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Vol. 22.

TORONTO, JUNE 17, 1892.

No. 12.

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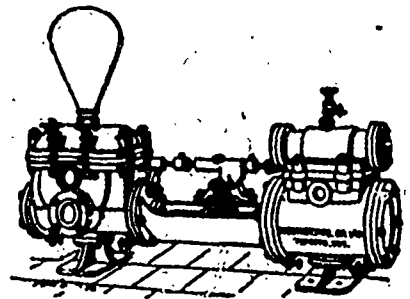
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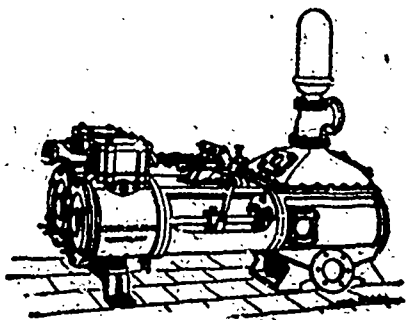
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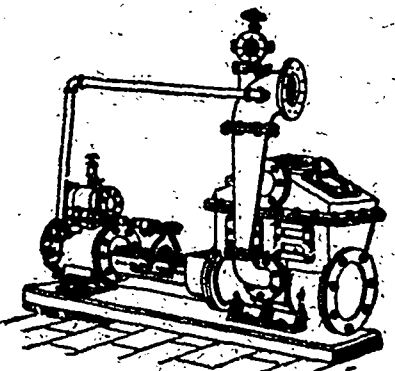


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**THEY ARE ALL BENEFITTED.**

MR. GEORGE JOHNSTON, the Dominion Statistician, in making up the census returns, separates the different industries of the country, and in doing this classifies as "industrial establishments" all concerns employed in the various branches of manufactures. Thus he classifies under this general head blacksmiths' and carpenters' shops and the like. The *Toronto Globe* takes exception to this and attempts to show that such establishments are not directly benefitted by the N. P., but are at a disadvantage because of it, and that it has not done much for what it calls legitimate manufacturing industries, nor helped to encourage lumbering or promote the development of our iron and nickel deposits, which, had we access to the markets of our own continent, would be of fifty-fold more value than all the exotic industries that have been called into being. It also tells us that, free from all tariff restrictions, the people of Canada could buy their supplies at very much less than what they now pay for them, while in doing this—in abandoning such manufacturing industries as we have built up under the N. P.—the employes of these home industries, while they would be thrown out of these particular employments, would find employment to better advantage in producing the indigenous articles which we would have to give in exchange.

Like the nurse who was called in to assist Mrs. Easy in her maternal care and excused the presence of her unhallowed offspring by declaring that it was a very little one, the *Globe* declines to recognize the Canadian mechanic of moderate means as being the possessor of an industrial establishment because he gives employment to but few besides himself. If it declines to call a carpenter shop an industrial establishment, where but a dozen men may be employed where will it draw the line, and with what number of hands, according to this dictum, would a woollen mill for instance, become a factory? Is a blacksmith any the less an artificer in iron when making horseshoes in a country cross roads shop than he would be in riveting boilers in a city machine works? Such sneers at the modest, but none the less important industries of the country, are characteristic of the *Globe*.

We deny, too, that these modest and unpretentious industries of the country are not benefitted by the N. P., or are at any disadvantage because of it. The *Globe* would suggest that such concerns are but a part and parcel of the farm and nothing more nor less than details of agricultural operations. If country blacksmiths and carpenters were never called upon to do anything else than shrink and replace tires on wagon wheels, and repair sheep pens and broken gates, this contention might hold good, but we know that these small industrial establishments are very frequently the nucleus of larger and more pretentious concerns, which, under the ever increasing demands arising from the operations of the N. P. become large employers of labor and large consumers of raw materials. The *Globe* should not despise the day of small things.

We are told that the N. P. has not done much for such manufacturing industries as we have, nor helped to encourage lumbering or to promote the development of our deposits of iron and nickel. It is very certain that if it had not been for the protection afforded by the N. P. we would not at this time have such a splendid machine works and ship building plant as that of the Polson Iron Works Company, nor such a successful factory for the manufacture of musical instruments as that of the Bell Organ and Piano Company, nor such an immense biscuit factory as that of Christie, Brown & Co., nor would we have such excellent Canadian made leather belting as that produced by the J. C. McLaren Belting Co., F. E. Dixon & Co., Robin & Sadler, and others, nor such iron working tools as those made by John Bertram & Sons, nor such wagons as those made by the Chatham Manufacturing Company, nor such mining machinery as that made by I. Matheson & Co., nor such burglar proof safes as those made by J. & I. Taylor, nor such furniture as that made by William Stahlschmidt, nor such cement as that made at Thorold and Napanee, nor such railway coaches and train cars as those made by Patterson & Corbin and by the Crossen Car Works. These concerns and hundreds of others in active operation throughout the land, and the excellence of their products, are visible evidences of the false statement that the N. P. has not done much for our manufacturing industries. As to our lumbering industry, we have the testimony of a Grit statesman that when the protection thrown around that industry in the way of an export duty on pine logs was removed, nearly all the saw mills in the Georgian Bay section were shut down, the logs being hauled and rafted over to the United States to supply material for

American mills and American labor. If that feature of the N. P. had been retained our now abandoned saw mills would be in active operation, giving employment to thousands of Canadians who are now bereft of that means of support; and our machine shops, founderies, boiler works and belting factories would have enjoyed a boom in their industries of which they have been deprived by the removal of the duty on logs. So, too, is it with our iron and nickel interests, and we can never expect them to show the activity which ought to be developed in them until we make it to the interest of furnacemen to enter largely into the manufacture of iron by increasing the duty on the article to where it will prove to be substantial protection; and imposing an export duty on the nickel which our American friends find so essential in the construction of their new navy, and which they can obtain no where else in such abundance as in Canada. More protection is what we need.

The *Globe* divides the industries of Canada into two classes, the "indigenous" and the "exotic," the first including the production of such as lumber and iron and nickel ore, and the other such manufacturing industries as these herein alluded to; and it tells us that it would be better for Canada to abandon these latter, obtaining our supplies of them from abroad, and devote ourselves to the production of the former, to be given in exchange. If this were done the lumberman would have to depend upon the foreigner for even the axe with which to fell his trees and the tools and appliances with which to fit it for transportation and for transporting it to a foreign market; and the miner of iron and nickel ore would be in precisely the same fix.

And yet the *Globe* tells us that the N. P. is of no value to any of our industries, but rather a detriment.

#### ASSUMPTION AND CREDULITY.

A FEW weeks ago, when the election of a member of the House of Commons was pending in East York, the *Globe* made an appeal to the farmers of that riding to vote against Mr. Maclean on the ground that the policy of his party was not favorable to them. In an editorial the *Globe* said:—

Mr. Maclean tells the electors of St. Matthew's Ward that he is going to develop the iron industry of Canada and give them a smelting furnace at Ashbridge's Bay. Here again he must assume that people are ready to believe anything that is told them. How can Mr. Maclean or anybody else develop the iron resources of Ontario in the absence of a market for the surplus output? Protection has been tried to the mast head but has failed. Sir Charles Tupper, who, like Mr. Maclean, is pre-eminently a man of loud assertion, pledged himself in 1887 to establish iron furnaces, rolling mills, hardware factories, etc., capable of furnishing employment to 30,000 persons; but all that has resulted from the onerous duties on foreign iron and from the bounty granted to the producers of pig is that the price of iron has been greatly increased in Canada, relatively to the price in England and the United States. Nothing can be done to ensure the genuine development of the Ontario iron mines so long as this country is isolated from the only available market to which the surplus could be sent. Can anyone suppose that the iron mines of Michigan, where so many Canadians are employed, could have been brought to their present pitch of development if Michigan had been cut off from the rest of the American Republic and compelled to

consume all the iron she produced for want of a foreign market?

Perhaps the *Globe* imagines that those who read its editorials have given up doing their own thinking, and are ready to believe anything that the *Globe* tells them. Mr. Maclean is twitted with an inability to induce the building of an iron furnace in Toronto, because there would be no foreign market for its surplus output. Last year the imports of pig-iron into Canada amounted to 80,000 tons, and the manufacture of iron, in its simpler forms, which might, could, would and should have been made here if the pig-iron industry had been properly protected, to several hundred thousand tons more. If, then, the industry had been properly protected we would not only have had it well established years ago, but we would also have been manufacturing many, if not all the simpler forms of iron which we are yet quite dependent upon other countries for; and we suggest to the *Globe* to take pencil and paper and figure out what such a condition would mean in considering the question. How ridiculous to prate about our inability to find a market for an imaginary surplus of an article which we do not as yet manufacture to any large extent, and for which there would be such an exceedingly large demand if we could supply it.

The *Globe* tells us that "protection has been tried to the mast head, but has failed," meaning protection to the iron industry. This we deny. As far as pig-iron is concerned, it never was protected, for if it had been we would be enjoying the results of the established industry to-day. What was intended to be "protection" was nothing more nor less than a tariff for revenue; for no duty ever laid on pig-iron coming into Canada was ever considered an inducement to capitalists to invest in a blast furnace. This is evident from the fact that the Government, entertaining this view, offered the further inducement of a bonus on such iron as might be made in the country. Therefore, protection has never been tried. The *Globe* sneers at Sir Charles Tupper because his efforts to build up the iron industries in Canada has failed to a certain extent. If Sir Charles was an extremist in his 1887 tariff it was in being extremely careful in not making the iron duties high enough to effect the results he intended they should. Up to that time some pig-iron was being made in Canada, and since then that production has not been materially increased, although the demand for the article, and for articles manufactured of it, have largely increased. If we needed pig iron then, we need much more of it now; and it is a mistaken policy on the part of the Government not to recognize this situation and meet the emergency by raising the duty to say, \$7 per ton. So, too, as regards rolling mills, foundries, machine shops, hardware factories, etc. We do not have enough of such establishments to supply the demand, and this is evident from the large volume of our imports of such products, and the tariff upon them is for revenue, not protection. In a recent issue of this journal we published a long list of manufactures of iron and steel, and the value of them, imported chiefly from the United States. There were very few, if any, of these articles which might not have been made in Canada, and which would have been made here, if they had been properly protected. As it was, under insufficient duties we were forced to purchase these articles abroad, to the detriment and discouragement of our own manufacturers and their employes.

The answer of the *Globe* to this contention is that to raise the duty would be to raise the price, and that in this way the Canadian consumer would suffer. But right here the *Globe* answers its own objections when it says that we should not endeavour to build up an iron industry because we would not have a foreign market for the surplus product. We have shown that there exists a large demand for all such articles, and the consuming public would not be particularly pained and distressed to observe that in an effort on the part of Canadian manufacturers to meet this demand, there should be such fierce competition that production had quite overtaken or exceeded the demand, and that the cost of the goods had been reduced to exceedingly low figures. Such an event might be unpleasant for the manufacturers, but the consumers would not shed bitter tears over it. And thus it is that protection tends to lower and cheapen the price of protected articles. But the protection must protect. It must not consist in such a failure as our present iron duties, but must be of a character to induce the investment of capital and the production of all the goods we can possibly consume. Were this the case—were the duties sufficiently high—the tall chimneys which Sir Charles predicted and which the *Globe* sneers at would make the sky murky with their bolching smoke, and instead of our being forced to spend millions in foreign countries, the money would be expended at home.

The illustration of the development of the Michigan iron industry is not forcible or even sensible, and the *Globe's* "ifs," are ridiculous. Michigan seems to have inexhaustible deposits of iron ore, and the manufacture of it into iron is a large and valuable industry, but "if," that production were increased a hundred fold, or even ten fold, is it not plainly to be seen that the supply would exceed the demand, and that even the whole continent would not have capacity to absorb the unnecessary production. See! Then why, if we had the furnaces, should the production be allowed to run ahead of the consumption? The *Globe* has a fine printing plant, the capacity of which could supply probably five times as many copies of that paper as is now printed, but it is not at all probable that the production is allowed to run in excess of the demand. And still it has unlimited and unrestricted access to the American market.

Does the *Globe* assume that sensible people are ready to believe any thing it tells them?

#### WHILE THE LAMP HOLDS OUT TO BURN.

In a recent issue of this journal we took occasion to say:

It is one thing to be a professional free trader "on principle," but when your professional free trader desires to invest his wealth in a manufacturing industry, it is surprising how very quickly he abandons his fad, and becomes an enthusiastic admirer of protection and the N. P. and immediately proceeds to ask the Government for a bonus on his product.

The *Week* quotes this sentence and enquires if such a change of opinion is attributed as a reproach to a new convert to the doctrine of protection. Immediately adjoining this sentence, in another column, allusion was made to the fact that a company had been organized in Toronto to erect blast furnaces,

that some of the gentlemen included in the provisional directorate of the company had previously been most determined opponents of the N. P. and that it was to be noticed that about the first of their official acts was to ask the Ontario Government to guarantee them a bonus upon whatever pig iron they might produce, the same as is done by the Dominion Government. This journal does not deem it a reproach for any man to abandon a bad cause and connect himself to a good one—for while the lamp holds out to burn the vilest sinner may return. As the *Week* knows, and we stated some of the gentlemen connected with the enterprise have always been opponents of the N. P. in any form, and free traders of most pronounced views. Far be it from us to impute any dishonesty to them in entertaining such views. From their standpoint they probably conceived that not only their individual interests but the general interests of Canada lay in that direction. Not being manufacturers, but viewing the fiscal policy involved in the N. P. from a theoretical and unsubstantial standpoint, they clung to a false theory and ignored the intensely practical question as to whether it was really desirable to have manufacturing industries in Canada; and if yes, then, seeing that we could have them by no other means, should it be accomplished by tariff protection. These gentlemen seemed to think so. They knew that Canada had never yet been able under any circumstances to establish a successful blast furnace industry. They had seen it tried with a tariff duty of \$2 per ton but without success. They had seen it tried with \$4 duty with like result, and they had discovered that even with a \$4 duty and a \$2 bonus no better result was achieved. Keen, shrewd business men as they all are, they saw that an enlargement of this principle of protection, and a guarantee of continuance for a term of years would make a judicious investment in blast furnaces exceedingly profitable, and having become satisfied in this point they were quick to agree to the formation of a company with a sufficiently large capital, and put their scheme into operation, if they could be assured that the N. P. would be enlarged and accommodated to their necessity. It is plainly to be seen, then, that if the Ontario Government should accede to the request of these gentlemen and guarantee them a certain bonus upon their production of pig-iron for a certain term of years, and if they could have the assurance that the inducements offered by the Dominion Government would not be abated or abandoned, they would put up their money, and the blast furnace projected by them would soon become a reality.

Does the *Week* see the point? We never questioned the sincerity of these gentlemen when they were theoretical free traders, and we would never question their allegiance to and belief in protection if they should embark in their proposed enterprise. In fact if that event should occur we would confidently expect these gentlemen to become active members of the Canadian Manufacturers' Association and do just what all the members of that body do—most heartily sustain the N. P. There are scores of members of that Association whose great interest in Dominion politics arises from a determination to do what they can to uphold and perpetuate that policy, and to retain in power the political party which is its defender and advocate; but whose sympathies are with another party in local and provincial affairs.

### THE DUTY INCREASES THE VALUE.

A few days ago the *Toronto Globe* said :

All the N. P. does for the farmer is to augment the price of what he has to buy. It does not, it cannot add a cent to the selling price of those articles of which he produces a surplus.

Let us investigate the truth of this assertion. The following table shows what some of our imports of farm products were last year, their value, and the duty paid on them ; also the value of our exports of similar articles. If the foreign producer paid the duty on these imports the *Globe's* contention may be correct, but if the Canadian consumer paid it, then the Canadian farmer was benefitted.

Articles.	Imports.		Exports. Value.
	Value.	Duty Paid.	
Beans .....	\$19,572	\$1,549	\$495,768
Indian corn .....	1,512,503	200,150	114
Cornmeal .....	321,710	40,821	1,303
Hominy, etc .....	0 020	1,805	12,550
Oats .....	30,182	7,918	120,017
Peas .....	11,139	859	2,032,601
Wheat .....	128,857	22,129	1,583,084
Wheat flour .....	234,313	43,124	1,588,578
Bran and mill-feed .....	95,462	19,092	162,324
Oatmeal .....	9,709	1,445	45,195
Horses .....	117,559	23,523	1,417,244
Horned cattle .....	16,730	5,018	8,772,409
Sheep .....	100,122	29,949	1,146,465
Hogs .....	8,843	3,658	1,954
Poultry .....	14,586	2,018	86,032
Butter .....	75,023	12,995	602,175
Cheese .....	20,189	3,191	9,508,800
Honey .....	3,558	781	264
Lard .....	69,174	29,749	3,174
Bacon and ham .....	208,173	77,112	628,469
Beef .....	98,843	54,302	25,161
Pork .....	596,588	166,756	4,089
Potatoes .....	31,254	5,020	1,693,071
	\$3,733,024	\$771,870	\$29,741,431

This list includes the principal articles produced by our farmers, and it shows that while they exported nearly \$30,000,000 worth of them, the country imported over \$3,700,000 worth, or about 12½ per cent, upon which \$770,000 was paid as duty, the average rate of duty being about 20 per cent. The *Globe's* contention is that the Canadian consumer always pays the duty upon imports. If this is so the duty raised the price of the domestic products, thus benefitting the farmer to that extent.

This table discloses some valuable facts regarding our exports of farm products, and impresses the importance of a diversified industry. Wheat is considered a prime factor in the calculations of the farmer, and peas are of less importance, but the value of our exports of peas was very much greater than that of wheat ; and our exports of both wheat and wheat flour aggregated in value less than \$3,000,000 against \$2,000,000 in peas. The largest value in the list is credited to cheese—\$9,500,000, showing the great importance of this industry, horned cattle coming next with a value of nearly \$9,000,000. These Canadian products find their principal market in Great Britain, where they command more remunerative prices than similar articles produced in the United States, with which they are sold in competition. The fact that we import so largely of all the articles enumerated in the list, chiefly from the United States, shows the importance of a more general cultivation of these crops by our farmers. The duty paid upon

them, under the N. P. enhances their value an average of more than 20 per cent.

### CONVERTED AT LAST.

THIS journal has often expressed its abiding faith in the doctrine that there is hope for the conversion of the vilest sinner, although the event may be long delayed and the interim behavior very, very bad. The sinner to whom we now allude is the *Toronto Globe*, and the particular bad conduct to which we object, has been its persistent opposition to any Governmental policy looking to any fiscal encouragement of any Canadian manufacturing industry. It has always denounced any policy looking in this direction, insisting that every such tub should stand upon its own bottom, or words to that effect ; meaning that if manufacturing industries in Canada could not be maintained without some sort of protection, so much the worse for them, and that they should be submerged and overwhelmed and destroyed by the fierce and unrelenting competition to which they would be subjected under free trade from foreign manufacturers. We feel some pleasure, then, in being able to announce that the *Globe* has experienced some change of heart (some of our acquaintances have long since come to believe that the *Globe* had no heart), and that it has now very boldly and unequivocally and editorially declared in favor of protection and of the Government giving big money, or money's worth to guarantee the erection of iron works in Canada. Hear it :

A deputation will wait upon the Ontario Government to-day, which should carry the good wishes of the City of Toronto. The Toronto Company formed for the purpose of establishing an iron smelting industry in Ontario, will ask the local Government for some material aid in carrying out the project. In what manner that aid can best be given is a matter open for discussion. There can be no doubt that aid of some sort would be repaid a hundred fold by the successful establishment of iron smelting and kindred industries. The mines of Ontario, thanks to wise legislation, are still in a large measure the property of the people, and anything that will bring these mines into use, will add to the wealth of the community at large. Several propositions have been made as to the form the Government grant, if determined upon, should take. Some would prefer that the Government should, for a number of years, guarantee part of the interest of the capital invested, while others, believing that the bonus is bad in principle, suggests that the Province take a large block of stock in the company. The latter course is one that, if it had been followed in the case of the C.P.R. grants, would have given the people of Canada a material voice in the management and policy of that Company, and might ere this relieved us of some share of the interest upon the National debt. \* \* \* Toronto should be able to secure the smelter if one is erected anywhere in Ontario. With this there would be established a centre around which many allied industries would doubtless grow up. It is true that our market is limited, and that a full prosperity cannot be obtained under present conditions. As citizens of Toronto, however, it is our duty to stand by the city, and do all that can be done with imperfect means to build up a great industrial community.

It is evident that if the *Globe* cannot head the procession it has been endeavoring to form to lead Canada into annexation, it is trying to catch on to the tail gate of the band wagon and go along with the noble army of Canadian protectionists who are leading the country into paths of prosperity



and industrial independence. And that's all right. The tail-gate is strong, and if the *Globe's* hold is tenacious it will arrive at its destination in good company. But how Sir John would laugh if he could but observe the tergiversation.

We hope, before this issue is printed, to know positively that the Ontario Government have acceded to the request of the Ontario Iron and Steel Company and have given them the assurance that the "material aid" suggested by the *Globe* in carrying out the project will be forthcoming at the proper time. No matter how large that aid may be, it will be a good investment if it is repaid a hundred fold, as the *Globe* says it will be. What a fine thing it will be for Toronto, and Ontario, and for the Dominion of Canada that we are really to have a large iron industry, and that it would prove to be a centre around which many allied industries would undoubtedly grow up. We are glad to accept the *Globe's* rosy-colored prophecy; and we overlook the few mean little inconsistencies it could not help uttering. No doubt the Dominion Government would be very glad to give all needed assistance in the matter, even to the extent of going farther than they have yet gone in endeavoring to build up a Canadian iron industry. No danger, dear *Globe*, that the concern whose cause you are advocating will produce more iron than we have use for. A hundred tons per day would mean only about 30,000 tons per year, and that would be much less than what Ontario alone imported last year.

We fully agree with the *Globe* that as citizens of Toronto it is our duty to stand together and do all that can be done to make her a great industrial community; and we now have hopes that our converted contemporary will expand its patriotism and take an equally firm stand in favor not only of Toronto but of all Canada. Let us all pull together to make Canada a great self-contained country—a great iron-producing country. The nation that manufactures its own iron prospers.

#### AS TO CAST-IRON PIPE.

A FEW days ago the Montreal *Herald* published a communication from a disgruntled person who considered himself "an overburdened householder," his complaint being that the water rates of that city are extravagantly large because the corporation in laying the water mains, find that the cost of cast-iron water pipe is higher in price than it would be if there were no duty upon the article. He says that this condition is "monstrous, disgraceful and outrageous," and that British manufacturers do not now tender in such contracts.

The *Herald* comments on the incident and upbraids the city council for allowing the imposition of a duty on cast-iron pipes that forbids competition and forces them to buy their supplies from combines who fix their own prices; and declares that pipe founders on this side do not compete fairly with the founders of Great Britain, because of the duty—that "a reduction, or better still, a complete abolition of the tariff on raw materials would do much to develop native industries."

Judging from the gross nonsense contained in the *Herald's* editorial, it would be charitable to suppose that the editor had taken a day off, and that some callow and inexperienced young man was occupying his chair. Our contemporary should un-

derstand that the Montreal city council has no voice whatever in the matter of laying duties upon imports, and that it is beyond their province to allow or disallow duties. The callow young man, too, talks with the intolligence of a parrot when he jabbars about "raw materials" and "native industries," and we will wager a big red apple that his knowledge of our social economy is not sufficiently extensive to enable him to give a rational definition of what are raw materials or native industries. We would be pleased to learn of his having made an effort to do so, and if he succeeds we will give him credit for having done what no other free trade Canadian editor has ever yet accomplished. Iron pipe is not a raw material in any sense of the word, but a finished product.

The *Herald* professes to be a stickler for journalistic decency, but it does not hesitate to allow blackguards free access to its columns to apply such epithets as he does in denouncing a policy which has time and again received the unqualified endorsement of the people of Canada. And this voracious writer tells us that British manufacturers now decline to compete in this market because of the duty upon iron pipe, in the face of the fact that last year we imported \$61,891 worth of such pipe into Canada, \$30,508 worth coming from Great Britain, and the balance from the United States.

The fact is, the price of iron pipe would be lower in Canada than what it now is if the industry, and the iron industry generally, received such a measure of protection as is accorded it in the United States. The Canadian duty is only \$12 per short ton, against which the manufacturer has to face a duty of \$4 upon his raw material, pig-iron, while the protection afforded it in the United States is \$18 per ton—50 per cent. higher than what Canada gives, against a duty of \$6 on pig-iron. The American pig-iron industry is protected 50 per cent. higher than the Canadian industry, and the American iron pipe industry there is favored with a similar difference in the duty. If, then, the American pig-iron industry requires protection to the extent of \$6 per net ton, (it has been \$9), it ought not to be expected that the Canadian industry should flourish under less favorable auspices. And this suggestion applies also to the iron pipe industry. Under the higher duties in the United States the iron industry in all its branches has grown to such immense proportions, and the cost of production been so greatly lowered, that the manufacturers there have not only fully occupied their home market, but they are possessing themselves of the Canadian market also, as is seen in the fact that last year we bought more cast-iron pipe from them than we did from Great Britain, and of pig-iron Great Britain sent us only \$629,000 worth against \$439,000 worth, from the United States. That shows what protection is doing for the American iron industry; and it shows what it would do for Canada if we had it. But unfortunately, we have not got it.

The growls from the *Herald* evidently emanate from a disappointed representative of some British pipe foundryman. The cast-iron business in Canada, like many another enterprise, is practically in its infancy, and, deprived of such protection as the N.P. gives it, it could not be continued a day against the competition of not only Great Britain but of the United States, in which latter country the benefit of a permanent protective tariff, established long years ago as ours ought to have been, is amply shown in the fact that iron and iron products, including



cast-iron pipe, are produced and sold cheaper in that country than any where else in the world. When Canada adopted the N.P., there was but one concern in the country engaged in manufacturing iron pipe, and it was with a very small plant in a very languishing condition. To-day we have four or five establishments well equipped with every modern convenience and appliance, employing a large number of hands and with capacity to supply all the present needs of the Dominion. It is true these concerns are not producing pipe as cheaply as either Great Britain or the United States, but this is because they pay a duty on their imported pig. This duty is paid willingly, as it is intended to build up our native furnace enterprises which will eventually supply all our needs in that direction, and which will do more to enrich the country than anything of similar character, and which will after a while, by reason of competition and excellence of materials, give us cheap pig-iron and comparatively cheap pipe.

#### LET THERE BE LIGHT.

We are requested by the *Week* to assist it in obtaining light on the question as to whether the business of printing and publishing in Canada is not as much a Canadian industry as the manufacture of baking powders. It seems to think that it is, and that in the pursuance of that business those engaged in it in the printing and publishing of newspapers are justified in agitating for the removal of the duty on baking powders, because Canadian manufacturers of that article decline to advertise their business now that they have control of the home market, whereas before the duty was imposed American manufacturers advertised their goods quite extensively in Canadian newspapers. "And the papers suffer in consequence," plaintively wails the *Week*. We very promptly stand beside our contemporary in answering its question in the affirmative. We do think that the printing and publishing business is as much a Canadian industry as the manufacture of baking powders or anything else. But our position is on broader ground than that occupied by the *Week*, and the self-appointed organ of the Canadian Press Association, and that ground is that no Canadian industry is warranted in waging a war of extermination upon any other Canadian industry unless in resistance to active warfare from the other side and in self-defense. But the Canadian baking powder manufacturers have never waged any warfare against any Canadian newspapers, either singly or against their Association. They are peaceably and quietly engaged in an industry called into existence by the N.P., and they are doing just what the *Week* and the organ, and all the members of the Press Association, and all the other manufacturers, and the banks, and the dry goods men, and the grocers, and the lawyers and doctors, and every other honest man in Canada is doing, that is, attending to their business and conducting it according to their own ideas. What under the sun have they to do with the methods of American manufacturers? And why should their industry be singled out for destruction because they do not advertise their business any more than any other manufacturers who do not advertise? Why does the *Week* join hands with this organ, and with some other sore heads who affect to voice the sentiments of the Press Association on this subject, in attempting to bulldoze and

blackmail the baking powder manufacturers into spending from \$10 to \$1,500 per year with nearly every newspaper in Canada? But this is just what is being done, and it is not seemly in such a staid and respectable journal as the *Week* to engage in such business, or to uphold those who do. And right here it may be well to state that those who affect to pledge the Canadian Press Association to this line of action—to an effort to bulldoze and blackmail the baking powder manufacturers into paying money for advertising against their inclination and judgment, under no less a penalty than that of having all their influence exerted for the destruction of the industry, are not authorized to speak for all the members of that Association. No, not by a great deal. For the good name of Canadian journalism, and for the credit and good sense of the Press Association, we object to the statement being sent out to the wide world that any self-respecting Canadian journal assents to any such disreputable proposition. There may be some newspapers embraced in the Association which have no higher or more exalted ideas of their responsibility to the public than is herein indicated, but there are many, very many of them, which view the matter differently. We are thankful to say that there are journals in Canada, connected with the Press Association, too, which are not bloodsuckers. They would be pleased to display the business cards of the manufacturers of baking powders, and of other articles also, but they do not desire to destroy the industries of these manufacturers merely because they do not advertise their business. We hope that these suggestions will help our contemporary into the light it so much needs.

#### EDITORIAL NOTES.

AFTER all said and done his grandfather's hat seems to be of capacity sufficiently large to cover two terms of occupancy of the presidential chair, and this Mr. Benj. Harrison will probably discover.

MR. JAMES G. BLAINE, Dear Sir: Will you kindly inform us what it was that Mr. W. Shakespeare said about the vaulting ambition that fell on 't'other side; and was the tumble into the consommé?

MR. JAMES G. BLAINE, Dear Sir: Allow us to suggest to you that a Secretary of State bird in the hand is worth two unattainable presidential nomination birds in the thicket of a Republican convention.

THERE is nothing more unrealistic in life than his love's young dream of being president of the continent to which he belongs, and this fact is now painfully apparent to ex-Secretary of State James G. Blaine.

THE London, Eng., *Star*, anticipating the result of the forthcoming Democratic convention, says that the sympathies of all free traders should be with the champion of reform, Grover Cleveland. It is just such British free trade sympathy for the Democratic candidate for the American presidency that is a strong factor in the success of the Republican protectionist candidate, who, this year is named Benjamin Harrison.

His Majesty's Government have increased to £60,000 the grant of £25,000 originally made for the purposes of the British Section at the Chicago Exhibition. The Royal Commission for that Exhibition is therefore enabled to dispense with the revenue it was proposed to raise by charging the exhibitors in proportion to the extent of space occupied, and therefore all space in the British Section will now be granted free of charge.

THE English papers of all shades of political opinion voice a general sentiment of rejoicing over the defeat of Mr. Blaine for the Republican nomination for the Presidency, and this because of his extreme high-tariff views. It is our impression that the English papers do not elect American presidents, but such expressions as they are uttering regarding prominent Americans who are ultra protectionists, do much to elect ultra protectionist Americans to the highest place of honor in the gift of the American people.

THE chief motive power for the machinery at the forthcoming Columbian Exposition at Chicago will be supplied by a gigantic steam engine of the quadruple expansion type, and will be of between 3,000 and 4,000 horse power. Compared with this engine the big Corliss that was exhibited at the Centennial Exposition at Philadelphia is almost a dwarf. In 1876 the Corliss was considered one of the wonders of the exposition, but its builder rated it at only 1,400 horse power, or less than half of the power of that here alluded to.

Two Americans are here looking at the piano factory, with a view to making it a \$1 per day hotel.—Kingston correspondent of *Toronto Empire*.

CANADIAN piano factories, like sewing machine factories, appear to have got a blow in the eye from the N.P.—*London Advertiser*.

IF the *Advertiser* is not wilfully blind it knows that neither the Canadian piano factories or sewing machine factories have received any blow in the eye from the N.P. Canadian musical instruments are second to none made any where else, and the manufacturers of them, under the benign influences of the N.P., not only possess and occupy the home market, but are also large exporters, sending their instruments to every quarter of the globe.

A CURIOUS apparatus was recently exhibited at a meeting of the Royal Society, London. It is a heat engine, based upon the principle that nickel, magnetic at ordinary temperatures, becomes non-magnetic at a temperature of 572° Fahr. A disc of copper is suspended by two strings, so that it can swing like a pendulum. Mounted on the copper disc is a magnet which holds up a piece of nickel. An alcohol lamp placed below the disc heats the nickel until it becomes demagnetized and drops away, when the pendulum makes an oscillation. During this oscillation the nickel cools sufficiently to regain its magnetic character, and is caught up by the swinging magnet only to be passed again over the lamp, which causes it again to drop, and so on, the pendulum being thus kept in motion.

ACCORDING to the trade returns for the ten months of the fiscal year, recently issued by the Government it appears that

the export trade of Canada shows great development over the trade for the corresponding period of the previous year. The figures of the two periods are as follows:—1892, \$89,435,793; 1891, \$77,152,314; increase, \$11,983,479. The increase for the month of April alone was \$250,053. The imports also indicate a steady improvement, although, of course, the duty still shows a decrease. For the month of April the value of goods entered for consumption was \$7,975,200, as against \$7,660,456 in April of last year, or an increase of \$314,744. The imports for the ten months were valued at \$89,876,146, as against \$89,490,399, or an increase of \$385,747. The duty collected during the ten months amounts to \$16,059,722, a decrease of \$2,641,146.

THE trade in terne plate does not revive. The imposition of a duty of 12½ per cent. last summer seems to have more than paralyzed the trade in this plate—in fact, seems to have killed it. Roofers ceased to buy after the price was thus increased by one-eighth, and have since used other material, notably galvanized iron and shingle plate. Any other effect the duty has had is of little moment. It has not helped any domestic industry, and has benefited the revenue but slightly.—*Toronto Hardware*.

"Not helped any domestic industry." This is amusing. If the duty upon terne plates has paralyzed the trade in this foreign article—an article which will never be made in Canada unless we adopt the McKinley method—it is building up a most flourishing industry—the manufacture of metallic shingles and roofing plates. That is a domestic industry it has helped, and which helps our unobserving contemporary.

A FEW years ago the *Newcastle Morning Chronicle*, published at Newcastle, England, celebrated the hundredth year of its existence, and as a souvenir of the occasion, reproduced an exact duplicate of its original issue, which was folded in with its current edition, and sent out to the public. In the afternoon of that day an elderly couple called at the *Chronicle* office, and stated that they were just from the country to answer an advertisement which had appeared in that morning's paper, requiring the services of a man and his wife to work on a farm. As they did not have the paper with them, and as the attending clerk could not recall the circumstance, search was made through the paper then on file, and sure enough it was found in the wants column of the *Chronicle* of a hundred years before. The elderly couple did not obtain the desired situation, but the fact that they had endeavored to secure it, illustrates the enduring value of printer's ink.

THERE is some little difficulty at the present time in getting grain to fill all the steamships that are in port, and this despite the fact that there is lots of grain in store at Montreal. On this account freights are rather dull. The principal reason for the difficulty lies in the fact that the English markets are in a bad condition, and shippers are therefore holding their grain in the hope of some improvement. There are also a greater number of steamships in port at this time than probably ever before at this season of the year, so that more grain is required to fill them.—*Montreal Trade Review*.

THE free trade papers delight in telling us that unless we import foreign goods we cannot hope to export domestic products, but according to the *Trade Review* we find the port of Montreal crowded with ships which cannot obtain outward

cargoes. Of course they came in loaded with foreign merchandise—manufactured articles, the products of foreign labor, displacing an equal quantity of goods which might have been made in Canada.

SPEAKING of the probability of Mr. McKinley being called to be Secretary of State in President Harrison's Cabinet, vice Mr. Blaine, the *Toronto Globe* says: "Both are vehement protectionists, and a protectionist is debarred by his creed from loving his neighbor." St. Paul spoke of a man as rejecting the faith and being worse than an infidel who provided not for his own household; and protection is carrying out St. Paul's doctrine on a national scale. If Mr. Harrison were president or ruler of the Universe, it would be his duty to see that no discrimination was made against any section, or in favor of any section of it. But not being the ruler of the Universe, but rather President of the United States, his duty is narrowed down to looking after the interests of the people of that country. His creed does not debar him from loving his neighbor, but it does impel him to look first after the welfare of those of his own household, in other words, the people of the United States.

THE *Montreal Trade Review* has an excellent editorial on "Cotton Waste" in which it is shown that the manufacture of this by-product of Canadian cotton and yarn mills into many useful articles of commerce would be in a flourishing condition if the article were liable to duty instead of being upon the free list as it is and always has been. It shows that the consumption of waste in Canada amounts to over 4,000,000 pounds per year, that the imports from the United States last year amounted to 3,800,000 pounds; that Canadian mills have capacity to supply about one half this latter named quantity, and that, owing to the overproduction of American mills, the manufacturers in that country slaughter their surplus product in Canada at about one cent per pound below what they demand for it from American consumers. If a duty were imposed upon this foreign product it would encourage the building up of a valuable industry in Canada engaged in preparing for market the waste from our own mills, and it would not increase the cost to the consumers.

A WASHINGTON despatch of recent date says: "Up to date the Louisiana sugar planters have received in all, bounty amounting to \$5,625,000." Another despatch says that the payments of sugar bounty under the McKinley Act on account of the production for the present fiscal year have been practically completed, and amount to about \$7,500,000. The estimate for the ensuing fiscal year is \$10,000,000. The maple-sugar farmers of Vermont are not so much delighted with the bounty of two cents a pound as they imagined they would be. "It costs them," says a New England paper, "more trouble to get out the necessary Government license and more time to get the product approved and the bounty money out of the Treasury than, generally speaking, the sum they finally obtain is worth." But the grievance is much more serious in another way. Sugar being now admitted free of duty the Canadian maple sugar growers have come into competition with the Vermonters and are covering the market in increasing numbers. There have been ten carloads of maple sugar imported

from Canada since the bounty law took effect where there was one carload before.

A BILL has been reported by the United States Senate Committee on Foreign Relations, which is intended to carry into effect the recommendations of the President in his last annual message regarding federal control of prosecutions for crimes committed in violation of treaty obligations of the United States. This bill provides that the federal courts shall have jurisdiction of crimes committed in any State against subjects of powers with which the United States has treaty relations. The need of legislation of this kind was clearly shown at the time of the controversy with Italy over the New Orleans incident, and the bill should be passed as speedily as possible. The controversy with Italy has been happily concluded, but the question involved is one which may occur at any time, and the Government should have power commensurate with its responsibility in the premises.—*Bradstreet's*.

This is a very nice arrangement in favor of foreigners, but what about the punishment of crimes committed by Southern Kuklux Democrats upon citizens of the United States who happen to be of African descent? Italy was ready to fight in defence of the rights of Italians residing in the United States, therefore the President insists on having a law which will protect Italians and all other foreigners against such butchery as was practised at New Orleans, but who is there to intervene between a negro suspected of crime and the lynching which immediately follows?

THE *London Advertiser* has become a touter for Henry George's book on "Protection or Free Trade," and insists that all its friends should get and read it. In this book Mr. George advocates the entire ownership of the land by the government, individuals to be deprived of any rights they may have therein. This is interesting for the farmers, for in it they may see just what such cranks as the *Advertiser* propose for them. "No foot of land shall they possess, nor cottage in the wilderness, the poor wayfaring man." An interesting feature of this free trade touting business is that this Henry George book which the *Advertiser* is so anxious to have placed in the hands of its friends is that the cost of it is only one cent per copy, and in this way: In the United States House of Representatives, beginning on March 11th last, and continuing on several subsequent days, the book was interpolated in speeches made for the purpose by a band of free trade conspirators who desired in this way to have it published in a very cheap edition at the expense chiefly of the United States Government. The parties to this conspiracy were the following named honorable (?) members of the United States Congress: Hon. Tom L. Johnson, of Ohio; Hon. W. J. Stone, of Kentucky; Hon. Jos. E. Washington, of Tennessee; Hon. Geo. W. Fithian, of Illinois; Hon. Thomas Bowman, of Iowa, and Hon. Jerry Simpson, of Kansas. There did not seem to be enough originality of thought in any of the Democratic free trade members of the House to say what they desired to have said as well as Mr. George had already said it. Of course all self-respecting Canadians will understand that when they purchase one of these Henry George books for a cent, the cheapness of it is largely at the expense of the United States treasury.

THE *New York Tribune* and the *Toronto Globe* are at one regarding what the United States should demand and Canada

concede in the matter of trade relations between the two countries. These relations, they say, should be on the basis of Canada admitting American manufactures into our market free in return for the free admission of our manufactures and natural products into the American market, whilst maintaining duties against the manufactures of Great Britain. "The arrangement," the *Globe* tells us, "would bear hard upon the merest fraction of British exports, whereas it would give us an infinitely larger market for our bona-fide factories, temper the arrogance of the exotic combines, and afford the great natural industries a chance for development." Both of these journals may assure themselves that no such trade arrangement as those they suggest will be made, for the people of Canada are most decidedly against it. They will never agree to discriminate against the mother country. If the *Globe* is not really talking through its whiskers, its words meaning absolutely nothing, it would be interesting for it to explain which are and which are not our "bona-fide factories." Is an establishment for building steam engines, for instance a bona-fide factory? If yes, then the *Globe* tells our engine builders that when they desire protection they are like children crying for something which is not suitable for them, and that they really don't understand what their interests are; and this is really very modest of the *Globe*. It would also be interesting to learn just what is meant by "natural industries." What are natural and what are unnatural industries? Is grinding wheat into flour a natural industry? If it is, the millers desire protection, and think that their industry would be ruined by free trade with the United States, yet the *Globe* tells them that free trade would give them a chance for a larger development. The *Globe* is insulting the intelligence of our "bona fide factories" when it gets off such stuff.

SOME time ago a mining prospector sent to the United States geological survey some specimens of nickel ore that he had found in Oregon, just where does not appear. The pieces of ore seem like half-rounded pebbles washed down and ground together by the action of water. They had been at first supposed to be meteorites and of no particular value. But it was found that they were scattered in great quantities over the bed where the prospector had discovered them. More specimens were tested and found to be 62 per cent. pure nickel, the rest being iron, except 10 per cent. of stony matter. Afterward a government mining engineer examined the bed whence the specimens had been taken. Nickel is found to some extent in the Lake Huron and Superior region, also in several localities in Pennsylvania, in Cornwall, England, and in Spain. These are the main sources whence the world's supply is drawn. The impression conveyed to the geologists who examined the nickel field in Oregon was that the pebble-like bits of ore had been broken off from some great mass or vein of nickel rock and washed down by torrent and current into the bed in which the prospector found them. But where is this mass of nickel bearing ore? That is the quest of some future prospector.—*New York Mercantile and Financial Times*.

An item to this effect went the rounds of the American press several weeks ago, and this journal endeavored to verify the truth of the finding of this supposed Oregon deposit by communicating with the chief of the United States geological survey on the subject. Mr. Day, of the Geological Bureau, stated that his bureau had no definite information regarding it, and referred to a gentleman in Oregon who was said to be interest-

ed in the "find." Application to him resulted in the statement that such pebbles of nickel ore had been found, but he declined to mention the locality or extent of the find. It is rather amusing to notice the style of our New York contemporary in alluding to the largest and most valuable known deposits of nickel ore in the world—those in the Sudbury district of Canada, as being "in the Lake Huron and Superior region." The nickel ore now being mined there exceeds in quantity and value that of all the rest of the world combined.

At a recent general meeting of the Manufacturers' Club, of Philadelphia, the Secretary, Mr. C. H. Clark, in his report, speaking of the tariff and its effects, said:

The tariff law passed by the last Congress has now been in operation for about eighteen months. A sufficient time, therefore, has elapsed in which to make a fair estimate of its influence upon the industrial forces of the United States. The returns show that it has transferred to this country the manufacture of large quantities of materials for which, heretofore, we have been dependent upon European sources. It has permitted idle mills and idle machinery to go into operation; it has given employment to thousands of men and women who otherwise would have been unemployed. It has enabled capitalists to start in this country new industries with good promise of successful results. It has not in any way diminished the volume of our foreign trade, because our imports, as well as our exports, are larger than they were at any preceding period; and the reciprocity clauses in the Bill have given to us, in Southern markets, exclusive privileges which permit us to enjoy great advantages in that direction; and in the meantime, the fact that there has been no advance in prices in any important direction, supplies proof that no injury has been inflicted upon any considerable body of domestic consumers. During the present year the American people will be called upon to decide whether the measure and the general large policy which have produced these highly important consequences shall be repudiated and laid aside, or whether the nation shall continue to have, in increasing measure, the advantages already obtained by it from a policy instituted by the founders of the Government—a policy which has been in operation without interruption during that period of thirty years since 1860, in which the country has made advancement in prosperity absolutely without precedent in the history of the world.

The American tariff affords the sort of protection that protects. There are many features of it which were intended to bear with unjust severity upon Canada, and there are some features of it which would not be applicable to the necessities of this country, but on the other hand, if our tariff were arranged somewhat after that style, without doubt we would give employment to thousands of our men and women who might otherwise be idle, and enable capitalists to start new industries.

THE *Toronto Globe* occasionally says a good word in favor of some Canadian industry. In a recent editorial review of "The State of Trade," speaking of our inland fishing interest, it said:—

A peculiar state of affairs exists at present with regard to a portion of our inland fisheries. The McKinley Act provides that all fish caught in Canadian waters by American nets and fishermen shall be admitted to the United States free of duty. It is a fact that all the fish at the ports along the Georgian Bay from Killarney to Wiarton by an ingenious arrangement fall into the hands of a Buffalo concern, and the manner in which they secure this monopoly of an enormous amount of

Canadian fish at these points, as well as at a good many others, to the exclusion of Canadian dealers, is by an arrangement with their Canadian agents who make a nominal purchase of the boats and nets of the fishermen and further represent themselves as American citizens in order to meet the requirements of the Act. The consequence is that, while the people in Buffalo are abundantly supplied with Canadian fish, our dealers have to ask permission of the Buffalo company before they can get one pound of Georgian Bay fish, because the fishermen, under their agreement with the Buffalo concern, are not allowed to sell the product of their nets to Canadians. The market in Canada is not large enough to consume all the fish caught in our inland waters, and Canadian dealers cannot therefore be as good customers of our fisheries as the Buffalo people, consequently no arrangement can profitably be made by our dealers with the fishermen similar to that made by the Buffalo dealers. The remedy suggested for this is a very simple one. It is to place an export duty on fish so as to make it equally advantageous for those who control the product of the net to sell it in Canada or Buffalo. An immense sum of money is every year expended on the propagation of our fisheries, and it seems only fair that the consumer should get some return for it. Instances are known in which Canadian dealers, in order to secure supplies of Canadian fish, have had to purchase them in the United States and pay a duty to the Dominion Government to bring them back here.

The suggestion to place an export duty on fish is a good one and should be adopted by the Government. That is, the duty should be levied upon fish caught in Canadian waters by American fishermen, or sent to the United States in other than Canadian vessels. Impose the duty.

WHILE we do not deny the propriety of the new organ of the Canadian Press Association endeavoring to more thoroughly unite the printers and publishers of Canada in their efforts to increase their revenues, as *The Week* seems to think we do, we are free to remark that all struggles in that direction should be in accord with that eternal fitness of things which would prevent sacrificing the general good to personal gain. We regret that *The Week* becomes perplexed in endeavoring to comprehend this simple proposition, as it says it does, and that it cannot understand that a newspaper is not justified in endeavoring to subvert and destroy a great principle of government merely because some certain business men do not deem it essential to their interests to advertise their goods in its columns. But that is the position our contemporary occupies. It thinks that because before there was a heavy duty laid on imported baking powder the American manufacturers of the article paid large sums of money to Canadian newspapers for advertising, and that now these foreigners are shut out of the Canadian market, the home manufacturers decline to advertise their products as the Americans had done, these newspapers are justified in exerting whatever influence they may possess in breaking down the N.P. to the end that the American manufacturers may again possess the market and renew their advertising contracts. We cannot view this as a specimen of anything but the most sordid avarice. It is all right for a paper to advocate the doctrine of free trade if it does it on principle, or to be a mugwump, without principle, or with principles of such transcendental and ethereal airiness as to lift it so high above the reach of ordinary mortals as to be of no practical value, but where the principle (?) leads to a desire for iconoclasm and destruction because of lack of advertising pat-

ronage, we object. We can respect an honorable foe be he ever so valiant a fighter, but those journals which wage warfare from entirely mercenary motives are not of that character. If the loss of a few dollars worth of patronage would make them antagonize the N.P. perhaps the bestowment of a few dollars would purchase their support of it. But it would be valueless.

THE beet root sugar question was up in the Legislature on Saturday and brought out opinions both for and against the Government bounty to growers of beet root. Beet root growing is the fad of the day with some who desire to improve the condition of agriculture in the province, and between their claims and the assertions of those who oppose them it is not easy for a layman to arrive at a just conclusion. What is sure, however, is that many mistakes have been made in connection with this industry in the past and that the price which is asked for re-establishing it is a very heavy one. The provincial bounty of fifty cents a ton for raising beets is the least part of it; the Federal Parliament is also asked to give two cents a pound bonus for the manufactured sugar. It would appear on the surface that those who do not raise beets were to pay more for the industry than those who do will benefit.—*Montreal Gazette.*

This is queer language from a journal which professes so much anxiety for the welfare of the farmer. There are those who desire to improve the condition of agriculture in Quebec, and their investigations have shown them the cultivation of the sugar beet and the manufacture of it into sugar might be made a most important and valuable industry, as it is in several European countries, and is fast becoming in the United States; and because these investigators have reached this conclusion the *Gazette* speaks of the idea as a fad. And then, if the *Gazette* finds it difficult to arrive at a just conclusion regarding the matter, it is because its eyes are wilfully closed to such indisputable facts as Prof. Saunders gave in his recent report to the Government, where he showed that the soil and climate of Canada were well adapted to the cultivation of the beet. The *Gazette* tells us that the price asked for establishing the industry is a very heavy one. We do not think so, considering that it would enable us to produce at home an article of prime necessity for which we pay millions of dollars abroad every year. Our present sugar duties enables a few Montreal refiners to pocket about \$750,000 a year more than what an equitable tariff would allow them; and it would not be any more unjust to the country to give an equal amount to the farmers as bonus for the production of beet sugar. But there would be no injustice whatever in doing this, while it is most palpably unjust to allow the Montreal refiners to squeeze \$6 per ton more out of the sugar consuming public of Canada, than what the McKinley tariff allows the American refiners to do in the United States. The sugar duties should be adjusted, and the beet sugar industry should be established.

STATEMENT showing the principal articles of farm produce imported into and exported from the Dominion of Canada during the undermentioned fiscal years ending June 30th, as per Trade and Navigation Returns:—

	Quantity Imported.	Quantity Exported.	Net Exports.	Net Imports.
1887-88.				
Wheat.....Bush.	5,321,717	7,299,694	1,977,977	
Wheat flour.....Brls.	63,270	355,883	292,613	
Wheat and flour..Eq. Bush.	5,606,342	8,000,942	3,294,600	

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Barley.....Eq. Bush.	6,856	9,370,158	9,363,302	
Barley malt....."	35,326	193,465	158,139	
Peas....."	7,664	2,164,069	2,156,405	
Beans....."	18,672	66,919	48,247	
Oats....."	46,923	566,721	519,798	
Oatmeal.....Brls.	1,117	14,369	13,242	
Indian corn.....Bush.	3,401,910	1,203,195		2,228,721
" meal.....Brls.	134,093	787		133,306
Rye.....Bush.	75,257	26		75,231
Bran and mill feed.....\$	26,980	61,384	37,404	
Provisions: Butter, cheese, meats, eggs, etc.....\$	2,449,591	13,664,521	11,214,933	
1888-89.				
Wheat.....Bush.	1,724,985	1,785,349	60,364	
Wheat flour.....Brls.	279,371	156,360		123,011
Wheat and flour..Eq. Bush.	2,982,155	2,488,744		506,589
Barley....."	6,852	9,948,217	9,941,365	
Barley malt....."	42,897	131,821	88,924	
Peas....."	8,258	1,982,853	1,974,595	
Beans....."	13,103	303,383	290,280	
Oats....."	429,748	165,480		264,268
Oatmeal.....Brls.	1,327	63,731	62,404	
Indian corn.....Bush.	7,349,729	4,386,259		2,963,470
" meal.....Brls.	154,348	1,170		154,178
Rye.....Bush.	102,598			102,598
Bran and mill feed.....\$	41,114	72,080	30,966	
Provisions: Butter, cheese, meats, eggs, etc.....\$	3,246,649	12,700,264	9,453,615	
1889-90.				
Wheat.....Bush.	2,844,929	2,580,801		264,129
Wheat flour.....Brls.	185,458	149,959		35,499
Wheat and flour..Eq. Bush.	3,679,490	3,255,617		423,873
Barley....."	12,550	9,975,911	9,963,361	
Barley malt....."	46,327	259,969	213,642	
Peas....."	14,154	2,488,142	2,473,988	
" split....."		239,971	239,971	
Beans....."	11,623	185,806	174,183	
Oats....."	967,252	846,895		113,357
Oatmeal.....Brls.	1,528	89,122	87,594	
Indian corn.....Bush.	9,959,815	6,624,746		3,335,069
" meal.....Brls.	189,198	1,895		187,303
Rye.....Bush.	68,800	504,067	436,167	
Bran and mill feed.....\$	124,401	87,153	37,248	
Provisions: Butter, cheese, meats, eggs, etc.....\$	3,553,370	13,799,411	10,246,041	
1890-91.				
Wheat.....Bush.	2,571,493	4,539,363	1,967,870	
Wheat flour.....Brls.	65,884	313,280	247,396	
Wheat and flour..Eq. Bush.	2,867,971	5,949,123	3,081,152	
Barley....."	197	4,892,334	4,892,137	
Barley malt....."	38,933	121,493	82,560	
Peas....."	8,592	2,567,484	2,558,892	
" split....."		186,801		
Beans....."	9,422	324,065	314,643	
Oats....."	134,401	345,647	211,246	
Oatmeal.....Brls.	1,445	11,988	10,543	
Indian corn.....Bush.	6,253,565	3,554,255		2,699,310
" meal....."	125,760	1,897		123,863
Rye....."	40,578	379,912	339,334	
Bran and mill feed.....\$	97,247	163,788	66,361	
Provisions: Butter, cheese, meats, eggs, etc.....\$	2,452,476	13,311,090	10,858,614	

Our Little Ones for June (Russell Publishing Co., Boston), has an appetizing bill of fare for its juvenile constituency. Each story has an admirable illustration, and with fifteen of these sketches, each having its own feature of interest, there is no end of entertainment. "A Little Great Grandmother," "A Fish that Plays Leap Frog," "The Strawberry Boy," "A Talk on Peacocks," are some of these excellent features.

BRET HARTE'S young daughter, Miss Jessamy Harte, will make her literary debut in the July Ladies' Home Journal with a most entertaining description of "Camp Life in the Adirondacks," in which it is claimed every evidence shows itself of inherited literary tendencies not unlike those evidenced in Bret Harte's earlier work. Miss Harte is a girl still in her teens, and has artistic as well as literary proclivities, as one of the illustrations accompanying her article shows.

SEVENTEEN portraits of American anthropologists will accompany Prof. Frederick Starr's article on "Anthropological Work in

America," which is to open *The Popular Science Monthly* for July. The article shows that both in quality and amount the work of Americans in this field compares favorably with that of Europeans, described by Prof. Starr in an earlier number. The fifteenth article in the series on the "Development of American Industries since Columbus," is on "Leather-making," and, like all in the series, is fully illustrated. The author is Mr. George A. Rich, of the *Boston Journal*. A stimulating article on present educational problems will be contributed by Mrs. H. M. Plunkett. It is entitled "Kindergarten—Manual Training—Industrial Schools," and embodies some principles of training children that have not yet been duly appreciated.

*The Illustrated World's Fair*, with its June issue, closes the first year of its existence. The Director-General of the World's Columbian Exposition contributes the leading article, and a beautiful sketch by Col. S. F. Norton accompanies the portrait of that widely known orator and editor. A feature of the issue is a profuse illustration of the sculptural groups which are to adorn the Administration Building, and a novelty is a page of humorous World's Fair Cartoons. The panoramic scenes, particularly one showing the Government Building, and another depicting the Northern Lagoon, are among the happiest hits of this remarkable publication. Ex President Hayes has contributed an article for the July issue, and Franklin E. Denton's great poem, on which he has long been at work, will soon be published. The Dockery Report to Congress, the New York Visit, the Action of Congress, Actual Progress to June 11th, and the Horticultural Rules fill many pages, each of which, however, is richly illustrated with copper half-tone pictures of great beauty and novelty. J. N. Halligan, General Manager, McVickar's Building, Chicago. \$2.50 a year; twenty-five cents a copy. Original subscribers should now renew their subscriptions, as otherwise their names will be dropped from the list.

*The Dominion Illustrated Monthly* for June shows many attractive and interesting features. Both from a literary and pictorial standpoint it is up to the mark of previous issues. Rev. F. G. Scott contributes a short story called "The Bible Oracle," dealing with a remarkable incident which occurred in the Eastern Townships many years ago. Mrs. S. Frances Harrison gives an excellent paper on "Music and Musicians in Toronto," illustrated with portraits of the leaders in that art. Another prominent Toronto litterateur, Mr. Frank Yeigh, in "A Century of Legislation," presents an admirable historical sketch of the men and events connected with the Parliaments of Upper Canada from the initial Legislature summoned by Gov. Simcoe in 1792 down to the present. The series of papers on Canadian amateur sport is continued, this month's subject being "Canoeing;" the paper deals with the development of this health-giving pastime from the primitive "dug-out" to the trim and well-fitted canoe now in use; the illustrations are exceptionally good. The science of folk-lore, so much talked about just now, is well treated by Mr. John Reade, whose paper, "Opportunities for the Study of Folk-Lore in Canada," is bound to awaken much interest in a country so rich in legend and tradition as this is. "McLarty's Kicking Bee" is an amusing story of country life in Ontario, and the quaint customs formerly in vogue there. Miss MacLeod writes on Winchester Cathedral and School, and gives a most entertaining description of a visit to these historic and beautiful places. Nearly all the articles are illustrated, adding much to their interest. The extra supplement is a fine half-tone engraving of the late Hon. Alex. Mackenzie, which will be greatly appreciated; it is well worth framing. Canadians of all classes should support this magazine. Price, \$1.50 a year. The Sabiston Lithographic and Publishing Company, of Montreal and Toronto, are the publishers.

*History of the Manufacture of Iron in All Ages, and Particularly in the United States from Colonial Times to 1891.* Also a Short History of Early Coal Mining in the United States, and a Full Account of the Influences which Long Delayed the Development of all American Manufacturing Industries. By James M. Swank, Secretary and General Manager of the American Iron and Steel Association for Twenty Years, from 1872 to 1892. In one volume, royal octavo, 574 pages, large type, good paper, well printed, best cloth binding, gilt title. Second edition, thoroughly revised and greatly enlarged. Sold only at the office of the American Iron and Steel Association. Price, Seven Dollars and Fifty Cents. Regarding this most valuable book Mr. Swank says:—"During the whole of the year 1891 all of my time which could be spared from other duties was devoted to a thorough revision and amplification of my *History of the Manufacture of Iron in All Ages*, the first edition of which, embracing 436 pages, appeared in 1884. I now offer to iron and steel manufacturers, the officers



PRESIDENT,  
W. K. McNAUGHT.

SECRETARY,  
J. J. CASSIDY.

TREASURER,  
GEORGE BOOTH.

# The Canadian Manufacturers' Association.

THE OBJECTS OF THIS ASSOCIATION ARE:

To secure by all legitimate means the aid of both Public Opinion and Governmental Policy in favor of the development of home industry and the promotion of Canadian manufacturing enterprises.  
To enable those in all branches of manufacturing enterprises to act in concert as a united body whenever action in behalf of any particular industry, or of the whole body, is necessary.  
To maintain Canada for Canadians.  
Any person directly interested in any Canadian manufacturing industry is eligible for membership.

CORRESPONDENCE WITH MANUFACTURERS REQUESTED.

Office of the Association: Room 66 Canada Life Building,  
KING ST. WEST, TORONTO

J. J. CASSIDY, Secretary.

TELEPHONE 1274.

of public libraries, and others, a second edition of this work in a handsome volume of 574 pages, including 132 pages of historical details not found in the first edition. The new book contains a complete table of contents and a full personal index. A copy of the table of contents, printed on thin paper, will be sent if requested. From an examination of this table the general scope and character of the History may be correctly inferred. The whole book has been printed from new type. This second and last edition has been prepared because much new information relating to the early iron history of the United States and of other countries has come into my possession since 1884, and because seven succeeding years of great activity in the development of the world's iron and steel industries have been productive of important statistical and other results which are eminently worthy of preservation in a condensed and permanent form. In the first edition there are forty-eight chapters. In the present edition there are sixty-three chapters. Among the entirely new chapters of the second edition is one relating to the early discoveries of coal in the United States and another detailing the connection of the Washington and Lincoln families with the manufacture of iron in colonial times. All accessible statistical information relating to the world's production of iron, steel, coal, and iron ore has been brought down to the latest possible periods. The statistical features of the second edition are more prominent than the same features of the first edition, but the second edition is chiefly commended to all who receive this circular because it is much fuller in historical details than its predecessor. The second edition will not be placed on sale in any book stores. The book will be forwarded promptly, encased in a paper box, at Mr. Swank's cost for expressage or postage, and care will be taken that it be received in good condition. It is now ready for delivery.

## COTTON WASTE.

The development of cotton manufacturing in Canada since the adoption of the National Policy has been very great. Indeed this growth was so rapid that it has resulted in almost a surplus of manufactured goods, terminating in a cutting down of profits to such an extent in some cases as seriously to injure the career of individual mills. The recent amalgamation of the various cotton manufactories has had its origin chiefly in the endeavor to place the industry upon a more stable basis, and so far as this is accomplished without oppressing the consumer, the change may be regarded as beneficial.

In 1872 only 2,444 pounds of raw cotton was imported, against 33,456,015 in 1890, while the importation of the manufactured article decreased during the same period from \$10,182,154 to \$3,991,795, indicating very plainly the gigantic strides taken by the cotton manufacturing industry of Canada. There is, however, one department of the cotton trade which has not increased proportionately to the rest. Wherever the manufacture is carried on there is always a portion of waste material, especially in mills manufacturing yarns, and the cotton waste industry is becoming in Canada a more and more important adjunct of the general manufacture; and would already have attained considerable dimensions but for the fact that it has hitherto been constrained to struggle forward without the protective regis of the tariff.

Cotton waste has an infinitude of uses, chief among which, per-

haps, is its utility among machinists and railroad men, all of whom consume large quantities annually. The consumption of the waste in Canada alone amounts to over 4,000,000 pounds yearly. The uninitiated will probably be surprised to learn that considerable skill and care is necessitated in preparing this article for the market and special machinery is requisite for cleaning, tearing, and blending it in its various grades. We do not speak with certainty, but we believe that the first mill for making the various grades of this waste was established in Montreal not a decade ago, by a gentleman from England, whose mills have since passed into the hands of a local company. During the early days of the industry, as now, cotton waste was upon the free list, and manufacturers courageously entered into competition with producers in the United States for the Canadian trade. In recent times, however, the manufacturers in the United States have awakened to the realization of the excellence of the Canadian article, and have endeavoured to swamp the home manufacturer by making Canada the dumping ground of their surplus product, which they sell at one cent per pound under their American quotations, whenever there is a demand for any large quantity. Last year 3,800,000 pounds of waste was imported, valued at \$274,000, and our native manufacturers found it, in many cases, impossible to compete for the trade, although our mills are capable of supplying at least 1,600,000 pounds per annum.

It seems to us desirable that the tariff should be so far amended as to at least place the Canadian producer on a footing of equality with the foreign competitor, and so prevent this country from being made a slaughter market. The theory of protection, if correct for one product of cotton, is assuredly properly applied to another, and more especially is it advisable in the interest of an industry already established, but languishing under the fierce sun of undue foreign competition. We do not desire to drive United States or British cotton waste entirely from the market by a prohibitive tariff, but we do urgently desire for this branch of Canadian trade a fair protection, sufficient to encourage it and bring it to a state of efficiency comparable with that of the allied branches.—*Montreal Trade Review.*

THE John Morrow Machine Screw Company, Ingersoll, Ont., have sent in their new standard illustrated price list, having reference to the various lines and styles of goods manufactured by them. In presenting this catalogue the company state that while they have illustrated by exact cuts most of their leading standard lines, they do not claim to have illustrated or even named more than a very limited number of the great variety of special forms of screws and special milled work which they are constantly producing. They are prepared to manufacture all classes of milled screws and special milled work from iron, steel or brass, all their products being made from the very best materials. They carry stocks of standard goods which enable them to make very prompt shipments of such orders. Regarding the forms of screw thread used by this concern, we are informed that they are of three varieties:—the common sharp V thread having its sides at an angle of 60 degrees to each other and perfectly sharp, top and bottom; the United States standard (Sellers') which also has its sides of the same angle, but has its top cut off to the extent of one-eighth its pitch, and the same quantity filled in at the bottom; and the Whitworth thread, having its plane sides inclined to each other at an angle of 55 degrees with both periphery and root of thread rounded. Orders should state which of these styles is desired.

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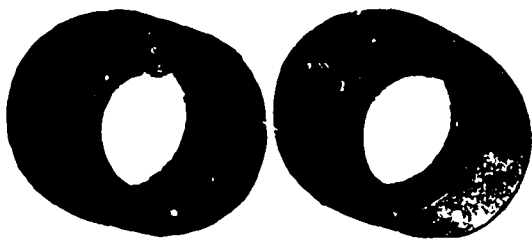
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SEAMLESS TUBE RUBBER HOSE.

The accompanying illustration shows the difference between the methods of manufacture of the new patent seamless tube garden hose manufactured by the Canadian Rubber Company, Montreal and Toronto, and the old style lapped tube hose. Some of the contrasts in the construction and relative merits of these two styles of hose are as follows: The claim is made that a lap hose cannot be made perfect—that when so made there is a seam extending the entire length, which is liable to open under pressure and admit water to the duck. This style can be known by the uneven thickness of the tube, and by compressing the ends the crack can be discovered. On the other hand, seamless tube hose is uniform in thickness, having no seams, no cracks, no defects; water can not



get through the rubber to weaken and rot the duck and cause it to burst under light pressure. Being made by machinery there is no variation in the excellence of it. The tube being run like lead pipe through a die, there is no liability to defects; and every section of it is subjected to pressure test before leaving the factory. It costs more to manufacture in this than in the old way, but producing it in very large quantities the manufacturers inform us that they sell it at the same price as ordinary hose. During the past year over two million feet of this hose was sold, distributed over Canada and the United States. The manufacture of this hose by the Canadian Rubber Company is protected by letters patent, and the article bears the company's trade mark, by which the genuine may be known. Samples of it will be sent on application.

SAFFORD RADIATORS.

The accompanying illustration is of a Safford dining room radiator, manufactured by the Toronto Radiator Manufacturing Company, Toronto. The utility and beauty of this article of household furniture commends itself at a glance. In speaking of the radiators manufactured by this company attention is called to that salient feature, the joints or connections. Experience has proven, they say, that a screwed joint is preferable to any other, and consequently the company have contracted to manufacture under license this well known patented radiator, the peculiar feature of which consists of a right and left screwed nipple, by means of which each loop is drawn firmly together, and by this arrangement the radiator becomes equal to and as rigid as any box coil. No bolts or packing of any description are used in their construction, so that both the water and steam radiators may easily be taken apart, changed in size, or repaired without difficulty.

It is not necessary to undertake to describe here the varieties or to mention the number of sizes in which this company produce these goods. Our desire is to bring the fact to the attention of our readers that these radiators are being manufactured by this company, supposing that any who may be interested will communicate with the company, who will take pleasure in sending their illustrated catalogue containing descriptions, sizes, prices, etc. Suffice it to say that they are made to meet any and every demand.

The town of Gladstone, Man., will give a bonus of \$5,000 towards the erection of a roller flour mill at that place.

A NOVEL POWER PLANT.

The Willimette Steam Mill Lumbering and Manufacturing Company, of Portland, Ore., is running a system of transmission of power that is really interesting. The company has the power plant erected on the shore of the Willimette River, while out in the river itself sits the mill, resting on piles, and the power is carried from the generators to the mill, a distance of some 200 feet.

The power plant consists of a two story brick boiler house, containing a battery of twelve horizontal flue boilers and two 1,500 horse Dewellyn heaters. The engines rest upon foundations of solid concrete 24 feet deep and 32 wide by 40 long, and having six granite capstones aggregating 80 tons weight.

Two improved Wheelock engines with 32-inch cylinders, 60-inch stroke and turning 70 revolutions per minute are used. The crank shaft is 20 inches diameter and 19 1/2 feet between the centres. The main bearings are 30 inches in length. The fly wheel is built in ten sections, weighs about 40 tons, and is 24 feet diameter, with a 66-inch face, the latter being grooved for 33 1/4-inch ropes.

Two endless manilla rope drives are taken from this wheel to jack-shafts 35 and 45 feet distant. One of these ropes has 16 and the other 17 wraps. The driven pulleys in both cases are 76 inches in diameter, and are keyed to 16-inch shafts running 267 revolutions per minute. A 600-horse transmission is arranged from the end of each of the jack-shafts and carried to the mill. Next to each jack-pulley is situated a 600-horse friction clutch coupling, to allow of the mill transmissions being thrown off if desirable.

The drivers are situated at the extreme end of each jack-shaft, and in one case drive the planer countershaft 177 feet distant, and in the other the circular saw centre 289 feet from the driver. The driven shafting being in both cases at right angles with the driver, each transmits 600 horse power with three strands of 1 1/2-inch rope at 7,550 feet per minute; the drivers, 108 inches in diameter, running at 267 revolutions per minute, and each driven pulley 98 inches in diameter at 320 revolutions per minute. The drivers and driven pulleys are each provided with nine grooves, six turns being made about compound winders for greater adhesion. The idlers and sag carriers have three grooves each, and the winders one groove.

The fuel used is sawdust, and is carried from the mill to the boilers by means of a chain conveyor.

We are in receipt of a notice from Guelph, Ont., to the effect that the partnership previously existing in that city between Messrs. Charles Auld, Jr., and A. R. Woodyat, was dissolved on June 1st inst., and that the business will be continued by Mr. Woodyat under the name of A. R. Woodyat & Co. This well known concern are engaged in the manufacture of lawn mowers, washing machines, wringers, etc.





# INVENTIONS.



This department of THE CANADIAN MANUFACTURER is devoted to the interests of inventors, of patentees of inventions, and of manufacturers of patented articles. Patents are granted in Canada for fifteen years, the Government fee for which may be paid by instalments. Arrangements have been made by which the issue of all patents by the Canadian Patent Office and all renewals and extensions thereof will be promptly noticed in this department, and a brief description thereof given. Enquiries on these subjects are invited and will receive prompt attention. No charge will be made for answers by mail when return postage is sent. Information given free regarding patent laws and the obtaining of patents in Canada, United States, Great Britain and all foreign countries. Claims for inventions, as embodied in Letters Patent, also the illustrations of them, will be inserted in this journal at moderate charges. The attention of manufacturers is specially directed to the opportunities for lucrative business which may be acquired by close observation of whatever may appear in this department.

Patent

Counsel

## CANADIAN PATENTS.

The following patents have been issued from the Canadian Patent Office from May 18 to June 1, 1892, inclusive.

Information in regard to any of these patents may be had free on application to THE CANADIAN MANUFACTURER, or copies of American patents corresponding to these, where the American patent has been previously granted, can be procured through us for the sum of twenty-five cents.

### MECHANICAL PATENTS.

- 38,969 Soap holder and distributor, W. Wilcklow, May 18th.  
 38,970 Weighing apparatus for vehicles, The Wanamaker International Car Scale Co., May 18th.  
 38,971 Pipe coupling, Consolidated Car Heating Co., May 18th.  
 38,972 Temperature regulator, Consolidated Car Heating Co., May 18th.  
 38,974 Paddle wheel for steamers, The Concave Paddle Wheel Co. (Ltd.), May 18th.  
 38,975 Sole or sock for boots and shoes, P. M. Hoffman, May 18th.  
 38,977 Machinery for squeezing water out of moss or other spongy substance, C. A. Clark, May 18th.  
 38,978 Steam-engine, The Richardson Engine & Steamship Co., May 18th.  
 38,979 Crane, J. Vanes, May 20th.  
 38,981 Machine for drilling or boring variously shaped holes, applicable also for shaping or trueing exteriors of nuts, or for analogous operations, A. H. Tyler and J. S. E. de Veseau, May 20th.  
 38,982 File case or cabinet, M. R. Jewell, May 21st.  
 38,983 Pick, C. B. Van Arsdale, May 21st.  
 38,984 Kneading board, M. M. Everhard, May 21st.  
 38,985 Animal trap, E. L. Lewis, May 21st.  
 38,986 Sealing device, C. Cuttriss, May 21st.  
 38,988 Advertising mile board, A. D. Cable, May 21st.  
 38,989 Roofing tile fastening, M. A. & J. H. Jackson, May 21st.  
 38,990 Plow device and connection, R. C. Percival, May 21st.  
 38,991 Churn, N. C. Lloyd, May 21st.  
 38,992 Horse halter, T. Morton, May 21st.  
 38,993 Machine for grinding knives for mowers and reapers, A. M. Cameron, May 21st.  
 38,994 Life preserver, F. G. Beckett, May 23rd.  
 38,995 Automatic safety extinguisher for lamps, J. B. Dowdall, May 23rd.  
 38,996 Wire nail making attachment for cut-nail machine, G. W. McKim, May 23rd.  
 38,997 Car coupling, A. R. Heath, May 23rd.  
 38,998 Pigeon hole case, D. C. Meehan, May 23rd.  
 38,999 Combined refrigerator and gas generator, H. B. Cornish, May 23rd.  
 39,000 Match box, T. B. Fiedler, May 23rd.  
 39,001 Transposing key boards for musical instruments, M. Philippe, May 23d.  
 39,002 Brick kiln, W. P. Grath, May 23rd.  
 39,003 Can opener, T. S. Kuhl, May 23rd.  
 39,004 Car coupler, R. Woolf and T. J. Montgomery, May 25th.  
 39,005 Game, J. S. Ellis and J. Sargent, May 25th.  
 39,006 Car coupling, P. McEntee, May 25th.  
 39,008 Truss, A. Dallas, May 25th.  
 39,009 Axle, A. Hoeffler, et al, May 27th.  
 39,010 Letter file, The Office Specialty Manfg. Co., May 27th.  
 39,012 Hose clamps, The Syracuse Specialty Manfg. Co., May 27th.  
 39,013 Wheel, F. P. Circle and A. Parkhurst, May 27th.  
 39,014 Momentum air compressor and air brake, E. St. O. Chapleau, May 28th.  
 39,015 Sewing machine, E. W. Broadbent, May 28th.  
 39,016 Skeleton wagon and sulky thill, E. Borland, May 28th.  
 39,017 Combination lock, S. K. Weymouth, et al, May 28th.  
 39,018 Matter to be used for the manufacture of biscuits or crackers, loaf bread and cakes, etc., N. Gentle, May 28th.  
 39,019 Sink trap, J. B. Carroll, May 28th.  
 39,020 Automatic relief valve for water pipes, E. Martyn, May 28th.  
 39,021 Car coupler, A. J. Watts, M. J. 28th.  
 39,022 Valve for hydraulic elevator, C. A. Hall, May 28th.  
 39,023 Rotary engine, S. G. Brosius, May 28th.  
 39,024 Sales recording tablet, H. O. Piaget, May 30th.  
 39,025 Drying apparatus, S. G. Phillips, May 30th.  
 39,026 Ditto.  
 39,027 Barrel closer, C. W. Moore, May 30th.  
 39,028 Compression joint, C. S. Bavier, May 30th.  
 39,032 Box, and machine to make same, May 31st.  
 39,033 Pocket whisk holder, J. F. O'Brien, May 31st.  
 39,034 Feed-water heater and purifier, R. Larmouth, June 1st.  
 39,035 Pneumatic tires, T. B. Jeffery, June 1st.  
 39,036 Means for trapping animals and birds, G. Andrews, June 1st.  
 39,037 Grate, E. J. Gordon, June 1st.  
 39,038 Table, E. Hinkel, et al, June 1st.  
 39,039 Combined gaining and sawing machine, J. F. Birkenfeld, June 1st.  
 39,040 Scraping tool for soil working implements, R. J. Edwards, June 1st.  
 39,041 Link motion, J. Lunz, June 1st.  
 39,042 Coffin shell mold, W. J. Anthistle, June 1st.  
 39,043 Machine for testing eggs, A. W. Webb, June 1st.  
 39,044 Piano pedal, S. Scoley, June 1st.

### SCIENTIFIC PROCESSES.

- 38,980 Oxidation and deoxidation of copper and its alloys when heated or being annealed, G. W. Cummins, May 20th.  
 39,007 Process of smelting, W. L. Austin, May 25th.  
 39,011 Apparatus for treating wire, W. L. Hayes and J. H. Konig, May 27th.  
 39,029 Manufacture of apple syrup, C. Lauz, May 30th.

### ELECTRICAL.

- 38,973 Galvanic electric plaster, D. Ross & W. Innes, May 18th.  
 38,976 Electric water heater, F. Ahearn, May 18th.  
 38,987 Electro galvanic belt, D. P. Andrus, May 21st.  
 39,030 Composition for resistance purposes, F. W. A. Schneider, May 31st.  
 39,031 Electro-therapeutic apparatus, W. J. Herdman, May 31st.

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# FETHERSTONHAUGH & CO.

Patent Barristers and Solicitors. Electrical and Mechanical Experts and Draughtsmen.

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**PATENT SOLICITOR,**  
CIVIL ENGINEER AND ARCHITECT.  
Associate Member Can. Soc. Civil Engs., Member of the Soc. of Archts. of the P.Q.  
Room 7, (3rd floor), 180 St. James St., MONTREAL.

**William Bruce,** Solicitor of  
CANADIAN AND FOREIGN **PATENTS,**  
17 King Street East, - - - Hamilton.

### ELECTRIC MOTORS IN HOMES.

It is not generally known that probably 3,000 people in this city are dependent for their living on the electric motors that the companies are placing in homes on the outskirts of the city.

George Redman, superintendent of the Brush Electric Company, said to-day, so rapidly has the means recently adopted by the tailors of utilizing the electric current for sewing machines been taken advantage of, that the Brush company has extended lines to 275 tailoring shops, nearly all of which are in the rooms of the owners' homes. This number includes several that have been adopted by seamstresses and workers on a small scale. The company has a total number of 800 motors in different parts of the city, varying from one-eighth to twenty-five horse-power. A large number of them have been put in during the last year. There is quite a large demand for them among dressmakers, small printing offices and dentists, and Mr. Redman predicts that before another year has passed street cars and many small offices will be heated by electric currents.

There are several new inventions utilizing the electric current that will soon be introduced in this city. In the company's offices can be seen a flat-iron, invented during the past few months, which is being tested for use in large laundries. The iron has a wire, attached at the back for heating it, and it is estimated that the iron can be brought to the necessary temperature in this way twenty-five or thirty per cent. quicker than by the usual method. Near the iron stands a soldering iron also being tested for use, and ranged about the rooms are the small sewing machines with motors attached. Electricity is plainly revolutionizing Rochester industry.—*Post-Express, Rochester.*

Will a pump draw hot water, if so, how hot and how far will it draw it?—Inquirer. Owing to the fact that water will boil in a vacuum at a temperature of 98° to 100°, it is impossible for a pump to lift what might be called hot water from any distance, for as the pressure of air is removed from the surface of the water, vapor is formed and fills the space, so that no difference in pressure between the inside of the pump and the air outside will be produced; consequently the water will not be forced above its level. If the supply of water is above the level of the pump, water will run in on account of its own weight, or more properly, the force of gravity. With a good pump and moderately fast speed, it might be possible to raise hot water a few inches, but the distance would be so slight that nothing practical would be gained.—*The Weekly Stationary Engineer.*

One of the most curious shipping disasters ever recorded is that which happened to the steamship *Lindula* near Calcutta. Nearly two years ago the steamship *Regius* was run into and sunk at her moorings in Garden Reach, River Hoogly. She was loaded with teas, seeds, and rice, and it would appear that as she rested at the bottom on her side the gases from her decomposing cargo ascended into her upper side and accumulated there. In January the *Lindula* struck the sunken wreck; immediately after the collision a hissing sound was heard from the fore-peak, and on one of the crew going with a light to see what was amiss, an explosion of gas occurred, killing two men and injuring others so severely that seven of them died subsequently in the hospital. The gas or foul air which exploded was from the sunken steamer—liberated by the collision and escaping into the fore-peak of the *Lindula* through holes made in the bows by the impact of the two hulls.—*Fairplay, London.*

## BRUNNER, MOND & CO., Limited, Northwich, Eng.

Manufacturers of **PURE ALKALI** Guaranteed 58 degrees.

The Strongest and Purest Form of **SODA ASH** in the market, and the most Economical Form of **SODA** for the Manufacture of

# Glass, Paper, Wood Pulp, Soap and Starch

Also for **PRINTERS, BLEACHERS and COLORES.**

**WINN & HOLLAND, Montreal,**

Sole Agents for the Dominion of Canada.



# Captains of Industry.

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

MR. H. SYKES, formerly secretary of the Ontario Worsted Company, Elora, Ont., is now manager of the Royal Carpet Company, Guelph, Ont.

MR. CHARLES RAYMOND, the sewing machine manufacturer of Guelph, Ont., is building a large addition to his factory and will considerably increase his output.

MESSRS. MASON & RISCH, manufacturers of pianos, etc., Toronto, have merged their business into a stock company to be known as Mason & Risch, with a capital stock of \$250,000.

THE Kuntz brewery at Waterloo, Ont., is being enlarged by the addition of a three story brick building 54x46 feet. Considerable new machinery is being added, including steam engine, boiler, etc.

THE Halifax (N.S.) Street Railway Company have established works where they will manufacture all their tram cars instead of importing them from the United States as heretofore.

THE Erie Glass Company, Toronto, is being incorporated with a capital stock of \$50,000, and will erect and operate glass works at or near Port Colborne, Ont., on the southern end of the Welland canal.

THE George E. Tuckett & Son Company, Hamilton, Ont., has been incorporated with a capital stock of \$500,000 to take over and conduct the tobacco manufacturing business of Messrs. G. E. Tuckett & Son.

MESSRS. W. KENNEDY & SONS, Owen Sound, Ont., have been awarded the contract for the water power machinery to be used in

generating electricity with which to operate the Niagara Falls Park and Rivor Electric Railway.

THE New Brunswick Cordage Works, at St. John, N.B., belonging to the Consumers' Cordage Company, of Montreal, are being again put in operation and will be run to their full capacity, giving employment to about 175 hands.

MESSRS. STEWART & HUTTON, Paris, Ont., have sent us a circular having reference to the sausage chopping and stuffing machines manufactured by them. These are made for both steam and hand power, and are of the latest and most approved and efficient styles.

THE Doon Woolstock Company, Doon, Ont., announces through our columns that they are prepared to supply the demands of the trade for wool stock, carded rhoddies, upholstering stock, batting, flocks, etc. They do custom work to order, and make a specialty of carbonizing.

THE Peterborough Canoe Company has been organized at Peterborough, Ont., to take over and carry on the business of the late Ontario Canoe Company, of that place, whose factory was recently destroyed by fire. A fine large factory will be built and operated under the management of Mr. J. Z. Rogers.

THE Napanee Cement Company, Napanee Mills, Ont., are calling attention through our advertising pages to the Portland and Hydraulic cement manufactured by them. These articles are endorsed by the authorities of leading cities and railways and others; and the company will send full particulars of strength, tests, etc., on application.

MR. E. B. SALYERDS, proprietor of the Preston Brush Works, Preston, Ont., has a very attractive card in our advertising pages in which attention is called to some of the lines of goods manufactured by him. Included in these are scrub, stove, shoe, horse and cloth brushes. He makes a specialty of manufacturing furnace and machine brushes, of which fact steam users and machinery men should make a note.

THE steamer Joan, built at Victoria, B.C., and launched a few days ago from Turple's ship yard, that city, reflects great credit upon all interested in her construction. She is 180 feet long, 30 feet 3 inches beam and 11 feet 6 inches depth of hold, built entirely of British Columbia timber, and copper fastened. She is a twin screw

## BELTING

Patent Rolled Shafting,

Hangers AND Pulleys,

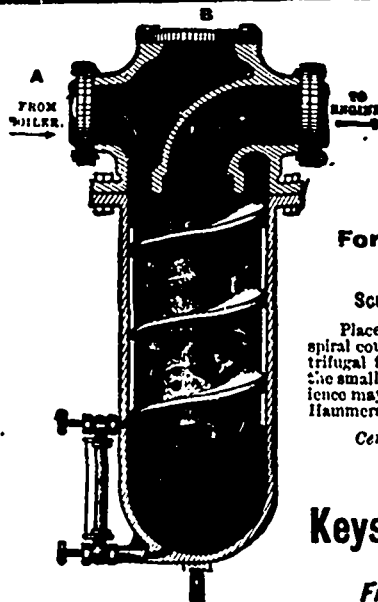
Wrought Iron Pipe and Fittings.

RICE LEWIS & SON

Limited,

General HARDWARE Merchants,

TORONTO.



## SIMPSON'S CENTRIFUGAL STEAM SEPARATOR,

For Supplying Clean and Dry Steam to Engines, Dry Houses, etc.

Screwing Flanges included with each Flanged Separator.

Place Separator as close to engine as possible. The steam taking a spiral course between the threads causes the water to be thrown by centrifugal force against the outer walls, while the dry steam goes through the small holes to centre of pipe. Steam can enter at A or B as convenience may require; also used in conveying steam long distances for Steam Hammers and Dry Houses.

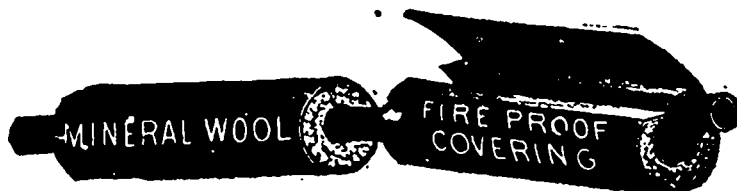
Centrifugal Steam Separators, Centrifugal Oil Extractors, Centrifugal Exhaust Heads, Keystone Double and Single Plunger Belt Pumps, Keystone Feed-Water Heaters and Purifiers.

Keystone Engine & Machine Works

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### LAMBIN'S PATENT.



## What is Mineral Wool?

A Fire and Frost-proof insulating material, blown from rock. Used for covering Steam, Hot Water, and Hot Air Pipes, Boilers, and Furnaces, and for Deadening and Fireproofing buildings. Covering Hot Pipes and Boilers saves forty per cent. in fuel.

EXCLUSIVE DEALERS AND PATENTEES,

Canadian Mineral Wool Co., 122 Bay St., Toronto.

SEND FOR CATALOGUE.

steamer with triple expansion engines, built by the Albion Iron Works Company.

Messrs. THOMAS DOWN & Co., Toronto, manufacturers of chemical fire engines, has just shipped one of these machines to Victoria, B.C., and are finishing another to be sent in a few days to Vancouver, B.C. This is a new industry in Canada which is rapidly assuming a position of much importance. The orders for both these engines were obtained through the Gutta Percha and Rubber Manufacturing Company, of Toronto.

Messrs. D. C. RIDOUT & Co., Toronto, announce in our advertising pages that they are patent attorneys, and as such are prepared to procure patents in Canada, Great Britain and foreign countries. They give preliminary advice free, that is, any who may desire to learn the modus operandi of obtaining patents, cost, etc., may obtain this information from them. This is one of the oldest patent attorney firms in Canada.

Messrs. SYKES & LINLEY, Glen Williams, Ont., manufacturers of woolen and carpet yarns, are building a 100x50 foot addition to their works, of stone, two stories high, to replace that part of their factory destroyed by fire last December. They are putting in a new boiler and other machinery, and are also building a new dye house, all of which when completed will give them better facilities than they ever before enjoyed. They will be in full operation early in July.

HERETOFORE both the firms of Messrs. J. & H. Burrows and A. & R. Burrows, of Guelph, Ont., were engaged in the manufacture of carpet, but now both these concerns have been brought under one management to be known as the Royal Carpet Company. The capacity of the works of the new company will be about double what it was before the joining of the two concerns. Included in the new machinery which the company have introduced into their new works are an art square loom and a three-ply loom.

SOME more of the "British Columbia tooth-picks" are on their way to Montreal, in the shape of twenty-eight pieces of lumber measuring in all 60,470 feet. This lumber was sawn at the Hastings mill, Vancouver, B.C., and was shipped to Montreal, by the British Columbia Mill, Lumber and Trading Company. The order

is the duplicate of the one filled in January last. The largest three sticks measure thirty-six and thirty-seven inches by sixty feet, occupying two cars. The twelve other pieces fill four cars. The Canadian Pacific Railway will rush the shipment through, and will endeavor to beat the time of the former shipment, which was ten days.

It is expected that the Royal Electric Company, Montreal, will commence work about July 1st to utilize the Chambly rapids as a motive power. The company intends to construct as many as four dams, in the course of time, the whole to furnish as much as 20,000 horse power. To begin with only one dam will be made, and that will give about 500 horse power, which can be utilized this fall. As the demand increases the other dams will be constructed. The wires will be made to cross the river, either in metal pipes filled with oil and sunk into the bed of the river, or will be placed overhead by means of special towers built on St. Helen's Island.

Messrs. STEVENS, HAMILTON & Co., Galt, Ont., have sent us an illustrated circular having reference to the improved 20 inch drill manufactured by them. Height of machine, 74 in.; diameter of column, 5 1/2 in.; diameter of spindle, 1 7/16 in.; travel of spindle, 10 in.; diameter of large step of cones, 9 in.; diameter of small step of cones, 4 in.; diameter of tight and loose pulleys, 9 in.; diameter of bevel gear, 6 in.; diameter of bevel pinion, 3 in.; greatest distance from base to end of spindle, 44 in. The cones are for 2 1/2 belt. The lower shaft should run from 250 to 300 revolutions per minute. Floor space taken, 4x1 foot 6 in. Weight of machine about 650 pounds.

Messrs. W. H. STOREY & SON, manufacturers of gloves, etc., Acton, Ont., inform us that they are crowded with work at this time filling orders for the fall trade. This concern was established in 1868, but three hands being employed in the manufacture of common harvest mitts. In 1884 the present large factory was built and occupied, where 200 hands find steady employment in the production of about every variety of goods in this line required by the trade, and where as fine and elegant kid gloves are made as any imported from France or Germany. Messrs. Storey & Son operate a large tannery exclusively on goods intended for their glove factory, beside which they absorb the product of another large tannery

**ROBIN & SADLER**  
*Leather Belting*  
 SPECIALTIES  
 DYNAMO BELTS  
 WATERPROOF BELTING  
 MONTREAL TORONTO  
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Established in 1849.  
**STEEL.**  
**Singer, Nimick & Co., Ltd.**  
 PITTSBURGH, P.A., U.S.A.  
 Manufacture all kinds of  
 Tool Steel, Hot and Cold Rolled Sheet Steel, Hammered and Rolled Steel, Saw Plates, "Soft Steel Centre," "Iron Centre," "Iron Back," "Soft Steel Back" (extra thick face), Plow Steels, Crucible, Open Hearth and Bessemer Plow Steels, Finished Rolling Plow Colters, Rotary Harrow Discs, Round, Square and Flat Machinery Steel, Springs, Axles and Steel Tire. Agricultural Steel Cut to any desired pattern.  
 Represented by  
**MR. HUGH RUSSEL**, Temple Building, 185 St. James St., MONTREAL. Mention this paper.

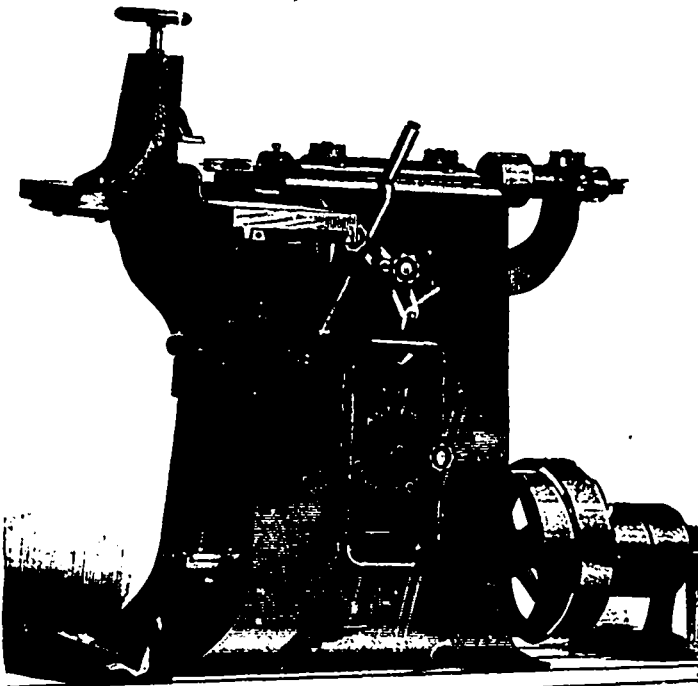
Established 1880.  
**TRADE MARK**  
  
**HELDMAN'S LACE STANDS THE TEST.**  
**LEATHER**  
 Write to  
**Heldman Bros.,**  
**BADEN, ONT.**

**S. LENNARD & SONS**  
**Dundas, Ont.**  
 Patentees of the "Elysian" Seamless Hosiery  
 MANUFACTURERS OF  
**Plain and Fancy Hosiery,**  
**CAPS, TUQUES, SASHES, Etc.**  
 To the Wholesale Trade only.  
 Represented in Eastern Ontario, Quebec, Nova Scotia, and New Brunswick, by **DUNCAN BELL, Montreal.**  
 In British Columbia by **E. G. ANDERSON, Victoria, B.C.**  
 In Western Ontario by **S. LENNARD, Senior Member of the Firm.**

in Acton, as well as large quantities of material which they import. These works are about being equipped with electric lights throughout. The tannery is now being enlarged and much new machinery placed.

It was stated in our last issue that the Magee Manufacturing Company, London, Ont., were starting a factory in Montreal for the manufacture of a new veneer nail keg of which they have recently obtained a patent. In the construction of this keg the body of it is made in one single piece, lined with strawboard, with four inside and four outside bands, making it, even without the heads, much stronger than the ordinary nail keg with both heads in place. The heads are made with two thicknesses of thin stuff, arranged crosswise. The character of this keg is such that there can be no shrinkage, no falling out of heads, no loosening or breaking of staves and no taking off of hoops to remove the head or replace the head. The cost of this keg is no greater than that of the ordinary ones.

MR. D. COLE, of the Doon Woolstock Company, Doon, Ont., proprietor of the Cole & Pedder patent carbonizing machine, has sent us a circular illustrating the same. This machine is used for the purpose of carbonizing and destroying vegetable matter such as cotton, jute, etc., contained in rags and piece goods composed of cotton and woolen; also for destroying burs, seeds, straw, or other vegetable matter contained in or mixed with wood, woolen waste or other fibre matter. The great economy obtained in the use of this machine is seen in the fact that it requires only about two horse power to operate it, while twenty-five cents worth of coal per day is sufficient for the retort, the large cylinder being thoroughly and sufficiently heated with about one quarter of the steam exhausted from a 25 h.p. engine. It requires no brick work, and occupies only about sixteen feet square of floor space. The capacity of the machine is to carbonize from 1,200 to 2,000 pounds per day of ten hours. This machine may be seen in operation in the works of Messrs. Smith & Co., 219 Front street east, Toronto, in the works of the Woolstock Company, Doon, Ont., and at Pittsfield, Mass.

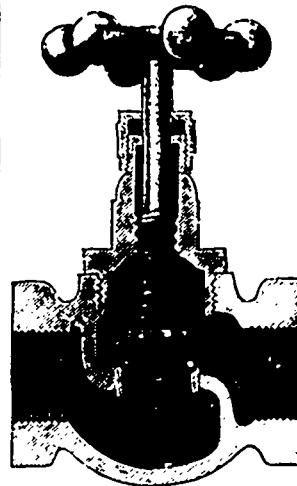


## Hollow Square Chisel Morticer

FOR MORTICING IN HARD WOODS

CANT BROS. CO., Ltd., GALT, ONT

In reply to the question, "How many patents have you?" put by a reporter to Edison, he said: "Over 600, and in not one of them have I been sustained by the courts." A radical change, Edison adds, should be made in patent laws, and until it is made, "there can be no incentive to any inventor dependent upon his invention for sustenance, to give the world the benefit of his work." Without entering into the merits of Edison's own case, there is ground for the complaint he makes. The inventor who goes stumbling



**DRAPER'S**

IMPROVED

## Globe Valve

Constructed to prevent Scales or Grains of Dirt being caught between faces at point of closing.

When the projection on valve enters the seat orifice, of which it is an exact fit, only clean fluid rushes past. Scales, etc., are pushed back and the faces meet with nothing between to injure them. Send for prices and particulars to

**T. Draper, MANUFACTURER**  
**BALL VALVES**

For Various Purposes,

Oil and Salt Well Supplies, Etc.

**PETROLEA - - ONTARIO.**

## Safford (Patent) Radiators

FOR

**HOT WATER & STEAM HEATING**



*Lead the World*

MADE IN

ALL SIZES and HEIGHTS

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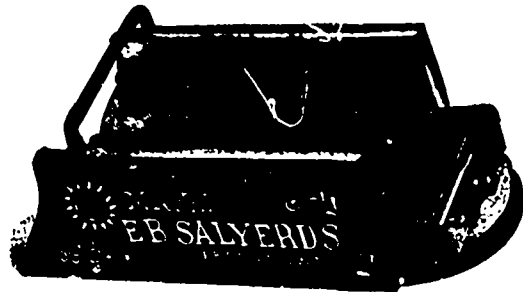
ahead without posting himself as to the patented discoveries in the line in which he works, is not greatly to be pitied in the disappointment that comes in finding, at last, that he has been anticipated. But the case takes on quite another aspect when the inventor, in the face of a record that is blank, so far as his special line of investigation is concerned, confidently complies with the patent laws of the land. He then makes the discovery that his patent is a permit to fight in the courts anybody and everybody who can bring testimony to a prior use of some feature of the invention, and yet a use that on the face of it was not satisfactory enough to warrant a patent application. The chances are even, that the claimant who has been lying in wait, who has shunned the light of the patent office, will win his suit. The story of the struggling inventor who has plodded on in obscurity until success seemed sure, and then lost the fruit of his labor through patent office intricacies, has its counterpart in the career of the so-called successful inventor, whose transit through the patent office is only a delusion of success, as the courts help him to discover later in the game.—*Iron Trade Review.*

# PRESTON BRUSH WORKS

E. B. SALYARDS, Proprietor. Manufacturers of

**Scrub, Stove, Shoe, Horse, Cloth**

And all kinds of  
**Brushes**



ORDERED  
**FURNACE  
AND  
MACHINE  
Brushes**  
Our Specialty

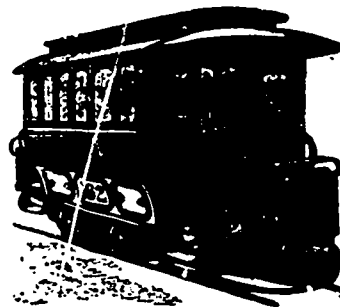
# ← PATTERSON & CORBIN →

**FINE**

**ELECTRIC CARS**

**OUR**

**SPECIALTY**



**ST. CATHARINES, ONT.**

MANUFACTURERS OF

**Horse and Trail Cars**

OF

**EVERY DESCRIPTION**

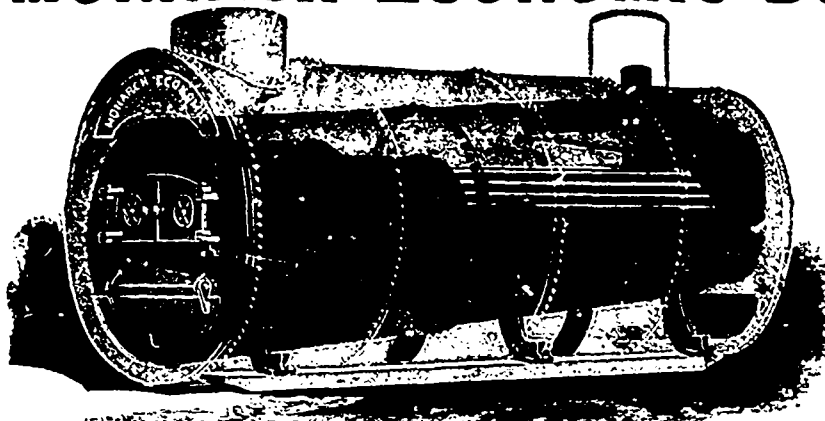
# THE MONARCH ECONOMIC BOILER

Patented Can. May 6, 1866;  
Feb. 10, 1887.  
Patented U.S.A. Oct. 5, 1886;  
Aug. 23, 1887; May 8, 1888.

Is the strongest and most  
**Portable Boiler**

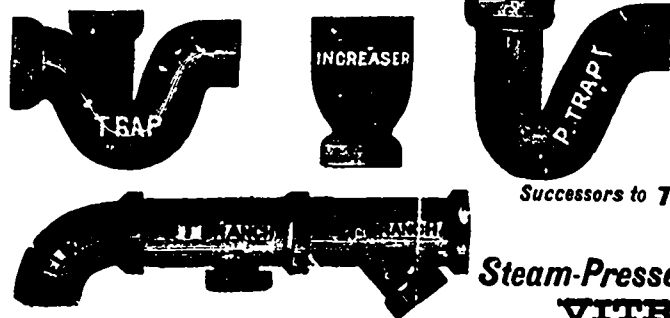
in use, and its high economy  
in fuel makes it specially valuable  
to gold miners.

Tested evaporation 10.25 lbs.  
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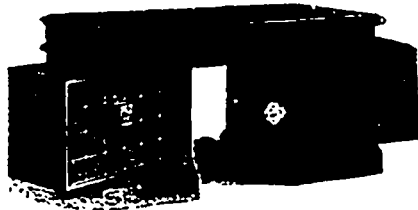
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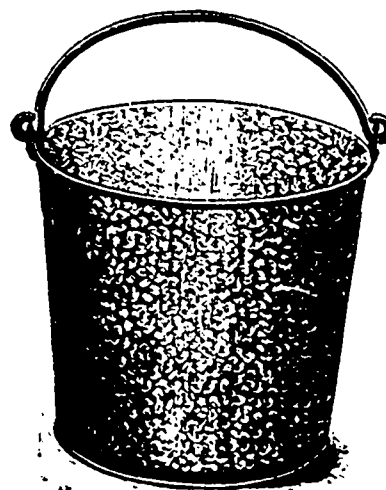
Income . . . . .	\$207,486.49
Increase over previous year . . . . .	\$36,069.06
Gross Assets . . . . .	437,959.11
Increase over previous year . . . . .	86,219.16
Insurance Reserve for the protection of Policy-holders . . . . .	289,045.00
Increase over previous year . . . . .	71,795.00
Surplus on Policy-holders account . . . . .	135,307.63
New Business written in 1891 . . . . .	2,111,100.00
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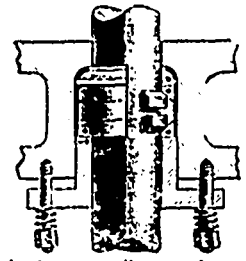
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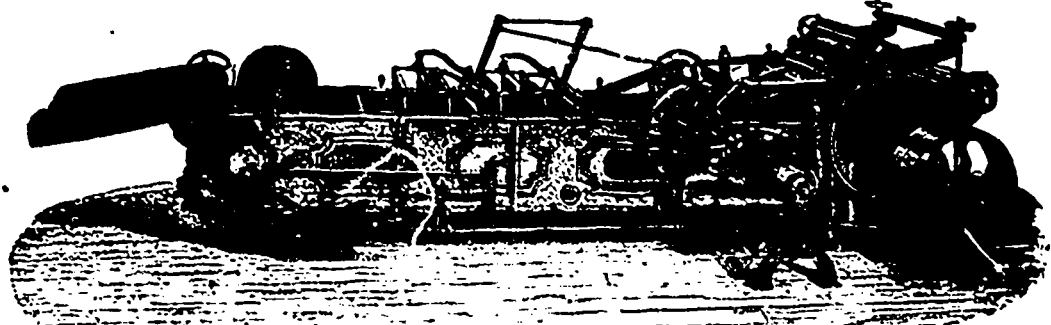
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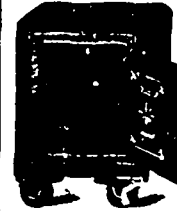
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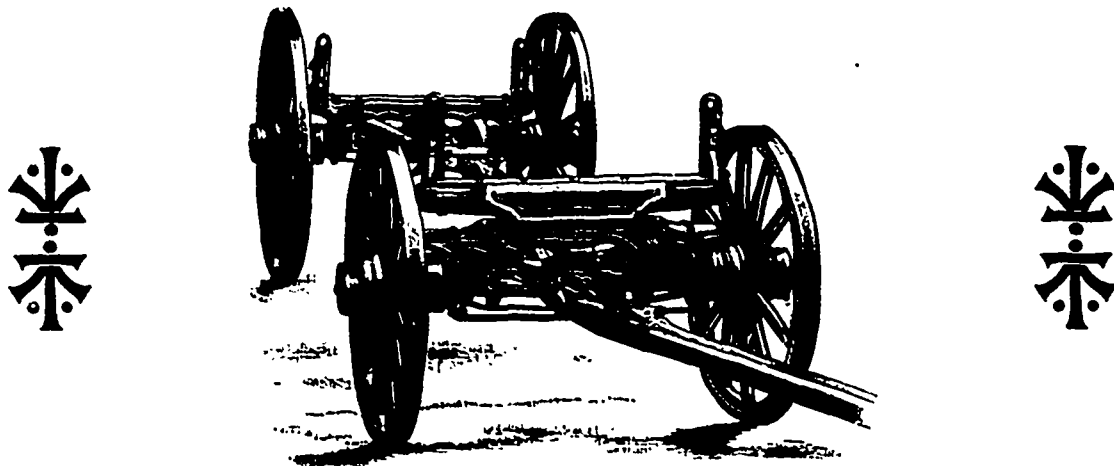
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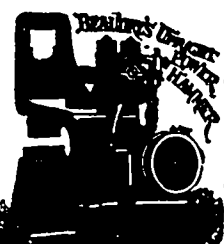
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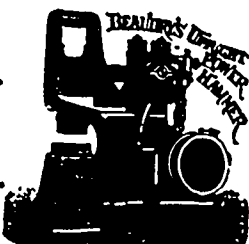
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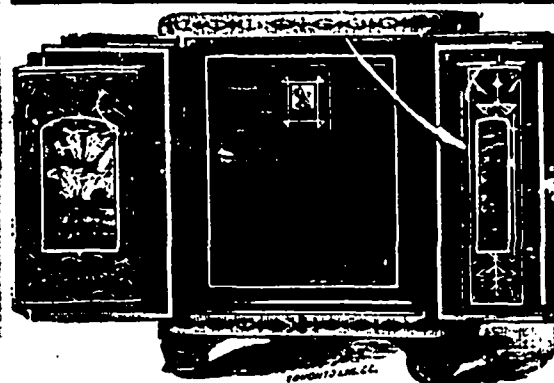


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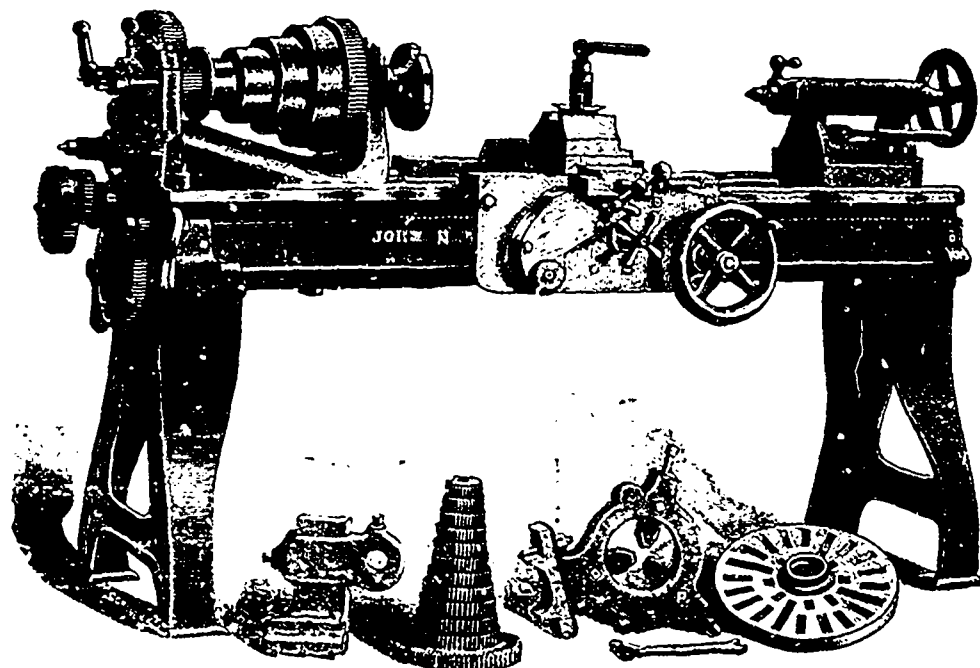
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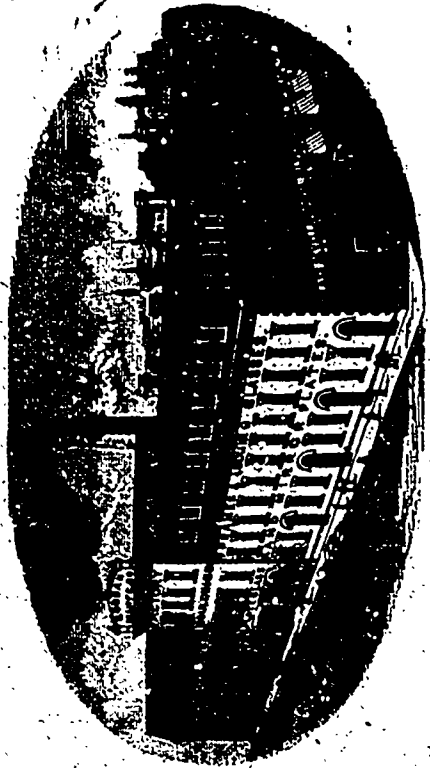
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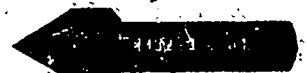
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