
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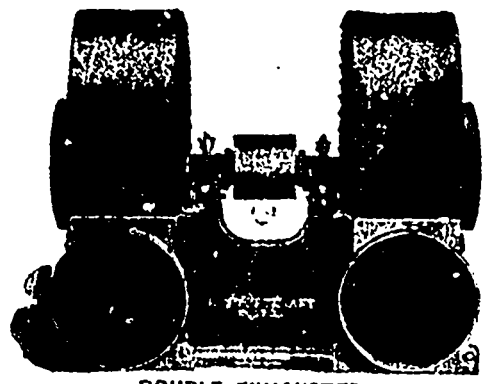
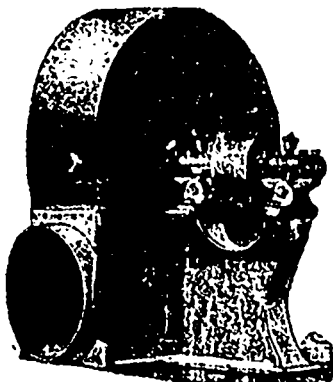
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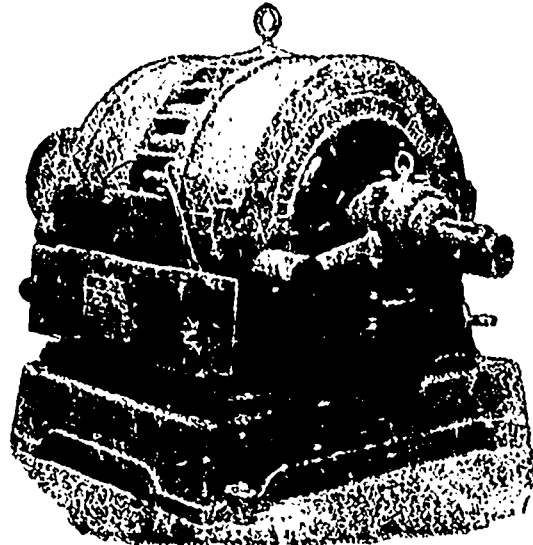
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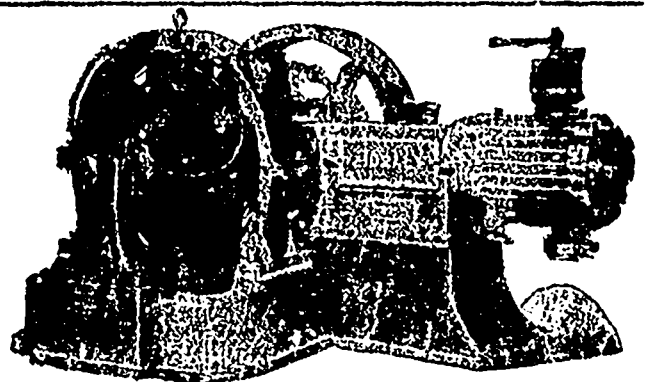
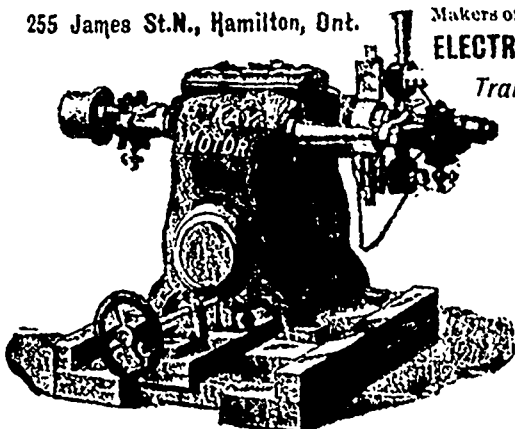
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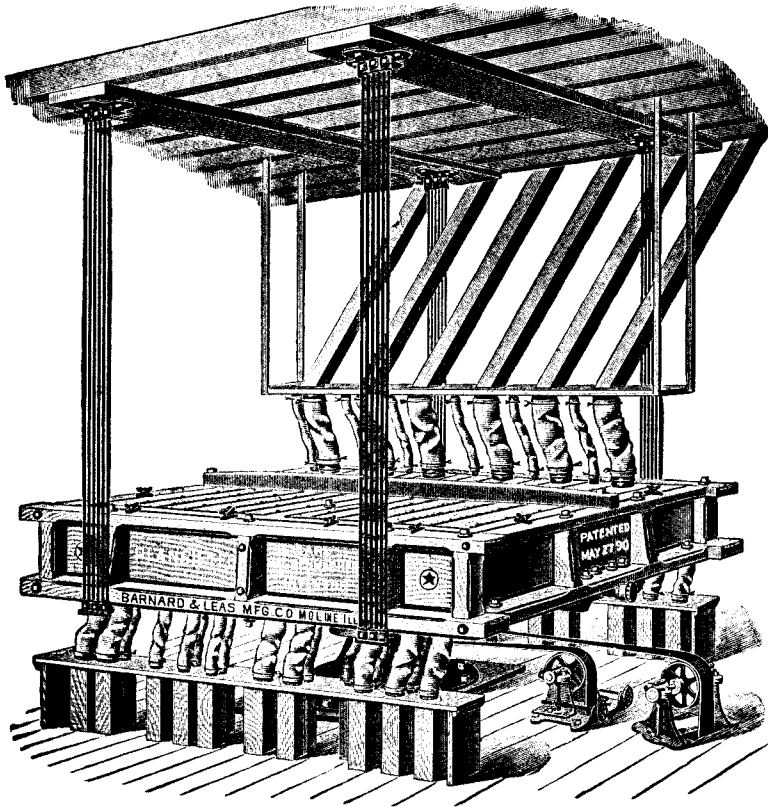
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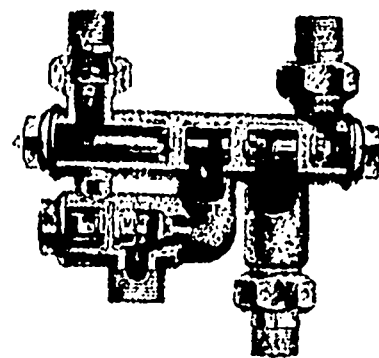
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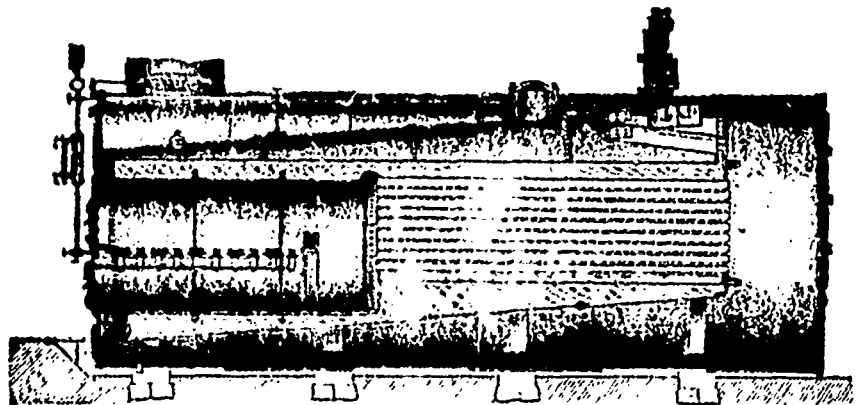
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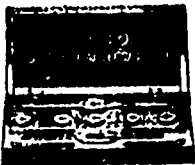
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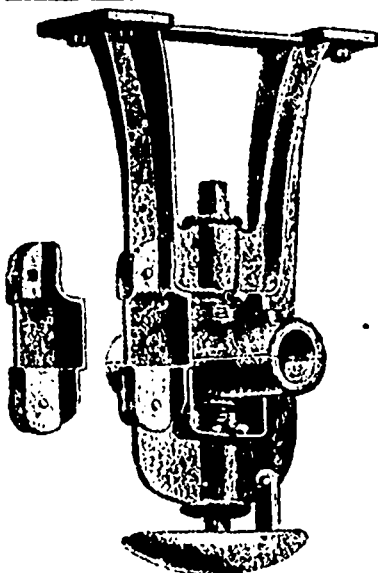
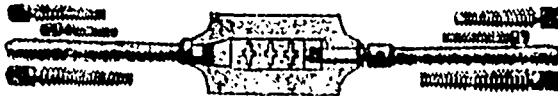
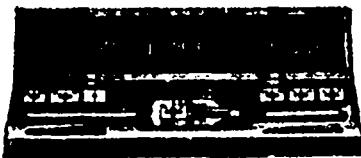


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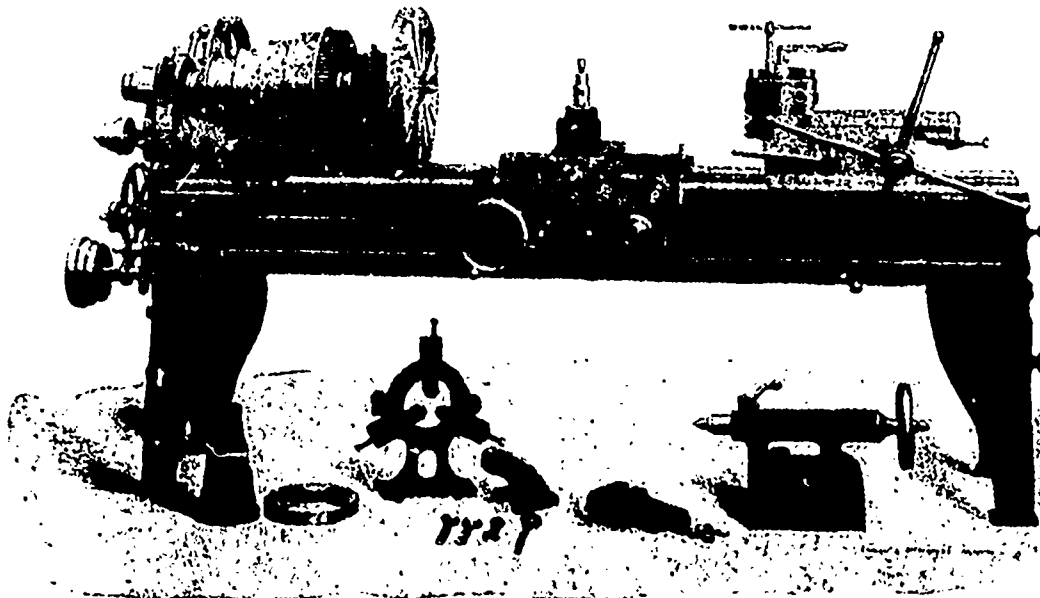
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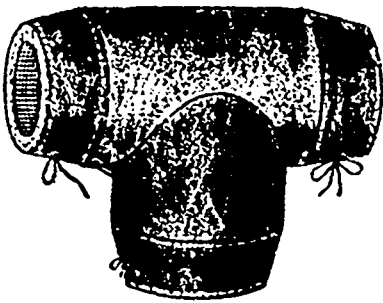
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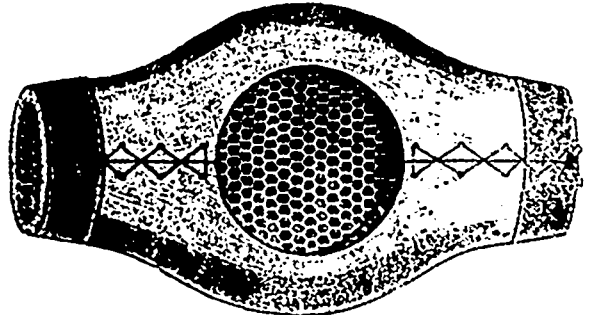
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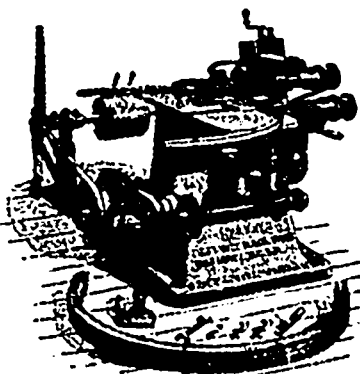
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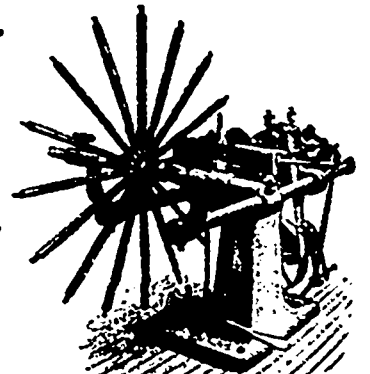
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OUR TARIFF EDITION.

According to promise made in our last issue, we have pleasure in reproducing many more of the kind expressions of our friends regarding the Tariff Edition of THE CANADIAN MANUFACTURER, which contained the full text of the 1897 Canadian Tariff, the 1897 United States Tariff, the British Tariff, the Newfoundland Tariff, and the British Merchants' Marks Act, issued by us on August 6th.

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PREFERENTIAL TRADE WITHIN THE BRITISH EMPIRE AND THE CORDEN MEDAL.

In a recent issue, we published an article from the British Trade Journal, of London, on the subject of preferential trade within the British Empire. We showed in evidence of the wide circulation and influence of that journal, that it is published in the Spanish, French, Dutch, and Italian languages, and that it was about to issue a Japanese edition. From its current number we learn that it has received the official authorization of the Russian Government for printing and publishing a Russian edition in Moscow. In its September issue is an editorial headed:—"The end of the German and Belgian Treaties and After." It prefaces the article by the following quotation from its issue of April, 1894:—"Let us ask the Australian Colonies to pass a bill through their legislature putting an end to this anomaly, and to follow it up by a tariff giving preferences to British goods as against those from Germany. If Mr. Reid bears such a mandate as a bill of that kind would give him, the question of our treaties with Belgium and Germany would at once be raised, for under those the Australian Colonies would be unable to put such a tariff into effect."

It says further:—"It was left to the Canadian Government just three years after our suggestion was put forward to carry it into effect, and the result has been precisely as we intimated it would be. The preferential treatment which Canada offered in last April could not be accepted by the Mother Country, the Belgian and German treaties standing in the way."

"That the hand of the British Government was forced, and on July 30th, last, it was announced from Berlin that Lord Salisbury had intimated to the German Government that the Treaty of 1865 would be terminated at the end of July, 1898. A few days afterwards news came to hand that the Belgian Government had received a similar notice to terminate the Treaty of 1862, announcements which were immediately confirmed by a statement made by Mr. Carzon, the Under-Secretary of State for Foreign Affairs in the House of Commons. The practical effect of the steps taken is, that for the next twelve months British goods cannot alone take advantage of the twelve and a half per cent. reduction offered them in the general tariff, but that the same favor must be also shown to Germany, Belgium, France and many other countries, with the exception of the United States. At the end of July, 1898, however, the discrimination in favor of British goods to the extent of twenty-five per cent. in the Canadian tariff can be applied to such goods alone, unless, in the meantime, Germany, Belgium and the other countries have conceded advantages to Canada in their tariffs, and thus obtain the same advantages as Great Britain. The last named contingency, however, is one not likely to occur. It is practically impossible for Belgium, Germany or France, in which the agricultural interest is defended by duties, to allow the cheap

grain, meat and dairy produce of Canada to enter into their markets as freely as they now enter into ours. Hence British manufacturers may, with confidence, look forward to preferential treatment in the Canadian market in August, 1898, an advantage, which, amounting as it will to twenty-five per cent., should insure a considerable impetus over the trade of their foreign manufacturing competitors in the markets of British North America.

How completely results have vindicated the position which Sir Charles Tupper took during the debate in the House of Commons in Ottawa, on the subject of Canada's obligations under these English treaties with Belgium, Germany and other countries. What a commentary they offer on the incapacity of the Canadian Government in dealing with international law.

The British Trade Journal refers to the flood of discussion which took place in that country over the denunciation of these treaties and its probable effects. On the Continent anxious fears were entertained as to the intentions of the British Government and the possible advent of a protective era throughout the British Empire. In France, especially, attention was given to the serious peril to which its trade would be exposed were England to raise a protectionist barrier against foreign products. England takes more than a third of the total exports of France, while France only takes fifteen per cent. of its imports from England. France also pays many bounties directed against English trade, such as on sugar, cotton yarn, shipbuilding and navigation, while the fishermen of England and Canada are excluded from the great markets for fish in Italy and Spain by the enormous bounty allowed on fish taken by their French rivals. Our contemporary says of these discussions:—"Nothing has occurred which more effectually proves the truth and common sense power of Lord Salisbury's argument that the idea that we shall never, under any circumstances, depart from our system of direct taxation, and that the worm will never turn, is most detrimental to our interests when commercial treaties have to be negotiated or when bounties or opposing tariffs must be protested against. Even economists and journals who have hitherto been pledged, body and soul, to our present system, admit that there will be reason for satisfaction if the impression caused by the present fear of the change of policy on the part of England is allowed to continue."

The Journal, in referring to the conferences held in June and July, with the Colonial Premiers, and the resolutions passed favoring the denunciation of the objectionable treaties, and the consideration by the Colonies of the practicability of improving the trade relations between them and the Mother Country by means of a preference being given in the Colonies to the products of the United Kingdom, remarks that "Nothing appears to have been decided with reference to the treatment of Colonial goods in the Mother Country, which would take the form of a preferential tariff for Colonial products as against those from foreign countries. Such a policy would directly touch the farmers of the United States, the vine and fruit-growers of France, and the beet sugar-bounty men of Germany and Austria." It says:—"The time for such a step is not yet."

The Journal is too intelligent to be deluded by the high flown sentiments of Mr. Laurier, who pretends that the offer of preferential tariff treatment from Canada was purely owing to gratitude for past political favors from England. It says:

"It is only reasonable to suppose that when once the British Colonies have given British manufactured goods a preference in their tariff over the manufactured goods of foreign countries, the matter will not rest there. The next step must be one of reciprocity. Canada, Australia and the Cape will very properly ask, What advantage is it to us that we give your manufactured goods this preferential treatment, unless you at home respond by similar discrimination in favor of British colonial produce? Then the Home Government will have another problem to solve, and they will be likely to solve it only in one way. That is the nightmare from which the foreign exporter is now suffering. He sees it as a specter approaching from the distance, and he fears it will end the halcyon days of direct taxation in Great Britain. It will mean that the idea of national or Imperial solidarity which has so long influenced the legislation and the economic policy of the United States, France, Germany, Russia and other countries, must at last be extended to the British Empire.

We have frequently directed attention to the fact that every trade journal in England entertains the opinion that preferential tariffs on the part of the Colonies involve an equivalent preference on the part of Great Britain. During the grand Jubilee celebrations in England it may have been all right and proper that the accomplished and eloquent Premier of Canada should dilate on the loyalty of Canadians, their affection for Her Majesty, and their attachment to British Institutions. It may have been quite fair that Sir Laurier should claim credit for the fact that Canada granted preferential tariff treatment to England without any stipulation for an equivalent. But it was an act of supreme folly for him to tell the British Government and people that Canada neither hoped for or desired any preference for its products in the markets of the Mother Country. From the day he landed in England until the day he left, he seems to have been oblivious to the fact that in his mission he was the representative of all Canada. He seems rather to have imagined that he was sent there for his own self glorification, and in the interest of his party. There are two parties in Great Britain (apart from their conservative or reform principles); the one consisting of those who look upon the colonies as valuable adjuncts to the British Empire, for which every exertion should be put forth to strengthen in their political connection, and to extend their commercial relations with the Mother Country, the other party consisting of those who during the past fifty years have persistently treated the colonies as not only useless, but even dangerous and expensive dependencies. Need we refer to the course of the latter during the Indian Mutiny, when they advocated the policy of "scuttle," under which Britain should rather abandon its magnificent Eastern Empire, than expend the money required for its preservation; or to their attitude with respect to the Confederation of Canada, which they viewed with the greatest distrust, in craven dread of supposititious hostility on the part of the United States? One would naturally have expected that the representative of Canada should unhesitatingly have done everything in his power to strengthen the hands of the former, and discountenance the mercenary principles of the latter. But no; Sir Laurier is a Reformer first, last, and at all times, and he unreservedly lent all the influence his position and prestige conferred upon him, to the support of the anti-colonial, ultra free trade party in England. When he arrived in England he found a large and influential section of the politicians and press full of enthusiasm over the preferential policy of Canada, and energetically discussing the corresponding duty of finding some equivalent advantage which Great Britain might confer on Canada, even if by so doing it might be necessary to modify the free trade policy of the past fifty years. The complaisant Sir Laurier, following up his usual policy of conciliation, which means abandonment of claims, relieved the merchants, manufacturers, politicians and the press from all necessity of further discussion, by informing them that they were troubling themselves without cause, because Canada neither wished for nor would accept

any favors. It is little wonder that he achieved much popularity through such a surrender of Canada's claims. Time will show the people of Great Britain that he did not, in his representations, represent the sentiment of Canada, nor even the intelligent sentiment of his own party; and, quite likely, not even what will be his own sentiment in 1898. It must not be forgotten that he is a very chameleon on commercial policy. Originally a thorough protectionist, later a supporter of commercial union with the United States, then, again, of unrestricted reciprocity, still later an advocate of revenue tariff, at present in favor of free trade as it is in England; and looking forward to 1898 we may find him a supporter of—what?

Sir Laurier appears to know so little of the commercial history of Canada as to be ignorant of the powerful stimulus which the former preferential treatment of our products in Great Britain imparted to every industry in the country; he appears to be ignorant of the present condition and requirements of Canada as to be unable to discern the incalculable advantages which preferential treatment in Great Britain now would confer on the railway, canal, agricultural, manufacturing, commercial, and all other interests of the Dominion. He knew, however, that free trade is the popular cry in England. His vanity clamored for a little of the flattery and adulation on which it had been so lavishly nourished in Canada. That, although the future prosperity of his country should be endangered, so be it if thereby he be honored. Who can deny that he achieved great honor and distinction? Let the sceptical abandon all criticism, when they reflect that Sir Laurier has returned to Canada with a Cobden medal as an evidence of his political sagacity and high statesmanship.

AMERICAN COMMERCE AND THE BRITISH FLAG.

The American Economist publishes a two page tabulated statement showing the value of imports and exports of merchandise of the United States from and to all the other countries of the world for the last two fiscal years. Without comparison with the similar trade of any other country the showing is a good one.

We analyze the statement showing the importance of that trade with countries under the British flag as compared with that of all other countries, the figures being those for 1896.

	Imports.	Exports.
Total Europe	\$418,639,121	\$673,043,753
United Kingdom	169,963,434	405,741,329
Per cent. of total	41.8	60.0
Total North America	68,683,179	89,982,291
Bermuda, British Honduras, British North America	41,934,886	62,581,708
Per cent. of total	61.0	69.0
Total West Indies	58,193,340	26,545,205
British	10,800,618	8,734,153
Per cent. of total	18.5	32.5
Total South America	108,828,462	36,297,671
Guiana	4,407,244	2,214,704
Per cent. of total	4.0	6.0
Total Asia	59,592,318	25,630,029
Aden, British East Indies, Hong Kong	23,445,782	8,426,729
Per cent. of total	26.0	32.8
Total Oceania	24,614,968	17,197,229
British Australasia	7,579,259	12,766,674
Per cent. of total	30.8	79.0
Total Africa	11,172,979	13,870,760
British Africa, British Egypt	9,775,944	11,506,535
Per cent. of total	87.5	83.0
Grand total	779,724,074	882,606,938
British	267,907,167	511,971,842
Per cent. of total	34.6	58.2

Total foreign trade of United States	\$1,662,331,612
Total foreign trade done with British flag	779,879,009
Per cent.	46.8

We can easily appreciate the desire of the American Economist to do as much trading as possible with the rest of the world, to have as much of that trading as possible done in American ships, and as far as possible to have every cent and requirement of the American people supplied at home by American workmen and American enterprise. This is a laudable ambition, but we regret to observe that our respected contemporary thinks it necessary upon all occasions to refer to Great Britain as being, in all its commercial transactions, the personification of objectionable methods, and the representative of a situation not at all in accord with those that obtain in the United States, and we also regret to find that a large and influential portion of the American press, American statesmen and politicians and the American people seem to imagine that they cannot possibly do justice to themselves unless they engage constantly in a vigorous twisting of the British lion's tail. The diversion, however, does not annoy the lion, however much our neighbors may enjoy the twisting.

We allude to this to show that although the United States may be highly gratified at the volume of its foreign trade, that trade would be sunk to very inconsiderable proportions were it not that countries in all parts of the world over which flies the British flag are such large consumers of American products, and upon which the United States relies for merchandise that cannot be had from any other countries on as favorable terms. It is no doubt flattering to Uncle Sam to know that sixty per cent. of the exports of the United States, consisting chiefly of agricultural and farm products, find sale in Great Britain, but he should remember that his is not the only country capable of catering to that requirement, and that that market might be closed to him if the tail-twisting were carried too far. It is true that the United Kingdom supplies to the United States less than forty two per cent. of its imports from Europe, and that Guiana supplies only four per cent. of the imports from South America, but it should be remembered that the merchandise from Great Britain represents the finest and best products of British manufacturing industries, while the ninety-six per cent. of imports from South America represent raw sugars, hides and other unmanufactured products.

When it is considered that more than forty per cent. of the entire foreign trade of the United States is done with countries over which flies the British flag, it is surprising that the tail-twisting should be persisted in.

BRITISH SHIPPING.

A great many of our free trade contemporaries, in comparing the insignificant showing of the United States in the matter of its merchant shipping with that of Great Britain, attribute the paucity of the one to the policy of tariff protection that prevails there and the abundance of the other to the practice of Cobdenism. It is quite susceptible of proof that neither of these theories are correct, for we know that long before Mr. Cobden was known in public life, Great Britain was Mistress of the Seas.

"The winds and seas are Britain's wide domain,
And not a sail but by permission spreads."

It was under a system of protection far more drastic and

comprehensive than Mr. McKinley ever dreamed of introducing in the United States that elevated Great Britain to the zenith of her glory as a maritime power. On the other hand, we know that at the time of the breaking out of the rebellion some thirty-five years ago, and for many years previous to that time, a degree of prosperity characterized the American ocean carrying trade that was remarkable and almost marvelous. This enviable condition was due in large part to the system of protection that prevailed there even then, but which was not so pronounced as at this time, but to the shipping laws that were then in force, but which have since been repealed, may be attributed most of the credit that attached to American shipping during that epoch. Those laws bore quite a similarity to those of Great Britain under which that country attained such prosperity, the effects of which in both cases were so similar.

It is quite true that under free trade Great Britain's mercantile marine has prospered, but if that prosperity is the result of free trade, why is it that the mercantile marine of other countries is showing equal advancement?

In many respects Germany is quite as pronounced in its practice of protection as the United States, and that country, in its shipping interests, is making relatively even more rapid advances than Great Britain. It is the ambition of Germany to become even a greater maritime power than Great Britain, and to attain that end it is using many of the methods that proved so successful with Great Britain, and there can be no doubt that if the United States was to adopt similar methods the results would be similar.

Hamburg is an important German shipping port, from which most of the finest ships of that country sail, yet it is a notorious fact that for many years and until a very recent date, the tonnage of British ships trading to that port was greater than that of German ships. This some of our friends are prone to attribute to free trade, but under the stimulus of protection and the British method of encouragement, Germany is fast wresting the Hamburg trade from its British rival. A German contemporary, the Frankfurter Zeitung, referring to the shipping returns of Hamburg in 1896 says that in consequence of the cessation of some English carrying trade, and of the founding of their own direct lines of steamers, for the first time, in 1896, the tonnage of German ships had surpassed that of Great Britain. Formerly England possessed, in registered tonnage, 45 per cent. of all flags. But since 1893 the figures are as follows:

Ships entered at the port of Hamburg:

	German tons.	English tons.
1893	2,445,536	2,763,964
1894	2,643,044	2,943,405
1895	2,722,392	2,822,363
1896	2,914,913	2,734,528

Mr. Ward, British Consul-General at Hamburg, in a report to the Foreign Office, mentioned that in 1896 there was, over 1895, an increase for Germany of 142,521 tons of shipping, but for Great Britain a decrease of 27,835 tons, making the British proportion of the whole 35 per cent. only in 1896. He also notes that the mercantile marine of Hamburg increased last year by 32 sea-going ships of 52,812 tons, making that port's present total 673 ships, representing a shipping of 712,896 registered tons. Moreover, a further 28 ships of 145,000 tons are now being built for the Hamburg mercantile fleet. It is quite evident that Cobden Club medals are not held in very high esteem in Germany.

THE BENEFITS OF PROTECTION

The undignified acceptance of Cobden Club medals by knightly gentlemen occupying high rank, and the conspicuous display of them upon knightly bosoms, is no proof that free trade is the correct policy for any British colony to adopt. It proves nothing more than the vanity of the wearer, and is no truthful indication whatever of the sentiments of the people.

In offering some proofs that great benefits flow from protection, and in alluding to some quotations which follow, the American Economist says that in no section of the globe can the difference between the effects of the protective tariff and free trade policies be more strongly contrasted than in the adjoining colonies of Victoria and New South Wales in Australia. The older colony, New South Wales, adheres rigidly to the free trade doctrine of the mother country. The younger and more progressive colony of Victoria has long since adopted the policy of Protection. The "free trade law" seems to exist in New South Wales as well as in the United States, and in order to refute some gross misrepresentations uttered by a member of the New South Wales Legislature, The Economist quotes from *The Age*, of Melbourne, of June 24th, epitomizing the following summary of facts which constitute the chief elements of national prosperity:

1. That our (Victoria) population, measured by density, is nearly four times that of New South Wales, and is nearly equal in absolute numbers, notwithstanding a sum of £16,000,000 of loans spent in New South Wales more than in Victoria, besides £194,430 spent for immigration in the mother colony, and a land revenue of £1,607,000 greater than that of Victoria.

2. That Victorian dwellings are more numerous than those of New South Wales, with fewer of the poverty stricken class.

3. That education is more widely diffused, with almost twice as many libraries, and more than twice as many books.

4. That the destitute asylums of New South Wales have almost twice as many inmates as ours, and cost almost twice as much in maintenance.

5. That our railway enterprise has been greater, we having a mile of railway to every twenty-eight square miles of territory, as against one to every 119 square miles in New South Wales.

6. That our post offices are more numerous absolutely and relatively.

7. That the value of our crops is greater by more than £1,000,000 sterling; that we more than double New South Wales in wheat; are more than eight times greater than her in oats; nine times in barley; nearly twice in potatoes; four times greater in vines; nearly twice in hay, and over 1,000,000 acres more in the sum total of all.

8. That the garden and orchard crops of Victoria are worth £19 4s. per acre against £9 2s. in New South Wales, and an aggregate of £816,415 in Victoria, against £479,756 in New South Wales.

9. That New South Wales sheep in 1895 were 47,617,687, against only 13,180,943 in Victoria, owing to the wide extent of pasturage over the Murray; but that even in this item, while Victorian flocks are slowly increasing, those of New South Wales have had a disastrous decline, according to Mr. Fenton, of 15,323,053 since 1891 to 1895, and a still more fatal one since, according to general estimate.

10. That while the totals of New South Wales cattle have declined since 1861 by 121,866, the Victorian increase has been 1,205,808.

11. That while the increase of New South Wales horses since 1861 has been 254,723, Victoria's increase has been 347,490.

12. That our dairy cows are more numerous and our dairy product greater.

13. That our swine are more numerous and their increase three times as large.

14. That in the details of our industry Victorian bread winners are greater, and their dependents fewer.

15. That in manufactures and products are greater, our factories worth more, and the hands employed greater by some 13,000.

16. That even in primary production Victoria has £181 3s. 11d. to the square mile against £82 7s. 11d. in New South Wales.

17. That the facts from the probate returns show Victorian accumulated wealth to be greater and more widely diffused.

18. That Victorian indebtedness is very much less than that of New South Wales; while her foreign investments and income from them are very much greater.

19. That the value of Victorian taxable property is much greater than in New South Wales, and its annual value £11,676,079, against £7,895,645.

20. That all this progress has been accomplished, notwithstanding that the New South Wales revenue from land, judged by the year 1895-96, is £1,607,191 larger in the mother colony than in Victoria.

Here are a score of conclusive proofs that agriculture, industry and investment are more prosperous in the protection colony of Victoria than in its free trade neighbor. It is a great group of facts, and protectionists are never afraid to present facts, while their free trade opponents wriggle and squirm only with theories and generalities. Turning to the question of foreign trade, which, the free traders assert, is "a direct test of a nation's progress," *The Age* refutes this idea and ably proves its point as follows:

As a matter of fact a nation's foreign trade is often merely its carrying trade, and is not even in a remote degree an index to its wealth production any more than the railway porter is a rich man because he carries so many people's luggage. This can be made evident by a glance at the following table, taken from Mr. Coghlan's latest edition of the "Seven Colonies."

Country.	Total trade per head, 1883-94.
United Kingdom.....	£19 7 6
France.....	10 11 10
Germany.....	7 19 1
Italy.....	3 2 3
Belgium.....	21 5 9
Spain.....	3 7 6
Capo Colony.....	14 16 10
Canada.....	12 9 2
Chili.....	13 7 2
United States America.....	6 6 11
Australasia.....	15 17 10

One has only to observe that Belgian external trade is three and a half times larger than that of America to see that it is no test at all of the productive ability of the two nations. According to this exploded theory of exports measuring a nation's industrial wealth, Australasia is twice as progressive as Germany, and five times as much so as Spain and Italy, while Belgium is three times as progressive as America. The thing is a manifest absurdity.

It is pointed out that the colony of Victoria used in her manufactures, in 1894, raw material worth \$50,000,000. Half of that raw material, at least, was her own produce. Had it been sent abroad for manufacture elsewhere, her exports would have increased by \$25,000,000. On the other hand, under a free trade policy, her imports would have decreased by a similar amount paid for the foreign raw material imported. On the other hand Victoria's imports of manufactured goods—to supplant the products made from the \$50,000,000 worth of raw material which she did use—would have increased by at least \$150,000,000, the raw material cost

certainly averaging less than twenty-five per cent. of the cost of the finished product.

It is clear, therefore, says *The Economist*, and Victorians know it, that it is a far better fiscal policy to retain money at home, to tax it in manufactures and the employment of labor, which circulates it from store to store with a profit attachment to every turn of each shilling, than it would be to send a sum of £30,000,000 out of the colony every year for the benefit of the manufacturers and wage-earners in Great Britain, other European countries, Asia and America, and for the exclusive colonial benefit of a small class of importers who air their free trade grievances, which are so easily punctured by protection proofs.

CANADIANS ARE NOT PAUPERS.

It has long been known, and recent experience has shown its intensity, that quite a number of unemployed laborers come to this country across the Canadian border. It is not the mere fact that they are unemployed to which we object, as it is the fact of their unfortunate impoverished condition. The immigration laws upon our statutes are supposed to check any influx of pauper labor. But they do not, because they are not rigidly enforced. It is not possible to watch every mile of the Canadian border, but it should be possible to prevent the admission of British pauper labor at those points where American officials are stationed. With the restoration of prosperity under our policy of Protection, and the consequent greater employment of labor, we are sure to see many hundreds of English, Canadian and Chinese laborers attempting to locate in the United States, and every effort made to do so in contravention of our immigration laws—should be promptly checked. The American labor market should be supplied by American wage-earners. There are more than enough of them to supply all demands at present. --American Economist.

And this is the method our exceedingly liberal minded contemporary advises to stop Canadians from entering the United States. It speaks of them as being paupers. It may be quite true that unemployed Canadians go to the United States seeking work, and it may also be true that some English and Chinese laborers gain admission there through Canadian territory; but it knows perfectly well that neither Canadian nor English laborers, as a class, are paupers; and as for Chinese laborers, our neighbors have their rigid exclusion laws, no more rigid, however, than their laws excluding Canadians. Time was when thousands of Canadians flocked to the American standard and fought and bled, and many of them died, in defence thereof, and to uphold the integrity of the American Union. And yet if any of these old army veterans from Canada, their home, should now venture to cross the border in search of employment they would be considered paupers and punished by deportation. Shame! It is noticeable, however, that every year thousands of Americans flock into Canada seeking employment in our forests, and that without let or hindrance, but to the disadvantage of Canadian lumbermen; and when these American workmen have found good employment in our Canadian forests, and take away with them the logs and timber cut by their labor, to be manufactured in the United States. If the Canadian who had been stunted in his labor by the invasion

of American workmen, should attempt to follow the Canadian logs to the American mills he is stopped at the border with the charge of being a pauper and punished for entering what our contemporary would have the world to believe to be a free country by deportation therefrom. The meanness of such a condition passes comprehension. Can it be that the Economist thinks it brave, manly, just, or even human to treat Canadians thus? And yet it says that every effort should be made by the American authorities to prevent Canadian laborers attempting to locate in the United States. Prompt retaliation in kind by Canada would soon teach our bumptious friends a lesson they would profit by.

THE CURSE OF CHEAPNESS.

A recent issue of the Iron Age, New York, contained the following:

The Lozier Mfg. Company, Toledo, Ohio, manufacturers of the Cleveland bicycle, have introduced female labor in their factory on work hitherto done by men in every American machine shop. A Toledo paper states that girls are now employed in the Lozier factory on milling machines, drill presses and other machines used in the manufacture of bicycle parts. The substitution of girls for men has certainly not been prompted by a desire on the part of the company to assist in the great purpose of making the female portion of the population self-sustaining, but rather, as stated by the journal in question, to secure cheaper labor than their competitors. It is an experiment not to be commended, and it is to be hoped that the first trial will be so unsatisfactory in results that it will speedily be abandoned. One of the proud boasts of Americans has been that in this country a woman commands greater respect than in any other country on earth. Women here are not unsexed as in many other portions of the world, where they perform the most exacting manual labor by the side of men. Occupations in which women can with perfect propriety be employed, and for which they are better suited than men, are steadily increasing, but the doors of machine shops should not be opened for them. Any advantage gained by thus employing female labor would only be temporary, as other factories would be forced to do the same thing in order to reduce costs to the same extent. The degradation of American women would proceed rapidly, while those who begun it would derive no particular benefit.

This introduction of female labor, as our contemporary shows, is in the way of an experiment made with the desire to provide cheap goods. Heretofore and until now American manufacturers and politicians have pointed the finger of scorn at Great Britain, Germany and some other nations because female labor was employed in industries where only men should work, declaring most vehemently that womanhood in the United States should never be thus degraded. Under Clevelandism and its near approach to free trade the competition of cheap labor in other countries has resulted in a condition little dreamed of a few years ago, and now the demand for cheap goods is reaping its whirlwind reward.

This accursed cry for cheapness is heard in Canada, and is being responded to. The Kingston, Ont., Whig, speaking of the fact that a number of Italian Americans had been brought by the contractors to labor on the St. Lawrence Canals because they could be hired for less wages than Canadian workmen would labor for, speaks of them as being the lowest priced in the world, and the readiest to disturb the conditions of trade by their fitful and faulty service.

Mutterings of discontent come to us, too, from the British

Trades Congress, held a few days ago at Birmingham, against this demand for cheap labor, by which these working-men say, truthfully, no doubt, the wealth of great Britain is being coined out of the hearts of the young. At that Congress the National Union of Gas workers and General Laborers introduced as a resolution that was carried by a more than two-third vote the following:—

"Considering that the employment of children in factories and workshops, and on board river and canal craft, and their consequent exploitation by the capitalists, is injurious to the children, unjust to their parents and a crime against the human race; considering the infamous fact that the children of the working class have not the same opportunities of the class-room and the play-ground as the children of the capitalist class; considering that in this connection Great Britain is behind other countries; considering that unhappy parents, under an unhappy system, are actually willing and even anxious to have their children torn from school and hurled into the factory—this congress is of an opinion that the time has come for Great Britain to cease building its empire on children's hearts, to give up coining its wealth out of children's wasted lives, and hereby instructs the Parliamentary Committee to demand as a temporary minimum from the Government:— (a) The abolition of child labor under the age of fifteen and (b) of all night labor under the age of eighteen." The resolution was opposed by the delegates who represented the textile workers. They declared that if the age at which a child could be legally employed was raised to fifteen years the children would never become efficient at their trades.

Discussing this same subject, and its applicability in the United States, Fred Woodrow, in The Age of Steel, says:

Child labor with its numerous brood of abuses and iniquities is not having the pleasure and pay of other days. It has had its cake and wine to the full, but in a general sense it is now restricted to the crumbs of its lost luxuries. It was time the cloth was removed from the table where cupidity had to loosen its waistband, and the profits of child labor paid for the banquet. The law has lifted its finger in the more advanced nations of modern times against what was a cruelty and a crime. Everybody is agreed as to the righteousness of this repression. In many cases it meant physical salvation, and in all it signified the betterment of the rising race. The slavery that started from the cradle and generally ended in a short coffin, if not abolished, is under surveillance. The axe is laid at the root of the tree. There is less of tender, immature and sinewless humanity in our workshops and mills. The boy with more fingers than birthdays is not so frequent in the coal pit, nor the girl of scanty years at the loom. The factory bell is not the terror to children it once was, when a child that could look over a chair and lift a pair of shoes was eligible to ten hours a day and a pair of aching legs. In such conditions childhood was a frosted bud. December came in May. The physique of the child suffered. What it had of mind and soul was clouded and burdened. It knew little of sympathy, and more of sweat and smoke. Childhood at the age of ten became familiar with the vices of thirty. Of manners that were coarse and words that were vile, there was enough on the opening pages of his life to stain its last leaf. If the memories of childhood are the treasures of riper years and old age, what of sunshine could be found to brighten its evening shades, or of happy recollections to strike a tuneful chord on the strings of a broken harp. It was Saturday darkened by the clouds of Monday. Moreover, when the voyager neared the line over which he saw no light, what was there in his childhood experiences to people the invisible shore with friends or to suggest anything but a factory whistle, where otherwise he would hear the chime of golden bells? In child-labor, under the old conditions, we dwarfed the body and starved the soul. It was Pharaoh at Goshen and Herod at Bethlehem. These gentlemen, how-

over, were not childless, nor have their abominations altogether ceased. In many of our domestic industries little fingers are picking threads and manipulating tobacco leaves, pasting labels and breathing sewer gas. Their backs are crooked before the pith in their spines has passed the milky stage, and little eyes that should mirror the pictures of God in skies and streams see nothing but the gas jet and the shadows of their thin bodies on the wall. Nor is it to be denied that hosts of children whose parents can well afford to keep them at school are being forced under the yoke of toil. Men with fat salaries send their children on the hunt for fugitive jobs, in some cases to selling papers, running errands, carrying coal and doing anything that turns up, in which a dime at one end and a juvenile serf at the other completes the diagram. For this iniquity there is no legal penalty, and for its cure nothing that legislation can devise. Of this selfishness and cupidity there is more in movement than many of us suppose. It is a bad sign. The boal exposes the blood, and the scab shows the leper. When, as we have known, a youthful scion of a handsomely salaried state official offers to displace the son of a washerwoman to secure cash for a bicycle, and a society belle does the same with an orphan in a store to get a sealskin saccue, if we are not showing signs of dollar leprosy, then Naaman was clean before he took a bath in the Jordan. We must reform or rot. We have done much to limit the abuses of child-labor, but it is a grim fact that cats still go on eating their kittens.

Will the curse of cheapness ever be removed from us?

EDITORIAL NOTES.

THE CANADIAN MANUFACTURER will pay Five Dollars for an authentic photographic reproduction of the two sides of the Cobden Club gold medal recently presented to Sir Wilfrid Laurier, in London, Eng. The representation must be not less than the full size of the medal.

Speaking of the many uses to which compressed air can be put, the American Carpet and Upholstery Journal says that if the inventors keep on, pretty much all that is achieved in art, sculpture, painting, weaving and decoration will be done by sleight-of-hand, i. e. to say, between electricity, compressed air and other subtle forces, man will but have to direct and the pretty thing that he wants will be before him. Compressed air is now driving tools of all kinds. It is shearing sheep in Australia, operating drills, reamers, screw cutting taps, etc. Even as far back as the World's Fair, the great buildings there were painted and whitewashed, and the great Manufacturers Building, covering thirty-one acres, was kalsomined inside of a month by a double spray machine. It covered 31,500 square feet of surface a day. These compressed air machines are simply big atomizers, similar in kind to those which women use for their toilet, but fed with a continuous supply of air. With one of these machines, one man can paint thirty coal cars a day, or one car in ten minutes, and the paint is driven into every crack and crevice of the wood. By applying the same principle, an artist's air brush is made, and this is used for decorating silks and satins, china and porcelain, for coloring maps and photographs, and even for making entire pictures. The air blast carries out the pigment in a stream, which makes a fine line when the brush is held close to the paper, and a wider and wider one as it is with drawn, and the quantity of pigment used is regulated by the artist's thumb on the side of the tool. It is said that no other brush can produce such shadings.

The Drapers' Record, one of the organs of the British textile trade, makes two cogent objections to Mr. Fielding's preferential scheme.

They are: First, that the preference discount is given impartially to Germany, Belgium, etc., as well as to Britain, second, that it is not allowed on the goods of these foreign countries if they are bought on the British market. That is, while all the most enterprising competitors of the United Kingdom are to be admitted to the advantages of the so called British arrangement, the Mother Country is to be deprived of the incidental benefit of distributing their goods to us.

If the Canadian importer buys German goods in London, says the Mail and Empire, and has them delivered to him in a British vessel, this Government will impose a discriminatory tax on them equal to twelve and one half per cent. of the regular duty. This is to make buyers purchase the goods in the really preferred markets of Germany, etc., rather than in the Mother Country. No wonder the Drapers' Record finds fault with the bogus British preference.

The industrial improvement in Canada is marked by the starting of new industries and the enlargement of those already existing. THE CANADIAN MANUFACTURER publishes a long list of such, in which are included nearly every branch of manufacturing industry, the expenditure in connection with the erection of which amounts to hundreds of thousands of dollars, to say nothing of the increased demand for mechanics that will be created when they get into operation. —Brockville Recorder.

Mr. J. S. Jeans, secretary of the British Iron Trade Association, in a recent article in the Iron and Coal Trades Review, jars somewhat rudely upon the complacency of those who have been wont to think of England as the synonym of commercial and industrial supremacy. He says that the working population of England has not appreciated the enormous increase in the ability of the United States to compete, not only for neutral but also for British markets. The competition from this country he regards as "more to be dreaded than the competition of Germany and other continental countries, serious and increasingly successful as that rivalry has been." He refers to the foothold obtained by American pig iron, rails, billets, cars, locomotives, cranes, machine tools, etc., in England and in markets heretofore largely controlled by England, and suggests that the facts in this regard "should surely make our workmen pause in their ill-considered demands for conditions that would greatly assist that rival in a competition that already exposes our industries to unusual stress and strain."

The Toronto Industrial Exhibition, otherwise known as the great Toronto Fair, after its usual twelve days continuance, was closed last week after a very successful season. We are told that the attendance was quite as large as on any previous occasion, and that the money receipts were quite as great. The exhibits of machines, machinery and appliances, were even more creditable than ever before, due in larger measure to the enlargement of Machinery Hall. The weather throughout, with the exception of one afternoon was very propitiously delightful. On this occasion, as on all other occasions, the efforts of the manufacturers to make it so, was a very large and important factor in the success of the event.

Mr. George T. Angell, of Boston, Mass., editor of Our Dumb Animals, after having given his reasons for his conclusions, says:--

- (1) That the [so-called] Monroe doctrine is a humbug.
- (2) That Great Britain has just as good right to buy Cuba from Spain--(or anything else she wants) without consulting us, as we had to buy Alaska from Russia without consulting her.
- (3) That as all the great powers of Europe have larger armies and navies than we have--and as we have two enormous sea-coasts (separated by a continent) to defend, unless we want to lose the gold mines of Alaska and pay perhaps a thousand millions of dollars for ransom of our large cities, we had better attend diligently to our own business, and treat all other nations with respect.
- (4) That the talk of lots of our congressmen is as silly as the proposition of the head of the New York militia to attack Canada, and of Gen. Flagler of our U.S. Army to blow up the Welland Canal and establish a chain of defensive fortifications from Ogdensburg to Duluth-- and all are as silly as a proposition to build a Chinese wall between ourselves and the British possessions, reaching from the Atlantic to the Pacific, or blow up Niagara Falls and empty the great lakes into the Atlantic Ocean.
- (5) That we have a lot of old politicians who seem anxious to get us into a war with somebody about something in which

the young men would have to do all the fighting and get maimed, wounded and killed.

(6) That war is exactly what Gen. Sherman called it, "hell on earth," and the politicians who try to get us into it ought to be locked up in lunatic asylums, or put to hard work in state prisons.

(7) That (as we have often suggested) there is plenty of employment for all our unemployed men on levees, canals, public roads and other much-needed internal improvements--and plenty of money, under a proper system of taxation, to pay for it.

Brother Angell has a level head.

The millers are now going to wait on the government and ask for special legislation in their benefit. They will probably be disappointed. The Liberal Government is not running the country in the interest of any class.--The British Whig.

If the millers require any special legislation to protect their interests why not give it to them? And what, pray, is the government running the country for if not in the interest of all the classes, including the millers? It is highly probable that our esteemed contemporary really intended to say that the Liberal Government are not running the country in the interest of any class but the Liberal party.

THE - - - -

WM. HAMILTON MANUFACTURING CO., Limited

MANUFACTURERS OF

THE "RELIANCE"

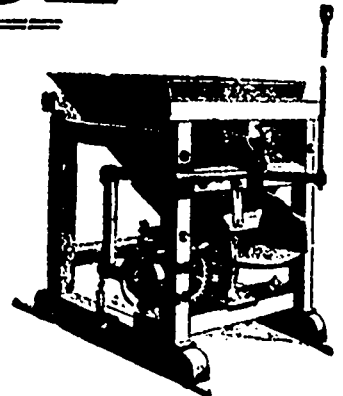
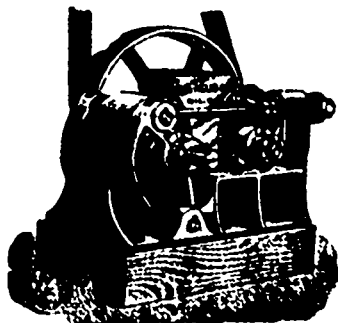
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PETERBOROUGH, ONT.

Free-Trade papers should be careful how they make their boasts of the effects of the Wilson Tariff. It did not do a single thing predicted. Under it not a single new industry was started, and in every branch wages were reduced, and will now have to wait until a complete recovery of prices before they can be restored. In no period in the country's history were so many workmen idle for so long a time, while almost up to the very last the revenue deficiency steadily grew. —Wheeling, W. Va., "Intelligencer."

Recently the United States Customs authorities at Detroit made a ruling that every time a bicyclist entered that country he must pay full duty on his wheel. Under instructions from Washington the ruling was promptly cancelled. Regarding the incident the Montreal Star says:

The announcement that the Washington authorities have "called down" the Detroit Customs officials who proposed to tax Canadian tourists who carried their wheels with them into the United States, shows how easily these border "jingoos" may outrun the saner intention of the real rulers of the Republic. To have maintained this Detroit ruling, indeed, would have been to perpetrated a gross stupidity. The idea was to collect duty on every Canadian-made wheel taken into the United States by a tourist; while those riding American "makes" could pass without paying toll to Dingley. The purpose apparently was to compel Canadians to buy American wheels; but it could hardly have had any effect in this direction, except, perhaps, in one or two border towns. A Canadian buys his wheel primarily for use at home; and he would be much more apt to be influenced in his choice by a tire he liked or the ease with which the wheel ran than by the remote contingency that he might want to take it to the "States" for a trip some time.

But had the ruling been foolishly maintained, it would have had a much greater effect upon tourist travel in the United States. The Canadian who, possessing a Canadian-made wheel, is casting about in his mind for the best place to spend a holiday, would be influenced not a little by the fact that he could take his wheel to a Canadian resort without paying any customs charges, while he must part with a considerable sum in order to visit an American resort and enjoy any riding it might afford. It is safe to say that Old Orchard, for instance, would vote to a hotel or a bath-house against so stupid a device for keeping Montreal wheelmen from spending their summer vacations there.

A ten per cent. discriminatory duty imposed by Great Britain against United States wheat and corn would soon bring the latter to their senses.—"THE CANADIAN MANUFACTURER."

We are rather inclined to believe that a ten per cent. discriminatory duty imposed by Great Britain against United States wheat and corn would have the effect of bringing the people of Great Britain to their senses by showing them, directly and conclusively, the benefit of a policy of Protection to British agricultural interests.—American Economist.

A change of policy in that direction on the part of Great Britain would be about the most galling episode ever experienced in American history. Under such a discriminatory duty Canada would, in a very few years, supply all the wheat and corn to the British market that would come from this side the Atlantic, and our American friends know it. It would be of undoubted benefit, too, to British agricultural interests, and a means of cementing the Empire into a vast and homogeneous whole, or words to that effect. It should be tried.

SADLER & HAWORTH

FORMERLY

ROBIN, SADLER & HAWORTH

Manufacturers of

OAK-TANNED LEATHER BELTING

MONTREAL AND TORONTO

Orders addressed either to our Toronto or Montreal Factory will have prompt care. Goods will be forwarded same day as order is received.

In an address made at the Toronto Fair last week Mr. Edward Gurney, one of the largest manufacturers in Canada, at one time president of the Canadian Manufacturers' Association, and now president of the Toronto Board of Trade, stated that the change which has come over the business situation in the past six weeks is unexampled in Canadian history. He predicted that by the close of this century Canada will have had three years of such prosperity as the oldest of those present never witnessed.

Unjust discrimination may triumph for a time, but fraud and deceit are bound to fail of their purpose in the end.—
Boston Herald.

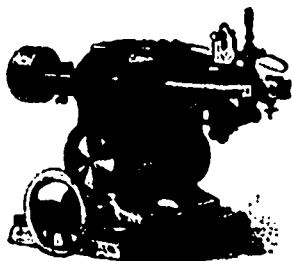
The Yankee spirit is said to be hurt at the announcement that the nation that thinks it is great enough "to lick the earth" in war, has not a dry dock which will accommodate its first class cruisers. That spirit would be more deeply hurt if there was any use for the cruisers, for after one good collision with a stronger navy all the battleships would be in docks or at the bottom of the sea.—The British Whig.

The manufacturing concern says The World, that makes exemption from municipal taxation a sine qua non of its establishment in any given locality may be set down as designed to fill no long felt want in the community. If a genuine demand exists for any article, or if a market can be found for the products of any industry, the paying of their proper share of taxes will not deter capitalists from under-

taking such businesses. The American Rattan Company is an example of one of these exempted concerns. Ten years ago it was granted exemption from taxes on agreeing to employ so many hands. The time has now expired, and the concern has decided to go out of business, or, rather, a deal has been made whereby the plant will be transferred to Walkerton. The country will support only so many factories, and the attempt to plant them where they will not survive is similar to a man's trying to lift himself by his boot-straps.

In an address on the undeveloped mineral wealth of Newfoundland, delivered before the Franklin Institute, Philadelphia, Mr. A. E. Outerbridge, Jr., says of the iron ores of that region, considerable shipments of which have been made to Sparrow's Point, Md., for the Maryland Steel Company.—
"Iron ores are very plentiful, and a Nova Scotia company has operated for several years quite extensively at Belle-Isle Conception Bay. The export of iron ore is rapidly growing, the ore is found near the surface, is very economically mined and is loaded on board steamers which run close under the high bluffs and take the ore directly into their holds through chutes. It has been found that the cinder refuse, commonly called 'blue billy,' from the Newfoundland pyrites, after extracting the sulphur in the manufacture of sulphuric acid, is almost entirely free from sulphur and is a valuable by-product, used in the manufacture of steel. It commands a higher price than similar cinder from any other source. The Newfoundland year-book for 1897 shows that the export of iron pyrites has increased from 410 tons in 1887 to 36,496 tons in 1896."

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350-light Incandescent Dynamo
And One Smaller Machine
One Arc Light Dynamo
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Above are but slightly used, and are as good as new.

We Manufacture a full line of
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VALVES AND PIPE . . . FITTINGS

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BREWERS COPPER WORK

Brewing Kettles, Boiling Coils,
Beer Coolers, Attempartors
Spargers, etc., etc.

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BOOTH COPPER CO. LIMITED.

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Established 1854.

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THE LEADING MANUFACTURERS OF ELECTRICAL APPARATUS FOR ELECTRIC LIGHTING, POWER TRANSMISSION, AND ELECTRIC RAILWAY PLANTS

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WESTINGHOUSE ELECTRIC COMPANY, Ltd., 32 Victoria Street, LONDON, S.W., ENGLAND.

For CANADA address, - - - - - **AHEARN & SOPER,** - - - - - **OTTAWA, CANADA**

The workmen of Toronto and Canada have good reason for celebrating Labor Day this year, with more than usual enthusiasm. Compared with the state of affairs in the United States, Canada has great cause for thankfulness. While the condition of the workingman in the former country has greatly improved since the new tariff bill went into force, there are not wanting features which cast an ominous shadow on the horizon. At a labor convention recently held at St. Louis, the delegates went wild when Mr. Sovereign shouted: "These injunctions of the Federal courts must be violated. . . . By the gods, the people will abolish your court and reorganize the Government. . . . Behind the injunctions stand the rifles, the Gatling guns and all the murderers money can buy. Let us meet them with guns!" The man who uttered these sentiments is at the head of the Knights of Labor. Mr. Debs, who has been punished already for breaking the laws, spoke in the same temper. The resolutions adopted set apart the wages of all union workers on September 3rd for the support of the strike instigated by mine operators to break down the business of an operator who favors fair treatment of workers, propose another convention on September 20th at

Chicago, if the strike is not by that time settled, demand the public ownership of railroads and telegraphs, protest against government by injunction, and then add:

Resolved, That no nation in which the people are totally disarmed can long remain a free nation, and therefore we urge upon all liberty loving citizens to remember and obey Article II of the Constitution of the United States, which reads as follows: "The right of the people to keep and bear arms shall not be infringed."

The people of Canada may be thankful that this ugly condition of things does not exist in this country.—Toronto World.

One of the most prevalent hobbies of the Free Traders is that a Protective Tariff is a tax upon the consumer by increasing the cost of production and the price of the commodity to the consumer. In contradiction to this claim we learn that English manufacturers propose to transfer their plants to the United States since the enactment of the new Tariff bill. If a protective tariff has the tendency to increase the cost of production they would remain where they are.—Philadelphia, Pa., Traffic.

THE ACME ROCKING GRATE CO.



The Acme Rocking Grate Bar is composed of fine zig-zag bars connected together; the centre bar is 5½ inches deep, the two bars next the centre are three inches, and the two outer ones are two inches. They are connected every six inches, thereby giving a very strong and durable bar, with very little iron on surface, giving a larger percentage of air space than any bar made, and will burn screenings as

well as lump coal, while there is no trouble whatever in crushing the clinkers. We guarantee ten per cent. saving in coal in every cast.

This is what a Street Railway has to say after making a test with screenings:

THE TORONTO SUBURBAN STREET RAILWAY CO.

R. WILSON-SMITH, Pres. E. P. HEATON, Vice-Pres.
R. H. FRASER, Sec. and Manager.

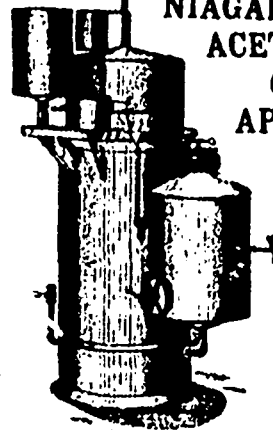
TORONTO JUNCTION, April 25, 1897.

Messrs. The Acme Rocking Grate Company,

GENTLEMEN, The Grates put in by you in our Power House have shown a decided saving in coal.
Yours truly, R. H. FRASER.

The Acme Rocking Grate Co. 176 FRONT STREET EAST, TORONTO, ONTARIO

THE NIAGARA FALLS ACETYLENE GAS APPARATUS



Patented in Canada, United States and Great Britain.

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

Acetylene Gas the Coming Light.

CHEAPER THAN ELECTRIC LIGHT
COAL GAS OR COAL OIL
For Private Dwellings, Business Houses
Churches, Public Halls and Offices.

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

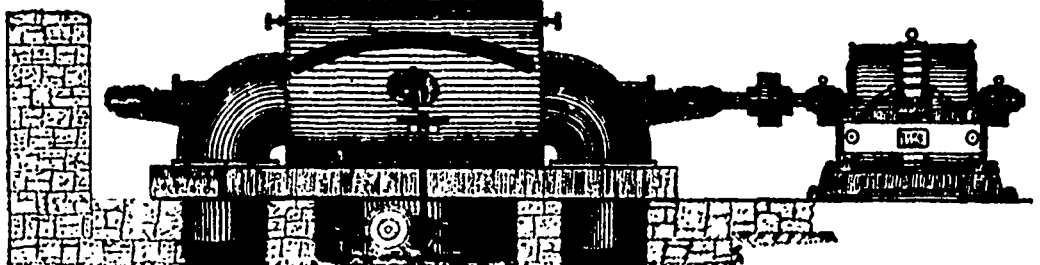
THE CROCKER TURBINE.

The cut shows the direct connection of two 20 inch.

Crocker TURBINES

Under 50 feet head to
ELECTRICAL GENERATOR
At Power Station of North Shore
Power Co., at St. Narcisse,
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Two sets were furnished for lighting
and power for City of Three Rivers,
17 Miles Distant from
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Address for Catalogue and full information—25 LANSDOWNE STREET.

COMPLETE WATER POWER PLANTS
BUILT AND INSTALLED.

About one hundred cars with 1,500 tons of rails for the Crow's Nest Pass Railway have recently passed through Toronto from the United States.

The Danish Milk Condensing Company is a lately established concern, starting with the object of developing the Danish dairy industry, and at the same time offering to the public an article of consumption of superior quality. It has for a long time been the aim of scientific efforts to produce condensed milk which in taste, smell, nutritive value and easy digestibility would replace fresh milk. At last these efforts have been crowned with success by Mr. Ejelstrup, who has surmounted the difficulties connected with the treatment of milk. By a very simple and ingenious process, the milk is condensed at a low temperature in such a manner that its chemical composition is not altered, and at the same time all bacteria are destroyed. This condensed milk is, without any addition of sugar or other foreign substance, prepared from the best milk, obtained from cows under the constant inspection of veterinary surgeons to guard against the transfer of any contagious diseases of which milk may often be the bearer. Condensed to about one-third of the original

volume, it may in this state serve the purpose of ordinary cream, and, mixed with two parts of water to one of condensed milk, replace the original pure milk. The principle object is, however, to provide an article of export, packed in hermetically closed tins that durability may be secured for an indefinite length of time, and for use in tropical climates, where there is no opportunity for obtaining fresh milk, and this object has been fully achieved. The machinery in the factory is of the latest and best. The milk, having undergone the necessary process in the condensing vats, is tapped by the method patented by the factory into sterilized tins, which are closed air tight as they run full, one by one, and then soldered down immediately. These tins are then placed in rows on shelves, where they remain for some time under close observation until they are packed for exportation in cases containing four dozen each. The tins are fitted with tubes, the cutting of which enables the milk to be drawn in a clean and convenient manner. After a portion of the milk has been taken out, the tubes prevent the exposure of the milk to the air, and by this means the product retains its freshness and purity for a long period. —American Economist.

The process of making bricks from sand, brought forward by Prof. E. C. Bruce of Washington, is said to have led to the formation of a company in California—location, etc., not given—with a view to carrying on the manufacture of such bricks on an extensive scale, no other ingredients entering into their composition than such as are contained in sand or earth. This stone brick, as it is described or termed, is produced from powdered stone—that is, sand, clay, etc., these latter being mixed with a prepared flux which acts as a bond, holding together the particles of sand or other material used as a filler, the whole being thoroughly annealed by heating. Among the various merits claimed for this kind of brick the saving of time is conspicuous, only ten hours being required for their manufacture, instead of eight to thirty days, a much reduced consumption of coal—scarcely any loss from burning—a crushing strength of from 10,000 to 45,000 pounds to the square inch, instead of 40 to 4,000 pounds, and but three fifths the cost of ordinary bricks. National Builder.

Another proposed wonder for the prospective Paris exhibition of 1900 is an immense Dussand microphonograph. It is said to be now in course of construction, and is expected to make the voice heard by 10,000 persons. This form of apparatus is claimed to be especially favorable for the deaf, and for the study of the feeble sounds given out by the organs of the body in health and disease, magnifying the voice much as a lens magnifies objects to the eye. The register is a modified phonograph, with a diaphragm vibrated by small electro magnets receiving currents through a microphone; the repeater is somewhat similar, with a microphone attached to the membrane, the current for this being obtained from one to sixty battery cells and thence passing to a telephone—the intensity depending upon the amount of current passing.

The delegates from the British Iron Trade Association who visited German and Belgian iron and steel works in 1895 reported that while in equipment they did not excel and often did not equal British works, they had two advantages over manufacturers in the United Kingdom. These were lower transportation charges and a greater measure of freedom from the exactions—often burdensome and unreasonable—of labor organizations. That this latter handicap is still a heavy one is evidenced by the presidential address of E. Windsor Richards, at the opening of the Institution of Mechanical Engineers at Birmingham, Eng., recently. In the published report occurs this paragraph:—"At the summer meeting held in Bristol, in 1877, the president (Mr. Thomas Hawksley) in his address took a gloomy view of the relations existing between employers and employed, asserting that our labor was too dear for successful competition with foreign countries, too dear in respect of the quantity of work performed, and too dear in respect of the obstructions and restrictions which the modern workman thought fit to place upon his employment and employer. After a lapse of twenty years these words seem even more applicable to the present state of these relations than they were at the time they were written." Speaking of this matter the Iron Trade Review says:—"Undoubtedly the restrictions of unionism as it has become entrenched by years of control in the engineering trade and other lines of industry, go far to offset the advantage of low wages which England has over this country."

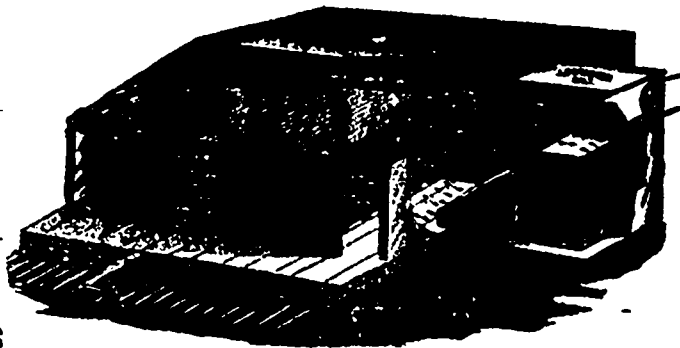
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Ventilating
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LITTLE WONDER HOT WATER BOILER for Heating Dwellings.

McEACHREN HEATING AND VENTILATING CO.
GALT, ONT.

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MAKERS OF

Lamps and
Transformers

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

CAPTAINS OF INDUSTRY.

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

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

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

At a recent meeting of the Montreal Board of Trade, a letter was submitted from a firm in Alexandria, Egypt, pointing out the increasing import trade of Egypt and the likelihood of still further increase on the opening up of Dongola and the Soudan. The letter mentioned the following articles in which large trade could be done. -Iron bars, plates, sheets and pipes, general iron-ware, woollen goods, drugs and chemicals, resin, etc., leather goods and belting, oils, grease and tallow, furniture, electrical instruments, zinc sheets, hardware and cutlery, iron bedsteads, carpets, boots and shoes,

turpentine, paints, colors and varnishes, paper and paper goods, lamps, soap.

Vick's Magazine for September presents a great amount of information in regard to bulb planting and culture, and has a large number of beautiful engravings of narcissus, hyacinths, tulips, jonquils, ixias, snowdrops, scillas and others. Bulb growing in its various aspects is treated, and those who wish to know about raising the spring-blooming bulbs in the garden, or blooming in the house in winter, will find here a fund of valuable information. Vick Publishing Co., Rochester, N.Y.

STEEL.

La Belle Steel Co.

PITTSBURG, PA.

Manufacturers of STEEL

PLOW SHOULDES, HARROW DISKS,
CULTIVATOR PLATES,
and AGRICULTURAL STEEL of all kinds.

FINE TOOL STEEL

FOR -

Dies, Drills,
Taps, Bicycle Cones,
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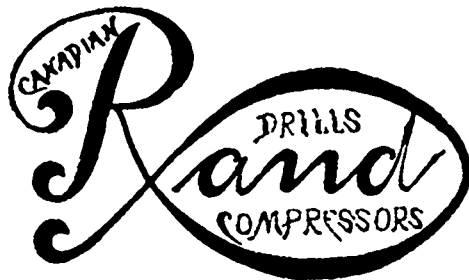
And for all purposes where requirements are exacting.

For Prices, Etc., Address,

W. G. BLYTH,

Agent for Canada.

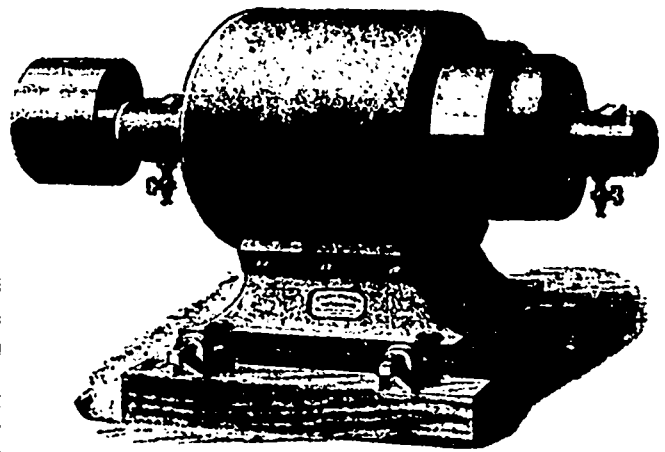
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Manufacturers of...

OIL-CLOTHS OF EVERY DESCRIPTION

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

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PRESTON, - - ONTARIO.

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FINE AND MEDIUM TWEEDS

ADVERTISE IN

The Canadian Manufacturer

DO YOU WANT TO GIVE

YOUR SON

A Profession?
A Start in Business?
A Farm?

YOUR DAUGHTER

▲ A First-Rate Education?
◆ A Dowry?
▼ A Home of her own?

— If so, take out Children's Endowments for them in the —

Manufacturers' Life Insurance Company.

For particulars address, **George H. Sterling**, Secretary,
Head Office, Toronto, or your Local Agent.

GEORGE GOODERHAM, President.

J. F. JUNKIN, General Manager.

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TEMPERED STEEL MACHINE SPRINGS.



SPECIAL SPRINGS of all description to order
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WIRE, Oil Tempered, Spring Steel and all kinds

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The Thompson Electric Co.

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"Enclosed Arc Lamps"

To burn 150 hours without Recarboning, for Series, Incandescent, Alternating and Power Circuits.

"Open Arc Lamps"

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NEW and GOOD SECOND-HAND WOOLLEN MACHINERY

SHAKE WILLEYS, TEAZERS, RAG PICKERS, GARNETTS,
AUTOMATIC FEEDS, WASTE CLEANERS, CARDS, CONDENSERS, SELF-ACTING
MULES, TWISTERS, LOOMS, HYDRO-EXTRACTORS,
SHEARING MACHINES, ETC.

GOOD Second-Hand COTTON and WORSTED MACHINERY

BELTING, CARD-CLOTHING, PICKERS, PICKING BANDS, ETC.

The advertised sale of the waterpower of the Shawenegan Falls, Quebec, was held at the Crown Lands Department, Quebec City, September 9th. There was only one bidder, Mr. David Russell, of Montreal, who became the purchaser at the price of \$50,000. One of the conditions of the sale is that the purchaser shall, within eighteen months, spend two million dollars in the erection of buildings and plant and the development of the water power.

The J. D. Smith Foundry Supply Co., Cincinnati, Ohio, have sent us their catalogue No. 10. This company are manufacturers of foundry facings and backings, supplies for iron and brass foundries, pattern makers, machinists, rolling mills, furnaces and steel works. They are also importers and refiners of plumbago, silver and black lead. The catalogue is fully illustrated and contains a fund of valuable information to any one engaged in the foundry or machinery business.

Speaking of the Toronto street railway system, the Glasgow, Scotland, Evening News says:—"The perfection of the tramway system at Toronto has evidently startled the wise men who have gone there to attend the British Association. Electricity is the motive power, as it is to most well-ordered capitals, and the cars go in all directions at an astonishing pace. 'When they get a clear run,' remarks one amazed visitor, 'they leave the bicycles which abound in incredible numbers, far behind. I have seen them run repeatedly at fully twenty-five miles an hour, if not more; and yet they are under the most perfect control. Moreover, the cars are most delightfully airy and comfortable. You buy six tickets for a quarter, that is a shilling, and the system is so arranged that a single ticket will take you almost from anywhere to anywhere. In Montreal, I should add, the service is almost equally good, and still more wonderful on account of the steep hills. The electric cars dash up and down the steepest gradients with as much ease and certainty as if they were on level ground.'"

The danger peculiar to electrical generating works is the liability to shock, which is often fatal if, by accident, anyone comes into contact with the conductors when charged to a high pressure, says the London Electrician. The contact need neither be very perfect nor direct; provided two parts of the body are made to touch conducting materials which themselves differ in pressure by 1,000 volts or more, or even by much less if the contact with the flesh is very good, a dangerous and possibly fatal shock will result. The ground, especially if damp, is sufficient for one of the contacts, damp leather boots affording no protection, so that any one standing on the ground or on metallic or damp wood flooring cannot safely touch a single object charged to a dangerous pressure. If, however, he should be standing upon a dry india-rubber mat, which is an excellent non-conductor, he will come to no harm on touching any number of dangerously charged bodies which are at the same electrical pressure; but if he should simultaneously touch, even through his clothes, two bodies which differ from one another in pressure by about 1,000 volts, the actual amount depending largely on the perfection of the contact, or if, while safely touching highly charged metal, he should touch or pass by hand any conducting article to some one else who is not also insulated, then a fatal shock may follow.—Electrical Review.

The Stayner Roller Mills, of Stayner, Ont., are having a Plansifter put in and other improvements are being made. W. and J. G. Greey, Toronto, have the work in hand.

James Woodruff's shingle, saw and grist mills at Sydenham, Ont., were destroyed by fire a few days ago.

The Goldie & McCulloch Co., are a busy concern these days, the engine and safe departments being particularly so. Amongst the orders now being filled in the latter shop is a large fire-proof vault for the new Independent Foresters' Temple in Toronto, and a large fire and burglar proof vault for the Sun Life Assurance Co., Hamilton. The foundry is working every night until 10 o'clock, and some of the men labor all night. Milling machinery is also receiving quite a boom.—Galt Reporter.

The Victoria Metallurgical Works Company, Victoria, B.C., has been incorporated with a capital stock of \$75,000, to take over the business heretofore carried on in Victoria under the style of the Victoria Metallurgical Works; to carry on the business of assayers, make mill tests of ore, etc.

Mr. Robert Dobson, Brampton, Ont., is enlarging his flour mill and putting in new machinery supplied by the Goldie and McCulloch Company, Galt, Ont.

R. Rutherford is transforming a large cheese factory at Cranston, Ont., into a cold storage warehouse for the storage of provisions, etc., to be shipped to England.

The Central Business College, of Toronto, has begun the regular work of the Fall Session with the largest number of new members ever registered at the beginning of any term. This is surely a good indication.

The roller boat which has been in process of construction for some time in the Polson ship-yards, Toronto, was launched a few days ago. The boat is the invention of a Mr. Knapp, a Prescott man, and by the adaptation of the rolling principle the inventor expects to revolutionize ships and ship-building both in the carrying power and speed. The boat is 110 feet long and twenty-five feet high and was built at a cost of \$10,000. Two engines of sixty horse power each are placed at each end of the vessel. If the invention is a success ocean roller boats will at once be built five hundred feet long and a hundred and twenty five feet high, designed to cross the Atlantic in two days.

Iroquois, Ont., will soon have both water-works and electric light. The building to accommodate the necessary machinery is nearing completion.

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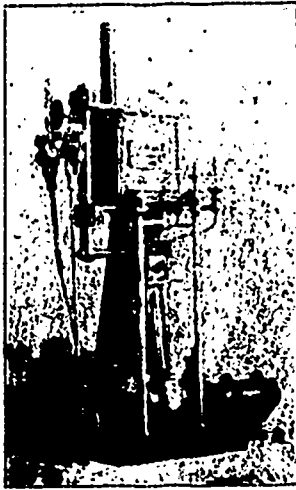
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 Yonge and Gerrard Streets.

The Kingston Foundry, Kingston, Ont., has been awarded the contract for building the new boiler for Rockwood Asylum.

David Donaldson's planing mill at Lanark, Ont., was destroyed by fire a few days ago. Loss about \$4,000.

Thomas Smedley's lumber and planing mills at Amigari, Ont., were destroyed by fire a few days ago.

Messrs. J. & M. Priest's saw mill at Mouseland, N.S., was destroyed by fire a few days ago.

The trouble between the Kingsville, Ont., Natural Gas and Oil Company and the town has been settled by the town purchasing the entire plant of the company.

The Citizens Electric Light Co., Watford, Ont., have got their plant in operation. They use the alternating system, and their plant has a capacity of 800 lights, 16 candle power. An arc dynamo has been added, using lamps of 2,000 candle power, and the citizens have the privilege of selecting the particular brand of brilliancy they desire.

The Wm. Hamilton Manufacturing Company, Peterborough, Ont., have received from A. W. Carscallen, M.P., an order for a ten stamp mill for the Belmont gold mine.

Ritchie's boot and shoe factory, at Quebec City, was burned a few days ago. Loss about \$75,000.

The general machine shop business of Jonathan Weir & Son, at Moncton, N.B., which has for some years been conducted under lease by the Record Foundry and Machine Co., has gone back to the old proprietors, and will in future be managed by Mr. John P. Weir, who is well and favorably known to the trade throughout the provinces. They are now prepared to execute with promptness all orders for mill work, boiler making, forging and repairs of all kinds. Engines will be built to order and a specialty will be made of locomotive repairs. This is one of the oldest and best equipped machine shops in the maritime provinces and the name of the manager is sufficient guarantee that first-class work will be done at right prices.—Times, Moncton, N.B.

The Kingston Foundry, Kingston Ont., will soon begin the manufacture of a new windmill, the invention of Mr. L. W. Lake, Inverary, Ont. The special feature of the new mill is that the speed can be regulated regardless of the force of the wind

The price of silver doesn't "cut much ice" with the shipping mines of the Slooan, since they seem to be going in to break all previous records in the matter of ore shipments. On Sunday, August 22, the steamship Alberta, International Navigation and Trading Company, cleared from this port with 583 tons of ore. It comprised twenty consignments ranging from 30,000 to 100,000 pounds each. The customs valuation of this one shipment was \$39,542, or an average of about \$68 per ton. This big shipment was made up of ore from fifteen different mines.—Kootenaiian.

W. N. Roberts, Renfrew, Ont., will at once rebuild his ash and door factory recently destroyed by fire.

At the quarterly meeting of the board of trade of New Westminster, B.C., held recently it was reported that so far efforts to establish a smelter at New Westminster had not been of avail, but there was reason to hope that one would be before long established there. The fishing season was spoken of with satisfaction. The lumber mills were reported all very busy. Mining development goes on slowly says the report in this district owing chiefly to the want of capital. The harvest was reported good and business excellent.

A large portion of the business part of Magog, Que., was burned September 7th. Among the buildings burned was that of the Eastern Townships Bank. Total loss was about \$200,000.

The glass factory at Wallaceburg, Ont., has now on hand \$55,000 worth of orders. One hundred blowers and assistants are at work in the factory.

Messrs. J. Y. Griffin & Co., pork packers, Winnipeg, Man., will spend \$50,000 this year in enlarging their plant.

The Goldie & McCulloch Company, Galt, Ont., recently sold two large engines to the N.P.R., one of which was for the company's Cow elevator at Owen Sound.

J. M. Downer's pattern works, Toronto, were damaged by fire a few days ago.

Fire at St. Roch, a suburb of Quebec City, a few days ago destroyed the boot and shoe factories of the Dominion Shoe Co., J. N. St. Pierre and Ed. Lapointe. The Dominion Shoe Company's loss was about \$25,000; Mr. St. Pierre's loss about \$75,000, and Mr. La Pointe's loss about \$20,000.

Mr. C. C. Hearle, Montreal, manufacturer of anti-scale powder, &c., has sent us copies of letters he has recently received from prominent manufacturers testifying to the satisfactory results from the use of his powder in cleaning their boilers.

The Crow's Nest Pass Coal Company, Toronto, is being incorporated with a capital stock of \$100,000 to carry on the business of colliery proprietors, miners, engineers, etc.

Messrs. Ahearn and Soper, Ottawa, have secured the contract to construct the telegraph line on the New York and Ottawa Railway from Ottawa to Moira, N.Y. It will include a cable across the St. Lawrence River.

Among the passengers who arrived at Halifax, N.S., yesterday from Newfoundland were Messrs. James Calder, Thomas Whitman and A. L. Curry of Bridgetown, N.S. These gentlemen have been in Newfoundland and Labrador all summer, having gone there for the purpose of prospecting timber lands in Labrador. The whole affair, Mr. Curry stated, was but the preliminary of a large enterprise which the people represented are in the hope of establishing in Labrador next year. As a result of the trip these gentlemen have made application to the government of Newfoundland for the right to cut timber on three hundred and seventy square miles of territory on the Kennamore, Kenamic and Hamilton rivers, which flow into Hamilton Inlet, one of the coast waters. The valleys of the rivers mentioned have very wealthy forests of spruce bordering on them, as well as smaller forests of pine and

hackmatack. If success attends the efforts of these gentlemen a company will be formed, as soon as possible, to operate in Labrador on a large scale. A schooner will be fitted out, and will proceed to the spot with a surveying party, and part of a plant. The mill will be portable, and will be moved from place to place as the profitable lumber of each district has been exhausted. Steam power will be used, and the mills kept running the year round. The lumber will be sent to Great Britain. -Montreal Witness.

The Penman Manufacturing Company, Paris, Ont., who operate some of the largest textile mills in Canada have made a number of improvements and additions to their mills in Paris, and among the improvements have decided to light their mills by electricity. The contract for a five hundred light "S.K.C." machine and the wiring of the factories has been awarded to the Royal

Electric Company, who purpose using for this their "S.K.C." two-phase, alternating current apparatus, the dynamo wound to deliver to the mains current at a pressure that can be used directly in the lamps, from 100 to 115 volts. This is the first instance in Canada, where alternating current is used for factory lighting and the "S.K.C." is, as far we know, the only machine that is inter changeable and can be used from 100 to 2000 volts with the same armature winding, the only thing being necessary to change the voltage being to change the connections. It has been heretofore held by electrical manufacturers that it was not practical to use the alternating current for factory lighting. This has been opposed for some time by the more advanced of dynamo builders, and we will have, in a very short time, demonstrated the feasibility of the alternating current for this purpose.

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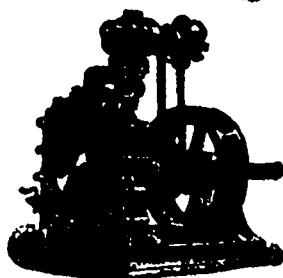
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Phelps Machine Co'y,
EASTMAN, P.Q.

The Kingsville Electric Light Company, a corporation recently organized in that town have decided to light the town, stores and residences by electricity, displacing natural gas, and for this purpose have bought from the Royal Electric Company, an "S.K.C." 500 light two-phase generator with the necessary transformers and material requisite to wire up 500 lights, which is the amount they intend to start work with. The Kingsville Electric Light Company have made a contract by which they use natural gas for fuel. They intend to furnish incandescent and arc lights as well as motors.

A supplement to the annual report of the department of agriculture regarding crops and live stock of the province of Ontario shows that the season has been very encouraging. A remarkable growth in the cheese-making industry is indicated, fourteen new factories having been opened during the season, and only one closed. In addition to this, four new creameries and one new butter factory are now in operation and only one creamery has gone out of existence.

At Vernon, B.C., by-laws to raise \$53,000 for waterworks, \$12,000 for an electric light plant and \$10,000 for a city hall have been carried by the ratepayers.

Messrs. A. M. Bell & Co's hardware store at Halifax, N.S., was destroyed by fire a few days ago. Loss about \$40,000.

One result of the Dingley Tariff was the temporary closing down of the big pulp factory at Sault Ste. Marie. According to a Sault exchange, the unsettled state of affairs caused by the tariff necessitated the mill looking to Europe for disposing of its pulp. The demand there requires that the pulp shall be the dry product. This made necessary a re-organization of the plant by the addition of drying machines. These machines will soon be completed, and when they are installed the mill will run again in full blast. According to the same exchange, there is no difficulty in regard to selling the pulp, as the Old Country market will take all the mill can produce, and contracts have been made already for all the pulp that the mill can make.

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ENGINE PACKING.



Messrs. H. McColl, John C. Scott, A. Reed, F. N. Taylor and G. M. Haldane, Strathroy, Ont., have formed a company to extend the electric light system of the town. The present building will be enlarged and a new generator installed.

We are in receipt of the A. R. Williams Machinery Company's stock list No. 41 of new and second-hand engines, boilers, machinery, etc. Besides the great variety of machinery handled by them and mention

ed in the list, the company announce that they are prepared to manufacture any special machinery that may be called for. The A. R. Williams Machinery Company, Toronto.

Mr. Jaffray, president of the Toronto Globe Newspaper Company, director of the Imperial Bank and one of the leading shareholders in the Crow's Nest Coal Fields Company. Mr. Forme of Fort Steele, the discoverer of the fields, and Mr. W. Blakemore, mining engineer, of the firm of W. Blako-

more, Sons & Co., of Cardiff, England, left by the Duchess on Monday for the Crow's Nest. The party will make a thorough examination of the company's property, and Mr. Jaffray will report to the Board of Directors on his return. The company has been re-organized with Hon. C. J. Baker as president, but the Board of Directors is not yet completed. Mr. Blake more represents both the company and the C.P.R. and has had large experience in coal mining. He will spend a month in the examination of the coal fields and in drafting a scheme for working the property. Mr. Jaffray informs us that the company intend getting to work at once, and to have the mines opened out and tramways laid ready for operating them as soon as the Crow's Nest Railway is ready to haul the coal. The company expect to find a good market in Spokane and neighboring American territory, as well as in British Columbia. —The B.C. Golden Era.

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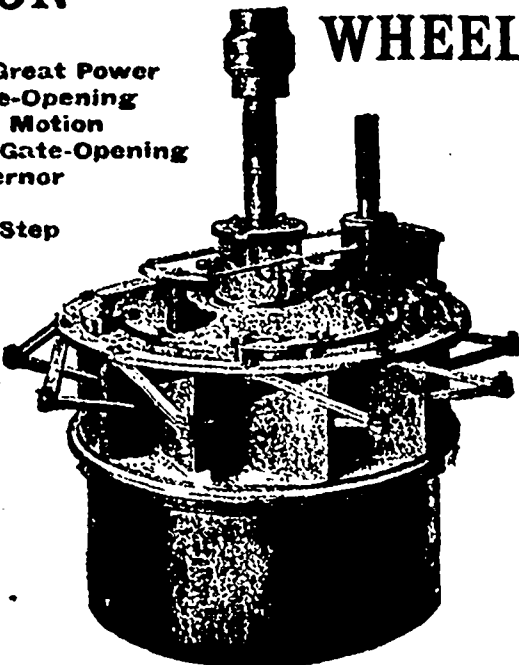
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St. CATHARINES,
February 9, 1897

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Cook & Son

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WHEEL

CHEESE IS KING.

The cheese industry, so far as Western Ontario is concerned, had its origin in Perth and Oxford, and these counties still form the centre of operations. It was away back in the sixties that a man named Dempsey started the first factory in Oxford County. Shortly afterwards P. M. Ballantyne opened another at Black Creek, and after all these years we find the Black Creek factory still in existence, and the name of Ballantyne is to-day as widely known as is the cheese which bears the brand of "Canada" on the box.

Although it is almost the life of the generation since the operation of cheese factories began in Ontario, it is within a much shorter period that the principal development has taken place. The extent of that development can best be shown by the following table, which gives the amount of milk delivered at factories in Ontario, the weight of cheese turned out, and the total value of the output, for a series of years past:

Year.	Milk used lbs.	Weight of Cheese made.	Gross value of Cheese.
1871	16,163,355	\$ 1,451,702	
1883	539,696,197	53,513,032	5,589,329
1885	733,437,254	71,209,719	5,781,569
1890	836,387,517	79,364,713	7,189,957
1897* 1,500,000,000	140,000,000	12,600,000	

* Estimated. St. Marys Argus.

FLAX IN ONTARIO.

The Farmer's Sun gives the following comments on the flax industry in Ontario, a business in which St. Marys is greatly interested on account of the large amounts of money paid out by the manufacturers here:

Referring to the mill of Messrs. Weir & Weir the Sun says: "There is a flax mill in St. Marys, owned by Weir & Weir, which employs sixty men the year round, and last year they worked up 1,900 tons of flax. An other mill in the same town is of about equal capacity."

The mills thresh out the seed from the flax, and this is retailed at about \$1.70 per cwt., bags included. For the meal ten cents per cwt. more is charged. There is, say Weir & Weir, a lot of adulterated meal on the market, which is composed in part of shorts, and part of oilcake meal. The fibre of the flax worked up at St. Marys is sold in the States.

There is a mill at Brandon, the only one

of its kind in Ontario, where oil is pressed from the seed.

Flax growing is not exactly a new thing in Ontario. Crops have been produced for thirty years past. The industry has not, however, made progress at all in keeping with the development of cheese-making.

John Hogarth, who is prominently connected with the business of growing flax, and turning the raw product into finished goods, appears to think that the comparatively small progress which has taken place is due to natural limitations.

"In some places," he told The Sun, "they have the soil, but not the climate; in others they have the climate, but not the soil. About Stratford we find both the initial conditions necessary to success. We have the soil, and we have the climate as well. I do not know of any other part of Ontario of which the same can be said. They are trying to make the industry go in Essex, but I do not look for success there."

The first mill was opened at Wolvorton by J. Holson Brown, and mills were afterwards started in Blewheim, and in Oxford county.

"At present there are between thirty-five and forty factories, all located in what may be called the Stratford district. Only about twenty-five of these are running, however, some of the others being closed on account of litigation."

"Each factory in operation requires the product of about 500 acres of ground. The average production is two tons to the acre, and the crop sells at \$6 to \$10 per ton."

"What advantages do you claim for flax cultivation?" The Sun asked.

"Flax is easy on the land," was the reply. "It does not take from the soil any of the elements needed to produce wheat. Land that is wholly run out for wheat or oats will grow flax. It is a splendid crop to rot soil, and it leaves the ground in as good condition for wheat as if the soil had been summer fallowed."

"Flax can be pulled for \$4.50 per acre; no expensive machinery is required for taking off the crop, and it goes direct from the field to the factory. Taking everything into consideration—no threshing, no storage, no risk of fire—it costs as little to harvest and market an acre of flax as it does one of oats. But oats will only yield about \$8 to the acre, while flax will return \$16 to \$18. More than that, flax can be turned into money earlier in the season than any other crop which the farmer produces."

Those engaged in growing are mostly Irish or Germans. In some cases, a mill company leases the land, and plants and harvests the crop with its own labor. Nearly all the fibrous far has been sent to the United States, although some has been shipped to Ireland.

The company, of which Mr. Hogarth is manager, is known as the Perth Flax and Cordage Company, and it proposes not to sell the fibre, but to manufacture it into twine and rope.

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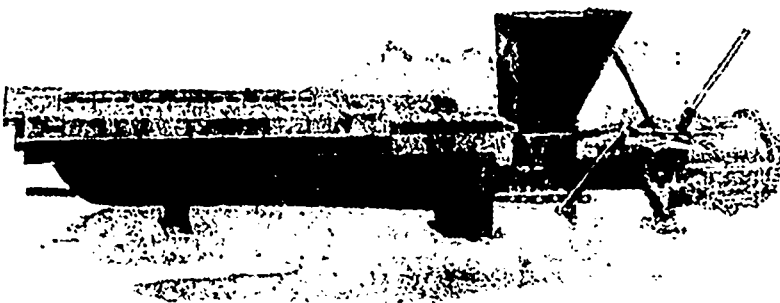
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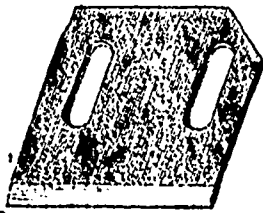
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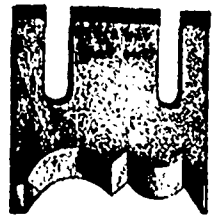
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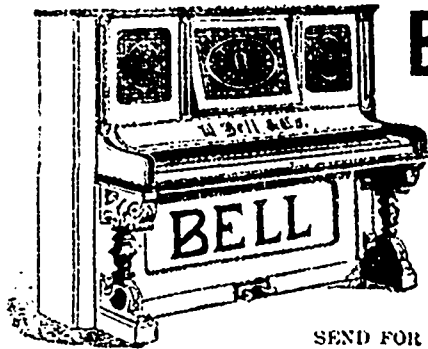


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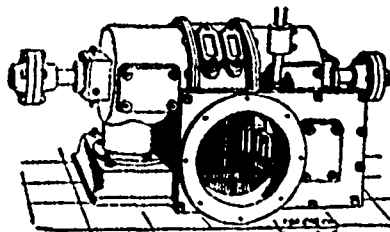
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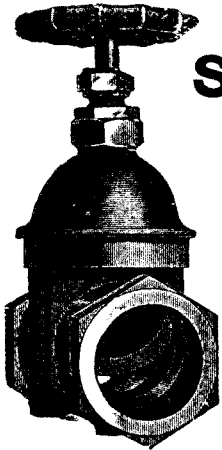
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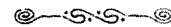
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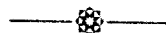
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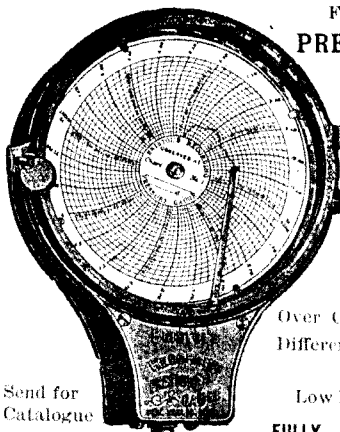
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