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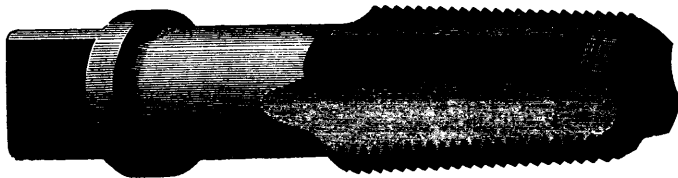
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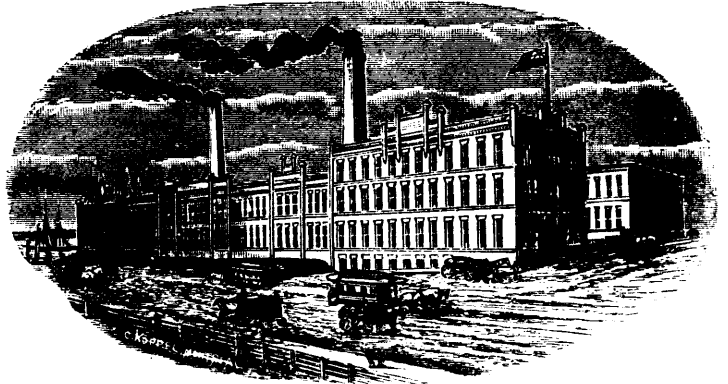
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ADVANTAGES:

The advantages of the BATTEN FIRE ESCAPE over all others are:

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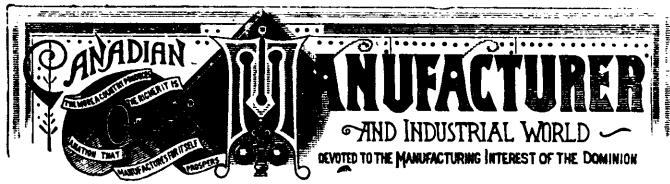
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THE MANUFACTURERS' ASSOCIATION MEDALS

THE committee on industrial design of the Canadian Manufacturers' Association met at the office of the CANADIAN MANUFACTURER on Oct 24th and made the following awards:

Carved panel for sideboard—Silver medal, Miss Mary K. Lewis, Yarmouth, N.S.; bronze medal, Miss Nellie Jeffrey, Toronto

Design for wall paper—Silver medal, Miss Nellie Jeffrey, Toronto; bronze medal, Miss Mabel M. Carey, Kingston, Ont.

Design for hearth rug—Silver medal, Mr. G. F. Stalker, Ottawa; bronze medal, Mr. C. H. Foss, Rochesterville, Ottawa.

Design for stained glass window—Silver medal, Mr. Gustav Hahn, Toronto.

Design for gasalier—Silver medal, Mr. G. F. Stalker, Ottawa; bronze medal, Mr. Gustav Hahn, Toronto.

Design for Association diploma—Silver medal, Mr. R. Holmes, Toronto; bronze medal, Miss A. E. Weaver, Ingersoll, Ont

Design for workman's cottage—Silver medal, Mr. George H. Hutchinson, Ottawa; bronze medal, Mr. C. H. Acton Bond, Toronto.

The Canadian Manufacturers' Association medal is an exceedingly handsome one. The obverse side represents a female with a scroll and crayon, discussing a drawing with a working artisan, beneath which is the legend "Arte et Labore." The reverse represents the Canadian maple leaf, surrounded with the inscription, "Canadian Manufacturers' Association," while engraved upon the periphery is the name of the successful competitor. These medals weigh over two ounces, the dies of which were engraved by Messrs. P. W. Ellis & Co., medalists, Toronto, who presented them to the Association.

AS TO PROTECTION.

"THE CANADIAN MANUFACTURER will not live to see the day that Protection will make Canada 'one of the greatest countries on the globe,' because that day will be indefinitely postponed

by the maintenance of protection. * * * And then what rubbish it is (for the CANADIAN MANUFACTURER) to say that Protection 'made Britain what she is.' The contrary is the fact. It was Free Trade that gave Britain her manufacturing and commercial supremacy. The editor of the MANUFACTURER must be deplorably ignorant of history, or he must be presuming on the ignorance of the readers of that journal, otherwise he would not dare to pen or publish such an absurd statement."—*Montreal Herald.*

Tray, Blanche and Sweetheart, little dogs and all, they bark at Protection. What has been and is may be repeated. Other countries have become great and prosperous under Protection, and we challenge the *Herald* to show why Canada, under similar favoring circumstances, may not become equally great and prosperous. The arrival of the day of that greatness will not be retarded or postponed because of the existence of a system that brought greatness and prosperity to other nations. The greatness and prosperity of the United States, previous to 1865, will not be disputed; but our contemporary will not deny that the enhancement of that greatness and prosperity since that time has been marvelous in the history of the world. At the acme of the ante-bellum prosperity of that country—just previous to the war of the Rebellion, and under the administration of Mr. James Buchanan—the financial condition there was such that the American Government was obliged to float a popular loan to raise money to carry on the ordinary affairs of the Government, and for this money the Government paid interest at the rate of twelve per cent. per annum. This was in time of peace, and under the operation of a tariff "for revenue only." Later, in 1865, that country found itself scarcely free from the clash of arms and the alarms of war, and the debt it had incurred in the suppression of the Rebellion and the maintenance of its Government had amounted to incredible proportions. The emergency called for statesmanship and financial ability of the highest order, and these requisites were forthcoming; and the man and the measure developed in Hon. Justin S. Morrill and his Protective Tariff bill. On the one hand was debt, threats of repudiation and national disgrace—on the other was the way out of the dilemma. Does our contemporary know the result? With her shipping swept from the high seas and her foreign commerce entirely obliterated, and with Britain in supreme control of the commerce of the world, the outlook of the United States was not very bright. The manufacturing industries of the country supplied but a small proportion of its requirements, and Britain was drawn upon for the balance. The production of pig iron was less than a million tons a year; of all kinds of steel but 15,000 tons, and of iron rails but 350,000 tons (for no steel rails were made in that country at that time). Two years later—in 1867—the price of imported steel rails was \$166 per ton, the consumption being 462,000 tons, of which only 2,277 tons were of domestic production. These are only a few specimen bricks from the Free Trade fabric as existing in the United States at the close of the war. At that time—in 1865—the production of pig iron in Britain, according to the Mineral Statistics Branch of the Home Department of the British Government, as compiled by Mr. Richard Meade, was only 4,825,000 tons. Per contra, under a Protective tariff much higher than that of Canada, the manufacture of pig iron in the United States now about equals that of Britain, and it is sold in Canada in competition with British iron, and at lower prices. How is that friend *Herald*,

for Protection? The greatness and prosperity of the United States were not "indefinitely postponed by the maintenance of Protection," as the *Herald* puts it, but were created by it; and what is true of that country may be equally true as to Canada.

And now as to the "rubbish" of the assertion that "Protection made Britain what she is." Waiving further notice of the undignified expression, and of the personal allusion to the "deplorably ignorant" editor of this journal, we suggest that the *Herald* read the history of the British Government for the past thousand years, and until but about two score years ago, regarding Protection in that country. As far back as the year 870 Britain enacted laws regulating the importation of merchandise from Germany. In 1431 she enacted laws prohibiting all importations of merchandise except in British ships. In 1504 she passed an act to regulate and restrict the importation of foreign-made silk goods, the statute as laid down in Henry VII., c. 21, prohibiting "all persons from bringing into the Realm to be sold, any manner of silk, wrought by itself or with any other stuff, in any place out of this Realm." In 1567 she prohibited the exportation of sheep, the punishment of the second offence being death. Some of the enactments of the British Parliament from 1559 to 1603 were as follows: Prohibiting the exportation of wool; restricting the coasting trade to British vessels; prohibiting the importation of minerals, finished leather, etc.; encouraging the immigration of skilled artisans, and the imposition of duties upon imported cloths. In the year 1700 the importation of calicos, chintzes and muslins was prohibited. In 1720 a law was passed imposing a fine of twenty pounds upon any person found wearing a printed calico dress; and a law made about that time, prohibiting the exportation of machinery for the manufacture of flax, was not repealed until the opening of all British ports to Free Trade in 1842. In 1646 the Parliament enacted a law prohibiting the exportation of the products of the American Colonies to foreign ports, except in British ships; and in 1731 an act prohibited the carrying into the said colonies the certain products of any foreign country, under penalty of forfeiture of both ship and cargo. Under the Commonwealth laws were passed encouraging the building of British ships. In 1719 Parliament declared "The erecting of manufactories in the colonies tend to lessen their dependence upon Great Britain;" and in 1732 the British Board of Trade, in a report to Parliament, noting the fact that "in New England, New York and Pennsylvania the people have fallen into the manufacture of woolen and linen cloths," said: "It is to be wished that some expedient might be fallen upon to direct their thoughts from undertakings of this nature; because these manufactures, in process of time, may be carried on in greater degree, unless an early stop be put to their progress. Moreover we find that certain trades and manufactures set up there are detrimental to the trade, navigation and manufactures of Great Britain." This suggestion and the petitions that were sent up from the British manufacturers, induced Parliament to pass an Act prohibiting the exportation from the Colonies of all such articles as interfered with the sale of similar articles manufactured in Britain. In 1750 an Act was passed prohibiting the erection in the colonies of mills for rolling iron, or works for the manufacture of steel, and any such establishments found there were to be declared nuisances and destroyed accordingly. By an

Order-in-Council made in 1763, it was decreed that the Cromwellian Navigation Act, which had been re-affirmed under Charles II., was to be vigorously enforced; and the enforcement of it, as stated by Edmund Burke in his speech in the Commons on American taxation, was "not only to tie, but to strangle the commerce of the Colonies."

Perhaps if the *Herald* will spend a few hours reading its history of the Mother Country, it will change its mind regarding our assertion that "Protection made Britain what she is" being "rubbish." As it now appears the "deplorable ignorance" remains with our Montreal contemporary.

ANOMALIES OF THE TARIFF.

A COMMUNICATION in a recent issue of this journal from "A Manufacturer" regarding some of the anomalies of the tariff, and an invitation to other manufacturers who might be in a similar situation to send a deputation to interview the Minister of Customs anent the matter, has given occasion for the Grit papers to do an immense amount of vaporous talking. They argue from the letter that manufacturers are writhing under the operations of our National Policy, and that they are wishing in their hearts that they were rid of it.

By reference to the letter in question, it will be seen that our correspondent does not attack the principles of the tariff, but some of the incongruities of it. He understands that the policy of the tariff is protection to Canadian manufacturers, and that when that policy fails to effect that object, or when it operates in the contrary direction, it should be modified. He understands that while the general operation of the tariff lies in this direction, it is but the work of the human brain, and therefore liable to develop imperfections. He does not expect perfection in the tariff, nor does he expect that all manufacturers will take just the same view of its imperfections as he does—that each of them shall feel the pinch of the adverse operation of it that he does. But for all this he does not see why, being a Protectionist *per se*, he should not endeavor to have the anomalies of the tariff removed or modified. And this he wants done by the friends of Protection, not its enemies. He does not want the sacrilegious hands of any enemy of Protection to lay its polluting touch upon it. He knows that those who have managed the destiny of Canada for the past ten years are still quite able to take excellent care of her interests; and he supposes, and very justly, too, that all that should be necessary to effect the desired reforms is to direct the attention of the authorities to the matter. In discussing this matter our correspondent does it as a friend of Protection; while the Grit papers which are doing so much mouthing over it, do so from no friendly standpoint, but solely with a desire to create among manufacturers and friends of Protection a feeling of distrust and dissatisfaction that they hope may ripen into revolt against a policy that they helped to establish, and which has done so much for them and for Canada.

Facts that our correspondent stated are certainly worthy of consideration. New discoveries in lines affecting Canadian manufacturing industries are being produced constantly. Manufacturers desiring to keep fully abreast with the times require the use of these productions, and on as reasonable terms as possible. Canada, yet a new country and not abounding in wealth, anxiously waiting for opportunities for investment in

every opening that presents itself, as is the case in many European countries, is willing and anxious to foster and encourage the manufacture of these things if it can possibly be done; and manufacturers are willing to wait a reasonable time to see if the home production will be proceeded with. If it is, or if it is strongly probable that it will be, well and good. But if the circumstances are such as to render it improbable that such industries will be established at home, then they think that the system of Protection does not apply. To tax the importation of such articles as cannot be produced in Canada is to establish a tariff "for revenue only," and that is contrary to the policy of Protection.

It is our opinion that the trouble complained of does not lie in the reduction or removal of the tariff generally, but in increasing it. It is not high enough; and for evidence of this we call attention to the Canadian tariff on pig iron, and the American tariff on that article. Our duty upon it is only \$4 per ton, and but a very small proportion of that which is required for domestic consumption is made in Canada. To remove that duty would not ensure an enlarged production, but would certainly instantly put out of blast the few furnaces we now have in operation. If that duty was largely increased—doubled—the result would be that blast furnaces would be built, the production of which would meet the demands of the country to very large extent, if not fully. In 1854, when the United States suffered from a purely revenue tariff, the average price of No. 1 anthracite foundry pig iron at Philadelphia, was \$36.75 per ton; but in 1878 the price there under the present protective tariff was but \$17 50 per ton. Now what caused this drop of over fifty per cent.? Protection. It cannot be claimed that the price of Scotch pig had similarly decreased in the same time, for, according to Fossick's History of the British Iron Trade, the price of that article in that country in the first named year, 1854, was 95 shillings sterling per ton, while in the latter year, 1878, the price was 55 shillings. In this latter instance the difference was only \$10 per ton, while the difference in the American iron was nearly twice as much.

What is said of pig iron will also apply to many other products; and if it is a fact, as the Grit journals and orators claim, that the present duty does not encourage the manufacturing industries in Canada to the extent and vigor promised for it by Sir Charles Tupper and the other advocates of our National Policy, the way to improve matters is not by reducing or removing the tariff, but by increasing it.

THE KNIGHTS OF LABOR COLLAPSE.

In his speech in Hamilton, Ont., on October 7th, Mr. T. V. Powderly, Grand Master Workman of the Knights of Labor, alluding to his Order, said:

"Four years ago the Convention of the Knights of Labor was held in this city, and since that date organized labor has occupied a more prominent place in the affairs of the country than ever before. Some things have occurred since that meeting which have reflected discredit upon the cause. The growth of the Order in the year following the Convention in Hamilton was too great to be healthy. When we met in this city we had 81,000 members; the following year, at the close of the Convention, held at Richmond, Va., we numbered 702,000. Then came a large defection. Large bodies of men joined the Order who endeavored to mould the assemblies to their ultra

radical purposes, and brought the whole labor body into disrepute. The Order is now composed of men who have the interests of the Order at heart, and the Knights are determined that never again shall any body, clique or ring gain any control over their actions."

Herein is contained an admission that illustrates the saying regarding the going up like a rocket and coming down like a stick. Three years ago the whole country was wondering what would be the lasting result and influence in the community of such a formidable power as over 700,000 men in one organization acting under the direction and dictation of such leaders as then headed the Knights of Labor. To-day people give themselves very little concern what the organization think, say or do, seeing that it is shorn of its strength to do more than foment discontent that occasionally breaks out into such foolish actions as the Galt strike. It is in a condition of hopeless collapse.

Mr. Powderly may be a pure-minded man, whose eye looks singly to the good of the class he represents, but it is evident that he became surrounded by advisers whose selfishness and corruptions had much to do with the disruption; and it is also evident that he will have to do considerable more pruning away of some who hold high positions in the Order before it can attain the conditions of purity that Mr. Powderly claims for it.

An American contemporary, the *Textile Record*, speaking of this broken labor organization, enquiring for an explanation of the collapse, says:

"The feeling excited by the selfish actions of some of the leaders no doubt had something to do with the loss of interest shown by the members. Men who worked hard and were ready to make heavy sacrifices for the cause looked with discontent upon leaders who drew heavy salaries while they sat in luxurious offices, ordering strikes which cost them nothing. But the selfishness thus displayed by the leaders probably only quickened the action of forces which in any event would have worked the ruin of the society. The chief of these was the conviction thrust upon the mind of every fair man in and out of the organization that its principles and its policy were violative of the requirements of justice. The society trampled upon the rights of the employer. It required of him that he should practically surrender control of his business to men employed by him, who in turn were controlled by persons with whom he had no connection of any kind. It assumed authority to fix wages, to say whom he should or should not hire and discharge; and even when he had complied with all the demands made upon him, it not infrequently compelled him to stop his machinery so that some less tractable employer could be coerced through the medium of a general strike. The society was equally unjust to the wage earner. It placed the skillful and industrious workman upon precisely the same level in the matter of wages with the bungler and loafer; it required him to take his money to maintain foolish strikes in other trades than his own, and it grossly oppressed the laborer who would not consent to submit to its tyranny. We recall the case of a woman in Delaware who was dismissed from a factory in which she was working because she was not a member of the Knights' organization, and who was then refused the privilege of membership when she applied for it. Thus she was actually denied the privilege of earning her bread by her labor.

"No organization conducted in such a manner as this can have permanence in a community composed of free people. It is nothing more nor less than an absolute despotism, and that kind of thing never was and never will be tamely submitted to unless there is physical force behind it. Decent and self-respectful workmen grew tired of being ordered about by ir-

responsible leaders, to whom they were paying good salaries; they wearied of humble submission to the insolence of "walking delegates" whose interests lay in fomenting disturbances; and they were disgusted at the unfair and harassing treatment to which their employers were subjected. If a large body of free American citizens had continued to yield obedience to such masters as controlled the organization there would have been good occasion for surprise and good reason for doubting if such men are indeed fit to exercise the powers of self government. That they threw off the yoke and asserted their independence by tens of thousands is one of the most hopeful of the signs which have appeared among the handicraftsmen of this country.

"Where the Knights failed no other organization can hope to succeed. The skill and effort which were required to bring this great society into existence will hardly again be exerted to accomplish a similar result with a certainty of ultimate failure. What Powderly and his co-workers could not do, other men, with equal talent, will hardly venture to try to do. That workmen should combine to help one another, and to maintain in a general way the cause of labor, is wholly commendable. But such combinations must act within certain clearly-defined limitations. They must confine themselves to giving help to those that are in trouble and to resisting attempts to oppress the worker. These things are legitimate and praiseworthy; but whenever such a combination goes so far as to attempt itself to engage in oppression it will provoke strenuous resistance, and it will certainly fail. It may protect its own rights, but it must not invade the rights of others. The employer has rights which are as much entitled to respect as those of the man who is employed, and public sentiment will not permit them to be trampled on by anybody. The place for the workingman to obtain justice for himself is at the polls, where he will find the body of the people ready to help him to obtain everything he ought to have."

TARIFF PERCENTAGES.

For the fiscal year ending 1887-88 the percentage of duty on the total value of goods imported into Canada for home consumption was 21.57. Taking the different countries from which the principal exports come, the figures show some surprising discrimination, as the following table will show:—

COUNTRY.	IMPORTS.	DUTY.	P. C.
Great Britain	39,298,721	8,972,739	23
United States	48,481,848	7,109,233	15
France	2,243,784	796,242	35
Germany	3,364,563	1,214,748	36
Japan	1,216,479	20,555	2
West Indies	3,268,663	1,831,367	58
Brazil	681,482	458,364	67
Belgium	488,743	117,228	24
Spain	374,932	171,790	46
Newfoundland	421,599	3,211	7
Holland	331,791	704,034	212
China	912,228	142,228	15

On an import of \$17 from the Argentine Republic, we paid a duty of \$14.76, or 81 per cent., and on an import of \$175 from Mexico we paid a duty of \$203.25, or 116 per cent. These are interesting comparisons and indicate how wonderful are the workings of a protective tariff.—*Montreal Herald*.

These tariff percentage arguments are fearfully and wonderfully constructed, and specially intended to carry awe and consternation into the strongholds of Protection. And then they show some "surprising discrimination" in favor of some and against other countries. Taking the averaged duty on importations of merchandise into Canada to be 21.57 per cent., as the *Herald*

states, reference to its table shows that the duty imposed upon importations from Britain, the average of which was 23 per cent., came nearer the general average than that upon importations from any other country. About every article of merchandise imported from Britain was dutiable; dutiable because the imports belonged to the more advanced and therefore more expensive classes of manufactures. On the other hand a large proportion of the imports from the United States were "raw materials," and as such admitted free of duty; and it was for this cause that there was a seeming "discrimination" in favor of that country and against Britain. The percentages as affecting importations from the United States and China were the same, although no similar articles were imported from these countries. Imports from Japan were taxed but two per cent., because but few articles coming from there can be manufactured in Canada, and it is against the policy of Protection to tax articles that it is evident we can never produce here. On the other hand the duty on the merchandise imported from Holland—consisting chiefly of jewels, precious stones, etc.—although not produced in Canada to any appreciable extent, are taxed very high because they are articles of luxury which only the wealthy, who alone can afford to use them, have to pay. The *Herald* cites one import from the Argentine Republic, valued at \$17, which paid a duty amounting to 81 per cent. on its value; and another import from Mexico valued at \$175, on which an *ad valorem* duty of 116 per cent. was levied. It should have shown that these two specific articles were luxuries that only the wealthy could afford, and this fact is suppressed by the suppression of the names of the two articles.

In reply to an enquiry regarding the matter, we are in receipt of the following letter from the Minister of Customs that explains itself. We commend the perusal of it to the *Toronto Mail*, which persistently puts the bounty paid to Canadian manufacturers of pig iron at a much higher figure:—

To the Editor of the CANADIAN MANUFACTURER:

SIR,—I have to inform you in reply to your enquiry that the bounty paid by the Dominion Government on pig iron manufactured in Canada from Canadian ore is one dollar per ton.

Yours, truly,

M. BOWELL.

WORKING WOMEN IN LARGE CITIES.

HON. CARROLL D. WRIGHT, the United States Commissioner of Labor, has sent us his fourth annual report, the subject of which is "Working Women in Large Cities." In this matter the object of Mr. Wright was to secure information relative to the condition of working women in a general sense, and, according to the introductory, "by working women is meant that class of women who earn their living in the occupations calling for manual labor. The professional and semi professional callings, like those of teaching, stenography, type-writing, telegraphy, etc., have not, as a rule, been recognized in the investigation, nor have women employed in textile factories been included, except incidentally." The latter not being included, because not as a rule located in large cities, and the special object of the investigation being to discover what cities have to offer women in the way of manual labor.

The study includes 343 distinct industries, and relates to twenty-two of the largest cities in the country. The total

number of women thus reported is 17,427, and is from six to seven per cent. of the whole number engaged in the classes of work under investigation.

The work of investigation has been carried on for the most by women employed for the purpose, and difficulties encountered may be realized from the fact that there is a reluctance on the part of working women to give the desired information, and it was only obtained by a personal interview with each of the 17,000 reported.

While the work is necessarily and undeniably incomplete, it is, nevertheless, of more or less value upon the subject, and throws considerable light upon the condition, circumstances and surroundings of that class of wage earners obliged to support themselves by manual labor.

A large portion of the work is given up to tabulated statistics, which cannot be noted at length or separately. The average weekly earnings in all the cities mentioned is put at \$5.24. The average lost time of those reporting is given as thirty six days per year.

As above mentioned, the work is very incomplete, as many of the more important industries are either entirely omitted or only incidentally noticed, and the number of workers reported shows but a small proportion of the whole number of working women employed in manual labor in the country. In order to have the report of full value, all these should be included, and would probably make a very different showing in the statistical tables. The subject is one of great interest and importance, when fully considered. There is probably no country where women are held in higher esteem, or their condition in life less difficult and degrading than there, still, notwithstanding our boasted progress and advanced civilization, the facts brought out by an investigation of this character go far toward showing that even in America woman's condition and surroundings, socially, morally and intellectually, are far from what they should be, and not in keeping with our nineteenth century ideas of civilization and morality.

EDITORIAL NOTES.

A LAW has been enacted by Chili, to take effect January 1st, 1890, abolishing import duties on machines and tools for use in agriculture, mining, trades and industries.

SOME of our St. Louis contemporaries may think we are doing a rash thing to offer to find a pair of Canadian snowshoes sufficiently large to fit the feet of a Chicago belle; but we can't take "back sass" from any Free Trader.

A COMPANY has been formed in London, Eng., for the purpose of erecting a tower in that city on the Eiffel plan. The tower is to be 1,250 feet high, and £500 is offered as a prize for the best design for the work, and £250 for the second best design. The competition is open to the world.

A FEW days ago the employés of the Toronto Brewing and Malting Company, this city, demanded that they should be allowed six pints of beer each daily while at work. They declared they would go out on strike if their request were not granted. They got the beer. It is awful how capital oppresses

labor, and how hard labor has to struggle to obtain and maintain its "rights"

At a recent interview of delegates from the Toronto Trades and Labor Council with the special committee of the City Council, anent the enactment of a scaffolding by law, Mr. John Armstrong, one of the delegates, not being satisfied with the slow haste being made in the matter, declared to the committee, "If you do not look out the Trades and Labor Council will have to come down and run the whole civic machinery."

THE Illinois Steel Company, of Chicago, announce that they possess a mine capable of producing tin ore in paying quantities, and that they will at once enter upon the construction of works for the development of the industry. The company believe in the feasibility of the enterprise to the extent of \$5,000,000, the amount they propose to put into it. Will our esteemed friend, the *American Artisan*, take notice of this fact?

EIGHT or nine years ago—about the time Mr. Garfield became President of the United States—the price for high grade plate glass at Pittsburgh, Pa., was \$2.25 per square foot. Now a very superior quality of the article is sold there at 80 cents per square foot. Up to about the time mentioned nearly all the plate glass used in that country was imported. Under protection plate glass works have sprung up in different parts of the country, with the result as shown. Protection is a great thing where the production of plate glass is concerned.

At the rate of gain shown during the last three years in the manufacture of pig iron in the United States, within the next five years that country will make more pig iron than any other country in the world. If the production now going on there should cover the entire year, the total output will reach 7,900,000 tons. As it is, the total output for 1889 will certainly reach 7,750,000 tons, or about 1,300,000 tons more than in 1888. And this, too, in the face of a protective duty of \$6 per ton, which is fifty per cent. higher than the Canadian duty on pig iron.

For the fourth time in five years and the second time this year, pending a strike conducted by D. A. 49, K. of L., of New York, dynamite has been resorted to; and as yet none of the dynamiters have been convicted. The last occasion was on Oct. 3rd, when Scanlan's slaughter house and wool-pulling establishment in that city, was wrecked by dynamite. The Scanlan's place has been boycotted by the Edison association of wool pullers and members of D. A. 49, K. of L., since February last. The new men went out on strike then, and the Scanlans have since refused to treat with them. Time bombs have been used in all the explosions that have occurred in 49's boycotts.

It is highly desirable that the manufacture of pig iron in Ontario should be encouraged. At present there are only two points in Canada where pig iron is made from the ore—Londonderry, N.S., and Three Rivers, P.Q. The establishment of furnaces certainly places the iron industry on the proper basis.

As long as the rolling mills are in a position of dependence upon imported scrap iron the industry cannot be considered in a healthy, sound condition. It is subject to the rise and fall of foreign markets, to short supplies and to revisions of the tariff. Iron should be produced in Canada of as good a quality and as cheaply as in any country, and when that is done the hundred and one industries depending on it will gradually grow and increase.—*Toronto World*.

THE Dominion Government have just issued a final statement of revenue and expenditure for the fiscal year ending with June 30, 1889. The following is the statement:

Revenue—	
Customs.....	\$23,727,258
Excise.....	6,858,560
Post-office.....	2,220,504
Public Works (including railways).....	3,642,707
Miscellaneous.....	2,323,516
<hr/>	<hr/>
Total.....	\$38,772,545
Expenditure.....	\$36,845,031

Showing a surplus of \$1,927,514.

This encouraging statement is capped by the announcement that the net debt of the Dominion, during September, was reduced \$2,403,384.

A WRITER in THE CANADIAN MANUFACTURER complains that the Factory Acts have been passed without any consultation with the manufacturers. This was unfair, of course. But think of all the tariff bills that have been passed in the interest of certain manufacturers without any consultation with the consumers.—*Toronto Globe*.

This is unfair, of course, but to be expected from the *Globe*. It is unfair for legislatures to pass factory acts at the dictation of labor organizations, without consultation with manufacturers whose business is injuriously affected by them. But the *Globe* is badly mistaken in saying that "all the tariff bills have been passed without consultation with the consumers." The "consumers" are the ones who elected the Parliaments that passed the tariff bills, and they will continue to elect just that sort of men.

THIS time it is at Victoria, B.C. A few days ago the union moulders employed at the Albion Iron Works, in that city, about twenty-five men in all, went out on strike. The trouble had its origin in the proprietors refusing to discharge an old and trusted employé who could not be induced to join the moulders' union. There was nothing besides this that could be said against the man. He was honest, competent, trustworthy and contented. He wanted to work and the proprietors wanted him to work. But he considered that there was no necessity for him to join the union, and he was opposed to tradesunionism on principle. The union moulders had tolerated the presence of this man among them for a long time, but the jawsmiths and mischief-makers of the union persuaded the men that it was undignified for them to longer work in a shop with a non-union man, hence the strike.

THE trip to Japan from the eastern cities of the United States *via* Vancouver, B.C., is somewhat shorter than the journey between the same points *via* San Francisco. The rates of freight are apparently much the same, yet in the past

tea season the Canadian Pacific steamers carried 5,357,944 pounds of Japan tea, against only 735,265 pounds carried by their American rivals, and the curious circumstance is that more than nine-tenths of this tea is consumed in the United States. Not in tea only, but in all other goods, is the preference given to the Canadian line, which now carries a large part of the transcontinental traffic, as well as that destined for the United States. The secret probably lies in the fact that the Canadian Pacific Railroad is able to offer better transcontinental freight rates than the American lines with which it competes, without the trammels of an Inter-State Commerce law.—*Australasian and South American*.

A GENTLEMAN who is largely interested in the proposed Canadian Atlantic cable, recently returned from England, reports that he found English capitalists so well disposed towards the scheme that he had no difficulty in putting it into practicable shape. The cable will start near Clew Bay, Ireland, and touch Canadian soil at Greenly Island, off Nova Scotia, a distance of 1,900 miles. Construction will be commenced next year. A firm of well-known London cable manufacturers have engaged to make the cable, lay, and guarantee it, for \$1,500,000. The cheapest cable that has yet been laid is the Commercial cable, and that cost \$4,000,000 to make and lay. The cable will be laid 150 miles north of the most northerly of the present cables, namely, the Anglo-American. The prospectus of the company declares that the new line can afford to send messages cheaper than any of the existing lines.

THE *American Artisan*, in its desire to depreciate the manufacture of tinplates in the United States, speaks lightly of the Black Hills tin mines in that country. It says, "New tin and tinplate enterprises will bear careful watching." Perhaps so. We have been informed that merchantable quantities of tin have been smelted in Chicago from ore taken from the Black Hills, and, in the hands of those who are managing the enterprise, there is no reason to doubt the successful production of tinplates in the works now being erected at Pittsburgh, Pa. The success of this latter enterprise, however, does not depend upon tin being found in paying quantities in the United States. It depends upon the protection that may be afforded it by the tariff. A sufficiently high duty will ensure the establishment of enough tinplate works in the United States to supply all the demand for tinplates.

SPEAKING of the canal system of Canada and its advantages to the mercantile interests of the country, and particularly of the Cornwall Canal, the Cornwall, Ont., *Standard* says:

"We of the present day can hardly realize that there was a time when it actually paid to smuggle salt into Upper Canada. But in the early days of the Talbot settlement eighteen bushels of wheat were required to pay for one bushel of salt—first, because of the difficulties in conveying the wheat to a market; and, second, because of the cost of conveying the salt to the consumer. In the same region a barrel of salt could now be bought for twenty cents. In 1827 the price of a yard of cotton was one bushel of wheat in Western Ontario. In 1833 the farmer could purchase six yards of cotton with one

bushel of wheat. To day he could probably obtain from twelve to fourteen yards for one bushel. In 1844 the tolls on a bushel of wheat going through the Welland and St. Lawrence canals amounted to eight cents. In 1828 the cost of freight of a ton of merchandise from Montreal to Lake Erie was \$26.70, and from Lake Erie to Montreal, \$14.30. In 1832 it was from Montreal to Lake Erie \$19.50. In 1847 it was \$3 per ton."

ALLUSION is made in another place to the financial condition of the Dominion. For the fiscal year ending June 30, the surplus of receipts over expenditures amounted to \$1,927,514, the total receipts being \$38,772,545. The total expenditure of the year reached \$36,845,031. The improvement shown by the statement gives fair promise of being continuous, the returns for the first quarter of the current fiscal year being of the most encouraging character. The revenue for the past three months aggregates \$9,909,691, as compared with a revenue of \$9,527,644 in the corresponding period last year, showing the substantial increase of \$382,047. On the other hand, the expenditure for the first quarter of the current year has been \$5,545,086, against \$6,769,135, in the corresponding period of last year, a decrease of \$1,224,049, a very gratifying result. The surplus of the year to date is, therefore, no less than \$4,364,605, while for the same period last year the surplus was only \$2,758,509. The reduction in the public debt during September amounted to \$2,403,384.

MR. BRUMELL'S official report on mining shows that 1,155 men were employed in making iron and steel in Canada in 1888. Mr. Brumell states that the estimates are incomplete. The incompleteness, however, will hardly account for

The difference between..... 1,155
And Sir Charles Tupper's estimate of..... 20,000

Which difference is..... 18,845

It is only fair to add that from present indications Sir Charles' figure will be reached about the year 1987.—*Toronto Globe*.

This is supposed to be sarcasm aimed at the N.P. When Sir Charles Tupper estimated that 20,000 men would become engaged in the iron manufacturing industry in Canada, it was on the supposition that the duty he proposed imposing on importations of pig iron would be high enough to nurse the infant industry into robust vigor. Sir Charles over-estimated the prospect. If he had only looked across the line to the south of us, he would have discovered that our American neighbors could not manufacture pig iron under as low a tariff as he proposed for Canada. If he had modelled his iron tariff on American lines the pig iron industry in Canada would not to-day be in the deplorable condition in which it is.

SOME of the New England owners of fishing vessels are beginning to ask what is to be done next toward establishing permanent business conditions as between them and the people of the Canadian Provinces. The *modus vivendi* of the past two years terminates with the present season. Under the existing arrangements many, if not most, of the American fishermen have taken out Canadian licenses, and thus escaped

difficulties in the Canadian waters during the past two summers. Among those who have thus saved themselves from trouble and expense have been some of the more outspoken opponents of the fishery treaty which was negotiated by the last administration, an important result of which was the temporary arrangement under which their business has been prosecuted of late. For successful voyages in one or two of the leading branches of the fishing industry, opportunity to get bait without delay or molestation is important, if not indispensable. The prevailing opinion is that action toward the prolongation of the present arrangement, or a permanent settlement of the controversy, must now come from the United States. Having rejected one treaty, it will apparently devolve upon this country to propose something else, unless things are to drift in a way to give rise to inevitable complications and mutual offence.—*Bradstreet's*.

SAYS the CANADIAN MANUFACTURER :

"The establishment of a tinplate works at Pittsburgh, Pa., is a fixed fact. A suitable location has been secured, and it is expected that the works will be in operation within a year. This means that the United States duty on tinplates is to be increased to at least two cents a pound"

What our Canadian exchange doesn't know about coming alterations in the tariff would fill quite a book—a very big book. There are people on our own side the border who claim to hear already the "tintinabulations of the bells" that shall ring the instrument out of existence forever and a day. But, *nous verrons*.—*American Artisan*.

If our Chicago contemporary intends to intimate that the American tariff is to be rung "out of existence," our opinion of it and those who thus interpret the "tintinabulations" is that they are very much mistaken in the meaning of the election of a year ago in that country. The re-election of Mr. Cleveland would not have been the signal for the erection of any tinplate works in the United States. From our Canadian standpoint we cannot set up any claim to any certain knowledge regarding any alterations to be made in the American tariff, but we will venture to wager a bet of a pair of largest size Canadian snow-shoes (to fit the feet of the daintiest Chicago belle), that changes in that tariff will be made in the interests of protection to American manufacturers.

THERE is now no doubt but that Canada is to have another stack of tall chimneys added to her manufacturing industries, in an extensive shipbuilding works to be erected by the John Doty Engine Company, of Toronto, at Collingwood, Ont. The commerce of the great lakes is growing with marvellous rapidity, and the supply of bottoms for the carrying trade on them is not equal to the demand. The trade between American ports is supplied with bottoms built in that country; and it is a fact that the aggregate tonnage of bottoms built in the shipyards of American lake ports is largely in excess of the aggregate of all the rest of the country. Canada, of course, shares in the traffic of these immense inland seas, and that traffic is also increasing with remarkable and gratifying rapidity; and the demand for Canadian bottoms of a different class from that which has heretofore had almost undisputed control

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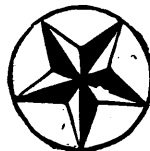
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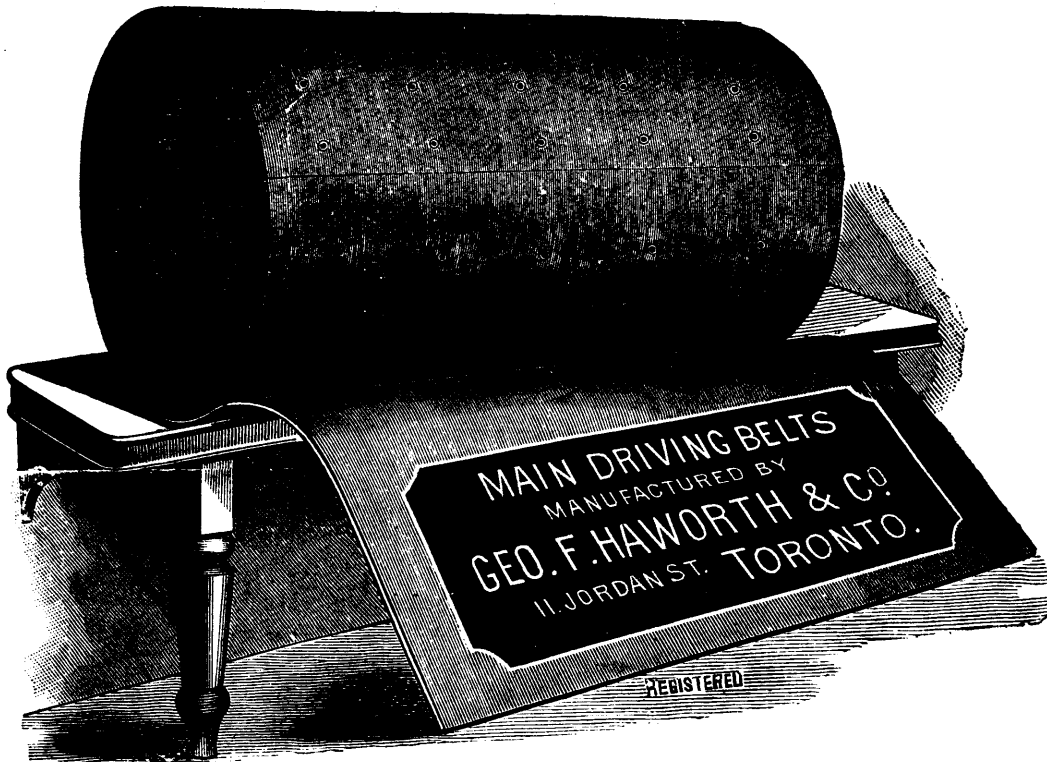
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of the business is eventuating in the establishment of extensive iron and steel shipbuilding works of the character of that which the Doty Engine Works Company are now about erecting. The company engage in this branch of business under the most favorable auspices. They have an abundance of capital behind them, and they will start out with the certainty of building as many as sixteen steamers. This is a good beginning and a remarkably fine prospect. A complete plant of machinery, etc., has already been ordered from Glasgow, Scotland, which will be on the ground at Collingwood as soon as the buildings and premises are ready to receive it.

AN incident occurred during the Galt strike which well illustrates the pernicious ideas promulgated by Trades Unions. A man having the appearance of a mechanic a little under the weather, who was trudging along the country road leading to the village of Clyde, inquired of a person whom he met if he was on the way to Guelph. He had gone astray somewhat, and after receiving the proper information, he remarked that he was a moulder in search of employment. The other man said, "Why, you are just walking away from Galt, where moulders are wanted." "Yes," replied the man, "I know that. I worked there a couple of days, but I came to the conclusion that the strikers were in the right, and so quit." "How can they be right," said the other. "You don't mean that one man is as good a workman as another, or that all should be paid the same wages no matter how much or little they can do." "Yes, I do." "But some men can do more and better work than others." "That makes no difference. Doesn't the Bible say that the man who worked an hour got as much as those who toiled in the heat and burden of the day," and saying this the moulder marched away, leaving the other man, who was a staunch Presbyterian, to ponder over the strange socialistic uses to which even the Bible can be put. That wandering moulder should be made a member of the Labor Commission at \$6 per day, and hotel and railway bills paid, or be promoted to a position in the Bureau of Statistics alongside of the O'Donoghue.

WOMEN complain that their wages for the same work is not equal to that paid to men. The occupations to which they can devote their time are limited in number, and the result is that there is more than an abundance of female labor in nearly all departments, excepting, may be, that of household help, which has become unpopular with the sex. There are signs of marked improvement, however. Take, for instance, the art of dressmaking. We were given the name of the head dressmaker, or *modiste*, of a leading dry goods establishment in an Ontario city, who received \$1,200 per annum; of another who was paid \$700 the first year and a promise of an annual rise. We know of a dressmaker from a country town who declined a situation unless paid \$750 per annum, and from the same town one has just removed to an adjacent city, whose salary is to be \$600 per annum, her assistant to receive \$400 per annum. Thus much for the ladies who are mistresses of the art of dressmaking. It is doubtful if even tailors are much better paid. The salaries of the presiding divinities in the millinery department of city dry goods stores are understood to reach up to \$750, and in larger towns \$500 and \$600 are common figures. Hat and

cap makers cannot do much better. Female operatives in knitting mills earn from \$1 to \$1.25 per day. Ordinary workmen, in the same business, do not earn much more. Schoolmarm complain, and with no little degree of justice, that their remuneration is not in proportion to the work done, even where they equal, and even excel men, which they do in the instruction and management of pupils, at least up to the age of ten years—the Trades and Labor Council and Knights of Labor to the contrary, notwithstanding. The jaw-smiths of these organizations have not had experience in educational matters, or they would not have commenced a crusade against the employment of female teachers. When women make themselves felt in the higher occupations, such as medicine and art, as they are beginning to do, the march of improvement in the matter of pay will have commenced in earnest.

A FEW days ago an exhibition car of the Canadian Pacific Railway Company was in Toronto, the intention being to take it to a number of desirable points in Canada, and afterwards in a tour through Michigan, Wisconsin and Minnesota. It is richly stored with specimens of the agricultural and mineral wealth of the great Canadian North-west, including British Columbia. The external appearance of the car is very attractive, and inside the arrangement is quite artistic. Over the door at one end is the great head of a bison, facing at the other extremity the head of a boar. All descriptions of magnificent straw, dried grasses, etc., disposed of to the greatest advantage in respect to display, cover the sides and the roof of the car, and make a most effective decoration. There may be seen the red fife straw, white fife, white Russian, Azoff Ladoga, Quebanca and other varieties grown along the line of the C.P.R. from Winnipeg to Calgary, and along the south-western branch. There are about thirty magnificent varieties in oats, including white Norway, black Tartarian and white Russian. There are fifty-eight varieties of native grasses, besides cultivated grasses, such as English timothy. To get an idea of the luxuriant growth of these, one requires to see them. Many of them even in their dried condition, are very beautiful, but their nutritious qualities are most regarded. The car is divided into four sections—Assiniboia, Alberta, Manitoba and British Columbia. Each district, in respect to grain cultivation, is represented by a hundred samples. Wheat, barley, oats, peas, vetches and other products shown are all of the finest quality. There are specimens of the two, four and six rowed barley, and what is a novelty, even among farmers, black barley, of which there is a splendid sample. There are seventy-two varieties of British Columbia fruit, besides vegetable marrows, turnips and potatoes, and the Pacific coast province also is represented by twenty three samples of natural grasses, samples of cedar and pine wood, and a maple leaf frame in a glass case which measures—the leaf, not the frame—21½ inches in diameter. Among the other exhibits are minerals in silver and gold quartz from the north shore of Lake Superior; coal from Anthracites, 85 miles west of Calgary; red sandstone from Lake Superior, and bricks from Vancouver and Banff. Hung round the sides of the car are views of British Columbia and the North-west and to represent borders between the sides and roof are strings of rare mosses and artificial flowers colored to show the dyes in the forest leaves.

SPECIAL ADVERTISEMENTS.

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

200 LIGHT GAS MACHINE for sale, only used two winters. Apply Wagner, Zeidler & Co., West Toronto Junction.

TISDALE'S BRANTFORD IRON STABLE FITTINGS.—We lose no job we can figure upon. Catalogue sent free. The B. G. Tisdale Co., Brantford, Canada.

IRON TURNING LATHE—12 inch over sheens, 20 inches in gap, 6-foot bed, in good order—for sale or exchange for small shaper. Standard Needle Co., Paris.

I WILL give a free deed of ten lots on the Scugog River to anyone who will start a manufacturing establishment employing a certain number of hands. A. D. MALLON, Lindsay, Ont.

BISCUIT FACTORY FOR SALE IN KINGSTON.—Including land, buildings and machinery, at \$5,000; going concern; good business; fully equipped. Apply to Macdonnell & Mudie, Kingston, Ont.

FLOUR MILL FOR SALE.—One of the best Water Powers on the Welland Canal. Could be converted for other manufacturing purposes. Address Richard Wood, St. Catharines, Ont. P. O. Box, 977.

FACTORY TO LET.—About eleven thousand square feet floor space, with engine, boilers, shafting and hangers; steam water and gas fittings complete. Apply SAMUEL MAY & Co., 111 Adelaide street west.

AS DYER—Blue vats and fancy colors in wool and piece. Fast carriage green cloths, tricots, flannels, etc., etc. Am at present engaged in the States, but desirous of coming to Canada. Address, GUBELINUS, this paper.

FOR SALE—at Merrickville, Ont., within five minutes' walk of the C.P.R. station or the Rideau canal wharf, a first-class Water-Power with substantial buildings suitable for roller mill or other heavy machinery. Apply to MRS. M. P. MERRICK, Merrickville, Ont.

FOR SALE.—The Wilkinson Plough Co. (Lim.), of Aurora, Ont., are moving to West Toronto Junction about the 1st January next, and offer their works at Aurora for sale or exchange. They are large, complete works, and have a capacity of from forty to fifty ploughs a day. Apply either to Aurora or to their temporary offices, 19 Wellington street east, Toronto.

FOUNDRY AND MACHINE SHOP FOR SALE IN DUNDAS—Formerly occupied by Thomas Wilson and Co., and lately by Cochrane Roller Mill Co., very suitable for manufacturing purposes; steam engine, boiler (new), also water power; a

quantity of machinery and shafting in building. Apply to Thomas Wilson, Dundas; Kingsmill, Cattanach & Symons, Toronto; or Bruce, Burton & Bruce, Hamilton.

THE ship *William Renton* has just taken a cargo of rough and dressed lumber from the Royal City Planing Mills, New Westminster, B.C., for Adelaide, Australia. Arrangements have also been made whereby another ship will also load. The mills have been running night and day for some time past.

A VERY useful electrical invention, tending to lessen the possibility of accidents in factories, is now being extensively adopted in Leeds. The breaking of a small pane of glass, which is adjusted against the wall of every room in the mill, will at once stop the engine, an electric current being established between the room and the engine's throttle valve, shutting off steam in an instant. By this means the engine was stopped at a mill in New Wortley in a few seconds, when a girl had got her clothes entangled in an upright shaft, and she was not hurt.

THE *National Magazine* for November will contain among other articles, "Comparative Philology," by Professor Schele de Vere, Ph.D., J.U.D. of the University of Virginia; "Political Science," by Professor Raymond Mayo Smith, A.M., of Columbia College, and "Shakespeare," by F. W. Harkins, Ph.D., Chancellor of the new National University of Chicago, whose instruction by mail and University Extension System for non-residents, now meeting with such favor, will also be explained in this number. In future numbers will appear a Symposium comprising articles by prominent scholars and statesmen giving their opinions on leading questions, such as "Darwin's Theory," "The Chinese Question," "Socialism," and "Should Immigration be Restricted?" Published the first of each month, at 147 Throop street, Chicago. Subscription price \$1 a year. Sample copy 10 cents.

Outing for November has for its leading article, "A Winter's Sport in Florida," by O. A. Mygatt. It is richly illustrated with wood cuts and reproductions from photographs. Other principal articles are "Whaling," by Herbert L. Aldrich, with numerous illustrations; "Our Four-Footed Friends," by Borderer, also handsomely illustrated; "The Orange Athletic Club," with views of the club house, etc. The novel by Captain Hawley Smart, the second instalment of which appears in this number of *Outing*, becomes more interesting. Other articles are "Lobsters and Lobster Pots," "Crankslinger Skaddle Rides Back to his Youth," a cycling story by President Bates; "Squirrel Hunting," and the hunting story, "Over Rag Wheel Mountain," "Reconsideration" and "I go a' Fishing," are poems of much merit. The editorial departments are bright and attractive, and the records give a faithful resumé of the achievements of our athletes.

It always seems as if *Good Housekeeping* grows better as the winter draws near. At any rate the number for October 26th is an extra good one. A splendid Amateur Entertainment is described by Mrs. Isabella Laning Candee in "The Carnival of Authors." It is worth trying. "Simplicity in the Home" is a short but very good paper by Abby M. Gannett. Helen Frances Bates furnishes a graphic account of "Keeping House in Arizona." Katherine Taylor finishes her valuable series on "Painting on China." The first instalment is given of a most interesting story, "Wash Ladies," by S. E. Boggs. Content Greenleaf has a fine paper on "Our Every-Day Fruit," which is soon found to be the apple, and gives excellent recipes for its use. These are some of the samples only. There is much more as good and perhaps better, and the general departments are full and good. Volume X. of *Good Housekeeping* commences November 9th, 1889, and Volume XI. commences May 10th, 1890, making two volumes a year, each containing thirteen numbers—a baker's dozen—one more number to each volume than a monthly magazine gives in a year. \$1.25 a volume, \$2.50 a year.

RE TARIFF REVISION.

To the Editor of the CANADIAN MANUFACTURER.

SIR.—I have to thank you for cuttings from the *Toronto Globe* of Oct. 21st, and from the *London, (Ont.) Advertiser* of Oct. 17th.

With your permission I would like to, in some measure, answer the remarks made therein anent my letter published in your journal, and which dealt with the anomalies of the tariff.

The *Globe* endeavors, by a process only too common in American journalism, to make a political hit by withholding the sense of my letter, whilst comparing two extracts therefrom.

I can quite understand how a daily paper, even with the best of intentions, could easily get muddled whilst discussing a purely technical industrial question. It would be better for such a paper to leave these matters to those who make them a study, such as the editors of trade papers.

But, whilst a man may be forgiven who in the excess of his zeal for the public, enters into questions he does not understand, and consequently gets muddled, the man who purposely makes a misrepresentation to secure some end he has in view, can only be considered with the contempt which should be awarded to those who do not tell the truth and the whole truth.

I would repeat here that in my opinion the National Policy is a system which is building up Canada and making it one of the greatest countries in the world. I would add that I believe it is doing this in spite of the fact that the tariff instituted as a consequence of this policy, has not always been intelligently carried out by the officials responsible for its working.

I would further add that I believe it is doing this in spite of a certain clique who do all in their power, even stooping to means unworthy of any man who may boast being a citizen of a country that vaunts its education and religion, to belittle the country and the country's great possibilities.

The question of Protection and Free Trade is no new thing to me. I believe in Free Trade for England, because I am of opinion that it is the only possible course open to the Old Country. But what is one man's meat may be another man's poison. The same line of argument that convinces my mind that Free Trade is best for England, convinces me that the National Policy intelligently carried out is the best for Canada. And when I say for Canada, I mean for Canada as a whole—not for the Canadian industries only, but for working people and for the farmers also.

To condemn a whole policy because certain matters, the outcome of that policy, are not and have not been intelligently carried out, is neither just nor reasonable. As well condemn the whole Canadian press because certain members of it are constantly guilty of the sin of Ananias. As well condemn the whole system of corporate government because certain city corporations have been notorious for the betrayal of the trusts placed in them by the citizens. As well condemn the healthy pastime of boating because, if report be true, in a certain city the houses built to shelter the boats are sometimes also employed for very improper purposes.

The London (Ont.) *Advertiser* has in some measure understood the spirit of my letter. It has evidently tried to grasp the points I mentioned in a fair and judicial spirit. It, however, states that I "ought to be prepared to submit to any duty, whether it works to my own hurt or not, so long as industries are established."

In the first place I have not objected, nor do I object, to the imposition of any fair and reasonable duty upon any article used by me which is being made in this country. What I have objected to, and do strongly object to, is paying duties upon articles not made and which cannot be made in this country to advantage for years to come; and to paying duties upon articles which are not made in this country, but which could be made here, were there any one with capital and knowledge to undertake the manufacture. I object to paying duty upon these until such time as some one commences to manufacture them. Being protected myself, I am willing to grant protection to any other industry; but as the protection granted me is limited, I am only willing to grant a limited protection to others. But I am of opinion that each case should be considered on its own merits many matters having to be taken into consideration the enumeration of which would be out of place in this letter.

I do not see why the few men who have had brains enough to make money, and the many who have lost their all, or are about to do so, need be dragged into this question. Any man who has made money in working an industry in Canada, has had to work for his money. Gainers and losers are to be found in all countries in the world. The mad folly of granting bonuses to men of straw, in order to enable them to erect industrial concerns all over the country, has prevented the possibility of great fortunes being made, though it has made it possible to lose a good deal of money, (advanced by people who thought that a business could be built up in a few months, and could be managed with success by men with little or no knowledge in that special business.) My aim in writing the letter was to secure if possible an intelligent discussion of the tariff question, so that errors might perchance be rectified. I regret that in one instance it has been so misrepresented as to enable a paper which should be above such tricks to attempt to give a political hit below the belt. I am yours truly,

A MANUFACTURER.

Manufacturing.

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

THE Oriental Shade and Tarpaulin Company, Toronto, has been incorporated with \$25,000 capital stock.

THE new burial casket factory at Thorold, Ont., is nearing completion, and will soon be in full operation.

THE No. 2 Mill of the Penman Manufacturing Company, Paris, Ont., has recently been undergoing repairs.

MR. WM. PEARSON'S woolen mills, at Singhampton, Ont., were destroyed by fire Oct. 26; loss, about \$3,000.

MR. JAMES GARDINER'S sorghum factory at Blenheim, Ont., was destroyed by fire, Oct. 18; loss about \$2,000.

THE Kingston Hosiery Company, Kingston, Ont., have declared a dividend of five per cent. for the past half year.

THE furniture factory of Messrs. James Bros., Trenton, Ont., was destroyed by fire, Oct. 17th; loss, about \$3,000.

THE Canada Lumber Cutting Company, whose works are at Belleville, Ont., will remove the same to Trenton, Ont.

THE pump factory of Messrs. Spencer & Sebring, at Simcoe, Ont., was destroyed by fire, Oct. 27; loss, about \$2,500.

THE Gananoque Electric Light and Water Company, Gananoque, Ont., has been incorporated with \$40,000 capital stock.

THE new paper mill about being erected at Victoria, B.C., will manufacture paper pulp for the China and Japan markets.

MR. WILLIAM DRAPER, cooper, of Thamesville, Ont., has manufactured over 16,000 apple barrels during the current season.

MESSRS. LEE & Snyder, who have a saw mill at Goldstream, near Victoria, B.C., will establish a sash and door factory at Victoria.

THE Tabor Felt Boot Company, of Fredonia, N.Y., contemplate starting a branch of their works in Canada, probably in Galt, Ont.

In the city of Quebec there are, according to the *Quebec Chronicle*, thirty-four tanneries and twenty-eight boot and shoe factories.

THE Laurie Spool Company, of Montreal, has been incorporated with \$15,000 capital for the manufacture of spools, bobbins, woodenware, etc.

THE Standard Drain Pipe Company, St. John, Que., are now manufacturing tombstones, the material being practically indestructible.

THE Pictou Iron Foundry Company, Pictou, N.S., are repairing and enlarging their works. They will give employment to about fifty hands.

THE Waterous Engine Works Company, Brantford, Ont., have recently supplied one of their steam fire engines to the town of Bobcaygeon, Ont.

MESSRS. J. D. SIBBALD & Co., of Regina, N.W.T., hold the contract for building the Indian Department grist mill at Carlton, Saskatchewan.

THE mica mining industry is being vigorously pushed by different firms at Sydenham. Factories are being opened to prepare the mica for the markets.

MESSRS. KING BROS., Whitby, Ont., are about doubling the capacity of their large tannery, and a scheme of assistance from the town is being considered.

THE North American Glass Company, Montreal, have recently made some important improvements at their works. Their old furnace now includes 22 pots.

MESSRS. BINGHAM & WEBBER, Toronto, inform us that they have now in hand contracts amounting to over \$6,000 for high-class artistic catalogue printing.

MESSRS. DOBBIE & STUART, foundrymen, Thorold, Ont., are building a new foundry of white stone, 80 x 34 feet. This is to replace the one recently destroyed by fire.

THE Vancouver Street Railway Company, Vancouver, B. C., have decided to adopt electricity as the motive power for the propulsion of its cars on the line now building.

THE extensive woolen mills of Mr. A. W. Brodie, at Hespeler, Ont., have been equipped with the necessary appliances and are now lighted with electricity throughout.

THE Eastern Townships Corset Company, Sherbrooke, Que., propose enlarging their works, and are asking that town to bonus them to the extent of \$10,000 for that purpose.

A PROCESS has been patented in Germany for making fire-bricks by compressing in moulds an intimate mixture of 75 per cent. of asbestos and 25 per cent. of plastic refractory clay.

MR. R. P. SUTTON, of Toronto, has been awarded the contract for the harbour work at Owen Sound being done by the Dominion Government. The contract is worth about \$40,000.

MESSRS. VIVIAN BROS., of Swansea, Wales, are preparing to put up extensive smelting works at Sudbury, Ont., where they are now doing considerable mining of copper and nickel ores.

MR. RICHARD DIXON, who was the first to begin the manufacture in Canada of spring needles for knitting machines, is managing the works of the Standard Needle Company, Paris, Ont.

THE Ball Electric Light Company, Toronto, will install an electric light plant in Whitby, Ont. There will be twenty lamps of 1,000 candle power each, and the contract is for three years.

THE Wm. Hamilton Manufacturing Company, Peterboro', Ont., a few days ago shipped three car-loads of mill machinery to the Victoria Lumber Manufacturing Company, of Chemais, B. C.

ARRANGEMENTS are being made to put the Berthier beet sugar factory, at Berthier, Que., in full operation next season. This means that large areas of land are to be planted for this crop.

A TRACT of land in Essex county, Ont., upon which is about ten million feet of hardwood lumber, within twenty-five miles of Detroit, Mich., has recently been purchased by parties in that city.

THE new firm of Hess Bros. & Co., of Listowel, Ont., have begun operations in their chair and cabinet factory, giving employment to about sixty hands, which number will soon be increased to 150 or more.

MR. J. H. STILL, St Thomas, Ont., has received an initial order for 400,000 umbrella and parasol handles for the English market. These are made from hard maple, and the demand is practically unlimited.

MESSRS. G. J. HAMILTON & SONS, Pictou, N.S., have commenced the erection of their new biscuit factory. It will be a four story and basement building 80x58 feet. They will give employment to about 100 hands.

ACTIVE operations have been commenced on the additions to the works of the McClary Manufacturing Company. A large force of men are at work, and things are being pushed ahead at a lively rate. —London, Ont., *Advertiser*.

MESSRS. HEES, ANDERSON & Co., Toronto, and Mr. Herman Force, of Askawana, N. Y., will establish an oil cloth factory in this city. Mr. Force will have charge of the factory, which will at the first give employment to about fifty hands.

THE McClary Manufacturing Company, London, Ont., will rebuild that part of their works destroyed by fire some months ago, and additional stories are to be added to their main building. This will considerably increase their capacity for production.

THE woolen mills of Messrs. Grant & Son, Chesley, Ont., produce flannels, blankets and yarns, doing both custom and wholesale trade. The factory is three and a half stories high, and contains four looms, besides all other necessary machinery.

MESSRS. NEELANDS & GRAY, Chesley, Ont., proprietors of the Chesley Ivory and Cuff Works, commenced the manufacture of ladies' and gents' ivory collars and cuffs less than a year ago, and their business is rapidly attaining large dimensions.

THE new owners of the Hastings saw mill at Vancouver, B. C., will put in new machinery of the latest and most approved pattern, which will largely increase the capacity of the mill. It will probably be the end of the year before the work is completed.

THE Town Council of Seaforth, Ont., are about to erect an electric light plant for their town. Messrs. Crystal & Black, of Goderich,

Ont., are to supply the boiler, and one of Cowan & Co's Corliss engines. Work is to be pushed forward as fast as possible.

THE Central Bridge Works, Peterboro, Ont., of which Mr. W. H. Law is proprietor, have recently been enlarged by the addition of several large new buildings, the main one being "L" shaped, the sides 150 and 148 feet long respectively, and 80 feet wide.

THE Bennett Furnishing Company, London, Ont., have received a large order from Victoria, B. C., for school furniture. This firm is working overtime with a large force of men making school furniture to supply extensive orders from Toronto, Glasgow and several English cities.

THE Canadian Edison Manufacturing Company, who now have an extensive factory at Sherbrooke, Que., for the manufacture of electrical appliances, will, it is said, either remove their Sherbrooke works to Hamilton, Ont., or establish a branch works at the latter place.

MESSRS. JACKSON & Co, piano and organ dealers, Peterboro, Ont., are forming a joint stock company, with \$50,000 capital, to manufacture pianos in that town, giving employment to about sixty hands. A commodious premises has been obtained, which is being fitted up for the business.

It is probable that Messrs. Messer & Simonds, who propose establishing a shirt factory at Galt, Ont., will occupy what was known as the Novelty Carriage Works there. They have a patent on an adjustable shirt yoke and \$10,000 in cash, with which they expect to do a flourishing business.

THE Canadian Pacific Railway Company have acquired land at Owen Sound, Ont., where they will proceed immediately to build one or more large grain elevators, having the best possible water and rail facilities for loading and unloading grain. There will also be extensive flour warehouses, lumber docks, etc.

THE Standard Drain Pipe Company, of St. John, Que., who have recently declared an annual dividend of eight per cent. on their capital stock, is one of the largest and most enterprising manufacturing concerns of the kind in Canada, who deserve all the success that can accrue to it from careful and judicious management.

MESSRS. STEVENS & HAMILTON, of Galt, Ont., have about completed their new machine shop—a substantial one-story stone building, well lighted. They are putting in a new steel boiler made for them by Messrs. Cowan & Co., that town, and expect to remove into their new and more commodious premises at an early day.

THE Albion Iron Works Co, Victoria, B. C., have been asked for figures by English capitalists upon two immense boilers for use in connection with a large paper mill which they contemplate establishing in that city. All the machinery in connection with the proposed factory would in all probability have to be imported from England.

THE Calgary Water Power Company, Calgary, Alberta, will be incorporated with \$100,000 capital stock. The object of the company is to improve the Bow River for lumbering purposes, and utilize the water power thereof, do a general lumbering business, establish water works, electric light works, erect flour and woolen mills, pulp mills, smelting works, etc.

THE Kingston Foundry and Machine Company has been incorporated with a capital stock of \$60,000; head quarters at Kingston, Ont. The objects of the company are the carrying on the business of general merchants, general manufacturers, ship and vessel builders and owners; of iron founders, boiler makers and machinists, manufacturers of iron ware, steam engines, machinery of all kinds, etc.

THE Dake Engine Company, of Grand Haven, Mich., have an order for one of their engines, large size, to run electric plant of over 200 incandescent lamps, and in addition the ventilating fans for a large new church in Minneapolis. One of these engines has been for some time past in use for this purpose in the Permanent Exhibition of Manufactures building, Toronto, giving excellent satisfaction.

THE R. Forbes Manufacturing Company, of Hespeler, Ont., have recently adopted the McIlvanie patent gas system, and are now lighting the whole of their premises with it. Messrs. Cowan & Co, Galt, Ont., supplied the holder and other appliances. The firm express themselves as highly pleased with it. They have also increased their steam power by adding an eighty h.p. steel boiler from Messrs. Cowan & Co

THE four handsome cars with which the Victoria Street Railway Company, Victoria, B. C., will commence business this month, were

built by Messrs. Patterson & Corbin, St. Catherines, Ont. The cars have capacity to seat thirty passengers each, and are complete in all their appointments, are thoroughly modern, and are equal in appearance and comfort to any in America. They are well ventilated, and will be illuminated with incandescent lamps.

THE Wilkinson Plow Company, one of the largest concerns in Canada manufacturing agricultural implements, whose works are at Aurora, Ont., are erecting a large works at West Toronto Junction, near this city, to which they will remove their business. Their new factory is being built of brick, and will have a capacity to produce 30,000 plows a year, which will give employment to 75 hands the first year, to be increased to 150 the second and to over 200 hands after the third year.

THE Lake Port Preserving Company, Colborne, Ont., of which Messrs. H. J. Mathews & Son and A. Campbell are the proprietors, is an important industry in that part of the country. The fruit preserving works is equipped with both water and steam power, and best improved machinery and apparatus. The concern also manufactures fruit barrels to the extent of 16,000 annually, and a land plaster or fertilizer to the extent of 1,000 bbls. annually. 150 hands are employed.

A JOINT stock company has been formed in Goderich, Ont., styled the Goderich Organ Co., and have associated with them a number of practical men. They propose to build organs on a fairly extensive scale, and to extend their capacity as occasion may require. The new factory building is well advanced. They have placed their order with Messrs. Cowan & Co., Galt, Ont., for a Corliss engine, and complete outfit of machinery. Messrs. Crystal & Black, Goderich, Ont., will supply the boiler.

THE Canada Electric Company, Amherst, N.S., have just completed at their manufacturing department a one hundred light dynamo of new design. It is to be one of a pair to be used on the three wire system in the lighting station. This machine is entirely of their own manufacture, and possesses several advantages not found in other makers, the chief of which is the comparative low speed at which it can run and freedom from liability to burn out under a heavy load.—Amherst *Weekly Press*.

SPEAKING of the electric railway now being constructed by the Victoria Street Railway Company, Victoria, B.C., the *Colonist* says that the rails are being laid very rapidly. The two large power boilers have been placed in the power house and the poles and wires are being adjusted, the expectation being that the road will be in operation during November. The closed cars for the road were built by Messrs. Patterson & Corbin, of St. Catherines, Ont. The open cars for summer use are to be built in Victoria.

MESSRS. WILLIAMS & SON turned out the first piano manufactured complete in Oshawa at their factory on Saturday last. It was an upright, and was shipped to a gentleman in St. John, New Brunswick. This week a dozen or more instruments will be completed, and the number will gradually increase as the large and magnificent establishment settles down to business. Already, we understand, there are one hundred and thirty hands employed, and the number is increasing almost daily.—Oshawa, Ont., *Vindicator*.

THE premises of the Cobourg Woolen Company, Cobourg, Ont., cover an area of five acres of land. The main building is 160x50 feet, four stories, and the boiler and engine rooms, wool storage, dye house and picker rooms are separate buildings. The premises throughout are supplied with automatic sprinklers connected with two steam fire pumps which connect with a reserved supply of water. There are seven sets of cards and forty-three looms, and the product is tweeds, of which the output is about 500,000 yards per annum. About 175 hands are employed.

THE ratepayers of the town of Galt, Ont., are to vote on the question of bonusing the Simonds Manufacturing Company, who propose establishing a white goods factory in that town. The company's proposition is to take over the premises known as the Novelty Works for a period of ten years, the entire plant to be exempt from all taxation, the company to establish a factory for the manufacture of shirts, collars and cuffs, which will give employment to from 50 to 75 hands the first year, from 75 to 100 the second year, and from 100 to 150 hands continuously thereafter during the term.

Two more new companies are being organized to go into the mining and smelting business on a large scale at Sudbury, Ont.—one in Detroit, by Mr. Terrence More, of Marquette, Mich., and the other in East Saginaw, Mich., by Mr. J. C. Ryan. It is claimed that there is no wild boom in mining in Sudbury; and the more the existing mines there are worked the better they show up. It was thought at first that the great copper-nickel ridges and mounds

were superficial deposits, but the Copper Cliff shaft is down now over 500 feet with no signs of giving out, and the best bed of ore has been found at this depth. The Evans and Stobie mines, worked by the same company are also proving up remarkably well, and so are the Dominion and Murray mines.

THE London Board of Aldermen acted wisely in dealing with the petition of Messrs. E. Leonard & Sons for the right to build an addition to their works on a piece of unused city street which the firm has been permitted to occupy for a long time past. This firm has been one of the mainstays of the city. It is one of the oldest, if not the oldest, manufacturing establishments in London, and it has done not a little by its superior productions to spread abroad the fame of London as an industrial centre, for its manufactures have been sent to the uttermost parts of the Dominion. Messrs. Leonard & Sons are firm believers in London as a manufacturing centre, and though they objected to being bound down to employ a certain number of men for a stated length of time, we may be quite sure that the firm will employ as many hands as they can find work for. The fact that the works are about to be enlarged proves that.—London, Ont., *Advertiser*.

MESSRS. PALMITER, EMPEY & Co., of Grand Haven, Mich., are manufacturers of Rhodes' improved swage for circular and gang saws, and they are about establishing a branch of their works in Toronto, from which to meet the Canadian demand. Regarding this implement, the firm inform us that it will swage the hardest as well as the softest saws; never pulls the points of the teeth off, as the swaging is done by direct and steady pressure, and not by rolling pressure; swaging will stand longer than when done by hand; makes the swage the heaviest on the under side of the tooth, leaving the face of the tooth perfectly straight; does not shorten the tooth as is done by upsetting; has a positive clamp, so that the saw cannot slip while being swaged, therefore every tooth is an exact duplicate of every other. It is simply constructed, there being nothing to break or wear out. Any ordinary man can swage a circular saw in ten minutes.

MESSRS. KNOX, ELLIOTT & JARVIS, the well-known Toronto architects, have supplied the plans and will superintend the construction of the new building to be erected in this city for the Confederation Life Insurance Company. The building will be in the French Gothic style of architecture, and will be built of red sandstone and terra cotta pressed brick, and will cost about \$300,000. It will take up the whole north side of Richmond street between Yonge and Victoria, and will have a frontage on Yonge street of 60 feet and on Victoria of about 100 feet. The building will be five stories in height, with a basement on the ground level and a sub-basement, making it in all seven stories high. Towers will be at each street corner, and in the centre will be a tower a little over 200 feet in height. This enterprising firm of architects captured this prize where there were seventeen other competitors, some of them being of the most renowned in the United States.

THE by-law which provides for the granting of a bonus to the Belleville Rolling Mills Company, Belleville, Ont., and which will be submitted to the vote of the ratepayers on the 20th of November, provides that a company shall be formed with a capital of at least \$50,000, for the establishment of a rolling mill for the manufacture of bar and other kinds of iron or steel in Belleville. Upon the erection and completion of buildings and plant at a cost of not less than \$40,000, with a capacity of sixty tons per day, and the employment of at least eighty men in and about the works, the sum of \$12,000 shall be paid as a bonus, and the sum of \$2,600 per annum for the next five years, provided the number of men is increased to 250 by the end of that time, the increase to be not less than twenty per annum. The men shall all reside in Belleville, and shall be employed for not less than ten months in each year. The works and plant shall be exempted from taxation for ten years, shall not be removed before the expiration of that period, and shall be operated continuously except in event of circumstances arising which the company cannot control.

THE latest achievement in portable, double-action furniture, according to a New York paper, is the cooking clock. It is made of white wood, stained cherry, and is constructed after the style of the old-fashioned grandfather's clock. The lower part of this mighty engine of domestic economy contains a gasoline stove, which, when in use, is pulled out like a drawer from its resting place. Below the stove is a receptacle for kitchen ware, while above it is a china closet containing four shelves. Above all this is perched a calendar clock, behind which is attached a gasoline vapor tank, which is connected with the stove by a pipe concealed behind the case. To the left, and fitted securely to one side of the case, is an Argand burner, supplied with gas generated by the gasoline vapor tank

above mentioned. When cooking is in progress the woodwork of the stove-clock is protected by a sheet of asbestos paper, which is placed at the back of the stove. When the stove, china closet, etc., are not in use they are pushed back into the case, the front of which is decorated with a handsome mirror. Besides this multiplicity of useful combinations, the ingenious inventor has found room within the magical case for a writing desk and a drawer for writing materials.

An important deal is being made in connection with the western implement and machinery trade. A new company is being formed to take over the business of the Massey Manufacturing Company, in the West, and also the business of Van Allen & Agur, of Winnipeg, and amalgamate the concerns in one company. All the plant, buildings, etc., of the Massey Manufacturing Company in the West and Van Allen & Agur will be put in the new company. The new company, which is applying for incorporation, will be known as Massey & Co., and will have a capital stock of \$500,000. A large portion of the stock is held by the Massey Manufacturing Company, of Toronto, but the new company will be independent of the former, and will control the territory from Lake Superior to the Pacific coast. The goods of the Massey Manufacturing Company will be handled, but all other lines of farm implements and machinery, from a wheelbarrow to a steam thresher, will also be handled, and the carriage makers' supply department, now handled by Van Allen & Agur, will also be continued. The officers of the new company are H. A. Massey, President; T. J. McBride, now Manager at Winnipeg for the Massey Manufacturing Company, Vice-President; H. R. Rogers, Treasurer; E. W. H. Van Allen, Secretary. It is the intention of the new company to erect a building on the vacant lot on Market Square, between the two buildings occupied by the Massey Company and Van Allen & Agur respectively. The property of the new company, including branch warehouses, etc., in Manitoba and the Territories, of which there are about forty-two, will aggregate \$100,000 in value.—Winnipeg, Man., *Commercial*.

THE Directors of the Hochelaga Cotton Company entertained a large number of their friends from Montreal at their lately acquired mills at Magog, Que., a few days ago, to whom it was a surprise to see such magnificent buildings in such a small place as Magog. The mill is divided into the spinning and printing departments, and when in full operation employs about 700 hands, the yearly pay roll amounting to about \$200,000. Ten million yards of cotton goods are turned out yearly, and there are enough orders on hand to keep the mill busy for five months to come. When the mills at Magog were acquired by the Hochelaga Company, they were not running more than half their capacity, but now the most improved English machinery is being placed in the mills, and it is hoped that everything will be finished by Christmas. The mill is run altogether by water power supplied from the Magog river. It would be possible to run eight or nine other large mills by this water power in addition to the one existing. About 350 new looms will be put in, in addition to about the same number which were in the mill when it was bought out. There are six printing machines. The engraving of the patterns on copper rollers is done in the mill, and in addition the designing of the patterns is executed so that everything from the raw cotton to its turning into cloth is completed on the premises. The goods have so far been placed through the entire wholesale trade from London to Halifax, and this year orders have been received from China and Japan, and many of the eastern markets. All grades of cotton are turned out, besides window hollands, drills for shoe linings, etc. The employes in the mills at Magog are largely farmers' daughters from the surrounding country, and the wages are very good, the average made by men in the printing department being \$25 a week.

THE John Doty Engine Company, whose already extensive works are at the foot of Bathurst street, Toronto, are making considerable enlargements to them which will undoubtedly make them the largest of their kind in Canada. They have acquired about three acres of land at the intersection of Bathurst and Front streets, opposite their present works, where they are now engaged in the construction of the following buildings: The land has a frontage of 345 feet on Front street, 378 feet on Bathurst street, and 315 feet on Niagara street. The engine and machine shop will be 245 feet long by 80 feet wide; boiler shop, 200 feet by 80 feet; blacksmith shop, 100 feet by 70 feet; foundry, 200 feet by 70 feet. Engine and boiler room, for power for the works, to be in rear of boiler shop, and will contain two boilers and one steam engine of 150 horse power capacity. At the corner of Bathurst and Front streets is to be a separate building, extending 100 feet on Bathurst and 60 feet on Front, three stories high, on the ground floor of which will be the offices of the company and a splendid show-room for the exhibition of finished machinery, the upper

floor to be appropriated to the use of draughtsmen, show-rooms, stowage of machine parts, engine and boiler fittings, etc. A standard gauge railway switch will enter the works through the boiler shop. In the centre of the enclosure will be a turn-table from which tracks will extend to all parts of the works. These important works will be equipped with every modern tool, machine, appliance and convenience necessary in successfully carrying on business in so large an establishment. Building operations are now in full blast, and it is expected to have the boiler shop roofed in before the snow flies. The plans for the office building are now ready, and tenders for its construction are called for.

THE DODGE WOOD SPLIT PULLEY.

THE Dodge Wood Split Pulley Company, of Toronto, are in receipt of a letter from Mr. R. W. Leonard, chief engineer of the Engineering Department of the Cumberland Railway and Coal Company, Spring Hill, N.S., in which he says; "Your transmission has been working steadily for the past month, raising 300 tons of coal forty feet in ten hours, and turning a revolving coal screen at a distance of 870 feet from the engine. It gives entire satisfaction." Regarding this the Pulley Company say:

"This is one of the many satisfactory endorsements which we are receiving from men of high order in mechanics, after having tested the merits of our system for transmitting power. Here we have an illustration of a case where power is wanted at a distance of nearly 900 feet from the engine. Shafts are neither parallel nor in line, and to add to the difficulty four railway tracks intervene. By any other means we think it will be allowed this would appear to be a somewhat difficult as well as expensive undertaking, while as a matter of fact the drive was in operation at the colliery in twenty days from the day we received the order, and that it was highly satisfactory is proven by the unsolicited letter of approval of Engineer Leonard. We believe that there are numberless cases in the Dominion where fine power continually runs to waste for the simple reason that those who might avail themselves of it do not know how cheaply and simply such power might be conveyed to any distance where required."

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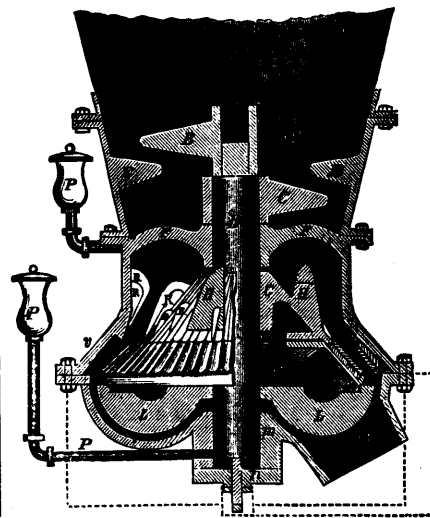
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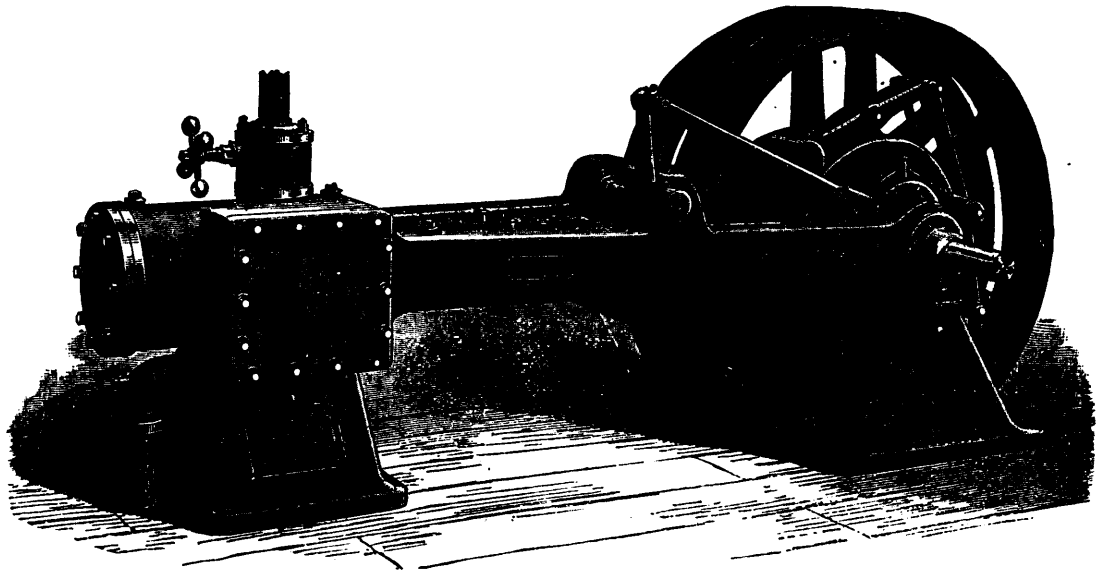
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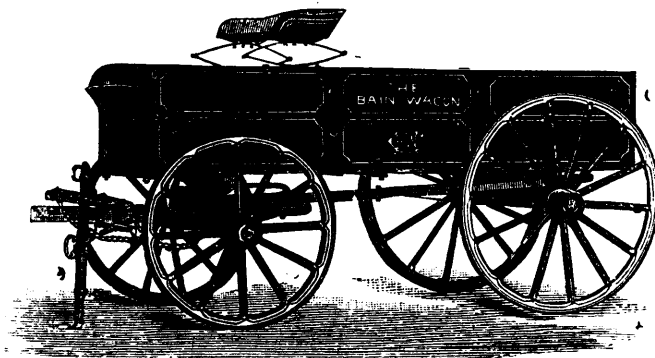
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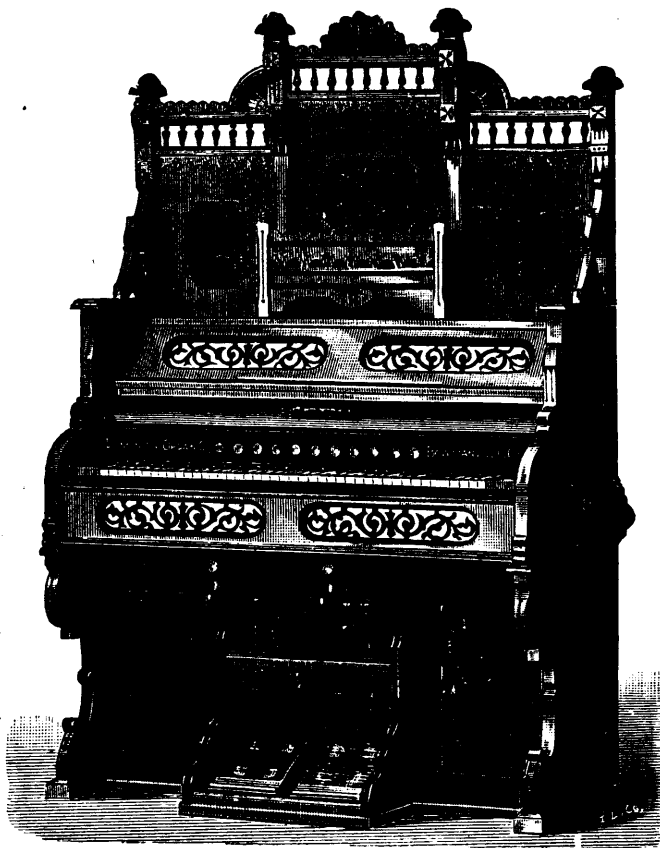
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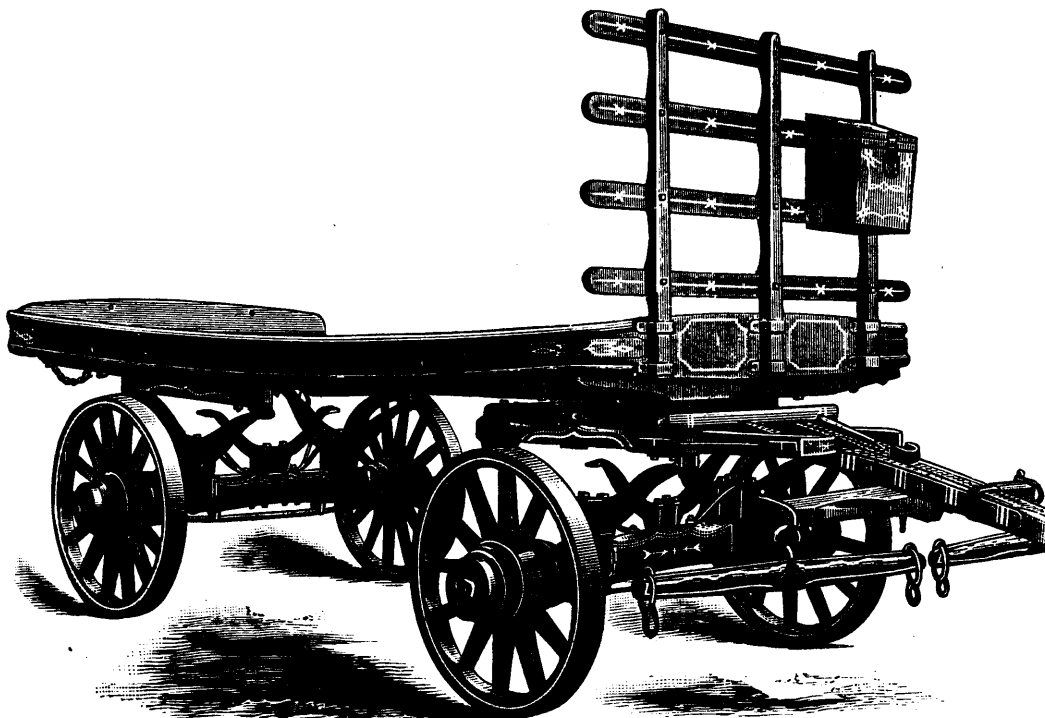
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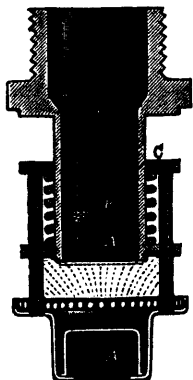
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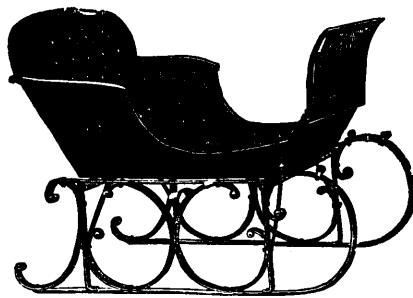
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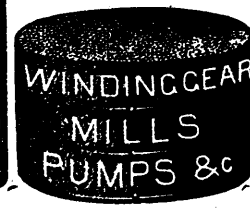
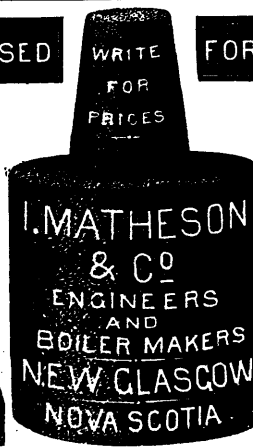
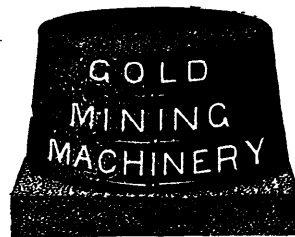
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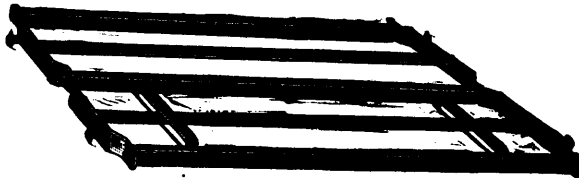
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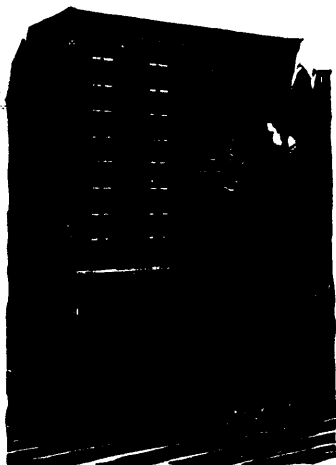


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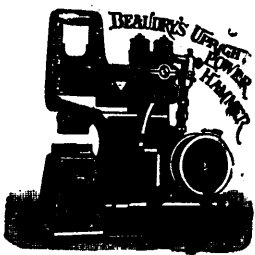
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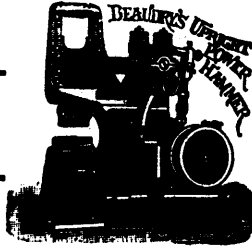
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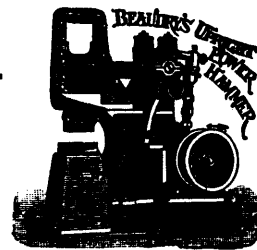
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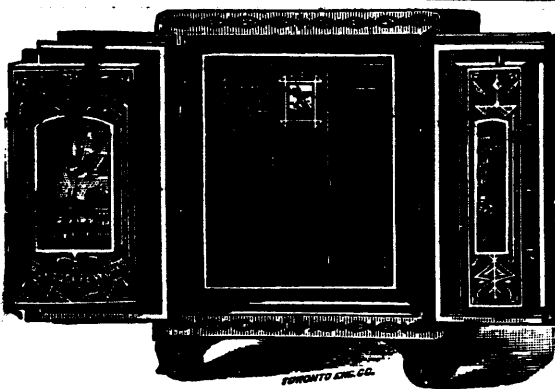


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SAFES

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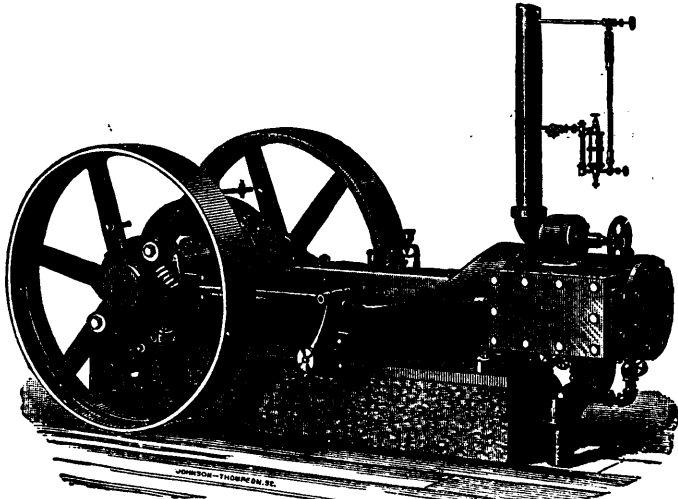
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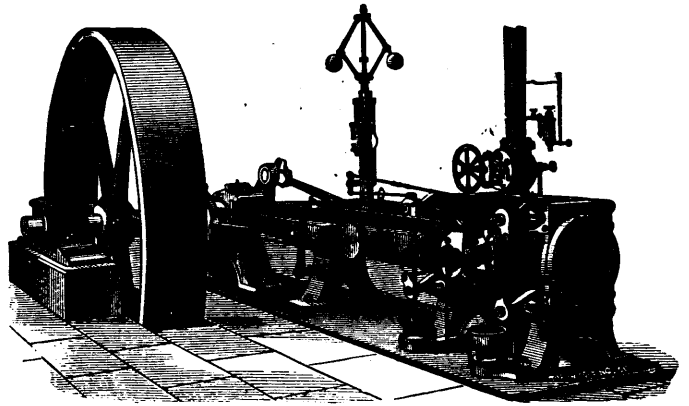
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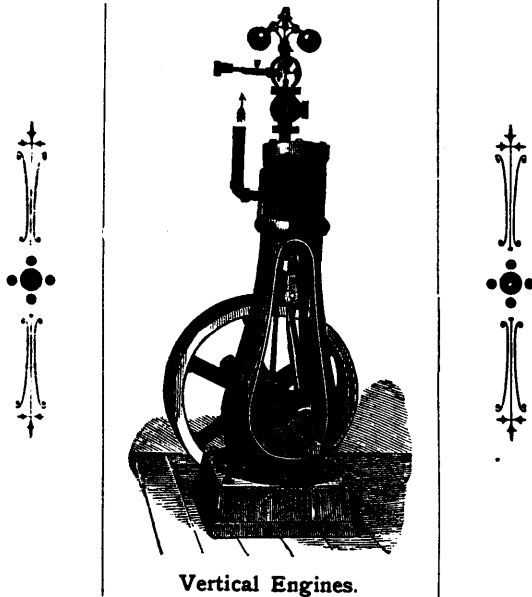
MONTREAL.



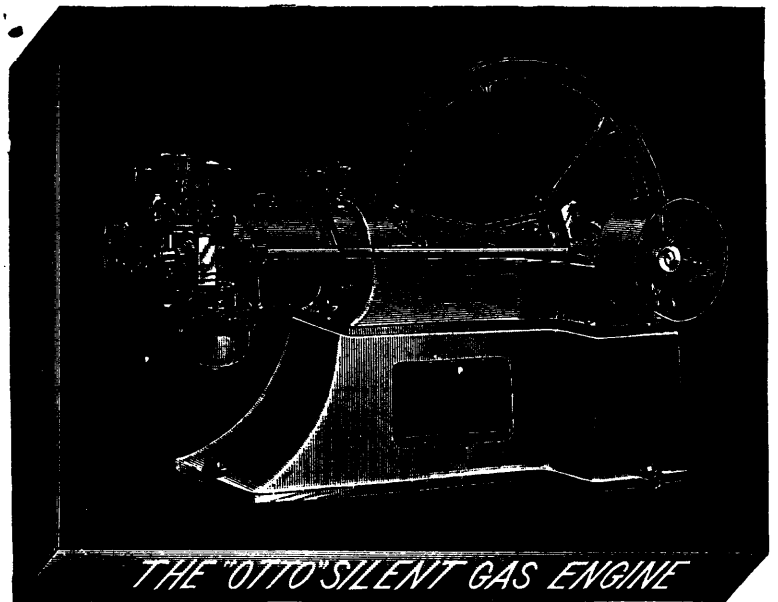
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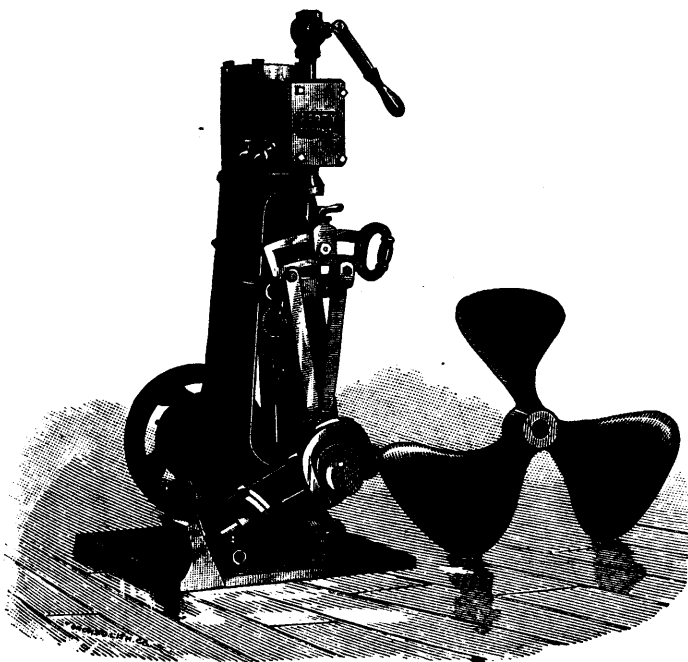
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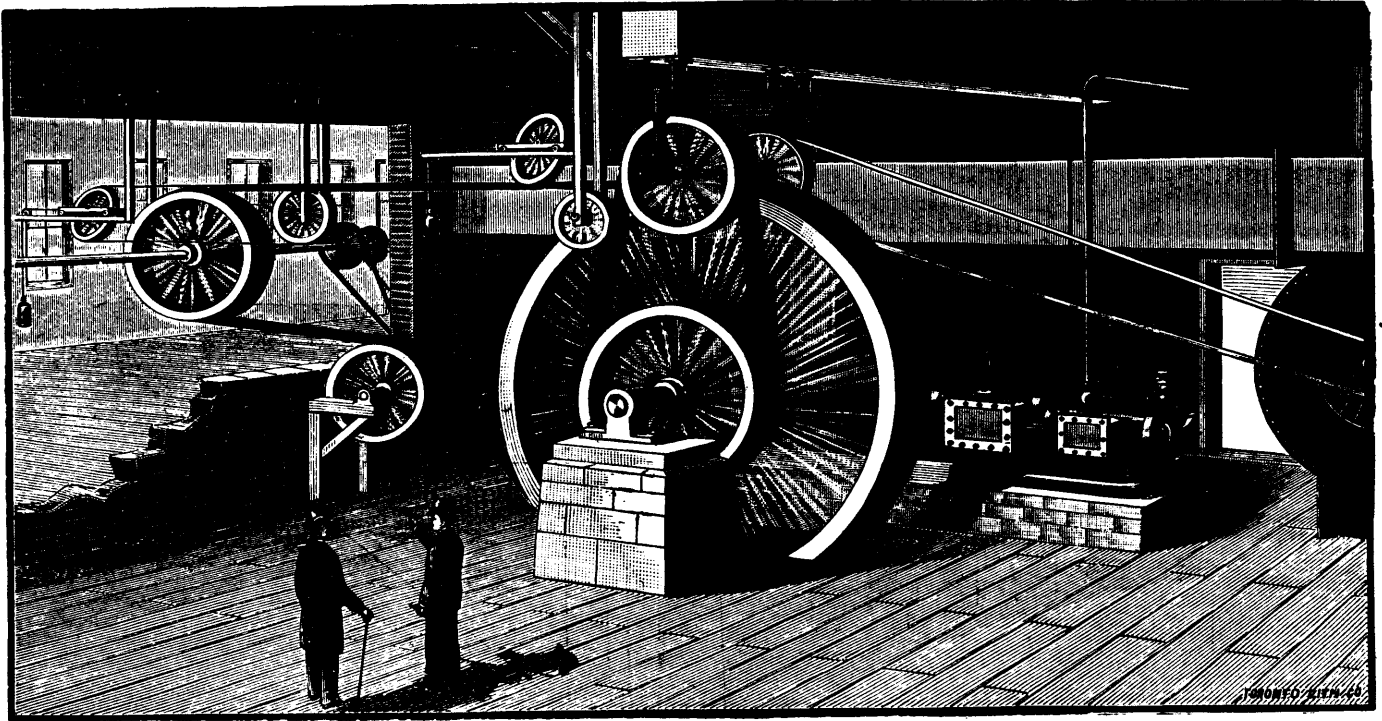
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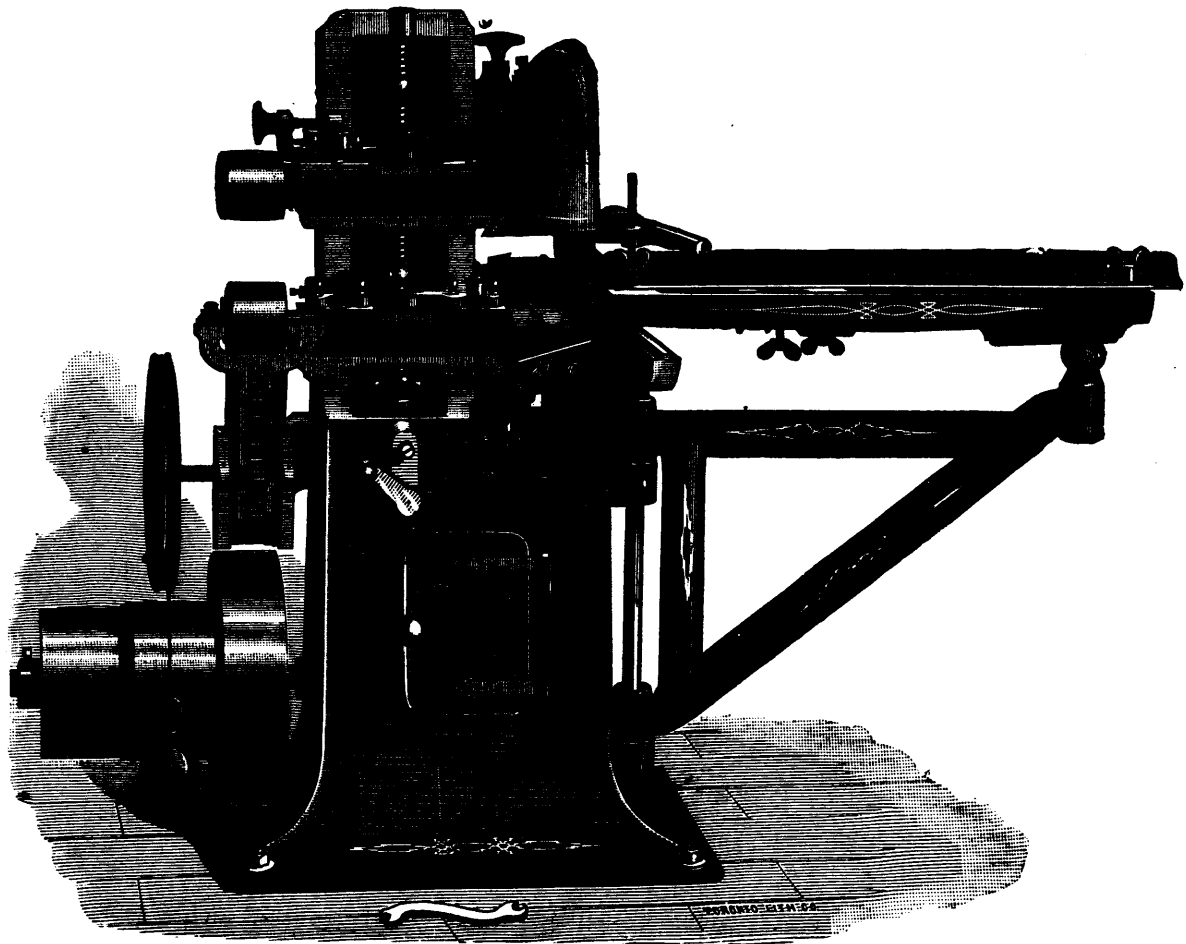
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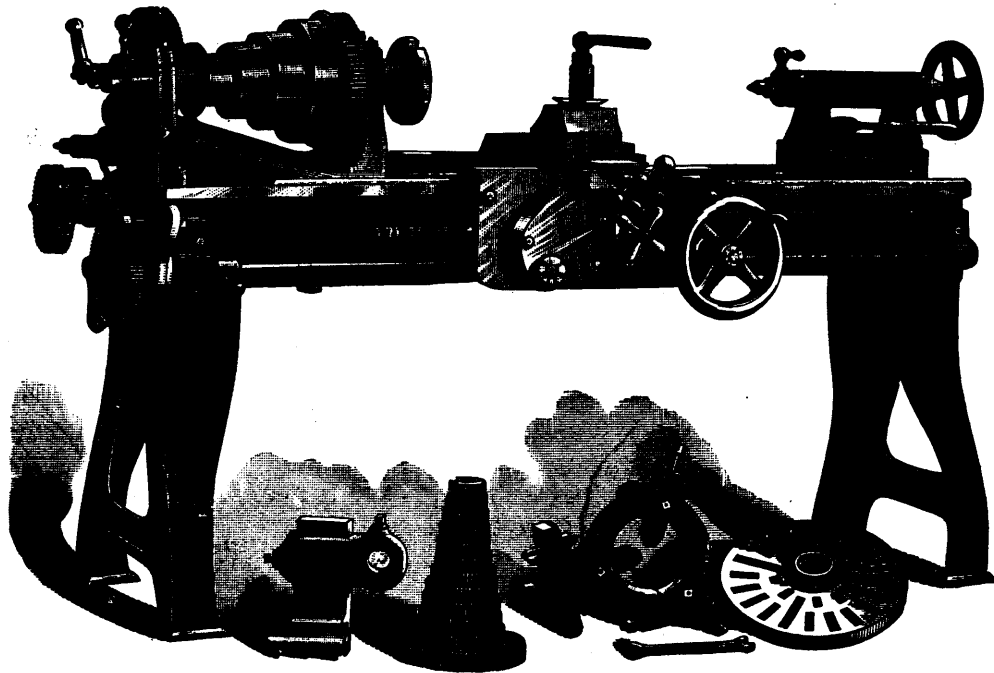
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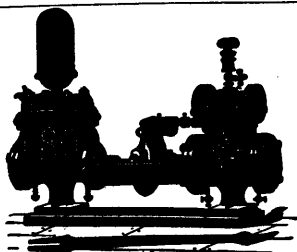
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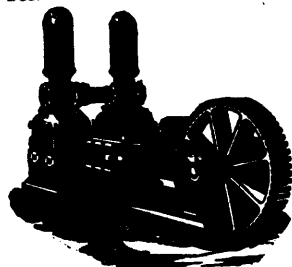
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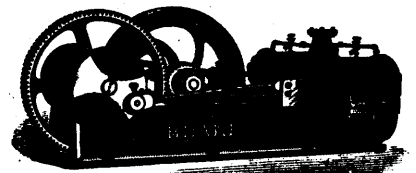
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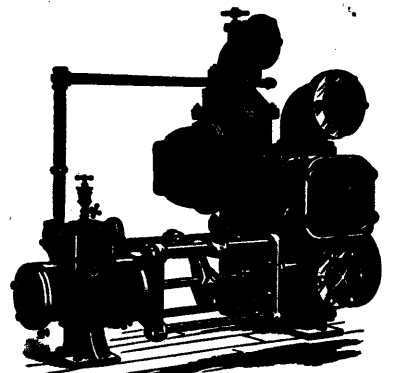
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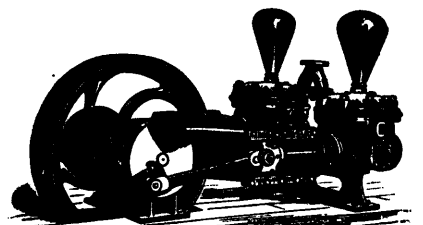
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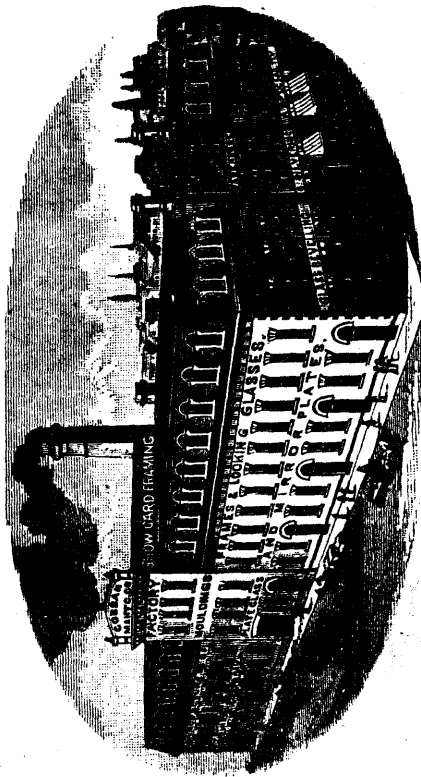
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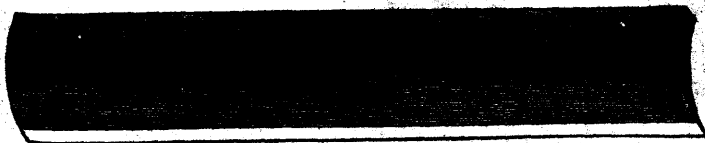
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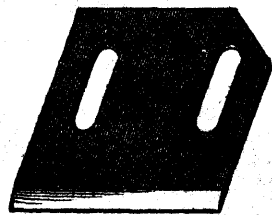
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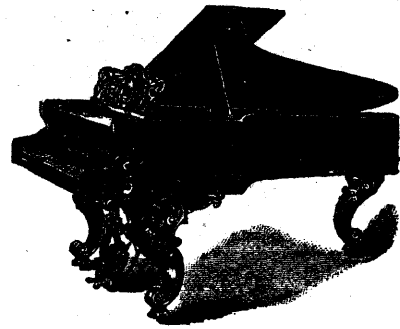


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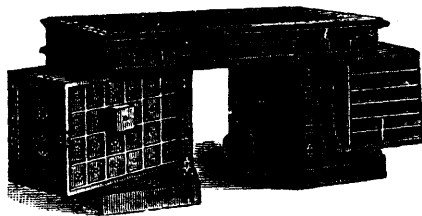
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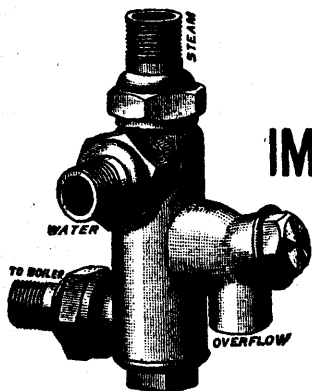
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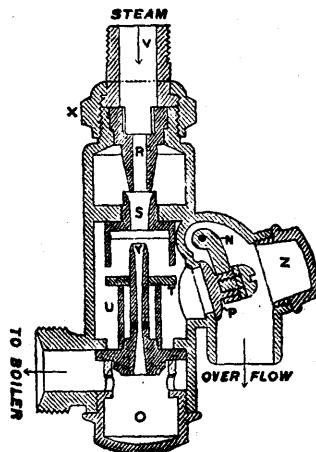
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