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# INDUSTRIAL WORLD

AND NATIONAL ECONOMIST.

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DEVOTED TO HOME INDUSTRIES, COMMERCE, FINANCE, INSURANCE, RAILROADS AND MINING.

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## Industrial World

AND NATIONAL ECONOMIST

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### A WORD TO THOSE INTERESTED.

The present is the first number of the **INDUSTRIAL WORLD AND NATIONAL ECONOMIST**, a journal the object of which is indicated by its title, and by this motto: "Home Manufactures and a National Policy for Canada." Its great aim will be the development of all the country's resources, and the material advancement of the Dominion as a whole. With party politics it will have nothing to do; it will not be an organ either of the Government or of the Opposition, but will be thoroughly independent. Leaving purely political questions to other hands, it will address itself to the far more pressing issues connected with the country's progress, commercial and industrial. The endeavor will be made to fill a void now unoccupied, and to direct public attention to the country's national interests, regarding which there should be patriotic unity. It is believed that the question as to the best system for Canada, in the matters of public works and commercial policy, ought to be capable of settlement on a common sense basis, and in such a way as to command general assent. The possibility, nay, the perfect feasibility of bringing the whole people of Canada to agreement on questions of production, transportation and exchange, will be kept in view, and the ground taken that such questions should be as readily settled as the four simple rules of arithmetic. It is not to our credit that we are still disputing whether it would not be a wise plan to withdraw our custom from our own producers and to give it to foreigners. A quarter or half a century hence those who come after us will perhaps wonder how it happened that rational men could ever have thought to make this a great country by sending its wealth abroad to enrich foreign producers, its own producers being meanwhile left without a market. How there could ever have been two opinions on this point will be a standing marvel to the people of the twentieth century; it will be difficult for them to believe that men could be found in Canada the friends of every country but their own. It is not a mark of advancing civilization, but of still remaining barbarism amongst us, for instance, that Canadian iron ore in immense quantities is shipped off to feed American furnaces, we being unable ourselves to utilize the mineral treasures which Providence has bestowed upon us. We are unworthy of the gift if we are incapable of using it, and our incapacity is the more remarkable from the fact that our neighbors can and do use what was given, not to them, but to us. With those who are to succeed to our heritage, the wonder will be how such dense stupidity as that of sending millions of money abroad every year for foreign iron, while having mountains of iron ore at home, could ever have prevailed with practical men. The time is coming when such questions will not be matter of debate, any more than the rules of addition and subtraction, but meanwhile they are in debate amongst us, and the mission of this journal will be to hasten the country towards an agreement on this vital point that production at home is what makes wealth and employment for a people. On religion and politics men will continue to differ, but there should really be no room for them to differ at all as to the duty of a Government to protect the interests of its own people. It should not require proving that by protecting home industry we give employment to both capital and labor at home, whereas by buying abroad and letting home industry go to wreck we give both work and wages away to foreigners. The time is drawing near when this reckless surrendering of work and wages to foreigners, instead of keeping them to ourselves, will be looked upon by all sensible men as what it really is—national suicide—and when people will marvel that any community laying claim to civilization

could ever have been deluded with the *ignis fatuus* of Free Trade, falsely so called. The new journal will muster facts to expose the delusion so carefully propagated by Free Traders that their system is gaining in the world. It will be shown, on the contrary, that, outside of the British Isles, the advance made by Free Trade has been but trifling, that it was the accident of a day, so to speak, while the causes that are compelling civilized nations to adopt Protection are of extensive range, deep seated and permanent in their operation. The ground will be taken that as a country advances in material civilization, it necessarily becomes more Protectionist. It will be maintained not only that as a matter of fact Protection is now every year gaining a firmer hold upon all progressive nations outside of England, but also that this must be so—that no other result is possible. It will be insisted upon that Free Trade is, to young countries especially, an arre-tor of progress, while through Protection their resources are developed and their progress hastened.

The production of Canada is from the farm, the forest, the sea and the mine, with further employment for many of her people in the business of shipping and transportation. All these different producing interests require protection, and to secure it for them is the first duty of the Government. The new journal takes its stand on this principle that Ministers are not placed in their high positions to be mere figureheads, but should do everything that can fairly be done to protect home interests. Foreigners may be left to take care of themselves, we may safely trust them to do that. The mischievous doctrine that Government can and should do nothing for trade will be opposed from the start as a delusion and a snare. The due protection of all home interests is National Policy; any policy which neglects one or more of them is not national, but sectional only. Bearing this in mind, the **INDUSTRIAL WORLD** will strive to be really and truly an exponent of Dominion interests—the advocate of every interest which can possibly be developed in any corner of Canada, from Cape Breton to Vancouver Island. National Policy is for the good of the whole Dominion. For trade with the States we want to substitute trade between the Provinces. It is not a reality, but an illusion, to say, for instance, that the Maritime Provinces can buy American flour cheaper than Canadian. American flour stored in Portland, Boston or New York, is at the time nearer hand to Halifax or St. John than Canadian flour at Toronto or Montreal. But look at the real truth. The American flour, or say nine barrels out of ten of it has actually been carried all the way from Wisconsin, Iowa, Minnesota or Illinois—five hundred or a thousand miles farther off than the Ontario grain fields. If the flour offered in Portland and Boston were the produce of Maine and Massachusetts the argument of nearness might have some force. But as it is the produce of States from five hundred to a thousand miles farther off than Ontario, the argument of nearness is gone. The Halifax buyer of American flour is not really trading with Boston, but with Minneapolis—far, very far, to the west. It will be somewhat more of an even case when Manitoba and the Northwest send flour to compete with Minnesota. But, as both Canada and the States have flour to export, and as prices are mainly determined across the Atlantic, the idea that American dealers can give Eastern Provinces people cheaper flour than Western Canadian dealers can, is utter nonsense. Coming to another branch of trade, we may ask, for instance, whether boots and shoes are actually retailed any cheaper in Boston than in Montreal. The real truth of the matter is that, except in European goods, prices on both sides of the border, to retail buyers, are very much the same. And the idea of any of our people buying anything cheaper from the States than from Canada is an utter delusion, except when it may be a reality for a very brief time through the efforts of our neighbors to kill off our trade by selling at or under cost.

The new journal will take this ground—that the Provinces should trade with each other, rather than with the States. Admitting that there are or ought to be profits in both buying and selling, the policy advocated will be that of both buying and selling to the greatest extent possible in our own country. The coal of Nova Scotia seems placed there by Providence for a return freight westward, to balance in some degree the heavy amount of produce going east. Taking it to Toronto, it would not really be carried much further than coal is carried from Maryland or southern Pennsylvania, up the Hudson and thence to Oswego.

Coal at Oswego looks near, but, like Minnesota flour at Boston, it has really been carried a long distance. The **INDUSTRIAL WORLD** will endeavor to expose the false idea that we can deal with foreigners more profitably than with one another.

A large foreign trade is desirable, and will be advocated by the **INDUSTRIAL WORLD**. But this will be maintained throughout, that home production well established is the best basis for foreign trade. It will further be maintained that our largest trade should be with southern countries, with those that differ most from our own. The most profitable trade is that with countries whose productions are most unlike those of our own. The natural course of things is not for the Maritime Provinces to trade with Maine and Massachusetts, but with Cuba and Jamaica. Ontario's trade should not be with the States of Michigan and New York, but with Brazil and Demerara. To the extent that another country's productions resemble those of our own, the profit of trade with that country disappears. Canada being a northern country, trade with the tropics is what she should strive for. We want the raw cotton of Georgia and Alabama, but we do not want the cotton cloths of Massachusetts; we can make just as good and as cheap as these latter for ourselves. We want the cheapest and crudest form of raw sugar that Havana can send us, but we do not want refined sugar from either New York or Greenock. In a word, it is "trade with the tropics that we want, and everything that will fairly promote such trade the **World** will advocate. First and foremost comes our own local trade, amongst ourselves, and next comes trade with countries and climates the most different from our own.

The need of a special journal to advocate the cause of home production will scarcely be denied by anyone. In the United States almost every important trade has its own special journal, and it is largely through the able and continuous service rendered by these journals that American manufacturing interests have grown strong and able to resist attack. The duties of a special advocate cannot well be performed by the regular political press, for such duties a paper of another class is required. All new and important inventions bearing on the progress of manufacturing will be duly chronicled in the columns of the **World**, and care will be taken to present accurate reports of tariff and custom house changes in commercial countries; more especially in the British Colonies and the United States of America. For such information, frequently of great value to individuals and firms, the **World** will be a mine of ready reference. The most accurate information available will be given respecting new and desirable foreign markets and, generally speaking, it will be the aim of the conductors to supply in its columns everything that manufacturers may wish to know, or might reasonably expect to find there. The **World** will, in brief, be a Canadian manufacturers' paper, wholly devoted to home interests, while seeking also to promote the kind of foreign trade which is profitable, or may be made so. The distinction will be carefully maintained between the two kinds of foreign trade—one being that kind which keeps us poor and in debt, while the other is that by which we make and save money. It is believed that such a journal, to fulfil the duties above indicated, is really a pressing want of the time in Canada, and that the undertaking will truly deserve a large, liberal and earnest support.

### THE PRESENT ASPECT OF THE TRADE QUESTION.

While the question of Protection or Free Trade is still debated in our own country, it may be interesting to take a glance at what foreign countries are doing with regard to it. At this very time there comes fortunately to hand an authoritative statement on the subject, in the form of an Imperial House of Commons return, bearing the recent date of March last, and giving the rates of import duty levied in European countries and the United States, upon the produce and manufactures of the United Kingdom. The last return of the kind was made in October, 1876, and therefore the changes of a little more than three years come under review. Considerable alterations are noted, and it is stated in the introduction that "the general tendency has been to increase the rates of duty," a notable admission, coming from investigators who must have been anxious to find all the indications that could be found of any progress made by Free Trade in foreign countries. The one exception remarked upon is Holland, which has abolished all duties on yarns of cotton, linen, and silk, on leather, and on copper, lead, and common copper and lead wares. The Dutch are still, however, thrifty enough to retain the small duty of 5 per cent on cloths, while admitting the yarns mentioned free; also on manufactures of

leather, and all but the cheapest and best-finished manufactures of lead and copper. In Russia the duties are now levied in gold instead of paper, an alteration which at the present rates of exchange, would give an increase of about 30 per cent. in the rates. There has been an increase of the duties on locomotives, pianos, spirits and leaf tobacco. Otherwise the Russian tariff has been but little disturbed during the period under review, but the ominous fact is noted that a proposal for increasing the duties on certain iron manufactures is under consideration. Sweden has raised the duties on sugar, spirits and unmanufactured tobacco; while Norway has, along with other minor alterations, increased the duties on spirits by about 35 per cent., and on tobacco about 50 per cent., and has put a duty on plate glass formerly admitted free.

The changes in Germany are the most important of all, for they amount to nothing less than the deliberate adoption, by that great Empire, of a thorough system of Protection, instead of the old system of modified Free Trade, which has until lately prevailed. The import duties have been very largely increased, and in the case of yarns a more complicated system of adjusting the rates has also been adopted. On the finer descriptions of cotton yarn the increase has been as much as 100 to 200 per cent., according to kind; on linen yarns, from 50 to 300 per cent. On cotton manufactures the increase in the rate of duties varies from about 25 to 50 per cent.; on linen piece goods of the finer qualities, from about 50 to 100 per cent., while on lace and on pure silk goods the increase is as much as 150 per cent., and on mixed silk goods about 70 per cent. (In all these examples, and others taken from the Return, the increase mentioned relates to the amount of the duty, and does not mean per centage of the value of the goods. When a 10 per cent duty is raised to 20, or a 20 per cent. duty to 40, it is said to have been raised by 100 per cent., having been exactly doubled.) Raw iron and steel, common iron and steel wares, and machinery, which were formerly admitted free, are now subjected to more or less onerous duties. Fresh duties have been imposed on certain lead and tin wares, and the duties on the finer manufactures of copper have been considerably increased. Coarse shoemakers' wares are now charged twice as much as formerly, while the rates on articles of fine leather have been increased about 60 per cent. The import duties on earthenware and porcelain have only been slightly augmented, but those on glass wares have been raised about 50 to 60 per cent. Duties on oils, candles, cheese, spirits, and tobacco have been increased in about the same proportion. In brief, Germany has decisively rejected even modified Free Trade, and has deliberately adopted a Protectionist system throughout. The important example of Germany cannot fail to tell with other countries.

Italy is the European country that has made the next most decided advance towards Protection as a system. The new tariff establishes considerably augmented rates on a large number of articles. The duty on cotton yarn has been raised about 20 per cent. on the coarser kinds, and over 100 per cent. on the finer. On the heavier manufactures of linen and cotton the increase is slight, but it is about 50 per cent. on the finer qualities of cotton, and on linen thread lace about 220 per cent. About 160 per cent. has been added to the duties on iron and steel rails, and about 50 per cent. to the rates on all but the commonest description of cutlery. In other respects the duties on iron and steel have been not been materially altered. Other augmentations of duty are:—On rolled lead, 100 per cent.; lead wares, 60 per cent.; sheet tin, 150 per cent.; tin wares, 15 per cent.; fine earthenware, 60 per cent.; colored or gilt porcelain, 40 per cent., and glass and glasswares about 50 per cent. There is also an increase of duties on many other articles, among them fine soap, stearine candles, petroleum, butter, cheese, cocoa, chocolate, sugar and spirits. Manufactured tobacco, formerly prohibited, is now admitted but only at a very high rate of duty—£40 12s. 10d. sterling, per cwt., which is equivalent to 7s. 5d., or \$1 7s. per pound, while in cigars the duty is half as much more. Unmanufactured tobacco is prohibited altogether. Evidently, Italy is not taking her steps in the direction of Free-Trade, and her example, together with that of Germany, will strongly influence the rest of Europe.

Austria has reduced the duties on coarse cotton yarns, but has increased them 30 to 50 per cent on the finer numbers. Bleached and dyed silk yarns are raised 80 per cent., pure silk goods 25 to 90 per cent., and mixed silks from 25 to 60 per cent. With many other instances of increase in the list, only a very few reductions are to be observed.

In Portugal the only increase has been on tobacco but a recent despatch says that the commercial treaty with England, which has been for a year awaiting

ratification, is at last rejected. The new Spanish tariff raises the duties on several important articles of British trade—coal 100 per cent, ships and boats 200 per cent, leather 60 to 100 per cent, seed oils 250 per cent, raw sugar 40 per cent, and writing paper 20 per cent. On petroleum, an American product, the increase is 200 per cent. A system of differential duties has been adopted, which is highly unfavorable to British trade, as compared with that of most European countries. Products of the Spanish colonial possessions are admitted at duties considerably lower than those which the products of foreign countries have to pay. With regard to other European States there is not much to remark. Switzerland has made no considerable alteration, except in the duties on tobacco. Greece has put on a special war tax of 10 per cent in addition to schedule rates.

The tariff figures now in force in France are given in the return, but no remark is made upon them. Remarks would in fact have been out of place, the French Chambers being this year, as they were also last year, engaged in the work of revising the tariff from top to bottom. It remains to be seen what particular concessions France will make in return for Mr. Gladstone's proposed reduction by one-half of the duties on French wines. Some concessions will have to come from the French side, or the pretence of making a treaty at all will have to be abandoned. But it is not for a moment to be expected that these concessions will change the strongly protective character of the French tariff as a whole, which is already fixed and determined.

We need no Imperial Parliamentary Return to tell us how the trade question progresses with our near neighbors, the people of the United States. Last year one change in the tariff was placed on the statute book—the abolition of the duties on quinine and salts of quinine. This year, so far, all attempts to reduce duties have failed in Congress; and even the heat and commotion of the Presidential election contest does not bring to the surface any indication whatever of any popular demand for a move in the direction of free trade. The truth is that the American protective system, having grown by what it has fed on for the last nineteen years, is now so strong, and has its roots so deep spread throughout the country that no attempt to destroy it has any chance of succeeding. Some time, possibly before long, it may be revised and made more systematic than at present, but we may rest assured that its essential characteristic—the protection of home production against foreign—will not be given up.

Besides Canada, only one other colony—Victoria, in Australia, has as yet adopted a protective policy. It was said a short time ago that a recent general election there amounted to a vote against Protection, but this turns out to be a mistake. The simple truth about our fellow colonists in Australia is that as yet they have not advanced enough in industrial progress to be Protectionists. But that they will advance admits of no doubt; and that industrial progress will with them as with ourselves develop a popular demand for Protection, is as sure as next year's summer. In all this review of tariff changes in the principal commercial countries, what indication can Free Traders point to, to show that their cause is gaining in the world? Absolutely none of any account, while in all the great nations, England alone excepted, Protection either firmly holds its own or is making important advances. It cannot be that all this means nothing; it means that Canada, in adopting a National Policy, is simply following the example of the civilized world generally. And for the policy of the thing this would appear to be sufficient justification.

### "GETTING AND SPENDING."

"Getting and spending we lay waste our powers," says the wise poet Wordsworth, who was himself a model of economy, and who had experienced the difficulty of getting the wherewithal to spend. It is not only our "powers" that are wasted by extravagance, but our fortunes, our time, our happiness and our comfort, the security of age and the future of children. In the *Life of Burke*, recently published, that wise philosopher is represented as insisting on the necessity of economy for just that class of persons whom this article is intended to reach—persons with fixed incomes. The tendency of things, as he points out, is for the purchasing power of money to decrease—for a great variety of reasons not necessary to be recapitulated here. This being the case, the necessity of economy is great. But it is greater still when we consider that as life advances expenses increase, by means of the education of children and the preparing of them for what is only too faithfully called the battle of life. Now, we may set out with the allegation that the practice of "economy," which means here saving, is least common among the very class in which it is most necessary. Experience of life and business has taught most thoughtful persons that a painfully large proportion of persons with fixed incomes are living at least a year ahead of these incomes. That is: they are engaged this year in paying off the debts contracted last year; and by consequence, running into debts this year which next year is mortgaged to pay. This is particularly true of the working classes, in which we may include clerks and all who have incomes fixed with sufficient certainty to enable them to tell within a reasonable margin how much they may reasonably expect to receive and how much they ought honestly to expend. For the very

poor of course it is useless to provide measures of maxima; there is always that large and melancholy residuum who, being controlled by vices and bad passions, by idleness and helplessness, are doomed by a very identical law of nature to utter poverty all the days of their lives. But above these there is still a large class who might be happier and more comfortable if they would, who could be more useful to society, more helpful to their families and more self-respecting and respected, if only they would seriously take to head and heart lessons that were painted in their school books, and which have been impressed on their memories by the vicissitudes of life. Extravagance among this class is too common, and the living a year ahead of income is the wretched result. The cause of this state of things is perfectly plain and not unnatural. Extravagance has been, and still is, the note of modern society. Luxury amongst the wealthy begins the evil, and on this continent luxury in that class has been great. Now, if it was here as it is in England, or in any continental country, where the dividing lines of society are so sharp, this would not be so much of an evil. But on this continent the dividing lines are indistinct, and people in the same rank of life have such varied fortunes, mix so much together, and act so freely on each other, that the inevitable result is—that those who are wealthy to a certain extent demoralize those who are not, give them an incitement to provide as far as possible the same enjoyments and the same display on means which will not permit it. The very greatest fortunes disappear in a generation on this continent. The smaller ones are, of course, more easily dissipated. And nothing is so easy as to encumber an income. And at this point comes in the strongest inducement to avoid such a result. It is this: that once an income is burthened with debt, it is like a body afflicted with an incurable disease, it is impossible to redeem it. No matter what exertions are made, it is often quite impossible to repay debts, there are no savings possible to be made, and a very little accident, perhaps, cuts off the income altogether. The fact and the causes of it being thus generally outlined, let us look at the results of it. We think it will be admitted by most experienced men that the worst effect of a disturbed condition of society and trade is felt among the smaller tradespeople. And the indebtedness of people who might pay if they would, in nine cases in ten, is the cause of an immense amount of distress among this class. Grocers' books are often scandalous revelations of unthrift, extravagance, and almost criminal negligence of honorable engagements on the part of people with fixed incomes, and often on the part of people to whom payment in advance would be as easy as payment after the bankruptcy of the unfortunate man who has waited a year for his money. Grocers, shoemakers, tailors, furniture dealers, not to speak of physicians, suffer enormously from delays, disappointments and losses by means of people who, as a rule, have quite enough money to save, if they would, instead of wasting. Snobbery, pure and simple causes more distress and annoyance among its devotees and more suffering among its victims, than vices. Bishop Fraser rather startled English society by saying he would sooner see the people free than sober; of course his actual meaning was misrepresented. We shall, however, perhaps, be better understood when we say that we would rather see the people saving than sober—for sobriety would follow a wise economy much more surely than economy follows sobriety. Snobbery, extravagance, the desire to appear better than we are, causes more misery to the valuable class of people (considered as citizens) who are cursed with it. To rich people we would say pay your small debts—the payment is absolutely necessary to the circulation and trade of the country. To people with smaller and fixed incomes we would say do not go into debt at all; if you do, the chances are that you will never get out of it and will be miserable all your life. To all classes we have one closing observation to make: in this country for nine people in ten money must be saved and cannot be made; and those who make money will confess that they began by saving it. We have said but little that might be said on this question, but we have said enough for sensible people we imagine. The story we have outlined, the philosophy we have inculcated is not new. It is as old as the Prodigal Son; it will be true in the days of those who will call us "the ancients." Something on many heads remains unsaid; and we shall from time to time, to the best of our ability, endeavor to say it.

### CATTLE SHIPMENTS FROM P. E. ISLAND.

We are pleased to note that the farmers of Prince Edward Island are turning their attention to the raising and fattening of cattle instead of devoting, as heretofore, the greater part of their energies to the production of grain and vegetables. Several shipments of cattle have lately been made from Charlottetown to England, the shippers being the Messrs. Carvell and Blake Bros. The Island offers a good field for stock raising, as it contains many hundreds of acres of land, which though unfit for grain or

vegetables makes admirable pasture. It is true the winters in that province are long and severe but one season is generally sufficient to fatten cattle sufficiently for market. There is every prospect that the present experiment of shipping beef cattle to England will prove profitable and much credit is due to Hon. Senator CARROLL, who is we learn the pioneer in the business. It will be remembered also, that it was he who took the first cargo of frozen salmon from the Restigouche to London, last fall, thereby opening up a trade which promises to grow extensively.

### MANUFACTURES IN A YOUNG COUNTRY, AND HOW TO ESTABLISH THEM.

A young country like Canada has to do with economic questions under circumstances very different from those which exist in England. England has markets for her agricultural products at her own doors, a deficiency of food, surplus capital, and unemployed labor; Canada has a surplus of food products for which there is no market, unless in foreign countries, and agricultural products are heavy and costly of transit: we have, too, a deficiency of capital and of labor. Protection encourages the investment of foreign capital in local industries, and brings in the skilled labor necessary for these. Local markets, the great want of a new country, are rapidly created; and good markets mean good profits and good wages. They stimulate production and lead to wealth. Where most of the population, as in Canada, are farmers, the products of the field find few purchasers except for export. Prices are poor, and the cost of transport to markets three or four thousand miles away, lowers to a minimum the profit of the producer. Alderman Mechi, in his work (1864), "How to farm profitably," says:

"It is precisely because British farmers have their customers—the British manufacturers—almost at their doors, and that other corn producing countries have not manufacturers, that British agriculture is rich and thriving."

Adam Smith, in his "Wealth of Nations," says: "The increase and riches of commercial and manufacturing towns contribute to the improvement and cultivation of the countries to which they belong in three ways. 1. By affording a great and ready market for the rude products of the country."

Even in the most recent works written in England solely in the interest of Free Trade, we have, inadvertently perhaps, a similar advocacy of the influence of manufactures in increasing the value of land through local markets. BADEW-Powell, in a work published this year on Free Trade, says, p. 78:

"Soils acquire a secondary value by the rise of market towns or manufacturing districts."

Manufactures add another population to the agricultural, these again give rise to commerce, with their kindred industries, and thus superadd another population. England, purely agricultural, could not support more than four millions of people; but England, agricultural, manufacturing and commercial, swarms with twenty-two millions. Canada has but four millions, but Canada, with all those industries, might now easily support ten times that number. At the beginning of the 18th century, MACAULAY says, the value of the products of the farm in England, with only half the land cultivated, far exceeded all other fruits of industry, yet now, with the vast improvement in agriculture, and the additional one-half of the land brought under tillage, the soil is the least of the three great sources of wealth, so marvellous, under the most rigid protection, had been the development of manufactures and commerce. One hundred and fifty years ago England had a population not more than Canada has to-day. Now, after 150 years of protection and 30 of free trade she has twenty-two millions, three-fourths of whom are engaged in manufactures, commerce, and other pursuits unconnected with the soil, giving good home markets, bearing the burdens of State, and adding to its prosperity in peace and strength in war. With manufactures we get that illimitable power—steam—which in England alone is capable of doing more work than the entire human family. With this vast creative power we can give employment to our own people, develop our country, and multiply a thousand fold the wealth-producing agencies. What then are the means by which we can obtain capital, population and skilled labor, manufactures and commerce, by which we can keep amongst us our young men and women; call to our shores a greater tide of immigration, secure that power more prolific than all others in the creation of wealth, give our farmers local markets, better and steadier prices; swell our commerce to such dimensions as to make easy the completion of our magnificent internal navigation and inter-oceanic communication, with all that is necessary for a complete and independent nation, and for the full development of the country? Amongst these means we believe none more potent than protection to native industry. Our manufactures must be protected in their infancy. Many instances are given in the history of trade of stronger manufactures of old communities sacrificing large sums to crush out the weaker industries of young countries. We find in reports of committees of the English House of Commons statements that sums as high as two millions of dollars have been sacrificed by rich manufacturers to destroy rivals in other countries. We do not want, therefore, either a Zollverein with American States to shut out English and foreign competition, nor do we want such a reciprocity as would place our weaker

### THE RECENT BANK MEETINGS.

The proceedings at the annual meetings of share holders of our joint stock banks, which occur, as to the great majority of them, during June and July, furnish us with the evidence of business men unbiassed by party feeling, upon the condition of the trade of the country. By no medium is the actual state of business so accurately indicated as by the bank statements, and to them we may turn with confidence for the promise or refusal of a revival from the depression which has so long weighed down our commerce. The Bank of Montreal meeting derived some additional interest from the fact that the new general manager, Mr. SMITH, was brought for the first time face to face with the shareholders, and anxiety naturally prevailed to ascertain his opinion as to the prospects of the bank for the future, and the actual condition of its business. As a new man, assuming the responsible position of general manager of the largest banking institution on this continent, Mr. SMITH's natural and not improper inclination was, not to exaggerate, but, rather to reduce the assets as to which there could be any possibility of doubt, to the lowest estimate, in order that, when revived business gave to them a new value, he might claim the honor arising from the improvement in the condition of the bank's affairs. And yet, with all his inclinations running in the direction of large deductions, Mr. SMITH has found it necessary to write off less than was done by his predecessor in 1870. Thus, in the year which closed on May 31st, 1880, the gross profits were \$1,735,000 and the net profits \$1,049,000, the bank writing off about \$700,000 for bad debts, while in the previous year the gross profits had been \$1,758,000 and the net profits only \$611,000, the difference of \$1,147,000 being absorbed by losses written off. It is thus seen that the management of the late general manager cannot be charged with a want of boldness in facing the situation from year to year and providing for losses as they arose. Of the losses provided for last year, not more than one-fourth arose out of the business of the year, the remainder arising from further depreciation in securities of insolvent estates carried over from the earlier years of the depression, and in this fact we have one of the most significant evidences of the improvement in business which has been going on for some months past. The condition of business, as revealed by the report of the directors and the speeches of the president and general manager, is still extremely quiet, and compels the banks to seek employment in the United States for a large amount of capital which cannot be used in this country, but, on the other hand, the period of failures has gone by. There is a substantial improvement in the lumber trade, from which important results are expected, and, in the words of the president, "the improvement in the general trade of the country was very decided, the manufacturing industry had benefited by the revision of the tariff, and, being free from the unfair competition to which it had hitherto been exposed, showed good prospect of doing well from this out."

There are some special features in connection with the proceedings which deserve attention, and among these is the disapproval which the directors of the Bank of Montreal, as well as those of the Merchants Bank, have expressed of the extension of the Dominion note issue, authorized last session. The language employed in the report of the Bank of Montreal is as follows: "The legislation authorizing an increase of Dominion notes from twelve millions to twenty millions on a very slender coin basis is a matter of grave importance, not only to the banks, but to the country at large, and your directors take this opportunity of recording an opinion unfavorable to Government issues of notes payable on demand, as fraught with danger to the best interests of the country." With the premises of this paragraph we are disposed to agree, but the conclusion is illogical, because of the clumsy wording of the paragraph, which fails to express the idea the Board intended to convey. Government issues of notes payable on demand are dangerous only when an inadequate reserve is maintained; with the condition of a strong specie reserve strictly observed, Government issues are preferable to those of joint stock companies, because of the better security they offer. But the question arises whether the reserve established by the Government can be considered a safe one, and to that we reply, "yes," so long as business is prosperous and conducted upon a sound basis; but when a financial crisis threatens the country, such as overtook us in 1875, the reduced specie reserve will unquestionably intensify the crisis, unless the vigilance of the Government exercised before the event prepares them for the drain on the reserve when it comes. When the depression came upon the country in 1875, it first made itself apparent in the inability of importers to discharge their indebtedness to foreign creditors. The banks were suddenly called upon to provide sterling exchange in settlement of the adverse balance of trade, and found their resources inadequate to meet the demand; in a word there was not gold enough at their command to purchase the necessary exchange. In this dilemma the Government was looked to to bridge the difficulty by the redemption of Dominion notes; the Government turned to its

deposit in the banks for this purpose and it was then discovered that the Government deposit in the bank did not meet the emergency again which it was held because, at the time the Government wanted gold from the banks to redeem the Dominion notes issued, the banks were calling upon the Government for the very gold they were expected to provide. The experience of the year 1875 seems to establish the fact that the Government deposit in the banks cannot be taken into account in estimating the ability of the Treasury to redeem Dominion notes when a sudden heavy demand is made for that purpose. The demand will be made only when the banks require gold for the purposes of exchange, and when, therefore, they are not in a position to provide the Treasury with the means of redemption. The legislation of last session, by reducing the specie reserve held by the Government, imposed an additional responsibility upon the banks, and practically compelled them to maintain the specie reserve for both the Dominion notes and their own issues. In times of crisis, when sudden large demands for gold are made so that the protest made by the directors of the Bank of Montreal and Merchants Bank against the extension of the Dominion note issue, and reduction of the specie reserve against such, is not to be wondered at, and is, under the circumstances, easily justifiable. But, doubtless, the Finance Minister whose mind has been fully occupied with this question, has calculated that no such sudden demand is likely to be made in the future. The cause of the demand was excessive importation, and as the present policy tends to lessen the bulk of our importations, by increasing production at home, the demand for exchange will not be likely to arise in any force sufficient to cause a financial crisis. If this view of the matter is correct and is accepted, the danger which under ordinary circumstances we might admit to be present, is largely eliminated from the calculation. The banks are, upon the whole, satisfied with the new Banking Act. They have reason to be so; it was framed in their interest, or, more correctly speaking, the expiring act was continued with few amendments and those of a nature universally demanded.

The testimony at the Merchants Bank meeting as to the condition of trade was, also, of a most encouraging nature. The general manager, Mr Hague, using these words—"If, as is my hope (and I must confess that there is reason for the hope), the times have taken that turn for the better, which is the commencement of a series of years of soundness and reasonable prosperity, this bank can scarcely fail to participate in the better state of things that will then be prevalent." We have, therefore, the testimony of those who may fairly be considered the most cautious, and therefore the most reliable authorities, the bank managers, that the condition of business has already undergone an improvement and promises to continue in the same direction, and the discussions at the bank meetings encourage us to look for a more prosperous trade in the year we are entering upon, than has been experienced since 1875.

MONEY ORDER EXCHANGE BETWEEN CANADA AND THE U.S.

In 1875, a convention was arranged under the direction of the Postmasters General of the United States and Dominion of Canada, for the carrying on of a system of exchange of money order between this country and the States American currency at that time being not of a gold value interposed, however, serious difficulties in the way of being able to devise a system of exchange, which would be at once safe to both Governments, and at the same time reasonably simple and speedy to the public, and as a consequence the issuing of a money order in Canada payable in the United States involved nearly as much labor to the Postmaster as a county attorney would have in drawing up a will of reasonable length, the unfortunate purchaser of the order being delayed for some fifteen minutes when the formidable looking document was being written.

The charge or commission, owing to all this elaborate preparation, had to be made in proportion to the labor, and the smallest fee levied in Canada for sending any sum under \$25 by money order to the States was 25 cents; the United States postal authorities charging exactly double this amount. Notwithstanding the art and cumbrousness of the system, the exchange supplied a great public convenience, and the business which, for the first year of its operation, only amounted to \$360,468.90, reached last year the sum of \$643,466.83.

Table with 3 columns: Year, Canadian orders payable in the U.S., U.S. orders payable in Canada. Rows for 1876, 1877, 1878, 1879.

It will be observed that this increase has gone on steadily, and what is most striking, that during the last year, while the amount of orders opened in the United States and payable in the Dominion, has increased as compared with the previous year \$62,000, or 25 per cent, the orders opened in the Dominion, payable in the States, only show an increase of 2 per cent. The equalization of the value of the currency of the States with gold, suggested to the postal authorities that the time had come when it would be possible to amend the convention of 1875, and adopt a means of transmission which would not only be a great improvement departmentally, but which at the same time would afford much greater facilities to the public at less cost. With this view, an exchange of ideas took place between the administrations early last year,

but as the American Government had their hands full negotiating a money order post-convention in Europe, the matter was by mutual consent postponed until a few weeks ago, when Dr. C. F. MacDonald, the Superintendent of the Money Order System at Washington, was sent to Ottawa by the Postmaster General of the United States as a special commissioner to treat with the Canadian authorities regarding the terms of an amended convention. Dr. MacDonald was accompanied by Special Agent Hamilton whose wide experience in the money order system was of much value in the negotiations. As there was but little difference between the proposal of either Government, the amended Convention was speedily completed, and the Postmaster General of Canada had the satisfaction of signing the formal document on the 20th May. By this amended Convention, which came into force on 1st July, the procuring of a money order payable in the United States has been made as simple as if it was payable in the Dominion of Canada—the purchaser of the order being handed the same, forwarding it to the person for whom it is intended. It is absolutely necessary however, that the letter of advice of each money order should pass through some recognised central office, so as to secure a basis of the international money order account between the two countries. This may delay the receipt of the advice at the paying office twelve or twenty-four hours after the corresponding money order may have reached the person for whom the money was intended, but a delay so short as this is immaterial. The charge for sending money orders is greatly reduced, and will be, on and after the 1st July, as follows:—

Table with 2 columns: On money orders payable in the United States, Cents. Rows for amounts from \$10 to \$50.

Fifty dollars is, in the meantime, the limit allowed by the postal law of the United States for a single money order, but probably within a short time this limit will be increased to \$100.

We think the Postmaster General may be congratulated on the satisfactory arrangement which has been concluded under his auspices, and have little doubt that the public will in this, as in all other matters, welcome and be thankful for changes which will save much time and trouble to all who may have occasion to use the admirable system of transmitting money by means of money orders.

TRANSATLANTIC TRADE AND THE NATIONAL POLICY.

Some days ago the Toronto Globe published a statement of receipts and shipments of grain and flour at Montreal, covering the period from January 1st to June 4th, 1880, and for the same period in 1879, showing a decrease in the trade this year so far. It contrasted this with the increased receipts and shipments at American ports, and asserted that a principal cause of the decrease at Montreal is "the deficiency and dearness of ocean freights, caused by the diminution of our imports." Here is a distinct statement made by our contemporary, which fortunately admits of being compared with official figures, which tell a very different story. The following figures, copied from British Trade Returns, show values of exports to "British North America," for the four months ending with April last, also for the corresponding period in 1879, and the quantities:—

Table with 3 columns: Values, 1880 (4 months), 1879 (4 months). Rows for Cotton manufactures, Haberdashery and millinery, Linen manufactures, Silk, Woollen, Worsteds stuffs, Carpets, Hardware and cutlery, Iron, Pig, Railway iron and steel, Sheet and boiler, Bar and bolt, Tin plates, and a Total row.

The increase in value is £339,829 sterling, or about £1,631,140, which is something remarkable, being for four months only. Continued at the same rate to Dec. 31st, and we see no reason why it should not be, the increase for the whole year would be nearly five million dollars, an addition to Britain's trade worth of mention, as coming from the Protectionist Dominion. But it is with quantities that we are chiefly concerned here. The table of quantities shows an increase in each and every item mentioned, but of most interest in the present case, is the tonnage of exports of iron and steel, with tin plates added. In the four months of 1879 the total number of tons of these heavy exports was 17,127, against 57,743 tons in 1880; increase, 40,616 tons! What now becomes of the reckless statement that "one of the most potent factors in the work of destruction" is "the deficiency and dearness of ocean freights, caused by the diminution of our imports?" The organ thought that the National Policy ought to diminish our imports from Britain, and therefore it asserts that such a diminution has actually taken

place, though official figures show a large and hearty most remarkable increase. We do not forget that in the above statements the figures for Newfoundland are included, they being for all British North America. But we can afford to deduct for all assistance for the Island, and still claim that the Canadian N.P. appears to be helping British trade instead of hurting it. Our Free Trade contemporary is not happy in its reference to facts of this nature.

OUR NEXT ISSUE.

An important improvement will characterize the second number of the INDUSTRIAL WORLD AND NATIONAL ECONOMIST, and as our arrangements are not yet complete for carrying out this design the next number will not be published until the 7th of July, when 10,000 copies will be issued and all regular subscriptions will commence from that date. Our correspondents and representatives will, in the meanwhile, wait upon leading manufacturers, financial houses, insurance companies, &c., to seek their patronage, and we ask cordial co-operation and generous support.

INDICATIONS OF THE WEATHER AND THE CROPS.

The indications of this year, so far are remarkably favorable for the northern portion of the temperate zone in this and also in the eastern hemisphere, but rather unfavorable for the southern zone. The indications are favorable for both hemispheres, on the whole, because this year's measure of heat and moisture together appears to be the best for both. The dusty lanes of Surrey and Kent, in which we had occasion the other day to refer, mean the best harvest that Ireland, Scotland the greater part of England has seen for many years. This side of the Atlantic there is moisture enough, to the north, but a deficiency to the south, and the results will shortly appear. North America will have a large production of wheat, but not of the best quality, while the Indian corn zones to the south, will fall under the average. This is not to be spoken of as a certainty, but it is by all odds the present probability. To put present harvest prospects in a general way, we should say that they are, on the whole, better now for Europe than for America. Heat and dust in the South of England betoken splendid summer weather and good crops the British Islands over, and the same for all Northern and Central Europe. At the same time, we hear of severe drought in the Middle and Southern States, while here, to the North, we have moisture enough, but not too much. It shows well for the wheat zone, but for the corn zone, to the southward, the indications are bad. Of course the month of July may upset some of these foreshadowings, but this is how things look at present. An extra good crop in Europe is now to be looked for, and people on this side the Atlantic can scarcely too soon make their calculations accordingly.

SCARCELY CORRECT.

"It is said that a new weekly journal on the plan of the Economist will shortly make its appearance, being issued simultaneously in Toronto, Ottawa and Montreal, and devoted to the discussion of national industrial questions, the tariff, trade relations, finance and kindred subjects. A company with a capital of \$20,000 is said to be in course of formation, and that Sir Leonard Tilley and other leading political managers favor the project. Amongst the writers for the new journal the names of Sir Francis Hincks, Hon. W. McDougall, Sir A. T. Galt, J. B. Huribert, Martin J. Griffin, John MacLean, W. F. Forsyth, H. R. Ives, and others are mentioned. It is safe to infer that an exposure of the fallacies of the present tariff will not be in the line of the new journal."

The above is from the Ottawa Free Press, of a recent date. We shall not enter into business particulars as these scarcely concern the public; but the inference that the INDUSTRIAL WORLD is in the most remote degree controlled by the Dominion or any other Government, or any member thereof, we must clearly, unequivocally and distinctly deny. That many of the ablest writers in Canada have consented to become regular contributors to our editorial columns, we have announced in the prospectus, but the names mentioned above form neither a complete nor yet a correct list. In due course we shall be in a position to announce a staff of contributors that, doubtless, will be a sufficient guarantee of the legitimacy of this journal's claim to a generous and respectable support from every class interested in the future of the Dominion, and the inauguration of a policy that knows neither party nor personal considerations. The gentlemen whose attainments and public prominence entitle what they say to mature consideration, we feel satisfied will write in the interests of the country as a whole, and not simply to please either a Government or a class interest, where such advocacy threatens to prove detrimental to the general prosperity of the Commonwealth.

DOMINION NOTE CURRENCY.

(From the Ottawa Citizen.) We print in another column a letter from Sir A. T. GALT, on the Dominion note currency, which appears in the Economist of May 15th. In the same issue our London contemporary refuses to be satisfied with our Commissioners' explanation, and still reiterates that the Dominion is taking a step towards inconvertible paper money, the same bugbear which Opposition financiers in Canada have held up to frighten timid people. We are really astonished that the Economist, well informed as it is on matters financial, should even contemplate so unlikely a contingency as that

Canadian four per cent. bonds, guaranteed by the Imperial Government, could not be converted into cash at any time at the shortest notice. In these days, when indifference and worthlessness are so much abroad, and when good securities are comparatively scarce, and eagerly sought after, the latter do not so abnegate, as the Londoner very well knows, our contemporary's collection is, in substance, this:—that the security provided is not sufficient to make it certain that gold to redeem the increased issue will always be forthcoming when wanted. Two considerations of prime importance it appears to leave out of sight, or scarcely at all to notice. As Sir Alexander GALT points out, this is a young and growing country, and as the volume of business expands the note circulation may safely be increased in proportion. Not to increase the circulation is to strangle the country's business and arrest progress. Another consideration is, that the Dominion Government should be credited with at least ordinary prudence and knowledge of business. Ministers are not managers of wild cat banks, but men who will sufficiently feel their responsibility to take care that no demand which cannot be met shall occur. Though the subject is a serious one enough, it is a little amusing, to find in the Economist's own columns (May 22nd) proof that the policy of issuing Government notes for circulation is favoured by the present Imperial Government, which itself so ardently supports Mr. Fawcett, now a member of the Gladstone Government, but best known to the English reading public as a Professor of Radicalism, Hard Money, and Free Trade, has actually given notice of a bill to authorize the issue of notes for 2s. 6d., 5s., 10s., & 20s., payable at any one of the five thousand odd post offices in the United Kingdom. The Economist considers this a dangerous scheme, and in effect condemns Mr. Fawcett's financing as much as it does Sir Leonard Tilley's. That Mr. Fawcett should at this very time be seeking to establish an Imperial note currency may not prove that the Canadian Finance Minister is right in seeking to extend the circulation of Dominion notes. But the coincidence is remarkable, to say the least, and people will have their reflections upon it.

SIR A. T. GALT'S LETTER.

The following letter appears in the London Economist of May 15th:—

Sir,—In the Economist of the 8th instant I observe an article on "The Canadian Currency," in which the terms of the proposed issue of notes by the Government are correctly stated, but from insufficient information an erroneous view of the subject seems to be taken.

Under the previous law which, with some modifications of detail, has been in operation for fourteen years, the Government were empowered to issue \$12,000,000, including the entire supply of small notes of \$1 and \$2, with a specie reserve of 25 per cent. For all issues over \$12,000,000 the excess was required to be held in specie. The business of the country has developed considerably within the period named—the Provinces of British Columbia, Prince Edward Island and the Northwest have been incorporated in the Dominion, all requiring an additional circulating medium, and within the last three years several banks have withdrawn from business, including one at least with a large note circulation.

There is now every prospect of an active and increasing demand for circulation, arising out of the recovery of the country from its late depressed condition. I do not, therefore, think that exception can be fairly taken to the action of the Government in taking authority to increase their note issue. Indeed, as proof of the public demand for these notes, the Finance Minister stated that the limit of twelve millions had already been exceeded by half a million, which he had to hold entirely in gold.

In evidence that the Government do not propose to force an excessive issue of currency, it may be sufficient to point out that the additional issue is not to exceed four millions for the first year, and a similar amount for the year following, and that the only aid to their issue is by precluding the banks from the use of notes under four dollars, which is a very slight change, as the notes in common use are ones, twos and fives, the two former having been for years exclusively issued by the Government.

I may add, with reference to your remark as to the possible intended displacement of the silver currency by notes, that the silver currency is for change only, and is confined to quarter and half dollars. The circulation of silver dollars is unknown in Canada, as none have been coined, and the United States dollar being a depreciated coin, is necessarily at a large discount.

With reference to the reduction in the specie reserves from 25 per cent to 15 per cent, it is, under the conditions imposed, more nominal than real, as the 10 per cent. is to be held in 4 per cent. debentures guaranteed by the Imperial Government. These debentures being held in London, and bearing a large premium, can at any moment be drawn against in New York, and the specie provided. The object of the Finance Minister is evidently to secure the means of providing within twenty-four hours the entire 25 per cent. specie, while saving 4 per cent. interest on the 10 per cent. held in Imperial guaranteed bonds. The amount to be so held will be \$2,000,000 when the entire issue takes place, while the Finance Minister at this moment controls £600,000 stg. of these bonds, or the equivalent certainly of \$3,000,000.

May I be permitted to correct your statement that the Canadian banks have been in the habit of keeping a reserve equal to 30 per cent. of their issues. They have never been obliged by law to keep any reserve against their issues, as distinguished against their deposits or their liabilities, and no special protection has ever been given to the noteholders, distinct from other creditors, until the present Government bill, under which they will have a prior lien on all the assets of the bank.

Your obedient servant,

A. T. GALT.

10 Victoria Chambers, S.W., May 12th, 1880.

—Angus Whelan, a Nova Scotia farmer, has patented a churn which makes butter in 2 1/2 minutes.

—It is interesting, and to many persons it may be profitable, to know the comparative value of different kinds of wood for fuel. Shellbark hickory is regarded as the highest standard of our forest trees, and, calling that 100, other trees will compare with it for real value as fuel for house purposes as follows: Shellbark hickory, 100; pignut hickory, 92; white oak, 84; white ash, 77; dogwood, 75; scrub oak, 73; white hazel, 72; apple tree, 70; red oak, 67; white beech, 65; black birch, 63; yellow oak, 60; hard maple, 59; white elm, 58; red cedar, 56; wild cherry, 55; yellow pine, 54; chestnut, 52; yellow poplar, 51; butternut and white birch, 43; white pine, 30. It is worth bearing in mind that in wood of the same species there is a great difference, according to the soil in which they grow. A tree that grows on a wet, low, rich ground will be less solid and less durable for fuel, and therefore of less value, than a tree of the same kind that grows in a dry and poor soil. To the ordinary purchaser oak is oak and pine is pine; but for house use the tree grown on dry upland and standing apart from all others is worth a great deal more.

ALONG THE ST. LAWRENCE.

HIVES OF INDUSTRY

Cornwall and its Manufactures and Trade. Morrisburg, Iroquois, West Winchester, Edwardsville and Prescott.

(From our Traveling Correspondents.)

Cornwall, the county town of Stormont, and the seat of the Court of Sessions of the United Counties of Stormont, Dundas and Glengarry, is fast becoming an important manufacturing centre. It is situated on the St. Lawrence River, on the line of the Grand Trunk Railway, about eighty-five miles above Montreal, at the foot of the Cornwall Canal, and was laid out and settled by U. E. Loyalists in 1793, being one of the oldest settlements in Western Canada. Its present population is about five thousand. The town is an exact square, fronting one mile on the river and extending a mile back. The streets, which are wide, cross each other at right angles, every block being of an equal size. The streets are also well graded, and are lined with substantial plank sidewalks.

TOWN GOVERNMENT.

Cornwall is governed by a mayor, reeve, deputy reeve, police magistrate, and a common council of nine members. The present mayor is A. P. Ross Esq., George Kirkpatrick, Esq., is Reeve, John Bergin, Esq., Deputy Reeve, Angus Bethune, Esq., Police Magistrate, and Geo. Jarvis, Town Clerk.

PUBLIC BUILDINGS.

The principal public buildings are the court house, registry office, and town hall and market. There are also five churches, viz: two Presbyterian, one Catholic, one Methodist, and one Episcopal church.

EDUCATIONAL.

The educational institutions of Cornwall are first class. They consist of a High School, presided over by two teachers; a Separate School, with two teachers, and six Public Schools; the whole being under the management of a Board of Trustees, chosen by the Town and County Council.

ELECTORAL DIVISION.

The Electoral District comprises the town and township of Cornwall, and the present member for Cornwall is Dr. Bergin.

CORNWALL CANAL WORKS.

The Cornwall Canal is 11 1/2 miles long, and is built along the edge of the river in order to overcome the Long Sault Rapids. It has seven locks 200 feet long by 55 feet wide, with a lockage of 48 feet. The bottom width of the canal is 100 feet, the top width 150 feet. The new works now under way consist of two locks 270 x 40 feet with 14 feet on the sills. These will take the place of the three locks at the lower end of the canal. The locks, which are under charge of Mr. Rubidge, are being built of a dark colored stone found in the vicinity in large quantities. The new locks are close together with a reach of 800 feet between them. The walls of the locks, including the raceway, are now completed. The stone courses at the lower entrance to the canal are laid on crib work, with an outer abutment to guard against ice shoals. It is expected that the improvements on the Cornwall Canal will be finished next year, when increased shipping facilities will be afforded. The Cornwall Canal is part of the great system of Canadian canals, which make the St. Lawrence River the great water highway for the products of the West. Great efforts have been put forth by the Americans to divert the trade through other channels, but so far, with only slight success. The quantity of grain which passed down the St. Lawrence at Cornwall in 1879 is estimated at 12,000,000 bushels.

AS A SUMMER RESORT.

In those in search of rest and retirement during the summer holidays, Cornwall offers superior inducements. In the rapid is excellent fishing, while the islands in front of the town are admirably suited for picnicking, boating, bathing, etc.

MANUFACTURES.

The chief manufacturing industries of Cornwall are its cotton and woollen factories, and its flour mills. The Stormont Cotton Manufactory is situated on the narrow strip of land between the river and the canal, at the west end of the town. The Canada Cotton Mills and the Cornwall Woollen Mills are situated near the foot of the canal at the east end. All these mills are run by steam and water power, the latter being supplied by slides from the canal. In addition to the above, Messrs. Flack and Vanarsdale have an extensive pottery. Messrs. Flack Bros. run a large cotton-battling factory. Mr. Wm. Mack and Mr. Wm. Hodge each own large flour mills. Mr. R. Hodgson and Mr. P. E. Adams own saw and planing mills. Messrs. Tobin & Loney have an extensive foundry and machine shop, and Mr. Wm. Atchison has lately started a saw and door factory. All these establishments appear to be doing a prosperous business. A more extended notice of all these factories will appear in a future number.

BUSINESS MEN.

Cornwall can boast of some neat and substantial looking stores. The buildings are principally of brick and stone. The principal dry goods dealers are Messrs. Kirkpatrick Bros., Edwin Kewin, Samuel Glive, McIntyre & Campbell, and George McDonald, all on Pitt street. Messrs. Donald McDonald, W. H. Dunkin and Duncan McIvor, deal in groceries, and Messrs. N. Taylor & Son and H. Pitts are the principal hardware merchants. Messrs. Shaver & McDonald are extensive dealers in furniture, and Messrs. James McDonnell, H. Hume and Mr. Banfield are the merchant tailors of the place. Dr. Pringle and Mr. W. B. Thompson are the principal druggists.

HOTELS.

The leading hotels are the Commercial House, J. D. McDonald proprietor; the Ottawa, Geo. Ross, American House, Allan Malley; Central Hotel, H. Penno; St. Lawrence Hall, B. Plomidon; Windsor Hotel, S. Crosby; Albion Hotel, W. Grant, and the Maple Leaf Hotel.

NEWSPAPERS.

Cornwall has two newspapers, the Reporter and Freeholder.

TRADE OF CORNWALL.

Being surrounded by a fine agricultural district, the shipments of produce as well as of manufactured goods from Cornwall, both by the Grand Trunk and by water, are very large; though, owing to the facilities afforded by other new towns in the neighborhood, the shipments of grain are not so large as they were some years ago. But the business done by the

Grand Trunk is something immense. Vast trains loaded with live stock, grain, and every other product of the west, pass Cornwall almost hourly on their way east.

NEW BUILDINGS.

From the number of fine new shops and other buildings which are now going up, it is evident that the business men of Cornwall have faith in the future of their town. The VanKoughnet estate has just erected an imposing brick block on Pitt street, containing nine stores, with offices, war rooms, etc. A number of other buildings are also in course of construction. These works, together with the factories and canal improvements give employment to a very large number of persons, and make Cornwall a pretty brick place. Twenty-two miles above Cornwall, on the St. Lawrence and Grand Trunk line, is the town of

MORRISBURG.

the principal town of Dundas County. Being a much newer town than Cornwall, of course Morrisburg is not so regularly laid out. It is built along the river, at the foot of the Williamsburg Canal, which is constructed in much the same manner as the one at Cornwall, and is four miles long. This canal was built to evade the Rapids de Plat, or Flat Rapids. It has eleven and a half feet of lockage, with two locks similar to those at Cornwall. The population of Morrisburg is about two thousand, and includes a number of quite wealthy men. Situated in the midst of a rich farming country, the shipments of grain and other farm products from Morrisburg is very large, and the general trade of the place is rapidly growing.

FERRY TO WADDINGTON.

A steamer plies regularly between Morrisburg and Waddington, in the State of New York, every day in the year, the St. Lawrence at this point running so swiftly as to prevent ice forming, even during the severest frosts.

PUBLIC AND PRIVATE BUILDINGS.

Morrisburg can boast of as fine buildings as any town of its size and population in the Dominion. There are quite a number of large brick blocks, comprising stores and other business places. Murkley's Music Hall, on Main street, is one which would do credit to a city of 100,000 inhabitants. The hall is on the second floor of the building known as Murkley's Block, and has two entrances. It is fitted up with large galleries, stage, dressing rooms, opera chairs, Weber piano, chandeliers, foot-lights, and indeed everything necessary for a first class music hall. This fine room is the private property of H. G. Murkley, Esq., who has fitted it up at his own expense for the accommodation of the residents of Morrisburg and vicinity. From the roof of the hall a splendid view of the river, islands and surrounding country can be obtained.

MANUFACTURES.

Messrs. H. G. Murkley & Son carry on an extensive business in the manufacture of sashes and doors. Mr. Gibson, ex-M.P., owns a large flour mill, and Messrs. Nash Brothers an extensive machine shop. There are also two foundries, owned respectively by Mr. Miller and Mr. A. Dane.

TOWN GOVERNMENT.

The town government of Morrisburg consists of a reeve and four common councillors. The present Reeve is Dr. Chamberlain. The streets and sidewalks are kept in good repair.

EDUCATIONAL.

The educational establishments of Morrisburg comprise the County Model School and a High School, employing eight teachers in all.

HOTELS.

The leading hotels of Morrisburg are the St. Lawrence Hall, McCannons Bros. proprietors, Windsor House, Walter Ford; Palace Hotel, Mr. Logan; American House, Mr. Stubbs, and the Grand Trunk Hotel, Armstrong Brothers.

SUMMER RESORT.

The advantages of Morrisburg as a summer resort are similar to those of Cornwall. Good fishing, boating, bathing, etc., are within easy reach.

CHURCHES.

Morrisburg has six churches, viz: 2 Methodist, 1 Catholic, 1 Presbyterian, 1 Episcopal and 1 Lutheran.

NEWSPAPERS.

The newspapers of Morrisburg are the Courier and the Herald, both weeklies.

BUSINESS MEN.

The principal dry goods dealers are Messrs. W & J. Meikle, John Capel, Thomas McDonald, H. A. Gibson, John Halliday, F. Bradfield, J. F. Gibbons and B. Wager. Messrs. John Barry, James Berry and J. M. Watson deal in dry goods and groceries, and Messrs. W. A. Plants, J. M. Kingston, E. C. Matthews and Snider Brothers keep general stocks of groceries, liquors and stationery. The leading hardware men are Messrs. Bradfield Brothers, D. McMahon & Co., and G. S. Hickey. Mr. J. C. Chalmers is the chief Jeweller. Besides the names given above, there are also five physicians, five lawyers and a number of merchant tailors and traders. The Molsons Bank and the Montreal and Dominion Telegraph Companies have each an office here.

From its natural advantages, and the pushing energy of its leading men, we should judge that a prosperous future is in store for Morrisburg.

After getting on board a steamer at Morrisburg, a pleasant voyage of an hour or so through the canal and river brings us to

IROQUOIS.

a town of some 1,000 inhabitants, at the eastern end of the Galops—pronounced Galoo—Canal.

This canal is seven miles long, and is cut through, or rather around, Point Iroquois, in order to evade the Galops Rapids. The canal follows the course of the river nearly the whole distance, having been built with crib-work. Its locks are 200 feet long, 45 feet wide, and overcome a fall of about 16 feet. The river between Point Iroquois, a short distance above the town, and the American shore is not over 400 yards wide, and the Iroquois people have lately been agitating for the construction of a bridge there. The current, although swift, is not deep, and it is thought that a bridge could be built without difficulty, and only five miles of railway would be required to connect with the Ogdensburg Railway in New York State. The construction of an international bridge at this point would, no doubt, divert much of the Grand

Trunk trade in a southerly direction and add much to the commercial importance of Iroquois. The general plan of the town of Iroquois is similar to that of Morrisburg, having one or two streets running parallel with the river, and cross streets at regular intervals. The Grand Trunk Railway line passes directly through the town. The principal stores, private residences, and other buildings are built of a dark colored stone which is found in abundance within a short distance.

TRADE OF IROQUOIS.

Iroquois claims to be one of the best, if not the very best wool market in central Canada. Large shipments of grade live stock, hay, butter, cheese, eggs and general farm produce are also made by rail and water.

PUBLIC BUILDINGS.

The chief public buildings are the town hall and market house, the churches and public schools. There are four churches, owned by the Presbyterian, Episcopal, Wesleyan and Episcopal Methodist bodies respectively. The Wesleyan Methodist church is really a fine building.

MANUFACTURING INDUSTRIES.

The Iroquois Milling Company own extensive flour mills, and Messrs. Bailey & Mills have a large cloth factory, as well as one or two grist mills. Mr. Patton has a saw factory in operation. There are also a number of tanneries. Mr. J. A. Carson is the principal manufacturer and dealer in furniture.

BUSINESS MEN.

The principal merchants of Iroquois are Messrs. C. & M. Mills, general dealers, D. Abbott, E. McNulty, Ross Brothers and Duran & Son, dry goods. Messrs. James Thule and J. Coulter are the leading grocery and liquor dealers, and Messrs. E. Ault and G. Scavris are the druggists of the town.

HOTELS.

The principal hotels are the Commercial House, D. Bowen, proprietor, and the Powell House, by J. Powell.

EDUCATIONAL.

Iroquois possesses a High School, presided over by two teachers, and four public schools.

TOWN GOVERNMENT.

The town government of Iroquois consists of a reeve and four councillors. The present reeve is J. N. Tuttle, Esq. The town also boasts of a bank, a custom house, a newspaper and a number of other institutions, which will be noticed at length in a future number.

WEST WINCHESTER.

This thriving village of 500 inhabitants is situated on the Morrisburg and Ottawa road, seventeen miles north of Morrisburg. It is located in the heart of a rich agricultural district, and is growing fast.

The principal industries of the place, besides farming, are the extensive saw and grist mills, and saw, door and stave factory, owned by Mr. M. F. Beach; a carding and shingle mill, owned by Mr. Hugh Christie, and a cheese factory, also owned by Mr. Beach. There are also several carriage factories, and five general stores well stocked. Andrew Broder, Esq., M.P., deals extensively in grain, butter and general produce.

EDWARDSBURG.

A village of about 600 inhabitants, is situated on the Williamsburg Canal, and also on the line of the Grand Trunk Railway, seven miles west of Iroquois. It contains a large

STARCH FACTORY.

owned by W. T. Benson, Esq., who is also an extensive farmer. Edwardsburg also possesses four churches, two schools and two hotels. The starch factory we will notice at length at a future time. Twelve miles west of Edwardsburg is

PRESCOTT.

A town of three thousand inhabitants, also on the St. Lawrence, and at the junction of the Ottawa and Grand Trunk Railways. Prescott, like Cornwall, is an old town. It was first surveyed and laid off in town lots in the year 1810, by Edward Jessop, grandfather of Col. H. D. Jessop, ex-M.P. and now Collector of Customs at Prescott. The land was granted to Loyalist families, and settlement was begun about the year 1815. Since the original survey was made, the ordinance property, including Fort Welland, at the east end, has been added to the town. The town front extends about one and a quarter miles along the river, and runs back about half a mile. The streets cross each other at right angles, each block being an exact square. The St. Lawrence at Prescott is a mile and a half wide, so that there is very little current. On the opposite side of the river is the city of Ogdensburg, in New York State, and two ferry steamers ply every hour between that city and Prescott. There is a very large traffic across the river here, and a vigilant staff of customs officers has to be maintained in order to prevent smuggling. Prescott port includes about twelve miles of the river front, so that the Collector and his few assistants must have their hands full. From the high ground at the west end of Prescott town a fine view of the St. Lawrence can be obtained.

PUBLIC BUILDINGS.

The principal public buildings are the town hall, registry office and market house. All these are quite in keeping with apparent progressive spirit of the people of Prescott.

BREWING AND DISTILLING.

The chief manufacturing industries of Prescott are the extensive distillery of Mr. Wiser, M.P., and the breweries of Messrs. Tabatt & Co. and J. McCarthy & Son. In connection with his distilling business, Mr. Wiser owns the Radeyk Stock Farm. All these institutions we will describe at length in a future issue.

SHIPPING FACILITIES.

Few towns on the river or lakes possess better shipping facilities than Prescott. The St. Lawrence & Ottawa Railway line runs down to the river at the eastern end, and steamers call at all the numerous wharves on their way up and down. The Grand Trunk Depot is also just in the rear of the town. An indication of the amount of trade done in Prescott, the customs duties there for this year will amount to about \$25,000, while the excise duty collected annually is in the vicinity of \$300,000.

TOWN GOVERNMENT.

The town government of Prescott consists of a mayor and nine common councillors, elected annu-

ally. Wm. Dunn, Esq., is the present mayor. There are also two regular and four special policemen employed.

BUSINESS MEN.

The principal merchants are Messrs. Robinson Greenhill & Co., Blair & Farmer, T. Kavanagh, J. V. Miller, L. G. St. Jean & Co., who deal in dry goods; Messrs. McAuley & O'Reilly, J. Maybury, J. F. Hayden, Kelly & Co., and G. E. Johnson, dealers in groceries; Messrs. N. Willard, Ross, Cummins & Co. and Sweeney & Co., hardware merchants, and Mr. M. J. Sweeney, dealer in liquors and hardware. Messrs. A. Jordan, T. Kavanagh and John Nolan are the principal dealers in boots and shoes. Mr. C. C. Tinkers own a large foundry. The leading merchant tailors are Messrs. Edward Mundie, Davis & Co., Wm. Dunn, Jr., and Joseph Haynes. Messrs. George Burke, C. E. Heplburn, Thomas Melville, Alfred Harding and Angus Fraser are the druggists of the town, and furniture is supplied by Messrs. Alfred Hough and Miles Coons.

CHURCHES.

Prescott boasts of five churches, all substantial structures. There are 1 Presbyterian, 1 Catholic, 1 Episcopalian, and 2 Methodist churches.

The Registry office for the County of Grenville is at Prescott. The present Registrar is P. McCree Esq.

HOTELS.

The principal hotels are the Daniels House, L. H. Daniels, Esq., proprietor; the Rayer House, J. S. Huntington, the Queen's Hotel, George Brunton, and the Windsor House.

FORT WELLAND.

This military station was built during the war of 1812 to resist expected invasion from the American side of the St. Lawrence. It is a square earth fort, situated at the east end of the town, and commands the channel of the river. Extensive repairs were made to this fort by the Ordnance Department last year, though the guns were taken to Ottawa some time ago. There are, however, four field or carriage guns still at the fort.

Quite an agreeable friendship appears to exist between the people of Prescott and their American neighbors at Ogdensburg. On the evening of our visit a first-class musical band came over from Ogdensburg and gave a free open air concert for the benefit of their Prescott friends.

GENERAL INDUSTRIAL NOTES.

—The Bay of Quinte and the Mohr and Trent rivers are to be stocked with salmon fry.

—There is some talk in agricultural circles of a central exhibition being held alternately at Ottawa and Montreal.

—Twenty-five thousand acres of land in "Belt D," near Morris, Manitoba, were sold in one day last week by the Dominion Land Agency at Emerson.

—The President of the Calcutta Chamber of Commerce expresses fears that India cannot longer compete with America in the production of wheat. The tea trade in that country is also depressed and a commercial crisis is predicted.

—The damage occasioned by the recent tornado and flood in Wisconsin is estimated at a million dollars. Bridges, mills, houses, farm buildings, and millions of feet of logs have been swept away, and dozens of families are homeless.

—The United States Department of Agriculture reports an increase in the cotton area planted of seven per cent. The condition is 99 this year, against 96 last year. The condition of the winter wheat is 94, which is four per cent. above the average of last year.

—The Grand Trunk Railway is making steady progress. The latest improvement announced is the introduction of dining cars. A new car for the purpose has just been completed at the Company's works, Point St. Charles. The time was when it would have been deemed necessary to get cars manufactured in a foreign country; but that day has gone by.

—The Grand Trunk Railway has 1,300 miles of road, 434 engines, 274 passenger cars, 9,017 freight, box and other cars; the Great Western, 902 miles, 216 engines, 167 passenger cars, 4,549 freight, box and other cars. The average speed of the Grand Trunk and Great Western passenger trains is 24 miles an hour. Twelve miles an hour is about the rate at which freight trains cross the country.

—The old adage used to be, "nothing like leather." It should now be, "nothing like paper." Paper is used for almost everything. Among the things made of paper exhibited at the Berlin exhibition not long since were paper buckets, bronzes, urns, asphalt roofing, water cans, carpets, skirts, whole suits of clothing, jewelry, material for garden walks, window curtains, lanterns and pocket handkerchiefs. The most striking of the many objects exhibited in this material was, perhaps, a fire stove, with a cheerful fire burning in it. There were newly invented railway carriages and chimney pots, four barrels, cottage walls, roofing tiles, and bricks and dies for stamping, all made of paper. Attention has frequently been called to the value of ordinary sheets of paper as a substitute for bedclothes. The idea seems to have suggested the fabrication of blankets from the cheap material, and if all that is said of them is true, they ought to be extensively used.—Lumberman.

—The Lellan correspondent of the Hamilton Spectator reports that a few years ago a gentleman started a small nursery there and was not successful, and sold out to three gentlemen named Messrs. Morris, Stone and Wellington, three experienced business men, who went to work with a determination to succeed if possible, and they have succeeded—greatly beyond their anticipations. They bought several acres of land adjoining that already in their possession and planted the same. Now they have over 300 acres under cultivation, with three conservatories 100 feet each in length and 40 feet wide, extensive packing houses, offices, etc. They employ at times over 70 hands and a large number of teams. Last spring they shipped trees to the Northwest to the value of \$25,000. These nurseries are probably the largest and best in the Dominion, and every year will add to their area and the increase of labor. The crops in the township never looked more promising, the fall wheat being very little injured by the frost. On many farms the yield will be fully twenty, if not more, bushels to the acre. There is a very large breadth sown. The spring crops are also very fine, grass especially. Clover will be light, the latter being winter killed, but the wheat and oat straw will make up for the deficiency. The peach, cherry, plum and pear trees are literally loaded, while small fruit is likely to be more than the average.

PRACTICAL SCIENCE.

SPONTANEOUS COMBUSTION

Some experiments made at High with reference to the spontaneous combustion of various materials...

TREE CULTURE ON WASTE LAND

Hitherto the abundance of natural timber in this country has made it easy to dispense with timber culture...

A correspondent, writing from Wisconsin, tells of a piece of land that was planted with walnut twenty-three years ago...

VENTILATION OF BOOTS AND SHOES

It is a matter of the most common every-day experience that in the wearing of boots and shoes, and especially those made of rubber, the feet sweat and heat almost continually in cold weather...

MECHANICAL INVENTIONS IN THE U. S.

After a somewhat lengthy litigation before the United States Patent Office, to determine the originator of the invention for producing multiple copies of writing...

Mr. George Lettenmeyer, of Little Georgetown, W. Va., has patented an improved carpenter's work bench...

Messrs. William A. Branch and Edmund Golucke, of Crawfordville, Ga., have patented improvements in grinding mills of that form in which the runner-stone is provided with metal grinding surfaces arranged in the eye of the stone...

An improved roll for forming billets from steel railroad rails has been patented by Mr. Frank B. Davis, of Johnston, Pa. The invention consists in constructing the rolls with a series of grooves, so formed as to gradually lower and thicken the web and fill out the angles between the web and the flanges and head...

An improved rotary pump has been patented by Mr. Erwin B. Newcomb, of Cumberland Mills, Mo. The object of this invention is to construct a rotary pump in such a manner that the floats shall be balanced and operated by the pressure of the water acting through ports or channels formed in the cylinder heads...

An improved rock drill has been patented by Mr. Geo. P. Schaefer, of Nashville, Tenn. The object of this invention is to provide a drill that will cut a perfect oval in the rock, and at the same time dress both faces of the solid channel.

An efficient and powerful implement for raising stumps, roots, rocks, and other objects, has been patented by Mr. Wm. H. Wright, of Belmont, N.H. The invention consists of a vertical U-shaped frame in which moves a ratchet bar, the frame being provided with a lever for lifting the ratchet bar, a latch for retaining the bar at the point to which it is lifted by the lever, and springs for throwing the latch in and out of engagement with the ratchet bar.

USEFUL FACTS.

Much trouble can often be saved by marking tools with their owner's name, which can be easily and inexpensively done in the following manner: Coat over the tools with a thin layer of wax or hard tallow, by

first warming the steel, and rubbing on the wax until it flows, and let it cool. When hard mark the name through the wax with a graver, or any sharp-pointed instrument, and apply nitric acid. After a few moments wash off the acid, and wipe it with a soft rag, when the letters will be etched into the steel.

A good plan for attaching emery to wood is to cover the wooden wheel with thick leather, and then to make a paste with very thin glue and emery, and lay it on with a knife. The glue must be about as thin as milk. These wheels, if made right, will cut a great deal better than most, if not any, solid emery wheel and will not glaze. They cut best when mounted on a long, thin spindle.

The absolute strength of a well glued joint is given as follows:

Table with 3 columns: Wood type, Pounds per square inch (Across the grain, end to end), Pounds per square inch (With the grain).

It is customary to take from one-sixth to one-tenth of the above estimate to calculate the resistance which surfaces, joined with glue, can permanently sustain with safety.

For adhesive labels dissolve 14 oz. common glue, which has been a day in cold water, with some candy sugar and 1/2 gum arabic, in 2 1/2 hot water, stirring constantly until the whole is homogeneous. If this paste is applied to labels with a brush, and allowed to dry, they will then be ready for use on merely moistening with the tongue.

To preserve cut flowers, let a spoonful of charcoal powder be added to the water, and the flowers will last as long as they would on the plant, without any need of changing the water, or taking any trouble at all.

The following ingredients are said to form an indelible black ink for writing on zinc: Take 30 parts of verdigris, 20 of sal-ammoniac, 8 of lamp-black, 8 of gum-arabic, and 300 of water; dissolve the gum in the water, and pour it over the other ingredients, well mixed and reduced to powder. A quill pen should be used for writing.

An excellent cement for attaching metal to glass or porcelain consists in a mixture of a solution of eight ounces of strong glue, and one ounce of varnish of linseed oil, or three-quarters of an ounce of Venice turpentine, which should be boiled together and stirred till the mixture is thoroughly incorporated.

TOM PAINE'S BRIDGE.

The following extract from a paper read by Mr. Pictou before the British Iron and Steel Institute, was published in the Railway Gazette:

One of the first employments of iron on a large scale was in the construction of bridges. In the sixteenth century a proposition was made by Italian engineers to construct a bridge in cast-iron, but the scheme proved abortive. In 1755 an iron bridge was projected at Lyons, to consist of three arches of 82 feet span. Part of the work was actually prepared and put together in the builder's yard, but from some cause not recorded this attempt was also abandoned and a timber bridge substituted. In 1777 the first iron bridge in England was designed by Mr. Thomas Pritchard, an architect of Shrewsbury, was constructed by Mr. Abraham Darby, of Coalbrook Dale, and erected over the Severn at Broseley in 1779. The span is 100 feet; the arch nearly semi-circular. Soon after this date the idea of constructing bridges in wrought-iron occurred to several French engineers, and several designs were prepared for works at Paris and elsewhere, but they were not carried out. In 1795 another cast-iron bridge was constructed over the Severn at Buildwas, by Thomas Telford, 130 feet span. The boldest conception, however, was the cast-iron bridge over the Wear, connecting Monkwearmouth with Sunderland, which was designed by the celebrated Thomas Paine, and was opened in 1796. It consists of a single arch, 236 feet span, with a varied rise of 34 feet. For grandeur of idea, lightness of effect and economy of material, it has never been surpassed.

Commenting on this, Mr. Jeremiah Head said that among the early iron bridges referred to in the paper was the one crossing the Wear of Sunderland. He happened to have been engaged on the staff when that bridge was rebuilt a great many years ago. He confirmed all that had been said about it. That bridge, originally designed by the celebrated Tom Paine, and afterwards improved by R. Hill, consisted of six girders made of a number of small castings put together end to end, and then the two bars extending the whole length were joined on the sides and bolted through, so that the castings were really strong together like a structure. In re-erecting them were they, cross and diagonal, from end to end. The bridge was so light in construction that he thought no modern engineer would have dared to put up such a thing, and it would only have been done, one would think, by some person who was unaware of the immense risk he was running. Nevertheless this bridge stood and carried all the traffic between the two sides of the river for a great many years. Eventually these girders seemed to get out of line; some of the castings were broken, and they became wavy, so that they were not in a direct line. Still the townspeople of Sunderland were proud of their structure, and when it was decided to rebuild it they were desirous that these girders should be preserved. The late Robert Stephenson strengthened it by putting in three large box girders, one between each pair of these original ones, and they are now what constitute the bridge. Two of the old girders were preserved. They belonged to the outside ones, so that they were still to be seen; but they bore no portion of the weight, and they were there as part of the original structure designed by Tom Paine. The iron was made of cold-blast iron, and he believed there was no other to be had in that day.

SHIPBUILDING IN NOVA SCOTIA.

At Kingsport, Mr. P. R. Crichton has two ships of 1,400 tons each on the stocks, one nearing completion, the other in an advanced state. At Ayvalik, two ships of 1,200 and 1,400 tons respectively are being built, one nearly ready for launching.

At Cananagh, Messrs. E. Bigelow & Sons have just launched a fine vessel of 1,200 tons. She is to load at West Bay, Parraboro', with deals.

At Enonville, Messrs. D. R. & G. F. Eaton have a large ship nearly completed, and have a contract for another, which they will commence as soon as the present one is launched.

At Hantsport, Messrs. Churchill & Co. have a ship of about 1,200 tons in an advanced stage. This firm have also a small steamer nearly ready to launch. She is a very fine model, and bids fair to be a fast boat. She is to have a pair of engines, cylinders 8 in. diameter, 10 in. stroke each. Having extraordinary facilities for carrying on this branch of business, the firm is anxious to secure contracts for a class of small fast-sailing steamers.

Mr. J. R. North, of Hantsport, is buying a large quantity of timber, and expects to put on a ship of large tonnage during the present month.

At Spadecove Island, a ship of about 1,200 tons is in course of construction for Messrs. Bigelow & Sons, of Cananagh.

Additional freight sheds have had to be constructed on the wharves at Montreal to meet the increasing trade at that port.

ONTARIO INDUSTRIES.

—Muskegon is gaining favor as a wool growing district.

—Brookville merchants want a butter and cheese exchange.

—The demand for wool is reported brisk in Western Ontario.

—An extensive bed of shell marl has been discovered near Orillia, Ont.

—The "St. Catharines Pulp and Paper Company" are seeking incorporation.

—One thousand head of cattle were shipped from Toronto for England last week.

—It is proposed to establish a bending and patent wheel factory in Bothwell, Ont.

—Orders have been given for the machinery for a cane sugar refinery, to be erected at Tillsonburg, Ont.

—John Robinson of the Bothwell Agricultural Works, is going largely into the manufacture of iron farming.

—Taylor's Woolen Mills at Napanee are doing a brisk business. Twelve looms are kept at work constantly.

—A survey is being made preparatory to the construction of an immense wheat elevator at Prince Arthur's Landing.

—An effort is being made to establish a silk and cotton factory at Peaton, Ont., to employ from fifty to seventy-five hands.

—Work on the new cotton factory at Brantford is being pushed rapidly forward. The brick work is now five feet high all around.

—It is said that the Hamilton Felt Hat Factory, which has been languishing for some years past, is to resume operations at an early date.

—The Grand Trunk Railway are erecting huge docks to receive coal at Port Huron and Point Edward, Ont. At Black Rock 90,000 tons are already stored.

—The price of potatoes has taken a sudden jump upwards, as the supply in the country is becoming limited. Some speculators are engaged in importing until the new ones come in.

—It is proposed to commence, in Peterborough, Ont., the manufacture of woodenware, such as pails, wash tubs, matches, etc., of a finer quality than any now manufactured in Canada.

—The Strathallan Cheese Factory, of East Zorra, Oxford County, is now in full working order. The May cheese has all been sold at good rates, the quality of the cheese made at this establishment standing A1.

The Barnia Wollen Mills have been rented again, and will shortly be in full operation. Mr. W. J. Lott, of Paris, Ont., a thoroughly practical man, is the lessee, and it is understood he has taken the mills for a term of years.

—The Oakville, Ont., Standard says: "Seidon has the fruit crop in this district looked so promising as it does this season. The strawberry crop will be exceedingly large, and there will be an abundant yield of apples, pears, etc."

—It is said that an effort will be made in the British House of Commons to have the present restrictions upon the importation of cattle into Great Britain removed. The reliability of the veterinary examinations will be questioned.

—James Britton, of Toronto, intends offering a gold medal, valued at \$100, at the next Industrial Exhibition, for the best four head of Durham Gwale cattle, suitable for exportation. The animals must be bred and fed by the exhibitors.

—Five thousand tons of hay, from the Ottawa Valley, passed over the Occidental Railway last week, en route to the American market. The railway authorities are putting on extra rolling stock in order to accommodate the increasing traffic.

—Mr. Sutton, who proposes to erect a cotton factory in London, Ont., asks the city for a bonus of \$50,000, and says that he intends to form a joint stock company with a capital of \$300,000. It is likely that the City Council will submit the proposal to the citizens.

—According to instructions from the Postoffice Department, handbills enclosed in newspapers hereafter will subject the newspapers to 2 cents extra postage. This is as it should be. Numbers of newspapers have heretofore defied the law, but under this regulation the offenders against it will be placed on a fair footing.

—The salt bed at Petrolia lately announced has proved so great that a wealthy company has been formed, and a shaft twelve feet square is sinking, designed to reach the bed. Several hundred feet of solid rock must be gone through before reaching this sea of salt, and it is thought that it will take a year to complete the work. The venture is considered first-class.

The Imperial Oil Company, of London, Ont., have commenced tearing down Spencer's refinery. The best portions of the machinery from this and all the other refineries owned by the members of the company will be placed in the Victor Works. The idea is to make those latter works equal to all the others combined. A large paraffine factory will also be built on the Victor grounds, and the works of Waterman Bros. closed down.

—The Kingston Collector of Customs has issued instructions regarding the disposal of damaged grain. There are three alternatives—to pay duty on the grain, return it to the port whence it came in bond, or destroy it by emptying it into the lake in the presence of the landing waiter. A vessel will not be allowed to depart from the harbor with damaged grain unless a bond be given that it will be returned to the place from which it was shipped.

—A large immigration of Scandinavians to the Canadian Northwest is expected this season, and arrangements are being made by the Government for the transportation overland from Thunder Bay of such of them as may wish to work upon the Pacific Railway. It is thus hoped to evade the wiles of Minnesota and Dakota land agents, who, according to one section of the Manitoba newspapers, have, so far, managed to divert a large number of the immigrants expected to reach that province.

—Messrs. Haggart & Cochrane, manufacturers of agricultural implements at St. Thomas, are shipping largely to Manitoba, where they have this year established several branch warehouses. The firm expect to work up a large trade in the Prairie Province, in which section the tariff is, they say, of great advantage to them. Of course they require to manufacture specially for that market. The trade promises to become a large and lucrative one for Ontario manufacturers of agricultural machinery and implements, if properly pushed.

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AGENTS: London, Eng.—Alliance Bank (Limited), Bank of Montreal. New York.—Messrs. Watson and Alex. Lang. Boston.—Tremont National Bank.

IRON MINING.

The Operations of the Forsythe and Baldwin Mines, Ironsides.

The iron mines of Ottawa county are situated in the mountains about five miles north of Hull, and two miles west of the Gatineau river in the road leading from Hull to Old Chelsea. The first mine, which bears the name of the gentleman by whom it was originally worked, is quite close to the town. The roadway to the mouth of the pit is cut through solid limestone rock, to a distance of several hundred feet. The pit is about thirty feet square at the mouth, is sixty feet deep, and widens as you go down. The walls being of solid rock no frame-work is needed to prevent them from falling in. Steam power is used for hoisting and drilling purposes, and gunpowder and dynamite for blasting. When the ore is hoisted out of the pit it is thrown into a tram car, which conveys it to the bluff at the end of the roadway. Here it is dumped into a "shovel" or large wooden box provided with openings at the bottom from which the wagons are loaded. The contractor for hauling the ore is Mr. J. H. Kerr, of Hull. From the Forsythe mine about half the ore is shipped by water and half by rail. That shipped by water is placed on barges at Ironsides wharf, and thence taken via the Rideau and Welland canals and the lakes, to Cleveland, Ohio, thence by rail to Niles, in the same State, where it is smelted. The ore shipped by rail is taken to Prescott via the St. Lawrence and Ottawa Railway, and thence across the river to Ogdensburg, and from there by rail or boat to its destination at Niles. Thirty-two teams are employed every day in hauling ore from the Forsythe mine, to the wharf and railway station, and these teams earn, on an average, three dollars each per day. Three tons of coal is an average load for a pair of horses.

Fifty-four miners are employed at the Baldwin mine, who are paid at the rate of \$1 per day. A new pit is being opened on the same property, about three hundred yards further up the mountain, where the vein of ore is larger and of a richer quality than that below. A shaft, eighty feet deep, has been sunk, and a quantity of iron taken out. Fourteen neat cottages have been built as homes for the miners, who have families, and boarding houses are provided for the single men. These, together with the roadways and the works at the wharf, were all built by Mr. A. H. Baldwin, the former proprietor of the mine.

THE BALDWIN MINE

The Baldwin Mine is situated near the top of Baldwin Mountain, about a mile above the Forsythe Mine, and is reached by a circuitous road, which winds around the hill in every direction. From the top, near the mines, a grand unrestricted view of the whole Ottawa Valley can be obtained. The Baldwin Mines consist of three openings; none penetrating far below the surface. Iron crops out all around, and there is no calculating the amount of ore to be found in these hills. The present proprietors of the Baldwin Mine are Mr. McLaren of Buckingham, Mr. Pe-w of Welland, Ontario, and Messrs. McLennan and Downey of Toronto. These gentlemen also own the Forsythe Mine, which is held under lease from them by Colonel Robins, acting for an American company Mr. J. W. Miday, of Ottawa, has the contract for getting out the ore from the Baldwin mine. He employs twenty men and thirty teams. All the ore taken from the mine is shipped by water, but as soon as the Chaudiere Railway Bridge is completed, an effort will be made to have a branch railway built from Hull to the mines. The St. Lawrence and Ottawa Railway Company have intimated their willingness to construct the work, provided the proprietors of the mines will guarantee a certain amount of freight, and secure a free right of way. The latter, it is thought, can be easily obtained from the owners of the land through which the line would pass. The grade, of course, would have to be pretty steep, but as no loaded cars would require to be taken up, the grade would be no obstacle in the way of the construction of a cheap road.

It is understood that an effort will be made to have the smelting of the ore taken from these mines done on the premises at an early date. Colonel Roberts has purchased the smelting apparatus formerly used by Mr. Baldwin, at Ironsides, and purposes siting up the furnaces, &c., in time to have the work of smelting under way by the close of navigation. The general yield of pure iron from the Forsythe Mine is 82 per cent. That the iron is of a superior quality is evidenced by the fact that American manufacturers of iron ware prefer it to Pennsylvania iron.

THE SOURIS COAL FIELDS.

Winnipeg Times.

Two large loads of coal arrived yesterday from the Souris country, being the first instalment of the dark mineral wealth owned by Mr. Hugh Sutherland in that future Pennsylvania of the Dominion. The coal was brought here by John Sutherland, brother of the proprietor, who to-forty-three days coming down. The barges were constructed at the coal fields, out of timber made from trees felled on the spot. Much difficulty was experienced on the journey, as timber jams and other obstructions to navigation were met with, but all were overcome, and the feasibility of Souris navigation determined. It is anticipated that there will be sufficient water in the river until August in each year to float barges down. At present there is twenty feet of water in the river. Mr. Sutherland has expended some \$15,000 on the experiment, and now that he is satisfied of its success, will go on with the work on a much larger scale. He calculates to make one trip a year, building sufficient barges to bring down all the coal needed for a year's supply. The coal is said to be of a very serviceable quality, and was a source of admiration to all who saw it—the first specimen of what is destined to be one of our great industries in the future. Mr. Sutherland intends sending half a ton to Toronto for further examination. Should this project be successful, it will be the means of materially reducing the price of fuel another year in Winnipeg.

GENERAL MINING NOTES.

A New York firm have paid \$50,000 for a few acres of gold-mining land in Balmora.

Antimony mining is becoming an important industry at Lake George, N. B. The supply seems to be inexhaustible.

The Chicago Industrial World says that the most extensive copper and iron mines in the world are those around Lake Superior.

The Hall Bros., operating at Fifteen Mile Creek, Pictou County, N. S., recently realized 300 ounces of gold as the result of 90 days' work.

Atkins Brothers are developing several promising veins of hematite ore in Rascomb, Manor Township, Yorks County. They have already sunk a well, and will erect machinery.

We gather from our large list of mountain exchanges, says a San Francisco paper, that there is a veritable "boom" in the gold-quartz regions, and that prospectors have rarely been more numerous or busy.

The British Columbia coal mines yielded 84,000 tons in 1877, 171,000 tons in 1878, and 241,000 tons

in 1879. The export to foreign ports for 1879 amounted to 1,189 tons, valued at \$2,000,000, an increase of 50 per cent over the previous year.

The San Francisco Mining News of the 5th inst. says:—"An association known as the 'Eocene Tunnel and Mining Co.' has filed its claim to all that part of the North Fork of Feather River, from bank to bank, for a distance of 11 miles, designated on the map and known as the 'Big Bend of the North Fork of Feather River.' It also claims the right of way for tunnels, flumes, ditches or pipes necessary to successfully work the same. The objects of the company are set forth to be the diverting of the water from its natural channel and the mining or digging of the river bed, and all bars located in it, within the confines above described, for precious metals. It is also stated that the company does not propose or intend to interfere with vested or accrued rights already acquired by other parties. That the company is a powerful moneyed institution is fully demonstrated by the following names of the members:—Wm. H. Vanderbilt, Anthony J. Drexel, Chas. H. Lewis, Jos. H. Banker, Thos. A. Edison, R. L. Cutting, Jr., Geo. C. Perkins, Charles Batchelor, William H. Cox, F. McLaughlin, E. W. McKinstry, J. C. Logan, John Hoey, G. W. Cummings, P. O. Hundley. This is, beyond question, the greatest mining enterprise ever undertaken on this continent, and possesses a capital unequalled by any financial institution in the world except, possibly, the Rothschilds. Operations will be entered upon before the close of the present season. The fabulous wealth of Feather River bed mineral deposits is so well known, and has been so strikingly demonstrated by the few developments hitherto enacted on a small scale, that the feasibility of this undertaking and the profitable character of the investment are questions admitting of no discussion.

Work on the Hibernia phosphatic mine, Buckingham, is to be begun at once. Men and provisions were shipped up recently by the new firm controlling the mine. Work at the Preston mine is in full blast, and it is expected that from ten to twelve thousand tons will be taken out this year.

Flour-gold is found in abundance in the north Saskatchewan between Edmonton and Battleford. It is found for the most part among rocks and boulders in the bed of the river, mixed with quicksilver. The color shows clearly to the naked eye and can be washed out to pay from \$2 to \$5 per day.

A Cape Breton paper says the silver mines at Cape Malton have been sold to the Cape Breton Oil and Mining Company, of Boston, and operations will be at once commenced thereon. Several new wells are also to be sunk by the same company at Lake Ainslie, where they will probably soon "strike oil."

It is proposed, in St. Stephen, N. B., to form another company for the purpose of opening up still further the apparently large deposits of ore at Massarene. Several gentlemen left here on Saturday night, and, arriving at that place, inspected the ground where lies the expected bonanza. The prospects appear more favorable than was anticipated. Large percentages of copper, silver and lead ores being found in the lodes examined. Several specimens were brought home by the party. The company, when organized, will, we understand, be called "The Passamaquoddy Mining Co."—St. Stephen Courier.

With reference to the gold and iron mining operations at Madoc, the North Hastings Review says:—"The depression in the iron trade still continues, but parties interested here are of opinion that prices will soon be up again, and business resumed. At the Seymour mine Mr. Pusey intends keeping the men at work getting out ore ready for shipment as soon as prices are high enough to make it profitable. We understand a force are steadily employed at the Dufferin mine getting it in good condition for extensive work. Mr. Munson continues to ship ore from the Sexton mine, and we understand has nearly the same force at work now as during the winter. Operations for the present, we believe, have entirely suspended at the Hematite mine. The mines operated by Mr. H. S. McMillin, for the Messrs. Andrews, of Youngstown, have been closed down, and that gentleman left the village for good on Monday last. We trust, however, when the business revives he will find his way back here again. Recent operations at the Malone gold mines have been most satisfactory. We have been informed that as high as \$115 per ton was realized from the concentrated ore lately put through the Severn mill. A number of the men employed here have suffered from poisoning, caused by escaped arsenic, but no serious results are apprehended. We understand crushing is going on regularly now. Several car loads of gold ore were shipped this week from the Richardson mine to Mr. T. G. Hall, of Buffalo. From all accounts his process of treating these ores has been highly successful."

The Czar of all the Russias has determined to develop the coal and iron resources of that great country over which he and the nihilists preside, and has engaged a Philadelphia man for the purpose of managing the business for him. A despatch from Philadelphia says:—"Wharton Baker, of this city, is to start for Russia to-morrow, at the solicitation of the Czar, to develop the great coal and iron fields of Southern Russia, bordering on the Sea of Azof. Mr. Baker acted as agent for the Russian Government two years ago while the cruisers were being fitted out in this country. The Czar has tendered to Mr. Baker personally the sole right of opening up the Denetz coal fields, north of the Sea of Azof, the iron deposits of Krivol Rog, north of the Crimea, the construction of a railway system, from the Sea of Azof, a distance of two hundred miles in a northern direction; the establishment of a great shipping port on the sea; the erection of works for the manufacture of Bessemer steel rails, and the building of grain elevators. This offer was made to Mr. Baker while in Russia about a year ago, and he was informed that the concession would be extended for eighty years. He at once employed a corps of engineers, under Henry A. Veis, of this city, to make a geological survey of the country, and charts were prepared showing the immense veins of iron and coal extending across the greater portion of Southern Russia. The reports of the experts were so satisfactory that, after a careful examination of the charts, a number of capitalists of this city and New York agreed to subscribe the necessary funds for the promotion of the vast undertaking which, it is believed, will require more than \$8,000,000."

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CLOSING PRICES IN THE LONDON METAL MARKET.

The following were the closing prices in the London metal market yesterday (May 28th 1880)

Table with columns for metal types (e.g., Brass, Lead, Copper, Tin) and their respective prices in London.

PRICES OF IRON AND STEEL BEFORE AND SINCE THE REVIVAL.

From the Annual Report of the U.S. Iron and Steel Association

The following table will show the lowest prices reached by various iron and steel products since the panic of 1873...

Table with columns: ARTICLES, Lowest Price, Highest Price Feb. 1880, Price May 15, 1880. Lists items like pig iron, steel rails, etc.

The fluctuations in the price of Connellville coke have been greater than in any of the articles above mentioned.

—Excellent iron ore from the Swanton mines is being received at Port Hope

—Another oil refining company, with their headquarters at Petrolia, is spoken of.

—Business appears to be looking up at the Spring Hill, N.S., coal mines. The miners wages have been increased from 90 cents to \$1 per day...

—A gentleman who recently arrived from Cape Breton says that there was every indication of the output of coal this year exceeding that of former years by 60,000 or 70,000 tons.

—We are informed, says the Ironton (Ohio) Register, that on the Lawrence and Belford lands they have a magnetic ore that has about 9 per cent. of manganese which is calculated to make the best of metal.

—The new machine shop which is in course of erection by the Acadia Foundry Company is 105 x 40 feet, height of post 16 feet. It is to have a truss-girder roof covered with sheet iron.

—A New Brunswick paper says: "Negotiations have at last produced results, and the charcoal iron works at Upper Woodstock and the mines at ... have been sold by the former owners Lewis P. Fisher, David Muoro, Henry A. Connell and Frank P. Sharp, to Messrs Charles H. Salisbury and James H. Sturdy, the representatives of a large mining company in Rhode Island.

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**A MONSTER CLIP.**

Few Englishmen have any idea of the magnitude of the operations carried on by the leading Australian sheep farmers, and the labor and expense attendant on the working of a large station. Some statistics of the shearing at Barrabool, one of Messrs. Edols & Co.'s stations in New South Wales, may be of interest. The past season's shearing lasted ten weeks, and was finished in the first week in December, by which time 206,123 sheep had been deprived of their fleeces. To do the work a hundred shearers, in addition to the station hands, were employed, and in a single day as many as 8,316 sheep were shorn. The aggregate yield was 2,515 bales of dumped wool, each bale averaging 3 cwt. 3 qrs in weight, so the gross weight of the station fleeces was no less than 406 tons. The fleeces of the rams averaged 8½ lbs., of the wethers 6½ lbs., and of the breeding ewes and lambs 3 lbs. 15 oz.; the average weight of each of the 206,123 fleeces, of which 54,000 were taken off lambs, being only an ounce under five lbs. The wool was well grown, sound and free from burr, and though Messrs. Edols & Co. have in previous years shorn 8,000 more sheep, the number of bales this year is 150 in excess of the yield of any former season. The clip is the largest yet recorded in New South Wales, and much of the great success of this station is due to the attention paid by the manager, Mr. Dennis, to the proper classing of the sheep. The labor and care required for the proper carrying out of the work at a station of this size can only be appreciated by those who have visited our Australian colonies, but the figures will suffice by themselves for some idea to be formed of it. They will also convey some slight impression of the advantages accruing to the colony by the extension of its railway system so as to tap the Riverina district.

The projected cotton mill at Milton is thus noticed by an exchange:—"Mr. McKay, whose manufactory of cotton yarn and hating was recently burned down in Dundas, visited Milton on Tuesday, and being favorably impressed with the town as a manufacturing point, proposed to the Council to erect a building, put in machinery to the cost of \$50,000, and employ from 20 to 40 hands continuously, on being granted a remission of taxes for 12 years, and a loan of \$1,000 for seven years. Mr. Joseph Martin offered him a site, north of the grist mill, and water power at the nominal rent of \$50 per annum. A number of gentlemen offered to subscribe the \$1,000 so that it need not be loaned by the town. The Council held a special meeting on Wednesday night, and were addressed in favor of granting the privileges asked for by Drs. Freeman and Robertson, and Messrs. H. Watson and I. Cartmer. The Council passed unanimously the required resolution, and we hope to see the building commenced at an early date. The buildings are to be of stone and brick."

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| Chatham, N.B. | Moncton, N.B.   | Stratford.       |
| Cobourg.      | Newcastle, N.B. | St. John's, N.B. |
| Cornwall.     | Ottawa.         | St. Mary's.      |
| Geoff.        | Perth.          | Toronto.         |
| Geoff.        | Peterboro.      | Winnipeg.        |
| Halifax, N.S. |                 |                  |

A. MACNIVER, Inspector.

Agents in Great Britain—London, Bank of Montreal, Bichin Lane, Lombard Street. London Committee—King, Esq., Chairman; Robert Gillespie, Esq., Sir John Ross, Bart., K.C.M.G.

Bankers in Great Britain.—London, The Bank of England; The London and Westminster Bank; The Union Bank; London, Liverpool; The Bank of Liverpool, Scotland; The British Linen Company and Branches.

Agents in the United States.—New York, Walter Watson & Co., Lang, 50 Wall Street. Chicago, Bank of Montreal, 151 Madison Street.

Bankers in the United States.—New York, The Bank of New York, N.B.A.; The Merchants National Bank. Boston, The Merchants National Bank. Buffalo, The Farmers and Mechanics National Bank. San Francisco, the Bank of British Columbia.

Colonial and Foreign Correspondents.—St. John's, N.S.; The Union Bank of Newfoundland, British Columbia, The Bank of British Columbia, New Zealand, The Bank of New Zealand, India, China, Japan, Australia—Oriental Bank Corporation.

(Issue Circular Notes and Letters of Credit for Travellers all parts of the world.)

**The Canadian**

**BANK OF COMMERCE**

DIVIDEND NO. 26.

**NOTICE**

Is hereby given that a DIVIDEND OF FOUR PER CENT upon the capital stock of this institution has been declared for the current half year, and that the same will be payable at the Bank and its branches on and after

Friday, the Second Day of July Next.

The Transfer Books will be closed from the 17th of June to the first day of July, both days inclusive.

The Annual General Meeting

Of the Shareholders of the Bank will be held at the Bank House in Toronto, on

Tuesday, the 13th Day of July Next.

The Chair will be taken at two o'clock noon.

By order of the Board,

W. N. ANDERSON,  
General Manager

Toronto, 23d May, 1889.