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THE CANADIAN MANUFACTURER

AND INDUSTRIAL WORLD.

DEVOTED TO THE MANUFACTURING INTEREST OF THE DOMINION.

THE MORE WE MANUFACTURE THE RICHER IT IS

A NATION THAT MANUFACTURES FOR ITSELF PROSPERS

Vol. 20. TORONTO, JANUARY 2, 1891. No. 1.

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Established over Fifty Years.

Theo. H. Eaton & Son,
Windsor, Ont. : Detroit, Mich.

**DYEWOODS, DYEING DRUGS,
CHEMICALS, ACIDS, Etc.**

HIGH GRADE LOGWOOD.
Domestic and Imported Extracts of
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SOLE AGENTS FOR THE UNITED STATES AND CANADA
FOR THE "CROWN ANILINE DYES."

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A NEW FAST BLUE
Replacing Allzarine Blue.

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Bayer & Co., Elberfeld.

**DOMINION DYEWOOD
AND CHEMICAL CO.**
TORONTO,
Sole Agents for Canada.

IMPERIAL BANK
OF CANADA.

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THE J. C. McLAREN BELTING CO.
BELTING MANUFACTURED FROM

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EVERY BELT GUARANTEED.

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THE GUTA PERCHA & RUBBER CO.
OF TORONTO. CH-CAWDEE SECTY.

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BELTING, PACKING, CLOTHING, ROSE.

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— AGENTS —
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MONTREAL.**

— ALSO —
EXTRACTS, DYEWOODS, CHEMICALS.

John Bertram & Sons,
CANADA TOOL WORKS!
Dundas, Ont.

SEE ADVERTISEMENT, PAGE 33.

FERRO-COPPERTIN
AN ANTI-FRICTION METAL
THAT IS
Durable and Cold Running.

J. & A. BERTRAM, Makers, Toronto.

TRADE **IMPERIAL** MARK
BOILER COMPOUND

FOR THE PREVENTION OF SCALE
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Prepared only and separately for each case after analysis of scale from boiler to be treated.
In successful use in Pennsylvania for over fifteen years.

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Contains neither acid or any ingredient which will injure iron, brass, or packing.
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Rubber Stamps,
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SEND FOR PRICES.

OUR IMITATORS

Owing to certain dealers attempting to palm off on the public the products of other makers, and representing them to be ours to the injury of the reputation of our goods, we have issued the following—

CAUTION TO THE TRADE
Merchants are respectfully advised that hereafter all gloves of our manufacture will be STAMPED with a SILK WOVEN label as below

W. H. Storey & Son
Aston, Can.

**McARTHUR,
CORNEILLE & CO.**

(Successors to JOHN McARTHUR & SON)

310 to 316 St. Paul Street,

and

147 to 151 Commissioners Street,

MONTREAL

offer at closest prices

PURE OLIVE OIL.

WINTER-PRESSED LARD OIL,

EXTRA FINE SPINDLE OIL,

and a full assortment of other

LUBRICATING OILS.

Also

CHEMICALS,

DYESTUFFS,

DYEWOODS,

EXTRACTS,

&c. &c. &c.

Are Sole Agents in Canada for

SOCIETE ANONYME

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MATIERES COLORANTES ET

PRODUITS CHIMIQUES,

DE ST. DENIS,

Successors to

A. POIRRIER AND G. D'ALSACE,

PARIS,

Manufacturers of

ANILINE DYES.

ARCHIL,

OUDBEAR.

&c. &c. &c.

Prize Medal, London Universal Exhibition, 1862.

Gold Medal, Paris Universal Exhibition, 1867.

Grand Diploma of Honor, Vienna Universal Exhibition, 1873.

Medal and Diploma, with Highest Commendations, Philadelphia Centennial Exhibition, 1876.

Maintain large stock, replete with all the new and improved colors. Will be pleased to furnish quotations, with samples and directions for use.

WILLY KNOX.

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KNOX & ELLIOT.

Architects, Engineers and Mill
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Office: 19 Queen Street East,
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and Forged Nuts, Felloe Plates, Lining and
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The Hardware Trade, Shoe and Leather
Finding Dealers, and Boot and Shoe Manu-
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Assortment and Greatest Variety of above
Goods always in stock, and can rely on orders
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Electric Gas Lighting, Elec-
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Supplies, Contrac-
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39 King Street West, Room 2.

This Space for Sale.



Published on the First and Third Fridays of each Month

BY THE

Canadian Manufacturer Publishing Co.

(LIMITED.)

63 FRONT STREET WEST, TORONTO.

FREDERIC NICHOLLS,
Managing Director.

J. J. CASSIDEY,
Editor.

SUBSCRIPTION. - - - \$1.00 per year.

ADVERTISING RATES SENT ON APPLICATION.

MR. FREDERIC NICHOLLS is Secretary of
The Canadian Manufacturers' Association,
The Woolen Manufacturers' Association, and
The Tanners' Association.
His Office is at the Publication Office of the
CANADIAN MANUFACTURER,
63 Front Street West, Toronto.

OUR JAMAICA EXHIBITION EDITION.

THE publishers propose getting out a special Jamaica Exhibition Edition of the CANADIAN MANUFACTURER about January 18th, 5,000 copies of which will be judiciously distributed to visitors there.

This distribution will be accomplished chiefly by those manufacturers who are to make displays, and by the agents and attendants employed by the Canadian Government, acting under the supervision of Mr. Adam Brown, M.P., Honorary Commissioner representing Canada.

The arrangement for the distribution will be so perfect that none of the copies will be wasted, but each and every one of them will be placed in the hands of intelligent visitors, where they will do the most good.

According to a recently published report of Commissioner Brown, about 300 Canadian manufacturers will make displays of their products at the Jamaica Exhibition. These displays will include about every line of manufactures produced in Canada suitable for the trade of Jamaica and that portion of the world. The Exhibition opens the latter part of January next, and will continue about three months. The Jamaica Government have expended large sums of money to ensure the success of it; and the visitors to it will assemble not only from the British Islands but also from the Spanish Islands and the neighboring South and Central American Republics. These British Islands alone have an area of over 13,000 square miles—three-fourths the size of Nova Scotia—and contain an aggregate population of 1,500,000 souls; the population of all the West Indies Islands being about the same as that of Canada.

These facts being considered, it is readily seen there is a large demand in that part of the world for many such articles as our manufacturers produce; and it is with the object of introducing these products into those markets that the Canadian Government are making such strong exertions. All visitors at exhibitions carry away souvenirs, and this Exhibition Edition of the CANADIAN MANUFACTURER will be a souvenir that business men will preserve and refer to long after the Exhibition has closed.

There can, therefore, be no better method of bringing one's business to the attention of these prospective buyers than by judiciously displayed advertisements in this Exhibition Edition of the CANADIAN MANUFACTURER. The paper will be of the usual size—columns 10 inches long and 3 3/8 inches wide—two columns to the page, and every feature of it will be first-class in every respect. The advertisements will be classified. The type will be selected from fonts of great variety, and set by the most skilful job printers, thus ensuring pleasing novelty and attractiveness; and special care will be observed in doing the press work, producing clear and well-defined impressions of all cuts and illustrations. The reading matter will be prepared with special reference to the occasion, and in the interests of advertisers.

The terms for advertising in this edition are as follows:—

- One Page \$25.00
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- Quarter Page \$10.00

Reading notices, with or without cuts, illustrating special articles, \$2.50 per inch of column occupied,

Bills for advertising payable on publication of paper.

Will you join our excursion party and visit the Jamaica Exhibition in company with the large number of other manufacturers who will go? If so, please notify us without delay, not neglecting to send copy, and cuts if desired. Cuts will be returned immediately after publication.

Address,

CANADIAN MANUFACTURER PUBLISHING CO.
Toronto, Canada.

PROTECTION MEANS PROSPERITY.

IN discussing the condition of the American farmer, the *Globe* informs us that that individual is giving his mind largely to the consideration of the tariff question, "that argues well for the cause of trade emancipation." Regarding protection "it has not taken him long to discover that the all-consuming home market promised to him is a fraud;" that "during the last five or six years the United States has exported more wheat and flour than it did from the adoption of the constitution in 1789 up to the adoption of the Morrill tariff in 1861; and more bacon and hams, many times over, than were sent abroad from the arrival of the *Mayflower* to the firing of the first shot in the late war."

The "home market fraud" is not admitted. It may be true that the exports of wheat and flour, bacon and hams is much larger now than before the inauguration of the Morrill tariff, but that it is larger in proportion to population we deny. In fact it is asserted that it is not as large, and that the exports of these articles is not as much as ten per cent. of the production of the country, more than ninety per cent. being consumed in the home market.

It is true, as the *Globe* states, that the American farmer is giving his mind largely to the consideration of the tariff, but it is not true that this consideration is in the direction of inducing him to reject protection. The contrary is the fact; for it was the farmer vote that placed the Harrison regime in power, and it will be that vote that will stand by protection and perpetuate it. It does not wound our feelings to admit that Mr. McKinley made blunders that will have to be corrected; but the protectionists of the United States, will never ask the enemies of protection to correct them. The friends of protection will attend to that matter.

Queerly enough, in the very issue of the *Globe* in which it is predicted that the American farmer was receding from protection was an editorial citing the fact that "the New South is setting aside the men who constitute the strength of the old Southern Confederacy;" that "Wade Hampton, a General of renown and a gentleman of unsullied reputation," had been defeated on seeking re-election to the United States Senate; that the people had nothing against him, but that he was a "back number," and had been "turned down." The *New Orleans Picayune* is quoted as saying "it is plain enough that there is growing up all through the South a disposition to put aside all the men and all the memories of the South in the civil war;" that the people there are busy in developing the country, in building blast furnaces and saw mills, and prefer to be represented at Washington by men of affairs rather than by the leaders of the forelorn hope of thirty years ago, whose presence and sentiments tend to annoy the North." Senator Cameron, of Pennsylvania, is quoted as saying that "Northern capital is flowing into the South. Manufacturing establishments are being created, and a community of commercial interests is fast obliterating sectional lines and forming one homogeneous mass of people."

We say that it is somewhat queer that in one column the *Globe* should have an editorial arguing that the farmers of the United States were about to desert protection and the Republican party, and in a parallel column it should show, as we have quoted, that the Southern farmers were deserting Free Trade and the Democratic party, and going for men who would favor the introduction of outside capital and the building of blast furnaces and saw mills, preferring to be represented at Washington by men of affairs rather than by such men as Wade Hampton. The *Globe's* arguments being read together and in the light of the facts it quotes are excellent arguments for protection.

It is true that the rising generation of the South know not Joseph. The men who inveigled the South into rebellion—such men as Jefferson Davis, Wade Hampton and other leaders, were Bourbons who never forgot and who never learned. Under the system of human slavery that prevailed there, and which they precipitated the most disastrous and expensive war of

modern times to maintain, free trade was an essential feature of their policy. In fact human slavery and free trade constituted the keystone of the arch of the Confederacy; and in forming its constitution it was specifically stipulated that no duties should ever be laid upon imports of foreign merchandise. The downfall of the Confederacy destroyed slavery, but it did not change the views of the political leaders there regarding free trade. With wonderful loyalty to the men who had led them in rebellion, after the war the whites of the South rewarded them by giving to them all the places of honor and enrolment that they controlled, and much of this control was acquired by the most outrageous persecutions and slaughter of the negroes and all who sympathised with them, and no man was louder in the declaration that no "nigger" should ever hold office if it could be prevented than Wade Hampton. Shot gun were and are the most potent arguments of the chivalry of the South in their political campaigns. The occupants of the seats in Congress assigned to the South were filled by such free trade Bourbons as Hampton; and the legislative halls resounded with their fulminations against every thing that savored of protection, and against every person who favored it. Fortunately they were in the minority, and while these congressional Bourbons and their Southern constituencies were bewailing the downfall of their confederacy, the loss of their human chattels and the failure to engraft free trade into the constitution, the North went marching on to prosperity and wealth under the banner of protection. Strange that the South should, for so many years, have preferred to sulk and pout and to wrap itself in its selfish isolation—but stranger still it would have been if it had not lifted its head and observed that while it was creating a desert the North was luxuriating in all that makes a people prosperous and happy. No wonder such men as Wade Hampton should be regarded as "back numbers" that should be "turned down." The farmers who believe in protection are the ones who are turning down the Free Trade Bourbons.

FARMERS ARE NOT GRIEVING.

The Toronto *Globe* has tired of telling Canadian farmers what great sufferers they are through the operations of the N. P.; or at least it is giving them a rest, and has turned its attention to such manufacturers as will accept it, and is now busy helping them to bewail their sad estate in being separated from the neighboring sixty million market. In a recent issue it publishes the names of some eight or nine manufacturers of agricultural implements who have been in financial embarrassment within the past few years (several of whom have since resumed business), telling that they suffered from the difficulty of finding sale for their goods in a market so small as to be constantly glutted; from having to pay an extortionate price for iron and the half-finished products of iron which they use; from their coal and belting being taxed; from having to support combines in such things as nuts and bolts which charge more than the American price plus the Canadian duty; from not being in a position to obtain their raw material at the American figure and sell in the American market, etc., etc. Hear it say this:

Free access to Michigan alone, coupled with their home

trade in this Province, would have been more profitable both for themselves and for their customers than control of the entire Dominion market outside of Ontario. If a near market is good for the farmer it is equally good for the manufacturer who has bulky wares to sell. It is dawning upon the implement men, and it will yet dawn upon others, that manufacturing industries cannot prosper upon the wreck of agriculture. If the farmer hasn't the money he cannot buy—at any rate, if he buys he cannot pay; and every intelligent observer can see that under the existing policy he is growing poorer and poorer.

There is no argument in such stuff. It is nothing strange that financial disaster should overtake some people engaged in the manufacture of agricultural implements. It overtakes other people engaged in other enterprises; and even daily newspapers are not entirely exempt from it. These disasters exemplify the Darwinian theory of the survival of the fittest. A business that might be exceedingly successful with only a given number of persons engaged in it would probably become exceedingly unsuccessful if the number of persons engaged in it should be very largely increased; and a concern of "the greatest respectability" would be quite as apt to go under as any other. The feature of "respectability" does not usually enter into the situation as an element entirely preventive of disaster. Money and correct business methods tell. There is no law to prevent men rushing into any line of business when they imagine they see bright prospects of success ahead. If the foolish ones alone were to be sufferers because of their foolishness perhaps not many tears would be shed. But usually this is not the case. One ill advised embarkation in a business may bring much trouble to the entire trade.

The *Globe* tells us that as a rule, where a foundry has to be closed, as has been the case with five or six of the concerns alluded to, the plant brings very little. It cites a case where a plant which cost \$75,000, and is as good as new, is now being offered for \$30,000 and no takers, the opinion of competent judges being that it will bring no more than so much old junk. And this is not surprising, for these reasons: It does not follow that the \$75,000 plant was worth that amount, or even seventy five cents, for the purpose for which it was intended. If it was good, suitable, and embodied all the latest improvements, and if the trade warranted its erection, it should be worth \$75,000 to-day. If it does not embody these requisites, the opinion of the competent judges the *Globe* speaks of is correct as to its value. The investor should not have put his money into it.

The charge that the manufacturers of agricultural implements have to pay an extortionate price for the iron and the half-finished products of iron which they use, and that they have to support combines in such articles as nuts and bolts which charge more than the American price plus the Canadian duty, is false. It cannot be borne out by facts; and we challenge the *Globe* to produce the names of offenders. It cannot do it. This false assertion has been exposed time and again.

Judging from what the *Globe* says, one might be led to suppose that there are no factories in Michigan for the manufacture of agricultural implements. "Free access to Michigan alone, coupled with their home trade in this Province," would satisfy these discontents. But there are factories in Michigan; and if these discontented Canadian manufacturers

are so very anxious to have access to that State, why, in the name of common sense, don't they move over there? But we can say this regarding them—a failure to succeed in Canada would be no guarantee for success in Michigan.

If the *Globe* has the permission of the manufacturers it names to place their distressful financial condition so prominently before the public, it is only done for advertising purposes. As a general thing Canadian manufacturers are well-satisfied with existing conditions. And the farmers are also; and this wailing about the low price of agricultural implements will not cause them to lay awake of nights regretting it. Not much.

INTERNATIONAL INTERCOURSE

We believe that the commercial instinct is too deeply rooted, the desire for intercourse with other nations too fully developed to admit of any great trading nation ever again sinking to the level of non-intercourse with other nations, and so dooming its people and its institutions to stagnation and decay. From one point of view, it seems almost a pity that Great Britain could not repay her competitors in their own coin by imitating their protective systems, and thereby teach them practically the obvious truth that hostile tariffs against trading nations tend to counteract each other and to leave each nation in the same relative position which it would have occupied under a system of universal free trade, save that the necessaries of life would have been made artificially dear. It may be that the apostles of protection in the countries which are adopting higher rates are simply moved to illustrate the old saying, *Quem deus, etc.*, and that the first effects of their increased tariffs may be akin to those produced by the McKinley Bill in the United States. —*The Week*.

What is meant by the "nation sinking to the level of non-intercourse with other nations, and so dooming its people and its institutions to stagnation and decay"? What is international intercourse, and what is it for? What makes it quite desirable with some nations and not at all desirable with some other nations? If non-intercourse with some nations will doom the nation practising it to stagnation and decay, why will not non-intercourse with some other nations have a similiar effect?

International intercourse is based entirely upon the demands of commerce; and commerce is the selling of things you have that you do not want, and the buying of things that you do not have but do want. If a farmer raises only as much poultry, beef and bacon as he requires for his own use, he enters into no commercial transactions involving a transfer of such things. He does not sell them because he needs them for his own use, and he does not buy such things because he is already supplied. But he needs sugar and coffee, and because he cannot produce sugar and coffee he buys what he requires. If he raises more poultry, beef and bacon than he requires he sells it to those employed in other industries who do require it, and with the proceeds thereof he pays for his sugar and coffee. This constitutes commerce, and involves purely commercial transactions. But the commercial success of a nation does not consist in buying from foreign nations such things as it could produce to advantage at home, nor in selling to foreign nations such things as could to advantage be consumed at home. Such trade, on the other hand, impoverishes the nation that indulges in it, and retards its commercial advancement and prosperity. Suppose a nation has a foreign trade of say a hundred million dollars a year, importing fifty million worth of

foreign products, and exporting fifty million worth of domestic products. According to the theory of *The Week* and of free traders generally, this would indicate the prosperity of that country. But a change appears, and instead of that country being engaged in the production of a fifty million export it increases its lines of industrial enterprises; and these require the consumption at home of all of the fifty million of its own produce. This change implies that these new industrial enterprises produce fifty millions worth of just such things as had previously been imported, obviating the importation of that value of merchandize, and it is clear that this entire foreign trade of a hundred million dollars would thus be wiped out. Would this new situation indicate national prosperity or adversity? There would be no international intercourse, and, because of the prosperity of the nation that had increased its consumptive ability to the extent of the fifty millions previously exported, and had increased its productive capacity to a like amount previously imported, according to *The Week* it was in a condition of stagnation and decay. Ridiculous. International intercourse does not thrive upon selling what can be consumed at home, or buying what can be produced at home. It consists in selling the surplus of home production, and in buying what cannot be produced at home. If international intercourse is the *ultima thule* of a nation's prosperity, why is not our intercourse extended to Greenland and Kamtchatka? The reason is, those countries produce nothing that we want, and want nothing that we produce: and we do not appear to be undergoing any rapid stagnation and decay because of our non-intercourse with them.

It is deemed "almost a pity" that Great Britain does not retaliate upon tariff nations "by imitating their protective systems, and thereby teaching them that hostile tariffs against trading nations tend to counteract each other, and leave each nation in the same relative position which it would have occupied under a system of universal free trade save that the necessities of life would have been made artificially dear." The possibility of Britain coming to the determination to "imitate protection" is not as improbable as some might suppose. Indeed at the very time *The Week* was suggesting this thing, the Bradford Chamber of Commerce was voting a resolution favoring the imposition by the British Government of discriminating duties upon French wines; the action being recommended for the purpose of retaliating against France for the duties she imposes upon English products. This action is of special significance as looking to an abandonment of the theory of Free Trade and of falling into line with the prosperous nations of the world under the banner of Protection.

The question resolves itself into whether it is to the interest of nations to foster and encourage the production at home of all such articles and things as are required at home that can be produced there. In other words, if it is to the interest of that nation to be commercially independent of all other nations. It may be that in doing this, and until new industries are well established, the cost of some products may be somewhat greater than the cost of similar products manufactured elsewhere; but it may be depended upon that such differences will equitably adjust themselves. When this situation prevails generally—when all nations produce all they require for home consumption, and export only such things as other

nations require but cannot themselves produce; and when they import only such things as they cannot themselves produce, the acme of national prosperity will be reached. In enjoying that prosperity, however, international traffic will be of but secondary importance, and will not at all indicate or measure the world's prosperity.

Meanwhile *The Week* should remember that the McKinley Bill has not yet been repealed.

COMMERCE THE MOTHER OF CIVILIZATION.

OUR esteemed contemporary, *The Week*, enquires with much pathos if it can be that the great nations of the world have passed the zenith of their civilization, and are beginning their relapse towards barbarism, because of their acceptance of the theories of tariff protection. It cites the fact that from various quarters come reports of increased national tariffs; that protected nations are adding new layers to what it terms "the Chinese walls," which they have erected as barriers to foreign intercourse; that the great American Republic which should have been an example to the world in commercial freedom, is now leading in the van of modern trade restrictionists; that the French Republic is likely to outmarch even our American neighbor in the path of commercial unfriendliness and isolation; that in Germany the tendency is still towards higher tariffs; that other European nations "with one or two honorable exceptions" among the smaller, are following the same general lines; that even the Argentine Republic is said to be about attempting to retrieve its squandered fortune by a resort to high taxation, and that were it not that Great Britain proudly maintains the grand principle of commercial freedom in the face of the hostile tariffs of the world, it is not easy to see where the blind competition would end. It thinks there would be some reason for the dread it imagines of a relapse to barbarism unless we are prepared to repudiate the view which has so long been regarded as one of the plainest teachings of history, and almost an axiom in sociology, that commerce is the mother of civilization; and it contends that the logical tendency of tariffs, verging more and more towards prohibitive limits, is in the direction of non-intercourse. "We believe, of course," says *The Week*, "that the commercial instinct is too deeply rooted, the desire for intercourse with other nations too fully developed to admit of any great trading nation ever sinking to the level of non-intercourse with other nations, and so dooming its people and its institutions to stagnation and decay."

It seems to us that *The Week* argues from a wrong and untenable standpoint, and, having taken this position, its argument is at fault and at variance with facts throughout. Aside from the tariff question we challenge it to produce one fact going to show that any great nation of the world has passed the zenith of modern civilization or is relapsing towards barbarism. This is an extreme view of pessimism. The latter half of the nineteenth century has witnessed greater and more valuable discoveries in the arts and sciences; in the developments of machinery and appliances for accomplishing great mechanical results; in practical inventions, and in the utilization of the forces of nature than were given to the world since the dawn of modern history. There is no subsidence of the

onward march of progress, and in our opinion the growing favor with which tariff protection is viewed by all the more civilized nations of the world, except Britain, is an evidence that such protection is intimately and most favorably connected with the world's advance in civilization.

One of the strong tendencies of civilization is towards centralization; by which we mean that the nation that aspires to reach the acme of civilization can only hope to do so by becoming entirely self supporting, or as nearly so as possible. "The nation that manufactures for itself prospers" is an axiom that all will admit; and by the same reasoning, the less manufacturing for itself a nation does, the less prosperous it is. The foreign trade of a nation includes the selling or exporting to other nations of its surplus products, and the buying or importing of such things as it does not itself produce. But this trade does not, or should not, interfere with the interior or home trade, nor should it in any way affect the civilization of that nation. Why should it? If commerce between nations tends to increase their civilization, why should not a greater interior commerce increase the civilization of the country in which it exists? As we have shown, the foreign trade consists in exporting the country's surplus, and in supplying from abroad the country's deficit. Now, if it is possible for the energies of the country that are directed to producing more than the home demand requires to be diverted to the production of those things in which the country is deficient, it is clear that there is no less employment of these energies, and that the volume of trade is not decreased. The volume of exports, it is true is reduced, and so is the volume of imports; but will *The Week* kindly enlighten us how this situation indicates a relapse towards barbarism and a recession from civilization? And will it enlighten us how the enlarged home commerce is any the less the mother of the nation's civilization than the less important foreign commerce? Our respected contemporary seems to labor under the impression that the only commerce that is of any civilizing value to a country is that which is had with foreign countries. In fact, it ignores the interior commerce entirely.

It does not follow that because a nation aims to produce within itself all that it requires, regardless of the surplus products of other nations, non-intercourse would be the inevitable result. In the nature of things Canada, for instance, requires many things that she cannot possibly produce—her teas must come from China and Japan, her coffees from Brazil and Java and her oranges, lemons and bananas from the Mediterranean, the West Indies and the tropics. In like manner these countries require many things that they are unable to produce, and if Canada can produce them, the interchanges will go on regardless of other considerations. *The Week* should not lose sight of the fact that the very theory of protection teaches that there should be free trade in such articles as cannot be produced in a country, and that if a duty is levied upon such articles, it is not a protective but a revenue duty.

Foreign intercourse is not a *sine qua non* of a nation's civilization or prosperity as *The Week* seems to think. Compare the interstate traffic of the United States with its foreign trade, and it will be seen that the best customers the producers there have are the Americans themselves; and this is empha-

sized in the fact that more than ninety per cent. of the agricultural products of that country are consumed at home, and less than one tenth exported. Hence the favor with which protection is viewed there. It is most firmly entrenched in the hearts of the people, and it is not probable that even the absurdities and incongruities of the McKinley Bill, which will, no doubt, be soon modified and corrected, will cause them to swerve from their allegiance to it. France falls into line and keeps step to the grandest music that ever marked the advance of civilization in modern times. Germany does the same thing. Other European nations are following the same general lines; the Argentine Republic, struggling to retrieve its recent disaster, is doing the same thing; so also the more prosperous of the Australasian countries; and were it not for the stubbornness of the old fossils of British politics, that country would soon abandon its false principle of free trade and range itself under the banner of protection.

CANADA'S FOREIGN TRADE.

THE statistics regarding the foreign trade of Canada for the fiscal year ending June 30, 1890, have been published.

The value of all imports for consumption was as follows:

Dutiable goods.....	\$ 86,258,638
Free goods.....	35,599,608
Total.....	\$121,858,246
Duty collected.....	24,014,908

The following table explains itself:

	Total Imports.	Entered for home consumption.	Duty collected.
1886.....	\$104,424,561	\$99,602,694	\$19,448,124
1887.....	112,892,236	105,639,428	22,469,705
1888.....	110,894,630	102,847,100	22,209,641
1889.....	115,224,931	109,673,447	23,784,523
1890.....	121,858,241	112,765,584	24,014,908

The exports for the year were:

Produce of the mine.....	\$ 5,126,131
Produce of the fisheries.....	8,524,508
Produce of the forest.....	27,239,264
Animals and their produce.....	26,630,672
Agricultural products.....	17,245,575
Manufactures.....	6,388,064
Miscellaneous articles.....	183,081
Coin and bullion.....	2,439,782
Estimated amount short, returned at inland ports.....	2,922,072
	\$96,749,149

Of the foregoing the produce of Canada amounted to \$85,257,586.

The exports from Canada for the years named were as follows:

1886.....	\$85,251,314
1887.....	89,515,811
1888.....	90,203,000
1889.....	89,189,167
1890.....	96,749,149

The grand total of Canada's trade imports and exports for the five years is as follows:

1886.....	\$189,675,875
1887.....	202,408,047
1888.....	201,097,630
1889.....	204,414,098
1890.....	218,607,390

Following is the value of exports and imports for home consumption by countries:

	Exports.	Imports.
Great Britain.....	\$48,353,694	\$ 43,390,241
United States.....	40,522,810	52,291,973
France.....	278,552	2,615,602
Germany.....	507,143	3,778,993
Spain.....	69,788	322,506
Portugal.....	207,777	84,034
Italy.....	84,059	163,486
Holland.....	1,042	422,267
Belgium.....	41,814	721,332
Newfoundland.....	1,185,739	469,711
West Indies.....	2,719,141	3,089,048
South America.....	1,551,887	1,003,962
China and Japan.....	61,751	2,100,065
Australia.....	471,028	205,384
Switzerland.....	400	216,523
Other countries.....	695,524	1,790,457
	\$96,749,149	\$112,765,584

Canada's trade with the United Kingdom and the United States for the years named was as follows :

	Exports to Great Britain.	Imports from Great Britain.	Exports to United States.	Imports from United States.
1886.....	\$41,542,629	\$40,061,199	\$36,578,769	\$44,858,039
1887.....	44,571,847	44,962,233	37,660,199	45,107,066
1888.....	40,084,984	39,298,721	42,572,065	48,481,848
1889.....	38,105,126	42,317,389	43,522,404	50,537,440
1890.....	48,353,694	43,390,241	40,522,810	52,291,873

FEMALE EMPLOYEES IN FACTORIES.

At a recent meeting of the Toronto Trades and Labor Council, the Legislative Committee drew attention to the fact that "in a number of factories in this city, whose employees are principally children, girls and women the dinner hour has been reduced by the order of the employers, and with the connivance and consent of one of the Ontario factory inspectors, despite the provisions of the law." It is stated that the Council empowered the committee to lay this charge before the Ontario Government.

As we understand them, the facts of this matter are: in one or more factories where there are children, young girls and women employed, as well as men also, a mutual understanding was entered into whereby the dinner hour was curtailed some minutes, to enable the employees to get away from their work that much earlier in the evening. Almost without exception these women and children take their dinners with them to their work; and it is no inconvenience to them whatever to get through with their meal, not having to leave the building, and resume work before the expiration of the noon hour. The days at this season of the year are very short, and these employees find it exceedingly convenient to be able to quit work before six o'clock. This they could not do under any other arrangement and work the stipulated number of hours during the day. Quitting work before six o'clock enables them to find seats in the street cars, those who have necessity to ride in them, before the great rush which always occurs at the general quitting time. This arrangement is generally appreciated by the employees in question; and we are informed that no complaints have ever been made by them regarding the shortening of the dinner hour.

It is true the Ontario Factories' Act—sec. 6, sub sec. 4—and each young girl and woman therein employed not less than

one hour at noon of each day for meals, but such hour shall not be counted as part of the time herein limited as respects the employment of children, young girls and women." This law was made for the special benefit of this class of employees; but it would be an act of oppression to rigorously enforce it by insisting that a full hour shall be taken at dinner time, and compelling them to remain at their work until six o'clock, when they prefer to take shorter time at dinner for the sake of getting away earlier in the evening. A canvas among the employees of one large concern, where over a hundred women and children work, disclosed the fact that but two girls objected to the shortening of the noon hour. They knew that work was abandoned before six o'clock, and they thought that, while they enjoyed the privilege of thus quitting, they had a right to demand the sixty minutes at noon. When the situation was explained to them, they at once declared in favor of the existing arrangement, and withdrew their complaint. A strict construction of the law might require the employer to grant the full hour at noon, which the employees do not desire; but on the other hand the employers would have a right to keep their employees at work until six o'clock, to the inconvenience of all concerned. Why not then allow the existing arrangement to remain as it is? It would be time to enforce the letter of the law if the employees so desired; but as long as they are satisfied with the arrangement, the matter should rest as it is.

The complaint, we understand, does not come from these women and children. In these factories some men are employed, and we are told the complaint comes from them. They object to have their dinner hour shortened for the accommodation of the women and children, and do not care to sacrifice time in the middle of the day for the sake of retiring from work before six o'clock. This, we suppose, is the basis upon which the Legislative Committee formulate their complaint. If the law is not utterly inflexible—if there may be some concessions from it in the interests of those for whom it was made—and if the facts, as here alluded to, are properly laid before the Ontario Government, the factory inspector, who has fallen under the Trades and Labor Council's displeasure, will be speedily vindicated. If the Government cannot see themselves free to construe the law with leniency it should be repealed.

THE MANUFACTURERS' ASSOCIATION'S SECRETARY.

AN exceedingly pleasing event of the holiday season just past was the presentation to Mr. Frederic Nicholls, Secretary of the Canadian Manufacturers' Association, on Christmas Eve, of an album containing an address that was voted to him with a gold watch at the last annual meeting of the Association. It will be remembered that these souvenirs were to have been presented to Mr. Nicholls at a special meeting of the Association called to be held at the Association's offices at the Fair Grounds at the time of the regular annual Fair of the Toronto Industrial Exhibition Association in September last. Just before the time for the meeting at the Fair Grounds Mr. Nicholls was called out of town by imperative business, and the presentation was made to his proxy. The address had not then been engrossed in an album as was desired,

the artist having it in hand not having completed it. Since then the album has been completed, and the committee having the matter in charge determined to present it and did present at the time indicated. The presentation took place at the office of the CANADIAN MANUFACTURER. Mr. R. W. Elliot, chairman of the Executive Committee of the Association, acting as chairman of an impromptu meeting of friends who had assembled on the occasion. Mr. Elliot is always felicitous in all such emergencies, and the remarks he made were in his happiest vein. Mr. Nicholls replied briefly, thanking the committee and Association for the sentiments contained in the address and for the confidence reposed in him as the Association's executive officer. In what he had done for the Association he had no selfish motives in view, neither had he any intention or desire to work exclusively for the benefit of Canadian manufacturers. His great desire was to advance Canada as far and as expeditiously as possible in her road to commercial and industrial independence. He was for Canada first, last and all the time.

The general opinion of those who inspected the album was that it was an exceedingly elegant specimen of artistic design and workmanship. The text covers eight pages, each of which possesses its own separate and original design, the inscription being in old English and other characters, beautifully illuminated in different colors. The first page contains Mr. Nicholls' crest and the legend "*Sine Timore*" above the inscription "To Frederic Nicholls, Esquire, from the Canadian Manufacturers' Association," the ornamentation being in lily work. The same page contains the coats of arms of all the provinces comprising the Dominion, and the date of Confederation, 1867. Another page displays a view of the Dominion Parliament buildings at Ottawa, and the date of the inauguration of the National Policy, 1878. A tree representing the National Policy extends its branches into all portions of the page, from the boughs of which are seen clustered the fruits of that policy, representing the leading manufacturing industries of the country, and intertwined among the branches the legend "Peace hath her victories no less renowned than war." Another page containing the dedication of the address displays two streamers, upon one "A Nation that Manufactures for Itself Prospers," and upon the other, "The More a Nation Produces the Richer it is," both the well known and familiar sentiments of the Association. Another page is symbolical of the iron industry. Vulcan is shown hammering a hot iron on an anvil; another view shows a workman wheeling fuel to a smelting furnace; another shows a foundry and men pouring melted iron from a ladle into the moulds; another shows an immense steam hammer in operation, and another a machine shop and iron-working tools. Upon scrolls are inscribed the names of the prominent men who were identified with the iron industry, and the dates of their exploits, from Tubal Cain, the first known artificer in iron, down to Bessemer of the present era. A page devoted to textile fabrics, shows a woman with distaff and spinning wheel preparing flax for weaving; sheep being shorn and a loom upon which the wool is being woven into cloth, and a cotton field with negroes gathering the fleecy staple, and a power loom where it is being made into cloth. In this page are shown the names of some of the men whose inventive genius blessed the world with the machinery for the cheap production of textile fabrics—Har-

greave and Peel in 1764, Arkwright in 1769, and Crompton in 1779. The page given to the lumbering industry shows an ideal Canadian pine forest in winter, a woodman felling trees and oxen with sled drawing logs; another view shows a steamer towing rafts of logs; and there are also an assortment of wood working tools. The last page of the album displays a view of Mr. Nicholls' residence in Toronto, the ornamentation being floral emblems of faithfulness and integrity. The cover is of leather in two colors, with gold ornaments, upon the front being a large silver shield inscribed "Presented to Frederic Nicholls, Esquire, from the Canadian Manufacturers' Association, 1890." The album is encased in a beautiful satin lined leather box, with silver hinges and clasp.

The address read as follows:—

At a regular annual meeting of the Canadian Manufacturers' Association held in Toronto April 7, 1890, it was ordered that a suitable testimonial be prepared and presented to Mr. Frederic Nicholls, as a recognition of the value of the faithful services he had rendered the Association as its secretary and executive officer, and that Mr. R. W. Elliot, chairman of the executive committee, and such other members of the Association as he might select and associate with himself, be a special committee charged with the execution of this order. The committee consisted of Messrs. R. W. Elliot, George Booth and W. K. McNaught, and they determined that the testimonial to Mr. Nicholls should consist of a gold watch and guard chain, and an address inscribed in an album.

At a general meeting of the association held in Toronto September 18, 1890, Mr. Elliot reported that his committee had obeyed the instructions of the Association, and that the testimonial was ready for presentation to Mr. Nicholls. Whereupon this address was read:—

Frederic Nicholls, Esq., Secretary of the Canadian Manufacturers' Association.

DEAR SIR.—The Canadian Manufacturers Association desire to express to you their sense of the value of the service you have rendered, not only to the association, but to the Dominion of Canada at large, in the intelligent manner in which you have always conducted the affairs of the Association, particularly those having reference to the tariff and fiscal policy of the Dominion Government wherein the Association are interested.

The Association recognize the fact that the success of the manufacturing industries of the country depend upon the tariff protection afforded them by the national policy. They are aware that the constantly changing circumstances of trade create new situations, and that the tariff laws in consequence thereof require corresponding changes and modifications to the end that no Canadian manufacturing interest suffer therefrom; and it is in looking after these alterations and amendments in the interest of Canadian manufacturers that you have displayed a knowledge of the necessities of the interests involved, an active zeal in looking after them, and keen and mature judgment in counselling and advising regarding them that have resulted in unmeasured good to all concerned.

What you have done in this direction could only have been accomplished by one thoroughly familiar with the law, and with the working of it, and equally familiar with the requirements of the country regarding it.

As an accomplished tariff expert, and as a gentleman in whom the Dominion Government have the utmost confidence as to ability, honor and integrity, you have been able at all times to approach the Government and secure respectful consideration recites: "In every factory the employer shall allow each child for any and all requests you have had occasion to present; and it is a matter of great gratification to this Association to know that, always being convinced of the righteousness of your

cause, you have been remarkably successful is inducing the Government to shape legislation in the desired direction.

Knowing that your services to this Association have been wholly unrequited, we ask you to accept this testimonial, accompanied with our fervent wishes for the health and prosperity of yourself and family.

Signed on behalf of the Canadian Manufacturers' Association.

B. ROSAMOND, President.

J. J. CASSIDY, Assistant Secretary.

R. W. ELLIOT,
Chairman Executive Committee.

TORONTO, September 18, 1890.

The credit of designing and producing this elegant and valuable souvenir belongs to Mr. A. H. Howard, R.C.A., Toronto.

THE POULTRY AND MEAT TRADE.

The Commercial Union advocates are attempting to make some capital out of the prices which farmers have had to accept for their Christmas poultry and meat, and for the former of which, they allege, they would have obtained five cents more per pound under Free Trade with the United States.

Milwaukee is a pretty large city, and has rapid communication with all eastern markets. According to Commercial Union argument, prices for poultry there should have been five cents per pound dearer than in Canada. The following quotation from the *Daily Commercial Letter*, Milwaukee, Wednesday, December 24th, shows the absurdity of the argument:—

Poultry—Live chickens quoted at 5 to 5½ cents per pound; roosters, 3 to 4 cents; turkeys, 7 to 8 cents; ducks, 8 to 9 cents; dressed chickens quoted at 6 to 7 cents per pound; turkeys, 11½ to 12½ cents; for choice; small and inferior down to 9 cents; ducks, 8 to 10 cents; geese, 7 to 9 cents.

Veal is easy, 50 to 60 lbs, 2 to 3 cents, up to for 80 to 100 pounds; choice fat kidneys, 5 cents.

Live cattle—Common cows, 75 cents to \$1.25; fair to good cows and heifers, \$1.50 to \$2.35; stockers, 500 to 700 pounds, \$1.65 to \$1.90; 800 to 950 pounds, \$2.10 to \$2.35; butchers' steers, 950 to 1,050 pounds, \$2.50 to \$2.80; medium to good, 1,100 to 1,200 pounds, \$3 to \$3.25; good to choice, 1,200 to 1,400 pounds, \$3.35 to \$4.25; veal calves, light, \$2.00 to \$3.00; heavy, \$1.25 to \$2.25; bulls, common, \$1.25 to \$1.40; good, \$1.50 to \$1.65; milch cows and springers, dull; common, \$10.00 to \$14.00; good to choice, \$18.00 to \$25.00.

Sheep are steady—\$2.75 to \$3.75 for common to choice; lambs, \$3.00 to \$4.50.

Dressed Hogs, \$4.00 to \$4.12½ per 100 pounds; with inferior and dirty, lower.

We present the above quotations as a New Year's gift to the pessimist scribblers who are so dissatisfied with our Canadian markets, and challenge them to find a single market in all Canada where Christmas prices ruled as low.

Next!

EDITORIAL NOTES.

As will be seen by reference to an announcement on page 400 of this issue, the publishers of this journal will issue a special Jamaica Exhibition Edition about January 16th, 5,000 copies of which will be distributed to visitors there. This exhibition is being exploited by the Government of that Island on strict business principles, the object being to induce manufacturers and merchants in other lands to display specimens of their goods there such as are suitable to the wants of the people; and to display to visitors the products and resources of the Island with a view to extending and enlarging trade

therein. A special invitation was extended to Canadian manufacturers to participate, and the cordiality with which this invitation has been accepted is demonstrated in the long list of exhibitors and exhibits to be found on another page. As a representative of these manufacturers this journal will also visit the exhibition, and be placed in the hands of thousands of those who will regard it as a souvenir of the pleasant event. In doing this we are not selfish, but desire the companionship of all manufacturers and merchants who may be pleased to accompany us. This is a rare opportunity for those who wish to extend their trade to the West Indies to let the nature of it be known by placing their business cards in our special Jamaica Exhibition Edition.

The knitted goods manufacturers of the country have pursued a wise policy during the past season, the result of which is a better condition of business and prospects which are reassuring. Over production and too great expansion have only one result, and a little conservatism saves a world of trouble.

The speech of Sir Richard Cartwright to the Young Liberals on Monday evening was marked by an interesting episode. The speaker had charged the Dominion Government with preventing the settlement of the North-West by the burdens imposed upon settlers. At the close Mr. J. S. McCordale, a well-known Single Taxer, got the floor as seconder of a vote of thanks, and pointed out Sir Richard's inconsistency in accusing the Government of imposing restrictions on the settlers, while he himself as the owner of large tracts of undeveloped real estate in the North-West was also discouraging the producer, by holding his property until the value thereof increased from the labor of others. The point was well taken, but the Young Liberals were not liberal enough to refrain from hooting and groaning the speaker in default of being able to answer his arguments.—*Labor Advocate*.

If the Government insists upon an affidavit from the dealers in foreign countries regarding the price at which he sells in the home market, the Canadian revenue will be materially increased. It is beyond question that Canada is made the dumping ground for all sorts of wares of second rate quality, defective goods, etc. It is a common remark in England that in the paper trade what are called "seconds," is sent to Canada, and the same is true of needles and small wares, which are peddled from door to door throughout this country and sold at whatever is offered for them. For the most part such goods are worthless, but notwithstanding this they interfere with the trade of regular dealers in all our towns, who have to contribute to the support of our municipal governments. It is a question if the community would not be benefited by enforcing the law against all persons who peddle these goods without a license to do so.

LONG credits are undoubtedly a greater source of injury to the trade of Canada than all other causes combined. This is particularly true of the agricultural implement business, and the system has been fostered by the banks of Canada, which

have advanced money on long-date notes as collateral security. This means that on a \$120 implement the manufacturer has been losing in three years time about \$20, without counting cost of collection, bad debts, etc., which always accompany the credit system. Some of the lines of credit given to agricultural implement makers by the banks of Canada are a source of wonder to those in other departments of industry, but there is reason to believe that the facilities thus granted have led some, if not all, of our manufacturers to expand and produce a greater quantity than the market demands, the result being a glut and heavy loss. Three years credit without interest would ruin any industry in the world, even if it were a Grit newspaper run on Commercial Union principles.

WOMAN'S opportunity for the study of mechanics is not sufficient to develop to any great extent the faculty of invention, but sometimes within her own sphere she has made valuable contributions in labor saving devices. A lady in Minnesota has thought out a self-threading sewing machine needle, and a number of her wealthy neighbors have thought it of sufficient merit to form a joint stock company, with a quarter of a million or more of capital to put it on the world's markets. Patents have been applied for in Great Britain, France, Germany, Austria, the Australian Colonies, Canada and the United States, and already secured in some of these countries. The American patent has been in litigation for some time because an unscrupulous person who saw a sample needle filed a claim in the Patent office in Washington, and several thousand dollars have been expended so far in the contest. We learn that the details of the device and its preparation for the market are being worked out in Paris, Ontario, where the only sewing machine needle manufactory in Canada is located. We hope the lady and her enterprising friends will meet with success.

THE *Canadian Manufacturer* continues to call loudly for an export duty, not only on the crude ore, but on its semi-manufactured form as "matte." It is certainly most desirable, it is almost imperatively necessary that the manufacturing process should be completed in the Province. The question is, will not the enlightened self-interest of those who may control the mines insure this, without either the objectionable export duty, or the Government bonus asked for by Mr. Ritchie? To the uninitiated it seems as if the cost of carriage, on the one hand, and of fuel and other raw material needed, on the other, should settle the question. The first is, of course, wholly in favor of home manufacture, and it is scarcely possible, one would think, that the second could counter-balance it. There is, of course, no reason why labor and the cost of living should not be wholly favorable to manufacture in Ontario. These are questions for capitalists and experts, but they should be decided before Government aid is sought in either of the ways mentioned. At the same time it seems clear to us that, if either an export duty or a bonus of some sort be proved to be a *sine qua non* of home manufacture, the argument, on *protectionist principles*, in favor of such duty or bonus would be stronger than that in support of almost any form in which a tax for protection is now imposed.—*The Week*.

THERE is a man in the civil service of the Ontario Govern-

ment named O'Donoghue who draws his salary with great regularity. This man is also chairman of the Legislative Committee of the Toronto Trades and Labor Council, and in that capacity is constantly endeavoring to stir up strife and discontent between employers of labor and their employees. One of his latest efforts in this direction is to demand the enforcement of the Ontario Factories' Act, which requires that not less than one hour at noon shall be allowed for meals to all women and children employed in factories. The merits of this particular matter are discussed elsewhere in this issue. It is not conducive to pleasant feelings on the part of manufacturers to observe that a man who is in the civil service of the Government should be always a mischiefmaker and an incendiary, whose great object is to create ill feelings and distrust between employers and employees. It may be said that he is a crank who represents the views of none beside himself—that he is harmless. This is a mistake. He has so forced himself upon certain unthinking ones that they cannot rid themselves of him; and he has a following of men who are never so well pleased as when they are creating discontent and stirring up strife. He is a mischiefmaker who ought to be suppressed. Being in the pay of the Ontario Government common decency demands that he should be made to conduct himself with propriety or be given the grand bounce.

THE learned Prof. Holden, of Lick University, has discovered in the moon parallel walls, metallic in appearance, with tops two hundred feet thick and not more than twelve hundred yards apart. If these walls are of aluminum or nickel ore, it is a great pity that they are too far away to be serviceable in building new ships for our navy.—*St. Louis Stoves and Hardware*.

Some children cry for the moon, and others cry for the imaginary mountains of nickle that are supposed to exist there. No use in crying. Canada has mountains of nickle ore, and whatever nickle Uncle Sam may need in manufacturing armor plates for his war vessels will of necessity be drawn from Canadian mines. But he should be made to pay Canada for it say fifteen cents per pound, that being the duty he imposed upon it before the McKinley land slide. Impose the duty.

An experiment was made a few days ago by naval officials of the United States at Annapolis, Maryland, to ascertain what effect cold will have on nickel armor plates. A Holtzer six-inch projectile was fired at a nickel armor plate which had been frozen to a point four degrees below zero. The plate was reduced in temperature by a packing of ice and salt at its back. The shot, the seventh projectile fired at the plate, was the same in character as those used in the tests several months ago. The projectile penetrated the plate about the same distance that the previous shots did, but did not go through it, and, as far as could be observed, had no greater effect upon the plate than when it was at normal temperature. Cold weather, it is held, therefore, will not render the nickel-steel armor of war vessels easier to penetrate.

THE advocates of an export duty on nickel ore say that it would be far more profitable for Canada to refine the nickel and sell the finished product than simply to sell the ore or the matte. This is begging the question. What is denied is not the profitableness of refining and manufacturing nickel, but the power of the Government to create such an industry by means of an export duty. The state of the iron industry

furnishes us with a melancholy example of the futility of duties and bounties. It is fortunate that our hope of building up a great nickel manufacturing industry rests upon a more solid basis. We have probably the most extensive deposits in the world, situated conveniently for shipping, and not far from large deposits of iron, so that our facilities for making nickel and nickel steel are good.—*Toronto Globe*.

The *Globe* calls in question the authority of the Dominion Government to lay an export duty upon anything. How silly. That authority is granted by the constitution, and it has been exercised frequently without challenge. It has as much authority to lay an export duty upon nickel ore and matte as upon pine and spruce logs. It is melancholy to think that when the Government were laying an import duty upon iron, and bonusing the production of it, it did not place the duty high enough to ensure the success of the industry. It should do so now. It is indeed fortunate that our hope of building up a great nickel manufacturing industry rests upon a more solid basis than as regards iron. All the world wants manufactured nickel, but Canada has a virtual monopoly of that metal. With an export duty the industry is assured to us without the duty there would be no certainty of our ever having it. Impose the duty.

THERE are those who are uninformed who believe that the McKinley Bill increased the duties upon many articles embraced in the American tariff schedule, and placed upon the dutiable list many that were before on the free list. There are 635 items or groups of articles in the new bill, 305 of which have precisely the same duties attached as in the old bill; the duties have been decreased upon 142 items or groups; increased duties have been imposed upon only 188 items or groups, and seventy-five items or groups previously dutiable have been placed upon the free list. As far as Canada is concerned we are not affected by the lowering of duties, but we are seriously affected by the increased duties, notably those upon horses, cattle, barley, eggs, etc., and there seems to be no doubt that these increases were aimed directly at Canadian products. The following shows a comparison between the old tariff and the McKinley Bill:

	Rate not changed.	Decrease	Increase.	Total.
Chemicals.....	59	44	71	114
Metals.....	49	50	19	118
Wool and Woolens.....	24	24
Silk and Silk Goods.....	4	..	2	6
Books, Papers, etc.....	6	1	2	9
Cotton Goods.....	17	6	27	50
Sundries.....	30	14	24	68
Flax, Hemp, Linen, etc.....	4	8	15	27
Marble and Stone.....	5	2	1	8
Earths, Earthenware and Glassware	8	4	15	27
Agricultural Products.....	10	2	45	57
Sugar.....	2	6	..	8
Wood and Manufactures of.....	11	5	3	19
Totals.....	305	142	188	635

Total items or groups of articles.....	635
Same rate as in old law.....	305
Decreased or made free.....	142
Rates increased.....	188

THE *Iron Trade Review* affects to think that because some shrewd and enterprising Americans discovered the extent and

value of the Sudbury Nickel deposits, and purchased and developed them, they lose their Canadian characteristics, and that Canada has no moral right to exercise sovereignty over them. "No sooner," it says, "does the great commercial value of the district appear, (thanks to the shrewdness and enterprise of these same Americans), than some of the Canadian journals ruffle up their feathers, spread themselves over the nest which no longer belongs to them, viciously peck at the American company in true old hen style." The pecking in "old hen style" is the advocacy by Canadian journals of an export duty upon nickel ore and matte. It was the original intention of Mr. Ritchie and his friends to erect their nickel refining works in Ohio, and it may yet be their desire to do so; and it was with a view to having Canada benefit by her nickel wealth that the export duty was advocated. As we have before said, the object is not to shut off the establishment of nickel refining works in Ohio, but to encourage the erection of such works in Canada. The *Iron Trade Review* complains that "this is equivalent to passing a compulsory marriage law and then explaining that it was not designed to prohibit bachelorism, but to encourage matrimony;" that "in either event it would go hard with the bachelor." This is clearly a case where brother Jonathan in his smartness and greed has overreached himself. Until that good man discovered that he had more use for nickel than his mines could supply he imposed a duty of fifteen cents per pound upon all importation of nickel-ore, matte and refined—but when he concluded that he must import from Canada he generously removed the duty upon ore and matte, retaining a high duty upon the refined metal. This was done to prevent the manufacture of refined nickel in Canada and to stimulate the industry in Ohio. He didn't want Canada to do any refining at all. If he had left his tariff as it was, or if he had put all forms of nickel on his free list, Canada would not have proposed the export duty. Mr. Ritchie and his friends would have been free to have manufactured refined nickel in either country as might best suit them. But when Jonathan insisted that Mr. Ritchie should not erect his refining works in Canada, self-respect and self-interest at once suggested that if Jonathan wanted Canadian nickel he should pay for it. Self-preservation is as good a law for Canada as for Jonathan. Jonathan will probably have to go down in his pocket and pay say \$300 per ton. for all the nickel he gets from Canada. But Mr. Ritchie will not suffer in the transaction—it will be Jonathan. Impose the duty.

MR. WILLIAM RISDON, proprietor of the Erie Iron Works at St. Thomas, Ont., is one of those who have been having themselves interviewed by the *Toronto Globe* on "the trade question," otherwise unrestricted reciprocity with the United States. He manufactures small agricultural implements, and he stands in line with the Macdonald Manufacturing Company and a few other aspirants for gratuitous advertising by declaring that the N.P. injures his business. "We buy all our bolts in Cleveland," Mr. Risdon is reported as saying, "and save money by it. The duty is about fifty per cent., and we pay it and get the Cleveland bolts below the Canadian price. Besides being cheaper, the Cleveland bolts are better. You can screw the nuts on the Cleveland bolts with your fingers, and it takes a couple of monkey wrenches to put on the Canadian nuts. Not all our manufacturers go to Cleve-

land as I do, because they do not probably find as great a difference in the freights as I find. On a box of bolts, 500 pounds weight, the freight from Cleveland to St. Thomas is fifteen cents a hundred; from Toronto to St. Thomas the freight is twenty five or twenty-eight cents a hundred." The Ontario Bolt Company, whose works are at Swansea, near Toronto, are manufacturers of just such bolts as Mr. Risdon alludes to, and Mr. James Worthington is the president and manager of the company. A representative of this journal called Mr. Worthington's attention to what Mr. Risdon was reported as saying, and in reply was told that for several years past Mr. Risdon's Erie Iron Works at St. Thomas, Ont., has been supplied to a considerable extent with bolts manufactured at the Ontario Bolt Works, and that no complaint has ever been made by Mr. Risdon against the goods as regards either workmanship or material—in fact, Mr. Risdon is being supplied with these bolts even now. Mr. Worthington states that Canadian-made bolts are the equal of any made in Cleveland or anywhere else, and that they are supplied to the trade in Canada at cheaper prices than American-made bolts can be sold in Canada; and if the imported bolts are sold at lower prices than here indicated it can only be done by undervaluation for duty, or that they are imported by the underground route, paying no duty. Mr. Risdon states that the freight rate from Toronto to St. Thomas is twenty-five or twenty-eight cents a hundred pounds—Mr. Worthington says that the rate on the bolts he is furnishing Mr. Risdon is only fifteen cents a hundred pounds. Mr. Risdon evidently uses large quantities of Canadian-made bolts in the manufacture of the agricultural implements he sells; and yet he tells his customers that Canadian-made bolts are worthless—that he uses only Yankee-made bolts. Is he representing his goods to be just what they really are?

SPECIAL ADVERTISEMENTS.

Advertisements will be accepted for this location at the rate of two cents a word for the first insertion, and one cent for each subsequent insertion. Subscription \$1.

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

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

FOR SALE.—In town east of Toronto, Two Set Woolen Mill, fully equipped and in good running order; never-failing water-power, main building stone, 50x150 feet, three stories; picker house, brick, 24x30, two stories; railway and water convenient for shipping, will sell with or without machinery. For further particulars address this office.

FOR SALE in Kent County, Michigan, the Buchanan Mill property consisting of a first class lumbering mill the exten-

sive water power in connection with it including the entire power furnished by the river with real estate on both sides of sixteen acres, situate one mile from Main Street of Lowell, a rich farming country surrounding an excellent location for paper mill, furniture factory, woolen mill and the many uses that require power. Also a splendid home and farm of 87½ acres with buildings, fruit, evergreens, etc. For further information call at the premises of JAS. R. BUCHANAN, Lowell, Michigan.

TO MANUFACTURERS.—The most desirable factory site in vicinity of Toronto, or equivalent cash bonus will be given free to suitable parties who will erect a factory thereon. Correspondence invited. Address GEO. F. COOK, 92 Church Street, Toronto.

AN ENTERPRISING MANUFACTURING TOWN.—West Toronto Junction, a town bounding the city of Toronto on the west—has had a phenomenal growth for a Canadian town. In 1885 its population was less than three hundred—to-day it numbers six thousand people and is a bustling centre of manufacturing enterprises. It presents especially good facilities for commerce—the main lines of the Canadian Pacific and Grand Trunk Railways, the T. G. & B., the C. V. R., and the N. R. R., all centre in the heart of the town and offer advantages for shipping to all parts of the Continent, which are unexcelled in the Dominion. The Town Council are alive to the interests of the town and have secured several very valuable factory sites on the lines of railway, which, together with exemption from taxes and free water, they offer as inducements for the establishment of first-class industries. Dr. Carleton is chairman of the Factory Committee.

The Youth's Companion for 1891 will give an instructive and helpful Series of Papers, each of which describes the character of some leading trade for boys or occupation for girls. They give information as to the apprenticeship required to learn each, the wages to be expected, the qualities needed in order to enter, and the prospects of success. Subscription price \$1.75 a year. Address *The Youth's Companion*, Boston, Mass.

A CHANGE is being made in the character of the *Electrical, Mechanical and Milling News*, Toronto, by which the milling department will be transferred to Mr. A. G. Mortimer, publisher of the *Canada Lumberman*, Toronto, by whom it will be continued as a separate publication under the title of the *Canadian Miller*, to be published on the 15th day of each month beginning in January. The name of the original journal is to be changed to *Canadian Electrical News and Steam Engineering Journal*.

WITH the first issue of 1891 *The Railway Age*, of Chicago, appears materially enlarged in both size and number of pages, in a new dress of type and with various improvements in its mechanical appearance. Its scope as a journal devoted to railways and kindred interests—to railway construction, operation, management and finance—is enlarged by the introduction of new departments and the expansion of old ones, and arrangements are made for numerous articles on special subjects from a list of able and eminent contributors. Illustrations will also be made a much more prominent feature than ever before.

THE special spring trade and holiday number of the *Canadian Shoe and Leather Journal*, of Toronto, is a credit to Canadian trade journalism. Printed on heavy book paper and in splendid style, the get up of it shows great care and taste and large expense. But this last feature is, we imagine, judging from the large number of advertisements appearing in it, much more than offset by the profit of the venture, which should be most gratifyingly large. The illustrations are fine, and the cover exceedingly beautiful. Accompanying the *Journal* was a number of large plates which included the portraits of practically the entire leather and shoe trade of Canada.

THERE is no magazine coming to our editorial table more gladly welcomed than the *Illustrated American*. Its merits are manifold. Mechanically it is manufactured from the very best materials—finest book paper, best ink, composed by the most skillful printers, and printed from the clearest type. Artistically, all the pictures and illustrations are of the finest descriptions, produced by or reproduced from the most renowned artists; and from a literary standpoint, all that is contained in it is of the most interesting and instructive character; the subjects it treats of being of to-day and not of times and things that have ceased to be interesting. The illustrations are the picturesque chronicling of contemporaneous history and events of national and universal interest, represented with a fidelity to detail and a perfection of artistic treatment that makes it a revelation of pictorial literature. Published by the Illustrated American Publishing Company, Bible House, New York City.

THE Christmas number of the *Dominion Illustrated* is a conspicuous instance of remarkable growth of this deserving Canadian publication, and its publishers are to be congratulated on the production of a work of such exceptional merit—rich to an extreme—not only in the uncommon variety and interest of its literary selections, but also in the extraordinary beauty and richness of the illustrations which adorn every page, and especially in the elegance of the numerous extra supplements given with the publication. These include a large illuminated copy of the Lord's Prayer, twenty-two by twenty eight inches in size and printed in fifteen colors; two charming reproductions of the famous etchings by Nichol, "Balance on the Right Side" and "Balance on the Wrong Side," richly colored; a new national anthem set to music; which we venture to predict will be sung in thousands of Canadian homes, and an intensely amusing six-page series of colored sketches of a distinctively Provincial type, the French-Canadian "habitant." It is pleasant to know that such an excellent production is altogether the outcome of Canadian skill and ability. The *Dominion Illustrated* is published weekly by the Sabiston Lithograph and Publishing Company, Montreal, at four dollars per year.

The *Trader*, of Toronto, is the recognized organ of the jewelry and kindred industrial trades of Canada. The holiday number of *The Trader* is a daisy. That's just what it is, and the most unob-servant could see it. Manager and editor McNaught, has succeeded in this issue of his paper in producing an edition of which he may well be proud. Eighty-four pages of solid enjoyment, every page affording its own distinctive pleasure. Printed in three or four colors, too, on the very best book paper, with new type, and presswork that is perfect. If one starts out with an eye to business to count the number of pages of advertisements, an involuntary stop is made to observe the taste and skill of the printer in their arrangement, and to read of all the elegant goods they proclaim, and the counting is forgotten. So too in inspecting the literary contents, one finds himself so interested that he reads on and on until he comes to the beautiful illustrations, and the reading is abandoned for admiration of the pictures. The "get up" and general excellence of it entitles it to companionship with the latest magazines. It is a journalistic "Eli" who has "got thar." It is fully abreast with any trade journal on this side the Atlantic. The jewelry trade of Canada should be proud of *The Trader*.

MESSRS. HUNTER, ROSE & Co., Toronto, have sent us "Raise the Flag, and Other Canadian Patriotic Songs and Poems." This is one of the best compilations of Canadian poems that has been offered to the public. It is not a large book, but its value is not to be measured by the number of pages contained in it, for every poem is a gem that all lovers of Canada will appreciate. In the presence of a pressure to force Canada to sacrifice her autonomy and individuality, and to become merged into and submerged by a neighboring people, the instincts of true and loyal Canadianism are finding vent in patriotic songs, many of which will be embalmed not only in the hearts of the people, but will find worthy place in books that will through coming ages tell of this happy land and of the strong and happy people who inhabit it. This book is of that description. The front cover presents a view of a Canadian schoolhouse with teacher and children in the foreground, cheering as the flag goes up; while the back page has a beautiful view of Queenston Heights and Brock's monument, above which are a medallion of the Queen and a shield with the Canadian coat of arms, draped with the blue and red ensigns, the whole surmounted with the motto: "For Queen and Country."

THE Christmas number of *Good Housekeeping* was the last of the fortnightly issues of that very popular journal. It has now taken its place with the monthlies. While it has been a deservedly successful publication thus far, we shall look to see it attain an even greater degree of popularity in the new form. The pub-

lishers announce several new features for the coming year, prominent among which will be "Ten Mornings in the Kitchen," by Miss Parloa, and a special series of Redfern Fashion papers, with illustrations peculiar to *Good Housekeeping*. The number of pages will be more than doubled, and the price will henceforth be uniformly 20 cents per number, or \$2.40 per year. The change to a monthly is an indication of the financial as well as the literary success of *Good Housekeeping*. It has become a great favorite in Canadian households, and is always a welcome visitor to Canadian firesides. The character of it is such that no man need doubt the propriety of placing it in the hands of his wife and daughters. It is clean, pure and wholesome; and there is always something in it that contributes to the fund of housekeeping knowledge that tends to lighten domestic labor and to cheer and brighten domestic life.

A HIGH order of stories, poems, articles and pictures fill the Christmas *Wide Awake* from cover to cover, while brilliant new type and the discardment of columns give the pages a very fresh and attractive look, and we learn that the magazine is permanently enlarged to one hundred pages. Leading attractions include a new Pepper's serial, by Margaret Sidney; the promised railroad serial, "Cab and Caboose," by Kirk Munroe; "Drawing the Child-Figure," the first of twelve pictorial drawing lesson papers (with monthly prizes), by Miss Caroline Rimmer, daughter of Dr. Rimmer, the art-anatomist and sculptor, and "Marietta's Good Times," an Italian serial, by a well-known Italian woman in Boston. The short stories, papers and poems (and there is a full treasury of them, making a Christmas stocking-book in fact), are by Sallie Pratt McLean Greene, Emma Sherwood Chester, Graham R. Tomson, Ethelwyn Wetherald, Charlotte M. Vail, Elizabeth Robins Pennell, Rev. George Whyte, Miss Hawley, John C. Carpenter, Margaret Eyttinge, Miss Poulsson, Mrs. Claffin and Prof. Otis T. Mason. A special feature is the fac-simile reproduction of Mrs. Hemans's original manuscript of "The Landing of the Pilgrim Fathers," which was brought to America by James E. Field. The price of *Wide Awake* will remain at \$2.40 a year. D. Lothrop Company, Publishers, Boston.

THE Westinghouse Air Brake Company, Pittsburgh, Penn., have sent us their "Instruction Book," having reference to the Westinghouse quick action automatic air brake manufactured by them. This instruction book is bound for the convenient pocket use of engineers and others interested in the detailed construction and manipulation of air brakes, and it is wholly devoted to an analysis and description of the new Westinghouse quick action automatic brake, giving full instructions for its operation, with detail drawings of its various parts and their application to one another. In view of the fact that the lives of the traveling public are in the hands of the men who operate the air brake, the importance of having everything connected with its construction and application fully understood can hardly be overestimated. It is with the idea in view to more thoroughly educate engineers in the use of this most important invention that the Westinghouse Company have issued this valuable little volume, and every locomotive engineer in the land should be thoroughly familiarized with its contents. The addenda pamphlet with the laconic title of "Don't," practically sets forth many things which the engineer should not do if he wishes to avoid mistakes and trouble. The Westinghouse catalogue is intended solely for the convenience of those ordering full sets and parts of airbrake apparatus, and gives full detail illustrations of such apparatus.

THE publishers of *Youth's Companion* have issued a beautiful calendar for 1891, unique and convenient, which contains also the announcements for the new year. Among the new names which will grace this model young folks' weekly paper are the Lord Chief-Justice of England—Coleridge, Hon. Seth Low, the Venerable Hannibal Hamlin, Camille Flammarion, Sir Norman Lockyer, Gen. O. O. Howard, Rev. Lyman Abbott, Jules Verne, Max O'Rell, Julia Ward Howe, Walter Besant, Benson J. Lossing, the eminent historian, and Carl Lumboltz. Truly a host of names in themselves, sufficient to warrant the success of a paper. Five serial stories are promised, by Molly E. Seawell, Rebecca Harding Davis, Julie M. Lippman, H. H. Boyesen and Elizabeth W. Bellamy. A popular series on the latest discoveries in science will treat of the stars, the sun, the moon, the earth, the ocean and the Gulf Stream. There will be another popular series on music by Mme. Albani, Emma Juch, Mme. Nordica, Marie Van Zandt and Emma Nevada, while Amelia E. Barr, Mary A. Livermore, Jenny June and Marion Harland will tell what a girl of sixteen can do when thrown on her own resources. Full prospectus and specimen copies sent free on application. Subscription price \$1.75 a year. Address *The Youth's Companion*, Boston, Mass.

THE St. Thomas Car Wheel Company, St. Thomas, Ont., of which Mr. P. H. Griffin is president, have sent us a brochure regarding the "machined" car wheels manufactured by them. The question is asked "Can a perfect car wheel be made? If so, what must be its distinctive features?" and the pamphlet is devoted to answering these questions, and describing the methods adopted by the Company in the production of car wheels. A car wheel must be absolutely safe, mechanically perfect, and economical for service. What this Company have done towards attaining these ends may be determined by the fact that out of a total of 500,000 wheels made in the last five years, and put into service of every kind on the leading railroads of the country, not one case of breakage has occurred. The Company command the means for furnishing in an absolutely perfect mechanical condition, and can supply such wheels at the ordinary market price paid for good chilled car wheels. Strong evidence regarding the excellence of these wheels lies in the fact that of four leading trunk line railroads, two of them have used such wheels as those made by the St. Thomas Car Wheel Company during the past five years, during which time not one life has been lost nor one dollar of damage incurred through their use. On the other two roads, during the same period over fifty lives have been lost and over \$2,000,000 paid out from this one cause alone.

HON. CARROLL D. WRIGHT, United States Commissioner of Labor, has sent us his fifth annual report, relating to the railroad labor of the country. It is a very thorough and comprehensive exposition of the subject with which it deals, as may be inferred when it is stated that the book has nearly 900 pages. Thoroughness, though, is a distinguishing feature of all the Commissioner's reports, and so, on this score, the present report doesn't differ markedly from its predecessors. The subject matter is conveniently arranged with reference to the various phases of the question, each of which is treated exhaustively, in the light of painstaking and fruitful research in the field of practical facts. First, the report makes an arbitrary geographical distribution of railroads, according to States and Territories. There are seven of these divisions or groups of States, viz.: New England, Middle Atlantic, Central South Atlantic and Gulf, Central Northern, Southwestern, Northwestern and Pacific. The aim in this grouping, of course, has been to bring together those localities in which the general conditions of labor were practically harmonious and of a like character. The succeeding chapters have to do with the relations of employees and corporations, legal and otherwise; time and earnings, etc. The investigation covered sixty different roads, employing 241,910 persons, and so widely scattered as, in the nature of things, to be thoroughly representative.

Outing for January is a superb holiday number, seasonable in matter and elegant in illustration. "The Mystery of a Christmas Hunt" is a story pervaded by such sportsmanlike spirit and domestic felicity as to lend a charm to the well drawn pictures that follow in rapid succession from the first page to the last. No better Christmas story has appeared in any magazine for years. "Lost in the Rockies," a midwinter adventure, stirring and powerfully told, follows, and "Honeymooning under Difficulties," a true story of the snow-swept plains of Manitoba, completes a trilogy of fact and fiction hard to beat; and just now, when cross-country running is a pastime supported with all the enthusiasm of its devotees. "The Last Paper Chase," by Wm. Earle Baldwin, enriches the incidents of the field with the interest of a most excellent bit of social fiction. But nothing in *Outing* for January, 1891, will awaken greater interest among college boys than "The Old Boy and the New," a romance of the football field, told by J. Seymour Wood. No pastime has brought out greater pleasure than amateur photography, seconded as it is by the use of the kodak, which the inimitable "Chancey" pronounces "the most productive of our institutions." In *Outing* for January, 1891, an admirable paper on "Flash Photography," by W. I. Lincoln Adams, teaches of the camera's possibilities, and under the influence of that well-written paper, "The Princeton Cane Spree," remembrance of the fun and frolic of college days will quicken into living forms, while "Artificial Skating Ponds," by C. Bowen Vaux, and "How to Sail on Skates," by F. D. Rogers, in the same number, are full of practical lessons for boys and girls.

THE Montreal *Witness*' Canada prize competition for true Canadian stories have proved very great successes during the past two years, and a third is now announced. Last year the *Witness* offered a \$500 Bell piano for the best true story written by a scholar at a public school in Canada or Newfoundland, the principal judge being the Marquis of Dufferin, aided by six other judges, who selected the best story from each province. The following is a summary of the competition now running, which ends with January, 1891:—All

scholars of public schools may compete. No story may exceed 2000 words. They must be founded on events which occurred within the Province where the writer resides. Every competitor receives a medal. The writer of the best story in the school receives as a school prize a copy of the *Northern Messenger* free for one year. The writer of the best story in the county will receive as a county prize a book containing the best stories of this and previous competitions. The writer of the best story in the Province will receive as a provincial prize a copy of Dr. Kingsford's History of Canada in four large volumes. This is considered the most valuable work on Canada yet published. The writer of the best story in the Dominion will receive a hundred dollar gold watch. In addition a framed portrait of the Queen will be sent to fifty of the schools showing the best general results. Prizes are also offered for the best original drawings illustrating the stories, these drawings to be the work of the writer or of another scholar. A prize, a copy of Ruskin's Works, is offered for the best illustrations of any of the stories now being published in the *Witness*. This is open to any one, whether a scholar or an adult. Full directions for the competition will be mailed free to any one sending a request for a circular to Messrs. John Dougall & Son, Montreal.

THE most important issue of *The Popular Science Monthly* in many months is the December number. It contains the first of a series of carefully written and generously illustrated articles on "The Development of American Industries since Columbus." The manufacture of iron and steel is to be described by Mr. W. F. Durfee, and the opening paper deals with our "First Steps in Iron-making." In the same issue Mr. Appleton Morgan asks the question, "What shall we do with the 'Dago'?" and points out in a style both witty and serious the evils that attend Italian immigration. The recent surprising discoveries of Dr. Henri Hertz in regard to electricity are given in a popular article, entitled "The Identity of Light and Electricity," written by Dr. Hertz himself. Rev. Dr. Henry C. McCook contributes an account of some "Defenses of Burrowing Spiders," with illustrations. Mr. John C. Branner describes "The Pororoca, or Bore, of the Amazon," which is the terrible rush of the incoming spring tide in the northern mouth of that river. In "Architecture and the Environment" Mr. Barr Ferree offers some practical observations in the interest of sound taste in building. In answer to the question, "What is Individualism?" M. Handfield-Jones, M.D., gives some illustrations of this valuable quality, especially among doctors. "The Experiences of a Diver," by Prof. Hermann Fol, is a particularly readable article. "Prairie Flowers of Late Autumn" are described by Prof. Byron D. Halsted. Mr. William Churchill gives a vivid account of "The Duk-duk Ceremonies," which include a terrible ordeal that certain Pacific islanders must go through on attaining manhood. "The Dress and Physique of the Point Barrow Eskimos" is the subject of a popular article by Mr. John Murdock. In "The Sensations of Pleasure and Pain," Dr. E. Heinrich Kisch gives examples of certain strong sensations, mostly painful, and tells what means are employed to relieve the pains of disease. "Animal Life in the Great Desert" would seem to be a barren subject, but Mr. William Marshall enumerates a goodly variety of creatures under that head. The subject of the frontispiece portrait is "Chamisso," who, like Goethe, was both poet and man of science. An account of his career by Emil Du Bois-Reymond accompanies the picture. Editorial criticism is bestowed upon a French attempt to discredit the scientific teaching of morality, and upon certain ideas in regard to "Human Selection," which appear in the article, by A. R. Wallace, printed in the November *Monthly*. New York: D. Appleton & Company. Fifty cents a number, \$5 a year.

THE Albion Iron Works Company, Victoria, B.C., are building a 100 horse-power compound steam-engine and boiler for a new steamer now being built in that city for Messrs. Richardson, Heathorn & McIntosh. This steamer will be 70 feet long, 14 feet beam, and 7 feet deep, and will be employed in the coasting trade, and in bringing coals from Nanaimo.

MESSRS. PATTERSON & CORBIN, car builders, St. Catharines, Ont., have just contracted to furnish the Ottawa Electric Street Railway Company with ten electric motor passenger cars and two trail cars; also to the electric railway connecting Vancouver and New Westminster, B.C.—twelve miles long—for 24-foot body 8-wheel electric motor passenger cars and three 16-foot electric motor passenger cars. This latter road is said to be the longest electric tramway in Canada. Messrs. Patterson & Corbin manufacture cars equal to any made in the United States or in the world.

Manufacturing.

This department of the "Canadian Manufacturer" is considered of special value to our readers because of the information contained therein. With a view to sustaining its interesting features, friends are invited to contribute any items of information coming to their knowledge regarding any Canadian manufacturing enterprises. Be concise and explicit. State facts clearly, giving correct name and address of person or firm alluded to, and nature of business. Subscription \$1.

MR. R. CUNNINGHAM is building a shingle mill on the Skeena River, B.C.

THE Dixon lumber and shingle mill at Kinmount, Ont., was destroyed by fire Dec. 21, loss about \$3,500.

THE first grain elevator in British Columbia will be erected the coming summer at Liverpool, a suburb at New Westminster.

THE Canadian Locomotive and Engine Company, Kingston, Ont., are building three locomotives for the Intercolonial Railway.

THE Barnum Wire and Iron Company, Walkerville, Ont., are operating their works to their full capacity, and are advertising for more hands.

THE Walkerville Malleable Iron Works, Walkerville, Ont., are full of business. They now give employment to one hundred and fifty hands.

MESSRS. KNIGHT BROS., Popcum, B.C., have procured machinery and will manufacture excelsior. This is said to be the first works of this kind in Western Canada.

MR. G. F. SLATER, proprietor of the Vancouver Shingle Mills, is enlarging his plant and introducing additional machinery for the manufacture of all kinds of lumber.

THE Albion Iron Works Company, Victoria, B. C., are repairing the damage done to the Steamer *Costa Rica*, which was recently ashore near that place, at a cost of about \$40,000.

WITH the close of the old year Messrs. Kerr Bros., Walkerville, Ont., closed out their business done under that name, beginning the new year under the new name of the Kerr Engine Company.

THE Canadian Edison General Electric Company have contracted to supply the New Westminster, B. C., Tramway Company with all the electric appliances necessary for the operation of their road.

It is stated that Captain Rogers, who for many years has been running between Nanaimo and Vancouver in the steamer *Dunsmuir*, intends to build a new steamer for the route.—*Nanaimo, B. C., Free Press.*

MESSRS. KERR BROS., Walkerville, Ont., will compound the engines of the Steamer *Africa*. This firm has been awarded the contract for furnishing the whole of the pumping plant to be erected at Niagara, Ont.

THE Canadian Pacific Lumber Company of Vancouver, B. C., propose to erect a large saw mill at the mouth of the Amacon river, down which the logs will be floated to the mill yard. Ships can load in these waters.

THE British Columbia Tanning Company, of Nanaimo, B. C., have its new boot and shoe factory now in operation, which industry will be carried on in the future in connection with the tannery. The work is all done by white labor, no Chinese being employed.

MESSRS. CANT BROS. & Co., Galt, Ont., announce that they are manufacturers of wood-working machinery for builders, planers, furniture, sash and door and wagon works, etc. Mr. H. W. Petrie, 145 Front St. West, is Toronto agent for Messrs. Cant Bros. & Co.

MESSRS. A. ST. G. HAMERSLEY, of Vancouver, B. C., and IRVING BELL, of the engineering firm of Bell & Miller, Glasgow, Scotland, were in Ottawa recently interviewing the Government in reference to the construction of a graving dock and extensive shipyards at Vancouver.

DURING the past season 129 cargoes of grindstones, lumber, piling, etc., were shipped from ports in Cumberland Basin. During the same time, 150 cargoes were shipped for local ports. Forty-one vessels of 35,958 tons, carrying 32,566,186 superficial feet of deals, cleared from Parrsboro, for Great Britain this season.—*Hull-Jax, N. S., Critic.*

THE Menasha Wood Split Pulley Company, Menasha, Wis., have recently filled orders for their pulleys, from Huntress & Brown Iron Co., Duluth, Minn.; Gesley Plow Mfg. Co., Beloit, Wis.; Messrs. Timothy Greening & Sons, Dundas, Ont.; Troy Laundry

and Carpet Cleaning Co., St. Joseph, Mo., and Mr. Thomas T. Rhoades, Coldbrook, N. Y.

MESSRS. JOHN TAYLOR & Co., proprietors of the Morse Soap Company, Toronto, manufacturers of toilet soaps, perfumery, etc., supplied large quantities of their finest goods for the retail Christmas trade in this city. These goods are of great intrinsic merit, are just what they are represented to be, and are put up in style equal to that of any similar imported goods.

"THE output from the New Vancouver Coal Company's mines yesterday," says the *Nanaimo Free Press*, "was the largest output that has yet been obtained. Although 2,000 tons has been often reached, but yesterday this amount was exceeded by fifteen tons. It is estimated that in about twelve months from now the output will reach about four thousand tons per day."

THE new lock at the St. Mary's Falls canal, Mich., is to be completed and ready for business by November 15th, 1893, work will be begun on May 15th, 1891, there are to be used about 100,000 barrels of cement, 20,000 yards of cut stone, 59,000 yards of backing stone and 5,000 yards concrete are to be laid; and 70,000 yards of earth are to be filled. This is after the excavation now going on shall be completed. The Act granting the appropriation bears date September 19th, 1890.

ON December 1st the Bottling Factory, which has been building at Spa Springs for the Company, was completed and taken over. It is a fine establishment, being 112 feet long by 35 feet wide, and three stories from the ground, with store rooms in the basement. In the basement, which is 6,000 barrels capacity, will be placed a 15 H. P. Leonard boiler, now on hand, and steam carried to the next floor to engine and for heating the building, which will be done through coils. The second floor is divided into a bottling room, in which one of the largest sets of bottling machinery used with appurtenances will be placed, a laboratory, store-room, office, and packing-room.—*Kentville, N. S., New Star.*

THE new fire-boat Snoqualmie, just completed at Seattle, has been tested, and proved more successful than even her designers anticipated. A line of hose was stretched up Washington street nearly to Commercial, and a dozen other lines from the outer end of the wharf, where the boat was moored, up halfway to Railroad avenue. When the water was first turned on little pressure was used, but it was gradually increased to nearly 200 pounds, when four lines of the hose gave way in pieces. At one time eight 2½-inch streams were thrown a distance of at least 150 feet from the nozzles, and, had it been practicable to use higher pressure, even more remarkable results would have been shown. There are the two seven-inch pipes which will be worked from the top of the pilot house by means of swivel nozzles. With all these in operation the Snoqualmie can discharge over 7,000 gallons of water a minute. When it is remembered that the largest land engines are only equal to 900 gallons a minute, some idea of the capabilities of the fire-boat can be obtained. She can easily do the work—and more effectively—of a dozen land engines.—*Victoria, B. C., Colonist.*

THE Gutta Percha and Rubber Manufacturing Company of Toronto has opened a new retail store at 12 King street west. The premises have been thoroughly overhauled and now present a bright and attractive appearance, being fitted up with the view of providing for the convenience of the best custom. The stock includes a complete assortment of every description of rubber goods. A novelty is the assortment of rubber air beds, cushions and pillows, the latter being covered with fancy linen, cretonne and silk. There is a fine and complete line of druggists' rubber sundries, embracing every article of that kind manufactured. The rubber boots and shoes are of the finest American make. A new feature in this establishment is the preparation made for custom work. Waterproof coats and cloaks for gentlemen and ladies are made to order. A special department is provided for ladies with lady clerks, so that the greatest privacy can be secured. Anything from a rubber bandage to a pair of shoes or a mantle may be had. Repairs to rubber goods will be made quickly and skilfully. On the first floor is a workshop for cutting ladies' work. Besides the articles already enumerated there is a fine assortment of the standard varieties of rubber goods. Door mats and stair treads of any size may be had. There is also a wide variety of hard rubber goods, tubing, combs and brushes.

ONE of the principal requisites of a sealing schooner's outfit is necessarily the boats, and the purchase of these is a chief item of expense. In the past, the custom has been generally to buy boats in the east, or else in California, and the majority of the Victoria fleet carry these foreign-made articles. Three seasons ago, Captain Dodd, of the *Maggie Mac*, tried the experiment of having his boats built here, and the result has far exceeded his expectations. The home manufactured craft were found tougher and more lasting

than the American made, and were the envy of the United States' skippers, who compared them with their own. There are now two or three builders in Victoria who cater almost exclusively to this trade, and turn out first-class work only. These are Mr. Jones, Mr. John Robinson and a new firm from Toronto. Mr. Robinson, who is a pioneer in the trade, is just now busy with a new 20-foot double-ender for the Maggie Mac, built of cedar throughout, with ash braces. It has a small, raised keelson, over which the timbers pass, giving greater rigidity and allowing water to run down under the floor. Every part of the boat is copper fastened in the surest and best style. As soon as this one is completed, the construction of six boats for the new schooner Maud S. will be entered upon, these requiring to be finished before March. The Toronto firm is also full of orders, and the industry is assuming very substantial proportions.—Victoria, B.C., *Colonist*.

In the search for the beautiful, the demand for impressive facades, the taste for complicated ornament, and a most singular appreciation of the odd, the grotesque, and the ugly, there is little attention paid to matters which seem self-evident and are of really vital importance. Windows are arranged to suit a symmetrical facade, whether they are just what are needed for the rooms or not, and, even where it is possible, little attention is given to the direction of the sunlight in order that the living-rooms may receive the full benefit of the natural warmth, nor are those rooms where it is not needed, or minor offices, relegated to the exposed side. The most important external feature, the door, is seldom adjusted to the climate. Even in large office-buildings, hotels, and churches, where there should be ample space for every structural convenience, the door is frequently of cramped dimensions, and, instead of being preceded by a porch, which would be an integral part of the architecture, and which is absolutely essential in our long, cold, damp winters, is boarded up with "storm-doors" that are not only hideous in design but an actual obstruction. With the rapid increase in the value of land which has taken place in all our large cities in late years, a wild fear lest any inch be wasted has resulted in a compactness of plan that is frequently painful. The housekeeper longs for the roomy closets and ample store-rooms of the old buildings; the fine hall that once formed an imposing and appropriate entrance has given place to the narrow entry through which it is frequently impossible to carry the larger articles of furniture. The same difficulty is experienced in the sharp, frequent turns which characterize so many stairways. Bedrooms are pushed into corners where they seldom have the benefit of pure, free air and the heat of the sun, for no other reason than that space is required for ample reception-rooms and state apartments, which, though used comparatively seldom, are treated as the most important part of the house.—*Popular Science Monthly*.

In a recent issue we mentioned the fact that the big machinery depôt of Mr. H. W. Petrie, on Front street west, was approaching completion, and would soon be ready for occupation. It has been completed and occupied. It is on the south side of Front street, including numbers 141, 143 and 145, about midway between York and Simcoe streets, and immediately north of the Union depôt. The building is of brick and iron, four stories high, fronting forty feet on Front street, with a depth of 124 feet, constructed with special view to the uses for which it was intended. It is equipped with every convenience, appliance and machinery requisite, and is heated throughout by the Buffalo hot blast system. To facilitate the handling of heavy machinery, boilers, etc., there are two powerful steam hoists, and also a lighter one. The safeguards against fire and burglars are thoroughly efficient. There are two fire and burglar proof vaults, manufactured by Messrs. J. & J. Taylor, Toronto. The offices are models of convenience and elegance. The metal railings, brass work, ornaments, etc., were furnished by the Barnum Wire & Iron Co., of Windsor, Ont. Those who are acquainted with the locality know that the south end or rear of this building borders upon the vacant space north of the Union depôt. It is but a few steps from the depôt to Mr. Petrie's building, and the Grand Trunk people are laying a substantial six-foot walk between the two, extending along the side of the building to Front street, thus affording a convenient passage between the depôt and the street, without the necessity of going by way of either York or Simcoe streets. This is a great convenience to Mr. Petrie, particularly in shipping small packages by express, and to Mr. Petrie's friends and customers, as they can be in his office in two minutes after getting off any train arriving at Union depôt. Heretofore Mr. Petrie had his headquarters at Brantford, Ont., and about two years ago he established a branch office in Toronto, on York street, opposite the east entrance to Union depôt. His Toronto trade increased so rapidly that he found it to his interest to concentrate all his business here. He is a dealer in all kinds of new and other machinery, boilers, etc.

In addition to his other stock he will carry a full line of iron and woodworking tools manufactured by Messrs. John Bertram & Sons, of Dundas, Ont., for whom he is their Toronto agent.

SWANSEA.

SWANSEA is a suburb of Toronto, lying on the lake shore immediately west of the city, and at the mouth of the Humber river. Its importance arises from the fact that it contains two most important manufacturing establishments, the Toronto Rolling Mills and the Ontario Bolt Works. The rolling mills are for rolling merchant iron and steel, and give employment to about 300 hands. At this time, and for some time past, the mills have been operated day and night to keep abreast with orders. The capacity is from 20 to 30 tons of finished iron each shift, the yearly product being about 20,000 tons. The iron and steel made here is chiefly from scrap, but for finer qualities of iron blooms are obtained from Londonderry, N. S., and from England. The output of these works is sold to merchants and manufacturers, and at prices which rule lower than similar goods made in the United States or elsewhere. The transportation to the mills of the raw material, scrap, blooms, fuel, etc., and hauling away of the finished product, gives valuable employment to the railroads. The company maintain a shunting engine of their own for use in their yards and about their works.

Adjoining the rolling mills are the works of the Ontario Bolt Company. This company acquired these works about six years ago, since which time they have been enlarged and extended, and have been equipped with new machinery, which enables the production of large quantities of strictly first-class goods in every variety demanded by the trade. Before coming into the hands of the present company these works were employed in the production of ordinary small goods. Now they are equipped with steam hammers, rivet-making machines, screw-cutting machines which will thread bolts up to four inches in diameter; upsetting machines to upset all sizes up to four inches in diameter; five drop hammers for making all kinds of drop forgings, and many other appliances necessary in the successful operation of first-class works. These works give employment to from 200 to 300 hands—sometimes more. As it is at the rolling mills, the employees are paid every two weeks, the more expert of them earning high wages. The products of these works are in demand by car builders, bridge builders, manufacturers of agricultural implements, railroad contractors and the hardware trade generally throughout Canada, British Columbia, Nova Scotia, and all intermediate provinces being good customers and large consumers. This large and steady demand is a guarantee that the products of the Ontario Bolt Works give good satisfaction both as to material, workmanship and price. The prices of these goods are considerably lower than for similar goods imported from the United States.

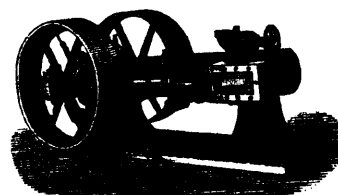
The following facts regarding these manufacturing establishments at Swansea indicate the volume of the business done there: \$250,000 per year is paid in cash as wages; 20,000 tons of iron and steel are made per year, in the manufacture of which 80,000 tons of raw materials are required; 4,000 tons of iron and steel per year are brought from Londonderry, England and other places, and the sales of the products of the Bolt Works alone average \$250,000 per year. The employees in these two establishments alone represent over 2,000 persons of Toronto's population.

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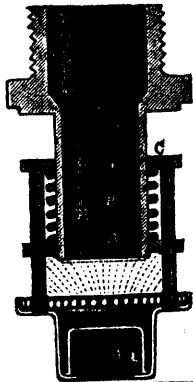
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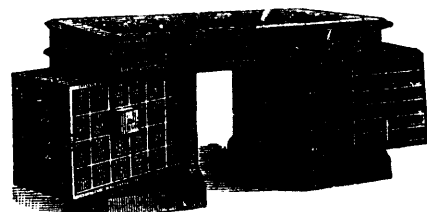
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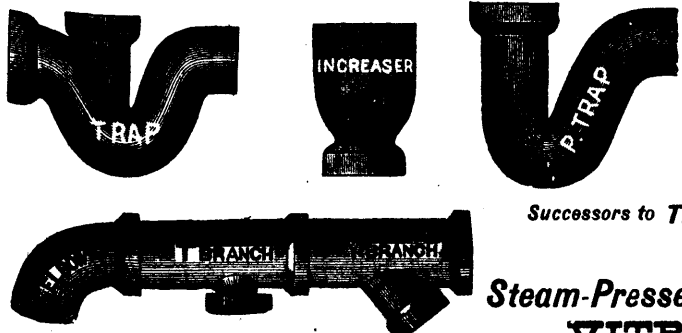
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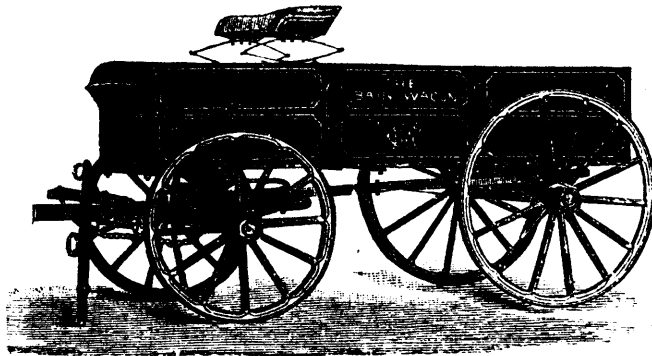
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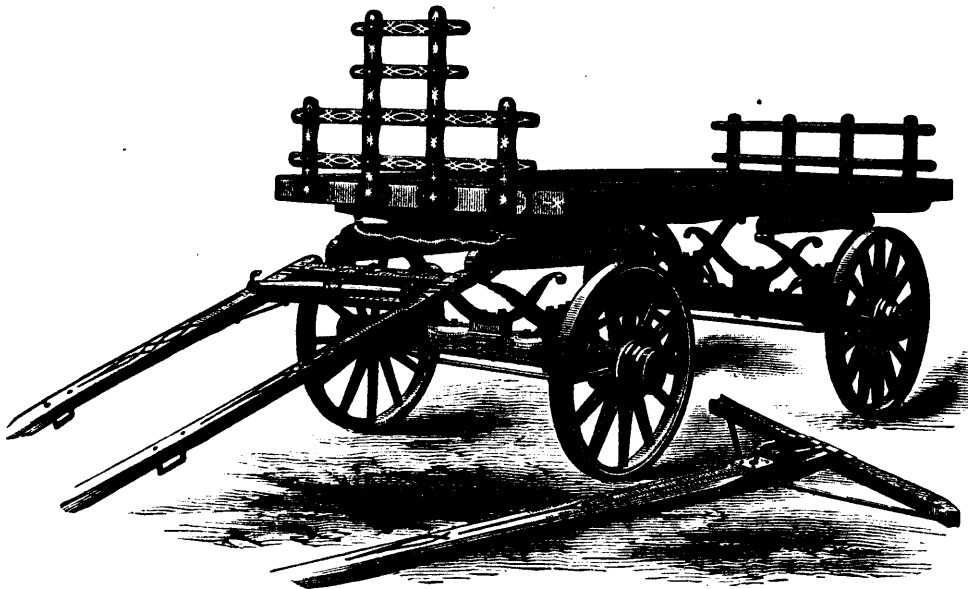
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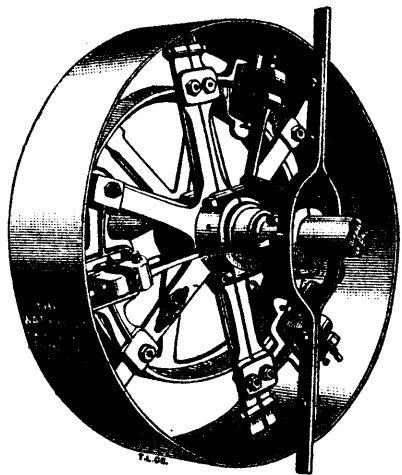
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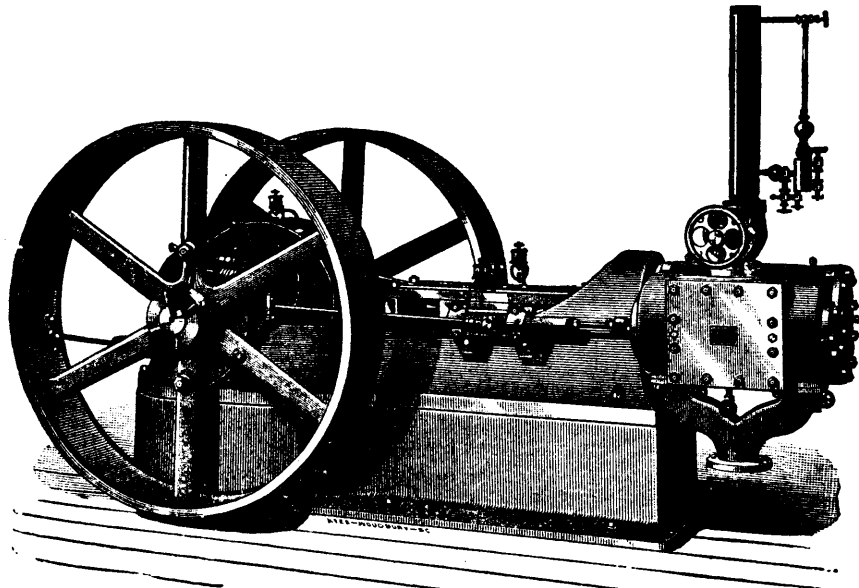
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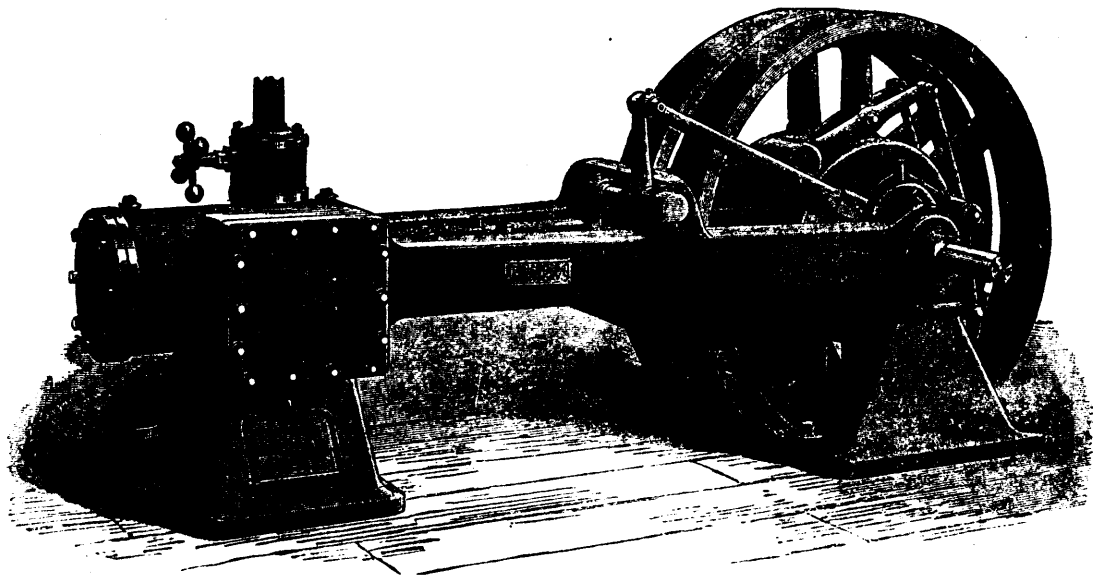
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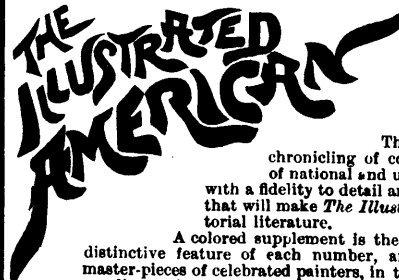
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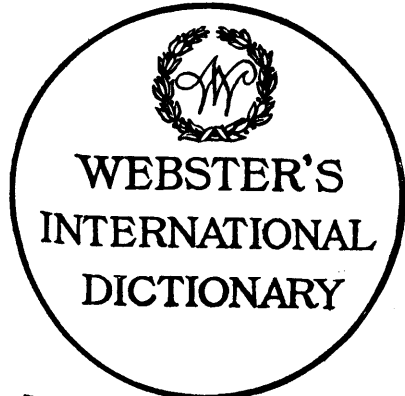
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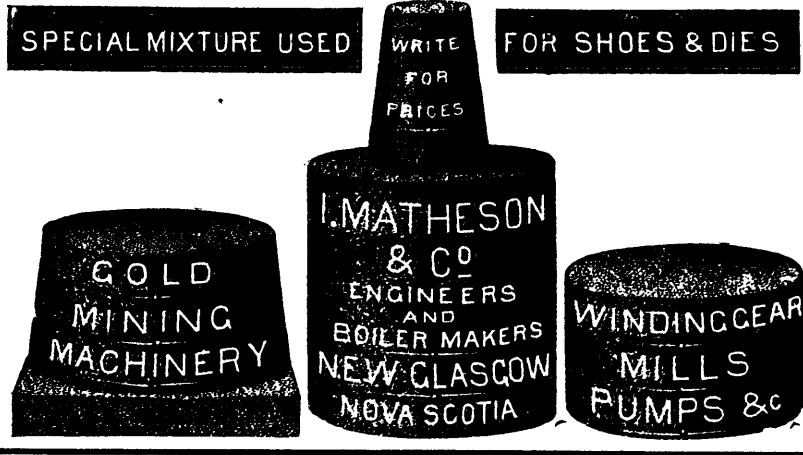
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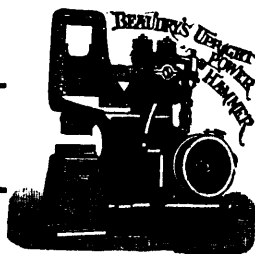
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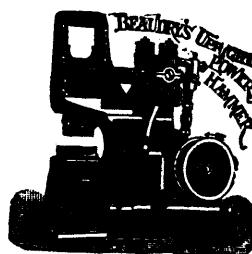
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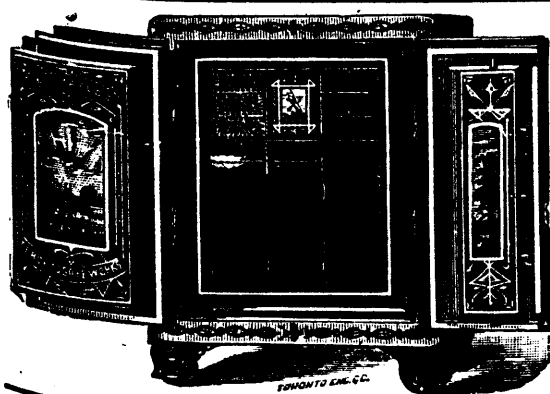


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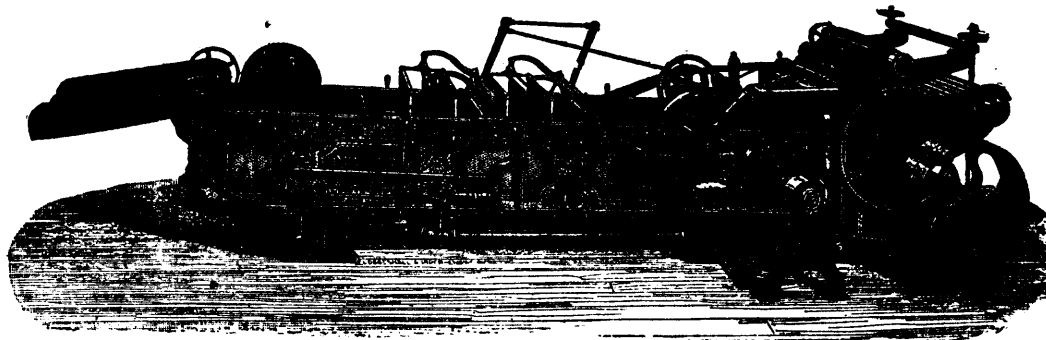
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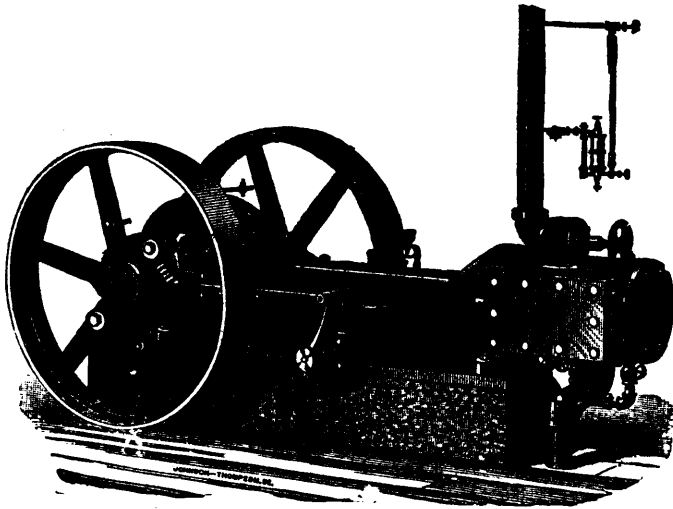
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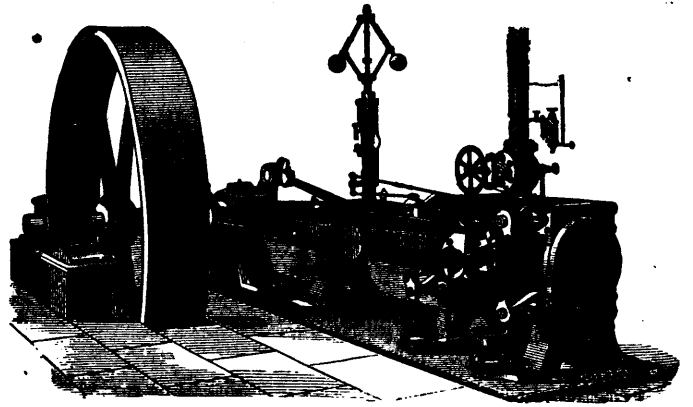
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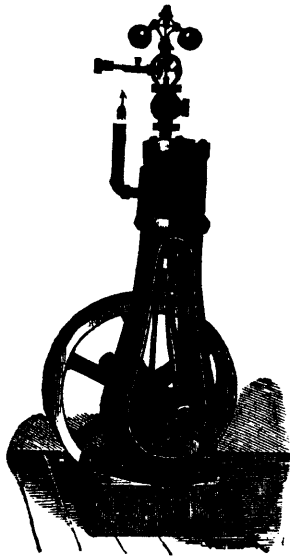
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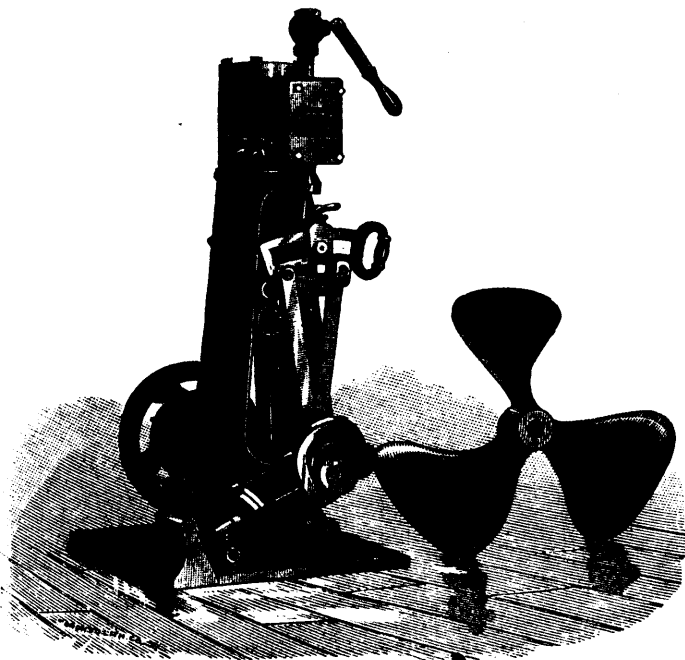
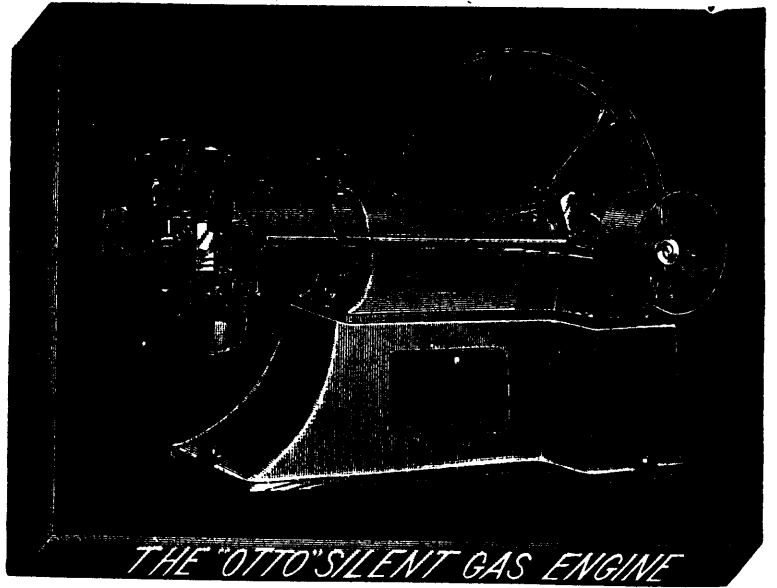
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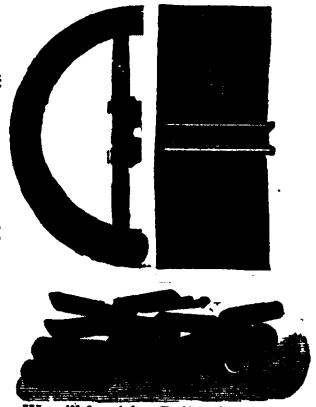
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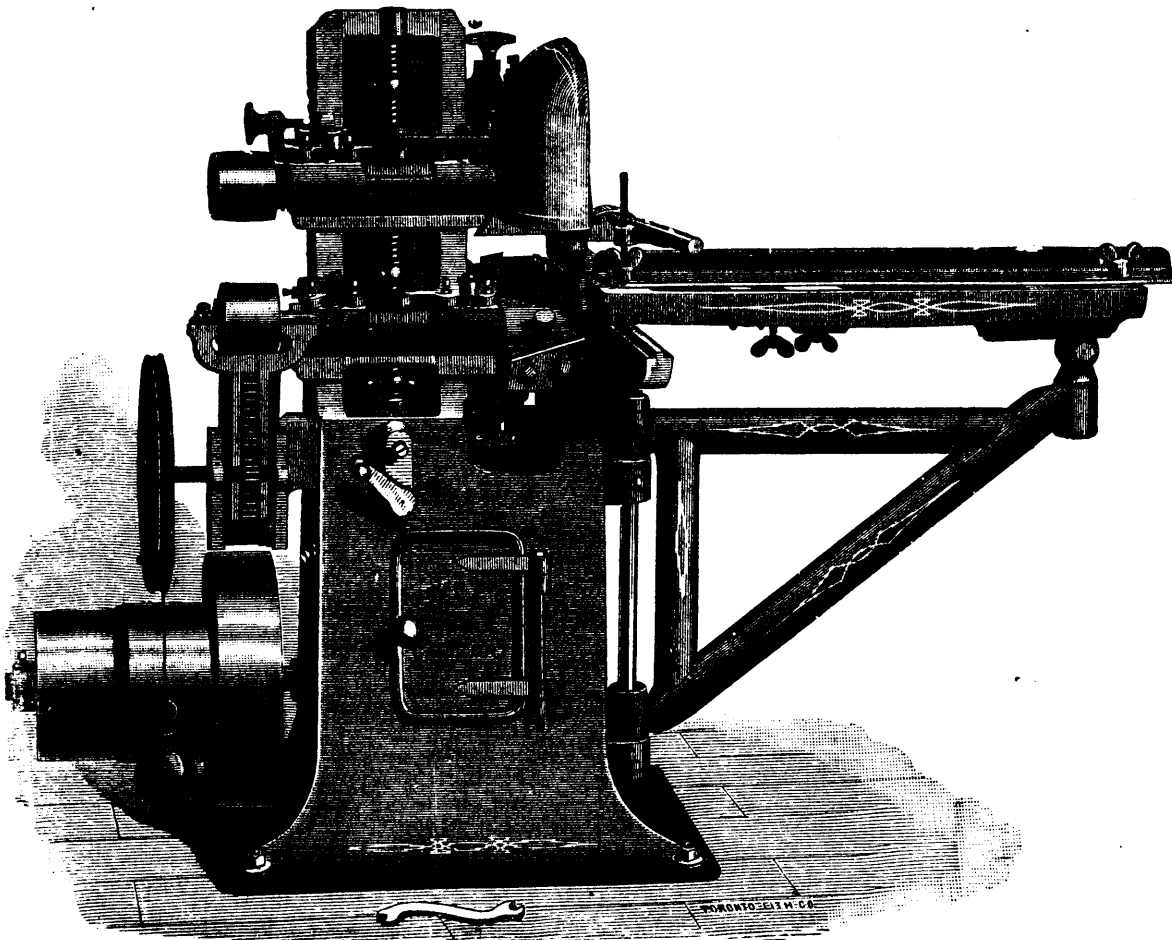
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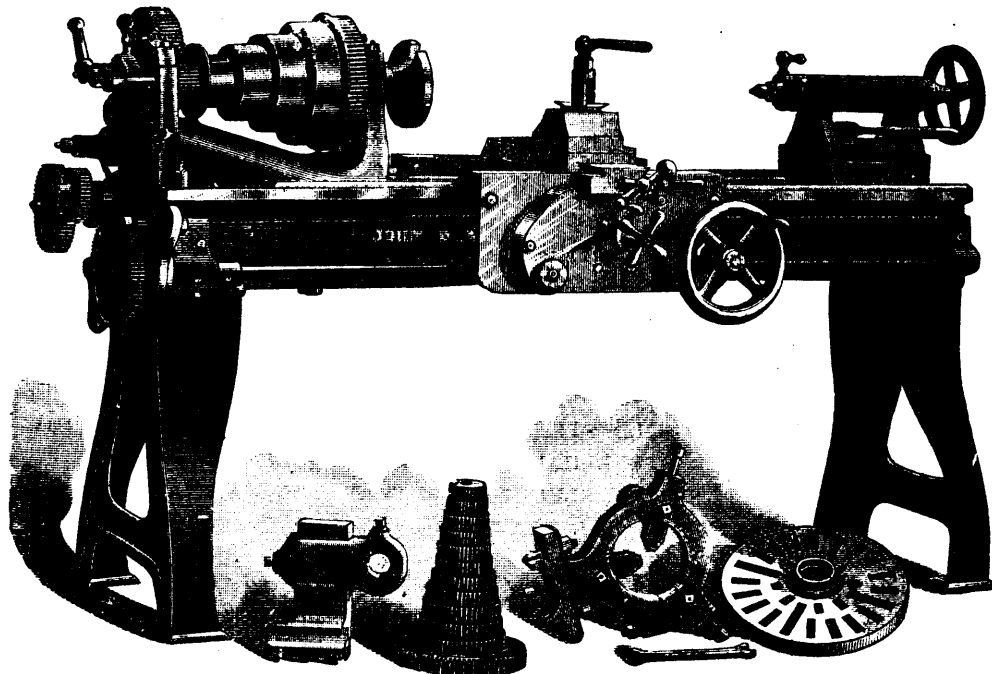
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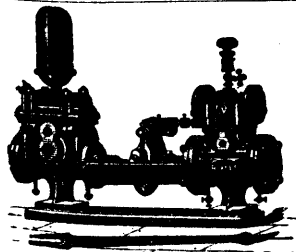
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TENONERS
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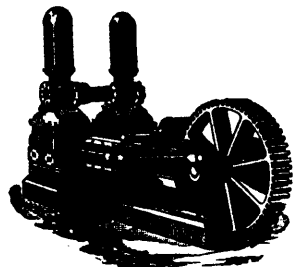
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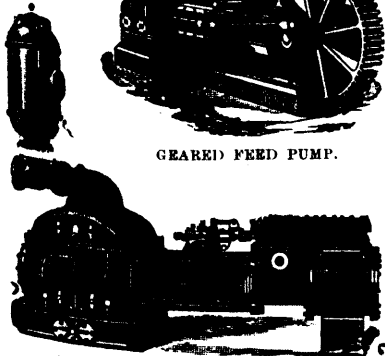
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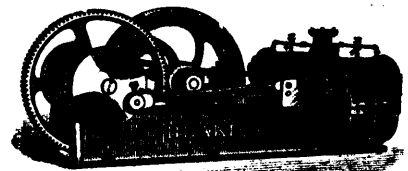
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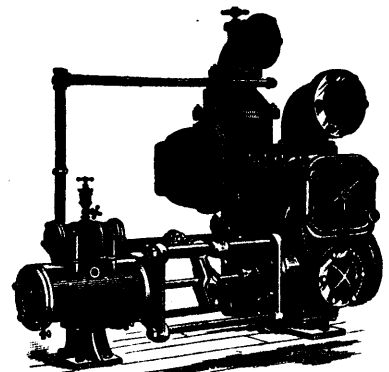
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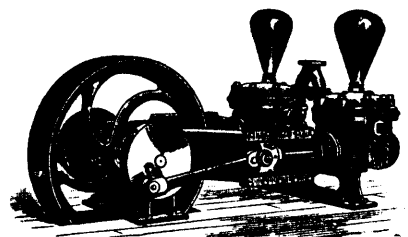
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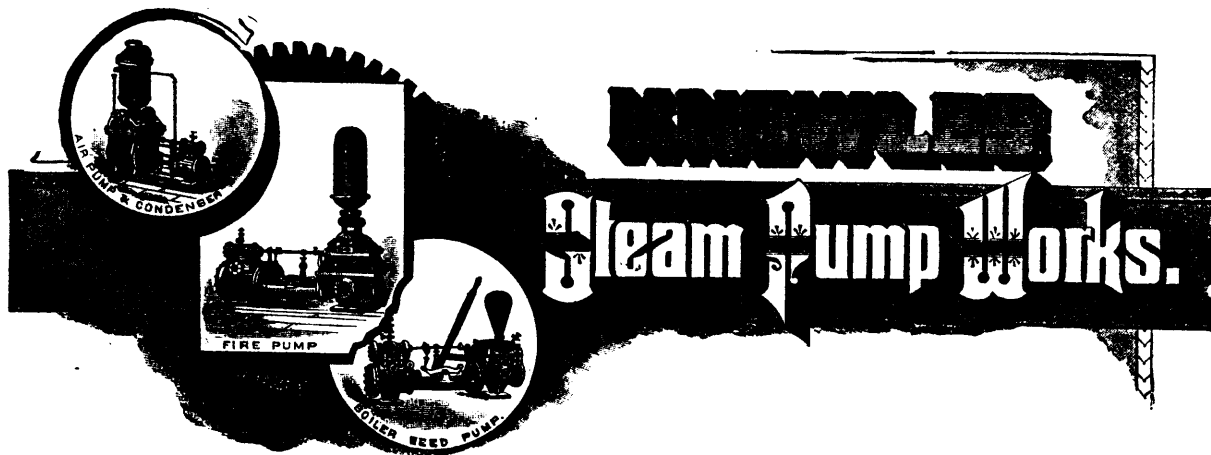
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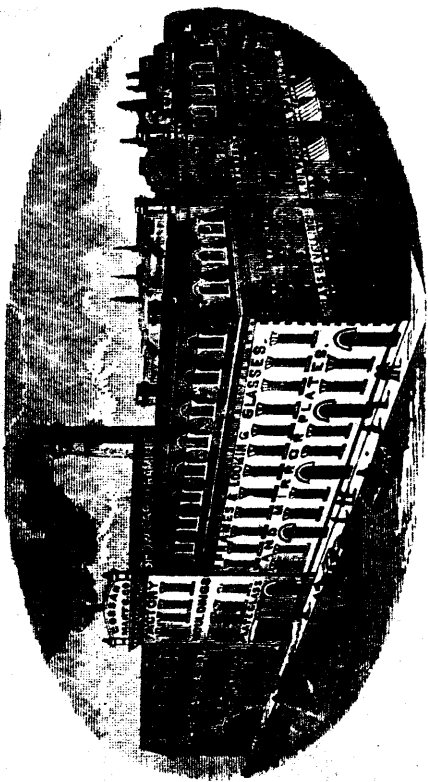
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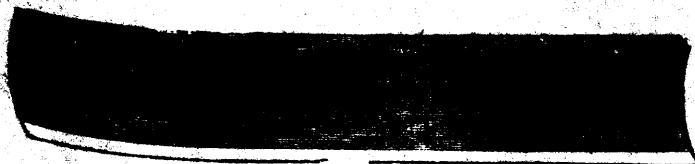
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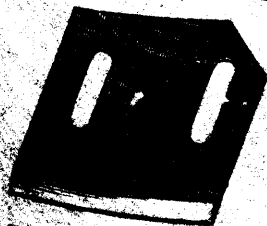


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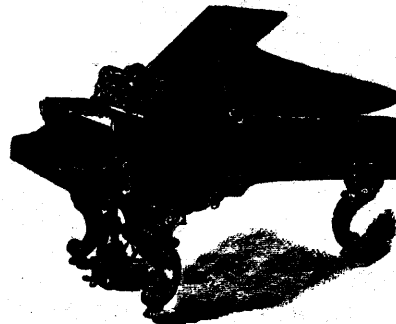
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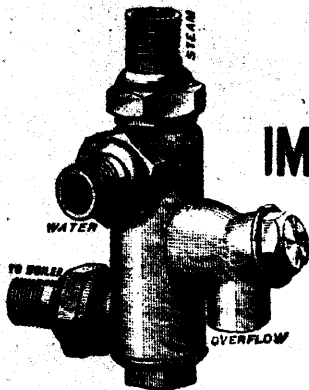
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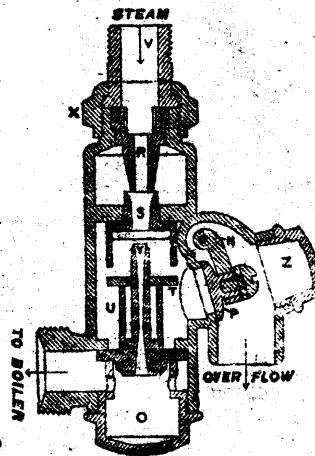
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