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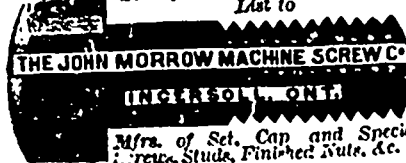
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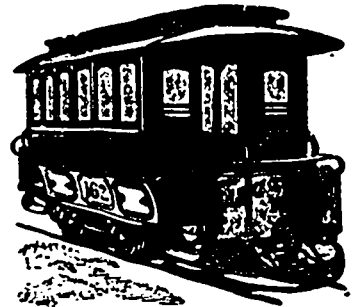
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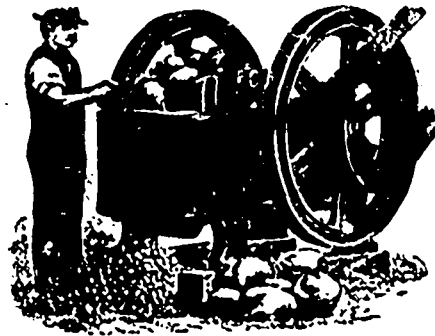
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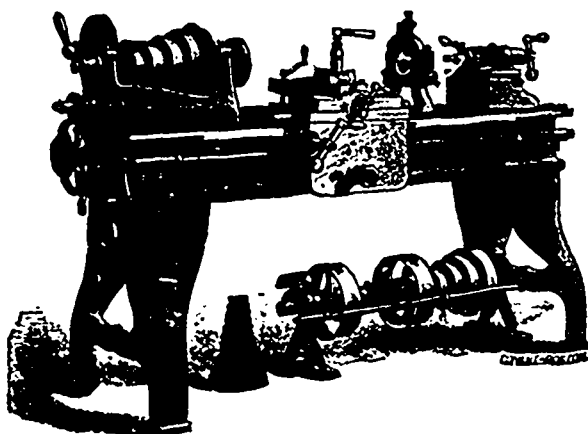
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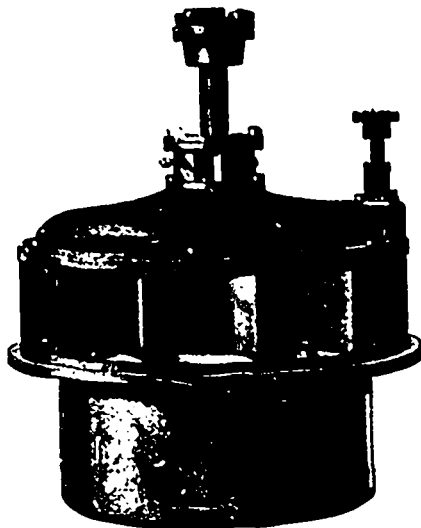
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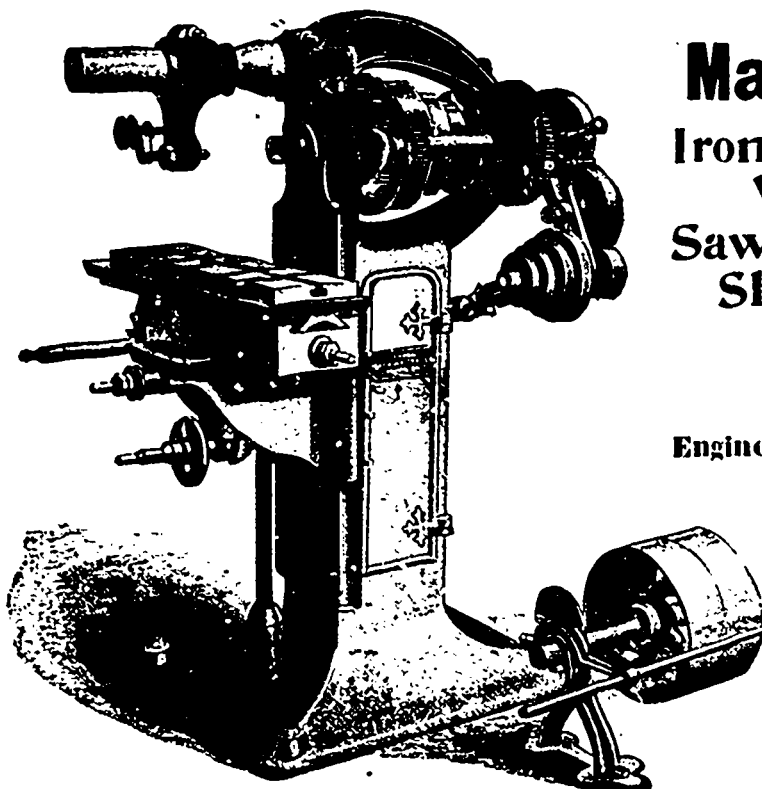
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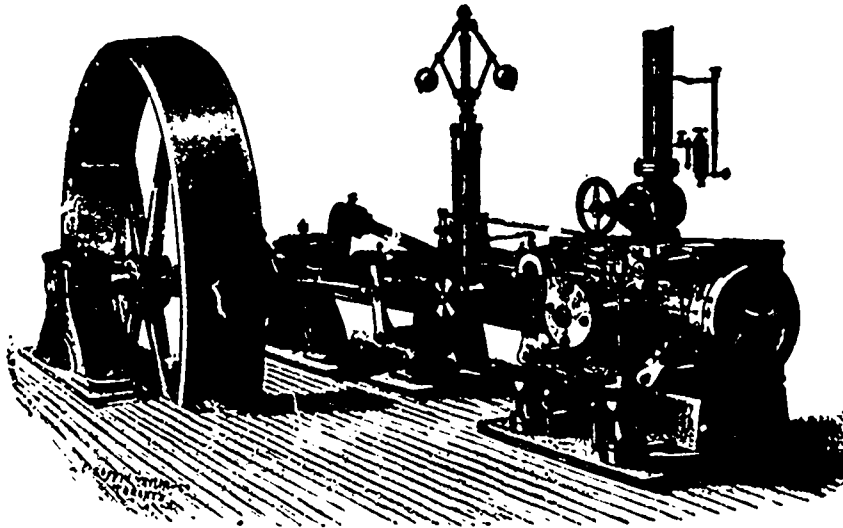
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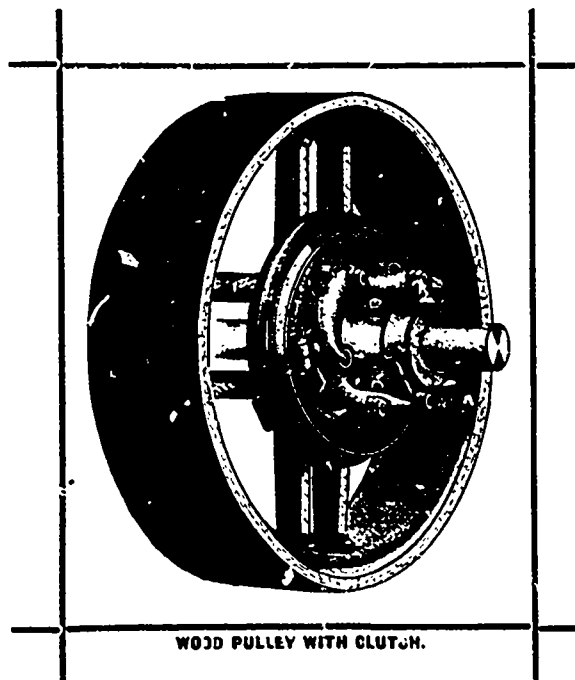


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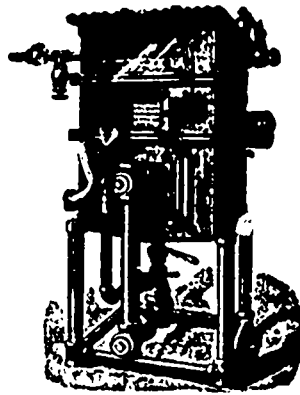
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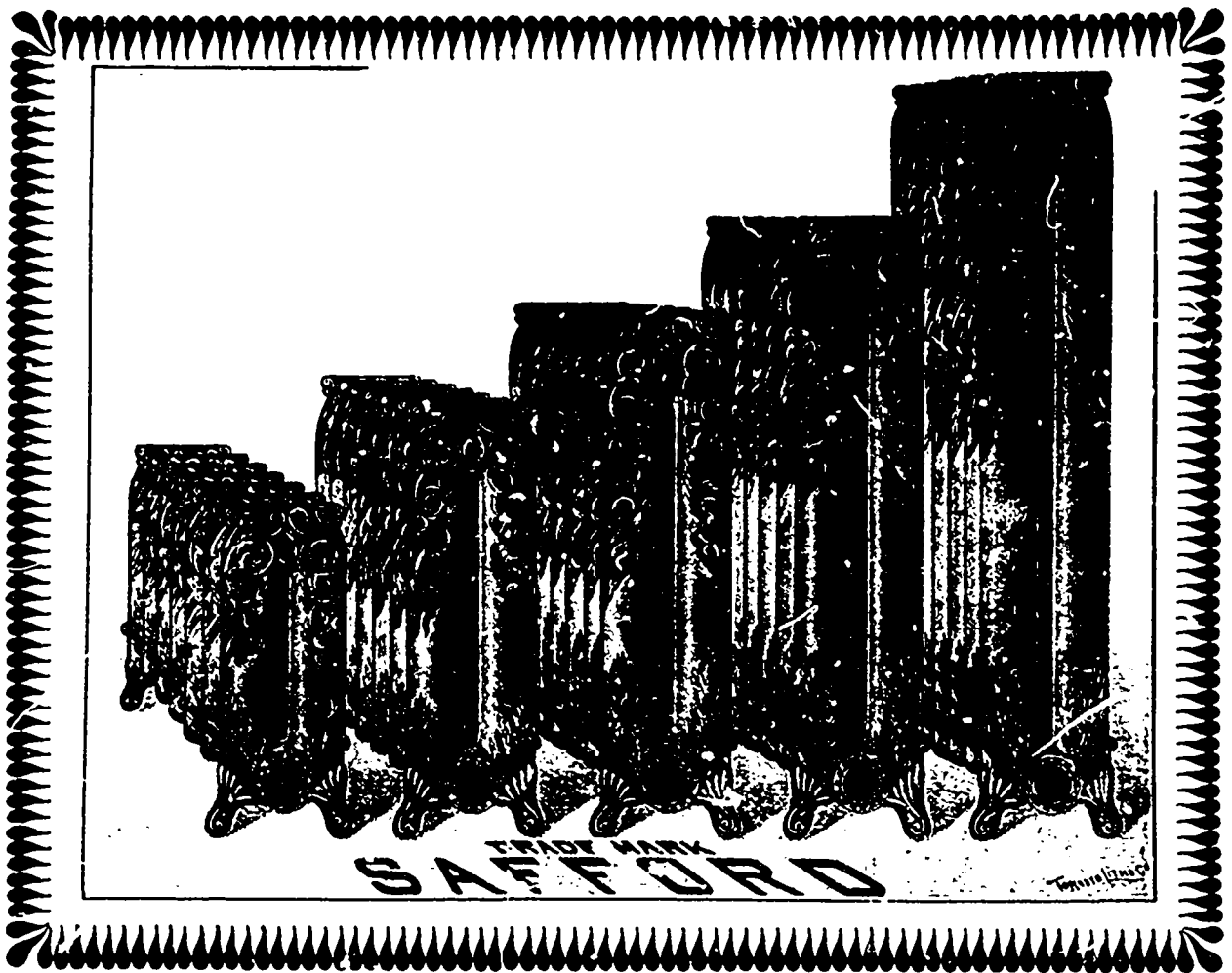
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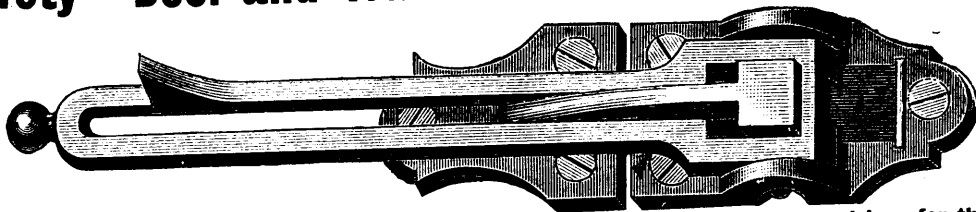
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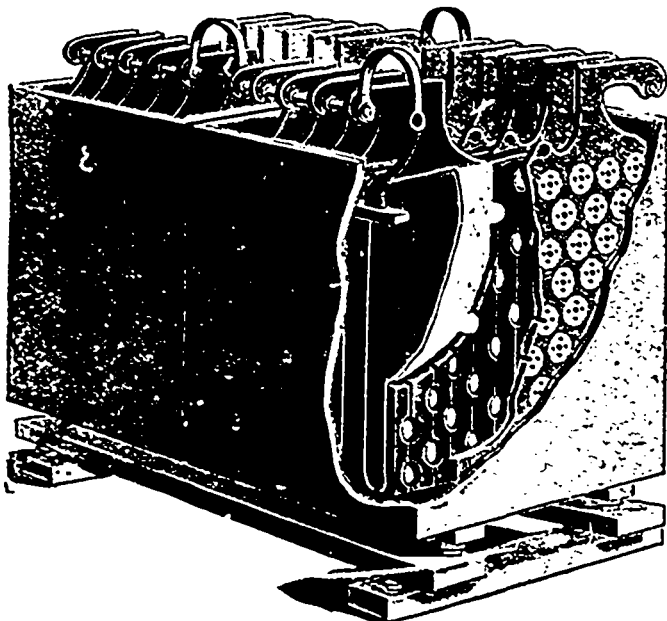
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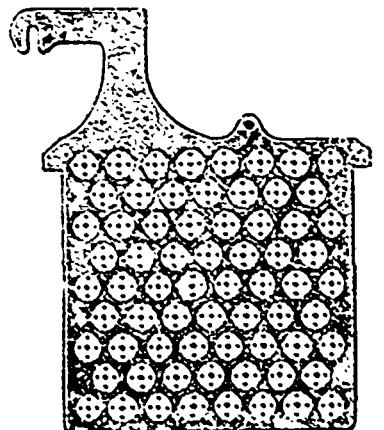
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It is significant that a New York firm—that of Arnold, Constable, and Co.—has appointed a Canadian agent who will represent them in upholstery, rugs, and carpets. The firm import high-class goods of this description largely from Europe, besides selling domestic makes. Canadian orders presumably would be supplied from New York in bond so as to save the double duty, unless the Canadian officials persist in their recent action with a view to discouraging imports of European goods via American ports. —Textile Mercury.

DRAWBACK OF DUTY PAID ON IMPORTED GOODS.

CERTIFIED COPY of a Report of a Committee of the Honorable the Privy Council, approved by His Excellency the Governor General in Council, on the 2nd November, 1894, re Drawbacks on imported goods used in Canadian manufactured articles, and Exported.

That, under authority of Section 247 of Chapter 32 of the Revised Statutes of Canada, intituled: "The Customs Act," the following General Regulations governing drawbacks be adopted:—

The manufacturer of any article manufactured in Canada, wholly or in part from material of foreign growth, production or manufacture imported thereinto, upon which any duty of Customs has been paid on such importation, may, upon the exportation of such article so manufactured in Canada, unless otherwise provided, and on compliance with such other regulations and restrictions as are herein contained, and are now or may hereafter be made applicable to each or any specific case be entitled to a drawback of ninety-nine per cent. of the duty paid upon the material of foreign growth, production or manufacture, used and wrought into or attached to the article manufactured in Canada and exported therefrom, provided always that no claim or claims for drawback shall be paid or be payable, unless it or they aggregate the sum of twenty-five dollars, as made or presented at any one time; and provided further that the material so used as aforesaid shall have been entered at Customs and the duty paid thereon within three years of the date of the exportation of the Canadian manufactured article.

To be entitled to a drawback the manufacturer shall make due export entry of the article or articles so manufactured in Canada and deliver to the Collector of Customs at the port where such export entry is made one of the bills of lading thereof, or a copy of the bill of lading thereof, duly certified as such, and as issued for Canadian Customs purposes only by the Agent of the Carrier, and a statement showing the distinguishing marks and numbers of the package or packages covered by the entry and the bill of lading, the foreign destination thereof, the number or quantity of contents, the place of manufacture, and unless a specific sum has been authorized as drawback payable, the quantity of the duty paid material used in the manufacture of the article or articles so entered for export, and the amount of duty paid thereon, and shall furnish evidence satisfactory to the Controller of Customs as to when and where the duty was paid, and such further evidence of the bona fides of the importation and exportation as the Controller may under the circumstances of the case deem necessary; all of which he shall verify under oath in form as per schedule hereto attached.

Sections 1, 2, 3, and 4 of Chapter 11 of the Consolidated Orders in Council of Canada are hereby cancelled from and after the date upon which the foregoing Regulations go into effect, except in so far as regards claims accrued thereunder prior to such date.

FORM OF OATH.

I, _____ of _____, do solemnly and truly swear that I am (1) _____ the proprietor of the

establishment for the manufacture of _____, situate at _____, and the claimant for drawback of duty paid on material used in the manufacture of the (2) _____ exported as per copy of export entry as over and described in the bill of lading attached, signed by the (3) _____ of the (4) _____ consigned to _____ at _____ and shipped for the foreign port of _____, and that none of the articles covered by such export entry and bill of lading are intended to be reloaded in Canada; and further, that they were manufactured in the Dominion of Canada, and that in the manufacture thereof there was used (5) _____ which was imported into Canada within three years from the date hereof at the port or ports of _____ viz.: in the fiscal year ended June 30th, 189_____, as per entry No. _____ for entries Nos. _____, on which a drawback is claimed under regulations amounting to the sum of \$ _____, being equal to (6) _____ on the _____ (5) _____ so used and exported.

Subscribed to and sworn to before me at _____ his _____ day of _____ 189_____.

- (1.) In case claim is made by a firm, insert the words "a member, or the duly authorized agent of the firm of, &c."
- (2.) Quantity, &c., of articles exported.
- (3.) Master, purser or agent, as the case may be.
- (4.) Name of vessel or railway by which shipped.
- (5.) Quantity, &c., of the raw material used in which drawback is claimed.
- (6.) Ninety-nine per cent. of the duty actually paid, or where a specific drawback is payable, the drawback payable under such regulations.

JOHN J. MCGEE,
Clerk of the Privy Council.

THE CANADIAN MANUFACTURERS' ASSOCIATION.

We are in receipt of a letter from a prominent Canadian miller in which he enquires, "What are the advantages, to one in my business, to be gained from becoming a member of the Canadian Manufacturers' Association?"

In the business card of the Association, published elsewhere in these pages, it is stated that its chief objects are "To secure the aid of both public opinion and Governmental policy in favor of the protection of Canadian manufacturing enterprises; and to enable those engaged in all branches of manufacturing industries to act in concert as a united body whenever action in behalf of any individual interest may be necessary."

Readers are no doubt aware that the Association was called into existence when it was found that if the manufacturing industries of Canada were ever to thrive and prosper it would have to be under a fiscal system of Government that would give them tariff protection against the unfair competition of similar industries in other countries. The Association was not organized for the protection or peculiar benefit of any one particular industry, but in the interests of all; and therein it differs very greatly from such associations as those of the millers, to which we suppose our correspondent belongs, or of the furniture manufacturers, or the tanners, or the brass manufacturers, or of any other particular guild of manufacturers, although most of the individual members in all such guilds and industries are members of this Association;

and it will be observed that there are several sub-organizations of the Manufacturers' Association, the members of which believe that while some of the details of the business of their several industries may be better looked after in that manner, yet feel that as touching the great principle of tariff protection their interests may be best conserved by operating through and with the parent Association. Thus there are affiliated with the Association such sub-organizations as the Woollen Manufacturers, the Knit Goods Manufacturers, the Carpet Manufacturers, and the Glove Manufacturers, while at the same time there are in close touch with the Association the millers, the tanners, the iron furnace men and other guilds, and manufacturers generally.

The Association never meddles with such matters as the prices at which goods are to be sold, or to interfere in any manner in the concerns of any industry outside of the tariff question. It can readily be perceived that an individual manufacturer, or even a guild of manufacturers, while looking sharply to their own particular interests, and thinking that tariff legislation should be made to take a direction specially intended to benefit them, might and probably would lose sight of the fact that such legislation might be exceedingly prejudicial to the interests of other manufacturers engaged in an equally important industry. One of the chief objects of the Association is to prevent such antagonisms; for it never asks the Government to make or not to make any changes in the tariff until those who desire them explain to the Tariff Committee of the Association the reasons for the desire. This Committee is composed of members of the Association engaged in many different lines of manufacturing enterprises, who would be quick to detect points where injustice might be done by the proposed change. If all the parties whose interests might be affected by a proposed change can agree upon a recommendation to the Government, to which the Tariff Committee can assent, then such recommendation would be made, urged by all the influence of the Association. If the Association should decline to make a recommendation that fact would not prevent those who might desire to do so from acting of their own accord as individuals in carrying their matter to the Government.

In union there is strength. From the denunciations so freely, frequently, and unjustly bestowed upon the Association by the enemies of protection, one might very correctly infer that it has some influence with the Government, and it might also be quite as correctly inferred that this influence would not exist if the recommendations and suggestions of the Association were unwise or unreasonable. In his day Sir John Macdonald considered the advice of the Association of much value to him in shaping the policy of his Government and in framing the tariff laws. And why not, when many of the very best and most reliable men in the land—men who had their capital invested in manufacturing industries, and who were giving their best intellect and energies to the building up of Canada—were at the head of it? Such men as James Goldie, William Christie, John Bertram, John McClary, Joseph Simpson, James Watson, P. W. Ellis, R. W. Elliot, John Cowan, Thomas Cowan, Adam Warnock, Robert Mitchell, W. H. Law, Bennett Rosamond, James Crossen, W. H. Storey, James

Hay, Louis Cote, G. E. Diamond, Edward Gurney, William Bell, William Craig, and hundreds of others throughout Canada, from Halifax to Sarnia—the very backbone and sinews of our national prosperity—were actively interested in its formation, and, those of them who survive, staunchly stand by it till now. These men were not nor are grinders of personal axes, but patriots who love their country and desire its prosperity.

It is a mistake to suppose that Canadian millers, or tanners, or manufacturers of any sort, would not and do not, as guilds or classes, derive substantial benefit from membership and identity with the Association. This is obvious if it is admitted that they are benefited by a policy that gives them control of the home market for their products. This protection to any particular industry could not possibly exist if those engaged in all the other industries were not willing that it should exist; and therefore those engaged in that industry should recognise the fact that without the friendly co-operation of all the other manufacturers, as exemplified in the National Policy, their industry would not probably thrive. And thus it is that all Canadian manufacturing industries are dependent upon each other for a system of cohesion which commands an influence with the Government which ensures the continuance of that protection without which no industry could prosper. The manufacturers must of necessity stand together, and the Canadian Manufacturers' Association is the nucleus of their strength and influence.

THE MIDDLEMAN.

Metaphorically speaking the Middleman toils not much, neither is he a spinner of textile yarns, yet this is the way the Wool and Cotton Reporter shows how he is interested in tariff reduction, how the public is not benefited, and how the manufacturer is hurt. It says :

One of the logical incidents to the depressed condition of trade is the unreasonable demand for low prices, and strange to say this demand is more urgent from jobber and retailer than from consumer, but possibly the former are merely anticipating the demand which is probable to come later on from the latter. However, there is reason to believe that the latter is not receiving full benefits of the reductions which have been made, and further than that he is not likely to—a reduction in manufacturers' price must be large in order to appreciably affect the price to the consumer. We do not mean to say that the past two years have not brought a reduction in the retail price of textiles—and we are only dealing with articles coming under this category—there has been a steady reduction in the past four years, or more, and the reduction has been considerably accelerated within the last two years; but it is safe to say that few if any reductions have been made since the new tariff went into operation.

The New York World on Monday last printed a list of 500 staple articles, on which it claimed a reduction had been made, due to the change in the tariff, and coming after the change. Assuming that the figures are correct as to time and amounts, they are not such changes as inure to the benefit of the consumer. It gives price of Amoskeag ginghams at $7\frac{3}{4}$ c. in 1894 against $8\frac{3}{4}$ in 1893, and Fruit of the Loom (cambic) 9c. against $9\frac{1}{4}$ c. How much of

that difference, do you imagine, goes to the consumer? Lowell super ingrains $72\frac{1}{2}$ c. against $77\frac{1}{2}$ c., and Sanford tapestries $67\frac{1}{2}$ c. against $72\frac{1}{2}$ c.; how much of this reduction does the consumer get? And yet consider the cost these changes mean to the manufacturer—the cotton market turns on one-eighth of a cent, and it is either a profit or a loss to the manufacturer, while to the jobber it is only just so much more or less of a profit, and to the consumer no change whatever is made. Because Lowell, Bigelow or Smith reduce prices of carpets 5 or 10c. per yard, does it follow that the house-wife who goes to Pray or Sloane will be able to buy any of these makes any cheaper? The simple fact is that the manufacturer has suffered a loss and the jobber has made a gain—the reduction not being sufficient to cause the retailer to change his price.

How much benefit does the consumer realize when he buys a suit of clothes made out of cloth on which there has been a reduction of 20 to 25 per cent. on the manufacturers' price? The jobber comes into the primary market and buys a line of dress goods at 5 per cent. below previous price—think you the consumer buys those goods at 5 per cent. reduction? The fact is the benefit of the change has gone largely into the pockets of the jobber and retailer, and the manufacturer has had to stand the loss. Possibly, and probably, the demand which buyers are making to-day for still lower prices may result in an advantage to the consumer, but it will take time before it is realized, and the loss in wages and earning capacity will more than offset any gain which may accrue from the reduction. The masses will find they have been deceived when they were told that prices were to be cut in half or greatly reduced—the reduction has been made at the wrong end. It has been taken out of the earning capacity, and the man who has had his wages cut 20 to 25 per cent., finds that the cost of living has not been reduced proportionately.

CANADIAN FURNITURE IN GERMANY?

Does not this look like an opening to sell Canadian furniture in Germany?

According to the United States Consul at Brunswick (Northern Germany) the Germans are very deficient in the manufacture of ordinary furniture. This arises from the scarcity of wood, and from the fact that they have not accustomed themselves to so many articles of furniture as is the case in our own country. Speaking broadly, there is no good furniture in Germany. This statement may be qualified with regard to art furniture, but even in this respect they fall far below the productions of American factories. A somewhat extended inquiry in this direction leads Consul Tingle to the belief that in Germany there is an excellent field for the extension of trade in American furniture. Especial stress must be laid upon cheapness, for thrift is, perhaps, the most predominating German characteristic, and the average German carefully scrutinizes the expenditure of every mark.

"It is rare," says the report, "to find a table or desk that sets evenly on its legs, and it is rarer still to find a common chair that will not come apart after very little use. Easy chairs of the comfortable 'sleepy-hollow' pattern are almost unknown, and the usual upholstered drawing-room chairs, while substantial enough, are far from being things

of beauty. The artistic and inexpensive bedroom sets—especially dressing cases and bureaus—which are to be seen in even the most humble homes in the United States, are never met with here. Instead, there is a very plain black-walnut bedstead, a small chest of drawers with a wall mirror and an old-fashioned, marble-topped waststand. These articles, with two or three ordinary chairs, furnish the bedroom equipment in the houses of the well-to-do. In the parlor or drawing-room the furniture in the houses of the rich is of the art variety, and answers its purpose very well. In this direction there is probably not much of an opening. In the dining-room the furniture is somewhat better, the sideboards or buffets having rather an air of substantial elegance; but the tables are not only severely plain but are exceedingly unreliable.

"Should the trade be established, it could be handled through commission houses in Hamburg. As to the best way of developing it, and upon what lines, the best plan would be for the American Furniture Makers' Association to send over here one or more experts to make a thorough study of the question. It is certain that the money spent in this direction would not be wasted."

The customs duties per 100 pounds are as follows: rough furniture, unpainted, 36 cents; with ornamental work or painted, \$1.20; upholstered but uncovered, \$3.60; upholstered and covered \$4.80. Freight from New York to Hamburg is \$1.20 per 100 pounds.

EDITORIAL NOTES.

Mrs. Clementine Fessenden, of the National Council of Women, has written a letter to the Empire which explains itself as follows:

"Faith Fenton" well asks what the National Council of Women have to say in this matter of obscene advertisements. We are too young to have accomplished much, but it may be a comfort to know that in the Hamilton local council we have a press federation, one of its avowed objects being "To endeavor by every legitimate means to restrain the publication of police and divorce court proceedings, as well as the vile patent medicine advertisements in the newspapers of the day, and to look forward to a more complete suppression of obscene and immoral literature." We trust that when other local councils meet this fall they will help on this work so faintly outlined, and that strong federations may be formed to meet this insidious foe, who, on every hand, is sapping the purity of our childhood, and laying his vile hand on our unprotected womanhood. We read of "epidemics of crime." Did it ever occur to the public that by giving them all the horrible minutiae, the papers of the day are in some measure responsible for the fanning into flame of the spark of wild disorder leading on to crime, which had otherwise slumbered or died out.

The Empire's answer to this most vital question is that it would be well if the suppression of this objectionable literature could be brought about, "but this is a sensational age, and the papers are forced to keep up with the procession until circumstances bring about a desirable halt." Mrs. Fessenden nor Faith Fenton either catch on to the true inwardness of the situation. The daily newspapers of Toronto, without exception, and of other cities also, are not published in the interests of domestic and social purity, but to make money, and they can make more money by publishing obscene and immoral literature, and disgustingly suggestive advertisements, to meet the debased

tastes of the debauched classes of the community, than by excluding such stuff in the interest of purity and virtue. The good women of the National Council of Women, and of the Women's Christian Temperance Union, before they can hope for the larger success for which they strive, should lay the axe of their endeavors to the root of the evil which is seen so disgustingly prominent in the daily papers about six times each week.

The tendency of the merchant marine of the United States is toward the construction of bigger ships, made of iron or steel. That is shown in the annual report of the Bureau of Navigation. Although, since 1884, the number of American vessels has decreased 504, the gross tonnage has increased 413,000 tons. The average size of vessels has increased from 177 tons in 1884 to 198 tons in 1894. In 1884 the steam tonnage 5,401 vessels of 1,465,909 gross tons was one-third of the merchant marine, while in 1894 it comprises 6,326 vessels of 2,189,430 tons or nearly one half of the total. In 1884 the steel tonnage was only 5,000 tons; in 1894 it is 350,000 tons. Steel marine construction in 1884 was carried on at only four ports in the United States, while last year 16 ports return such construction. The great feature of this maritime development, outside of this transformation of material, is the growth of the merchant marine of the Great Lakes. The total tonnage of American lake ports has increased 500,000 tons during the decade, or nearly doubled; and the iron and steel steam tonnage on the lakes has increased from 27,000 tons in 1885 to 250,000 tons in 1894. The lake ports stand high in the scale of steam tonnage. Of such a tonnage of 2,189,430 gross tons of all descriptions, 482,294 tons are documented at New York, 183,224 at Cleveland, 128,839 at Buffalo, 128,386 at San Francisco, and 120,817 at Detroit.

Messrs. R. Macgregor, R. Scott and C. J. Shurly, of Galt, Ont., and Mr. Petrie, of Guelph, are contemplating a trip to Australia. The trip is nominally for pleasure, but they will look into the prospects of doing business with the colonies. These gentlemen are all shrewd business men and their opinion, on returning, on the chances of business with our Australian cousins, will be worth something.

Pending the recent elections in the United States, Mr. Singerly, a Democratic free trade candidate for Congress in Philadelphia, declared that "No country that has ever existed except the United States has attempted in time of profound and prolonged peace to raise the tariff—to raise the taxes of the people—as was done by the McKinley law of 1890." Regarding this wild statement The Manufacturer of that city says:

Mr. Singerly has been misinformed. There has been profound peace in Europe since 1870. Within the past five years France has largely advanced the protective duties in its tariff. Spain has done the same thing. So has Russia. Out in Australia the last one of the States to cling to free trade has abandoned it and gone over to protection. India has endeavored to adopt a protective policy but has been forbidden by England to do so; and in England itself the sentiment against free trade has of late acquired force which, twenty years ago, would have been thought impos-

sible. In fact, no one familiar with such matters can successfully dispute the assertion that there are no signs anywhere upon the globe of a movement towards free trade. The whole civilized world, outside of Great Britain, has tightened its protective bands.

Governor McKinley, the great American champion of protection, has a pretty talent for epigram. In a speech at Chicago a day or two ago he said: "If we don't keep our business here, our business won't keep us here." This is a timely truth put in very compact form, and it is a truth that applies to Canada as well as it does to the United States.—Hamilton Spectator.

The CANADIAN MANUFACTURER seems to think that variety is not the spice of life, so far at least as the contents of a trade journal are concerned. Its issue of September 7 was devoted wholly to the Canadian and United States tariffs, and all the available space for reading matter in its current issue is given up to the Toronto Fair. St. Louis Farm Machinery.

Perhaps so. That the publishing of the tariffs of both Canada and the United States in one issue of this journal was a commendable stroke of journalistic enterprise is shown by the fact that it was thus commented upon by a large number of papers in both countries; that we were complimented in the matter by scores of advertisers and other business men, and that a large demand existed for copies not only from Canada and the United States, but also from Great Britain, France and Germany. Mr. James M. Swank, general manager of the American Iron and Steel Association, thought our matter of sufficient value to reproduce a considerable portion of it in The Bulletin, and to make editorial mention of it in the following words:—

The CANADIAN MANUFACTURER, of Toronto, the very able organ of the Canadian Manufacturers' Association, contains in its issue for September 7th entire and exact reproductions of the new Canadian tariff, which was ratified on July 23, 1894, and of the new United States tariff, which became a law and went into effect on August 28, 1894. Both of these important papers are copied from official documents—the Canadian obtained from the Dominion Minister of Finance at Ottawa and the American from the Treasury Department at Washington. Their publication in the CANADIAN MANUFACTURER is a timely favor to all who are interested in commercial transactions between the two countries. We publish on our second page to-day so much of the new Canadian tariff as will possess interest for our readers.

Farm Machinery's allusion to our notices of exhibits of manufactures at the recent Toronto Fair was probably prompted by the conscientiousness of the fact that the only rival our fair ever had—that of St. Louis—is fast sinking in importance. Where's Reifsnider?

The Women's Christian Temperance Union has passed a resolution protesting against the publication in newspapers of reports of prize fights and sensational crimes. It would be well if this could be brought about, but this is a sensational age, and the papers are forced to keep up with the procession until circumstances bring about a desirable halt.—The Empire.

The Empire admits the propriety of suppressing the publication of a class of news that should exclude the admission of any paper publishing it not only from the homes of respectable people where female purity is considered of inestimable value, but also from offices and places of busi-

ness where gentlemen object to having such filthy reading thrust before their eyes so continuously and disgustingly. It would be well if this exclusion could be brought about, at the urgent request of both good women and good men, but The Empire excuses itself from attempting it upon the plea that this is a sensational age, and that it is forced to keep up with the procession of Police Gazettes and similar objectionable papers until the pressure of public opinion forces it out of the nasty business. The Empire does not pander to the wishes of the better classes of its readers—to ladies and gentlemen—but to the corrupt under half of the reading world, who demand just such pabulum as it supplies to them.

Andrew Carnegie, the Pittsburg iron king, arrived in New York on Saturday after a year's absence in England and Scotland. When asked about the business outlook abroad Mr. Carnegie said:—

The condition of affairs in Europe, and particularly in England, is deplorable. You can hardly conceive to what extent the depression has lowered values and paralyzed business. For several years capital in England has been a loser of money, and the outlook does not seem to brighten. Agricultural land has never been so low. Within fifty miles of London it is possible to buy land for less than within fifty miles of New York. Lately there have been sales as low as \$50 and \$60 an acre.

How is it that, enjoying as she does the inestimable blessings of free trade, England's commercial and industrial condition is "particularly deplorable"? Not only does free trade fail to preserve her from the effects of the general depression; but makes her condition worse than that of the other countries of Europe. The coincidence of the only free trade country in Europe being the greatest sufferer by hard times is one too striking to be overlooked.

Hamilton Spectator.

Attention is directed to a paper published elsewhere in this journal regarding the proposed St. Clair and Erie Ship Canal, supplied to us by Mr. D. Farrand Henry, M. Am. Soc. C. E., of Detroit, Mich., chief engineer of the proposed canal. This canal will be entirely within Canadian territory, and when completed would give us an independent waterway from Port Arthur, at the west end of Lake Superior, via our own Sault Ste. Marie Canal, the St. Clair and Erie Canal, the Welland Canal, and the St. Lawrence canals to Montreal and the Atlantic Ocean. This canal should be constructed without delay.

There was an election the other day in the Australian province of Victoria, and, according to a British journal, "sanguine anticipation had been indulged" that the people would declare for free trade. The result, however, was, as the Textile Mercury, of Manchester, England, declares, "the practical annihilation of the free trade party." The Mercury enquires, "How is this perversity to be explained?" and it attempts to answer the question by showing how hard it is for a community to turn to righteousness when once it has begun to indulge in iniquity. This may satisfy the mind of a British free trade bigot, but other people will find it hard to believe that any community of free men will persist year after year in voting against its own interests. The Victorians have simply done what

all the other people of the world outside of the British islands have done, and this unanimity of action, among nations living under various forms of government and speaking various languages, can be accounted for only upon the theory that some one general force, in operation everywhere, thrusts the people toward a single conclusion. That force, beyond question, is the instinct of self-preservation. Precisely that force will overthrow the Democratic party in the United States in the approaching elections. The American people, during their thirty years of high prosperity under protection, seem to have acquired the belief that their prosperity was the free gift of Nature. Bitter experience has undeceived them. They know now that they prospered because they were protected, and they are going back to protection to stay.—Philadelphia Manufacturer.

The Buffalo Express has the following to say regarding Canadian Banks :

The success which attended the sale of the Canadian 3-per-cent. bonds in London recently, where the \$2,500,000 loan was subscribed five times over at 97½, reflected great credit upon the financial standing of the Dominion, and has directed considerable attention to Canadian financial methods. Canada is justly proud of her system of chartered banks. Thirty-nine of these institutions are doing business in the Dominion with branches in every town where there is business enough to warrant the expense, and districts remote from the large cities therefore enjoy all the advantages of sound banking privileges, while the circulation and accommodation are flexible and expansive in perfect sympathy with the necessities of trade. Detailed statements are published by the Dominion Government every month, giving minute information as to the assets and liabilities of each bank, so that its affairs are open to constant public scrutiny, and a bank failure in Canada is a novelty and a disaster of very rare occurrence. In the last 30 years the value of the shares in Canadian banks has steadily increased, and present values are the best evidence of the stability of Canadian banking-houses and the confidence of the shareholders therein. Shares in the Bank of Montreal, for instance, which sold at 108 in 1865, are now held at 225, Bank of Toronto stock, at par in 1865, is now worth 251 a share, and other bank stocks are quoted at figures not far below those mentioned. In 22 years the paid-up capital of all the banks doing business in Canada has increased from \$42,000,000 to \$62,000,000; their circulation from \$25,000,000 to \$30,000,000; deposits from \$49,000,000 to \$176,500,000; total liabilities from \$87,000,000 to \$221,000,000; and assets from \$144,000,000 to \$308,000,000. In that period of time the population of Canada, which was 3,686,596 in 1871, had only increased to 4,833,239 in 1891, and the figures will not now exceed, probably 5,000,000. The immense increase in the volume of business transacted by the banks, therefore, exemplifies the stable growth of Canadian commerce, while the soundness of these financial institutions illustrate the prudence and sagacity of their bankers and the excellent system under which they work.

Speaking at Berthierville, Que., on a recent occasion, Mr. de Musy, manager of the beet root sugar factory said: "to some extent the beet root sugar industry owed its establishment in this province to Lt.-Gov. Chapleau, who went to France to study the industry and on his return made special reports and did all he could to promote it. He then proceeded to give some interesting figures relative to the present factory, which, he said, was erected in 1880,

and was opened in 1881, but after one season's working it proved so unremunerative that it was closed until 1883, when it was reopened. The same result, however, attended it as before, and again it was closed. The industry was restored in 1888, but once more failure attended it, and it was not until last year, when Messrs. Lefebvre & Co. took hold of it, that it was reopened and proved successful. The premises, he said, occupied seventeen acres of ground, the factory itself covering four acres. The employes received about \$120 a day in wages, and \$1,000 per day were paid for beets. The coal bill amounted to \$100 a day, and another \$100 a day was expended in oil, grease, lighting, etc. The sugar manufactured was sold at from 3¼c to 4c. a pound at the factory; but he thought that next year they would be able to sell it at from 2½c to 3c a pound, as they had now considerably improved the machinery. The annual expenditure in connection with the factory was about \$180,000. Until this year the industry had never realized a profit but it was expected that this season's working would result in a favorable balance of between \$30,000 and \$40,000.

The Toronto Globe in its issue of the morning of November 6, the day upon which the Free Trade Democratic party of the United States sustained the worst defeat it ever encountered, Republicanism and protection having swept the country, said :

No matter how the Congressional elections go, Canadians and Americans can take comfort in the assurance that McKinleyism is dead, and protection in any form is certain of an early demise.

Such prophesies we laugh to scorn. Why even The Empire could come closer the mark than that. In olden days false prophets were burned to death, and the foolish Globe does not gain wisdom by their sad experience. No doubt both Canadians and Americans take comfort in the result of the elections, for they most unmistakably show that protection is a very live issue in both countries. There are no flies on protection, even of the McKinley sort, in the United States. The Globe prophet is a dandy.

The Steamer Storm King, which sailed from Montreal for a British port on November 23, was the last vessel to leave Montreal for the season, navigation having closed. A large portion of the Storm King's cargo consisted of cattle and sheep, and the shipments of live stock from Montreal during the season of 1894 are now definitely known. That they have increased very largely over those of 1893 is shown in the following statement :

| | Cattle. | Sheep. | Horses. |
|------------|---------|---------|---------|
| 1894 | 86,604 | 139,763 | 5,579 |
| 1893 | 83,322 | 3,743 | 1,660 |
| | 3,282 | 136,020 | 3,919 |

The Globe quotes Alexander Mackenzie as having said that "The farming interest is the one that sustains the country." If this is so why not abandon every other interest and the whole country engage in farming. Shut up the factories and workshops, close down all other industrial establishments, and let every mother's son in Canada, including The Globe staff, go to raising wheat at fifty cents

per bushel. Of course, as Mr. Mackenzie said, as quoted by the *Globe*, "The price of what we would have to sell is regulated by the English market, and not by anything on this side of the Atlantic."

Mr. Elmenhorst, the sugar refiner who committed suicide in Montreal the other day, had an income of \$70,000 a year, going to prove that wealth, which most people sigh for, cannot ward off despair or make life worth the living to those who hold it lightly.—*The Empire*.

An unnecessarily high and vicious duty upon refined sugar made it possible for Mr. Elmenhorst to acquire a fortune that gave him an income of \$70,000 per year; and a number of other sugar refiners are still piling up fortunes at the same rate by the grace of the tariff.

In our last issue we re-published an item taken from the *Philadelphia Carpet Trade Journal*, in which reference was made to the formation of a company in that city for the manufacture of Chenille Axminster Carpet, such as is being made by the *Toronto Manufacturing Co.*, of which Mr. James P. Murray is President, which Company are the owners of the patents under which this article is made. This Philadelphia Company, which will be known as *White-Murray Carpet Co.*, has been organized with a capital of \$200,000, the intention being to erect a factory and to proceed with the manufacture of such carpet in Philadelphia. We are in receipt of a note from Mr. Murray, of the *Toronto Carpet Co.*, in which he says that the *Imperatrix Axminster Carpet*, having taken the Canadian trade by storm, inspired him with a desire to introduce the same into the United States. The high duty in that country upon such goods, however, prevented the shipment of carpet from Canada, and knowing the intrinsic value of it he laid the proposition before some of the best carpet manufacturers of Philadelphia, with the result that Mr. John R. White, of the late *Boyd-White Co.*, became interested and took an active interest in organizing a new American company. It is somewhat remarkable that Canadian carpet dealers should take two years to find out the merits of this article which the Americans took up on sight. Its value, durability, and appearance were all favorably commented upon by those who saw specimens of it which Mr. Murray showed in Philadelphia. We understand that Mr. Murray will make strong efforts to introduce this article into Australia.

Richard Gird, the owner of the Chino rancho, San Bernardino County, California, principal owner of the enormous beet sugar factory at Chino, says, beet sugar making is a great success. About \$300,000 worth of improved machinery, including the Steffens process of extracting sugar from the best molasses, has recently been put in, making the plant cost fully \$100,000. There are, Mr. Gird says, 4,000 acres of beets on the Chino ranch, and 2,000 more in the vicinity. The crop will amount to about 55,000 or 60,000 tons. It would have reached 100,000 but for the dry weather. He says there is money in beet growing. The gross value per acre of the product of the beet land is from \$80 to \$90, and the net profit from \$30 to \$40 an acre. Last year he got 174,000 pounds of beet seed from abroad, mostly from France. This cost \$20,000. "There is enough good beet land in California, from San

Francisco south, to supply sugar for the whole world," said Mr. Gird. "The consumption is increasing fast. Two years ago we used on this coast 90,000 tons of sugar. We are now using seventy pounds to each person on the Pacific coast."—*San Francisco Examiner*.

According to the *New York Iron Age*, an arrest was made in that city a few days ago of a well known New York Importer, charged by the Customs officials with undervaluation to the extent of \$100,000 in invoices of enamelled iron ware. It is said that these fraudulent undervaluations have been going on for a long time, and that enamelled goods of German manufacture have for years been systematically sent into that country under forced values. The alleged offender has been held under heavy bail, and the result of the present proceedings will be watched with great interest. It is rumored that a similar condition of things has been existing for some time in the case of enamelled ware imported into Canada. We have knowledge of the fact that for a considerable time past the Canadian market, particularly Toronto and Montreal, has been flooded with these cheap German goods, with the result that the domestic industry has been so very seriously handicapped that it was merely a question as to how long it could continue in operation.

Mr. T. D. Ledyard, of the *Ledyard Gold Mining Co.*, whose valuable properties are within about one hundred miles from Toronto, has shown us a gold brick valued at \$160.00, part of a product of a trial run of his works on about fifty tons of ore. The total yield from this quantity of ore in free gold and concentrates was \$750, or over \$14 per ton. Mr. Ledyard informs us that there is sufficient ore obtainable on the property of his company to supply fifty tons of ore per day for the next fifty years, and that it can be mined at very low cost because of the very favorable situation of the deposits.

Mr. F. A. Halsey, who has for some time been connected in a dual capacity with both the American and Canadian Rand Drill Companies, has discovered that his duties in connection with the American Company have of late very largely increased, while the Canadian business has reached the stage of development where it does not require his personal attention to the extent that it formerly did, announces that he expects to make New York City his headquarters for the future, but with no intention of severing his connection with the Canadian Rand Drill Co. On the contrary, he expects to continue as engineer of that Company, and direct its operation as before. His New York office will be at 23 Park Place.

By the explosion of a steam boiler in the sawmill of Mr. T. E. Essery at Monticello, Ont., on Nov. 21st, two men were killed and several seriously injured, and the mill building entirely destroyed. It is stated that at the time the event occurred the mill was crowded with workmen. The water in the boiler was low but no attention was paid to the fact. This sort of thing is going on constantly, the lives of human beings sacrificed and much property destroyed. In the event above alluded to, the men who

were killed and injured were not to blame for the explosion; but he who was responsible unfortunately escaped. There is no excuse whatever for such destruction of life, and the time has arrived when it should be made a criminal offence for any man to operate a steam boiler that has not been duly and properly inspected and certified to, and in charge of a competent engineer.

In a recent editorial in this journal was shown the relative value of the imports and exports of Great Britain, illustrating that as a consequence of free trade the former greatly exceeded the latter to the impoverishment of that country. The Montreal Herald alluding to our article attempts to refute it by reproducing a large portion of a chapter from Henry George's book on protection and free trade. The fact that our contemporary is forced to resuscitate such exploded arguments as those of Mr. George shows the straits it is in. We notice that the Herald is being printed on green tinted paper, its declaration being that scientists have discovered that green is the most restful color to the eyes. It may be that green is a suitable color for the paper, but when discussing the question of protection, everything that it says regarding it is blue.

We are no admirers of the political sentiments of Mr. Stapleton Caldecott, but we heartily endorse what he said to a newspaper man a few days ago who applied to him for some information regarding the financial standing of an out-of-town insolvent merchant who was indebted to Mr. Caldecott's firm. Mr. Caldecott stated that he did not think it advisable for newspapers to publish such items during the prevailing hard times. He is of the opinion that it has a depreciating effect on what business is being done and that the general public would rather have them suppressed. On that account he declined to give any information regarding the matter. This is in line with the course always pursued by this journal; for, while we are glad to chronicle the event of any new industry we see no beneficial results whatever resulting from the publication of commercial disasters.

Mr. John Heywood, Publisher, Manchester, England, has favored us with a copy of a most valuable book recently issued by him concerning recent cotton mill constructions and engineering, by Joseph Nasmith, Editor of the Manchester Textile Recorder. The book is in a great part a reproduction of a special article which appeared in the Textile Recorder in May, 1894. It has been represented to the author that there was need of some article through which accurate information relating to modern methods of mill construction could be obtained, and this led to the work before us. The book is chiefly intended as an aid to those practically engaged in the cotton trade and not for architects or engineers.

The Allgemeine Electricitats-Gesellschaft, Berlin, Germany, have sent us their new illustrated descriptive catalogue having reference to the construction of street railways. They state that Germany had adopted in recent years this new motive power on an exceedingly large scale, and to satisfy the demands of municipal authorities they have decided to publish their experience in electric street railway construction, the result of which is the catalogue now before us. The catalogue itself is a work of art and one of the finest specimens of bookmaking that has come under our observation. It is profusely illustrated with photo-engravings of different features of their railway system in many of the largest cities in Germany, besides which all of the details of street railway building are suitably illustrated. Views are also given of the dynamos and power house appliances necessary in the construction of such works. Those who may be interested would do well to apply to the company as above for a copy of their beautiful catalogue.

Cycling published by W. H. Miln, Toronto, F. Bryers, editor,

is a mirror of wheeling events, devoted to the interest of cyclists in general, which seems to fill the long felt want we sometimes hear talk about. Of course the bicycle has long since ceased to be a toy or a plaything, for the amusement of those who have spare time which may be devoted to it, but a means of cheap, easy and convenient locomotion, now almost absolutely indispensable to bustling, busy business men, and women also. Considering the fact that there are thousands of bicycles in use in Toronto, it is but natural and proper that not only the users of them, but the trade generally—those who manufacture them, those who deal in them, and those who repair and fix them up when required, should have a good journalistic representative of their interests; and this they have in a most gratifying manner, in our interesting contemporary. It is always up to date in cycling news, and its liberal display of advertisements demonstrates the esteem in which it is held by those engaged in the bicycling business.

Messrs. Baker & Co., refiners of gold, silver and platinum, and assayers and sweep smelters, Newark, N. J., have sent us a very convenient and instructive pamphlet containing much valuable data concerning platinum. To those who are interested in the use of this valuable metal, the notes upon the use and care of platinum ware, the best methods of cleaning it, etc., cannot but be of great value. There are exhaustive tables showing the weight per foot of platinum wire in Troy and French weights; a rule to ascertain the weight of corresponding size in pure silver; weights per square inch of platinum sheet or foil, etc. Messrs. Baker & Co., manufacturers of platinum for incandescent lamp manufacturers, electric gas lighting, contact points, electric protecting fuses, ignition fuses, heaters, electrodes, electro-plating, etc.

The Copp, Clark Co., Toronto, publishers, have sent us a copy of the Canadian Almanac for 1895. This is the forty-eighth annual issue of this work, and we think we may say that the Almanac is more vigorous and attractive than ever. The publishers have been fortunate in securing an article from Dr. J. G. Bourinot on Canadian Parliamentary Procedure. The Doctor, who is a world-wide authority on such matters, describes in plain language the work of a Session, and tells us how our laws are made. The series of articles on the Defences of Canada will be found interesting. They comprise H. M. Regular Forces in Canada; H. M. Ships on our Coasts; the Royal Military College; the Defences of Esquimaux, and the Fisheries Protection Service. A timely article on the Canadian Sault Ste. Marie Canal, with a Map of the District, will be found of interest. Statistics of all the British Colonies and Possessions throughout the world are given, with a Map of the World, showing British Territory shaded. A study of this list shows to what a great and powerful Empire we belong. The statistical and directory portion of the Almanac will be found complete, accurate, and up to date. The Canadian Almanac may be obtained from all booksellers, or from the publishers. Price, in paper covers, 20 cents; in cloth covers, 30 cents.

The sparkle of bright music, in a new ballad by Sir Arthur Sullivan, entitled "Bid Me at Least Good-Bye," adds much to the pages of the Christmas Ladies' Home Journal, in which the full piano score and words are given. Frank Stockton opens one of his cleverest tales with an equally clever title "As One Woman to Another"; Eugene Field is particularly happy in a striking bit of character verse, so which a whole page with illustrations is well given; Frances Hodgson Burnett is delightfully reminiscent in telling of "The Man Who Most Influenced Me"; John Kendrick Bangs begins his "Paradise Club," in a "take off" on the equal suffrage question; the Rev. S. D. McConnell makes a very real being of the mother of Christ, in his article "A Girl of Galilee." Robert J. Burdette is funny and wise in a Christmas article; Maria Parloa tells of "The Fete Days of the French"; Madame Nordica, the operatic prima donna, writes to girls who think of operatic careers; the new serial, "A Minister of the World," takes us to the border of fashionable religious life in New York City; and in addition to all this there are not less than twenty articles on the practical side of a woman's life at Christmas time. The subscription price of The Ladies' Home Journal is one dollar per year. Published by The Curtis Publishing Company, of Philadelphia.

Outing for December has a warmth and cheeriness, all its own, which bids defiance to howling blasts. In text and illustrations the number takes now a higher standard than has been long maintained by this popular magazine of sport, travel and recreation. Its contents are: "A Jamestown Romance," a capital story of Colonial days by Sarah Beaumont Kennedy; "The Japanese Theatre," by Eustace B. Rogers, richly illustrated by native artists; "A Boating Trip in Samoan Waters," by Frederick M. Turner; "With Pennsylvania Quail," by "Juvemis"; "The Captain's Bet," a short story by Thos. S. Blackwell; "Sledging in Norway," by Charles Edwardes; "Shooting Mallard on Goose Lake," by E. W. Chubb; "The Haps and Mishaps of a Florida Maroon," by "Larry Yatt"; "A Woman in the Mackenzie Delta," by Elizabeth Taylor; Leuz's World Tour Awheel Ending China"; "Peter Teeter," a short story by Chas. N. Hood; "An Indian Ocean Turtle Chase," by Geo. H. Westley; "National Guard of New York State," by Capt. E. E. Hardin; "Football in the South," by Lovick P. Miles, and the usual editorials, poems, records, etc.

One of the most acceptable trade journals that comes into this office is the American Agriculturist, published by the Orange Judd Co.,

New York. This paper is now published weekly, by which it is enabled to more fully and specifically cover all agricultural and horticultural industries than was possible when it was a monthly. The character of the information contained in it is such as to make it exceedingly valuable to all agriculturists, and particularly those whose enterprise lead them to the production of a multiplicity of such things as our enlarged demand in all the markets of the country call for. Its suggestions regarding matters on the farm, methods of farming, raising stock, gardening, fruit culture, etc., are invaluable. In addition to which it always contains a large amount of reading matter which makes it particularly valuable in families.

The Christmas Number of Scribner's Magazine presents a remarkable list of popular writers, including Rudyard Kipling, Robert Grant, H. C. Bunner, Brander Matthews and George W. Cable. In illustration it shows a number of novel features. Oliver Herford produces a series of fantastic drawings which are curiously interwoven with the text of Brander Matthews' story in a manner new to magazine illustration. Another notable feature in illustration is the three frontispieces showing the best work of A.B. Frost, Albert Lynch and Emile Friant, each drawing being very original in sentiment and treatment. One of the richest illustrated articles is the account of the great English painter, George Frederick Watts, R.A., by Cosmo Monkhouse, who writes from the fullest knowledge, and with the approval of the artist. There are twenty pictures representing the most characteristic phases of Watt's art. The number opens with a poem by Rudyard Kipling, entitled "McAndrews' Hymn," which gives the philosophical reflections of the old Scotch engineer of an ocean liner. Another poem with striking pictures is "The Wood-cutter's Hut," by A. Lampman; Robert Grant contributes another Christmas tale entitled "The Matrimonial Tontine Benefit Association." There is a novel idea suggested in the story which will probably be utilized in a practical way. Other poems and the Point of View complete one of the most entertaining and artistically attractive numbers of this magazine.

A wide variety of topics is treated from the scientific point of view in The Popular Science Monthly for December. The number opens with an article on Athletics for City Girls, by Dr. Mary Taylor Bissell, who approves of tennis and cycling, but especially recommends a well-directed gymnasium. President Jordan, of Stanford University, sets forth The Needs of Educated Men in a way to encourage and stimulate all who are fearful about the future of government and society. Prof. James Sully continues his studies of Childhood with a chapter on The Child's Thoughts about Nature. A subject which few persons have thought about—The Economic Theory of Woman's Dress—receives a searching examination by Dr. Thorstein Veblen. An instructive

insight into Japanese thought and character is afforded in Shinto the Old Religion of Japan, contributed by Koshimoto. An illustrated paper on Responsibility in Crime from the Medical Standpoint is furnished by Dr. Sanger Brown, of Rush Medical College. The amateur in geology will welcome Prof. W. M. Davis' account on The Ancient Outlet of Lake Michigan, also the Geology of Natural Scenery, by F. J. H. Merrill, and the British Association popular lecture on Geologies and Deluges, by Prof. W. T. Sollas, F.R.S. The Chemistry of Sleep is treated by Henry Wurtz, Ph. D., and there are a biographical Sketch and Portrait of Prof. Zadoc Thompson, the Green Mountain naturalist. New York: D. Appleton & Company. Fifty cents a number, \$5 a year.

A New Canadian Enterprise.

We always take pleasure in being able to draw the attention of our readers from time to time to new industries being started in our midst, as it is in the general interest of the whole Dominion to have as many factories established as possible, as they tend to increase its welfare and prosperity in providing work for our artisans, laborers and others, it also supplies the article it makes at a lower price to the buyer than formerly, when it had to be imported, besides helping to provide a home market for the farmer with its consequent better prices.

The party in power at Ottawa knew what they were about and they showed their wisdom and farsightedness when they framed the National Policy and put it into force, and in proof of its success it has developed the country, increased its manufacturing industries to a very large extent and covered the country with railways, so that we are in a more prosperous condition to-day than any other country in Europe or America.

It is significant and to the point to notice that the well known firm of Henry R. Worthington, of New York, manufacturers of pumping and hydraulic machinery, have been obliged at last to make arrangements to make their goods in this country to enable them to hold their own. They have, therefore, entered into an agreement with the old established and well known firm of John McDougall, proprietor of the Caledonian Iron Works, Montreal, to manufacture and sell for them, and to be known as their sole, general and manufacturing agents for the Dominion of Canada.

The history of the Worthington pumping engine since its invention in the year 1840 is well known and its present high state of development is a marvel in steam engineering and its consequent success is unprecedented in the trade, as shown by the fact that total contract capacity up to January 1st, 1894, was three billions, one hundred and

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Machinist, Iron Founder, Boiler Maker, Etc.

GENERAL AGENT FOR

WORTHINGTON PUMPS,
WATER WORKS SUPPLIES,
ETC.

Montreal, 26th November, 1894.

We take pleasure in announcing to our friends and patrons that we have been appointed by the firm of Messrs. Henry R. Worthington, of Brooklyn, N.Y., as their General Agents for the Dominion of Canada. We therefore would respectfully ask you to send your favors and orders for "Worthington" Steam Power, and Electric Pumps for all purposes, Condensers, Water Meters, and Repair Parts, direct to us after this date.

Your favors will always receive our very best and most prompt attention, and the goods will be up to the usual Worthington standard, and they will be charged at the lowest possible rates.

It is our intention to carry a stock of all the leading kinds and sizes of Pumps, and **MESSRS. R. H. BUCHANAN & CO., OF MONTREAL** and **MESSRS. CRAIG & M'ARTHUR OF TORONTO**, will also carry stocks; and other sub-agents will be appointed in due course in the principal cities of the Dominion, and stock will be placed with some of them for the convenience of customers; thus insuring prompt delivery.

The reputation of the firm of Messrs. Henry R. Worthington as makers of Pumping and Hydraulic Machinery is world wide, and stands foremost amongst all its rivals. It is therefore unnecessary for us, on our part, to give details and data to prove a fact that is so well known and acknowledged. We will do everything we can to uphold their high reputation and to continue the success of their goods in this country.

We solicit your orders for Pumps, Condensers, Water Meters, etc.
Estimates given for all kinds of Pumping Plants, etc.

We beg to remain,

Yours respectfully,

JOHN McDUGALL,

P.S.—We take this opportunity of expressing our sincere thanks to our many friends and customers for the liberal patronage we have received from them during the past, and we hereby ask that it may be continued to us in the future, as we are able to render even better service than heretofore, from the fact that we are rebuilding and extending our works, and putting in the latest improved and special machinery, so as to give greater capacity and improved facilities to meet the demands of an increasing business.

JOHN McDUGALL.

seventy-six millions, eight hundred and ninety thousand, (3,175,890,000), U. S. gallons in 24 hours. Besides, there are fifty old line pumping engines having an aggregate daily capacity of 60,000,000 U. S. gallons working against a head ranging from 1,500 to 2,800 feet.

The excellency, economy and efficiency of the Worthington pumping machinery, condensers and other goods made by them, are not excelled. Their goods are well known and they have a world-wide reputation.

We wish this new addition to our Canadian industries every success.

The Value of a Good Name.

The following extract from Industries and Iron, of London, Eng., of November 3, 1894, explains itself:

Worthington Pumping Engine Company v. Naval Construction and Armaments Company, Ltd.

This case came before Mr. Justice Romer on the 26 Oct., and raised the question as to how far the plaintiffs were entitled to the exclusive use of the words Worthington pumps. The facts were shortly as follows:—The plaintiffs are an American company carrying on business at 153 Queen Victoria Street, London, E.C. They sell, but do not manufacture, pumps or pumping engines called "Worthington pumps." The original Worthington pump was patented by Mr. H. R. Worthington in America in 1859. The patent was originally granted for fourteen years, and was extended for seven years, coming to an end in 1880. The Company was established in 1884, its principal object being to place on the European market the inventions of Mr. H. R. Worthington. It is apparently auxiliary to a company in America, which is the successor in business of Mr. Worthington and his partners, and the company last named manufacture in America, the pumps sold in England and elsewhere by the plaintiff company and other auxiliary companies. The only people who have manufactured the pumps in England under the name of Worthington pumps are apparently (1) James Simpson & Co., Ltd., who made certain kinds of Worthington pumps under a license to do so from the manufacturing American company and (2) according to the plaintiff company's allegations in the present action, the defendant company. The principle of the Worthington pump is too well known to need description and since the expiration of the patent the invention has been extensively adopted by manufacturers, the pumps made by them being advertised and sold as "duplex pumps." The defendants are shipbuilders, and make pumps on the Worthington principle for use on ships, and the present action was brought to restrain them from selling their pumps as "Worthington pumps." A number of witnesses were called

on behalf of the plaintiff company, who said that the meaning of the term "Worthington pumps," as understood by engineers and manufacturers, was pumps manufactured by the Worthington people. At the conclusion of the evidence adduced on behalf of the plaintiff company

Mr. Justice Romer said that it did not appear that any purchaser from the defendants had been led to believe, or had understood, that the pumps supplied had been made or sold by the plaintiff company. Having regard to the pleadings, it could only be contended that the defendants had threatened and intended to sell their pumps as Worthington pumps. His Lordship said he was prepared to hear the defendants' evidence as to this, but suggested that the action should be dismissed without costs.

Mr. Moulton, Q. C., who (with Mr. L. B. Sebastian) was for the plaintiff company, said his clients would consent to this if the defendants would say they had no intention to pass off their pumps as Worthington pumps, and in such a way as to lead purchasers to suppose they were pumps supplied by the plaintiff company.

Sir Richard Webster, Q. C., who (with Mr. Neville, Q. C., W. F. Hamilton, and Mr. Benham) was for the defendant company, also assented, the terms of all imputations of fraud being withdrawn.

This having been done the proceedings terminated.

St. Clair and Erie Ship Canal.

Considerable interest exists both in Canada and the United States regarding the proposed canal connecting Lake St. Clair and Lake Erie, located entirely upon Canadian soil, and which would save a distance of some seventy miles in the passage of vessels from points west of Lake St. Clair and all ports on Lake Erie. No precise information has heretofore been published in any Canadian journal regarding this important link in our inland navigation, and to enable the CANADIAN MANUFACTURER to do so we have obtained from Mr. D. Farrand Henry, M. Am., Soc. C. E. of Detroit, Chief Engineer of the St. Clair and Erie Ship Canal, the following paper concerning that enterprise:

The boundary between Canada and the United States, except in certain specified instances, runs through the centre of the great lakes and their connecting rivers, but unfortunately for us the shallowest water appears to be on the southern side of the line, and the government engineers, in improving and deepening the channels, have done most of their work in Canadian waters. Fortunately the canal and locks at Sault Ste. Marie was at first a state and not a government work, or doubtless the engineers would have located that on the Canadian side, because the canal would then have been only about

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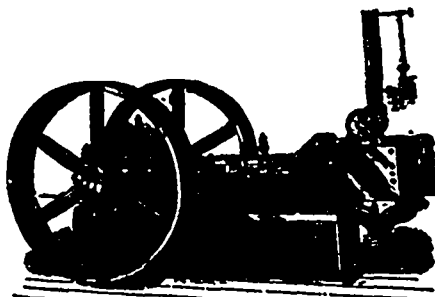
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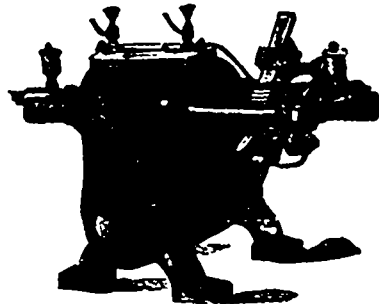
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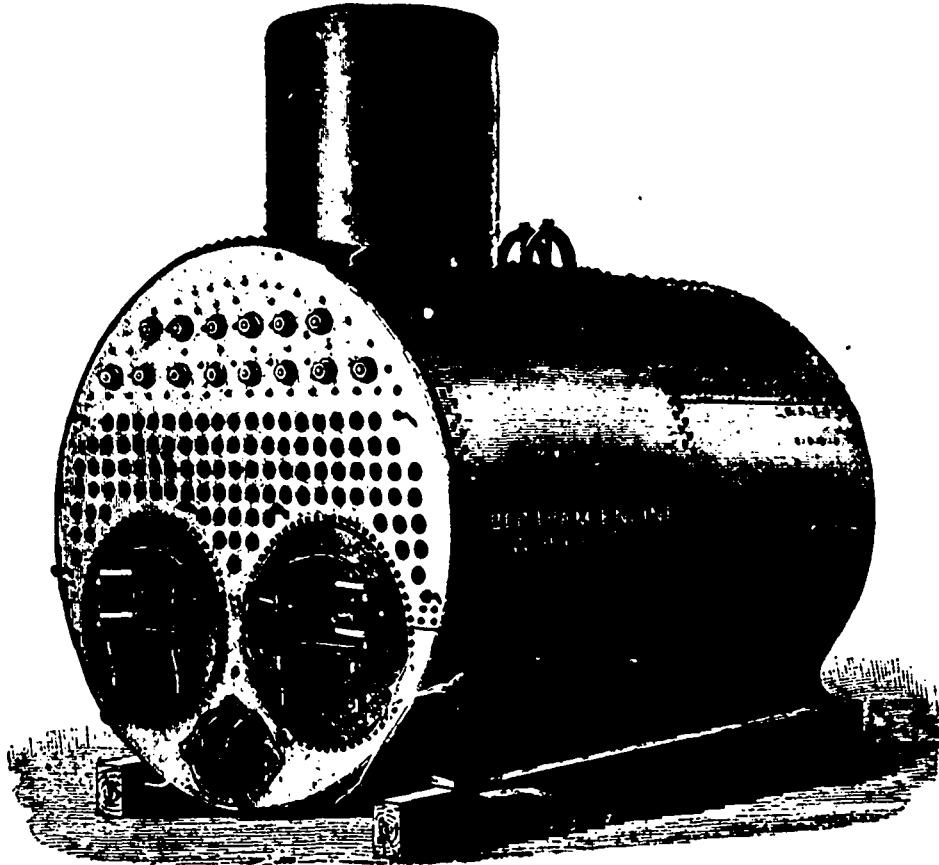
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half as long. Not so with Canada. Whatever work they have been able to do has been done on their side of the boundary, and they have a system of canals past the Niagara Falls and the rapids of the St. Lawrence connecting Lake Erie with the ocean, and they are now constructing a canal and lock at Sault Ste. Marie fully equal to the one we are finishing on our side. A canal connecting Lakes Huron and Ontario has also been proposed, but both the lockage and the cost are too great to make it a possibility, and even the expense of cutting the peninsula between Lakes St. Clair and Erie has been considered too much to warrant its construction by the Canadian government. This canal, however, would be a great advantage to navigators of these inland seas, as it would save over seventy miles of tortuous and difficult navigation.

The peninsula is formed by the south side of Lake St. Clair, the Detroit river and the west end of Lake Erie. The map shows some of the turns of this passage, but nothing of its dangers. The government has expended large amounts for its improvement, especially at a rocky ridge called the "Lime Kiln Crossing" (entirely in Canadian waters), yet the loss of wrecks and detentions the past two years has been estimated at over a million dollars. So tortuous is it that one of the old Indian names signifies "The place where one is turned about," and we realize the aptness of the name when, standing on the docks at Detroit, we look south into Canada.

This peninsula is broad at its extremity, but at the eastern side of Lake St. Clair it is only a little over twelve miles across to Lake Erie, and as the soil is a stiff blue clay with no rock within a hundred feet of the surface, the construction of a canal would be a comparatively easy matter. For about two miles from Lake St. Clair there is an open marsh, thence the land gradually rises until near Lake Erie it forms a ridge about eighty-five feet above the lake. This would make a deep cut necessary, but a few miles to the west is a little estuary called Two Creeks, which near the lake is a deep lagoon, where a fine harbor can be constructed, and from which a ravine cuts the ridge only about thirty-five feet above the lake. When the waters of the lakes were thirty feet higher than at present, a stage which must have continued for a long time, as it is so well defined on the rocky shores of Lake Superior, there was probably a stream here connecting the lakes. But as the waters fell it was silted up, and nothing is now left but the estuary and the ravine, inviting the construction of a canal. The distance here across the peninsula is about two miles more than the line before mentioned, but the lighter cut and the harbor make it the preferable route.

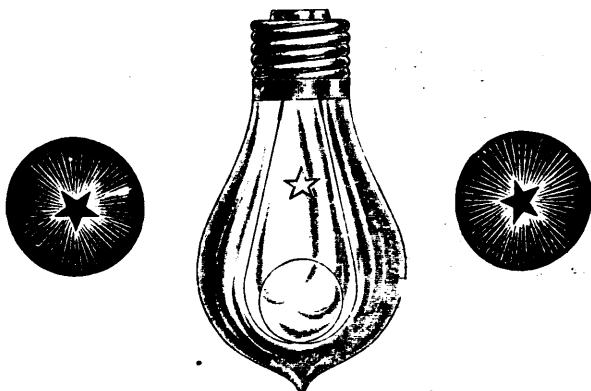
The proposed canal will therefore have a length of about fourteen miles, with a depth of twenty-one feet and a bottom width of 120 feet, with slopes of one and one-half or two to one, as may finally be de-

termined. Four railroads cross the line of the canal, and swing bridges will have to be provided for them, as well as for several common roads; but as they stand open except when in actual use, they will be but little impediment to navigation. There is at present no harbor on Lake Erie, and many a vessel which has gone ashore at Point Pelee could have been saved had there been a refuge such as is now proposed at the mouth of the canal. The difference in the level of the two lakes is normally less than three feet, depending upon the force and direction of the wind. A strong easterly gale will so heap the water in the western end of Lake Erie as to raise its level above that of Lake St. Clair, and make the surface current at least of the Detroit river run upstream. A westward wind will lower the water in Lake Erie, but not proportionately. Locks, therefore, will not be needed, though a guard gate at the upper end may be useful, both during construction and afterwards during repairs.

Few people have any conception of the magnitude of the lake commerce. Gov. Flower, in a message to the New York legislature, states that the lake tonnage in 1889 was 10,000,000 tons in excess of the combined entrances and clearances of all the seaports of the United States, and 3,000,000 tons greater than the combined entrances and clearances of the ports of Liverpool and London. Its growth has been mainly due to the improvement and deepening of the connecting rivers, so that vessels of deeper draft and greater tonnage could be employed.

In 1850, eight or nine feet was the extreme draft possible for vessels navigating the lakes, and though there were quite a large number of vessels they were all small. One or two vessels went from the lakes through the Canadian canal around Niagara and the rapids of the St. Lawrence, and essayed an ocean voyage. But it was not found profitable for such small craft. But about the above date the state of Michigan, aided by a grant of land from the United States government, commenced the construction of a canal around the rapids at Sault Ste. Marie, and put in locks having a depth of ten feet over the miter sill, and during the following decade the government improved the shoals of the St. Mary's river and the delta or "Flats" of the St. Clair to the same depth. The lake traffic rapidly increased, and the demand for deeper channels was so strenuous that the government constructed a new lock at the "Soo" with sixteen feet over the miter sill, which was opened in 1881, and the channels were correspondingly deepened. Again there was a great increase in the traffic; not in the number of vessels, but their tonnage. In 1881 the United States registered tonnage passing the Detroit river was 17,378,240 tons, and in 1891 it was 22,160,000 tons, an increase of over 26 per cent. And now the government is constructing another lock at the "Soo" which will have twenty-one feet over the miter sill, and

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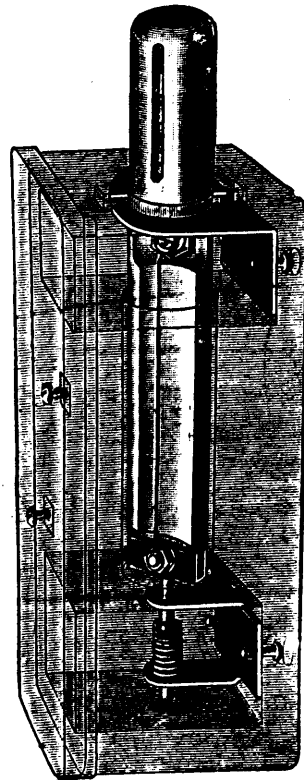
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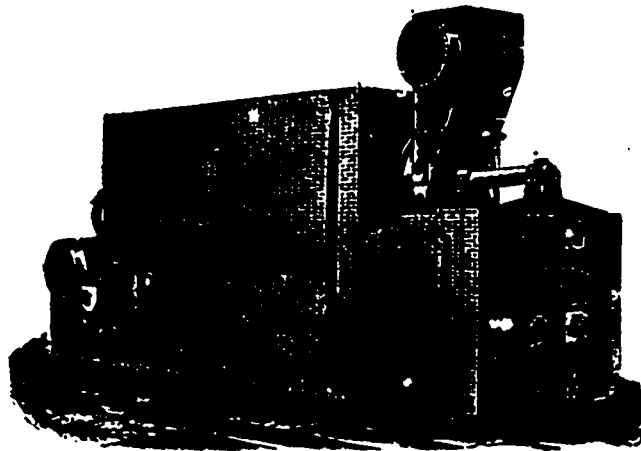
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before long the lake waterway will be of this depth throughout. In fact, for some years the work at the Lime Kiln Crossing in the Detroit river has had for its object the blasting of the rocky ridge to give a channel of that depth. Doubtless a fresh impetus will thus be given and the traffic will increase in the future even more than in the past.

This waterway over the great lakes has built up the states on their borders, for without this cheap means of communication the ores and timber of Michigan and other states could not have been exchanged for the coal and bulky machinery of the east.

From Duluth to Chicago is about 900 miles, and from Chicago to Buffalo nearly the same, and bulky freights such as ore and coal have been carried over these distances at \$1 a ton, which is far less than the actual cost of transport by railroads. But as their shores became populated railroads stretched away to serve as feeders for the lake traffic and also for the transport of goods when these waterways were icebound, and at all times for the carriage of perishable freight and passengers where time is an object.

From the "Flats" around the peninsula to a point in Lake Erie opposite the mouth of the proposed canal is nearly 110 miles by map measurement and much more as sailed through the tortuous and difficult passage of the Detroit river, and among the shoals and islands of the western end of Lake Erie, while from the same point by way of the canal is a little over 30 miles, a saving of over 70 miles. This means not only a saving in the cost of running for from thirteen to eighteen hours in the round trip, and a probable lessening of the insurance by avoiding the dangerous navigation of the Detroit river, but also an additional trip during the season, which is of more importance than the lessening of the expense of each trip.

A careful preliminary estimate of the cost of constructing this canal is less than \$4,000,000, and an American company has been formed with all the capital needed promised. Col. David Tisdale, M. P., of Simcoe, Ont., has drawn a very comprehensive charter, and there seems no doubt of its passage at the coming session of Parliament. If properly pushed, the canal can be completed within two years.

Boiler Explosions.

There is in this country a tendency to condemn, on general principles, any interference of the state with the rights of the private citizen. To put it stronger, the mass of our people are jealous of individual rights to the extent that leads them to suer wrong, rather than there shall be a semblance of curtailing private or corporate rights. This is a healthy sign, but in its extreme tendency it leads to a condition of not distinguishing as clearly as we ought to do between individual rights and individual wrongs. If it is the duty of

the state to refrain from interfering with the one, it is equally its duty to see that the other does not so interfere. If murders were not committed, it would be unnecessary to provide penalties for the crime. Since, however, murder is committed, no one doubts the propriety of protecting, first, by restraining the murderer, and second, by punishing him. Thus, in every country, it is found necessary to prohibit certain acts, when such acts would jeopardize the rights of others. We are led to reason thus from the growing frequency of boiler explosions, attended, as they usually are, with the destruction of property and the loss of valuable lives. It has come to be time that some one answered the query as to who is to blame. It is time that the "mysterious" and "dispensation-of-Providence" parts of the matter were put one side along with other superstitions for which we have no further use.

It is time that every one understood that when lives are sacrificed in this way the question is always pertinent, "Who is to blame?" Gentlemen of coroners' juries will have to be appealed to for an answer. In times past their verdicts have not always been considered particular models of common sense. There has sometimes, perhaps, been a little too much circumlocution—a trifle too much of the unknown element. In reforming this, altogether, there is an opportunity for fame. Better still, there is a prospect of justice. It is not so difficult as it might seem. The custom of trying how not to answer the question has much to do with the apparent difficulty. If a boiler situated in the basement of a six-storey building makes a wreck of the property and destroys a hundred lives, more or less, it is not necessary to waste any time in astonishment. Such things are as likely to happen to-day as many another thing that happens without exciting surprise. It is not necessary to waste any time in investigating mysteries. There will not be any mystery to investigate. It will not be a serious job to find out the reason in a plain, common-sense way. If it is found that the cupidity of the owner placed a man in charge of his boiler whose only qualification was a willingness to work cheaply; and if it is further found that this man was loaded with other duties—duties that called him to remote parts of the building—a knowledge of these facts ought to go a good way in answering the question, "Who is to blame?" If there is evidence of general mismanagement, of faulty construction, poor material or workmanship; or if it is found that needed repairs have been neglected, or a multitude of "safety" appliances made to take the place of the constant attention of a skilled man, these facts ought to put a reasonably intelligent jury on the track of finding out who is to blame. No plea of ignorance is admissible. The law punishes the individual who sets fire to his own property to the endangering of that of his neighbors. By and by, when that query gets a straightforward answer, we shall

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PRINCE ALBERT, N. W. T., Nov. 5th, 1894.

WM. & J. G. GREY, Toronto, Ont.

DEAR SIRS:—You have built me a good mill and I am doing a good business. I like the running of mill. I am well satisfied with mill. Mill makes best separations I ever saw. The flour is thoroughly separated from the bran and shorts. It can't help but make good results. There are good reports coming in from our flour wherever it has gone. Have not had occasion to solicit orders, as we have been selling and gristing our flour as fast as we could make it. Have people come 100 miles. Everyone seems well satisfied with flour. Have not been able to make enough yet to fill demands.

Yours truly, JOSEPH KING.

WM. & J. G. GREY, Toronto.

DEAR SIRS:—Mill running A.1. and in first-class condition.

MAINTOWN, ONT., June 14th, 1894.
THOMAS WILLING.

WM. & J. G. GREY, Toronto.

DEAR SIRS:—I am operating the mill you built for the Whitewood Milling Co. I consider, for a fifty barrel mill, it is pretty hard to beat.

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hear of a man being punished for blowing up his boiler—and his neighbor.

After all, prevention is better than cure. We organize fire companies mainly for the protection of property, and by systematic and persistent efforts their members are trained to the greatest proficiency. They are trained not only in manual dexterity and athletic feats, but are chosen with reference to their knowledge of such things as shall render them efficient, as well as for their ability to make instant and judicious use of their faculties in possible emergencies. This is to our credit; but at the same time we expose the lives of men, women and children to the tender mercies of men in charge of steam boilers, of whom it may be said, four-fifths have no adequate conception of their business; and in cases of emergency have not the slightest idea of what to do or how to do it. The state cannot say how much money the individual shall pay his engineer; but it can and ought to say what qualifications the individual's engineer shall possess before being allowed to take care (?) of a thousand lives. It can and ought to insist that boilers so situated as to expose human life shall not be left to take care of themselves, while the man who is supposed to have them in charge is attending to other work for their owners. And it can and ought to insist that boilers thus situated shall be known to be in proper order so far as regular and careful inspection can determine the fact.

The simple fact is, that with the world's knowledge of these things the explosion of a boiler is entirely inexcusable. Boilers ought to be as safe as a kitchen stove, and when they are otherwise there is a reason that can be determined. Almost universally some one is to blame. When we get accustomed to being told in plain language who is to blame, boiler explosions will be rare events. —Wool and Cotton Reporter.

Frauds in Soap.

If at the end of the saponification process the alkaline solution is sufficiently strong, the soap will, on standing, separate as a fluid layer on the surface of the spent lye, which contains the glycerine set free during the saponification; but in any case separation can be rapidly brought about by adding salt to the liquid, when the soap, being insoluble in salt water or brine, separates out and is removed and placed in molds to harden. The block of soap so cast is then cut first into slabs and then again into bars. A soap made in this way with tallow or lard as the fatty matter would be "white curd," while if yellow bar is required, rosin is added to the mixture of lye and soap after most of the fat has saponified.

When rosin is boiled with alkaline solutions, a compound is formed by the direct union of the resinous acids with the alkali, which strong-

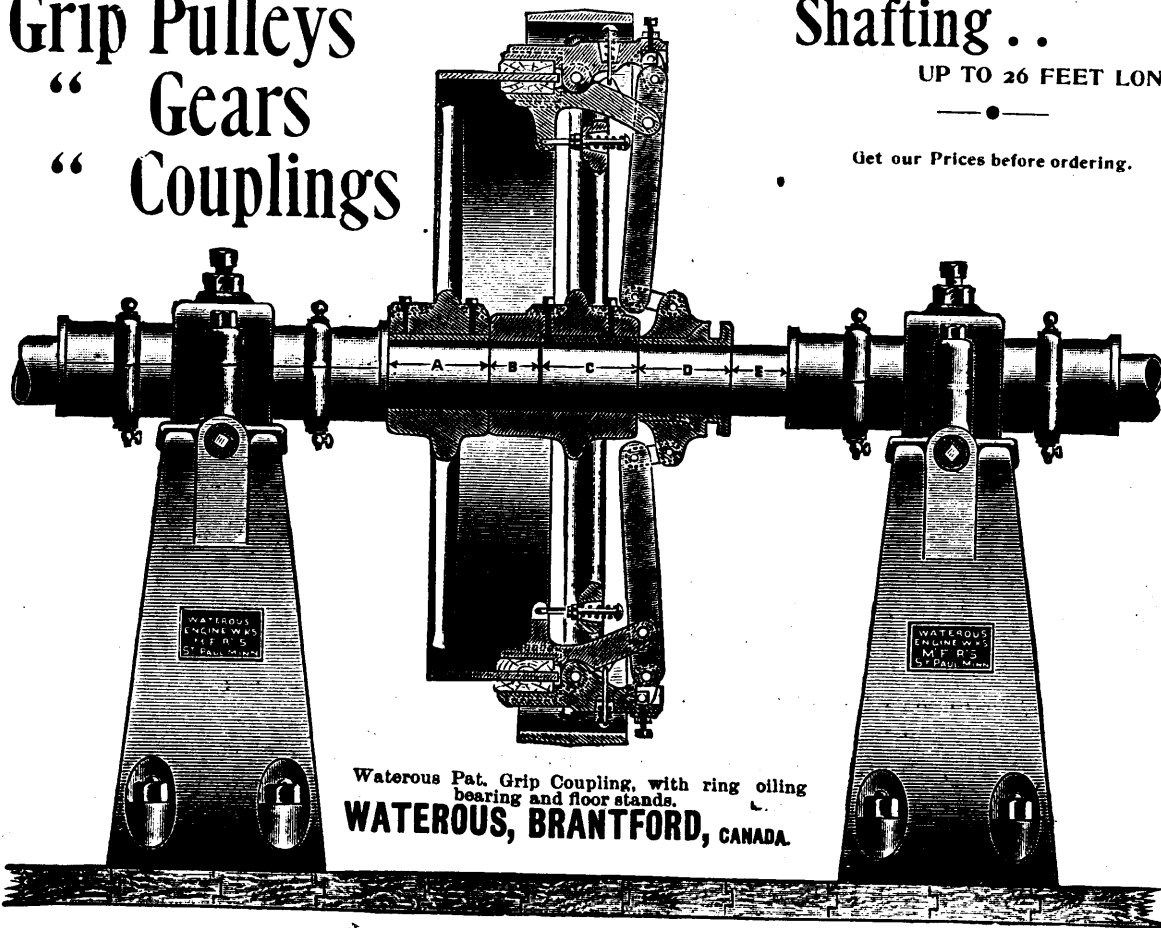
ly resembles ordinary soap, so that the yellow soap is really a mixture of fatty and rosin soap, and when the ingredients are of great purity the product goes by the name of "primrose" soap. Bar soaps so made on a large scale are, as a rule, the stock from which the various forms of toilet soap are made by processes intended to render them more attractive for personal use, but generally the consumer gets far better value for his money, and far less injury to his skin, by using a good "white curd" or "primrose" soap than by employing a high-priced toilet soap, while cheap toilet soaps, especially cheap transparent soaps, should be studiously avoided. The demand made by consumers for cheap soaps, which in many cases are sold retail at prices considerably below the wholesale market price for a true soap, has given rise to the introduction of highly watered soaps, caused to set hard by the addition during manufacture of sodic sulphate, which enables the manufacturer to make a so-called soap often containing less than twenty per cent. of true soap.—Vivian Lewes, in The Popular Science Monthly.

It is a little singular that no device has been invented that is every way and generally as satisfactory to weavers for threading the shuttle as sucking the thread through its eye. Instruments of some kind or other are in more or less use, but nothing is so expeditious and convenient as drawing the thread through by suction of the mouth. In its sanitary aspects, this custom is decidedly objectionable. The respiratory organs oftentimes suffer permanent injury from this habit, of the loose fibres and lint being drawn into them. More or less irritation to the delicate membranes of the organs occur, not infrequently resulting in permanent injury to health. Poison is also often introduced into the system from the dyes that may be used on the yarn, and infectious disease could readily be conveyed by practices of this kind. There is nothing to commend this practice of threading the shuttle except its expeditiousness. It is certainly detrimental to health and should be abandoned. Many weavers, it is true, recognize this, and it would be well if all did so, or were forced to do so. There have been several devices placed before manufacturers for accomplishing by suction, on the piston principles operated by a lever, what the mouth is called upon to perform. But, so far as we know, none of them have met with anything like general favor. There is an American device very recently brought out, and being experimentally tried by a number of cotton mills in this neighborhood, for threading the shuttle by a peculiar construction of the eye itself. The threading can be effected with the rapidity of the motion of the hand. Something of this kind should be done, and suction by the mouth prohibited.—Manufacturers' Gazette.

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UP TO 26 FEET LONG.**

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Waterous Pat. Grip Coupling, with ring oiling bearing and floor stands.
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Flax a Profitable Crop.

The good price which farmers are receiving for flaxseed this year should draw attention to this crop as one which might find greater favor with Manitoba farmers. With the prevailing low price for wheat, it is necessary to make the best use of any other opening for a profitable cultivation of other crops. Flax is a crop which is well adapted to Manitoba. It is an excellent crop for subduing new land. About all the flax grown in the United States is produced in districts where conditions are somewhat similar to Manitoba. The production of flax in that country is confined to the newer northwestern prairie states, where new land is being brought under cultivation. In the older, middle and eastern states flax is not grown. The rich virgin prairie soil of Manitoba is therefore just the thing for flax. Another advantage with flax, which should bring it in favor in Manitoba, where our summer season is short, is its early ripening habit. It can be safely sown after it is too late in the spring to sow wheat, and it therefore does not conflict with the wheat crop.

The price of flaxseed this year is higher than usual, owing to the light crop in the United States, where the crop suffered from drought. In Minnesota, Iowa and South Dakota, the three principle flax states, the production is estimated to be from 10 to 30 per cent. under an average, according to district, or a 1 average decrease of 20 per cent. Flax is also grown to some extent in Kansas and Nebraska, but the production in these states does not cut much of a figure in the totals. The total crop of the five states named is estimated at 8,500,000 bushels. The price shows about the same proportionate appreciation as the decrease in production, prices being about 20 to 30 per cent. higher than last year. The price at Chicago reached \$1.50 per bushel of 58 pounds recently. There is a duty of 20 cents per bushel on flax going into the United States, but with the high prices ruling this year a profitable price can be paid to producers here to export to the republic. In addition to the demand from home crushers, parties have been buying in Manitoba this season to ship to the States, and farmers here have been paid as high as \$1.10 per bushel for their seed. The market opened at 90 cents, but soon advanced to \$1. and ranged from \$1 to \$1.10. The home buyers of seed are the Winnipeg mill and an Ontario crusher.

Nearly all the flaxseed produced in Manitoba is grown in the district south of Morris to the international boundary, and east of the town of Morden to the Red river. This is the district settled principally by the Russian Mennonites, who are the chief growers of flax in Manitoba. With the low price of wheat, evidently a considerable extension of the flax crop in this province would prove an advantage to the farmers --Winnipeg Commercial

CAPTAINS OF INDUSTRY.

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

On Wm. Aitkens' property, just south of Wyoming, Ont., oil has been struck at a depth of 500 feet.

Mr. J. Ashley will start works at Gananoque, Ont., for the manufacture of electric motors, dynamos, etc.

The saw mill, owned by M. Avery & Company, formerly Lillie's mill, is undergoing thorough repairs. Kingston News.

The Band Flour Mill at Welland, Ont., recently purchased by Messrs. Wm. Munro & Co., is being overhauled and repaired.

The Simpson Company, manufacturers of furniture, Berlin, Ont., will erect a 140x25 feet five-storey block next their present factory.

The Belleville Sun Printing and Publishing Company are applying for incorporation with a capital stock of \$30,000 for the publication of a newspaper.

Messrs. Shurly & Dietrich, Galt, Ont., have lately made extensive shipments of their saws to Tacoma and other points in Washington Territory.

The Hubbell Primary Battery Company of Ottawa, Ont., are applying for incorporation with a capital stock of \$45,000 to manufacture electric batteries, etc.

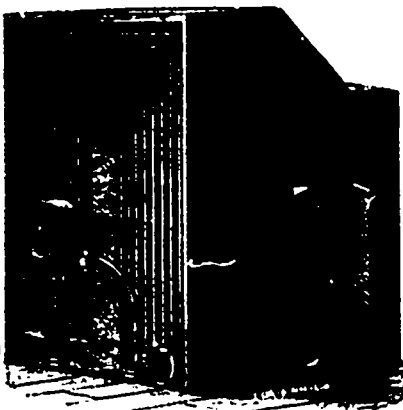
The Dundas County Telephone Company are applying for incorporation with a capital stock of \$10,000 for the purpose of operating telephones at Chesterville, Ont.

The Sterling Silver Plate Company of Toronto are applying for incorporation with a capital stock of \$50,000 for the purpose of manufacturing silver and gold goods, etc.

Mr. J. H. Read, of Chatham, is seeking inducements from Berlin, Ont., for the establishment of a hand roller factory. The Council will offer him ten years' exemption from taxation.

The Seaforth electric light plant, formerly run by the town, has been purchased by a joint stock company, with A.H. Ingram as superintendent. A new power house has been erected opposite the G.T.R. station, and the plant is considered one of the best in Ontario. The company is running 800 incandescent and 75 arc lights. --London Free Press.

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SYSTEM OF
HEATING,
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DRYING.**



**J. D. McEACHREN,
GALT, ONT.**

The following is a sample of the letters I have received from purchasers:--

OTTAWA, Oct. 1st, 1891.
Mr. J. D. McEACHREN, Galt.
We have dried over 100,000 feet of stowed hard wood lumber in the dry kiln you put in for us about a month ago. The boards come out in splendid condition. We are now satisfied we have the best dry kiln in the market for speedy and even drying, and comes fully up to your recommendations. The steam trap is an excellent article, worth its weight in silver to us, as it saves us a lot of worry and fuel.

Yours truly,
McRAE & CO.

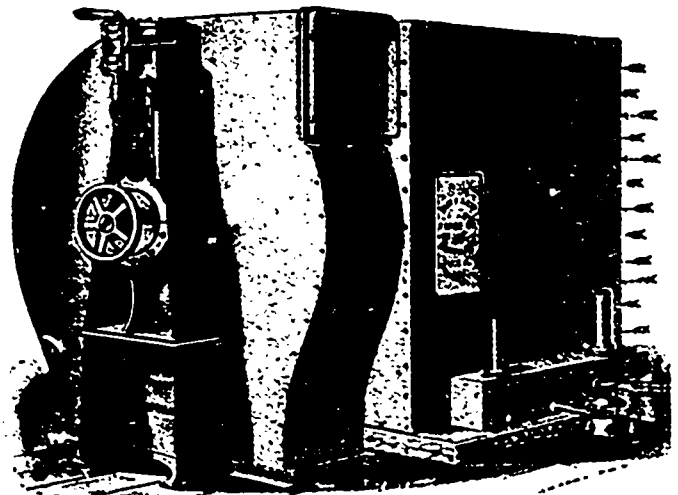
BRANTFORD, March 16th, 1891.
J. D. McEACHREN, Esq., Galt.
DEAR SIR,--In reply to your favor of the 15th inst., we might state, that the Hot Blast Heating System erected by you for our new factory, and driven by an independent engine, is giving us the best of satisfaction. We prefer it to any direct system, either radiators or piping, and has proved very economical. We have had no trouble in keeping the temperature at 70° at zero weather, with only 2 lbs. pressure on the heater. The heat is evenly distributed in the different flats and is under perfect control, and can be raised to the above mentioned temperature in about 30 minutes, the amount of space heated being 125,000 cubic feet.

The disc wheel makes about 400 revolutions per minute and has a great capacity for handling air. The engine makes on an average about 80 revolutions per minute and develops 1 1/2 h.p.

Our office is heated by this system and the air is constantly pure and refreshing.

Yours truly,
WM. PATTERSON & SON.

Buffalo Lumber Dry Kilns



The Largest Drier in America is equipped with a "BUFFALO" Hot Blast Apparatus.

THE OWNERS ARE ENTHUSIASTIC
All Users of Buffalo Kilns write letters similar to this one
"The Kiln answers every purpose to perfection: the Dry Rooms are run with exhaust steam at mere nothing in the way of cost, compared with the old way. Your arrangement is very simple and easily managed, besides being a money saver in operation. We are able, with the Kiln you sent us, to dry soft woods in three days, and hard woods in five days. That's good enough for anyone."--SMITH BROS., Sayre, Penn.

Send for Catalogue.

BUFFALO FORGE CO., Buffalo, N.Y., U.S.A.

H. W. PETRIE, Toronto Representative, Toronto, Ont.
CANADIAN MACHINERY & SUPPLY CO., Brantford,

Brantford representatives.

Chicago Office:--22 & 24 West Randolph St.

Mr. A. Willard, of Toronto, has erected a new chopping mill near Galt, Ont.

The Dominion Suspender Company, Niagara Falls, Ont., will erect a three storey addition to their factory.

The O'Keefe Brewery Company of Toronto, are increasing the capital stock of the company from \$550,000 to \$600,000.

Mr. Thomas A. Knowlton, Eastman, Que., has purchased the kindling wood factory in that place and will operate the same.

Mr. A. C. Gillies, Ayr, Ont., has invented a new telephone upon which he is now working, and which will be patented as soon as it is in operation.

The Acme Silver Company, of Toronto, are applying for incorporation with a capital stock of \$30,000 for the manufacture of silver and gold goods, etc.

The Niagara Neckwear Company of Niagara Falls, Ont., are applying for incorporation with a capital stock of \$20,000 for the manufacture of neckwear, etc.

The Eaton Bros. Brewing Company of Owen Sound, are applying for incorporation with a capital stock of \$200,000 to purchase and acquire the business heretofore carried on by Eaton Bros., etc.

The Doty Engineering Works, Toronto, are, we understand, about resuming business. They have secured an office at No. 2 Church street, where they will be glad to see their friends. It is probable that they will soon be in full operation again.

Messrs. Darling Bros., Montreal, have secured an order for the construction of a 600 horse power Webster vacuum feed water heater and purifier for the Temple Electric Co.'s new power house in that city. We are informed that this is the largest single feed water heater that has yet been placed in Montreal.

The announcement that they would immediately start manufacturing bicycles on a large scale has brought to the H. P. Davis Company some liberal offers from other places in the shape of cheap site, power and exemption from taxes. They are now considering whether they will locate in Toronto, Montreal or Peterboro. - Toronto Globe.

Mr. James Watt, President of the proposed new iron rolling mill at Guelph, Ont., informs us that all of the stock required for starting the company has been subscribed, and that the erection of the necessary buildings and the placing of the machinery will be proceeded with immediately, it being the expectation that the mill will be in operation early in the coming spring.

Messrs. Darling Bros., Montreal, advise us that they have just been appointed Canadian agents for the Sterling safety boiler as made by The Sterling Company of Chicago.

The steamer Daisy plying on Lake Otonabee is to be lengthened twenty feet, and equipped with a pair of propelling engines. Captain Charles Calcutt of Peterborough is proprietor.

Messrs. McKay & Hyde, of Halifax, have leased a building at Lequille, Hants Co., N.S., which they have fitted up for the manufacture of cornmeal with capacity for about 50 barrels a day.

Messrs. Mulley & Gatfield, who have coal docks at Amherstburg and Sandwich, Ont., will remove the former to the latter place, and concentrate all their business there. The chutes at Sandwich will be doubled in capacity.

Messrs. Fogarty and Baldwin, the new proprietors of the Dominion Last Factory, of Granby, Que., are making several additions to their works. A new solid brick engine house has been erected, and a new heater is now in course of construction.

The Gutta Percha & Rubber Mfg. Co., of Toronto, have made a large addition to the main building of their factories in Parkdale, in which will be placed a new set of belt presses and other machinery for the manufacture of belting, hose, etc.

The Queen City Oil Co., of Toronto, are increasing their shipments of oil to Australia, where their products bring 5d. more per gallon than other oils. They now have offices and barrelling stations at Ottawa, Montreal, Hamilton, Fort Erie and Brockville. - Trade Review.

While boring for water recently on his farm, Mr. Geo. Sisson, of Mauvers, discovered a bed of chalk-white clay similar to the Cornwall, Eng., article, which is used in the manufacture of china-ware. He has since been offered a large sum for part of his property, but refused. - Peterboro' Review.

It is rumoured that Thorold may soon have another important industry located within her limits. The Rubber Factory at Port Dalhousie is somewhat desirous of changing the location of their works owing to lack of room. As this industry employs over 200 hands, it would be a valuable acquisition. - Welland Telegraph.

The Toronto, Hamilton & Buffalo Railway Company has been reorganized, S. E. Peabody, of Boston, is now President. They are at present actively constructing the first section between Brantford and Hamilton. They have built from Brantford to Waterford, and have determined to at once construct two branches—from Hamilton to Welland, and Hamilton to Toronto. - London Free Press.

VALVES and - Pipe : : Fittings

Write for Latest Prices.

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Stylish, Roomy,
Light, Comfortable
and Strong.

PIANO BODY,
PORTLAND BODY,
QUELPH BODY AND
ADJUSTABLE SEAT BODY.
CUTTERS TO SUIT ALL
REQUIREMENTS.

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J. B. ARMSTRONG MFG. CO. Ltd., QUELPH, CANADA.

Black Sheet Iron, all sizes.
Sheet Steel, Ordinary & Dead Flat.
Russia Iron, Genuine and Imitation.

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ENGLISH HOUSE :
SAMUEL, SONS & BENJAMIN
164 FENCHURCH ST. LONDON. E.C.

SHIPPING OFFICE
1 RUMFORD PLACE. LIVERPOOL

Kerr & Morgan,

--- MONTREAL, QUE.,

MANUFACTURERS OF

ELEVATORS

Hydraulic, Belt Power, Electric and Hand Elevators for
Passenger and Freight Service

AND General Machinery.

Mr. J. Little is erecting a grist mill at Clarenceville, Que.
 Mr. Barker is erecting a saw mill at Burford, Ont., near Brantford.
 Messrs. J. C. Barr and F. Payne are promoting the starting of a wrench factory at Granby, Que.
 Messrs. Short & Squair, Vancouver, B.C., have bought the Vancouver Varnish Works from Melton, Smith & Co.
 The Foam Yeast Company, of Toronto, are applying for incorporation with a capital stock of \$25,000 to manufacture foam yeast, etc.
 The Eureka Oil Developing Company with headquarters at Petrolia, Ont., are applying for incorporation with a capital stock of \$5,000.

The Niebergall Stave and Lumber Company, of Staples, Ont., are applying for incorporation with a capital stock of \$45,000 to manufacture lumber, staves, etc.

The Prescott Elevator Co., are applying for incorporation with a capital stock of \$250,000, for the purpose of building a grain elevator wharfs, docks, etc., at Prescott, Ont.

The Eureka Oil Developing Company, of Lambton, Ont., are applying for incorporation with a capital stock of \$5,000 to purchase and take over the business at present carried on by J.E. Austin.

The steamer Magnet will go into dry dock at Sorel, Que., and be rebuilt during the winter. Her berth capacity will be increased to 160 passengers, the cabin refitted and rebuilt, new engines put in, and patent feathering paddle wheels. About \$15,000 will be spent on her.

The Niebergall Stave and Lumber Company of Staples, Ont., are applying for incorporation with a capital stock of \$45,000. The first directors are Geo. Niebergall, Geo. Acheson and S. P. Halls of Goderich, Ont.; Geo. M. McEwan, Hensall, Ont., and David R. Menzies of Clinton, Ont.

The Dodge Wood Split Pulley Co., Toronto, inform us that they have just shipped a car load of their patent wood split pulleys to one of the largest dealers in Australia. This order consists of over 600 pulleys of various sizes which the purchaser will carry in stock in his various branch establishments throughout the colonies; and from the reputation and standing of the house, the Dodge Wood Split Pulley Co. congratulate themselves on being so fortunate in securing this new outlet for their products. We are informed that the Dodge patent pulley, manufactured in Toronto, is now carried in stock and on sale in about every important city and manufacturing centre in Europe, South and Central America and Australia, as well as throughout Canada.

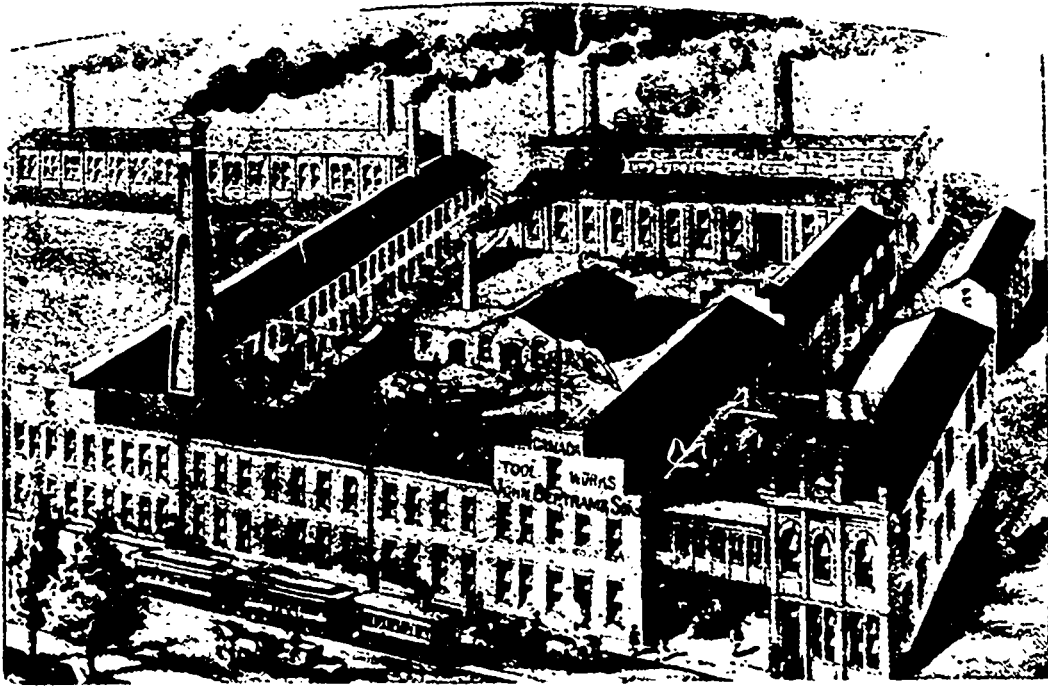
The Midland Electric Light and Power Company, Midland, Ont., are applying for incorporation with a capital stock of \$10,000 to construct works for the production of electricity for commercial purposes.

The St. Anthony Lumber Company with chief place of business at Whitney, Ont., are applying for incorporation with a capital stock of \$1,500,000. E. M. Fowler, Chicago, Ill., E. C. Whitney, Minneapolis, Minn., and Arthur Hill, Saginaw, Mich., are the first directors.

Letters patent have been issued incorporating The Magnetawan Tanning and Electric Company with a capital stock of \$50,000. C. G. Marlatt, and W. T. Marlatt, of Oakville, Ont.; John Waldie and Wm. Cameron, of Toronto, and R. J. Watson, Burk's Falls, Ont., are the directors.

M. Frankenburg, owner of the Globe India Rubber Manufacturing Co., of Manchester, England was a few days since in Quebec, where he will shortly open a branch of his extensive establishment. As an encouragement to the new industry the City Council has voted an annual grant of \$2,500 to be paid during five years.—Trade Review.

Mr. J. D. McEachren, Galt, Ont., manufacturer of drying, heating and ventilating apparatus, writes us as follows:—Last July I supplied Messrs. McRae & Co., of Ottawa, with one of my new system dry-kilns and patent fans. These gentlemen have been for some time engaged in an experimenting process of staining our Canadian woods so as to imitate walnut, mahogany, etc. The staining process was perfect and easily accomplished, but they could not find a kiln in Ottawa that would dry the lumber without warping and streaking it, thus unfitting it for use. With my new drying process and kiln they now dry all they can stain easily and lumbered was out in excellent order. I have since shipped a similar kiln to Mr. J. A. Parr, of Ottawa. I have recently put a blast heating and ventilating system into a block of three three-storey stores in Galt, which is now working very satisfactorily, changing all the air in the several stores, offices, etc., four times per hour, giving a very comfortable temperature under perfect control in every room. I have put in a blast dryer in the Berlin, Ont., Steam Laundry which is now drying starched shirts in thirty minutes. I am now finishing a large dry kiln for Messrs. W. Doherty & Co., organ manufacturers, Clinton, Ont. I supplied the same firm with a similar heater and four others for heating their three workshops about a year ago, and this repetition of the order within a year, under present pressure in business, is a valuable testimony to the efficiency of my heating system. Besides these, I have filled numerous orders for fans, condensers, house and office heating apparatus, etc. All the machines I make are novel in their construction and operation and have given excellent results.



CANADA TOOL WORKS, Floor Space 60,000 Square Feet.

MANUFACTURERS OF :

- Engine Lathes
- Brass Finishers' Lathes
- Cap and Break Lathes
- Planers
- Drilling Machines
- Boring Mills
- Shapers
- Slatters
- Bolt Cutting Machinery
- Nut Tapping Machinery
- Wood Working Machinery
- Car and Locomotive Machinery, etc.

Correspondence Solicited.

Highest Award, World's Fair, 1893. Bronze Medal and Award, Quebec Provincial, 1894.

JOHN BERTRAM & SONS, DUNDAS, ONT.

The St. Clair and Erie Building and Land Co., are applying for incorporation with a capital stock of \$400,000 to erect public halls, business premises, etc.

Messrs. Achison and Dolman have leased the saw mill owned by Mr. Stirrett and will run it for all it is worth during the coming winter season.—Petrolia Advertiser.

The Portland Rolling Mills Co., of St. John, N.B., are applying for incorporation with a capital stock of \$200,000 to manufacture rolled and hammered iron, etc. Mr. James C. Robertson, St. John, is one of the incorporators.

The Point Albino Street Railway Company are applying for incorporation with a capital stock of \$100,000 to construct and operate a street railway in the villages of Fort Erie and Port Colborne, in the County of Welland, Ont.

The Ottawa Porcelain & Carbon Co., Ottawa, are applying for incorporation with a capital stock of \$100,000 to manufacture porcelain and carbon, and also electric light and power machinery, electric lamps, etc. Mr. John Wm. McKae, of Ottawa, is one of the incorporators.

The Facer Hammered Solid Steel Car and Locomotive Steel Co. (Ltd.) are applying for incorporation with a capital stock of \$150,000 and headquarters at Perth, Ont., to manufacture wrought or forged steel wheels, such as car wheels, locomotive wheels, etc., whether of steel or iron.

The city authorities of Sherbrooke are endeavoring to secure from the British American Land Company or elsewhere a suitable site for the works of the Jencks Machine Co. The company's shops are now situated at a distance from the railway and cartage costs heavily. This effort on the part of the council is in order to enable the company to erect the additional buildings required by the expansion of the business in the right portion of Sherbrooke.

The quantity of lumber taken by barge from Ottawa and immediate vicinity during the navigable season is placed at about 305,000,000 feet. Of this some 280,000,000 feet were taken by the boats of the Ottawa Transportation Company, and the remaining 25,000,000 feet by American boats. The quantity shipped by rail during the same period is estimated at about 100,000,000 feet; but by including the shipping by rail during the winter months, this amount would be almost doubled.

After an entire renewal of machinery in the Goldie Milling Co.'s mill at Ayr, the mills were set in operation on Thanksgiving day. Everything moved in perfect order. The mills are composed of two mills, one capable of turning out 200 barrels per day, and a larger one capable of turning out 500 per day. Everything by way of improvement in making flour has been introduced, so that the mills as they now run are according to capacity the most complete in Canada.—Galt Reporter.

The Smith Bros. woolen mill, Sarnia, has been re-opened for the purpose of making up all the stock left in the mill at the time of failure. It is now running full time manufacturing their celebrated makes of underclothing, yarns, flannels, sheetings, blankets and tweeds, which as fast as made are being taken to the Smith store, where all are sold at the actual mill cost. This is the greatest bargain opportunity ever offered the public in the vicinity. Smith Bros. Mill Store, Sarnia.—Petrolia Advertiser.

The Citizen's Light and Power Company are erecting a large new station in St. Henri in which they are putting a 1200 h. p. steam plant to furnish power for the lighting of the harbor, St. Henri and Cote St. Antoine. It is intended also to supply the power for the Standard Light and Power Co. to run an electric road to Lachine which it is claimed will be in operation early next spring. The two companies have been amalgamated for over a year. The new station, it is said, will cost \$120,000. The building dynamos, steam engines, etc., are being put in under the superintendence of Mr. T. Emile Vanier.—Montreal Star.

The Henderson Cycle and Manufacturing Company, of Brantford, Ont., are applying for incorporation with a capital stock of \$24,000 for the manufacture of bicycles, etc.

Messrs. Jacob Y. Shantz & Son, Berlin, Ont., are applying for incorporation under that name with a capital stock of \$100,000 to continue the business of the old concern as manufacturers of buttons, ornaments, novelties, etc.

The Mica Boiler Covering Co., Toronto, are applying for incorporation with a capital stock of \$50,000 to manufacture boiler and steam pipe covering, insulators for cold storage, refrigerators, etc., Messrs. A.D. Benjamin and F.D. Benjamin, Toronto, are among the first directors.

Mr. Gilpin, inspector of mines, is preparing a display of Nova Scotia minerals and products of the mines for the imperial institute, London, which will be forwarded shortly, and will remain permanently at the institute. The collection will include iron ores, fluxes, fuels and pig iron, made by the New Glasgow Iron Coal and Railway Co., at Ferrona, from local sources of supply; also a fine display of steel made at New Glasgow, rolled and turned, by the Bessemer process from the iron. This display of manufactured steel consists of rails, shafting, etc. The whole exhibit will be of peculiar interest as showing the beginning of the manufacture of steel from Canadian ores.—The Outlook.

SUPERIOR CHILLED IRON ROLLS.

Perfect Surfaces, Deep Chill, Hard,
Tough, Durable, Guaranteed
Free From Flaw.

—FOR—
Iron Rolling Mills,
Rubber Works,
Paper Mills,
Flour Mills, Etc.



For Rolling
Iron, Steel, Cold,
Silver, Brass, Copper
Wire, Lead, Paper, Etc.

EXTENSIVE PLANT FOR
GRINDING AND CORRUGATING ROLLS.

MANUFACTURED BY
WM. & J. G. GREEY,
2 Church St., TORONTO.

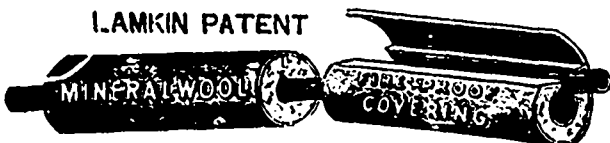
Steam Pipe and Boiler Coverings

ASBESTOS GOODS
COTTON WASTE

STEAM PACKINGS
GASKETS, Etc., Etc.

Largest and Best Assortment in Canada.

LAMKIN PATENT



Canada Mineral Wool Co. Ltd.

122 Bay St., TORONTO.

TELEPHONE 2376.

ROBIN, SADLER & HAWORTH

Manufacturers of

OAK TANNED - -

LEATHER BELTING.

Montreal and Toronto.

We make BELTING FOR ALL KINDS OF WORK.

When ordering state where BELTS ARE TO RUN.

Thomas Conlon is rebuilding his saw mill at Little Current, Ontario.

The Government have instituted a bonded warehouse at Edmonton, N. W. T.

T. E. Essery's sawmill at Monticello, Ont., was totally destroyed on Nov. 21st, by the explosion of the boiler.

Messrs. Wildbur & Moss, Belleville, Ont., purpose erecting a new weaving factory in the spring. - Trade Journal.

The Williams Hurlbut Company of Collingwood, are applying for incorporation with a capital stock of \$11,000 for the manufacture of all kinds of hosiery, etc.

The Western Wire and Nail Company of London, Ont., are applying for incorporation with a capital stock of \$50,000, for the drawing of wire of all descriptions and the manufacture of wire nails.

It is proposed to build a railway from Campbellton, on the Restigouche, to a junction with the Bangor and Aroostook railway, now nearing completion. Several American capitalists are interested in the scheme. The road would run through a fine lumber region. - Trade Review.

An item has recently been going the rounds of some of the so-called trade journals to the effect that the Canadian Mineral Wool Co., of Toronto, would remove their factory and business to Hamilton. We have knowledge that this statement is at variance with the truth, as the company propose doing no such thing. Their works in Toronto are in active and satisfactory operation.

Attention is directed to the business card of The Dodge Wood Split Pulley Co., Toronto, wherein their new split friction clutch is illustrated. They claim that the cost of a clutch, or any other shafting appliance, does not cease until it is erected and ready to run. Their clutch being a split will often save many times its cost to the purchaser owing to its being separable or in halves. They mail descriptive catalogue on application.

Messrs. Wm. & J. G. Greey, manufacturers of flour milling machinery, solicitous of the welfare of those who are employed in the milling industry, and who are compelled to inhale the dust and atmospheric impurities always present in mills, are handling the Hurd patent automatic respirator which is described as being the most complete and efficacious article ever offered for protecting the throat and lungs from dust, poisonous gases and other impurities in places where persons are exposed, and life endangered. Although this is a comparatively new article, we are informed that already there are over 15,000 of them in use.

Ge 1711's fruit evaporator works at Norwich, Ont., were destroyed by fire, Nov. 24; loss about \$8,000.

Messrs. Davidson & Munro, Peterboro', Ont., have taken over the Ontonabee Flour Mills at that place, which have recently been thoroughly equipped with new machinery, lighted by electricity, and heated throughout with steam. The capacity is 200 barrels per day.

The Robinson Fish Company, whose extensive warehouse at Selkirk was recently destroyed by fire, has begun reconstruction. The new warehouse will be completed in a few weeks, and will then be filled with ice in readiness for the spring catch. - Winnipeg Commercial.

The Hochelaga workshops of the C. P. R. present a busy appearance nowadays, the company having recently taken on three hundred men. These men will be engaged in repairing, painting and varnishing thousands of cars which compose the rolling stock of the company. This work will proceed at the rate of two cars a day, while in the course of the winter, it is stated, a number of baggage and freight cars will be built. - Montreal Gazette.



THE HURD
... PATENT AUTOMATIC ...
RESPIRATOR.

OVER 15,000 IN USE,
Preventing Disease and Prolonging Life.

The most complete article ever offered for
Protecting the Throat and
Lungs from Dust,
Poisonous Gases, and all
other Impurities,

In places where persons are exposed and many
times life endangered.

Mailed free to any address in Canada on receipt of \$2.15.

WM. & J. G. GREEY, 2 CHURCH STREET, TORONTO.

.. IMPORTANT ..
TO LIGHTING STATIONS.

OUR NEW
ALTERNATING CURRENT INDICATORS

Are now ready. Before purchasing elsewhere send for our New Catalogue, which contains the prices and description of the above instruments, and also a list and prices of other new instruments of our manufacture.

WHITNEY

ELECTRICAL INSTRUMENT CO.

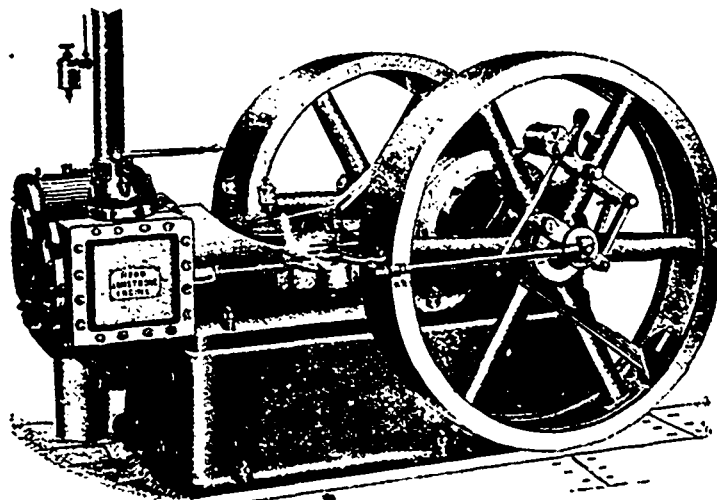
Sherbrooke, P.Q., Canada.

Penacook, N.H., U. S.

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Henry F. Kellogg, General Selling Agent.

- BOSTON, MASS., W. S. Hill.
- BALTIMORE, M.D., The Poolo Electric Co.
- CHICAGO, ILL., Electric Appliance Co.
- CINCINNATI, O., Nowotny Electric Co.
- HALIFAX, N.S., John Starr, Son & Co. Ltd.
- NEW YORK CITY, Geo. L. Colgate, 136 Liberty Street.
- SAN FRANCISCO, CAL., California Electrical Works.
- TORONTO, ONT., Toronto Electrical Works.



In the Robb Armstrong Tandem and Cross Compound Engines, the high and low pressure valves are both controlled by the governor, arranged so as to give equal work to both pistons, which tends to extremely quick regulation under sudden changes of load, gives better steam distribution and higher economy than can be obtained by having a fixed cut-off on the low pressure valve.

ROBB ENGINEERING COMPANY, Ltd.
AMHERST, N. S.

Winchester, Ont., town council is considering the question of constructing waterworks.

Newboro' is shortly to be connected with the outside world by telephone. *Almonte Gazette.*

The A. B. Jardine Co., Hespeler, Ont., are getting out a new tap lathe, which, when completed, will be patented.

Messrs. Wm. & J. G. Greey, Toronto, manufacturers of milling machinery, have just supplied a chopping mill to be operated by Mr. Myles Scott at Lakelet, Ont.

The Stern Bicycle Co., Syracuse, N. Y., are applying to the Toronto City Council for certain privileges by which they hope to establish a factory in Toronto.

The Montreal Exhibition Company have signed a contract with Jos. H. Siles, late British Commissioner at the California Fair, to establish an exhibition in Montreal during the summer of 1896.

The Dominion Government have awarded a contract to Messrs. D. McIntosh & Son, Toronto, for supplying and erecting historical monuments at Lundy's Lane and Chrysler's Farm, Ont., and Chateaugay, Que.

The City Council of Toronto will lease a suitable plot of ground, near the corner of Dufferin and King Streets, to the Metallic Roofing Co., of this city, upon which they will erect a large factory for the purposes of their business.

The new bridge over the Grand Trunk at St. Henri is on the point of completion. Meanwhile the Montreal Street Railway Co. has a number of men busily engaged completing their track up to and over the bridge so that it is expected that in a few days the Notre Dame line of cars will be able to run on the whole length of their route. The bridge is a fine substantial structure of iron with stone abutments, and is the full width of Notre Dame Street.—*Montreal Herald.*

It is now stated on the most reliable authority that the Suspension Bridge Co. will commence shortly after the opening of the new year to erect the long talked of new steel arch bridge which will probably be completed by fall, no interruption of traffic taking place while the work is going on. The structure will have a double railway track above with an ample carriage and foot way below, besides a track for a trolley car. No interference will be made in the location of the Grand Trunk station, but it is expected that when the new bridge is completed the railway company will open a new yard in Stamford to accommodate the increased freight traffic which the bridge facilities will ensure.—*Welland Telegraph.*

Mr. Adam Graham has leased the Ontario Foundry at Campbellford, Ont., and will operate the same.

The C. Beck Mfg. Co., Penetanguishene, Ont., have recently purchased a large planing mill plant which they expect to have in operation in the coming Spring.

The Central Company have struck a powerful flow of natural gas in their first well at Dunville, Ont. Twelve successful gas wells are now in operation at Dunville.—*London Advertiser.*

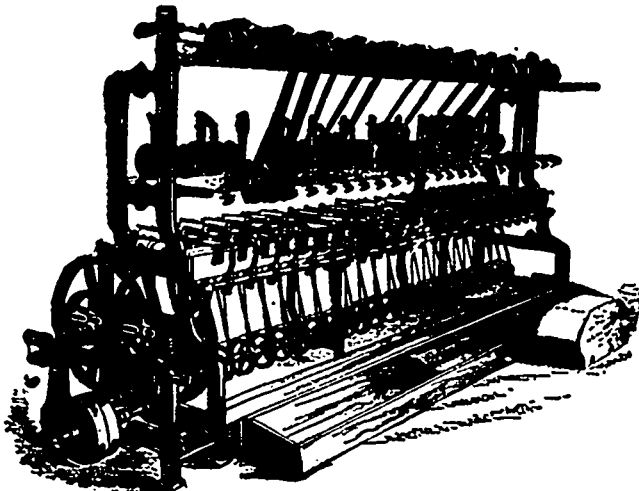
The Drummond Lumber Co., are building a large saw mill at Forestdale, Quebec, and they will build a dam across the Deschene River, about 7 miles from Forestdale, to supply power for the same.

The L. E. Starrett Co., Athol, Mass., have sent us their new catalogue having reference to the machine cutters, etc., manufactured by them. The illustrations are of gangs of milling cutters, patent involute cutters, metal slitting saws, angular cutters, end mills, screw slotting cutters, etc. These goods are described as being of the finest quality and as accurate and perfect as is possible to produce with high class machinery and special tools. The Starrett Co. will take pleasure in sending illustrated catalogues on application.

Messrs. Leitch & Turnbull, Hamilton, Ont., manufacturers of electric and hydraulic hand and power elevators, inform us that they are now busy on orders as follows:—Six power elevators for the Collingwood Meat Co., Collingwood, Ontario; one electric passenger elevator for the Metropolitan Loan Co., Ottawa; one electric passenger elevator for the Synod of Toronto, in the Beard Building; one heavy power elevator for the Kingston Vehicle Co., Kingston, Ont.; one electric car elevator for the Toronto Railway Co.; one elevator for House of Providence, Kingston, Ontario; one hydraulic elevator for J. E. Thompson, Toronto; one for Comet Cycle Co., Toronto; one for A. R. Williams, Toronto, and one power elevator for Barchard & Co., Toronto.

It will be gratifying to the citizens and all concerned to know that on Monday the stone shop of the Bell Organ and Piano Co. will commence to run overtime. This is necessary, because the sales in all departments recently have been in excess of the production. It is expected that the brick factory will also be running overtime shortly. Mr. W. J. Bell, the energetic business manager, is to be congratulated on this state of affairs, and the manner in which he has pushed the business during the short time that he has been at the head of it. The cable receipts from London are the most satisfactory in two years, which is also very gratifying to the manager. It may also be stated that a large number of new men have been taken on, so that every department is filled.—*Guelph Daily Mercury.*

MEDAL AWARDED AT WORLD'S FAIR



Patent Bobbin Winding Machine, for Worsted or Cotton Yarns

Pat. Nov. 22nd, 1887. With variable motion. Pat. Aug. 5th, 1883.

The Only Successful Skein Winder

Variable Motion, patented Aug. 16th, 1891, and Sept. 5th, 1893.

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Anilines, Dyestuffs and Chemicals

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ACTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION
Berlin, Germany.

NEW YORK, 55 Beekman St.

BOSTON, 106 and 108 Milk St.

PHILADELPHIA, 122 and 124 Arch St.

A. W. LEITCH, 16 Hughson St. South, HAMILTON, ONT.

The Radial Railway Co., Hamilton, Ont., propose erecting machine shops in that city at a cost of about \$50,000.

The Maud Hydraulic Company has been formed, with a capital of \$25,000 and headquarters in Vancouver, to develop valuable Cariboo properties.—Victoria Weekly Colonist.

Messrs. McKay & Co., the large and well-known flour milling concern at Chaudiere Falls, near Ottawa, are promoting the building of a large grain elevator at Prescott, Ont., opposite Ogdensburg, N. Y., at a cost of about \$150,000.

St. Croix Soap Manufacturing Co., Saint Stephen, New Brunswick, of which Mr. J. P. Sanong is manager, informs us that they are making considerable additions to their factory premises, which includes a storehouse 50 ft. square, iron case and fire proof, and an enlargement of their brick boiler house, and an additional 60-horse power boiler. These improvements are in addition to those that were recently made, and are given an additional floor space of about 2,000 square feet.

The Thurman Fuel Oil Burner Co., Indianapolis, Ind., have sent us their new illustrated catalogue having reference to the oil burning apparatus manufactured by them. This machinery is specially adapted for boilers, furnaces, forges, glass making, brick kilns, potteries, ovens, dryers, etc.; and for every branch of industry where heat for any purpose is used. The illustrations in the catalogue have reference to the application of the Thurman system to all the practical purposes here alluded to.

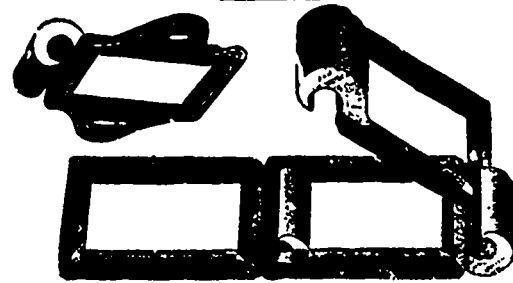
The J. F. Pease Furnace Co., Toronto, have sent us their new catalogue having reference to the Economy Combination Heaters and Warm Air Furnaces manufactured by them. We are told that at the present time nearly 25,000 of these furnaces are in use in Canada and the United States. Their construction is not the result of apparently clever theories or notions, but is founded on simple practicable and original conceptions justified by the practical tests and experience of many years devoted to this particular branch of manufacture. Many improvements have been added to their construction with a view to making them efficient and durable. They are made with sufficient regard to durability and simplicity. It is not this Company's endeavor to show how cheaply the furnaces can be made but how well. The Pease system of heating includes ventilation, and this is particularly adapted not only to residences but to schools, halls, churches, etc.; and the catalogue makes reference to a very large number of such places, many of them in Toronto. In this climate the cost of fuel is a large item of expense and those who are interested in heating would do well to obtain a copy of this descriptive catalogue from the Pease Furnace Company.

Another electrical enterprise is about to be started at Ottawa. A number of local capitalists have just formed a joint stock company, with a capital of \$45,000, and have purchased the patent of a primary battery from an American inventor, and will shortly begin the manufacture of this patent in Ottawa.—London Free Press.

The Dominion Cotton Co. are improving the fire protection in their mills at Windsor, N.S. A reservoir measuring 130 by 75 feet and 4½ feet deep, is completed, and they are now placing four additional hydrants outside the mill which can be supplied either from the reservoir or from the town system.

The negotiations which have been under way for some time past for the purchase of the Victoria Hydraulic Co.'s claims on the North and South Forks of the Quesnelle river, were closed yesterday, and the property transferred to the new syndicate. This is composed of Geo. A. Cox, President of the Canadian Bank of Commerce, and Wm. McKenzie, president of the street railway, Toronto; D. D. Mann and T. G. Holt, contractors of Montreal, also representing other Eastern capitalists, and F. S. Barnard, M. P.; of this city, the original owners, also retaining a considerable interest. The amount paid to the latter in cash and paid-up stock, is understood to be in the neighborhood of \$70,000.—Victoria, B.C., Colonist.

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CANADIAN PATENTS.

The following patents have been issued from the Canadian Patent Office, from September 1 to September 28, 1894, inclusive.

Information regarding any of these patents may be had on application as follows:—

| | | |
|------------------------|----------------------------|-----------|
| Fetherstonhaugh & Co., | Bank of Commerce Building, | Toronto. |
| Ridout & Maybee, | 103 Bay street, | Toronto. |
| A. Harvey, | Central Chambers, | Ottawa. |
| J. A. Grenier, | Imperial Building, | Montreal. |

Copies of American patents corresponding to Canadian patents can be procured from either of these attorneys for the sum of twenty-five cents each.

- 46,902 Knitting machine, Chicago Hosiery Co., Chicago, Ill.
 46,903 Clothes sprinkler, Patrick Giblin and William Tracy, Montreal, Que.
 46,904 Boring machine, Charles W. Meggenhofen, Franklin and Albert S. Courtright, Indianapolis, Ind.
 46,905 Refrigerator, James T. Gurney, Boston, Mass., and Chancey J. Medberry, Font du Lac, Wis.
 46,906 Process of producing illuminating gas, William Young, Priorsford, County of Peebles, Scotland.

- 46,907 Food product, John J. Angus, Green Bush, Wis.
 46,908 Process of waterproofing leather, Edward H. Lewis, St. Louis, Mo.
 46,909 Sifting machine, Alexius Muller, Jakob Soder, and Fridrich Gutjahr, Budapest, Hungary.
 46,910 Device for changing motion, Jonathan J. Hamilton, Neepawa, Man.
 46,911 Foot warmer, Fred Lied and Thomas E. French, Columbus, O.
 46,912 Balanced slide valve, Edwin Lloyd, Blue Island, Ill.
 46,913 Manufacture of fuel, William B. Hartridge, Saintoin Road, County Surrey, Eng.
 46,914 Refrigerator, James T. Gurney, Boston, Mass., and Chancey J. Medberry, Font du Lac, Wis.
 46,915 Folding chair, John D. Pennington, Dundas, Ont.
 46,916 Apparatus for operating pumps in deep well, Frederick C. Blackwell, Enniskillen, Ont.
 46,917 Burial Casket, William A. Roe, Manchester, Ia.
 46,918 Automatic receding saw mill set-works, Algernon S. Petticrew, St. Louis, Mo.
 46,919 Device for determining the location of a distant object, W. C. Rafferty, Governor's Island, N. Y.
 46,920 Cooking stove, William J. Copp, Hamilton, Ont.
 46,921 Process of crystallizing liquors, Philippe Condamin, Marcjols, France.

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- 46,926 Hay and stock rack, William Daniels and Ernest C. Daniels, Orangeville, Ont.
- 46,927 Insect powder duster, Herbert C. Adams, Mexico, N. Y.
- 46,928 Waist, Sarah C. Benham, Columbus, O.
- 46,929 Sifting apparatus, Otto Fuchs, Buttstaed, Germany.
- 46,930 Fire escape, James L. Gregory, Washoe City, Nev.
- 46,931 Bust form, Hannah E. Matthews and Adaline M. Matthews, Grand Rapids, Mich.
- 46,932 Process of treating fabrics, Frederick G. Annison, 218 Burdett Road, Bow County, London, Eng.
- 46,933 Means of seeding boxes, Joseph A. Christie, Montreal, Que.
- 46,934 Pipe bender, Thomas Seaton, Sr., Toronto, Ont.
- 46,935 Ice house, Mathias B. Eaton, Boston, Mass.
- 46,936 Salt screening apparatus, Thomas Craney, Bay City, Mich.
- 46,937 Electric meter, William Thompson, Baron Kelvin of Largs, Glasgow, North Britain.
- 46,938 Method of treating fish or fish offal, John C. W. Stanley, London, Eng.
- 46,939 Car fender, Stephen S. Kembal, Montreal, Que.
- 46,940 Heddle actuating mechanism for looms, Florentine Buyek, Philadelphia, Pa.
- 46,941 Dry air closet, George R. Scates and Elbert S. Rogers, Knoxville, Tenn.
- 46,942 Purification and manufacture of sugar, The Hon. George A. Drummond, Montreal, Que.
- 46,943 Ice cream freezer, Henry O. Thies, Muskegon, and Nathan E. Serwood, Detroit, Mich.
- 46,944 Art of producing dyestuffs, The Grasselli Chemical Co., Cleveland, O.
- 46,945 Electro-magnetic switch, Florence L. Hartel, Koekuk, Ia.
- 46,946 Illuminant appliance for gas and other burners, The Welsbach Incandescent Gas Light Co., Montreal, Que.
- 46,947 Grain sieve, The Cloz and Howard Mfg. Co., Webster City, Ia.
- 46,948 Recording machine, Charles H. Hall, Murdock, W. McAskil, Glidden, and Josiah A. King, Jr., Font du Lac, Wis.
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- 46,951 Stopper puller, Alfred W. Butterfield, Bozeman, Man.
- 46,952 Extension car step, Thomas Thatcher, Utica, N. Y.
- 46,953 Treating salts in solution by electrolysis, Henrik C. F. Stormer, Christiana, Norway.
- 46,954 Thill support, Ruben Cox, Washington, D. C.
- 46,955 Manufacture of nickel and cobalt, Pierre Manhes and Societe Anonyme de Metallurgie du Cuivre (Procedes Pre Manhes), Lyon, France.
- 46,956 Centrifugal apparatus, Jonathan A. Mays, Belsize Terrace, Aamstead, County London, Eng.
- 46,957 Friction clutch, The Cole Mfg. Co., Laconia, N. H.
- 46,958 Pneumatic tire and rim for wheels, The Pneumatic Tire Co., Dublin, Ireland.
- 46,959 Casket clamps for hearses, George F. Baird, Austin, Minn.
- 46,960 Bag lock, Frederick E. Windsor, Warren Pa.
- 46,961 Combined bracket and shelf, the firm of Darling Bros., Montreal, Que.
- 46,962 Hoe, Eliza B. Hazel, Orange Mills, Fla.
- 46,963 Cutting mechanism for mowers, etc., Alfred G. Campbell, Sherbrooke, Que.
- 46,964 Pegging machine, John F. Davey, Marlborough, Mass.
- 46,965 Vegetable grater, John G. Baker, Philadelphia, Pa.
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 46,977 Mining machine, Francis M. Lechner, and Mark E. Gallimore, Columbus, O.
 46,978 Aerating distilled water, James E. Thomas and Elisha P. Grow, Bay City, Mich.
 46,97 Apparatus for aerating distilled water, James E. Thomas and Elisha P. Grow, Bay City, Mich.
 46,980 Combined blackboard and desk, Hiram E. Butler, James-town, N.Y.
 46,981 Means for attaching pneumatic tires to vehicle wheels, Pardon W. Tillinghast, Edgewood, R.I.
 46,982 Halter square, Thomas N. Martin, Cheyenne, Wyo.
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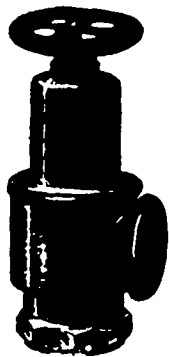
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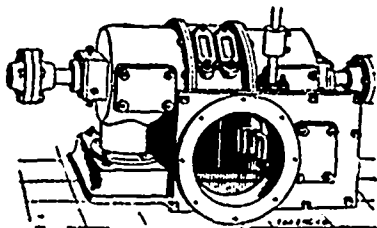


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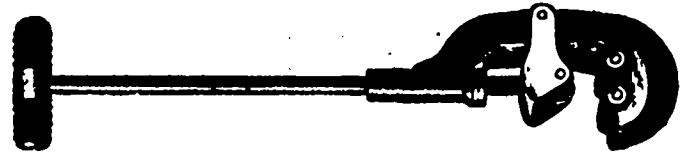
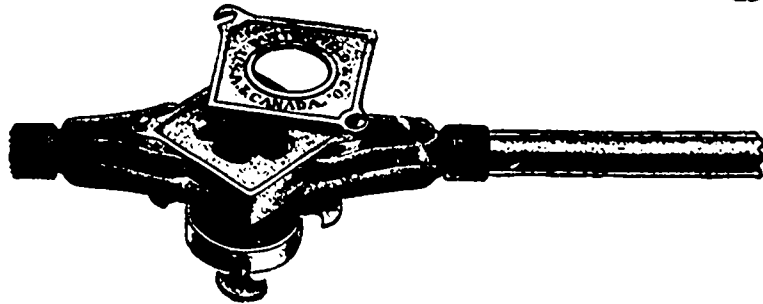
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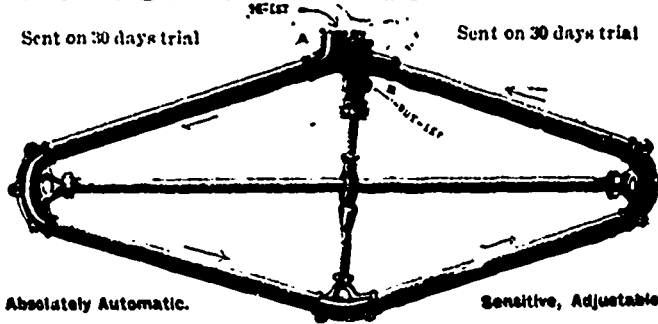
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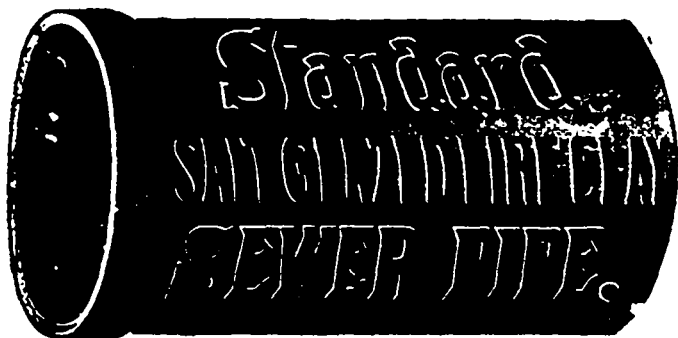
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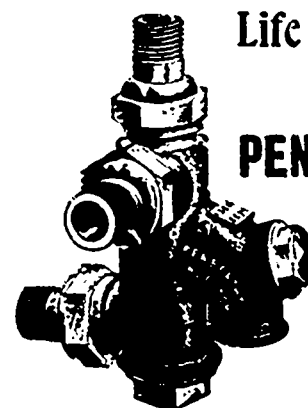
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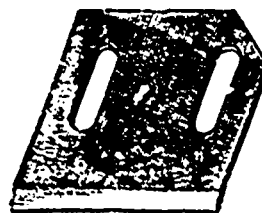
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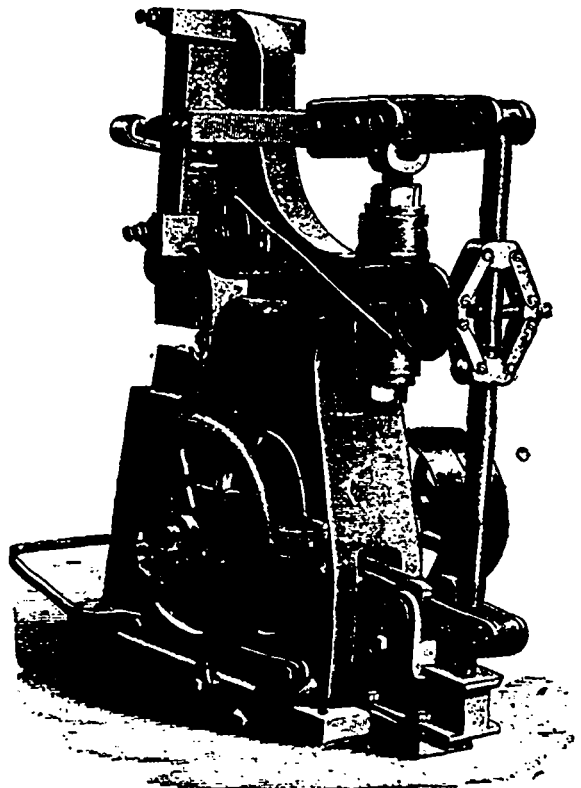
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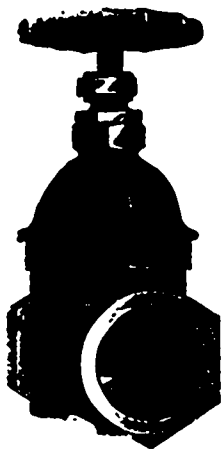
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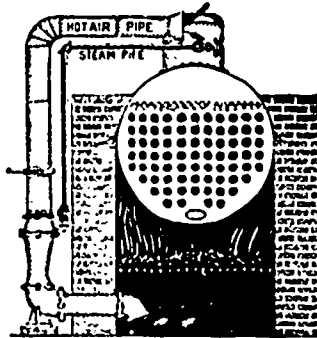
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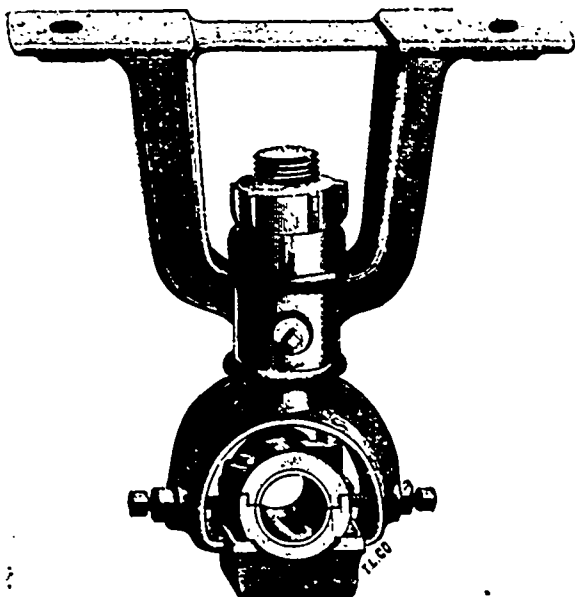
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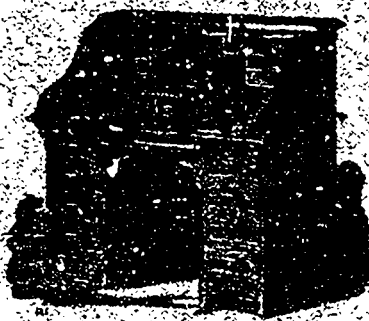
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