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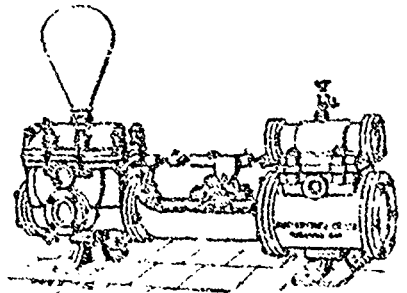
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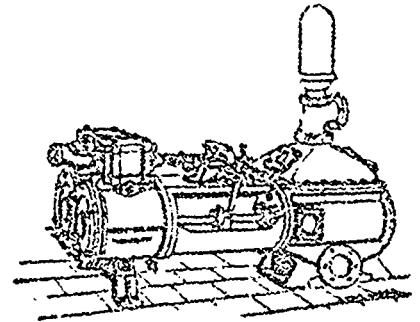
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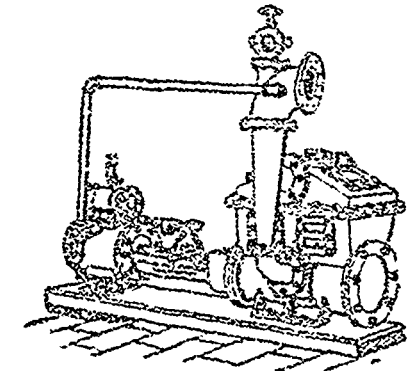


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SELF-DEPENDENCE AND SELF-RESPECT.

This journal has frequently directed attention to the fact that the tariff laws of Canada were modelled very closely along the lines observed in the United States tariff: that had it not been that tariff protection prevailed in that country we would never have adopted it in this; that our conditions are of such a sensitive character that changes in the American tariff quickly and perceptibly affect Canada, and that Canada could not long hold to protection if it were entirely abandoned in the United States. These are facts over which we have no more control than the ocean has over the influences of the moon which forces the irresistible tides around the earth twice in every twenty-four hours. But while these facts are patent to us, and while we recognize the full force and value of them, it is none the less our duty to bend ourselves vigorously to the oars and do all we can in bringing our ship into port, and not allowing her to be carried whithersoever the current might direct. Therefore, Canada has been no indifferent observer of the course of political affairs in the United States, particularly since the inauguration of the McKinley idea of protection, and to the result of the presidential contest just closed. Students

of affairs have long since observed that for certain reasons the politicians of the United States Republican as well as Democrat have maintained a settled policy in a certain direction. We know that there are more Irishmen in the United States than there are in Ireland, and that they are voters. We know that these men believe that they were driven to expatriation by the oppression of the British Government, or at last they have been taught this, and they have been taught to hate Great Britain and everything affiliated with the Mother Country. We do not discuss the justice or injustice of this phase of the situation. We know that if an American orator desires to make an impression on an audience, he cannot do so more successfully than by twisting the tail of the British lion. Canada being politically connected with Britain, and this anti-British feeling prevailing in the United States, as a matter of course any unfriendly feelings our neighbors may entertain towards the Mother Country is generously and bountifully extended to Canada. Else why the Fenian raids of a few years ago? We know also of the greedy and grasping disposition of our neighbors. They knew that the roll of the British drum follows the sun around the world, and that there is no hour in the twenty-four that the shining sun does not kiss and welcome the folds of the British flag. Of course they can never hope for such a thing for their Stars and Stripes; but they hug themselves with the delusion that at some day in the not far distant future all people on the North American continent will accept their laws from Washington, and that their flag will be raised to the utmost height of the North Pole. The outstretched wings of their symbolic eagle now extends from the Atlantic to the Pacific, and while the bird swishes its tail in the waters of the Gulf of Mexico, although its longing glance is in the direction of the polar regions, the farthest north it can now stretch its neck only enables it to dip its beak into the southern sides of the Great Lakes. There are as fair fields beyond its reach as any beneath the shadow of its wings, and it covets them. The greed of the American people, and their hatred of Britain, makes them desire the acquisition of Canada.

Under these circumstances what acts of neighborly kindness may Canada expect from the United States? None whatever; that is to say, none but such as may be instigated by selfish and mercenary motives. If Canada expects or ever hopes that she will be treated under a Democratic administration with any more consideration than she was under a Republican administration, let her be undeceived. One of the last official acts of Mr. Cleveland, before he was succeeded by Mr. Harrison, was to issue a threat against Canada; and one of Mr. Harrison's late official acts, while about being superseded by Mr. Cleveland, was to strike a mean, unfriendly and uncalled-for blow at Canadian commerce. And such will be the programme as long as the politicians of that country seek and gain popularity by twisting the tail of the British lion; by threats of dislodging the British flag from the continent, and by scheming to annex Canada to the United States.

The situation calls for an exhibition of all the dignity and self-respect that Canadians possess. We would like to be on friendly terms with our neighbors, and to do business with them with as little friction as possible, but as long as we refuse to withdraw our allegiance to the British Crown—refuse to

lower the British flag—refuse to become absorbed into the American Union, just so long will we have to encounter just such treatment as the politicians of the United States have been bestowing upon us.

THE PROTECTIVE SYSTEM—HOW IT OPERATES.

THE really pertinent question in this discussion is whether and to what extent the protective system operates to debar the people from enjoying the full benefits of the reductions in cost which are rendered possible by the discoveries and inventions of the age. A complete answer to this question would, there is reason to believe, throw a startling light upon the amount of the tribute which is taken by law for the benefit of monopolies and combines.—*The Week*.

This extract is from a leading editorial in our respected contemporary, in which an effort was made to show the desirability of free trade and the heinousness of protection. It argued that the whole system of protective duties is unjust and oppressive to the farmers and other general consumers; that it compels them to pay enhanced prices in the interest of a few manufacturers; that it is a violation of the rights of citizens to transfer by (tariff) law from the pocket of one citizen to another, and that the crucial fallacy of the argument for protection lies in the tacit assumption that the pocket of the consumer is affected only to the extent of the sum he pays by way of duty upon the imported dutiable article he buys. "No account," the *Week* says, "is taken of the tribute he pays to the protected manufacturer in the shape of the enhanced prices or the comparative inferiority or unsuitability of the articles of home manufacture which he is constrained to purchase, whereas it is in this indirect way that the major part of the tribute is usually exacted. When this is pointed out one is met with the reply that the home made product is really quite as good and as cheap as that of foreign manufacture, if not better and cheaper. The obvious rejoinder then is, what is the need of protection?" Having thrown itself into this dramatic posture our respected contemporary folds its arms, elevates its nose, looks wise and announces that it awaits an answer.

The contention of the *Week* is that Canada at no stage of her industrial development should undertake to produce anything that we may desire at any less cost than what we can produce it, by less wages to labor, is evidence that Canada can produce something and exchange it for that article to greater advantage than she can produce the article itself. Thus, inasmuch as Canada can produce wheat cheaper than England can, but cannot under existing circumstances manufacture certain articles as cheaply as England does, where labor is cheaper, therefore Canada should confine herself to the production of wheat and buy her needed manufactures in England, paying therefor with the proceeds of her exported wheat. Of course this position is not in accordance with what is now considered the best policy of government. England will never buy more wheat from Canada or from any other country than is absolutely necessary to supply the deficiency of her own crop, and consequently if Canada's exports of wheat should become large enough to supply the English demand—and no one doubts the extent of available land and the fertility of the soil to produce such a quantity—and if we had the farming population to produce it, and if farming were the chief

occupation of the people, considering the competition of other nations also, it would be discovered that farming was a very unremunerative business.

It is only by having part of our population engaged in industries other than farming, and keeping our surplus of grain down to the actual wants of Europe, that agriculture is profitable. When our farm products are mainly consumed at home, the farmer obtains the best prices, and saves part of the cost of transportation. Again, experience shows that the prices of manufactured products are always greatly cheapened when their manufacture is fairly entered upon at home. Thus, in order to maintain paying prices for our farm products, and diminish the cost of manufactured products, it is essential that part of our population should be engaged in manufacturing industries.

It cannot be that the *Week* proposes that all manufacturing industries in Canada in which we cannot produce as cheaply as in England shall be abandoned, and those employed in them engage in producing wheat for the English market. If it does not, where will it draw the line? It is not surprising that manufactures can be produced cheaper in England than in Canada. In the old country labor is crowded to the wall and is forced to work at starvation wages or starve absolutely, compelling a low standard of living, and enabling the production of manufactures for very much less money than what similar manufactures can be produced for in Canada, where a higher standard of living prevails. But because England can manufacture cheaper than Canada can is no reason why it would be economical wisdom for Canada to confine herself to farming and lumbering pursuits and supply all her wants for manufactured articles from England.

The *Week* bases its plea for free trade upon the claim that the poor man will be benefitted by it—that protection increases the cost of his purchases, while free trade gives them to him at a minimum. In our opinion the poor man in Canada is more interested in protection; and we illustrate our contention in this way. The Canadian duty on a certain article is 35 per cent., making the cost, duty paid, of an article which cost \$10 in England, \$13.50 in Canada. This article can be made by say six days' labor in either country, the cost of which in England is \$5, in Canada, \$8. The *Week* argues that it would be better to make the purchase in England, having free trade, than in Canada under protection. The answer to this is that no more labor is expended upon it in Canada than in England, and the production of it in Canada gives employment to domestic labor which it would not otherwise have. The English laborer, if he made the article, would have \$5 for his services, which represents his ability to consume; but if made in Canada the remuneration would be \$8, or \$3 more than the other, which implies that the Canadian consumer would have \$3 more with which to buy than the English consumer. Of course this principle applies in an enlarged sense, the production at home of needed manufactures meaning a higher standard of living for labor.

Diversification of industries is essential to the most profitable employment of the people, because it is only by it that each worker finds his opportunity to exercise his peculiar ability to the best advantage. If our labor were confined to employment in agricultural and the ruder industries, that portion of it which did not find congeniality therein would

be wasted. Thus and for this reason we see that Ireland has become depopulated of its common laborers, and that every year witnesses the emigration of hundreds of thousands of the same class from England. Wages are always the highest, and material prosperity the greatest, where industries are diversified and agriculture supplemented by manufacturing industries. Foreign trade is of importance only so far as we import articles which we cannot conveniently produce at home, and export articles which we cannot consume at home. It is a fundamental principle in economics that all manufactures should be produced as near as possible to the sources of the raw materials and to the consuming markets. In Canada the aim and object of protection is to act upon this principle—the aim and object of free trade is in a different direction.

THE CARPET INDUSTRY.

In the November number of the *American Carpet and Upholstery Trade*, of Philadelphia, the leading carpet trade journal in the United States, is the following item:

There is quite a call from the Canadian market for "unions." Many of the Philadelphia factories have made large shipments of cotton carpets there this fall.

This statement is correct, for we are well informed that many of these large shipments are on the Canadian market, the goods being offered for sale in the carpet stores throughout the country. These so-called cotton carpets are a combination of cotton and jute, and are imported under the following item of the tariff:

Cotton, colored fabrics, woven in whole or in part, of dyed or colored yarn, or jute yarn, or part jute and part cotton yarn, or other material, except silk, n.e.s. 25 per cent.

Or under this item:

Jute carpets, mats, matting, and squares, 25 per cent.

When they should be entered under this item:

Carpets, viz., two ply and three ply ingrain, of which the warp is composed wholly of cotton or other material than wool, worsted, hair of alpaca goat, or other like animal, 5 cents per square yard and twenty per cent.

It has been contended in this journal that even under an honest classification, whereby imported carpet pays precisely the duty it was intended should be paid, the duty was not high enough to give reasonable protection to our carpet manufacturers, and that particularly on such carpet as that described in the first two items of the tariff above alluded to, there should be a specific duty in addition to the ad valorem, as in the last item. These American carpets, of which such large quantities are now being imported into Canada, are specifically described in this last item, and should have been entered as such, but they were not, and because they were not a fraud is being committed on the customs, and a grievous wrong on our carpet manufacturers.

The word "unions," used by our Philadelphia contemporary, may need an explanation. In the carpet trade generally, in Canada, United States and Great Britain, the word "union," used in connection with carpets, means that in the manufacture of "union" carpet one-half of the material is wool and the other half cotton. Thus a "union" carpet may have a

warp of cotton and a woof of wool. Some American carpet mills neglect to use any wool at all in making what our contemporary speaks of as "cotton carpets," large shipments of which have been made from there to Canada this fall. They also make a carpet composed of cotton and jute, in which is no wool, and which is being sold to Canada as "cotton carpet."

Both these carpets, all cotton and cotton and jute, are very cheap stuffs, and far from equal in value to real "union" carpet, which is half wool. But when these cotton and cotton and jute carpets are brought into Canada they are sold as "unions," thus deceiving all who handle them but who are not acquainted with the peculiarities of their construction. These fraudulent imitations of "union" carpet are sold at very low prices—so low, indeed, as to interfere very materially with the sale of Canadian "union" carpet.

The way, too, in which they are imported into Canada is a fraud upon the revenue of the Government as well as a great injury to our manufacturers. It is a fraud upon the revenue in that they are not properly entered at the customs. They should be entered under the item which properly describes them as two ply or three ply ingrain of which the warp is composed wholly of cotton or other material than wool, and liable to a duty of five cents per square yard and twenty per cent. ad valorem. The warp of these carpets is composed wholly of cotton or of jute, or of cotton and jute mixed, but contains no wool.

In April last the carpet manufacturers' section of the Canadian Manufacturers' Association formulated and presented a petition to the Government asking additional tariff protection to their industry as follows: On all wool ingrain carpet, 10 cents per square yard; on "union" ingrain carpet, 5 cents per square yard; on Smyrna rugs, 5 cents per square yard, and on all carpet having only an ad valorem duty, 10 cents per square yard. A strong delegation of manufacturers waited upon the Government, and in presenting their petition explained very fully the nature of the difficulty which they desired to have removed. Of course they were received most courteously, and assurances given them that their matter would receive careful attention, but no relief has yet been granted or even promised. The manufacturers do not complain of having to pay duty upon much of the material used in their factories, but they do not think it fair, or just, or right that the duty they pay upon their raw material should be considerably more than the protection they get upon their finished products. It is a fact that an importer can bring in a foreign carpet, paying the duty thereon at from 7 to 8 per cent. cheaper than the manufacturer can import the yarns to produce a similar carpet. This is "protection" with sarcastic emphasis.

The request for a specific duty on all carpet bearing only an ad valorem duty was to check the importation of low priced tapestry carpets which are the most formidable competitors of Canadian mills. While the importation of ingrain carpet last year amounted to only 146,000 yards, our imports of low priced tapestries aggregated 1,507,000 yards, valued at \$507,000, or only about 33 cents per yard.

Toronto can produce thousands of witnesses every day, to the fact that the city is overrun with pedlars representing American concerns who tramp from house to house offering American-made Smyrna rugs for sale on the instalment plan.

These goods are imported at ridiculously low values, paying duty accordingly, to the great detriment of our manufacturers and dealers. All the money that is obtained for these goods goes out of the country. Every assurance has been given the Government that if the duties were slightly increased, as asked for, there would be no increase in the price of the home product, the desire being to shut out the cheap foreign stuff.

The situation was desperate enough when these cheap foreign carpets were properly entered and paid the duty as intended by the law, but now, when the country is flooded with them and the customs being constantly defrauded by rating them improperly, it is to be hoped that something may be done. If the Government does not awake to the situation, our carpet mills will have to close, the employes be thrown into idleness, and the capital invested lost.

AS TO PULP WOOD AND WOOD PULP.

We are in receipt of a communication from a manufacturer of wood pulp, who operates one of the largest factories in Canada, in which he complains that while American manufacturers depend to a very great extent upon Canadian forests for their supplies of pulp wood, which is exported free from Canada, and imported free into the United States, Canadian manufacturers, when desiring to export pulp to the United States, is met there with a tariff duty of \$2.50 per ton on their product. He suggests that if a suitable export duty were imposed upon pulp wood that many of the American mills, particularly those which manufacture for export, would be forced to remove to Canada, and that this country would receive the benefit arising from the industry, instead of being only a provider of wood to be manufactured in another country. He thinks, too, that if an export duty were levied, to be enforced only against such countries as impose an import duty on Canadian-made pulp, the result would be that the United States would, in the interest of its pulp industry, be forced to remove or greatly modify its duty on Canadian pulp.

About the same arguments apply in this matter of export duty on pulp wood as in the case of saw logs. A statement of a few facts will throw light on the situation. It is a fact which cannot be denied that hundreds of thousands of cords of pulp wood are supplied every year from Canadian forests to American pulp factories. It is also a fact that the available supply of pulp wood in the United States is rapidly decreasing; that that which is obtainable there is cut in regions remote from the mills; that the cost of transportation of it makes the article very expensive, and that the cheapest and most available supplies are those which are drawn from Canada. Large quantities of pulp manufactured in the United States find sale in other countries, the export of the article having increased wonderfully of late years. Of course very much of these exports of pulp are made from Canadian wood.

With their characteristic selfishness, and in face of the fact that their pulp industry could not flourish, without Canadian wood, our American neighbors placed an almost prohibitive duty on Canadian pulp while admitting the wood duty free, just precisely as in the case of saw logs and nickel. A result of this

is the fearful crippling—yea, the almost total destruction of a most valuable Canadian industry. Our pulp manufacturers are excluded from the American market, while at the same time the American manufacturers are formidable competitors with them in Canada in the purchase of the raw material—pulp wood. Restricted to the home market, excluded by the McKinley tariff from the United States market, they find the Canadian railroads doing a heavy business hauling Canadian pulp wood past the idle doors of the Canadian pulp factories and into the United States, duty free, to supply raw material to American pulp mills.

One of the most discouraging features of the situation is that, as anomalous as it is, they fail to receive any redress which the Government ought to afford. For two years past individuals, committees and delegations of manufacturers have expended time and money without stint in visiting Ottawa and presenting their case to the Government, but all in vain. There is always some specious excuses offered for deferring consideration, or vague hints and promises are made of something which is to be done, but which is never done, until hope has gone glimmering adown the wind, and disappointment has given way to disgust. It is very true that "careful consideration of the matter" is invariably promised, but their promises are as flattering as the east wind, and no more nourishing.

It might be supposed that as large and important a matter as the export of pulp wood from Canada is, some mention of it would be made in the Trade and Navigation Returns, but such is not the fact. The Returns for last year—the latest available—make no mention whatever of exports of pulp wood. Spool wood is enumerated, and so is wood pulp, but not pulp wood. Therefore it is impossible to obtain any official information regarding it; but it is well known that hundreds of thousands of cords of it are sent to American pulp mills each year, and we have knowledge that what was one of the largest and most important pulp mills in Canada has been removed across the lines into the United States, where it is giving employment to American labor in making Canadian wood into pulp for the American market.

It is this sort of business that is driving Canadian capital and Canadian labor into an exodus from which the country is suffering. Instead of the Government affording some protection to this important industry, and to others which we have repeatedly named, it could not act more in accord to the McKinley idea than what it now does. The McKinley desire is to build up American manufacturing industries, and the Dominion Government gives them great assistance and encouragement in doing so. The McKinley tariff puts a heavy duty upon wood pulp, while pulp wood is on their free list. The raw material must be obtained in Canada, and the absence of an export duty on pulp wood keeps American factories in a condition of booming prosperity, while Canadian factories are in a condition of collapse. The McKinley tariff puts a duty on Canadian lumber, while saw logs is on the free list, and because we have no export duty on saw logs hundreds of millions of feet of Canadian logs keep Yankee mills busy, while Canadian mills are rusting in idleness. The McKinley tariff puts a duty of \$200 per ton on refined nickel, while nickel ore and matte are on their free list; and because we impose no

export duty on the crude material, all that we have to show for our invaluable mineral wealth are the holes in the ground from which it was taken, while many expensive and valuable plants are springing into existence in the United States for the purpose of refining Canadian nickel. How long, O Lord, is this suicidal policy to continue? How the McKinleyites must chuckle and smile at the cordial co-operation of the Dominion Government in their endeavor to boom American manufacturing industries at the expense of Canadian enterprises. They take away our pulp wood, our saw logs and our crude nickel, and although Canadians protest, their Government look wise and promise that something will be done about it "by and by." They see Canadian manufacturing establishments shut down and thousands of Canadian workmen thrown into idleness, and they do nothing. They see thousands of Canadian workmen following Canadian raw material into a foreign and not very friendly country, seeking the occupation there of which they had been deprived at home; and they see that these unwilling exiles are met at the boundary line and denied admission unless they forswear their allegiance to Canada and become American citizens, and not a hand do the Canadian Government raise to correct the evil and to give continued employment to Canadians in Canada.

But then the Government have a more than two-thirds majority in the House of Commons; and few, very few, so-called Canadian newspapers there be which profess allegiance to the National Policy which protest against this sort of suicide.

EDITORIAL NOTES.

In our list of Canadian patents, published in another page, that numbered 40,470 was the last patent issued from the Patent Office up to November 14th. We keep our readers posted.

The disintegration of the Conservative party has evidently begun, and if the leaders of it do not quickly bestir themselves they will have no followers but a handful of mossbacks who have no influence.

ALL readers of the CANADIAN MANUFACTURER are invited to avail themselves of our offer to furnish information, free of charge, regarding where and of whom any machine, machinery, raw or finished material, etc., can be obtained. If you don't see what you want, ask for it. It is our business to find business for others.

MR. J. C. HOPKINS, mossback, ex president of the Toronto Young Men's Liberal Conservative Association, wants to clip the wings of President Armstrong, of that association, because he tells some wholesome truths about the mossback fogies of the Conservative party. Mr. Hopkins does not seem to appreciate the situation.

MR. J. C. HOPKINS, nor the *Empire*, nor any of the other mossbacks of the Conservative party can down the spirit of reaction that has set in against the policy of inaction and do-nothing that now characterizes the Dominion Government. Party is valuable only as long as the leaders of it observe the contract they made with the voters who put them in power.

If the mossbacks were wise they would correctly interpret the handwriting on the wall and act accordingly.

THE CANADIAN MANUFACTURER takes much pleasure in publishing illustrations and descriptions of any new thing of a mechanical character to be placed on the market. No charge whatever is made for doing this, as it is our desire to let our readers know what is being done in such things. If a manufacturer has a novelty or specialty which he wishes to become known, if he will send us an electrotype and descriptive matter it will be published. Let the world know what you are doing.

WITH a revenue of \$36,900,000 this current year, as compared with \$38,579,000 in 1891, and a surplus of \$250,000, together with cheap sugar and a free breakfast table, the Government may well feel proud of its financial management. —*Toronto Empire*.

All but the cheap sugar and free breakfast table. This delusion has been repeated by the *Empire*, parrot-like, until it probably believes it, but no one else does. We cannot have free sugar on the breakfast table until sugar fit to be used on the breakfast table is admitted duty free.

THE Lay Whip Company of Westfield, Mass., is said to be the largest whip manufacturing concern on the American continent. Under the influence of the National Policy, and with a desire to enjoy the Canadian market, this company have established a branch factory at Rock Island, Que., where they give employment to a large number of Canadian workmen. Their factory is included in the large brick factory building in Rock Island, recently erected by Messrs. Butterfield & Co., manufacturers of taps and dies, etc.

A VALUED correspondent who has been a subscriber to and advertiser in this journal ever since its inception more than a dozen years ago, informs us that of his knowledge we were wrong in stating in a recent issue that a certain whip manufacturing company whose headquarters are in a Massachusetts town, were doing an illicit business in Canada by smuggling their goods across the boundary line. What our correspondent says in this matter goes as a fact, and we can only express our regret that we did injustice in the statement we made.

If excessive exports were an unfailing indication of prosperity, as balance-of-trade theorists pretend to believe, Ireland would be among the most prosperous of nations. She exports a greater proportion of her yearly product than any other European nation, and her chief articles of import are receipts for the payment of rent. —*Toronto Globe*.

If Ireland were a manufacturing country, as it should be, there would be no necessity of exporting a greater portion of her agricultural products, for they would be consumed at home. Free trade and manufacturing repression are chargeable with much of the unhappiness existing in that unfortunate land.

MR. CARNEGIE, the Pittsburg manufacturer, lives in the United States. He is a monopolist. In the eyes of the *Toronto Empire* he is a "selfish tyrant." If he lived in Canada, the *Empire* would have regarded him as a patriot, a philanthropist. There is not a monopoly or monopolist that is not

an earnest supporter of the policy of "protection" that the *Empire* was established to praise. — *London Advertiser*.

Without wishing to disparage the intelligence of our worthy contemporary, we venture the opinion that it really don't know the meaning of the word monopolist. If it does, it certainly would not use it so promiscuously and inappropriately.

MR. GEORGE JOHNSON, the Dominion Statistician, is reported in the *Empire* as saying that the Government is "getting all the good there is to be got out of protection, and at the same time preventing any undue pressure upon the mass of the people." That is to say, the sugar refiners the coal oil men, and the binder twine manufacturers are getting all the good there is to be got out of protection by squeezing hundreds of thousands of dollars more than they are justly entitled to out of "the mass of the people" by means of the "undue pressure" of the tariff. If Mr. Johnson made the silly remark attributed to him he talks through his whiskers.

THE Krupps have sent an agent to investigate the quality of iron ore deposits in Labrador, whence they hope to get a cheaper supply than they now obtain in Spain. They consume 500,000 tons per year, but they are not handicapped, as our gun makers are, by a tariff of 75 cents per ton on their raw material. Germany is experimenting with protective tariff laws, but she is not yet Protection mad. Her manufacturers are not taxed on crude material. — *Cleveland, O., Iron Trade Review*.

Rather queer expressions from a strong protective journal; but we desire to know of our contemporary what it is to be "protection mad," and also what are "raw materials?" Tell us please.

WE note the following Orders in Council recently issued, affecting the tariff:—Previous to the last session of Parliament an order was passed placing degreas on the free list. In the absence of a ratification of the order by Parliament, it would cease to be operative at the close of the session. It was not presented to the House for ratification, and although many months have passed since the adjournment, we find at this late day the order only now being renewed. Quite unbusinesslike. An Order in Council has also been passed, providing that the tariff item permitting brass, copper, iron or steel, rolled round, wire rods of half an inch diameter to be entered duty free when imported by wire manufacturers, for use in making wire in their factories, is amended so as to include for purposes of free entry, rolled copper rods one inch and under in diameter.

PROTECTION when necessary: reciprocity when possible; not a dollar for corruption. When, in protecting the people of one country by tariff, we impoverish and pauperize the people of another country, protection then becomes legalized international robbery. — *Wade's Fibre and Fabric*.

He that provideth not for his own household denieth the faith and is worse than an infidel. — *St. Paul*.

The nation is but an enlarged household, and those who have it in charge, that is, the Government, are under a divine injunction to protect its people. If in affording that protection other people are impoverished and pauperized, the fact is to be regretted. But charity begins at home. And then it is questionable if there can be such a thing as legalized international robbery through protection. The term is but a jingle of words that means nothing.

Those who continue to regard foreign goods as evils will see a triumph of protection in the reluctance of Canadian manufacturers to exhibit at Chicago. — *Toronto Globe*.

With an entire space of only 15,000 square feet appropriated at the Chicago Exhibition for the display of manufactures from all Canada, from Halifax to Vancouver, what inducement is there for Canadian manufacturers to give the proposition a second thought? Machinery Hall at our own Toronto Fair contains a space of 16,000 square feet, and this is entirely too small to accommodate any considerable portion of the iron and wood working machinery which our manufacturers would exhibit if they had the space to show the goods. Anything like a fair display of Canadian pianos and organs alone would require more space than what Chicago appropriates for all Canadian manufactured products.

It will now be in order for the organ of the infant industries to explain that after American industries were nurtured to maturity by protection the system was abolished, and that the outgrown garments may be worn by the Dominion until she has produced a score of Carnegies and Fricks. — *Toronto Globe*.

It will now be in order for the *Globe* to explain how and when the American system of protection was abolished, and why the Carnegies and Fricks of that country should be held up to public scorn because they invested their money in industries made possible only by protection, and which gives employment to thousands of American workmen. Don't crow too soon, dear free trade friend, for protection has not been abolished in the United States. If the Mills Bill indicates the public sentiment regarding protection, free trade is a long way off in the dim future.

CANADIAN opponents of protection cannot do better than get together unanimously on the same line. If protection is bad for a country like the United States, enjoying free trade in a land as large as all Europe, then must it be doubly bad for a sparsely settled country like Canada, with its industrial interests and agricultural resources hampered on every hand by vexatious taxes. The N.P. must go! — *London Advertiser*.

Why "must" go? Who says protection is bad for the United States? Because our neighbors don't like the McKinley features of their tariff, it does not follow that they intend to or even desire to eliminate the protective features of it. Suppose they adopt the Mills Bill, if the *Advertiser* is acquainted with that measure, it knows that in a great many of the most important items it places the duty much higher than prevail in the Canadian tariff. And then there are not near enough Canadian opponents of protection to impair or destroy its integrity.

A FEW days ago a detachment of over four hundred blue-jackets, besides the officers, belonging to the British navy, were landed at Halifax and were carried across the continent through Canadian territory to Vancouver, to serve on British war ships, while a similar detachment from those ships were transported the other way, over the same route, bound to England to be discharged. These men were afforded every comfort on their overland journey, and as their trains sped across the country the standard of the British Royal Navy waved from the hindmost car. And this along a route quite contiguous to the

international boundary, and almost within sight of the United States. This shows one of the values of Canada to Britain. Of course this sight is quite worrying to some of our Yankee friends, who talk blusteringly about driving the British flag from the American continent; but they should remember that the old flag don't drive worth a cent. All the northern boundary of the United States, from the Atlantic to the Pacific, would be quite accessible to an army of British soldiers if it should ever become desirable to place them there.

Which gives the greater amount of employment to Canadian labor: the exportation of \$1,000 worth of logs, or the exportation of \$1,000 worth of lumber?—*Toronto Globe*.

That is a question for Sir Oliver Mowat. He is going to sell some timber limits soon, and a word from him will cause every log to be sawn into lumber in Canada. The *Globe* might help Mr. Mowat to answer its question for the good of the country.—*Hamilton Spectator*.

Those who live in glass houses should not throw stones. The timber limits which the Ontario Government may sell are but a tithe of the vast areas from which timber is being constantly cut and rafted as logs across the lakes to the United States, giving employment to thousands of people in that country. And Canadians are not even allowed to follow these logs and obtain employment in converting them into lumber. Mr. Mowat may possibly be able to cause some of the logs to be cut in Canadian sawmills; but the Dominion Government have it in their power to force the cutting of every one of them to be done here. This could be done by imposing an export duty on the logs. But do you ever observe the *Spectator*, or any other of the Tory papers, demanding the export duty? Not much. It is a great thing to be a Government "organ" So independent, you know.

AFTER the event comes the time for reviving prophecies, and many papers recall the words of James G. Blaine when he declared that the McKinley tariff bill did not provide a new market for a single pound of flour or a single barrel of pork. Here in Canada protectionists have scarcely seen through the humbug of the home-market theory yet.—*Toronto Globe*.

In the light in which the *Globe* pretends to quote Mr. Blaine, that gentleman never made the remark attributed to him. There was no McKinley tariff when the remark was made, and it was when insisting upon the insertion of a reciprocity clause into the then pending measure, and showing that foreign nations could be forced to grant fiscal favors to the United States if they desired favorable reception there of their products, that Mr. Blaine made the remark. His contention was that the proposed McKinley bill was deficient in that it placed sugar, coffee and hides on the free list, while the countries from which these articles came imposed duties upon American products which were prohibitive. Mr. Blaine saw that his country held the key to the situation, and insisted that it should be used. When we think of our exports of nickel, saw logs and pulp wood, we regret that the Canadian Government does not adopt the spirit of Mr. Blaine's plan to force an equitable reciprocity with the United States.

As immediate re-adjustment of the tariff in the honest interests of the farmer, is the only way to prevent a repetition of Tuesday's work here. That is, it must be made needless to be avoided. The manufacturers who now have seventy odd

majority at Ottawa, will not be wise if they turn a blind-eye to the storm signal floating across the border.—*Montreal Star*.

This shows how much the *Star* don't know about Canadian politics. The manufacturers have not got seventy odd majority at Ottawa, or any majority at all: and scarcely more than a corporal's guard of members. And as to an immediate re-adjustment of the tariff, the manufacturers have been asking for it for a long time in the honest interests of the whole country, not of a class, as the *Star* proposes. Some of the adjustments they desire include changes which will make Canada an iron producing country; that will cause Canadian logs to be cut into lumber in Canadian mills; that will stop the export of pulp wood in the interest of Canadian pulp mills; that will give us a nickel refining industry; that will give free sugar on the poor man's breakfast table; that will give us cheap coal oil and liquid fuel, and make it impossible for a combine to extort unjust and exorbitant prices for binder twine. If the manufacturers had seventy odd majority in the House of Commons, or even seven majority, these changes would have been effected at the last session. It is the Conservative party that has the majority, not the manufacturers.

Mr. Ives, a member of the Dominion Parliament for Sherbrooke, Quebec, had a large pulp mill in Canada. Since the McKinley tariff became operative he has removed the machinery to New Hampshire and erected a mill there. Mr. Ives is a staunch Tory.—*London Advertiser*.

Suppose Mr. Ives is a staunch Tory, what has that to do with the question? The fact is, the Canadian tariff is not arranged to meet such emergencies. Pulp logs are admitted free into the United States, while wood pulp has to pay a heavy duty. Mr. Ives has been active in trying to induce the Canadian Government to place an export duty on pulp logs, but thus far without success. If this were done the machinery of Mr. Ives large pulp mill which he removed from Quebec to New Hampshire, where it is giving employment to American workmen, would be replaced in his Sherbrooke mill and operated with Canadian workmen. Therefore, an export duty should be imposed on pulp logs. Our American friends force Canadian manufacturers to remove their machinery to their country, drawing the raw material from Canada also, but they immediately proceed to bounce any Canadian workman who ventures to obtain employment there unless he becomes naturalized. A retaliatory tariff is what we need.

A CORRESPONDENT, who is a manufacturer doing business at Hamilton, giving employment to a large number of hands, complains of the operation of the law enacted by the Ontario Legislature having reference to the liability of employers to employes when bodily injury has occurred caused by machinery in factories. The law says that the injured workman shall have a money claim against the employer. This is for the protection of the workman against the careless exposure of dangerous machinery; and the law also provides for a factory inspector whose business it is to examine factories and direct the erection of such safeguards about machinery as he may think necessary. Our correspondent, who seems to have had an unhappy experience in this direction, tells us that the manufacturer is not only liable for damages for any accidents that may occur, but also for all the costs that can be attached

to the case in the law courts. He cites a case where a workman was injured in a factory, and that a satisfactory arrangement could have been made whereby the employer was to pay the workman the sum of sixty-five dollars, but before the payment was made the lawyers got hold of the case and brought suit for \$600. This borders quite closely upon blackmail. Mr. Barber, the factory inspector, is a good and faithful officer, who never has any objections raised against his suggestions regarding safety appliances, and our correspondent thinks that where the inspector has made his suggestions, and the manufacturer has carried them out in good faith, his certificate to that effect should be a bar to any action for damages where accidents occur. The intention of the law is to protect the employes—the operation of it, in many cases, is to oppress the employer.

A PRESS telegram from London, England, states the following:—

The treatment to which the female employes of the Acrated Bread Company have been subjected has just been made public, and has aroused indignant public criticism. Many hundreds of girls work sixty hours weekly for from eight to ten shillings a week, often in over-heated, badly ventilated, underground rooms. As the last dividend declared by the company was forty-two per cent., a small section of the shareholders proposed that the workers should also profit by the prosperity of the company, and receive a slight increase in their wages. The bulk of the shareholders were thunderstruck at such a proposal. They howled it down. The chairman decided that the company could get girls at half the price now paid, and denounced workmen in general for craving for what was called leisure.

This is no exceptional condition of affairs in free trade Britain, for what is said of the hardships borne by these girls may be said of those in many—we might have said in all other occupations; and is in strong contrast with the better fed and better paid workers in protected Canada. Of what use, pray, is free trade to the poor working girls of London, where food and clothing are said to be very cheap, if, after being worked almost beyond endurance for sixty hours per week, they receive only a couple of dollars for their services? And the fact that the employers of this oppressed labor pocket as much as forty-two per cent. per annum on their investments does not disclose any exceptional condition of affairs either, for such dividends are common enough there. This is in strong contrast with the profits derived from manufacturing concerns in Canada, where competition keeps the profits down to a very low margin.

A few days ago the New York World contained the following:

During the discussion of the McKinley Bill in the House of Representatives a prom-

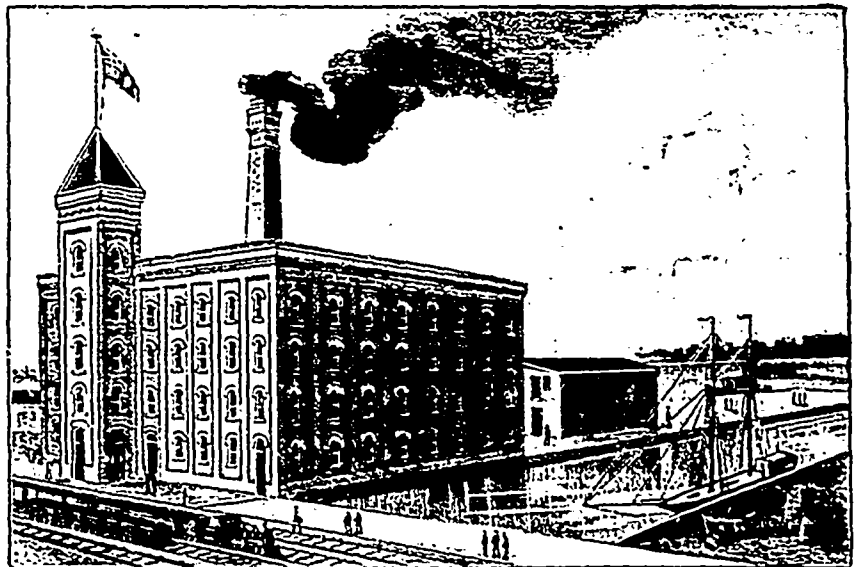
inent member of the Buffalo Fish Company, E. J. Tribles, visited the large firms along Lake Erie and St. Clair River who are engaged in the fishing and packing business, and raised a large fund for the purpose of having inserted in the bill a duty on Canadian fresh fish. The largest fish dealer in Detroit, Mich., subscribed \$500 to this fund.

E. J. Tribles and Mr. Clark of the Buffalo Fish Company and H. C. Post of Sandusky, O., and others of Erie, Pa., visited Washington, D.C., where they succeeded in placing a tax of one-fourth of a cent per pound on fresh herring and three-fourths of a cent per pound on all other kinds of fresh fish. Post and Tribles are accused of having had inserted in the bill clause 641, which the majority of the fishermen condemn, and which reads:

All fresh herring caught in Canadian waters in American nets should be allowed a free entrance in the United States.

As soon as this clause was inserted in the bill the Buffalo Fish Company and Post of Sandusky sent their agents to Canada and secured bills of sale from the Canadian fishermen for their nets. They represented to them that they could not buy their fish and pay the necessary duty unless they transferred their nets to them by bill of sale. A contract of this nature, it is claimed, was entered into by a large majority if not all of the Canadian fishermen, and in this way these two firms have created a gigantic monopoly.

Millions of pounds of herring are caught in the great lakes by the Canadians, and their principal market is the United



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States, where they are sold to the lake shore packers and are frozen, smoked and pickled. The Canadian laws prohibit Americans from fishing in Canadian waters or having any interest in the nets, therefore these bills of sale which the Canadians have made over to these firms are merely sham affairs to blind the customs officials of the United States. This grand protective scheme simply permits these fish monopolists to enhance the price of fish to the consumer, to drive other firms out of the business, to lower the wages of their employees, to rob the Canadian fisherman and to cheat the United States Government.

A duty of five cents per dozen on Yankee eggs will offset this.

The shipbuilding business is worth looking after. There is a good deal of it being done now, and Hamilton is just as good a point as any at which to build steamers. That Hamilton firms can build first-class boats has been demonstrated, and will be made still further evident next spring, when the big boat for the Toronto and Niagara line will slide gracefully into Hamilton bay. But there will be a big demand for freight boats soon. In two years the work on the St. Lawrence canals will be completed, and there will immediately ensue a demand for at least fifty new large boats for the grain carrying and other trades. An intelligent study of the situation will make the fact manifest, and Hamilton ought to be in a position to build at least some of these boats. The opening of the new canals will create a revolution in the carrying trade, and new boats of full canal capacity will then be in great demand.—*Hamilton Spectator.*

It makes one weary in considering what with propriety might be called the insurmountable obstacles standing in the path of the shipbuilding industry of Canada. As our laws now stand, any vessel flying the British flag and sailing under

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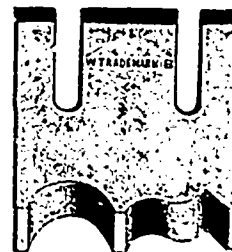
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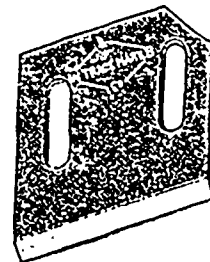
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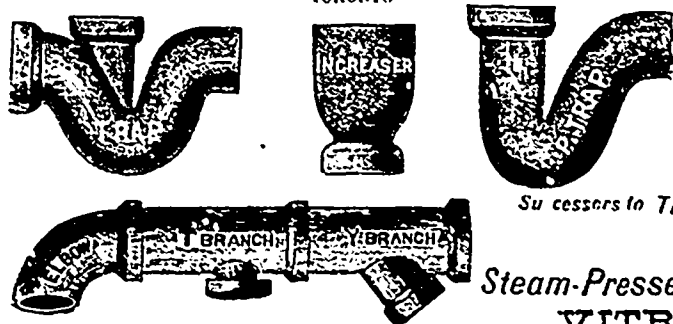
THE OBJECTS OF THIS ASSOCIATION ARE:

- 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.

Manufacturers desiring to hold meetings for the promotion of their business are invited to avail themselves of the Board Room of the Association for the purpose, which is offered to them free of charge.

J. J. CASSIDY, Secretary.

HENRY NEW, Pres. J. H. NEW, Vice-Pres. A. E. CARPENTER, Sec.-Treas.
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a British register is entitled to engage in any maritime or lake commerce to which Canadian vessels have access. There are steamers passing through the Welland canal constantly engaged in freighting between the Upper Lakes and Montreal, which were built in Britain, and which never pay any more dues or charges than if they were built in Canada. The steamer *Columbian*, probably the largest and finest passenger steamer in Canada, belonging to the Richelieu and Ontario Navigation Company, was built on the Delaware river. If she had been imported direct from the United States into Canada, taking out her register here, her owners would have had to pay about \$30,000 duty; but she was transferred from the American to the British flag at St. Johns, Newfoundland, where there is free trade in ships; and being thus a British vessel she was entitled to all the rights and privileges of such in Canadian waters. If Canada had a right to impose a duty on any and all vessels built abroad and engaging in Canadian trade, there would be a great boom to the shipbuilding industry. As it is, however, such legislation as we have is entirely against it. It is true some of the materials necessary in shipbuilding are admitted duty free, but other materials are liable to duty. Thus in the construction of such a vessel as the *Columbian*, if built in Canada, probably several thousand dollars would have to be paid in duties upon materials; but if the vessel is built in Great Britain or any British possession, or if in the United States or any other country, and transferred to the British flag, she can engage in Canadian commerce without the payment of one dollar as duty. Until this defect in our laws is remedied we can never hope to have a really flourishing shipbuilding industry.

Godey's for October is the finest number ever issued by that popular monthly. It has undergone a complete change in every way possible, so that one would scarcely recognize it. It is accompanied by a colored plate containing the faces of half a score of beautiful

women, and labeled "Godey's Idea of the World's Fair." The November number promises to be just as fine. Send for it, 21 Park Row, New York. Single copies, twenty-five cents.

BEFORE departing for his post as United States Minister to Russia, Dr. Andrew D. White left with the editor of the *Popular Science Monthly* the manuscript of an important paper in his Warfare of Science series. It will appear, under the title "From Magic to Chemistry and Physics," in the December and January numbers of the *Monthly*. While abroad Dr. White expects to revise his New Chapters in the Warfare of Science, for publication in book form.

THE *Star* almanac, now coming out in Montreal, is said to be a thing of wondrous interest. It contains upwards of 25,000 facts that every one will find of absorbing interest. The *Star* almanac partakes largely of the nature of an almanac, an atlas and an encyclopedia combined. For a good solid thing of merit it will be grand to send away to friends at Christmas time. The price to the public is only twenty-five cents. A wonderful book for a wonderfully low figure.

MR. ARCHIBALD BLUE, director of the Ontario Bureau of Mines, has sent us his first report regarding the minerals of this Province—a volume of 237 pages. A perusal of this report shows how great a service this branch of the Government may render to our mining industries. The report is in the nature of a review of

A. LEOFRED,

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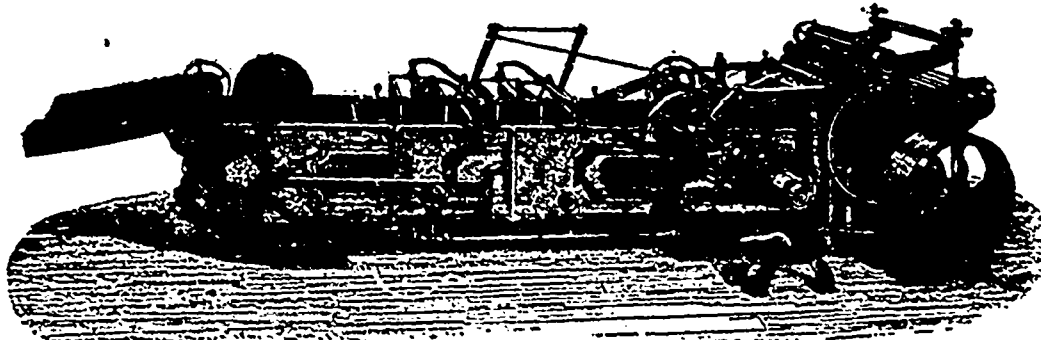
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the subject and an introduction to more elaborate details to follow in subsequent volumes. The object of Mr. Blue's Bureau is to collect and publish information and statistics on the resources and mining industries of Ontario. Mr. Blue's tastes lie in this direction, and the Government have done exceeding well to entrust this important matter to his experience and willing hands.

THE sample copy of the Christmas number of the *Dominion Illustrated* is a genuine surprise; we had no idea that such a superb work could be turned out in Canada. Everything in the number, colored supplements, reading matter and illustrations, is not only of a very high order, but most attractive, and will, we think, tempt everyone—even editors—to indulge in a few copies as souvenirs. The comic supplement is excellent, and shows great originality and skill on the part of the designer; the adventures of the hero at sea and in Paris are very funny. Another very good thing is the double page plate of the "Legislative Halls of Canada"—where our worthy M.P.'s and M.P.P.'s luxuriate and wrangle. As a rule the buildings are noble and imposing, and will give our friends abroad some idea of the progress of the Dominion in self-government. The large supplement, "Christmas Morning," is a beauty, and is well worth a handsome frame. The reading matter appears to be just the thing for the holidays, bright, interesting and beautifully illustrated; a new departure is in reproducing on title page the portraits of the authors. The whole number forms a literary and artistic treat, and must be seen to be appreciated. From the high merit of the work we do not doubt but that the whole edition will be disposed of as soon as put on the market.

THE Ontario Nut Works, Paris, Ont., of which Messrs. Brown & Co. are proprietors, have sent in an illustrated descriptive circular, having reference to the square and hexagon hot pressed nuts manufactured by them. These nuts are described as being made from a superior quality of iron, are uniform in size, with a true and smooth hole. Great care is shown in the selection of stock and in the manufacture of these goods, and the claim is confidently made that for quality and finish they are not surpassed by any made in the Dominion. These works were established by Messrs. Brown & Co. in 1873, and they have succeeded in securing a very large share of patronage by the superior quality of their goods and their promptness and care in filling orders.

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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.

CANADIAN PATENTS.

The following patents have been issued from the Canadian Patent Office from September 14th to 24th, 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.

NOTE.—The new Canadian Patent law has come into effect, whereby the life of Canadian patents is for the term of eighteen years. Patent numbered 39,264, and all subsequently numbered are granted for the longer term.

MECHANICAL.

- 40,327 Typograph, F. E. Bright, September 13th.
- 40,328 Saw set, C. Baker, September 14th.
- 40,330 Machinery for making cigarettes, A. S. Ecoffe, September 14th.
- 40,331 Shield for carriage wheels, D. S. Paine, September 14th.
- 40,332 Cheese, E. G. N. Salenius, September 14th.
- 40,333 Speed regulators for governors, F. N. Saylor, September 14th.
- 40,334 Gate latch, C. F. Bettman, September 14th.
- 40,335 Pump, J. F. Kievell and C. F. Wilkin, September 14th.
- 40,336 Camp stool, G. H. Ellis, September 14th.
- 40,337 Fencing wire, F. Guilleaume, September 14th.
- 40,339 Pew back, J. D. Pennington, September 14th.
- 40,340 Ditching machine, L. H. Turner, September 14th.
- 40,341 Grain binder, E. G. Watrous, September 14th.
- 40,342 Washing machine, J. H. Taylor, September 14th.
- 40,343 Device for holding the globe in tubular lanterns, G. L. Flower, September 14th.
- 40,344 Bag lock, H. McKinnon, September 14th.
- 40,345 Boot and shoe, G. L. Williams, September 14th.
- 40,346 Surface printing plates, J. Mullaby and L. L. Bullock, September 14th.
- 40,047 Book shelving, G. Stikeman, September 14th.
- 40,348 Halter, Harry W. Sisson, September 14th.
- 40,349 Wash board, M. C. Burke, September 14th.
- 40,350 Drainage trap for steam pipes, E. E. Gold, September 14th.
- 40,351 Dash board, P. M. Bunes, September 14th.
- 40,352 Carpet sweeper, J. O. Boggs, September 14th.
- 40,353 Apparatus for burning liquid fuel, W. M. Abbott, September 14th.
- 40,354 Window blind, W. Z. Brown, September 14th.
- 40,355 Smoke consumer, F. L. Bates, September 14th.
- 40,356 Mechanical stoker, R. H. Williamson, September 14th.
- 40,357 Vehicle, H. Seeman, September 14th.
- 40,358 Wagon box, W. McCubbin, September 14th.
- 40,359 Halter, R. Bruce, September 14th.
- 40,360 Sewing machine attachment, A. B. McDowell, September 15th.
- 40,361 Machine for making, repairing and cleaning roads, G. W. Taft and E. L. Lathrop, September 15th.
- 40,362 Machine for cutting staves or barrel covers, J. W. Chapman, September 15th.

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PATENTS

Procured in Canada, United States, Great Britain, and all Foreign Countries.

Counsel Work undertaken in Patent Causes.

Patent Suits prosecuted before the Courts
Validity and Infringements of Patents investigated.

Searches made. Assignments and Agreements drawn.
Advice on Patent Laws, etc.

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

C. G. C. Simpson, 146 St. James St., Montreal,

EXPERT and
SOLICITOR

PATENTS,

Patents obtained at lowest fees, compatible with first-class practice. (25 yrs.)

- 40,363 Hydro-carbon engine, C. B. Brayton, September 15th.
- 40,364 Machine for making metal balls, E. A. Jones, September 15th.
- 40,365 Machine for grinding metal balls, E. A. Jones, September 15th.
- 40,366 Toy, W. V. Snyder, September 15th.
- 40,367 Machine for pressing and blowing glassware, S. J. Plumber and J. A. Jones, September 15th.
- 40,368 Dovetail joint-closing machine, A. T. Linderman, September 15th.
- 40,369 Steam engine, E. S. Smith, September 15th.

- 40,370 Window sash balance, J. Sharp and R. H. Reid, September 15th.
- 40,371 Liquid gauge and tap, J. Sharp and R. H. Reid, September 16th.
- 40,372 Steam engine, A. H. Larochelle, September 16th.
- 40,373 Book stapling machine, J. Lyman, September 16th.
- 40,374 Corner joint for packing boxes, A. T. Lindeman, September 16th.
- 40,375 Combined churn and butter worker, R. B. Disbrow, September 16th.
- 40,476 Water meter, R. S. Rogers, September 16th.
- 40,378 Oie concentrator, C. E. Seymour, September 16th.
- 40,478 Whiffletree attachment, W. J. Lohr, September 16th.
- 40,379 Combined advertising device and cigar tip cutter, F. R. White, September 16th.
- 40,380 Damper regulator, C. G. Jewett, September 16th.
- 40,381 Railway surface cattle guard, J. T. Hall, September 16th.
- 40,382 Apparatus for unloading cargoes, M. J. Paul, September 16th.
- 40,383 Steam engine, E. S. Smith, September 16th.
- 40,384 Rotary pump, B. J. Taber, September 16th.
- 40,385 Improvements in the application of sand blast in engravings and etching, J. Mills, September 16th.
- 40,386 Secondary battery, J. H. Gerry, September 17th.
- 40,387 Car coupler, P. Hoff, September 17th.
- 40,388 Rotary veneer or lumber cutter, H. F. Smith and J. F. Plumb, September 17th.
- 40,389 Heater, E. S. Wilber, September 17th.
- 40,390 Type writer, G. H. Lascar, September 17th.
- 40,391 Type writer, G. H. Lascar, September 17th.
- 40,392 Extension table, W. Williams, September 17th.
- 40,393 Flue for fire places, K. McKenzie, September 17th.
- 40,394 Spring tooth harrow, J. A. Publow, September 17th.
- 40,395 Fire heater, W. B. Nevill, September 17th.
- 40,396 Cattle Guard, James Whittemore, September 17th.
- 40,397 Temperature regulator, J. T. McElroy, September 17th.
- 40,398 Pneumatic pump, F. A. Halsey and the Canadian Rand Drill Company, September 17th.
- 40,399 Shifting rails for carriages, J. C. Parker and E. S. Heaton, September 17th.
- 40,400 Air pump, A. A. Dittmann, H. Falkenhausen and A. L. Reinmann, September 17th.
- 40,401 Pulley for the transmission of power, The Cant Bros. Co., September 17th.
- 40,402 Tap socket for barrels, C. J. Mayhew, September 19th.
- 40,403 Core attracting solenoids, W. R. Michl, September 19th.
- 40,404 Door bell, J. Allen and S. Goulden, September 19th.
- 40,406 Harrow, R. Neville, September 19th.
- 40,407 Snow plow, J. Kobb, September 19th.
- 40,408 Device for preventing rattling in thill couplings, E. Wilder, September 19th.
- 40,409 Rail joint, G. G. Stacy, September 19th.
- 40,410 Road cart, J. B. Armstrong, September 19th.
- 40,411 Hay elevator and carrier, W. Londen, September 19th.
- 40,412 Car coupler, W. C. Watson, September 19th.
- 40,413 Vehicle box, D. R. Couch, September 19th.
- 40,414 Machine for cutting cloth, H. A. Caldwell, September 19th.
- 40,415 Hot air furnace, R. Tate, September 19th.
- 40,416 Distilling apparatus, A. W. Ellis, September 19th.
- 40,417 Carbon burner, J. H. La Rue, September 19th.
- 40,418 Coin operated lock, H. Caspar, September 19th.
- 40,420 Machinery for separating grain, seeds, etc., R. Crease, September 19th.
- 40,421 Rail cutter, E. H. Angell, September 20th.
- 40,423 Field range, J. Marce, September 20th.
- 40,424 Station indicator, G. W. Robertson, September 20th.
- 40,425 Car coupler, J. H. Eakins, September 20th.
- 40,426 Sewing machine, H. R. Tracy, September 20th.

- 40,427 Hot water furnace, E. S. Manny, September 20th.
- 40,428 Gas engine, Evans Gas Engine Company, September 20th.
- 40,429 Water heater, R. F. Walsh, September 20th.
- 40,430 Ink bottle, W. G. Collins, September 20th.
- 40,431 Stopping mechanism for knitting machines, G. J. Manderfeld, September 20th.
- 40,432 Machine for moulding heel stiffener, W. C. Stewart, September 20th.
- 40,433 Car coupler, D. Grant, September 20th.
- 40,434 Railway joint chair, T. Sayers, September 20th.
- 40,435 Gang plow, R. L. Penn, September 20th.
- 40,436 Flax seed separator, D. E. Loger, September 20th.
- 40,837 Harrow, A. Wilfert, September 20th.
- 40,438 Case for preserving merchandise in a moist condition, H. D. Streater, September 20th.

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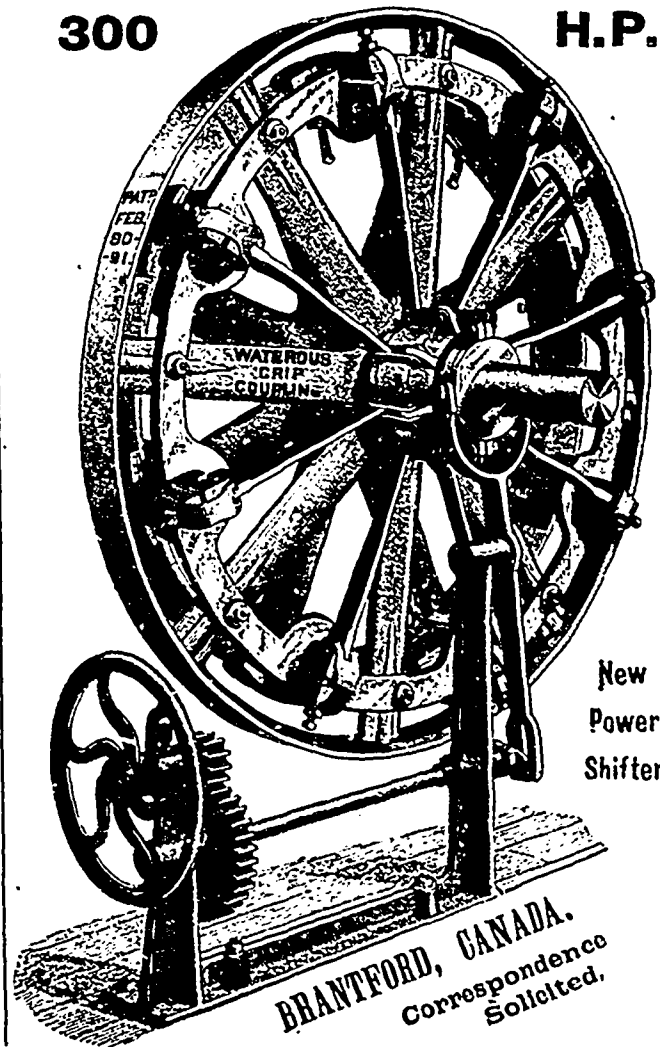
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Solicited.

- 40,439 Adhesive material for use on driving bolts, C. G. Thoenes and F. A. Thoenes, September 20th.
 40,440 Harvester, T. C. Wilkins, September 20th.
 40,441 Ore concentrator, C. Brent, September 20th.
 40,442 Gear for electric milways, G. R. Baldwin, September 20th.
 40,443 Merry-go-round, J. C. Fowler, September 22nd.
 40,444 Apparatus for loading and unloading vessels, J. Abbott, September 22nd.
 44,446 Body cooler and supporting frame therefor, E. B. Magill, September 22nd.
 40,447 Apparatus for sorting cellulose, C. Wandel, September 22nd.
 40,449 Driving Dress, W. Carey, September 22nd.
 40,450 Railway time signal, The Fontaine Safety Signal Company, September 22nd.
 40,452 Compound press, F. B. Deane and J. W. Marshall, September 22nd.
 40,454 Cart saddle, E. O. Blackford and H. E. Stoughton, September 22nd.
 40,455 Staple driving machine, P. A. Coupal and A. E. Towne, September 22nd.
 40,456 Pulley wheel, Hugh McColl, September 22nd.
 40,457 Check puncher, W. J. Jenner and A. J. Roberts, September 22nd.
 40,458 Street railway transfer ticket, W. E. Whitehead, September 23rd.
 40,560 Flour bin, sifter and measure, E. A. Gill, September 23rd.
 40,461 Striking and strength test, F. W. Kremer, September 23rd.
 40,462 Children's underwaists, G. D. McKay, September 23rd.
 40,463 Feed trough, C. B. Snellenberger and J. B. Snellenberger, September 23rd.
 40,464 Mechanism for actuating interlocking gear for railway switches and signals, H. Bezer and T. W. Burley, September 23rd.
 40,465 Stump extractor, J. Cornelius and R. S. Kayler, September 23rd.
 40,466 Hay ricker, Acme Harvesting Company, September 23rd.
 40,467 Veterinary operating table, M. M. Copp, September 23rd.
 30,468 Machine for stacking hay, D. H. Talbot, September 24th.
 40,469 Buckle, C. A. Minehart, September 24th.
 40,470 Driving belt, I. Jackson, September 24th.
- SCIENTIFIC PROCESSES.
- 40,329 Process of extracting metals from ores and minerals containing them, J. Turtton, September 14th.
 40,338 Process of hardening metals, J. S. Durning, September 14th.
 40,419 Process of making charcoal, L. Zwilling, September 19th.
 40,422 Process of testing liquids or substances, F. Clement, September 20th.
 40,445 Process of and apparatus for making varnish, H. Pfanne, September 22nd.
 40,453 Process of treating metalliferous ores, G. S. Wright, C. Ballard and C. Marshall, September 22nd.
 40,459 Process of reducing ore, J. T. Wainwright, September 23rd.
- ELECTRICAL.
- 40,405 Pump motor, T. Ferguson, E. C. Ferguson and A. L. Ferguson, September 19th.
 40,448 Electric switch and cut-out, C. W. Huntington, September 22nd.
 40,451 Electrical locomotive, W. H. Soley, W. Perkins, J. Wolstencroft, W. O'Neil and W. H. Telland, September 22nd.

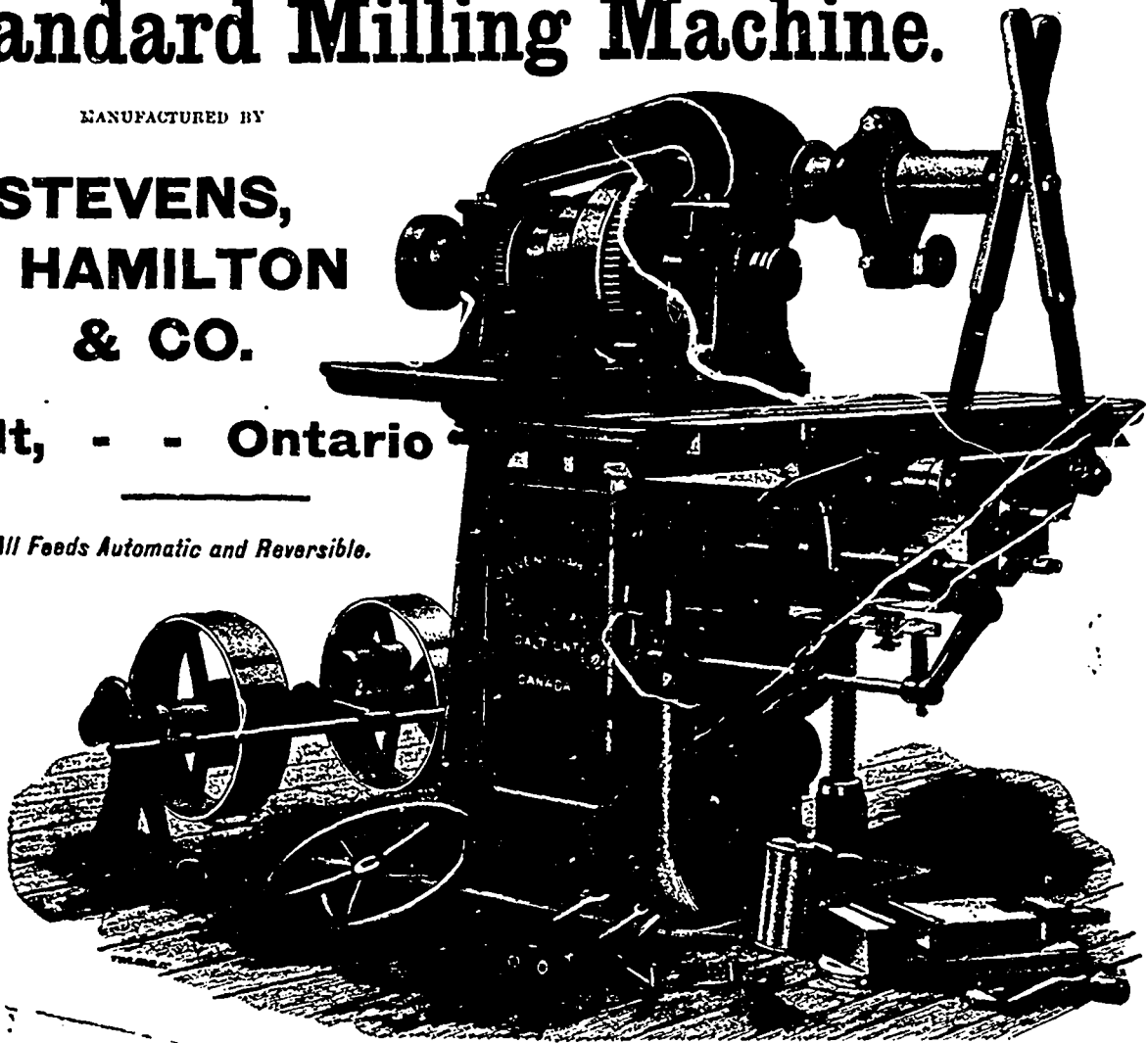
Standard Milling Machine.

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All Feeds Automatic and Reversible.



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. HENRY PORTER, Montreal, will enlarge his business, and engage in manufacturing carriage leathers, etc.

MR. JOHN S. RIGBY is erecting works at False Creek, near Vancouver, B.C., for the manufacture of Portland cement.

THE capital stock of the Peterborough Canoe Company, Peterborough, Ont., has been increased from \$3,000 to \$40,000.

MR. JOHN MARLYTT's pork-packing establishment at Aylmer, Ont., was destroyed by fire November 3rd. Loss about \$3,500.

THE enlarged plant of the Massey-Harris Company in Toronto will include works for the manufacture of harvesting machinery, knives, etc.

THE steam boiler in the saw and shingle mill of Mr. H. McQuarrie at Bark's Falls, Ont., exploded on November 13th, wrecking the mill.

THE lumber mill and planing factory of Mr. Joseph Cooper at Owen Sound, Ont., was destroyed by fire November 13th. Loss about \$3,000.

CLENDENNING'S flour mill near Carman, Man., was completely wrecked a few days ago by the explosion of the steam boiler. Loss about \$8,000.

THE two flouring mills of Messrs. W. Thompson and S. R. Stuart at Mitchell, Ont., have recently been re-modeled and new machinery introduced.

THE Norwich Elevator Company has been incorporated at Norwich, Ont., with a capital stock of \$2,500 to build and operate a grain elevator at that place.

MESSRS. DUFON BROS, Mitchell, Ont., manufacturers of blankets, flannels, tweeds, etc., are making considerable alterations and improvements in their mills.

MESSRS. A. & E. LOIGNON, Montreal, manufacturers of structural iron work, forgings, etc., are introducing a lot of new machinery, new steam engines and boilers, etc.

THE Saint Francis Mills Company has been incorporated at Brompton Falls, Que., with a capital stock of \$100,000 to manufacture lumber, wood pulp, shingles, etc.

THE Magog Print Works at Magog, Que., the property of the Dominion Cotton Mills Company, of Montreal, are to be considerably enlarged and new machinery added.

THE Dominion Hosiery Mill of Messrs. G. Barrett & Co., Mitchell, Ont., have been enlarged and new machinery introduced, increasing their capacity of output 50 per cent.

THE Lang Tanning Company has been incorporated at Berlin, Ont., with a capital stock of \$50,000 to take over and carry on the tanning business of Messrs. R. Lang & Son, of Berlin.

MESSRS. A. M. NEWLANDS & SON, manufacturers of Saskatchewan and plush robes, etc., Galt, Ont., will start a large factory in Buffalo, N.Y., from which to supply their American trade.

IT has been determined to wind up the affairs of the Niagara Casket and Coffin Company at Thorold, Ont., the probability being that a new company will be organized to take over the works.

MR. J. H. ETHERINGTON, who has heretofore operated a carpet factory at Paris, Ont., has secured a suitable factory building at St. Catharines, Ont., and is removing his machinery to that place.

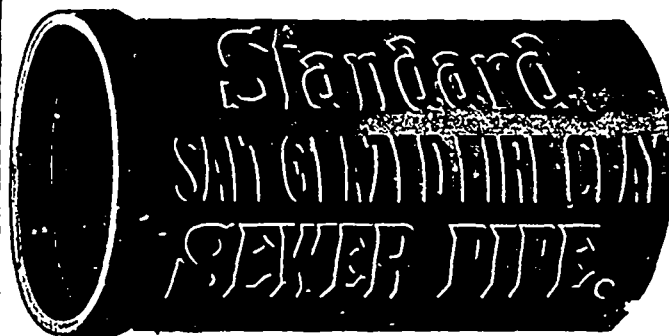
THE Ontario Peat Fuel Company, with headquarters at Toronto, has been incorporated with a capital stock of \$300,000, to manufacture peat fuel and also machinery for the manufacture of such fuel.

THE Lancashire Belting & Hose Company, Manchester, England, will place their goods on the Canadian market, and have appointed Mr. Robert S. Fraser, of Montreal, their Canadian representative.

A NEW company is about being organized in Thorold, Ont., to manufacture a new patent casket handle and all kinds of undertakers' hardware. Messrs. Joseph Battle and J. D. Ripson are interested.

THE Symmes Hay Cap Company, of Sawyerville, Que., is applying for incorporation with a capital stock of \$15,000, to manufacture the Symmes patent hay and grain caps, and vegetable covers, etc.

THE corporation of St. Henri, Que., near Montreal, have voted a bonus of \$33,000 to Messrs. William Clendenning & Sons, of Montreal, in consideration for which the new foundry, etc., of that concern are to be located at St. Henri.



The Standard Drain Pipe Co., St. Johns, P.Q.

Manufacturers of Salt Glazed Vitrified Sewer Pipes, Double Strength Railway Culvert Pipes, Inverts, Vents, and all kinds of Fire Clay Goods. The Standard Drain Pipe Co., of St. Johns, P.Q., Ltd. W. C. TROTTER, Pres.

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TORONTO, - ONTARIO.

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THE Breithaupt Leather Company, whose headquarters are at Berlin, Ont., are making some important enlargements of their works at Listowel, Ont., their expectation being to manufacture 200,000 sides of sole leather the coming year.

THE Pedlar Metal Roofing Company, Oshawa, Ont., will make a large addition to their works, and important new machinery will be introduced, including a power press for stamping metal ceiling. This is a new concern, but they are enjoying a fine business.

THE Canadian Oiled Clothing Company has been incorporated at Port Hope, Ont., with a capital stock of \$20,000, to manufacture waterproof horse and wagon covers, oiled clothing, etc. This company will acquire and operate the oil clothing factory at Port Hope, Ont.

THE new steamer *Garden City*, which, during the past season, ran on the route between Toronto and St. Catharines, will undergo extensive alterations during the winter, including sleeping arrangements, with a view to carry excursions between Toronto and Chicago next summer.

MR. C. C. HARRIS, Toronto, manufacturers of solders, Babbitt metal, stereotype metal, etc., is making some important alterations in his works. He is abandoning steam power for electricity, and is putting in new machinery for the manufacture of unfoil, metal capsules, etc.

MESSRS. JOHN INGLIS & SONS, Toronto, have recently supplied machinery to flour mills at Melbourne, Ont., Hillsdale, Ont., and Collins Bay, Ont. They are now building pumping machinery,

boilers, filters, etc., for the water works at Brandon, Man., and are compounding an engine for the steamer *Edward Blake*.

MESSRS. MORRIS, FIELD, ROGER & CO, formerly of Brantford, Ont., are erecting a piano factory at Listowel, Ont., which will give employment to some 60 hands. Their building is of brick, 165 x 50 feet, four floors, besides which there will be a detachment show room brick building, and also a brick office building.

THE Dominion Embroidery Company has been incorporated at Toronto with a capital stock of \$40,000 to manufacture table and piano covers, scarfs, carriage robes, embroidered flannels, etc. Mr. Wm. Reichling, at the head of the concern, had large practical experience in this business in Switzerland, and later in Toronto.

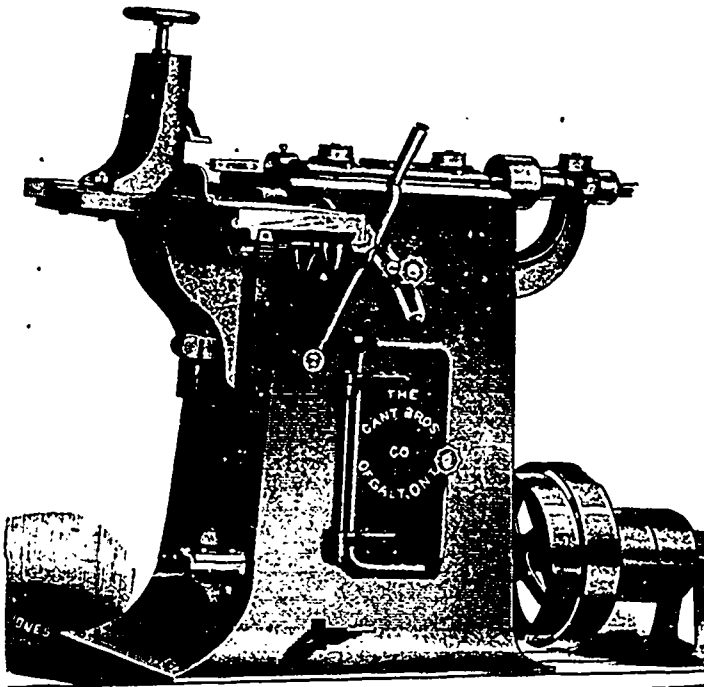
SIR RICHARD CARTWRIGHT has offered to the Wormworth Piano Company, of Kingston, Ont., a large building and machinery at Napanee, Ont., rent free for two years, and the money necessary to operate a large piano factory. We heartily welcome Sir Richard to the grand army of Canadian manufacturers. This move of his qualifies him for membership in the Canadian Manufacturers' Association.

MESSRS. JOHN INGLIS & SONS, Toronto, have been awarded the contract for building the boilers and engines for the new steamer now being built at Owen Sound for the North Shore Navigation Company. There will be 3 boilers, each 11 feet 6 inches long and 9 feet diameter; the cylinders of the triple expansive engine to be 18 in., 30 in. and 48. diameter and 30 inch stroke, to develop 1,300 horse power.

THE Graham Evaporating Works at Belleville are said to be the largest of the kind in Canada, giving employment to about 200 hands, more than half of which are women, girls and boys. The consumption of apples at these works is about 1,600 bushels per day. Since the season opened in September Mr. Graham has paid out in cash for labor and apples over \$60,000. Enlargement of his works this year cost \$6,000, and before the next season he will add a vinegar factory.

THE Doty Engine Works Company, Toronto, are making a specialty of manufacturing the Roberts Safety Water Tube Marine Boiler for yachts, launches and other steamers. This is, they say, the original fixed water line pipe boiler, some 400 of which are now in use. They are described as safe, reliable, light weight, economical, no shop repairs, small space. This concern also manufacture triple expansion and compound marine engines for yachts and other steamers. Illustrated catalogues sent on application.

MESSRS. DARLING BROS., Montreal, are sending out a number of their Claussen friction clutch pulleys, some of their customers being the Standard Drain Pipe Company, St. John, one 44 x 12 inches; the Paton Manufacturing Company, Sherbrooke, two 52 x 11 inches each; Hobbs Manufacturing Company, London, one



Hollow Square Chisel Morticer

FOR MORTICING IN HARD WOODS

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

LAMBIN'S PATENT

MINERAL WOOL

Fire Proof Covering

Cast Iron Water and Gas PIPES

Special Castings.

CANADA PIPE AND
FOUNDRY CO., MONTREAL.

A Great Loss!

If you have any Pipes or Boilers uncovered you are losing on same at the rate of 80 cents every year on each square foot of surface exposed. By having them covered with our Mineral Wool Sectional C covering you will save 85 per cent of this loss. The saving thus effected in fuel will in one year more than pay the cost of covering, which we guarantee to last as long as the pipes.

Our covering is the best fuel saver on the market.

Canadian Mineral Wool Co., Ltd., 122 Bay Street, TORONTO.

36 x 12 inches, Canadian Bridge & Iron Company, one 44 x 12 inches, Messrs. R. White & Co., Montreal, three, 60 x 12 inches, 36 x 12 inches and 24 x 8 inches respectively, and one 75 h.p. clutch coupling.

In connection with the extension of the Montreal Cotton Company at Valleyfield, Que., Messrs. Darling Bros., of Montreal have shipped over 70 tons of machinery to that concern, consisting of steel shafting, saddle castings, hangers, etc. The Montreal Cotton Mills have put in water wheels equal to 1,100 h.p., and the above is to transmit this power. They also have the fitting up of the new electric light station in connection with the cotton mills, and are putting in the Claussen friction clutch pulley and the Nordberg cut-off governor.

ANOTHER evidence of the value of the N.P. in Canada is the establishment of a branch factory of the Lay Whip Company, of Westfield, Mass., at Rock Island, Que. At this latter place they have what is said to be one of the most complete plants in Canada for the manufacture of whips and whip goods, and which is claimed to be in point of size and equipment second to but one other similar concern on this continent. It was recently noticed in this journal that Messrs. Butterfield & Co., manufacturers of taps and dies, etc., had erected a very large brick factory building for the purposes of their business. When this building was being erected it was with a view to also accommodate the business of the Lay Whip Company; and this latter concern now occupy a large portion of the Butterfield building.

THE Curtis Regulator Co., formerly of 63 Beverly St., Boston, Mass., have removed to 29, 31, 33 Haverhill St., that city, where they have extensive sales rooms and offices in a large new building of five stories and basement, measuring 75 x 45 feet. The great increase in the business of this concern has necessitated this move, as well as the building of an extensive new factory in Charlestown, Mass. This structure is of most substantial character with heavy brick walls, and measures 105 x 45 feet, and is five stories in height. It is equipped with a 100 horse power Ball high speed compound engine, and a locomotive boiler. The works are supplied with its own dynamo and electric lights, and a track of the Boston & Maine Railroad runs into the premises. With these facilities the Curtis

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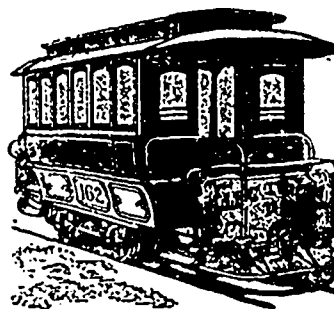
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MESSRS. F. E. DIXON & Co., manufacturers of leather belting, Toronto, has sent us a circular having reference to the electric and dynamo belting made by them, and to the parties who have this belting in use. They mention one 36-inch belt 98 feet long in the power house of the Toronto Electric Light Company which has been in constant use ever since August, 1885, and looks good for at least ten years more of hard service. They also mention one 36-inch belt 100 feet long; one 36-inch belt 123 feet long; one 38-inch belt 100 feet long; one 24-inch belt 100 feet long, and over 1,500 feet of 8-inch belting, all in the works of the Toronto Electric Light Company, all of which are of double thickness, and are giving the best satisfaction. They say that this 38-inch belt is the largest ever made in Ontario. After mentioning the names of a large number of electric companies in Ontario and Manitoba who are using belts manufactured by them, they say:—"We are the only belt manufacturers in this Province who can show belts of our own make which have been in use as long as five years. We can point to belts of our own make in this city alone which have been in constant use for ten, thirteen, and even nineteen years, and are still good." Messrs. Dixon & Co. invite correspondence; and will send Dixon's Hand Book free on application.

STEAM PIPES--LOSS FROM RADIATION.

NOT only pipes laid under ground, but all pipes conveying steam should be covered, for the losses by radiation from unclothed pipes and vessels containing steam is considerable, and in case of pipes leading to steam engines it is magnified by the action of the condensed water in the cylinders. It therefore is important that pipes should be well protected. This fact readily commends itself to the judgment of any practical man, though many who are aware that there is a certain loss, have very little idea of how great it really is. Careful experiments have ascertained that with a steam pressure of 75 pounds and the temperature of the atmosphere at 60°, a 2 inch

main loses one horse power for every 132 feet in length; a 4 in. pipe one horse power for every 75 feet; a 6 in. pipe for every 46 feet, while a 12 in. main loses 1 horse power in efficiency for every 26 feet in length when uncovered.

There is a wide difference in the value of different substances used for protection from radiation, their value varying nearly in the inverse ratio of their conducting power for heat, up to their ability to transmit as much heat as the surface of the pipe will radiate, after which they become detrimental rather than useful as covering; this point is nearly reached at baked clay or brick.

A smooth or polished surface is of itself a good protection, polished tin or Russian iron having a ratio for radiation of 53 to 100 for cast iron. Hair or wool felt has the disadvantage of becoming charred from the heat of the steam at high pressure and sometimes of taking fire therefrom. A case of this kind occurred a few months ago where a cylinder was covered with wool; the man in charge noticed smoke coming from around the lagging, and on taking a section off, found the wool, which was in a small measure saturated with cylinder oil, which had dropped a little at a time when filling the lubricator, was smoldering; as soon as air was admitted to it, it blazed up nearly igniting the wood work. Such cases as these have led to the use of a variety of cements for covering pipes, composed generally of clay mixed with different substances, as asbestos, paper fibre, charcoal, etc.

The comparative value of different coverings may be seen from the following table compiled by Chas. E. Emery, Ph. D. :

Non-Conductor	Value
Mineral wool832
Do. with tar715
Sawdust680
Charcoal632
Pine wood, across fibre553
Loam, dry and open550
Slacked lime480
Gas house carbon470
Asbestos363
Coal ashes345
Coke in lumps277
Air space undivided136

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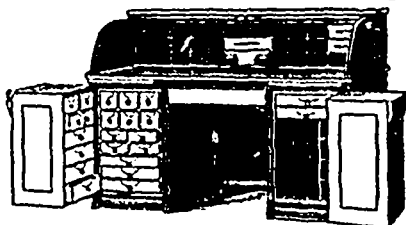
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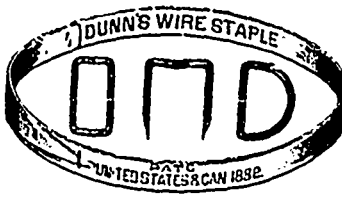
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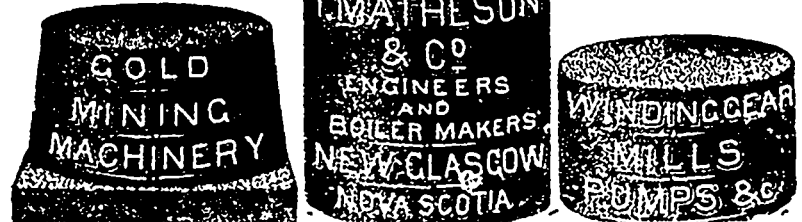


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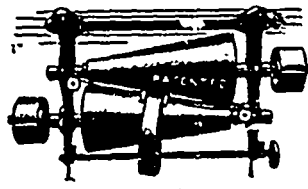


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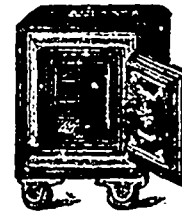
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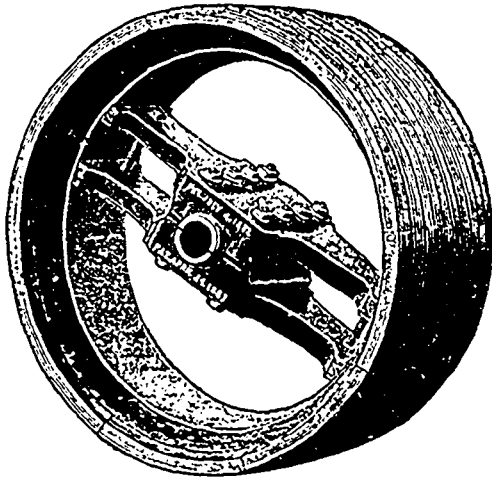
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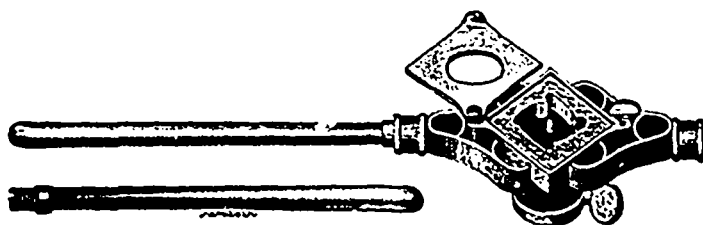
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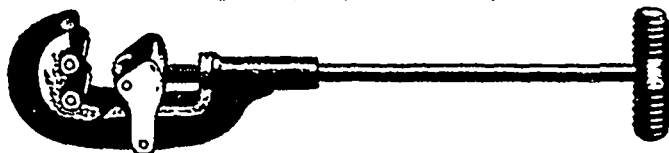
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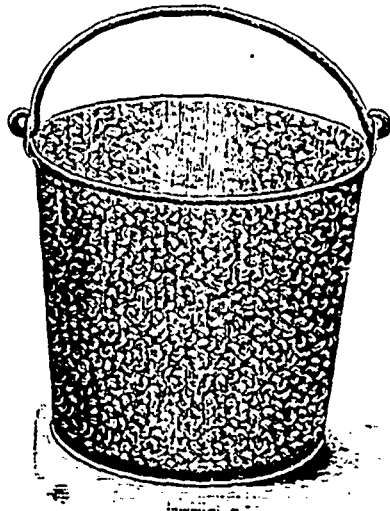
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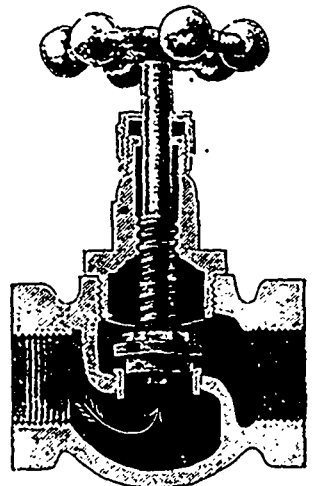
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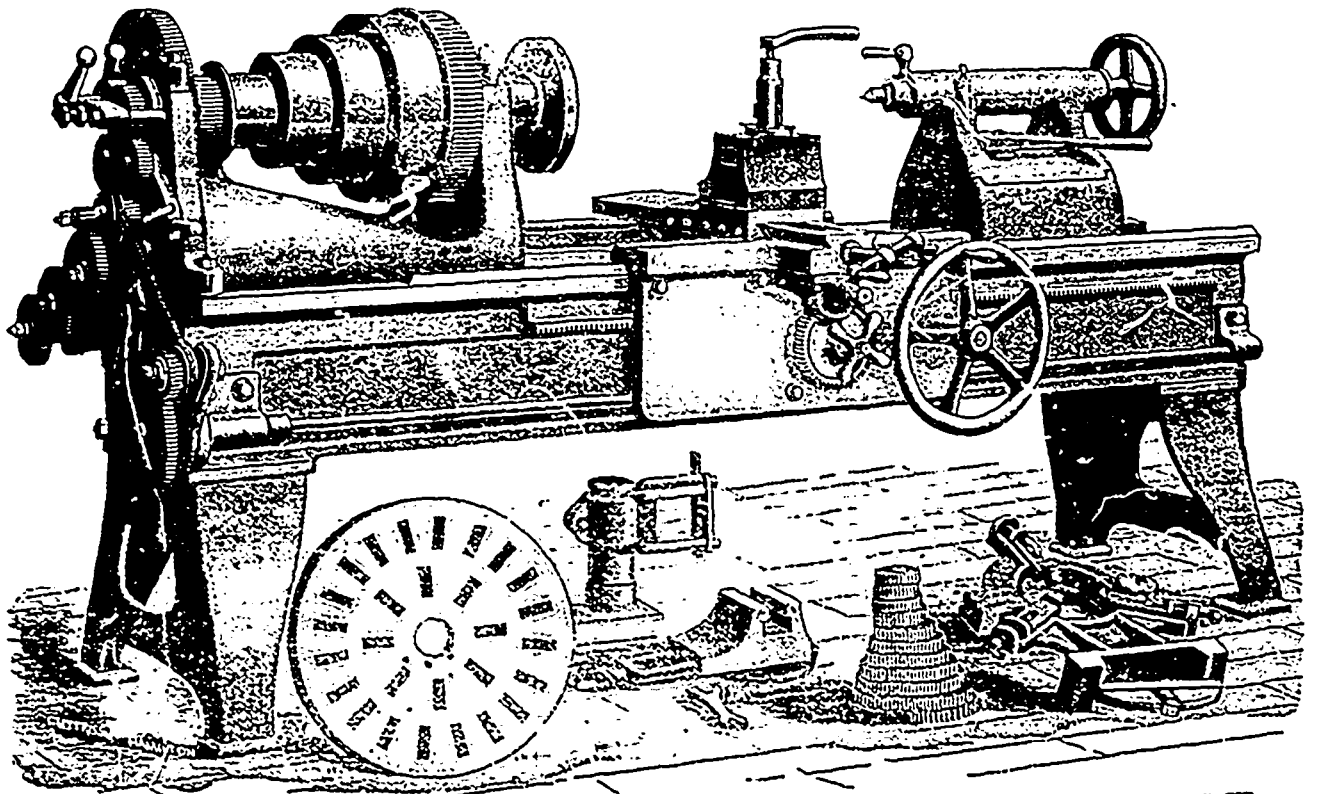
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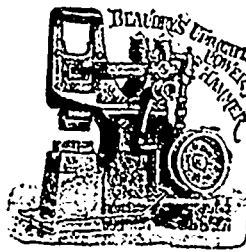


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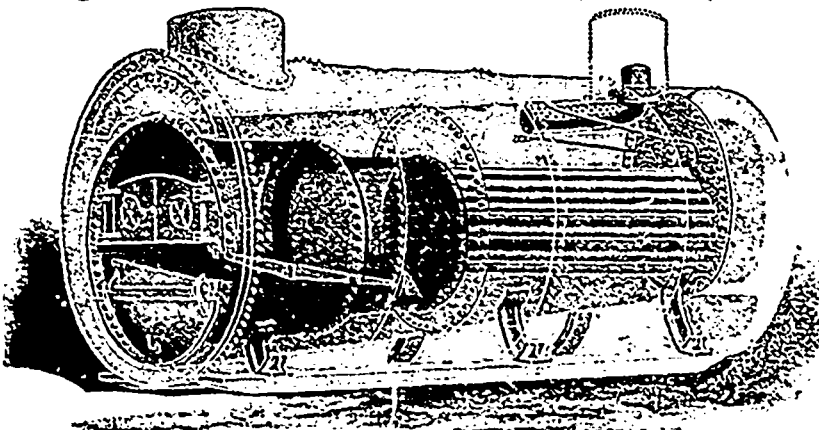
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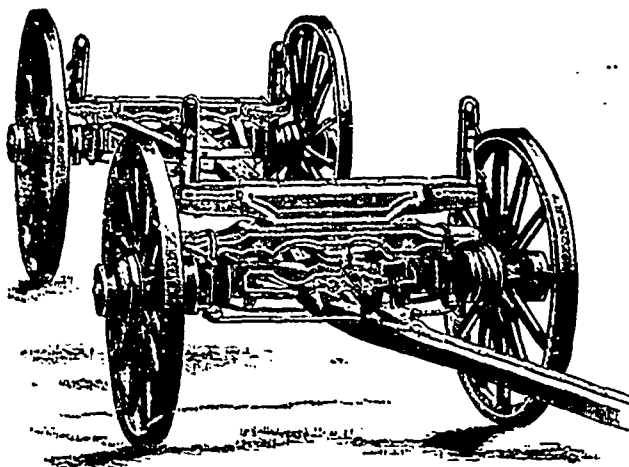
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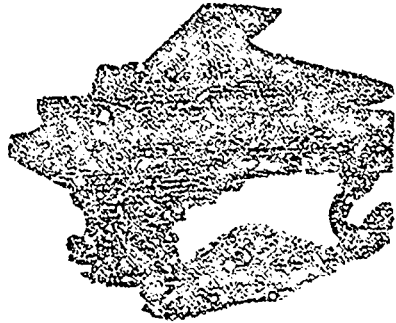
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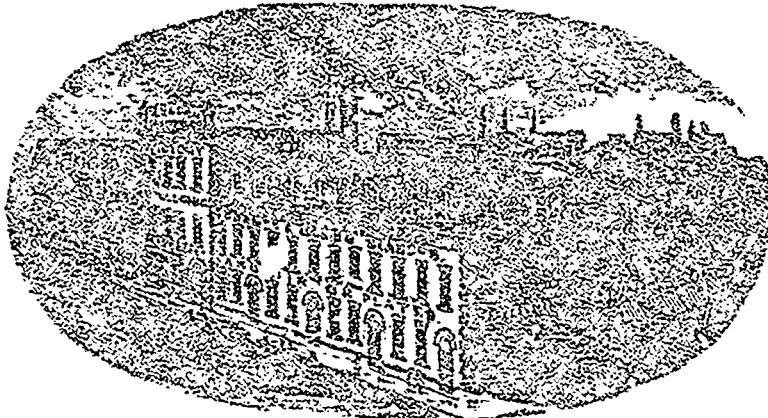
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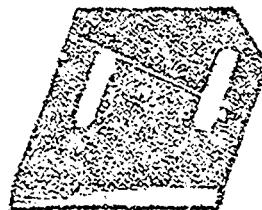
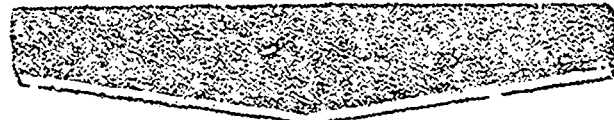
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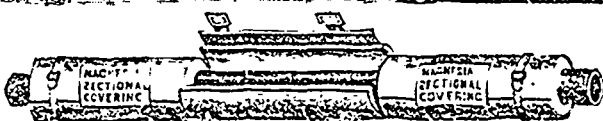
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