

INDUSTRIAL WORLD

AND NATIONAL ECONOMIST.

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THE INDUSTRIAL WORLD

AND NATIONAL ECONOMIST.

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FREDERICK NICHOLS, GENERAL MANAGER, TORONTO.

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THE FREE TRADE FALLACIES.

In England the logic of Free Trade is being severely tried by the superior logic of events; and it can scarcely be doubted that it stands the ordeal to the satisfaction of its friends. Under the pressure of the time, they are being driven to the use of some arguments that look very weak when closely examined. For instance Mr. Balfour, recently, in the course of an indignant protest against the idea of taxing American exports, asked, "what effect would it have on the price of cotton in Lancashire, or on corn for the bread of all the people? Now, that a proposal to tax foreign corn has been introduced in the House, and the reasons given are better than Free Traders like to admit. It has been a prevailing impression and one diligently cultivated by them, that the British consumer has been kept from his bread cheaper, by an amount at least equal to the duty repealed. But the important fact has been proved that the very shilling of reduction to the British consumer there has been a gain of three shillings and more to the foreign producer. Since the change the British price has fallen a little, while the foreign price has risen a great deal. The proofs of this curious fact are interesting enough to be given at length on some day, and this we may do on a future occasion. Meantime it may be remarked that to the imposition of a moderate duty on foreign grain—say six shillings per quarter—there appears to be only one serious objection, and that is certainly one that would have to be considered. It has been said that the British agriculturist would immediately be seized upon by the landholder so that nothing for the general good would result. Put a duty on foreign corn, it is said, the landlords would simply take the rent in proportion, and the farmers would be just where they were before. We must admit the force

of the objection; but still it should not be deemed insuperable; and indeed public expectation is altogether at fault. If some remedy for the injustice practised under the existing land laws be not soon found. Were this secured, then, we say, the last rational objection to a moderate British duty on foreign corn would have disappeared. But will Mr. Balfour tell the country who ever proposed to tax American cotton? No British interest whatever would be protected thereby, for East India cotton, though used for some purposes, and to a considerable extent, is not and cannot be a substitute for American cotton. "O Lord, give us plenty cotton, but no 'Burrat'"—was the prayer of a Lancashire spinner in the time of the cotton famine. It is not creditable to Mr. Balfour that, for the purpose of making a point against the Protectionists, he should represent them as demanding what they are really as much opposed to as he is. In still another respect the ex-tribune of the English people, who now, strange to tell, is found stubbornly resisting the people's demands, is very much at fault. He says:—"To imagine that our suffering springs now from hostile tariffs is absurd, because we have had great prosperity under the same tariffs, but to suppose your case will be improved by refusing to buy what you want from foreigners to punish them for not buying freely from you seems to me an idea and a scheme worthy of the inmates of a lunatic asylum." It is evident that he is getting angry, apparently losing his temper from being on the losing side of the argument; and so he takes the rough and ready, but not very convincing, method of waving troublesome opponents off to the lunatic asylum. True it is that Britain prospered in time past, when foreigners had tariffs seemingly as hostile as at present; though it would be still nearer the truth to say that the hostile tariffs of those days lacked a good deal of having the strong protective effect which the present tariffs have, simply because they were very crude, and ill-arranged, and unsuitable in many ways. But experience has taught wisdom, and the enlightened Protectionism of to-day, on the European continent, is a very different thing to combat from the unscientific attempts of former times. Mr. Balfour's main error, however, lies in forgetting something which it is astonishing that a man of his capacity should for a moment lose sight of when handling this subject. He forgets that in the days when the British export trade prospered, in spite of hostile tariffs, foreigners were so far behind in manufacturing that they were easily beaten, tariffs and all. But will he or any one else venture to maintain that this truly represents present conditions? A great change has supervened, and the position of England towards foreign countries is seriously altered. Thirty years ago England fought and won, against poorly developed foreign manufacturers and blundering, ill-concocted hostile tariffs. Now she has to fight against foreign manufactures so well developed that they crowd her own home market, and against hostile tariffs framed at no hap-hazard, but with high commercial and scientific skill; as witness the new French tariff, now so vigorously denounced in England because of its acknowledged and certain efficiency as protection to France. What are we to think of a man who, professing to be the people's guide, ignores so great and so important a change in the situation, pretending all the time that he does not see it? Is he a safe guide, we ask, or worthy the name of statesman? Under circumstances discouraging to Free Traders, the London *Economist* indulges in another of the delusions with which they endeavour to keep up their spirits.

Speaking of the new French tariff, it says that if the French people refuse to buy from England the simple consequence will be that England will buy the less from them, so that in the end they will hurt chiefly themselves. There might be some comfort in this were it true, but it is not true. It will not bear the test of facts. The *Economist* puts the case thus:—"International trade resolves itself into the barter of the products of one country for those of another, and the more freely our goods are admitted into France the more largely will we take of French goods in exchange. On the other hand, in so far as France succeeds in shutting out our commodities, to that extent will she diminish our purchases from her." "Our retaliation, in the event of higher duties being entered by France, will of necessity take the form of a great diminution of our purchases from her, and an increase in the price of all the goods which, in spite of the protective tariff, she will still find it necessary to buy from us." We call this mere literary dreaming on the trade question; it does not accord with the experience of practical men. Is it supposed that an English importer of French silks and merinos, on sending his order, stops to inquire whether some French buyer of cotton or iron goods will probably send England an order to balance? Not a bit of it, he looks only at his own chances of selling French silks and merinos to his customers; the question whether some French houses will buy English iron and cotton goods to balance does not enter into his calculations at all. The West Indies and South America sell largely of their products to the United States, but take their pay in cash mostly, and only to a limited extent in American goods. But the fallacy of the *Economist's* reasoning can scarcely be better shown than by repeating its own figures, recently quoted in these columns, showing three years' exchanges of woollen goods between England and France:—

	Exported from Britain to France.	Imported from France to England.
1878	£2,088,182	£1,360,250
1879	2,710,492	2,394,268
1880	2,417,702	3,375,133

Here we see English purchases from France greatly increasing, but does this bring anything like a corresponding increase of French purchases from England? No, instead of that, the latter remain almost stationary. The advantage lies with the protected country; and the French appear to know it.

"LET WELL ENOUGH ALONE."

Some time ago, in an article under the above heading, we endeavoured to show wherein the counsel offered had a particular application to Canada. In 1879 we adopted what has been rightly called the National Policy—a Canadian policy, designed expressly for the promotion of Canadian interests before all others. Soon afterwards, while we were all looking with much interest to see how the new policy would work, the public mind was more or less disturbed with proposals for Federation of the Empire, for a British Zollverein, for an American Zollverein and for Annexation. None of these proposals were entirely new, they had all been mooted before, but what we remarked upon was the circumstance that the birth of the N.P. should have been the particular signal for their reappearance. Having boldly struck out for ourselves on the path of commercial independence—or "commercial autonomy," as Mr. Goldwin Smith calls it—we were suddenly confronted with a confusing array of complicating proposals, as if with the express design of distracting us from our new work. Confronted as these various

schemes were with each other, they had still one important characteristic in common. They were, one and all, calculated to favour either England or the United States at Canada's expense. It seemed as if their promoters, on the British and American sides respectively, actually resented the attempt on the part of this young country to achieve its commercial independence; and were determined that no such consummation should follow if they could prevent it. That Canada must and should remain in a condition of commercial inferiority and dependence was the first premise with them all; where they differed afterwards was upon the question whether the tribute was to be paid to England or to the United States. And they are still fighting it out on that line, for apparently not even with their dying breath will they ever consent that we colonists should have the audacity to do our own thinking, and actually to establish a Canadian policy for Canada. To them the thing appears outrageous: "take any shape but that," they say. Divided as they are themselves into two hostile camps, one side saying that we should draw our supplies of manufactured goods from England, the other that we should supply ourselves from the United States; or one point however, they chime in together most harmoniously: the idea that we should manufacture for ourselves is utter nonsense, and an offence against the *haine politique* of Empire, equally so whether the Empire in view be that of the old British lion or the American spread eagle. Now, we take the liberty of repeating what we have frequently contended for before, on other occasions as well as on that above referred to. We say it with all the emphasis we can command—"let well enough alone." The supporters of the National Policy—in other words, the large majority of the Canadian people—have a right to resent impertinent attempts to distract public attention with a variety of crazy schemes, all designed to defeat the new policy, and to "choke it off" etc. It has had a fair trial. We may well suspect that the advocates of Canada's commercial subjugation to either England or the United States are secretly afraid that it will prove successful if allowed to go on, and that therefore the reason why they are at this particular time so pressing for a change. Apparently they fear that if the "blasted thing" be allowed to continue for a few years, it will have taken such a hold of the country that it will be impossible to shake it off. If this be their apprehension, then so far we thoroughly agree with them. For the N.P. is unquestionably getting every week a firmer grip of the country, as witness the now wavering attitude of politicians who but recently were for digging it out, root and branch, without mercy. Meantime friends of the new policy will be glad to observe the reasonable, common sense view of the matter taken by the Imperial Government, as quite recently laid down by Earl Kimberley, the Colonial Secretary. On the afternoon of May 3rd a deputation representing the British and Intercolonial Trade Union had an interview at the Colonial Office with the Earl of Kimberley and the Marquis of Harrisborough. They asked the Government, so we read, "to enlarge the powers and the numbers of British possessions and commerce abroad, with the view of taking evidence in the various centres of the empire upon the subject of trade and commercial tariffs existing between Great Britain and her colonies and dependencies." "Enlarging the powers and numbers of British possessions and commerce abroad" does not read very clearly. We may suppose that what is meant is that the Government should make special effort to obtain official re-

ports from all quarters, as minute and as complete as possible, on the condition and tendencies of British and colonial trade. The deputation further urged "that in all matters of Imperial or international treaties, where colonial interests were directly or indirectly affected in the commercial treaties made by Great Britain with foreign powers, the views of the colonies should be definitely ascertained beforehand and acted upon." Earl Kimberley did not think there was any need of the inquiry asked for; the various colonial tariffs were easily enough procured, and if more special information was wanted the Government was prepared to furnish it. What followed in his speech to the deputation is thus reported:—

"With regard to colonial tariffs, which were settled by themselves, he confessed he felt they were much more likely to take a sound and more rational view of their own affairs than he should in that room or the House of Commons sitting at Westminster. He understood from the interesting speech he had read of the Canadian Finance Minister that from the Dominion point of view that policy had been extremely successful; but his Lordship's view was more for agricultural implements under her present fiscal policy than if she had continued to deal with Americans. With regard to the Australian Colonies in passing the act of 1878, the Home Government's desire was to promote closer intercourse between those colonies which were divided by artificial boundaries, and that it would be wrong when they expressed their desire to make arrangements between themselves for the Government to stand in the way, and they were left to act as they pleased. If they should come to an agreement, as he hoped they would, and that it would be one of free trade principles, then it would be a matter which the Government should greatly rejoice at. He believed, on the whole, that the tendency in Australia was in the direction of free trade. With regard to the making of treaties with foreign powers, since the Government had been in office they had made arrangements with the Prussian Office that in all cases where treaties were to be negotiated where the colonies were affected, the colonies should have the opportunity of making their views heard; that as far as possible the Home Government should not make the treaties without first of all ascertaining the wishes of the colonies; and they had put Sir Alexander Gait in direct communication with certain foreign Governments with whom the Canadians wished to enter into some arrangements."

Earl Kimberley's words, conveying his opinion that the colonists are much more likely to take a sound and rational view of their affairs than British statesmen sitting in Downing street or Westminster, will strike the public ear with the ring of common sense, and will undoubtedly become historical. Not for many years has there come from the Colonial Office anything of equal importance, as far as the public are informed. The references to the Canadian Finance Minister's well grounded statement of the success of the new policy, and to the Imperial recognition of the Dominion's foreign interests, in the person of the High Commissioner in London, are most satisfactory and assuring. The Colonial Secretary's words, doubtless beforehand considered, and spoken with due official reserve, are to be taken as meaning not less than appears on the face of them, but rather more. They are in substance an intimation to those anxious souls who are so intent and so eager for some great change or other with which to upset Canada's National Policy, that the Imperial Government will not help in their crusade. Canada is to be allowed, if so she pleases, to "let well enough alone."

Our John Orincom, says a Chicago despatch, began a forty-five day's fast at noon on Saturday in presence of Dr. Lanner, representatives of the press and others. He will drink water only. Several well known physicians have arranged to watch him. Unless he sees his way clear to making money out of his physical sacrifice, we cannot understand his motive. And he runs the risk of cutting short his days of probation on earth.

THE STEAMBOAT QUESTION ACTION IN THE UNITED STATES.

The terrible disaster on the river Thames on the Queen's Birthday, which resulted in the death, as far as can be ascertained, of nearly two hundred persons, has called general attention to the question of overcrowding and of the safety of steamboats.

Overcrowding having prevailed so long and no serious results having followed, the probability of such a calamity as that which has been the theme of comment for the last week, was not counted upon.

It required the disaster of the Thames to call public attention to the matter; and now that it has been aroused, it is to be hoped that some means will be devised to stop the swelling of the pockets of steamship owners or organizations at the expense of human life.

The question has been trifled with too long, and the sooner rigid measures are enforced the better. There is an Act on the Statute Book which provides "that no steamboat shall carry passengers without, at least, one life-preserver for every passenger carried; and shall also have a sufficient number of boats in good condition and properly equipped.

Every passenger steamer when inspected by the steamboat inspector is granted a license which states the number of passengers she is adapted to carry without hazard to life; and "that for every contravention in respect of any steamboat in the Dominion of Canada, on any voyage or trip thereof, or in port, of any provision in this Act, or in the said Act as amended by this Act, the owner or master thereof shall incur a penalty of not more than two hundred nor less than forty dollars."

The important point, in the first place, is to require a strict enforcement of the law in regard to the fitness of steamboats to carry passengers, secondly, to insist upon such an equipment as the law requires, and, thirdly, to prevent the carrying of a larger number of passengers than is stipulated in the license granted. It is notoriously true that not a few of the steamboats which carry large numbers of passengers are not provided with the life-saving apparatus, that some of the so-called "life-boats" to be found on board are utterly unfitted for the purpose of saving life, many of them being leaky and unprovided with oars, while some of the steamers are not strong enough to carry large numbers of passengers.

We are glad to notice that the Toronto Board of Trade has taken action in the matter. A special meeting of the Board was held on Friday of last week. Considerable discussion took place, and different opinions were expressed in regard to the best means to prevent over-crowding; but on one point all were agreed, namely, the desirability of doing something. The following resolution was carried:—"That a memorial be transmitted from the Board to the Governor-in-Council, praying that an immediate inspection of all steamboats and ferries plying on the lakes and waters of Ontario be made; also, that an Order-in-Council regulating the number of passengers that may be carried by any steamboat, either in proportion to the dimensions or tonnage, be issued."

necessity for leaving it arose from the fact that many steamers were found within a short time after their annual inspection to be deficient in life-saving appliances. It will be observed that the law leaves the visiting of steamers by an officer at such time as he thinks expedient, and it can be demonstrated that such visiting was the exception and not the rule. Nevertheless, it is maintained that the department cannot enforce a duty the time and fulfillment of which are left to individual discretion. The policy of the department, it is understood, is to compel a rigid enforcement of the steamboat laws, as required by Section 1,780 of the Revised Statutes, which provides that "every officer who neglects or refuses to make return or report shall be fined not more than \$100." Three of the officers failing to make the daily report referred to have been called upon by secretary Windom to explain their neglect and informed of the penalty they have incurred. It is to be hoped the Government of Canada will not be behind that of the United States in insisting that its officers do their duty in the matter of carrying out the requirements of the law.

EDITORIAL COMMENTS.

We regret to learn that the Hon. James C. Pope, Minister of Marine and Fisheries, is seriously ill at Charlottetown, P.E.I.

A RETURN recently issued represents the number of depositors in the British Post Office Savings Bank at the end of the year 1879 to have been 1,988,477, was a sum of £22,012,134 to the credit of the depositors.

It is stated that the new Collector of Customs at New York will have the disposal of 953 appointments, subject to the approval of the Secretary of the Treasury. His salary is \$12,000, with about \$5,000 additional in fees.

"One effect of the present one-sided free trade policy has been," a correspondent of the London Globe writes, "to almost annihilate our formerly prosperous silk industry. In 1860 the value of foreign silk and silk mixed goods imported was under £2,000,000; in 1880 the value had increased to over £18,000,000."

The Charlottetown, P.E.I., New Era says "The Industrial World as its name indicates, is devoted to the encouragement, in the Dominion, of industries of all kinds, and deserves the strong support of Canadians. It is new in the journalistic world, but its pages bear evidence of the ability of its editors and managers."

It appears that the recent election in Preston was fought in a great measure on a trade issue, the disadvantage British industries are beginning to suffer in consequence of the growth of Protectionist principles on the continent coming to the front. The London Times in a recent article said: "It is becoming necessary in this country to fight the whole battle of Free Trade again."

It is said that Sir Charles Dilke will preside at the sittings of the Commission for the conclusion of a new commercial treaty between England and France. The Commission, in all probability, will be composed of the French Ambassador in London and two other French delegates, with Sir Charles Dilke, Mr. O. M. Kennedy, C.B., and Sir Charles Rivers Wilson as representatives of England.

The Senate of the University of Durham, England, has passed the following resolution:—"That female students who shall have fulfilled the requirements of the University respecting residence and standing shall be admissible to the public examinations and the first degree in Arts of the University." This action should encourage the champions of the ladies in Toronto University, who will shortly take action for the purpose of having all the honours of the University thrown open to women.

A CONTRACT has just been closed at St. Louis, Mo., for an experimental shipment of 30,000 bushels of spring wheat from St. Paul to Glasgow, Scotland, by barge to New Orleans, and thence by steamer at the rate of 38 cents per bushel. If this shipment proves successful others will follow, amounting, perhaps, to

100,000 bushels. A large lot of sacked flour has just been shipped from here to Liverpool via river to New Orleans at the rate of 50 cents per hundred owing to the abundance of flour at New Orleans.

The business of the United States Post Office service for the year 1880 is thus summarized: The total number of pieces of all classes mailed during the year ended December 31, 1880, was 2,720,242,572. The whole number of letters mailed during the year was 1,053,252,876, or an average of 24 for each man, woman and child in the United States; 324,556,416 postal cards, 812,042,000 newspapers, 40,148,702 magazines and other periodicals, and 21,515,832 packages of merchandise passed through the mails during the year.

A RETURN relating to proof spirits was recently laid before the British House of Commons. The tables for 1880 show that 36,284,762 gallons of proof spirits were distilled, that 3,575,617 gallons were delivered, duty paid, from stocks, and that 32,317,025 gallons were put into bond. England paid £6,322,655 8s. 3d. as duty on spirits during the year, Scotland paid £4,203,418 10s. 5d. as duty, and Ireland paid £3,580,720 18s. 2d. for duty. With regard to consumption, England drank 16,950,020 gallons, Scotland 6,325,036 gallons, and Ireland 5,182,430 gallons.

Mr. Schutz, ex-United States Secretary of State, has assumed editorial control of the New York Evening Post. Writing on the present condition and future prospects of the Republican party he says:—"The Administration finds itself involved in quarrels fiercer than any we have witnessed for many years, and the Republican party is openly threatened with disruption. What is the cause of all this? The same thing that has been the stumbling-block of so many Administrations; that has caused the failure of so many politicians, who without it might have become statesmen—the distribution of the offices, the patronage, the spoils."

In the Pall Mall Gazette of the 19th of May we read:—"The Press Association is informed that it is the intention of the French Government, under the new arrangement on the expiring of the commercial treaty with this country, to add 15 per cent. to the existing duty on all textile fabrics coming from Great Britain and Ireland. It is, moreover, the intention of the French authorities to place a bounty on all goods imported into French ports in French bottoms; and also to impose a duty on all manufactured iron from this country, as well as on paper imported from here into France." It is no wonder that alarm is spreading in England.

Reviewing the probable effects of the new French general tariff on Scottish industries, the North British Daily Mail, of Glasgow, says:—"Every branch of our textile manufactures will be effected more or less. Printed calicoes, as explained by Mr. Gustav Jacoly, will be practically excluded from the French markets, as the rates of duty proposed to be imposed upon them are not only largely increased, but their classification in the tariff is so complicated as to be really incomprehensible. Then, again, in the matter of mineral oils the rates of duty are proposed to be raised by something like two thousand per cent. In fact, there is not a merchant or manufacturer now doing business with France but would find that business virtually destroyed by the new tariff. In the present state of our commercial affairs this is not a pleasant alternative to face."

The London Daily News in its financial article referring to the new coin composed of gold and silver being struck in France for presentation to the Monetary Conference, says:—"The experiment may be successful in furnishing a good token coin for circulation in France and perhaps in other countries of the Latin union, and if so it will supersede the unwieldy 5-franc pieces and the minute gold coins which are so easily lost. It is impossible that the new coins should become international money in the full sense of the term, for their value would continually fluctuate according to the value of silver in the bullion market. Supposing silver to rise so much as to cause their bullion value to exceed their nominal value as coins, they would be melted for export and disappear, and

supposing silver to fall so as to depress their real value below 5 francs they would pass current only within the countries in which they may be a legal tender."

NATIONAL INDUSTRIES.

The Industrial World will be pleased to receive items of news from its readers in all parts of the country, for publication in these columns. It will take but a few minutes time and a postal card to acquaint us with what is going on in your neighbourhood, and we will always find room for all legitimate communications, which must be accompanied by the writer's name as a guarantee of good faith.

Machinery for the manufacture of beet root sugar at Farnham has arrived out.

The Dominion Bolt Company, late of Montreal, have removed to 19 Front street, Toronto.

It is understood that the new glucose manufactory at Ottawa will begin operations about a month hence, affording employment to twenty-five men.

Mr. Corby of Belleville, last week shipped to Messrs. Coughlin, of London, England, one hundred and seventy-five cattle, which were fattened in his distillery during the winter.

A letter received from Cornwall by a Montrealer, interested in the Canada Cotton Mills there, states that the strike of the spinners has entirely collapsed, and the operatives are returning to work.

An addition to Hawkins' shirt factory in Hamilton is now under course of construction. The addition will be 75 feet by 60 feet and three storeys high. This will greatly increase the facilities of the factory.

At a meeting of citizens of Hamilton held at the ruins of Burrows, Stewart & Millen's Malleable Iron Works on Saturday, resolutions of sympathy and others in favour of a remission of taxes for ten years, in case of rebuilding, were passed.

The advertisements of the city of Ottawa offering inducements to manufacturers to locate in that city are receiving many answers from all parts of the country, and the indications point to a big boom in manufacturing interests in that city.

The capital of the Montreal Distilling Co. is to be \$150,000, in shares of \$100 each. The following first class names are connected with the enterprise: Hon. John Hamilton, G. W. Hamilton, Gilbert Scott, J. H. Joseph, Hon. H. Starnes and J. J. C. Wurtele.

Messrs. J. B. Cantin, Augustin Cantin, Louis Fortin, Charles A. Cantin and Jas. O. Simpson, of Montreal, have been incorporated under the name of the Cantin Forwarding Company (Limited), for the purpose of running freight vessels between Canada and the United States.

All the machinery in connection with the new knitting factory has been placed in position and running order. Work was begun yesterday, and it is expected that by Monday the first knitting goods will be placed upon the market. About sixty hands will be employed.—Kingston Whig.

The Hamilton Canning Company, of which Mr. Thomas Robertson, M.P., is the head, have advertised for tenders for the erection of a factory. The building is to be situated on Wood street, between James and Macab streets, and is to be of wood, stone foundation, 140x27, three stories high.

Mr. D. McRae, of McRae & Sons, woollen manufacturers of Galt, Ont., is in Halifax in quest of a suitable site for a woollen mill which he proposes to erect, and which will give employment to 200 hands. He also proposes establishing a jute manufactory, which will be the first of the kind in Canada.

A new industry is spoken of in Ste Cuneogonds in the shape of a paper factory to be commenced by Messrs. J. W. & L. Delisle. The Messrs. Delisle have already a considerable factory of the kind at St. Jerome, which is in successful operation. The present one is intended as a branch establishment.

The traffic receipts of the Great Western Railway of Canada, for the week ending May 20th, 1881, were—

Passengers	\$35,111
Freight and live stock	69,816
Mails and sundries	3,707
Total	\$108,634
Corresponding week last year	85,983
Increase	\$22,651

The railway works at Gilling, N.B. are strained to their utmost capacity. They have now 35 men hard pushed building flat-cars for the broad gauge road. Probably between 150 and 175 of the flat-trucks will be built at these works during the summer. The axles and wheels, which are of the largest size and heavily tested, come from the Londonderry Car Works, Nova Scotia.

Very rapid progress has been made in the excavations for the foundations of the cotton factory at St. Henri. A large number of men are now at work, and at the present rate the stone and brick work of the building will be completed quite within the time specified. Mr. Payne, the manager, who has been in England for some weeks past attending

to the purchase of machinery expected to return to the factory.

One branch of manufacturing industry which has recently made considerable advance has that of housewares. Samples have been received from the house of H. Starnes & Co. which show great progress in the manufacture of hitherto largely imported goods from other places. The firm, it is said, have also started out a line of goods of which the superior quality is a guarantee, as the name indicates, of light and aerial in its composition.

On Monday the 22nd inst. one of the prominent directors of the Spinning and Knitting factory, which has been established in Belleville, was present at their first meeting. Mr. H. Wells was appointed chairman, and Geo. D. Dickson secretary, and Mr. G. Northrup treasurer. A lively discussion ensued on matters pertaining to the establishment of the factory. Mr. Starling and Shaw were appointed a committee to go to Montreal and ascertain what the Victoria Foundry could be purchased for. About all the other business subscribed, and unless some unexpected obstacle interposes the factory will be running order before many months.

Over two thousand head of cattle from the port of Montreal for that last week, and most of them from the farms of Ontario. It may surprise the reader to hear that they are being sold from Liverpool and London, especially for cattle. The *Press* had 2,000 and no other cargo, 300 of them from the vicinity of Guelph, the others from Uxbridge. The *Press* is a steamer, probably among the first ever put to sea with steam, still she is good cattle boat, as her berths are roomy and the ventilation of the steamers *Barcelona*, *Lea*, *Widley Abbey* and the *Thames* last week, all loaded with Ontario horses and sheep.

Mr. S. Leage, Assistant Commissioner of Agriculture, writes in regard to the arrival at Quebec of superphosphate purchased by the Quebec Government from a French firm:—"The superphosphate manure purchased in England by the Department of Agriculture is now in the course of being discharged on the Commissioners wharf. In accordance with the decision of the Council of Agriculture, two tons of the manure will be forwarded without charge to each of the agricultural societies. The remainder is offered to the farmers of the province on applying to the Department of Agriculture for the sum of \$2.00 per 2,000 pounds, or \$2.00 per 100 pounds over and above the charges for packing which are ten cents per ton, or 250 pounds." Instructions for the use of the manure are contained in a circular of the Department of Agriculture.

A reporter in the *Times* paid a visit a few days ago to the carriage factory of Mr. J. H. Marks, on Mechanic street. There was every evidence of a general hum at this establishment, and what it is the National Policy blessing of the National Policy light, the proprietors seem to enjoy it hugely. Mr. Marks came to New Brunswick 14 years ago, five of which were spent in Petticoats and the remainder in Moncton, and he says that business is better this season than ever before in all this part. Orders are not only brisk but payments are satisfactory. Employment is now given to 11 first class workmen (in addition to Mr. Marks himself), in the wood working, painting and blacksmithing departments. The factory premises have been extended since last year, this year and now include main building 100 feet, 2 stories with attic, blacksmith shop 24 by 35 and lumber house 24 by 24 feet, in addition to drying platform, etc. The lower flat of the main building is used for saleroom and wood working shop; the second flat and attic for paint shop and trimming shop. *Moncton Times*.

On our outside pages this morning we copied from the *Mail*, will be found a completed list of the subscribers of stock to the extent of \$300,000, in the Nova Scotia Cotton Factory. It is almost needless to say that the erection of the building will be proceeded with immediately, and within a few months the factory will be in operation. Mr. Brownfield leaves for the United States this morning in the interest of the company. Messrs. J. F. Kenny and W. L. Love will leave to-morrow. They will visit the newest, most complete, and most extensive cotton factories in the Nova Scotia States, and on their return to-day hence, will report on the "Ideas," the most approved machinery and the newest inventions found in the mammoth factories of New England. It has already been ascertained that owing to the great rush of work on behalf of American machine shops, the manufacturers across the line will be unable to fill orders for the machinery in the quick time required by the prospective directors of the company. Mr. Brownfield will, therefore, immediately after his return from the States, have to visit Great Britain, to purchase the necessary machinery. The provisional directors are determined to push operations with the utmost vigour, and to make the Nova Scotia cotton factory in the province a grand success—the pride of the old city of Halifax and of New Scotland—a source of keeping with the splendid enthusiasm exhibited by the people in establishing a great industry, which will be an

...toward making this city one of the great manufacturing centres of the Dominion. It is understood that the capital will be made at once...

THE PROVINCE OF QUEBEC

Almost the earliest settlement of the province, French Canadian farmers have been used to cultivate tobacco...

coming in contact with each other. It is well for those who can afford it to have a special receptacle erected, such as the Louque describes. The doors should be kept open except during rain or violent wind...

natural advantages of Nova Scotia for shipping dead meat to England over the United States and Upper Canada, saving of expenses in freight, railway traffic, keep, loss in weight, etc.

GRAIN ELEVATING AT MONTREAL

The grain elevating "ring," which has been a standing reproach to this port for years, is evidently to be crushed out of existence at last.

THE ONTARIO DAIRYMEN'S ASSOCIATION.

A meeting of the committee on dairy products of this association was held in the Walker House, Toronto, on Friday.

LOOKING AHEAD ON WHEAT

A writer in the Country Gentleman says: "Whatever may be said of the outcome of the wheat crop, and however it may rule, the wheat crop of 1881 will be a great deal less than in 1879 or 1880, and on the whole prices will advance, though possibly not as much as they should; and therefore he who is fortunate enough to make a great wheat crop in 1882 is pretty sure to have a very good thing. At this time it seems to be important for the farmer to be governed so far as he can by the facts, that in the order of nature there are seasons, or years of large crops and better if not high prices; but owing to certain circumstances not under the farmer's control prices do not always rise, and sometimes do not fall, until the crop has passed beyond the control of the producer. The seasons, in the order of nature, make crops and mar them, and the commercial classes, being the superior force, fix prices to suit themselves."

PREPARING DRIED FRUITS FOR MARKET.

Apples should be carefully peeled and cored, then sliced or quartered, placed upon frames, then dried in a gentle heat. Unripe or wormy apples should be discarded, or such pieces carefully cut out. Patches may be dried either peeled or unpeeled. If the former, they will best cut fine. If the latter, in halves...

Cherries must be pitted, and to bring good prices they must be very dry, entirely unmixt with sugar. Black raspberries and blackberries are dried whole, and care must be taken that they be unbroken. Dried red raspberries never will sell. Apples and peaches, to bring the best prices, must be bright and light coloured, to secure this, they must be dried in a dry air. The atmosphere is often so charged with moisture, even in sunshine, that it will take up more very slowly. Such an atmosphere is very unfavourable to the drying of fruit, the juice evaporating so slowly that it decays and darkens the colour. Those who cannot construct drying houses should prepare and dry their fruit upon days when the air is very dry only, out of doors, or else indoors in a gentle fire-heat and current of air. Apples on strings are objectionable. If dried on strings, these should be removed before the apples are packed. Barrels are the best packages.

THE AMERICAN COAL TRADE

But little can be said in addition to our remarks of last week on the position and prospects of the coal trade. They remain essentially unchanged. Even with the restricted production of the past two weeks, the demand seems to be fairly met, and consequently the accumulations at tide water have not been sensibly reduced. In some few cases the surplus held in cars waiting shipment may have been worked off, while in other cases it has increased. Dealers in this city buy sparingly, for the very good reason that their wants are small, and they find no difficulty in supplying them at schedule rates, and in some cases at a slight concession. Their customers are taking only such quantities as they actually need for the time being: the householder a single ton for cooking purposes, and the manufacturer as few tons as he can get along with. In fact, consumers are not laying in coal, and consequently the dealers find themselves with all the stock they can carry, or care to have at this season, with little or no demand for it. To be sure, there is some demand, as there always will be, but it does not amount to much. It does not afford encouragement to the retail dealer to lay in any additional stock. At the same time things appear to be in the same condition and consequently the demand from that source is a limited one, affected only, and that to a moderate degree, by a possible further advance in freight, which may or may not come in the near future. The question of an advance in prices of coal at tide water ports is being actively discussed. Some are in favour of an advance "all along the line." Others favour a moderate advance on the "domestic class" leaving steam coals unchanged, while others, again, hold that if an advance is announced at the present time it will be only "on paper," and will not be maintained, that individual operators and "outsiders" are cutting rates now, and an advance by the companies will only give them a wider margin to cut from. It seems quite certain that so long as present prices can be maintained only by restricting production to three days in each week it is, as a necessity to talk of advancing prices. When the demand becomes sufficiently active to require working full time, then prices can be advanced legitimately, and without fear of any unfavourable reaction. From the bituminous regions we hear of steady shipments, but occasional lots have to be sold at a concession from published rates, in order to secure prompt shipment and keep things moving.—The Mining Record.

THE PRODUCTION OF BEER IN THE UNITED STATES.

The statistics of the Inland Revenue Bureau show how enormously the production and consumption of beer have increased in the United States within a very short time. In 1870 we produced of fermented liquors 203,813,098 gallons, and consumed nearly the whole quantity, besides more than a million gallons which had been imported. In 1880 the production had increased to 413,760,310, and the consumption to nearly a million gallons more. The most of this liquor was beer and lager beer, and the quantity brewed is yearly increasing at a rapid rate. Though in production our breweries are still far behind those of England and Germany, which annually send out one thousand millions and nine hundred millions of gallons respectively, before many years ours will produce as much as theirs. Already we are far ahead of Austria, which produces only 270,000,000 gallons. Meantime our importation of foreign beer has greatly declined. The quantity was two-thirds less in 1880 than in 1873. Our domestic beer has so much improved in quality that imported beer is now in very small demand. The value of what was brought over last year was only \$683,485, and much of it was the light beer from Bavaria. The English malt liquors are no longer preferred here to any great extent. But we are not yet by any means as heavy drinkers of beer as the English. They consume annually the enormous quantity of eighty-two gallons per head of their strong beer, while Germany's consumption of lager is only twenty-two gallons per head. The milder beverage is apt to breed a depraved taste which only an inordinate quantity can satisfy. How to substitute lager beer for the heavy ale and porter with which so large a share of the English people regularly furnish themselves is, therefore a question which vexes many of the philanthropists of the country, for Great Britain is more cursed with drunkenness than any other nation. The temperance people ought to rejoice that so mild a beverage as lager beer has become the most popular drink of the country. Its increasing use is aiding the cause of practical temperance in the most efficient way, for it may be drunk daily by the majority of people without endangering their sobriety, while the habitual use of whiskey can be resisted in by only a very few without lamentable consequences.—New York Sun.

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ALLEGED ADULTERATION OF JAPANESE TEAS

Consul Stahel writes from Hogo, Japan, a report on the tea trade of 1880, which contains the following interesting passage on the subject of colouring teas in Japan, which will be novel reading to American consumers. I avail myself of this occasion to call the attention of the Department and of American consumers of tea to the fact that most of the teas shipped from Japan to the United States are now artificially coloured. About 1870, consumers began to call for a higher colour than any natural process would furnish, and although this demand was long resisted by the shippers in Japan, and at some loss to themselves yet ultimately it prevailed, and for some years past artificial colouring has been the rule, so that Japan teas, which are naturally of a blackish green colour, are now made to resemble the bluish gray or grayish blue teas shipped from China as "green teas." The materials used to produce these unnatural shades are not very pernicious, being nothing worse, as a general rule, than indigo and gypsum, but they certainly add nothing to the value of tea leaves for drinking purposes, while they do add considerably to their cost. There is therefore nothing to be said in favour of the practice, except that dealers in America prefer teas of that description. The adulteration will probably continue as long as consumers in America buy teas only according to the appearance of the leaf, regardless of its drawing qualities, and as long as the simple secret of making the infusion is so little understood in our country.

BADNESS IN CIGARETTES.

There are few current delusions that have become so firmly fixed as the trade which claims that the only original cigarette, warranted not to kill or ruin the larynx, is the one wrapped in rice paper. During the last ten years cigarette smoking has grown apace in this country. At the beginning of the war the cigarette was the mark of a foreigner, the Spaniard especially. All the continental nations, however, do most of their smoking in this way. The ready-made cigarette is only a comparatively late invention. It was created in deference to the impatient spirit of the American, who cannot give the time or possibly acquire the skill necessary to roll a cigarette. The address with which this job is done abroad elicits admiration. The great adept was Napoleon III. In the making of this small article that with one hand, the left, he could arrange the tobacco and roll the paper into a condition fit to smoke. This, however, is by no means a rare accomplishment in France, Spain or Italy. It was the American who invented the patent cigarette, not so much to save the consumer the trouble of making the article as to get a good chance to adulterate them. There is not a cigarette made in America that any man, boy, or woman would smoke if the making and mixture of them could be seen. Every brand makes a loud boast of using rice paper, whereas any one who takes the trouble to examine the rice plant will see at a glance that there is no fibrous consistency in it to make paper of the sort used in cigarettes. Prodigious fortunes have been made and are making, and millions of people are slowly ruining their digestive organs by inhaling the foul stuff wrapped up in the various brands that claim to be pure. Let any smoker of cigarettes subject his tongue and throat to a medical examination after smoking a package of cigarettes. Vitriol itself leaves no more sinister impression on tongue, throat and palate if the cigarette were made of pure tobacco and fairly good papers it would be no more harmful than a cigar. But the greed of trade enters this, like all other enterprises, that spring up to supply sudden demand. A package of twenty cigarettes, which may represent an outlay of three to five cents, the manufacturer exacts twelve to sixteen cents for. There is rarely in a package of twenty as much genuine tobacco as a smoker consumes in one honest puff. It may be safely said that, with one or two exceptions, every cigarette made is a source of violent physical reaction, destructive of vital tissues and the active principle of lurking and insidious diseases, and that it is better to smoke a pound of tobacco in any other form than the pinch mingled with poison that makes up the ridiculously expensive and utterly worthless article of cigarette that holds the market.—Philadelphia Times.

The locust plague is doing much damage in South Carolina.

Lord Lorne has given a number of medals for distribution amongst the scholars of the various educational establishments in Quebec.

SPIRIT OF THE COMMERCIAL AND INDUSTRIAL PRESS.

SAFETY OF LIFE ON EXCURSION STEAMERS

(Monetary Times)

It would be literally correct to say that, for years past, the public has been dreading some such terrible steamboat disaster—we can hardly call it an accident—as that which occurred on the Thames at London, Ontario, on the Queen's birthday. So common has been the practice of the proprietors of excursion steamers to tempt fate, by overcrowding, that the wonder has been that disasters were not more frequent. On the very day this disaster occurred, pleasure steamers left Toronto not a whit safer than the ill-fated Victoria. Indeed, there are instances of persons who refused to go on board a crowded steamer here, of such a build that if much thrown to one side, she would inevitably go over. Some of the pleasure steamers that have plied between this city and the summer resorts in the neighbourhood have for years been systematically overcrowded, not once or twice in a season, but regularly and every day. The lives of the passengers have been constantly put in peril. The chief consideration of some of the boatowners seems to have been not the safety and convenience of the passengers, but how many fares could be squeezed out of a trip. The business was not always profitable; competition sometimes cut down fares below the cost of doing the work. But this was no excuse for overcrowding the boats and endangering the lives of passengers. If but few accidents had happened, the greater is the cause to wonder at the impunity when danger was so often courted. The number of lives lost near Picton, a few years ago, ought to have caused measures to be taken that would have prevented the disaster of Toxaday. It is to be purpose that we have an Inspector for steamboats, if overcrowding is permitted. Overcrowding is not the only source of danger. In times when competition between different boats is keen, speed becomes a consideration as well with the passengers as with the owners of the vessels. The ordinary passenger wishes to be on the fastest boat; he is delighted when the one that carries him passes a rival in the race. Racing is a thing much more difficult to prove than overcrowding. There is so much difference in the speed of steamers that one may easily beat another without having her fires unduly urged. If extra inflammable materials are put on the fire, the intention to race may be inferred; but even then the fact does not lie on the surface. But when the decks of a steamer are black with human beings, who have barely standing room, the danger is at once seen. Anything that causes the passengers to move to one side of the vessel at once puts all the passengers on an overcrowded vessel into danger. And the most trivial thing may cause such a movement: the meeting of another craft, the playing on a hurdy-gurdy, or any casual cause of attracting the attention of the passengers. How great the danger from this cause is the London catastrophe furnishes but too decisive proof. When the vessel lurches heavily on one side, the weight from the upper deck is thrown, not perpendicularly but laterally, on the stanchions, and they may either break or be wrenched out of their sockets. When the Hanlan-Plained race was being rowed, on Toronto Bay, an "accident," precisely similar to the London one, was very near occurring. "Something caused the walk of the passengers on the upper deck, to sway to one side of a large steamer, on which many of the race viewers had gathered. The stanchions were observed to bend under the lateral pressure, and some of them were nearly wrenched out of their sockets. Had a passenger not called the attention of the captain to the danger and the latter not sent many of them down below, a crash would in all probability have followed, with a result even more fearful than that on the Thames. Not only is it necessary to place some limit to the number of passengers on pleasure boats; it is especially necessary to prevent too many going on the upper deck. The higher the deck, the greater the leverage power exerted by an undue weight of passengers on one side. The stanchions are often very fragile in appearance; and though they may be strong enough to bear any weight likely to be put upon them while they are perpendicular, they would give way under a heavy lateral pressure, breaking at the weakest point or being forced out of their sockets. It is probable that the legislation which must now certainly deal with the whole question of the safety of human life on excursion steamers will contain some special provision about the construction and weighting of upper decks. It is strange that while the question of deck loads on freight vessels has attracted so much attention in England the obvious danger from crowding the upper decks of passenger steamers in this country has been all but overlooked. The great passenger steamers that ply on the lakes and the St. Lawrence are probably safe in the particulars under consideration. The chief danger lies in what may be called ferry boats, generally small steamers, which run between our cities and some neighbouring rural paradise. The greater the distance run, the less the danger. That, we think, would be the rule as things are managed. We should not like to say that on none of the many steamers which have for the past dozen years plied between Toronto and Niagara the

passengers have ever been subject to more than the minimum or even the average of danger. And yet low rates of fare have tempted the public to brave every danger. It is a pity that the duty of carrying passengers below cost, the passengers are only too ready to run unknown risks. Here, as well as by encouraging racing, the public must share the blame with the steamboat owners. What is the remedy? Unregulated traffic, where human beings form the freight, will not do. Here the let alone policy, so excellent in some spheres, will not do. It is pregnant with danger to human life. With which legislative body rests the duty of action, we do not stop to inquire. What we insist on is that the duty of action is clear. No official attempt was made to discover where the fault lay. If fault there was, in the Hamilton disaster, and a poor widow has to fight a difficult battle against an organized corporation. When disasters such as that or such as the one on the Thames occur, there ought to be a rigid official inquiry. We have no intention of pre-judging the case of the captain of the Victoria, further than to say that appearances are strong against him. If any man does that which will probably lead to disaster, the natural result cannot, without a misuse of language, be called an accident. The line which separates innocence from culpability has in that case been crossed, and there can be no difficulty in fixing the responsibility. The legislature is not free from responsibility in not having strictly prohibited overcrowding; but, in the absence of a specific law on the subject, everyone knows that it is his duty not recklessly to imperil the lives entrusted to his care.

THE SUGAR QUESTION IN CANADA.

(New York Greener.) A correspondent of the Muncion, Canada, Times, Mr. George Gordon Duxton, of Halifax, N.S., discusses the advantages to Canada of the present national policy of that country upon the sugar question. It appears that the Toronto Globe had dissent from the views of Mr. Duxton, and in his reply he takes the ground and proceeds to argue "that the National Policy has given us cheaper sugar, an expenditure of \$1,200,000 at home instead of a foreign country, a valuable foreign trade, a market for produce, work for our vessels, work for our railways, work for our unemployed capital, home market for our coal, and generally a healthy condition of a great variety of industries," all of which seems reasonable enough when it is considered that the national policy referred to excludes practically American refined sugar, and has induced the opening of a sugar refinery at Halifax, which the Halifax New Era describes as "magnificent," and after showing in what respects this grandiloquent adjective is eminently appropriate, proceeds to say: "In so large an adventure in a new business, there will be, doubtless, among many people, a serious question of its success on so large a scale; for this factory, if we are rightly informed, perfected in every particular, is full staff and machinery for the output of 5,500 barrels of refined sugar per diem; and it is, we believe, a recognized fact in such cases, that, for profitable working, the largest product attainable should be manufactured. It, therefore, becomes an important consideration—in fact, one on which the profitable working of the factory, in a great measure, depends, where can a favourable market be found for its large product, when working to its greatest extent? As far as Nova Scotia is concerned, we know that a very small proportion of refined sugar has heretofore been used in comparison with the annual import of Muscovado sugar and molasses; but as in Europe, and now in the United States, doubtless this will all be changed in a very short time. Our people will, for moderate prices, especially in the lower grades of refined sugar, soon be educated up to use refined sugar altogether, and thus the consumption will be largely increased from month to month—in fact, soon take the place of raw or Muscovado sugar altogether. We must, however, bear in mind that the whole estimated consumption of sugar of all kinds, including maple, is estimated at 28 to 30 lbs per head for 4,000,000 people, the whole estimated Dominion population. As we before remarked, our refinery must be kept in full operation if best results are to be looked for. An opening must, therefore, be found for a considerable excess of production beyond our local requirements, or even of Dominion consumption, until, as we before remarked, our people are larger consumers. We might, therefore, feel some doubt as to the future of this industry, had we not the experience of other countries largely engaged in the same industry for our encouragement and guidance. Let us, for instance, look to that beehive of industrial productiveness—Belgium; this thriving kingdom is but a little in advance in population of the Dominion of Canada, as it is stated at 5,112,650 against our rising 4,000,000. Yet here, in Belgium, the sugar refining industry is proportionately the largest in Europe, and we may well be amazed when we find Belgium manufacturers and sells the product of 41 cane sugar refineries and 170 manufactories of beet root sugar besides—all products of large profits and immense advantages to her people. The consumption of sugar and treacle in Belgium is small, yet she finds profitable sale for her enormous product of refined sugar. It would be

interesting, indeed, had we the means of tracing out her large export sale and would, doubtless, be of great advantage to those more immediately interested in the direction of our large establishment to make themselves practically acquainted with her efforts in so successfully disposing of so large a product of her refined sugar. What makes the action of this little kingdom in this sugar industry the more remarkable is that she is surrounded by the extensive sugar refineries of France, Holland, Germany and England. To whom, therefore, does she export her sugar? Where does she find profitable sale for her large product of refined cane sugar, to say nothing of her beet root production? That she does so, and that in increasing proportion, is as evident as that the sun shines. On this point we are not informed particularly, but are inclined to think Belgium largely supplies the Spanish, Italian and Sicilian markets of the Mediterranean, and perhaps the larger markets of Portugal, all large consumers of refined sugar. Thus, Belgium, with like population as to numbers as the Dominion of Canada, has 41 refineries of cane sugar, besides her large number of beet root factories. Let no one, therefore, say Canada is overdoing it—too sanguine of results, etc., and just let us for a moment consider the difference in our favour in our geographical situation. Here we are within twelve or fifteen days sail of the largest cane sugar producing countries. This sugar can be landed at the smallest possible cost, freight and charges, into—as we have before remarked—the very melting pans of our refinery, and with smallest port charges to the vessels bringing it, probably, of any Atlantic port in Europe or America. Belgium, on the contrary, is a long voyage to and from any cane sugar producing country, and must produce her cane sugar for manufacture at a great disadvantage compared to Halifax, and yet we see, with all these disadvantages, Belgium keeps 41 cane sugar refineries in active operation. Our refinery directors may well, therefore, take courage and not be easily discouraged at any present seeming difficulties in their way, a bright prospect is before them of a profitable and extensive business, and we will hope to see, ere long, a large export of refined sugar added to our trade lists."

THE SETTLEMENT OF THE NORTH-WEST.

(Shareholder) There was an interesting letter in the Gazette a few days ago from Mr. Thomas Cramp upon this subject, and one which is well worth careful study. Mr. Cramp points out where all the Governments of Canada have failed to promote the immigration, which he considers, and we agree with him, to be an essential element in the prosperity of the country. He believes that they have failed to realize its importance, and that therefore they have been parsimonious, and have not incurred the expenditure that was necessary to obtain immigrants. He goes on to describe an interesting experiment that was undertaken by the Dominion Steamship Company, of which his firm are the agents. Under the administration of Mr. Mackenzie the company obtained a reserve of two townships on the Little Saskatchewan, and were thus able to offer a location to intending settlers before they left England. They offered the lands in two ways: farms without stock, which they gave to the immigrants, 100 acres free and 100 acres adjoining, at a dollar an acre, providing that no farm should be less than 200 acres in extent, and farms fully stocked, 200 acres for £200. They put up a wood house and provided agricultural implements, a team, a cow, poultry, fruit trees and other necessary things, and they were prepared before the arrival of the settlers, so that they had nothing to do but enter in and take possession. The result was that these lands were all taken up at once by settlers of the most desirable class, men possessed of means and experience, who were able to contribute to the progress and prosperity of the country, and unlikely at any time to become a burden upon it. That this is so is proved by the fact that Rapid City, one of the most flourishing towns in the North-West, is situated upon this location. Now the complaint Mr. Cramp makes, and it appears to us to be well founded, is that, though repeated applications have been made for further reserves to be settled in the same way, they have invariably been unavailing, and have of late been abandoned. We should have supposed that the Government recognizing the good results that have followed from the experiment that was then tried, would have given every encouragement in its power to a development of the principle. The plan was an excellent one; the intending settler knew before he left England where he was to locate, and if he had the requisite £200 he walked on to a farm and at once began agricultural operations. There was no time lost in building a house, nor in purchasing stock and implements. We noticed a little while ago that, in the proposals for Irish emigration made to the Imperial Government, a similar sort of plan was to be adopted, but there appears to us to be no reason whatever why it should not be the rule. The steamship companies have more facilities than any other organization for disposing of the lands of the North-West to the most desirable persons. They have agents in every town and in scores of large villages in Britain, men who are acquainted with the circumstances of those who make application for passage and lands, and who, therefore, would be

better able to select the right sort of persons than any mere travelling agent could do. We believe that the development of this plan cordially taken up by the Government would contribute very materially to the progress of the country, and especially to the settlement of the prairie provinces, and we commend it to the consideration of the Minister of Agriculture.

THE LONDON DISASTER.

When we wrote last week recommending a system of inspection of vessels carrying passengers on the rivers and lakes we little thought that our remarks would receive so speedy and so forcible confirmation as is supplied by the London disaster. That catastrophe, which, according to the latest reports, nearly three hundred persons have lost their lives, seems to have directly resulted from the overcrowding of a flat-bottomed vessel. It appears that there were some seven hundred people upon the Victoria, which was utterly inadequate to carry any such numbers. They moved about in masses, and so caused the vessel to rock. Then the captain called on them to beware and keep still, and this caution they seem, as crowds do, to have interpreted into an advice to go to the other side of the boat. They made a rush, and the boat, which had no hold in the water to resist the weight thus thrown upon one side, capsized, keeled over, and the result was that all these lives were lost in a stream so shallow as to be scarcely navigable at all. Truly life is everywhere with dangers that we not of. No one would have dreamt that the Canadian Thames would be the scene of a disaster so awful in its consequences, or that its placid bosom would be the grave of hundreds of persons. This occurrence, however, shows that too many precautions cannot be taken in all matters affecting navigation. It is apparent that some means must be adopted for the prevention of overcrowding, and especially the overcrowding of flat-bottomed boats, which are especially dangerous. This must invariably be done upon all public holidays, when there is always a rush of excursionists. We know that it is difficult to prevent persons from crowding these steamers, but perhaps, the recollection of the frightful consequences that followed such a course at London may have the effect of rendering them more careful in the future. Some measures should also be taken to secure proper inspection of the boats, so that some but suitable vessels should be used for the conveyance of passengers. We trust that the Government will at once take steps to put into effect the manifest lessons of this awful occurrence, and that some means may be adopted whereby such a disaster may not recur.—Shareholder.

OUR FOREIGN TRADE.

The decline in amount of our exports to Germany, which is represented by the difference between \$112,000 worth of products sent her in 1879, and only \$42,337 in 1880, is occasioned by the absence from the table this year of phosphates, of which we exported \$6,050 worth in 1879, and which are now again "booming"; by lessened lobster export from New Brunswick, \$3,985, against \$5,784; by fewer tons of which we sent \$30,925 in 1879, and only \$9,223 from Ontario last year; in agricultural products, for where we sent her 42,120 bushels of rye in the previous year we only sent 12,340 bush, valued at \$11,234, in 1880. Other items of this year's exports to Germany are 12,340 bushels peas, worth \$3,170; wheat, 2,911 bushels, \$5,188; seeds, \$4,149; deals and boards from New Brunswick \$12,350, an increase from 1879. An increase is observable in our sales of manufactures to that country last year: more sewing machines were sent, a few of them being from the Province of Quebec, and \$4,700 worth of other "machinery," not particularized. There is also an item of 5,623 lbs. tobacco leaf, shipped from Ontario to Germany, whether grown in our German county of Waterloo, or from the more westerly county of Essex, we do not know. We do not find in this latest return, any repetition of the sample lots sent to Valparaiso, in 1879, of agricultural implements, boots and shoes, sole and upper leather.

Purchases from Germany have been the largest for four years, amounting to \$449,791. The heaviest items are cotton hooley and other manufactures; woollen manufactures, yarn and worsted \$72,476, of which \$10,363 is dress goods, and \$31,102 hooley, shirts and drawers. Manufactures of steel amounted to \$12,006; of gold and silver \$12,764; of iron \$12,482, and wire \$21,862, besides tin, lead and brass manufactures to smaller amounts; plate glass, \$10,400; window glass, \$7,006; other glass goods, \$15,302, making a total import in glass of \$33,399. Books, Christmas cards and chromes amount to \$4,495; buttons to \$2,219; tobacco \$18,093; china and porcelain ware \$24,737; drugs and dyes, silk manufactures, and jewellery are considerable items; minor ones are seeds, staves, hops, tobacco pipes, paints and colours, musical instruments and leather manufactures. Our imports from France during the year consisted most largely of champagne and other light wines, and spirits, calamine and bld, feathers and artificial, silk and silk goods, and various fancy articles. A list of them may be

of interest. Books and pamphlets, \$342; bible and prayer books, \$1,000; manufactures of paper, \$2,000; manufactures, \$20,000; manufactures, \$20,000; silk do, \$10,000; leather do, \$10,000; watches, \$10,000; fancy goods, \$10,000; articles of iron, \$14,971; frothers, \$10,000; ribbons, \$20,175; buttons, \$10,000; leather, sole, left, japanned, \$10,000; gloves and mitts, \$10,000; olive oil, \$10,511; spirits and wine, \$247,355 gallons, \$4,000; champagne, \$34,050; champagne and sparkling, \$10,939; other ditto, \$10,000; and dyes, \$3,000; fish preserved in oil, \$6,261; fruits and nuts, \$10,000; articles these articles above enumerated we have purchased from France during the year cologne water and other perfumes, wax candles, vinegar, sweetmeats, brushes, soles, straw hats, plate glass and embroideries to make up the total of \$1,115,841.

Of our exports to France, \$100,000 of a total of home growth of \$1,000,000 in 1879 of Canadian product was from "the field" and "the forest." The item which then swelled our nominal exports to France to so large a sum as \$1,000,000 in the return, was an American wheat \$259,299, shipped from Canadian ports. Oats is the cereal which we ship most to France: 774,247 bushels of them sailed at \$312,250, went to her last year from Prince Edward Island, while this year before the quantity was 303,218 bushels. Not so much United States wheat is half has gone from Canadian ports this year. A few thousand dollars worth of pens and other firm produce has been sent thither from the Province of Quebec. Ontario has sent to France agricultural implements, wooden articles, and \$7,439 worth of seed. Quebec has sent in small quantities fruit, bran, tallow, potash, and horned cattle, horses, oak, white pine, elm, ash, and birch timber, to a considerable aggregate. Under her import of wood from the Dominion is increased one-fifth on the year, \$50,579, against \$288,797. New Brunswick was the largest exporter of deer skins, \$248,517 was the value. Quebec, Nova Scotia and Prince Edward Island are sending some. The Maritime Provinces also send lobsters to La Vieille France.

As far as the arrangement of the Trade Returns will permit, we make a comparison of the quantities of other wool and silk wares imported during the two fiscal years last past.—Monetary Times.

THE ALLAN LINE.

The extent of the steamship service of the Allan line can be realized when we state that from Montreal there is now a semi-weekly line to Liverpool and a weekly one to Glasgow. From Baltimore to Liverpool there is a fortnightly one, while from Boston to Glasgow they are running a weekly line, and also extra steamships to Liverpool and from present indications it appears that the Messrs. Allan have decided to establish steamship service between Glasgow and this side. A Liverpool paper has the following upon the new departure: "The new service is likely to divert a great deal of the passenger traffic to America which Londoners now export to Galway being admirably situated to catch the emigrants from the Midland counties. It is also in some respects superior to Londonderry, or even to its port of embarkation. Its bay, with its natural breakwater of the Ards Islands, forms a harbour which may well venture comparison with the Cobe of Queenstown; and then there is no river, Lee or Foyle between the emigrant and the "ullster." Nor is it a trifling recommendation that the "City of the Tribes" is a great deal nearer than its rivals to the chief American ports which receive the Irish overflow. It is distant only 2,760 miles from New York, 2,741 miles from Boston, 2,165 from Halifax, and 1,428 miles from St. John's, Newfoundland." It is not improbable that the service from Galway has some reference to the expected exodus from the west of Ireland to Manitoba and the West West, promoted by the Pacific Railway Syndicate.—Journal of Commerce.

THE CANADA SHIPPING COMPANY.

The annual meeting of the shareholders of the Canada Shipping Company was held recently in the company's office in the Custom House square, Montreal, the President, Mr. Alex. Murray, presiding. The annual report was read and shown that the earnings of the past year had been satisfactory. The directors had an interim cash dividend of 4 per cent on 24th November last, amounting to \$41,298, and they have now declared one of 6 per cent payable on the 21st March, which will amount to \$74,596, all \$115,894. The gross earnings of the steamships of the company for the year amounted to \$762,641.68, and the net earnings to \$244,892.79. The net earnings of millage vessels, \$13,738.50. Net earnings of tug Lake 3863.50. Net earnings of the Company, \$265,774.79. The Directors have decided to take 12 sailing ships out of the Atlantic trade and they are all now chartered for Eastern voyages. The report having been adopted, votes of thanks were returned to the officers of the Company for their efficient services, after which the election of Directors was proceeded with resulting in the re-election of the old Board. The meeting then adjourned.—Montreal Star.

TORONTO PRICES CURRENT.

Table of current prices for various commodities including Groceries, Hides and Skins, Leather, Produce, and Hardware.

Table of current prices for various oils, spirits, and other goods.

WEEKLY REVIEW.

Toronto, June 1st, 1881

The country is rejoicing for the delightful and seasonable weather we have been blessed with recently. In this section of the country there is every indication of a most bountiful harvest. The fall crops are looking very fine and the spring crops appear to be all that could be desired.

In box cars with the result that often 5 or 6 head are lost in a car from suffocation and the condition of the remainder is seriously impaired. About 3000 head of export cattle were shipped by Toronto shippers during the past week.

THE WOOL HOUSE. WINANS & CO., 18 Church Street, Toronto. S. Lennard & Sons MANUFACTURERS OF PLAIN & FANCY HOSIERY. HAMILTON COTTON COMPANY, HAMILTON, ONT. CASTORINE OIL MACHINE. ASTORINE OIL CO. Brayley & Dempster, Wrought Iron and Saddlery Hardware. JAMES WRIGHT & CO. STORE AND OFFICE FITTINGS. Canada & the Brazils. Montreal & Halifax. NEW STEAMSHIP SERVICE. F. J. MACKAY.

RAILWAY MATTERS.

AMERICAN RAILWAYS AS SEEN BY ENGLISH EYES

A correspondent of the *Revue de Saint-Louis*, writes from the United States—

Like most things on this continent, railways differ very much from those in England. People, as a rule, travel longer distances and travel greatly by night. The matter of your passage money, again, is very often a bargain much depending on the sharpness of the traveller as to the amount he pays. There are two kinds of tickets, one an ordinary or unlimited, and one a contract or limited ticket. The unlimited ticket, or coupon as it is called, is good for passage until it is used, and with it you can obtain what are called "stop-over checks." The contract coupon is limited, and good for passage only within a certain time after date, and with it you cannot obtain "stop-over checks." The unlimited coupon is issued at the published rate, but the contract coupon is sold at a smaller cost, making a difference between Montreal and New York of, perhaps, five dollars on the trip. To a person who is going directly to his destination this is, of course, the cheaper plan, but if he wants to stop at any town on his way, or requires to make a lengthened stay at his destination, he must take the unlimited coupon. Long journey tickets are mostly purchased at an agent's in your town and a threat that you will travel by a competing line will often induce him to slightly lower the fare. The "stop-over checks" before mentioned are slips of paper given by the conductor on the train, allowing you to break your journey for a length of time at a specified point. There are four classes of travelling, first, second, emigrant and commercial travellers, and the fares are three, two, one and two cents per mile respectively. A second class car is generally the smoking car, but all trains do not carry second class passengers. It is amusing to see a man who has paid first class fare travel all the way second class in order to smoke. Commercial travellers are allowed to travel by any train at two cents per mile. Suppose yourself travelling from Chicago to New York, you will travel over the Michigan Central, Great Western of Canada, and the New York, Lake Erie and Western railways. When you pay your fare you will be furnished with a piece of paper about nine inches long, divided into four spaces. The first space is devoted to stating the contract the different railway companies have entered into with you; the next space is printed like one of your tickets, and reads, N. Y. C. & W. R., Suspension Bridge, Niagara to New York; the next space reads, G. W. R. of Canada, from Suspension Bridge, Niagara; and the last space reads, Michigan Central Railway, Chicago to Detroit. As you arrive at the end of either company's road the conductor tears off the portion belonging to that road, and forwards it to the company's audit office. The last road travelled over, viz., the New York, Lake Erie & Western, secures with its portion the contract part. All tickets are collected on the trains in America. The first thing that strikes an Englishman when he emerges on the platform is the sound of the bells attached to the engines. These bells perform almost all the duties of our whistle. Most necessary things, too, are these bells, for railroads frequently run for some distance through the public streets and across country roads. Of course, while being quite as effectual as a whistle in such cases, they are not so great a nuisance. Having obtained your ticket, the next thing to see after is your luggage, or baggage, as it is here called. The baggage room is provided over by the baggage master, and on showing him your ticket he affixes checks to your trunks, at the same time handing you similar checks (pieces of brass marked with a number, about the size of a half crown), one check for each parcel. All worry as to your effects is now over. Your baggage will be conveyed safely to its destination, and taken care of till such time as you wish to redeem it. I have allowed a month to elapse before claiming mine. Should you lose your checks you will then have trouble. When attempting to enter the cars one finds that the platform is so low that it is necessary to climb up steps to reach the car platform. The cars are about twice the length of your railway carriages, and, as all know, open like a tram car at either end. The seats, however, are crosswise, and not down the side. They hold two, and by an ingenious contrivance the backs of the seats can be turned so that you can either face the next passengers or turn your back to them. The cars are fitted up with every convenience, to even a fountain with drinking water. I speak here of the ordinary car, as English people know what a "Wagner" or "Pullman" is like. There is one great boon in the use of these cars, viz., you can change your seat as often as you like, and wander from car to car whilst the train is in motion. This greatly relieves any monotony, and enables you to get away from the greatest of nuisances, a crying baby. The scene inside the cars naturally differs very much from that of an English carriage. In the place of the usual notice in English carriages, I read one thus: "Passengers are requested not to put their feet on the chairs, and to use the spittoons." Again, instead of sitting looking out of the window or sleeping, the American indulges in conversation with anyone with whom

by the time being thrown in contact, he has a notion that as a preliminary it is well to know a little about you and asks you every question for which your private affairs are quite to him. Another scene inside the car is the travelling news and his water. This young man makes his appearance soon after the train starts with an armful of story books. These books he promiscuously drops into the laps of the passengers as he rapidly passes through the car. A stranger thinks this to be one of the means for passing the time agreeably, and has become quite interested in his story when back comes the lad and collects all the books or their value. Probably you have become so interested in the tale that you consent to pay for a book. Presently, though again comes the lad, this time with a basket of fruit very tempting but very dear. Even again you find him re-appearing, this time with "surprise packets," which are thrown into your laps as the books were, as he returns to collect them he urges their cheapness and the certainty of getting a prize of perhaps more than the value paid. Presently he returns, and this time with candies done up in pretty packets. He has now ceased to be an amusement and becomes a nuisance, but still he continues coming through with his varied merchandise. A great nuisance in American travelling is the s'maming of car doors. As we approach a station the conductor comes through and shouts out the name of the station, and again, as soon as the train is in motion he passes through examining the tickets of those who have just boarded. Besides the conductor, passengers are continually passing through. One can imagine how uncomfortable this noise is to those who, unable to afford a sleeping berth, are trying to catch a moment's sleep on their seats. There are still many things I might mention, but I fear I shall exhaust your patience, Mr. Editor, so I conclude by just stating that, on the whole, I think English travelling suits English people best.

GRAND TRUNK RAILWAY.

The arrangements made at the last half-yearly meeting of the Grand Trunk Railway Company must have been received by the share and bondholders with much satisfaction. It is a matter of pride to every Canadian that so great a corporation, whose capital has been furnished by British investors, should give such evident signs of prosperity. The progress of this railway enterprise has been slow, and the semi-annual gatherings of its proprietors have not been at all happy until very recently; but we heartily congratulate the management upon the steady growth of the patronage which has placed the Grand Trunk among the most prominent of our carrying powers. That which has recently been achieved, we believe, is only the inauguration of a system which will eventually prove a lucrative source of profit to the shareholders, especially the through and independent route to the Western States, a branch of the line which was not procured without overcoming almost insurmountable fences. The effort required to break down the barrier, which was latterly a brilliant triumph of the general manager, need not now be discussed, because our readers are familiar with all the facts concerning the success of the Western venture. The most gratifying feature in the half-yearly returns is the augmentation in the traffic receipts, which were, in the half-year ending December, 1880, \$5,790,000, against \$4,800,000 in the corresponding period of 1879, or an increase of \$990,000, of which the passenger returns yielded \$200,000 and the freight \$790,000. While the business of the road has steadily advanced the working expenses have been cut down from 72 1/2 per cent. in 1879 to 67 1/2 per cent. in 1880, though wages and material in the latter half-year were higher. The net profits of the six months were \$1,870,000, or \$500,000 more, comparing 1879 with 1878, and the most remarkable fact is that the net receipts for the past half-year were equal to the whole net receipts of 1876, the former too, under a mileage of 1,273, against 1,380 in the latter. Adding some other source of profit, including interest in the International Bridge, amounting to \$65,000, and \$50,000 from the investment in Chicago and Grand Trunk bonds, the half-year's divisible profits were nearly \$2,000,000, or \$500,000 more than in 1879. After paying out of the sum mentioned preference charges to the extent of about \$1,000,000, there were \$945,000 for division among the preference holders. These results speak for themselves, and while very little, if any, of the capital is held in this country, the prosperity of the company will be regarded with as much favour here as by those who are peculiarly interested elsewhere. The general manager and his staff have had many anxious years, but their efforts have, to a very great extent, been instrumental in bringing about the results which appear in the official returns. The shareholders are, no doubt, satisfied with the immediate past, and are encouraged to take the outcome of the future. In connection with the affairs of this huge concern, we may notice here the appointment of Mr. Wainwright as Assistant general manager. No doubt Mr. Hickey required some one to relieve him of a portion of the work of his office, and, in the selection of Mr. Wainwright we are sure the railroad world is sensible of the fact that no man could have been named better fitted to discharge the duties attached to so important an office. Mr. James Stephenson

also, a most excellent and well-qualified faithful officer of the company, will be understood to assume the duties of the position contemplated. There is no doubt that at the moment...

THE NEW ILLINOIS RAILROAD

The London *Daily News* contains a student telegraph from Berlin that Messrs Siemens and Halske, two well-known electricians, invited members of the multiplicity and press to take part in the trial of their new electric railway which runs between Lichterfeld and the Adlonshaus six miles from Berlin. The trial was an entire success. Every phase must be given to these electricians who had not only to work out the most difficult of scientific problems, but also to contend with the most stringent rules which German officialdom thinks fit to exercise on such undertakings. The trial was made in a simple tramcar with an electric battery carrie attached between the wheels. It was controlled through the rails on which it ran with the principal battery at the station. The rails are 39 inches apart and exactly resemble those of an ordinary railroad, the gauge being narrower. The greatest speed obtained was 18 English miles an hour. Dr Siemens has proved that if necessary far greater speed could be obtained, but this was not allowed by the German police authorities. The fact is that the officials here hardly know how to deal with this wondrous invention. They seem afraid of it, and do not know whether to place it under the tramways or railroads act. However for the present they chose to consider it, as our Atlantic cousins would say, a simple horse car, and for public use it will not be allowed to proceed at more than nine miles an hour. The railway will be opened to the public at once.

The two new locomotives which were sent to Belleville for use on the Grand Junction railway were evidently required elsewhere, for they have been sent away again.

The first regular train on the Quebec Central railway ran from Levis to Sherbrooke yesterday. It is expected that very shortly connections will be made at Sherbrooke or Lennoxville by this line which will shorten the distance from Quebec to New York considerably.

The Illinois house has passed the bill prohibiting railroads, under heavy penalties, from changing the rates of freight without given sixty days' public notice. We have seen no bill compelling dealers in other commodities, coal dealers, for instance, to give two months' notice of a proposed increase of price.

Owing to a scarcity of freight cars on the Canada Central, there is a block of square timber accumulating on the Upper Ottawa. Business is greatly retarded by this circumstance, and relief is earnestly sought in every possible way. It is thought that in a few years very little timber driving will be done on the Ottawa river.

Immense numbers of immigrants continue to pour through Chicago toward the North-West. A few days ago the Michigan Central brought no less than 2,084, the Pittsburgh, Fort Wayne & Chicago about 1,100, and the Lake Shore & Michigan Southern, 1,000, while hundreds of others arrived by the other roads from the east. Most of these people proceeded at once to the North-Western States or Manitoba.

The railroads of the South are in a better condition than ever before, and, with the growing need of direct routes, will increase in importance. The gauge of several of the important lines will soon be narrowed to the standard width, and better time will be made as traffic increases. The improvement of the railroad facilities will have a tendency to attract visitors and immigrants, and as capital becomes more plentiful there will be a general improvement in every branch of industry, and with this a great increase in business with the roads.

Satisfactory progress is being made with the construction of the Canada Atlantic railroad. The line between Coteau Landing and Alexandria is all under contract. The bridges, which are to be of iron and steel of the standard of the Quebec, Montreal, Ottawa and Occidental railway, are being made by the Toronto Bridge Company, and the steel rails for this section, about thirty miles, are now en route from England. Cars are expected to be running in September next. The route between High Falls and Ottawa is now being located by Mr. C. L. Kofer and staff. The annual general meeting will be held at Lancaster next Tuesday, when full reports will be made.

Statements of extraordinary locomotive mileage are now in order. The Ohio & Mississippi road comes to the front with some remarkable figures. During the month of March engine No. 109, William Day, engineer, ran 7,429 miles, No. 60 Mike Murphy, engineer, made 7,275 miles and No. 108, John Halvey, engineer, made 7,023 miles. The aggregate of these three engines was 21,727 miles in a month. Seventeen other engines on this road each made over 5,000 miles in the same month. The aggregate mileage of 115 engines during the same time was 445,268, or an average of 3,863 miles per engine. These figures are remarkable and challenge the New York Central, Canada Southern and other roads, which have hitherto given us some large figures in this respect.

At the year end the New York Central reported that one of its roads made 9,000 miles in a month and during six consecutive months averaged nearly 10,000 miles a month. This we believe has never been equalled, and we doubt if there will be a record on roads in the country that can show as good figures without the Ohio & Mississippi above given. Let me have more statistics.

Some statistics of American Railways seem to show much better than could have been expected, considering the extraordinarily unfavorable conditions of the past season. Returns of forty companies for April show aggregate earnings of \$12,280,000 against \$9,919,200 for April 1879, an increase of \$2,360,800 on a mileage of 27,296 miles against 23,208 miles last year. This shows an increase of nearly 10 per cent in earnings while the mileage has only increased 17 per cent. Moreover, it should be remembered that earnings on newly constructed lines are necessarily small at first and do not represent the business which is to be expected when they are fully in operation. Out of the whole list of forty roads only four show a decrease, and the aggregate loss of these is only \$75,740 compared with the same month of 1880. For the first four months of the year the same forty roads earned in the aggregate \$44,675,300 against \$39,920,000, a net increase of \$4,755,300, or nearly 12 per cent. Of course the extraordinary expenses incurred in fighting the elements will cut down the net earnings, but the fact that the amount of business to be done is largely increasing is full of encouragement.

The Kingston *Wing* says that the engineers on the survey of the Toronto and Ottawa R.R. have arrived at Sherbrooke Lake and are camped at Peter's Crossing, between Round and Long lakes. They have experienced great difficulty between this point and Mountain Grove, but have eventually secured a most excellent line, both curves and grades being almost completely their absence, but at any rate as easy as on any road in Canada, which, when we consider the nature of this "wild and wild country," is a fact worthy of note. Mr. A. L. Hogg is in charge of the party, assisted by Messrs S. H. Symes, C. E., D. G. Charles, C. E., J. E. Hammond, Jas. Patterson, P. C. E., and H. Mackenzie. Messrs Hogg, Charles and Patterson have for some years been associated upon other railways, and the entire staff, with the exception of the axemen, are old hands on surveys. The party have been at work since last December, and during our remarkably severe winter have not remained in camp a single day on account of stress of weather. They appear, without exception, a fine hardy lot of young fellows, capable of enduring any amount of hardship. Their lot is evidently a hard one, and we shudder as we contemplate the onslaughts of mosquitoes and black flies. The mess arrangements of the camp are under the management of S. Benton, of Kildare. The survey will be completed as far as Perth in a few weeks. Perth seems to be looked upon as a terminus by every man engaged, and when hardships are endured "wait till we get to Perth" makes all quiet. The distance now run is nearly 90 miles, and as we consider the mountainous district, as well as the numerous lakes and water courses, this is a long distance to run and secure so good a line in so short a time.

The Southwestern system of railroads, all of which are now under the protection of Jay Gould and his friends, are not likely to remain dependent upon Mr. C. P. Huntington and his Southern Pacific route for their connections with the Pacific slope. It was semi-officially given out yesterday that the original charter of the company will be carried out without any stoppage of building at El Paso, where the road is to meet the Southern Pacific by January 1, 1883. The objective point of the road as chartered was San Diego Bay, the extreme southern point of the coast of California, and the charter gave it twenty sections of land per mile in California, and forty sections per mile in the Territories between Texas and California. The land grant was absolute and without subject to forfeiture, the only thing approaching to the nature of a condition being the supplementary Congressional Act of May 2, 1872, the language of which required the completion of the whole line from "the eastern boundary of the State of Texas to the Bay of San Diego, in the State of California, as aforesaid, within ten years after the passage of this Act, and upon failure to so complete it Congress may adopt such measures as it may deem necessary and proper to secure its speedy completion." When Colonel Scott was president he obtained the best legal advice on this point, and the conclusion therefrom was inevitable that the land grant could not be forfeited under this or any other section of the charter without abandonment by or consent of the company. The penalty for failure to comply with the requirement of the charter is certainly severe enough when it is imagined what a *corde blanche* is given congress in the words "adopt such measures as it may deem necessary and proper to secure speedy completion." It is estimated that eighteen months will be required to build from El Paso to San Diego. Whether this work will be begun before El Paso is reached from the East is doubtful. It would seem at first blush that if the two southwestern systems are to be rivals Mr. Huntington would have to find other ways of connecting his Chesapeake & Ohio system in the east with his Southern Pacific in the west.

than by the Gould road, from St. Louis, but it is much more likely that it will be energetically railroad artists will take the good they can get from a line by a continual network of the same route.—*North American* 19

MINING NEWS.

PHOSPHATE IN THE COUNTY OF OTTAWA

The Haldane Mines.

Is it not an empty boat to say that Canada is a land not only large in proportions, and rich in its forest land, but also, and perhaps more truly in riches in its mineral wealth. And so it is, and the vast Dominion is a matter worthy of notice. In that respect the district of Ottawa, Long Point, and Iron Mines of Chelsea been known as their ore of great value, but only within the last five years have the people of this portion of the country attempted anything in the phosphate line. For years and years, while lumbermen were concerned at the expense of our wood land, deep in the heart of the Laurentian range lay veins upon veins of a substance yet to become one of the staples of Canadian trade and one of the most powerful means of fertilizing a country to that rightful position among the commercial nations of the world—a position which she will be eminently qualified to occupy. One of the first parties to go into the phosphate business in the County of Ottawa was Mr. Haldane, of Aylmer. Mr. Haldane purchased two hundred acres of land, forming lot No. 12, in the first range of Wakefield. On this lot he saw a slight indication of phosphate. Here a great risk, but without risk very little can be gained in this world. He had no example to go by in the phosphate business, but he was a man who sought a way into his lot along a tract over a mile in length, filled with swamp, impassable and hills unmountable. There he commenced operations some two years and a half ago. The mine, about fourteen miles from Iron Mines, where to-day stands a pile of over a million of green phosphates, the property of Mr. Haldane and the produce of this lot. As we have said, the road for a mile to the mine was almost impassable a couple of years ago. To-day one hundred to one hundred and fifty dollars would make it a splendid road. This lot of two hundred acres contains a shanty, stable, out-houses, blacksmith shop and shed for the cutting of the ore as it comes from the pits. These buildings enhance the value of the place to a great extent. The general rock around there is what is called a diorite, a compound of hornblende and feldspar. In the centre of the lot arises a cone like hill or mound. This cone is some two hundred feet over the surrounding country. On examining it, the first idea a person is struck with is a strange one, you would imagine it had been heaved up by some convulsive freak of nature and there left, standing amidst the surrounding hills, a lone hermit, unlike its companions in form or composition. There it stands, a solitary monument, awaiting the hammer of the explorer to knock away its outward shell of pyroxene, of mica, of prillite and feldspar, and to exhibit its kernel of pure phosphate. And this is not overdrawn, for the work justifies it. In eight different places have "shows" of red, of black or of green phosphate been opened. They seem to peep out on the hillside and to lead in towards the centre. At the spot where the shed and forge are built, some eighty feet from the top of the cone hill, on its eastern face, a splendid "show" of green phosphate appeared. Messrs Haldane and Sons went to work and dug down to a slanting direction, their shaft trending more to the edge than centre of the hill. After heaving out several tons of indifferent quality they came on a vein of red of pyrites, mica or any other mineral—a vein of pure phosphate. They delved and blasted until to-day there exists a hole 73 feet in depth and an average width of 20 feet which has given out hundreds of tons, and seems to be widening out into a real bed as they progress. On the other side of the hill is a tunnel of one hundred feet in length, out of which several hundred tons have been taken. Four "shows" of red phosphate out of which a great deal has been extracted, and about a dozen surface indications which dot the hill go to prove that it must really be a phosphate hill, and that its centre must be endless in its contents. Messrs Haldane & Sons took out over 1,400 tons of red phosphate in a couple of years. It seems the more they take the more they seem to find awaiting their picks. When the road will be finished, which requires very little time and very little expense, and when the miners will commence to dig in towards the heart of the cone hill, we are sure no more valuable mine will be found in Canada. It has the advantage of being near the city, of containing very pure ore and of, according to all appearances, being inexhaustible. At a rough guess, the mine and all the improvements must be now worth over \$50,000, and ere long it may be worth double the money. About two tons and a half to three tons can be daily taken up by ten men at any one of the "shows," and double that amount can be taken out at the big pit. We give this short account of these mines merely to show how, in the district of Ottawa, new springs of national wealth are every day gushing forth. It might please or interest some readers of the paper to know that with the loss of our forest lands,

...of iron, come when they... are other sources of pro... We have chosen to... the Halifax mines as an... to having visited them... and knowing them better... phosphate mines in the... of Ottawa. - Montreal Gazette.

PHOSPHATE INDUSTRY

The phosphate manure purchased in France by the Department of Agriculture for distribution to the agricultural societies is now in the hands of the dischargers on the Commission's Wharf. In accordance with the decision of the Council of Agriculture two tons of this manure will be forwarded without delay to each of the agricultural societies. The remainder is offered to the farmers of the province, on application to the Department of Agriculture for the sum of \$26 a ton of 2,000 pounds or \$26 per 100 pounds over and above the charges for packing, which are 10 cents per bag of 150 pounds and 20 cents per quarter of 250 pounds. I enclose copies of the circular of the Council of Agriculture and of the Department of Agriculture on the method of distributing this manure and in manner of its application. Hoping that in the interest of agriculture, that we will place your readers in possession of this information.

I have the honour to be, sir, Your obedient servant, H. LEAVER, Asst. Commissioner of Agriculture.

Minister of the Department of Agriculture, P. Q. on the method of applying the chemical manure called "Common Superphosphate"

In order that this manure may produce all the good results it is capable of, it must be applied in a state of fine powder, and should any lumps be found in it, by moisture or other cause, these lumps should be reduced to powder. When the ground is ploughed and ready for being sown, the best time to apply this manure is either in the morning or in the evening, immediately before or after sowing the seed, and it should be covered in afterwards by harrowing. For meadows and pastures it should be applied in rainy weather, otherwise the acids which it contains might prove temporarily injurious to the vegetation. In applying this manure for potatoes, beets, turnips, cabbages and similar vegetables, it should be distributed as equally as possible on the surface of that part of the ground beneath which the roots will spread, so that the plants or seeds may get into direct contact with the manure. The plan to follow is, first put in the seeds, covering them lightly with earth, then apply the manure equally over the surface, and lastly spread another layer of earth. The following are the quantities of manure to be used per arpent: For sugar beets, 1,000 to 1,500 pounds per arpent; for potatoes, turnips, cabbages and similar vegetables, 700 to 900 pounds per arpent; for barley, oats, buckwheat and similar grain, 400 to 500 pounds per arpent; for meadows and pastures, spread the manure like plaster, at the rate of 400 to 500 pounds per arpent. - Montreal Gazette.

WEDDING OF MINERALS AND WEDGES.

Gunpowder having been found a most dangerous material to be used in mines where gas is given off in more or less quantities, various substitutes have been proposed to take its place and effect the same object for which it has so long been adopted. Some of those expedients have been most effectual, but for some reason or other, which has not been made known, they have not been adopted. Wedging by hand, in coal mines especially, is a most tedious process, and somewhat laborious, and this the men have complained of, and have preferred to run the risk of an explosion by using powder, by which they can obtain rather more money for a less amount of work. The matter of safety does not appear to be entertained by the miners as against that of obtaining a little more money, and not a few of our mine owners seem to have forgotten that there is a mechanical means of bringing down minerals far more profitable in every way than by hand wedging. Some three or four inventions at least have been brought prominently forward for the purpose of superseding hand wedging and the employment of gunpowder in bringing down coal in particular. We have seen Messrs Jones and Bidders hydraulic coal breaking machine tested in a hard seam of coal, and the result appeared to be in every way satisfactory. There was no difficulty in using the apparatus—a small hand machine easily worked, and which brought down the coal after it was wedged in large pieces, and in that respect it was far better than powder, which necessarily makes a very large quantity of small coal. Mr. Gratton Jones, who brought out one of the first of our coal cutting machines, also introduced a wedging machine which was easily applied, and in every respect a nice and effectual piece of mechanism. Trials have been made with it, and the results have been most satisfactory. In some of our mines there is great difficulty in detaching the coal from the roof when there is not a free parting even by means of powder, but mechanical power has in those cases been found to act well. Where, however, there is a free parting

between the mineral and the roof the wedges in particular can be employed to considerable advantage, and have been proved to be in every way economical, saving the miner from a great deal of physical labour as well as time in bringing down what is termed a tall. Another wedge which has been successfully tried in some of the hardest seams is that known as the M'Dermott and Elliott's patent expanding wedge. The machine is used in a manner similar to that of most other wedges and is in every way simple. After the miner has worked the coal to a depth of from 5 to 10 feet, and in length (say) 7 or 8 yards, a rock perforator is introduced near the roof, when the wedge is introduced at its point and then is driven home by a sled, a hammer when the coal is brought down quickly and in large blocks. In very hard rock the wedge on one occasion was tried, and it was pierced to a depth of 20 inches in seven minutes, which done by hand would have occupied at least two hours. During the experiments made with the various wedges to which we have alluded the miners who were present and took part in the work appeared to be much interested in what was going on, minutely examining the apparatus, and were evidently impressed with its value to themselves. But for some reason which we are unable to explain the hand and hydraulic wedges have made no way, and at the present time are only to be found at a very few places indeed, although their value has been recognized by both mine owners and miners. Seeing, however, that blasting with powder will be prohibited to a much greater extent than it now is, some other method will have to be introduced, for as we have before stated hand wedging is too slow a process to be made profitable to the workman or his employer. We, therefore, think that such appliances as we have brought under notice should receive more attention than they have hitherto done at the hands of those who have the control of mines, for wedges are about the only power that will be found at all efficacious in the working of mines where powder has been the motive power in bringing down minerals after they have been undercut, but owing to its danger has been prohibited. - Coal Trade Journal.

A Halifax, N.S., despatch says Coal shipments from Pictou have commenced this season with renewed energy. The Halifax Company are making great exertions to open up their new seams, and in a few months they will be raising coal from their new mines on a large scale as they did from the Ford Cape pits. The three new mines now being opened will be able to produce a thousand tons of coal daily. From a private letter we learn that there is great excitement among mineral men in St. Stephen over the discovery of a lump of quartz richly laden with gold by a young fellow there some days ago. The fellow was offered \$200 to tell where he found the piece, but he refused to do so. He carried the quartz over to Calais and showed it around, increasing the interest of all who saw it. Between this bonanza find and the cotton mill there now, things are lively in St. Stephen. - Chatham, N.E., Star.

Big bonanzas in the way of gold leads appear to be the order of the day. The latest comes from East Chesetook, where Mr. John Anderson recently struck a lead said to be of extraordinary richness. Some fine specimens of quartz from this lead were exhibited in town on Saturday. These things excite the cupidity of the average citizen to a greater degree than a whole drove of overgrown cattle. A man with a pocket full of quartz shining with gold is gazed upon with greater envy and admiration than even the great Symer. - Halifax Chronicle.

H. H. Stow, Esq., of Bradford, McKean County, Penn., has made arrangements to commence mining on a deposit of Actinolite, discovered last season by Mr. J. E. Harrison, of Bridgewater. It is located on Lot 12, in the 2nd Con. of Kaladar, and owned by Mr. Geo. Peebles, Jr., about 18 miles from Madoc Station, and 3 miles from the surveyed line of the Toronto & Ottawa Railway. Mr. Stow proposes to test its qualities for the manufacture of paint, instead of asbestos, a mineral to which it is closely allied in composition, and is also supposed to be equal to any article now in use for lining furnaces, stoves, grates, etc., and also in making roofing felt and paper. - Belleville Ontario.

The company of American capitalists recently organized by a resident of Quebec to operate the gold mines on the Metgemette and Oliver rivers, near the Chaudiere gold fields, Quebec, have secured the services of a Californian who has had twenty years' experience in alluvial gold washing. On visiting the mines his first remark was that this was no place for a poor man, but for capitalists as there was as much gold in the adjoining mountains as in the bottom of the river. His idea is that the only way the mines can be profitably worked is by the introduction of the hydraulic system. Acting upon this, the company has decided to introduce it, and arrangements are now being made to mine on a large scale. They intend to do as much with the new apparatus as 1,000 men could in washing out under the old process. The men are now washing from \$1 to \$12 worth per day. The Metgemette and Oliver rivers are tributaries of Riviere du Loup. The latter are only working the former. The

latter they have, it is said, disposed of to New Yorkers for two millions of dollars. - Montreal Star.

On Sunday morning, at a depth of 60 feet the diamond drill of the Vancouver Coal Company struck a seam of good hard coal between 10 to 12 inches and 1 1/2 feet in thickness. This is indeed a rich strike for the City of Nanaimo as well as for the company, and to show that the theory of the old miners was correct, in that a good seam of coal extends from Commemorial Inlet and the Peninsula and out under the harbour, over a quarter of a century ago a shaft was sunk where the Nanaimo Hotel now stands, to a depth of 80 feet, and the coal worked, but the water soon became too strong for the Indians to bail it out with buckets (pumps being almost unknown then) and the seam had to be abandoned. Parties who worked there described it as a six foot seam of good hard lean coal. It is a continuation of this same seam that the diamond drill struck on Sunday. The drill is still continued at work so as to ascertain the depth of what is known as the lower seam. In a few weeks the sinking of a shaft will be commenced, but Mr. Beaumont has not yet decided upon the exact locality. The striking of this seam of coal, together with the finding of a good seam of coal in the Chase River mine, augurs well for the future prosperity of the Vancouver Coal Company. - Nanaimo, B.C. Free Press.

The output of coal in Belgium went on increasing, almost steadily, from 3,479,160 tons in 1830 to 15,778,401 tons in 1872. The following year it diminished to 14,669,029 tons to rise again in 1875 to 16,011,331 tons. It again diminished in 1876 to 14,329,578 tons, and in 1877 to 13,938,523 tons, but rose in 1878 to 14,899,175 tons, and in 1879 to 15,447,292 tons. The returns for 1880 have not yet been made up definitely, but it is believed that the output has gone on increasing. The number of hands underground, which was 31,543 in 1845, rose with slight fluctuations to 84,732 in 1875, when it gradually diminished to 82,766 in 1876, 77,163 in 1877, 75,836 in 1878, and 74,338 in 1879. The probability is that with improved means of extraction it will be found to have been still less in 1880. The total number of men employed both underground and also on the surface, which was 110,720 in 1875, decreased to 98,714 in 1879. The number of pits worked has diminished almost regularly from 407 in 1844 to 301, the mean depth increasing, however, from 163 to 392 metres. The number of ventilating fans has increased in a perfectly regular progression from fifteen of 150 horse power in 1841 to 304 of 7,916 horse power in 1880. In the following year the number diminished to 302, though the horse power rose to 6,339 and then went on increasing regularly to 381 of 13,940 horse power in 1879.

Mr. Yenor, who is about severing his connection with the Government Geological Survey of the Dominion after fifteen years' service, has opened a general mining agency in this city. His long experience in connection with the survey, to which he was appointed by the late Sir Wm. K. Logan in 1845, renders him specially adapted for his new departure. He has in turn examined and reported on the mineral deposits of Hastings, Addington, Frontenac, Lanark and Renfrew counties in Eastern Ontario; and Pontiac and Ottawa counties in the Province of Quebec. He has also thoroughly examined the phosphate deposits to the rear of Kingston and neighbourhood of Perth, as well as those more recently discovered in Ottawa county and largely brought to light by himself. Mr. Yenor now offers to establish in Montreal an illustrative collection of the mines and minerals of Canada, if the city will provide a suitable room. He is confident that he could soon gather together as complete a collection of the economic minerals of the country as that recently removed to Ottawa. To this collection hereafter models of mines and furnaces would be added, thus making it as practical as possible. What is wanted in such a centre as Montreal is a true representation of our mineral resources, not shelves lined with rare specimens from our fossiliferous rocks, over which a paleontologist may gloat, but a well arranged assortment of our ores and mining products. Such it is Mr. Yenor's intention to establish should he receive the necessary assistance. - Montreal Gazette.

The shipment of coal from Pictou has commenced this season with renewed energy. During the season of 1881, our coal miners will be called on to exert every energy to supply the demand. We are happy to be able to state that the coal company, the Halifax, is making every exertion to supply its former customers, and will in a few months be raising coal from its new mines on a large scale as it did last year from the Ford and Cape pits. This company has done wonders in developing its previously unworked seams, having now three new mines almost ready to produce some thousand or more tons daily. With the coal companies of Westville, St. Harton, and the Vale exerting every nerve to supply a steady and increasing demand, Pictou county can look to the future with great confidence. An anticipatory and consequently intellectual and moral progress. And yet there are people so demoralized as to ask this country to destroy this hopeful state of affairs, and for party greed and private ambition to deliberately strangle the mines and other industries flourish-

ing so well at present. No one doubts that the National Policy is the cause of prosperity at our coal mines—that the markets given by it are the reasons why our companies are called on to render their efforts. It is true unfortunately that there are persons who in their political hatred and jealousy would sacrifice the N.P. our mines and every budding industry in the land. However not more than a corporal's guard of them can here exist, for the people of this section of the Dominion cannot be so blind or so reckless as to make any mistake in a matter so vital to them. - Montreal.

The New York Engineering and Mining Journal has the following cheering reference to mining in Canada:—The mines in Canada and Newfoundland are at last receiving considerable attention. They are drawing to their aid a large amount of capital, as well as the very necessary adjunct, practical mining experience, for the development of their vast mineral resources, both from England and the United States. The constant transfer of mining estates, noticed in our columns of late, many of which have for years been but monuments of past folly, clearly shows the activity which prevails. Nova Scotia seems to be taking the lead with her enormous rich gold quartz districts, and the alluvial district of the Chaudiere, in the Province of Quebec, is not far behind in the attention it is receiving. Copper mining in the Eastern townships, principally in the neighbourhood of Sherbrooke, Province of Quebec, is an accomplished fact, and is showing satisfactory results. Considerable attention is also being paid to the phosphate of lime properties on either side of the Ottawa river, as well as to asbestos and plumbago. The rich iron deposits of the Laurentian system, stretching from Hull, Province of Quebec, to Madoc, Ontario, and the west, are much sought after and are being practically worked, the ores being shipped to the United States in considerable quantities. North of Belleville, Ontario, gold again comes to the front in the Marston and Madoc districts, where is situated the Canada Consolidated Gold Mining Company's property as well as other smaller concerns. The building of the Canada Pacific Railway will, no doubt, in due time have its effect on the mineral wealth of the north shores of lakes Huron and Superior, and eventually British Columbia. Already one large new company has been organized in England to work the native copper deposits on Michipicooten Island. We will shortly publish in the Engineering and Mining Journal an account, compiled from official sources, of the active mining operations which have been carried on in Canada for the past two years. We heartily wish our northern cousins success in their ventures; and if they only keep well in view the follies of the past, which put back mining in Canada nearly twenty years, we have no doubt they will meet with a fair measure of success.

THE LACK OF CAPITAL.

We have less currency per capita than England or France, while the capacity of our country to absorb and profitably employ capital is immeasurably greater than either England or France. The immense extent of our territory, its almost exhausted undeveloped resources, the active, ambitious character of our people, the more equal diffusion of capital, and the correspondingly greater ability of all classes to obtain the comforts and luxuries of life, and to engage in enterprises for the improvement of their condition, the rapid increase of the country in population and wealth, are all advantageous circumstances over European countries favourable to the safe and profitable employment of capital, and necessitate the use of a large amount. Europe has, perhaps, under present circumstances, more currency than she needs. Whether, if her wealth were as equally distributed as ours, and all her other conditions were as favourable as with us, she would then, with her present amount, have a surplus, is a matter of speculation. That she now has such a surplus is evident from two facts.—

First—The rate of interest, that almost infallible barometer for measurement of the relations between the supply and demand for money, is in Europe generally low.

Second—European capital is constantly seeking investment in other countries. Large amounts of this capital are invested in this country in railroads and other public works, as well as in the securities of our cities, states and nation. We are generally largely the debtor—a circumstance showing, not that we are poor but proving conclusively that we lack active capital. And this lack of our part, this want of available capital, has many manifestations. The active demand for money, the generally high rates of interest which it commands in all parts of the country outside of the financial centres, the fact that our best securities are allowed to go abroad; that there is an indisposition to make permanent investments even with large returns, that short loans are usually preferred to long ones, and that the disposition is to turn capital as readily as possible, are all evidences of a lack of money in our own country rather than of a plethora. Capital here is not seeking employment, but business is seeking capital. In Europe the reverse is the fact. It is true that at times money is

plentiful, particularly in the large cities of the United States, and that the rate of interest is comparatively low. But this condition of the money market is rather the exception and not the rule. At such times money is loaned at low rates on call or short time, that it may be called to meet the active demands of business when required. That scarcity is the rule and plenty the exception are facts never lost sight of in our money market—ruling the hour even when money is most abundant in supply and least in demand. The reason is that our condition is unlike that of the old World, whose wealth has been elaborated and concentrated by ages of labour into gold, silver and other forms of value readily available to the purposes of commerce. The immense wealth of the United States, as yet, is principally in undeveloped forms. The raw material we have in exhaustless abundance. It is in our mines, forests and fertile lands, in our water power and fisheries, and in the intelligent labour whose magic touch is to turn all into gold and furnish the capital now largely drawn from foreign sources. - U.S. Economist.

EARLY DAYS OF STEAM NAVIGATION

A fact indicates the rapidity of the progress in steam navigation. The engineer of the first steamer which ran from St. Louis to New Orleans is now living. He is ninety-two years of age, and resides at St. Louis. William Hayes is his name, and he recently related the incidents of his first trip down the Mississippi, and also of a trip up the Yellowstone. — "When the little steamer Don Juan made her first trip I went out as engineer. People thought she was a great boat in them days, but they wouldn't set much store by her now, unless the Historical Society wanted her. I was proud of her, though, for all that, and to people along the river that trip I guess she was the biggest curiosity they'd ever seen. They used to gather in crowds all along the bank and watch her as far as they could see anything. We were twenty-four days going from New Orleans to St. Louis—a good while for the boats used now-a-days, but you see we had to lay up nights and run only by day time. Our pilot was a fat boatman, and didn't know anything about the river except how to run one of them things. And there was no wood yard then, and we had to cut all our wood at night. We used to cut up 'towheads' wherever we found them, and dead wood of all kinds I was on the Yellowstone, which was the first boat that ever went up the Yellowstone river. She was owned by the American Fur Company. The funniest thing was to see the Indians; they had never seen a steamboat before, and I liked to scare them to death. We had an alligator for a figure head, and a rum 'scape pipe out into the jaws of the 'gator, so that every exhaust need to come out of the jaws. When the Indians never could get away fast enough." - Western paper.

Of the cultivable land in Russia proper about one-third is held by the State, one-fifth by landed proprietors and one-fifth by peasantry.

According to a table prepared by Herr von Schueler, it appears that in 1,000 of the population in 1878 there were 142 more births than deaths in England, 126 in Germany, 82 in Italy, 77 in Austria, and 27 in France; and the four previous years give like results.

The New Jersey Legislature passed a law last winter prohibiting the employment of more than 100 convicts in any one branch of labour in any of the prisons of that State. There are now 330 convicts employed in the Trenton prison making boots and shoes for contractors whose contracts expire July 1st. The effect of this law will be to put a stop to manufacturers employing convict labour in New Jersey, as it is claimed that a force of but 100 workmen or less cannot be operated to advantage at making shoes by machinery. A large manufacturer had offered to pay the state 65 cents a day for the services of 600 convicts to be employed in this business, but the enactment of this most righteous law prevented the bringing of that amount of convict labour into competition with the labour of honest, free citizens.

The Illustrated Scientific News has again reached our editorial table, and right glad we are to welcome the June number, which is unusually full of handsome engravings and interesting and valuable reading matter. Under the management of its new publishers—Messrs. Mann & Co.—the Illustrated Scientific News has risen to the front rank of illustrated journals published in this country, and being issued at a very low price it is within the reach of all who are interested in novelties, science, the useful arts and natural history. The June number contains handsomely illustrated articles on The Chimpanzee and Gorilla, Ostich Farming, New Wireless Locomotive, The Maxim Flro Boat, Perforating Machine, a new and novel Embroidering Frame, the new Electric Milling Purifier, and a number of other handsome illustrations, besides a large number of interesting articles not accompanied by engravings. The subscription price of this handsome paper is \$1.50 per annum, or 15 cents per copy, and can be had at all newsdealers or from publishers, Messrs. Mann & Co., 77 Park Row, New York.

MONTREAL PRICES CURRENT.

Table of Montreal prices current, categorized by Groceries, Coffee, Sugar, Flour, and other commodities. Includes items like Flour, Sugar, Coffee, and various oils.

Table of Montreal prices current, categorized by Drugs and Chemicals, Window Glass, and other commodities. Includes items like Soda Ash, Window Glass, and various chemicals.

Table of Montreal prices current, categorized by Leather, Boots and Shoes, and other commodities. Includes items like Buffalo Sole, Boots, and various leathers.

Table of Montreal prices current, categorized by Weekly Review, Iron and Hardware, and other commodities. Includes items like Iron, Hardware, and various metals.

Textual content providing market analysis and news, including sections on Wool, Leather, and various industrial reports.

DOMINION CARD CLOTHING WORKS. York Street, Dundas. W. R. GRAY, Proprietor.

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LUMBER TRADE.

THE BRITISH MARKETS

(Timber Trades Journal.) London.

The lumber trade in this country has been during the past few days... The weather, however, though not half as much as the land could profitably absorb...

will continue in the building trade... who at present have the responsibility of importing...

Petersburg goods seem stationary; there appeared, however, a disposition on the part of the sellers to keep them up...

We are glad to say that there is every appearance of more business being done...

There is little chance to report in the trade... Of inland futures there seems to be no dearth...

BRITISH TRADE NOTES

(Timber Trades Journal.)

There is nothing noteworthy to record from Higa and other east country ports...

Ask in any quarter you will, the same report of stagnation meet you... The Wiborg shippers are reported as holding out for full quotations...

The Norway flooring houses are carefully watching the market here, and at present seem disinclined to reduce their quotations...

Large parcels of Finland battens, we hear, have been recently sold for July to September shipment to this country at £5 free on board...

It seems that a considerable quantity of teak is coming forward, and we notice that according to last advices nearly 3,000 tons were shipped from Rangoon...

British timber importers are constantly threatened with the "great" continental demand—to stimulate their speculative facilities, we suppose...

STEAMSHIPS AND THE TIMBER TRADE.

The constantly increasing number of steamships in the timber carrying trade will not be wondered at by those who take note of the immense quantity of steam tonnage annually turned out in this country...

American trade is daily gaining momentum and more in importance... The second species of mahogany is described as a tree of vast size growing in the mountainous parts of central America...

MAHOGANY.

Mahogany was used at an early period by the Spaniards for ship building... The doctor's cabinet maker, named Wollaston, was then employed to make a candle box of them...

Over \$30,000 worth of city real estate was sold by auction in Montreal on Saturday, the price being considerably in advance of what was offered a year ago.

one also plentiful at the Bahamas where it grew on the rocks to a great height... The natives of India account it the most lasting timber their country produces...

The Fencion Falls Canal says There is a big jam of logs in Barnet River between Johnston's Rapids and High Falls...

The lumber firms of Flat & Bradley, McArthur & Brose, John H. McCune and others are making extensive shipments of hickory, oak, elm and pine to the old country...

Mr. Malcolm MacArthur planted a garden patch a portion of McDougall's Island, a timber limit under lease to the Kewatin Lumbering Company...

CANADA Marbleized Slate Works HAMILTON, ONT. MARBLE AND MARBLEIZED SLATE MANTELS. J. M. DURWARD Successor to R. Hauger.

R. H. Smith & Co. (Successors to J. FLINT) Sole Manufacturers in the Dominion of Canada of the 'SIMONDS' SAWS ST. CATHARINES, ONT. Sole Manufacturers of the genuine HANSON, IMPROVED DIAMOND, IMPROVED CHAMPION, and the NEW IMPROVED CHAMPION CROSS-CUT SAWS.

THE METAL TRADE.

THE BRITISH MARKETS.

(American Manufactures.)

The Board of Trade Returns issued to-day show that the value of the imports for the month ending April 30 has increased by £5,979,703 when compared with the same month last year...

The steel movement progresses. The Krump Works, originally erected to work the Bank furnaces, are now fit to produce 1,000 tons of steel a week from either Bessemer or Cleveland pigs...

The Scotch raw iron market has been very quiet this week. Business, even of a speculative nature, has been extremely languid, and prices have again fallen...

The Cleveland pig iron trade has had about it no more animation than the Scotch business. Merchants are doing most of the present trading, for makers do not care to offer much iron, believing that they will be repaid for their withholding policy by the improved state of the market...

foreign and coastwise shipments. The figures for the former are 39,405 tons and for the latter 28,489 tons. The make of Cleveland pig during April has been nearly 177,000 tons—40 per cent upon the previous month of 2,000 tons...

In Sheffield the demand for iron is exceedingly quiet, and prices have dropped now to the level of 1878; indeed some makers complain that they are executing contracts at an absolute loss...

At the Atlas and Cyclops Works there is a brisk demand for composite armour plates, chiefly for our own government, though it is well known that several English firms are having plates supplied to them which are intended for foreign vessels...

In galvanized iron there seems to be a lull, for though orders are not difficult to meet with, the limit of price in most cases renders them impracticable for the makers of South Staffordshire iron...

The Birmingham hardware trades show but little sign of improvement as a whole, although in some few departments things look a little better. Demand increases very slowly and the competition for orders is so keen that prices are forced down to an unremunerative level...

The Welsh iron and steel trades are in a rather variable condition. On the whole, there is an inclination to more work, yet in some localities there is a pause in the inflow of orders, while in other localities there is brisk work...

Many of the principal tinplate works of the Swansea district are still at a stand, the strike continuing in all its intensity, and so far as present appearances indicate without prospect of termination. Swansea is the centre of the South Wales tinplate trade, the make of which for year was 6,422,213 boxes...

THE LONDON MARKET.

The following were the closing prices in the London metal market May 7th, 1881:—

Table with columns for metal types (Bessemer rails, English pig, etc.) and their corresponding prices in various units.

UNITED STATES MARKETS.

Pittsburg. Fig Iron.—There was quite an improvement in the demand in the latter part of last tender week, and several sales of large lots were made, but at

slightly reduced prices, as follows: 200 tons gray forge from native ore, \$22.40; 250 tons do, \$22.40; 300 tons do, \$22.40; 350 tons do, \$22.40; 400 tons do, \$22.40; 450 tons do, \$22.40; 500 tons do, \$22.40; 550 tons do, \$22.40; 600 tons do, \$22.40; 650 tons do, \$22.40; 700 tons do, \$22.40; 750 tons do, \$22.40; 800 tons do, \$22.40; 850 tons do, \$22.40; 900 tons do, \$22.40; 950 tons do, \$22.40; 1,000 tons do, \$22.40.

Table titled 'MADE FROM LAKE SUPERIOR ORES' listing prices for Bessemer, Gray Forge, and other iron types.

Table titled 'MADE FROM PENNSYLVANIA AND VIRGINIA ORES' listing prices for Bessemer, Gray Forge, and other iron types.

Table titled 'ANTHRACITE IRONS' listing prices for Bessemer, Gray Forge, and other iron types.

Table titled 'CHARCOAL IRONS' listing prices for Bessemer, Gray Forge, and other iron types.

Manufactured iron.—From some cause or causes prices of manufactured iron are growing weaker. This is believed to be caused by some of the manufacturers accepting low prices in order to get business...

The steel trade of this city also continues to lag, but according to reports a good many are being sold at some other points, doubtless at prices below the card. Concerns that make nothing besides nails are sometimes compelled to sell below the card, or do no business at all...

Steel.—This is about the dullest season of the year in the steel trade, and the present season is no exception to the rule; on the contrary it is unusually dull. We quote as heretofore: Best quality refined cast steel, 11 to 12c per pound...

Scraps.—There is but little, if any change in the condition of this trade as compared with last week. Consumers still pay from \$27 to \$28 for No. 1 wrought, while railway machinery scrap is worth about \$20...

Philadelphia.

Fig Iron.—There is no improvement to note in the pig iron market over the rather unfavourable report forwarded last week. Buyers and sellers entertain different views as to prices and as to the policy to be pursued...

and they are satisfied the requirements will be no less, in fact considerable more during the last half than the first half of the year. Some buyers have offers on the market for instance, to-day an offer of \$20.50 for a certain brand of forged iron delivered, and \$24 for foundry...

Structural Iron.—The demand for all kinds of structural iron has resumed its former activity, and prices, though no higher, are adhered to with a little more uniformity. Large contracts have been entered, and new specifications are coming in...

Plate and Tank.—Orders for a thousand tons or more have been booked at four or five mills in the East, and it looks as though the steady demand of the past few weeks would continue. To secure work from Western competition closer cutting has been going on...

Rails.—The crisis in steel rails seems to have passed. The approaching completion of increased facilities and the fact that the bulk of summer requirements have been provided for, have had the effect of giving prices a downward turn...

Old Rails.—\$26.50 to \$27 are the ruling prices. Buyers are offering the former figures and holding off. Sales are heard of every day on time, and the market may be quoted fairly active.

New York.

Fig Iron.—Some large buyers, it is alleged, have been on the market in quest of foundry iron for delivery during the last half of the year. One statement has it that \$23.50 has been bid for 10,000 tons...

Each reel of paper on which the London morning papers are printed is, on average, forty six inches wide and three and a half miles in length. The combined issues of the Times, Standard, Daily News and Daily Telegraph, if placed end to end, would form a continuous line of nearly six hundred miles...

during the remainder of the year. A still more favourable feature is the absence of probability that prices will reach a point tempting to speculators. The range of prices quoted remains about \$23.50 to \$25 for No. 1 X foundry, \$24 to \$25 for No. 2 X foundry, and \$25 to \$26 for gray forge, according to quantity and brand.

Scotch.—Nearly all the cheap lots a-ri-ving seem to find ready outlets among dealers, and in this respect there is some improvement on the conditions that have prevailed for some time past. In regard to store lots there is nothing new to report, the bulk of supply being in good hands, and the total not really excessive, while comparatively few, indeed any, sales are making at prices below those quoted last week...

English.—On the ordinary brands of Middlesbrough there has been no change of importance. No. 3 at \$18.45 to \$18.50 and No. 4 at \$17.75 to \$17.80, seems about there in the way of attractive offerings, while several orders are on the market for some fair sized lots at prices within a fraction of those named...

Rails.—The announcement that some 35,000 tons American steel had been sold for January, February and March delivery, at prices equivalent to \$24.67 at tide water, has placed the market in very uncertain shape, and for the time being no reliable prices are quotable. It is claimed, however, that no less than \$40,000 would be accepted for either foreign or American deliverable this year...

Old Rails.—The market has undergone no change of importance. There is a very fair demand, with \$26.50 to \$26.60 for rails and \$27 to \$27.50 for double heads generally, but sales are slow owing to the refusal of many holders to accept less than \$27 and \$28 respectively. A 250 ton lot of iron sold at \$28.50 in Baltimore, a 500 ton lot of double heads at \$27.50 here, and a 400 ton lot of iron at \$28.50 to arrive in Philadelphia.

Scrap Iron.—Buyers are wrought scrap seem very few in number at the present time, and some of the few are so much in need of supply that they will pay within one or two dollars of the prices asked. About \$28 to \$29 are the figures held out for by the vendors.

Copper.—Lake Ingot very quiet, with 18 1/2 to 19 1/2 quoted. An Arizona mining company is reported to have contracted to deliver 10,000,000 pounds the current year in a local metal. Sales at prices below that for Lake Ingot at the time of delivery. Manufactured, quoted as follows: Bessemer's copper, over 12 oz. per square ft., 28c; do. 12 oz. to 15 oz., 30c; do. 10 oz. to 12 oz., 32c; do. lighter than 10oz., 34c; circles, segment and pattern sheets less than 24 in. diameter, 31c; do. over 24 in., 34c; locomotive fire box sheets, 31c; sheeting copper over 12 oz. per sq. ft., 26c; do. half, 28c; copper bottoms, 21c.

Lead.—The "bull" movement in domestic pig has collapsed, and now there are few sellers of common at 4 1/2 cents but very few buyers. Manufactured lead quoted as follows: Bar, Co, pipe 6 1/2; sheet, 7c—less 10 per cent discount to the trade—and 10 1/2 for pipe 15; shot, 7 1/2 for drop; 8 1/2 for buck and 9 1/2 for patent chilled—less 1 per cent discount to the trade for small lots, and for large lots 4 per cent.

Niter.—No large sales are making, but there is probably the usual movement of small lots at 6 1/2 to 6 3/4 for Silesian.

Antimony.—A light jobbing business doing at about 14 1/2 to 14 3/4 as to brand.

Foreign iron ore, principally from Spain and Africa, is being brought to this country in large quantities. The Baltimore American tells of some 38,000 tons that had arrived there in ten days, and that having received fifteen shiploads in that time. Several other large consignments are on the way. Between fifty and sixty vessels, mostly steamships, are chartered to arrive loaded with ore and pig iron, one firm having contracted for the delivery within the next thirty to sixty days of 200,000 tons. The steam capacity average from 1,500 to 2,000 tons capacity each. The aggregate of the arrivals of iron ore at Baltimore, says the Journal of Commerce, since January 1st is 120,000 tons, the larger portion of which is forwarded to the Baltimore & Ohio Railroad to interior points of consumption.

INSURANCE MATTERS.

FINANCIAL SUPERVISION

It is a well-known fact that the importance of the supervision of insurance companies...

AN IMPORTANT DECISION

An important insurance case has just been decided by His Honour Judge Mackenzie of Toronto.

COMPETITION IN INSURANCE

Keenest competition is the cry now heard in all branches of business, and the general complaint is that the margin of profit is thereby so reduced that there is little money to be made.

ability and put its trust in it. It also appreciates the fact that insurance is a business of value...

THE NATIONAL FIRE UNDERWRITERS.

The fifteenth annual meeting of the national board of fire underwriters was held in New York, Thursday, President M. Bennett, Jr. in the chair...

The report of the committee on statistics showed that 293 companies received \$61,934,265 in fire and \$3,043,030 in marine and inland premiums in 1890...

POSTAL TIME TABLE.



POST OFFICE, OTTAWA.

ARRIVAL AND DEPARTURE OF MAILS

Table with columns for Mail, Time, and Destination. Includes routes to Montreal, Toronto, and other provinces.

Registered matter must be posted half an hour previously. Office hours from 9 a.m. to 5 p.m. For Savings Bank and Money Order business, 9 a.m. to 4 p.m.

mills, furnaces and distilleries. The board then elected as president D. A. Hald and D. W. C. Scaillon secretary, and adjourned.

RETURNS OF THOSE THAT RETURN NO MORE

No legislative enactments seem to have any appreciable effect on the average number of losses at sea. In point of fact, instead of diminishing, they seem to be increasing...

A system as broad as the country should be organized by which could be recorded, and annually reported, all kinds of serious accidents to persons or property, together with their causes and effects.

At a meeting of the National Board of Fire Underwriters, on Thursday last, some curious and interesting facts were stated regarding the business of fire insurance during the past year.

POSTAL TIME-TABLES.

POST OFFICE, MONTREAL.

MONTEAL, JUNE 21, 1890.

MAILS.

ONTARIO & WESTERN PROVINCES.

Table of mail routes to Ontario and Western Provinces, including destinations like Toronto, Quebec, and Halifax.

LOCAL MAILS.

Table of local mail routes within Montreal, including destinations like St. Charles, St. Laurent, and St. Jerome.

UNITED STATES.

Table of mail routes to the United States, including New York, Boston, and Philadelphia.

GREAT BRITAIN, ETC.

Table of mail routes to Great Britain and other international destinations.

WEST INDIES.

Table of mail routes to the West Indies, including Havana and San Juan.

Postal Car Bags open till 8.45 a.m. and 9.15 p.m.

The Street Boxes are visited at 9.15 a.m., 12.30, and 7.30 p.m.

Registered letters should be posted 15 minutes before the hour of closing ordinary mails, and 30 minutes before closing of Magellan Mails.

were paid. The committee reported that the census tables show the proportion of known incendiary fires to be 15 per cent. of the whole.

The result of the recent census of India are being roughly cast up, nearly all returns being in. According to these, the numbers for the North-West Provinces are 32,400,000, and Oude 11,200,000.

RAILWAY TIME-TABLES.



Canada Central Railway.

CHANGE OF TIME

On and after MONDAY, 21st JUNE, trains will run as follows—

Western Express Train, making close connection with Grand Trunk Railway for Toronto and all points West, arriving in Toronto at 11.30 a.m.

ST. LAWRENCE & OTTAWA RAILWAY.

CHANGE OF TIME

On and after THURSDAY, 10th JUNE, 1890, trains will run as follows—

For the East, West, South and North-East. For the East and West. For both East and West.

Q. M. O. & O. RAILWAY.

CHANGE OF TIME.

COMMENCING on Wednesday, June 27th, 1890, trains will run as follows—

Table with columns for Mixed, Mail, and Express trains, listing departure and arrival times for various routes.

Local trains between Hull and Aylmer. Trains leave Mile End Station seven minutes later.

General Office, 15 Place d'Armes Square. Ticket Office, 13 Place d'Armes and 222 St. James St., Montreal, and opposite the St. Louis Hotel, Quebec.

INTERCOLONIAL RAILWAY.

SUMMER ARRANGEMENTS, commencing 15th June, 1890.

Through Express Passenger Trains run daily (except Sunday) as follows—

Table of summer train schedules, including routes to Halifax, St. John, and other coastal cities.

This train connects at Chaudiere Falls with Grand Trunk Railway for Montreal and St. John. The train to Halifax and St. John runs through to the destination on Sunday.

THE MONEY MARKET.

DOMINION TRADE REGISTER

INDUSTRIAL DIRECTORY. AGRICULTURAL IMPLEMENTS. A. S. WHITTING MANUFACTURING CO. ... WELLAND VALLEY MANUFACTURING CO. ... ANILINE DYES. EMIL THOURET & CO. ... BRASS WORKS. H. N. TADDA CO. ... COTTON BROKERS. M. WRIGHT, Dundas, Ont. ... COTTON MILLS. HUNTER COTTON MILLS CO. ... HAMILTON COTTON MILLS CO. ... EDGE TOOLS. R. T. WILSON, Dundas, Ont. ... ENGINES AND BOILERS. O. C. MORRISON, Hamilton, Ont. ... THOS. WILSON, Dundas, Ont. ... JOHN PRINSON, Toronto, Ont. ... FILES. THOS. GRAHAM, Toronto, Ont. ... FREDRICK HAURCH, Cote St. Paul, Montreal. ... FILK & SPRING CO. ... J. OUTHAM & SON, Dominion Mills Works. ... FURNITURE. OSKAWA CABINET CO. ... AMERICAN BRACKET CO. ... THOS. & CO. ... JAMES WRIGHT & CO. ... GLASSWARE. HAMILTON GLASS CO. ... GLOVE MANUFACTURERS. W. H. STOREY & SON, Acton, Ont. ... HAMMERS. HENRY J. WARREN, Cote St. Paul, Montreal. ... HOOPS, SPOONS AND BENT GOODS. F. W. MORE & SON, Hamilton, Ont. ... IRON WORKS. CANADA SCREW CO. ... COWAN & CO. ... DOMINION BOLT CO. ... H. R. IVRS & CO. ... HAMILTON BRIDGE & TOOL CO. ... MCKENKIN & BERTRAM, Dundas. ... THE OSKAWA MALLEABLE IRON CO. ... OLIMSTED & SON, Hamilton, Ont. ... KNIFE WORKS. THE WHITMAN & BARNES MANUFACTURING CO. ... KNITTING MILLS. S. LENNARD & SON, Dundas. ... LASTS, DIES, ETC. CHAS. CHILDS, Montreal. ... LEATHER BELTING. DOMINION BELT AND HOSE CO. ... ROBIN & SAILER, Montreal. ... BOLTON & SMITH, 167 Mountain St. ... DANIEL BELL & CO. ... DOMINION ORGAN AND PIANO CO. ... R. WARRICK & SON, Toronto. ... CANADA PAPER CO. ... DOMINION PAPER CO. ... JOHN FISHER & SONS, Dundas. ... LINCOLN PAPER MILLS CO. ... W. S. BARBER & BROS. ...

SAW MANUFACTURERS. R. H. SMITH & CO. ... SHURLEY & BIRCHALL, Galt, Ont. ... CANADA SCALE WORKS. ... SPICES, ETC. R. D. VAN DE CAIR & SON, Toronto. ... STEREOTYPES, ENGRAVERS, ETC. F. HIVER & CO. ... STOVES. WM. CLENDINNING, Montreal. ... TELEPHONES. HOLT TELEPHONE CO. ... BUTTER & CHEESE TRIERS. ... WIRE WORKS. B. GREENING & CO. ... MAJOR & GIBB, 636 Craig St. ... TIMOTHY GREENING & SONS, Dundas. ... WOODEN GOODS. C. T. BRANDON & CO. ... J. R. McHARRN, Jr. ... WOOLLEN MANUFACTURERS. J. ROUTH & CO. ... JOHN WARDLAW, Galt. ... WOOLS AND COTTON WARPS. WINANS & CO. ...

PETROLEUM.

THE BRITISH MARKET. ARTHUR BROWN & CO.'S PETROLEUM REPORT. LONDON, May 16th, 1881. Refined Petroleum Oil—The past week has been a repetition of that preceding it, the only exception being that good brands of spot oil have increased in value. ...

PETROLIA WEEKLY OIL REPORT

(Petrolia Advertiser.) The market for crude continues dull. The demand seems about the same as last. Prices \$1.65 to \$1.70. Refined is quoted at 18c to 18 1/2c. Drilling operations are very brisk. Operations are being steadily pushed through at present. Mr Crocker is busy rigging up his wells. ...

advantage of a certificate in case he wishes to hold his oil for a time and get money advanced on it. REFINED OIL MARKET. Petrolia, (Ont.) \$0 17 1/2 per gall. ...

The above are wholesale prices per Imperial gallon at which refined oil is sold by the car load the price per single barrel is generally from 1c to 2c above these figures. The latest refined oil quotations in New York market are as follows— Cargo lots for export, 110 burning test by the baybold tester, 8c. ...

PETROLEUM PRODUCTS. Lubricating \$2 00 @ \$10 00 per bbl. ...

Much having been written of late in regard to this staple, a few remarks in regard to its history may not be ill timed. In the Massachusetts Magazine, published in 1783, occurs the following reference to the existence of oil springs in Pennsylvania:—

THE MONEY MARKET. TORONTO STOCK REPORT. BANKS. Canadian Bank of Commerce. Consolidated. Hamilton Bank. Federal Bank. ...

DEBENTURES, &c. Dominion Gov't stock, 5 per cent. 30th April and 31st Oct. ...

MONTREAL STOCK REPORT.

Table with columns: NAME, L & S, Capital sub-scrib., Capital paid-up, Rest., Dividend last 6 Months, Closing Prices June 1. Includes entries for British North America, Canadian Bank of Commerce, etc.

In 1854 the successful manufacture of oils from coal caused attention to be drawn to the possibility of utilizing these native oils; and the Pennsylvania Oil Company was formed for the purpose of manufacturing the petroleum found at Oil Creek, in Venango County, Penn. ...

THOMAS WILSON, Dundas, Ont. Manufacturer of STATIONARY and PORTABLE Steam Engines, BOILERS and MACHINERY of every description. COTTON MILL CALENDERS, HOSIERY STEAM PRESSERS AND PROPELLER WHEELS, ALL SIZES. THE DOMINION BOLT CO.

139 Front Street East, TORONTO. Machine-Forged Nuts, Hot-Pressed Nuts, Carriage Bolts, best, Plough Bolts, Machine Bolts, Coach Screws, Bolt Ends, R. R. Truck Bolts, Strong Shot Bolts, Boiler Rivets, Bridge Rivets, Roof Bolts, R. R. Spikes, Hilt Bolts, Hilted Bolts, Spring Bolts, Norway Carriage Bolts, Tire Bolts, Bright Rivets, Sine Bolts. The quality of the Iron, Steel of the Bolts, and the style of packing, is SUPERIOR TO THE AVERAGE, and equal to the best Foreign Bolts, Nuts and Screws.

THE DRY GOODS TRADE.

NEW YORK ADVICE.

New York Mercantile Journal) The demand for printed goods from first hands has been somewhat irregular, and the moderate proportions but there has been a fair inquiry for the most desirable styles of fine prints, shirtings, staples, mourning and cravats. The price distribution has been fairly active and some of the large jobbing houses have effected a considerable package distribution of low priced fabrics and shirtings. The advance in printing cloth has given a firm tone to the market, and for the best and most popular makes prices are very strong, though as yet without quotable change. For wide prints, printed lawns, etc., there has been a fair steady demand from first hands, and a moderately active piece distribution. Dress goods have been rather quiet with agents, but jobbers have done a fair business, both in cotton and worsted fabrics. Gingham continues very popular, and the leading styles of dress goods, staple checks, mourning, soeruckers, etc., have been in brisk demand, both from jobbers and agents, the latter being only partially able to meet the request on account of light supplies. The print cloth market has been very active during the past week, and a large business has been done in both "spots" and "futures." Prices have continued to advance, and close strong at current quotations. Little has occurred to change the situation in cotton since our last. Prices are comparatively low, and while it proves difficult to inaugurate and sustain any decided upward movement there is a whole-hearted fear of selling the market off. The tendency, both last week and this, seems upward. We again mark a slight advance in the figures. The average prices of futures as officially reported are as follows: June, 10.67; July, 10.71; August, 10.76; September, 10.44; October, 10.07; November, 9.94; December, 9.98; January, 10.08; February, 10.200. There is little or no increase of business in wool, nor is much probably to be looked for until the market for woollen goods improves, of this, however, there are those who think they see an early prospect. Of the relative state of things in eastern markets and in the producing regions, the Shipping List has this to say: "Consumers are in full possession of the knowledge that our market stands wholly in the interest of buyers, and for this reason they refuse to venture into large operations, being constantly on the alert for a lower range of values. With this the situation here, in the country it is just the contrary. Telegrams from San Francisco report the market active for good wools, with sales of red bluff up to 29 cents, this price having been paid for account of a Boston dealer. In Texas there is yet considerable activity, and extreme prices are being paid. In Kentucky and Indiana the market has not fairly opened, but some wool in both States has been sold at 25@26 cents. The purchases making in the interior do not indicate good judgment on the part of buyers, as wools fully equal to the best thus far obtained can be purchased in this or the Boston market at about the same figure paid the growers, but new wool with many is a luxury, and as such commands high prices." Carpet wools are steadier. Since the free sales not long ago stocks are more concentrated and holders are less disposed to push sales. Cables from London report a better feeling in English markets.

glove finish, that felt and a and Fifth avenue combats are advanced. The export demand continues to increase and the shipment last week was the largest ever made for a like period. The demand for printed goods from first hands has been somewhat irregular, and the moderate proportions but there has been a fair inquiry for the most desirable styles of fine prints, shirtings, staples, mourning and cravats. The price distribution has been fairly active and some of the large jobbing houses have effected a considerable package distribution of low priced fabrics and shirtings. The advance in printing cloth has given a firm tone to the market, and for the best and most popular makes prices are very strong, though as yet without quotable change. For wide prints, printed lawns, etc., there has been a fair steady demand from first hands, and a moderately active piece distribution. Dress goods have been rather quiet with agents, but jobbers have done a fair business, both in cotton and worsted fabrics. Gingham continues very popular, and the leading styles of dress goods, staple checks, mourning, soeruckers, etc., have been in brisk demand, both from jobbers and agents, the latter being only partially able to meet the request on account of light supplies. The print cloth market has been very active during the past week, and a large business has been done in both "spots" and "futures." Prices have continued to advance, and close strong at current quotations. Little has occurred to change the situation in cotton since our last. Prices are comparatively low, and while it proves difficult to inaugurate and sustain any decided upward movement there is a whole-hearted fear of selling the market off. The tendency, both last week and this, seems upward. We again mark a slight advance in the figures. The average prices of futures as officially reported are as follows: June, 10.67; July, 10.71; August, 10.76; September, 10.44; October, 10.07; November, 9.94; December, 9.98; January, 10.08; February, 10.200. There is little or no increase of business in wool, nor is much probably to be looked for until the market for woollen goods improves, of this, however, there are those who think they see an early prospect. Of the relative state of things in eastern markets and in the producing regions, the Shipping List has this to say: "Consumers are in full possession of the knowledge that our market stands wholly in the interest of buyers, and for this reason they refuse to venture into large operations, being constantly on the alert for a lower range of values. With this the situation here, in the country it is just the contrary. Telegrams from San Francisco report the market active for good wools, with sales of red bluff up to 29 cents, this price having been paid for account of a Boston dealer. In Texas there is yet considerable activity, and extreme prices are being paid. In Kentucky and Indiana the market has not fairly opened, but some wool in both States has been sold at 25@26 cents. The purchases making in the interior do not indicate good judgment on the part of buyers, as wools fully equal to the best thus far obtained can be purchased in this or the Boston market at about the same figure paid the growers, but new wool with many is a luxury, and as such commands high prices." Carpet wools are steadier. Since the free sales not long ago stocks are more concentrated and holders are less disposed to push sales. Cables from London report a better feeling in English markets.

There are consumed in the United States annually 1,000,000 ounces of quinine. New Jersey is largely responsible for this, of course. Since the duty on quinine was removed the richest bark has gone to London and the poorest comes here. The quinine extracted from each is the same in quality, but more of the lower alkaloids are found in the poorer grades of bark. The stock in the world's market has increased in five years from 53,134 bales to 110,105 in 1880. This increase is owing largely to the increased popularity of quinine as a tonic, and does not actually show an epidemic of malaria. To-day there is an band in the United States of the world only about four months' supply. Since the duty on quinine was removed it has become an article of speculative trade, whereas formerly it was a simple matter of supply and demand. Owing to this the price of quinine has increased instead of fallen off, as it was expected it would do. This advance has not been felt by the retail buyer. Last year there was a fair, healthful demand, and consumption of quinine in the United States, unequally divided between the east and west, but aggregating 1,000,000 ounces. In the east the consumption was extraordinary. In the west it fell off proportionately. During January and February of this year there was an unusual demand for quinine in this country, but it is considered to be almost entirely speculative. Just at this time dealers are waiting for an expected decline in price from \$2.50 an ounce, which quinine brings at wholesale. If the recent wet season is followed by a period of drought, quinine will hardly be a drug in the market, for just these conditions are necessary to the development of the malaria which makes quinine active. The lower alkaloids extracted from the quinine sell at wholesale at from 25 cents to \$1 an ounce, and are sometimes used in the west. Great quantities, too, of the lowest grade are exported to China, where they command about 50 cents an ounce. It is not denied that the cinchona and other alkaloids thus extracted are to all purposes nearly as useful as quinine, if the buying public but believed it. About 600,000 ounces of cinchona are consumed in the United States. In Europe nothing but the best quinine is consumed.—N. Y. Sun

conception of alterations in the system of measurement, the British tonnage, as compared with previous years, is a great deal less than it would have appeared to be if the old plan of taking the figures had continued. The only other figures for 1879 are those of the United States, which show the tonnage of vessels registered for the foreign trade to be 1,325,510 tons. In that country, however, vessels representing 2,712,221 tons were enrolled for home trade (including lake and river steamers), and are prohibited by law from going on a foreign voyage. The proportion of steam vessels only in the British Empire was in the aggregate 2,949,282 tons and in the United Kingdom alone 2,720,551. The addition to the tonnage of British ships last year amounted to 411,750 tons which applied to all vessels, whether British, foreign or colonial built. The tonnage of vessels built in the United Kingdom during last year was, for home and the colonies, 401,895 tons, for foreign 69,656—total 472,551 tons, an increase over 1878 of 60,921. This amount is the largest on record except those of 1872, when it reached 474,718, and of 1874, when it rose to the extraordinary figure of 603,807 tons. It may be interesting to know that the tonnage of vessels built last year in the United States was 167,400, the lowest since 1859, which, however, was an exceptional year, as the ten preceding years was largely in excess of it. The return further shows that trade with British possessions was conducted last year in British ships of 8,384,505 tons, and in foreign ships of 1,107,542 with British North America in 2,412,458 British tonnage, and 670,847 foreign, and with the United States in 6,939,245 British, 612,834 United States, and 1,441,952 of other countries. Of the number of ships which cleared under the Passengers Acts from the United Kingdom to ports out of Europe, 704 of 1,550,857 tons were British, and 35 of 69,059 tons foreign. The total number of passengers carried was—in British ships 285,863, and in foreign 12,494. The figures, as to passengers, show in all respects a marked increase over those of 1879.—American Ship.

ENGLAND'S COMMERCIAL CRISIS.

The Preston Election.

London, May 21.—Although as I called you yesterday, the return of Mr Eckroyd, the Conservative candidate for Preston, over Mr. Henry Yates Thompson, of the Pall Mall Gazette, who represented the ultra-radical section of the Liberal party, does not affect the strength of parties in the House, it has a novel and peculiar significance. Mr. Eckroyd is a cotton spinner—the Eckroyds and Ackroyds of Lancashire have been captains of industry for several generations—and he came out on a platform of retaliatory duties or reciprocity of tariffs. The agitation on that subject, of which my cable despatches have kept you well informed, is led in Parliament at least by Mr. David MacIver, the member for Birkenhead, who is well known on your side of the water from his former connection with the firm of D. & C. M. & Co., managing owners of the Cunard line. Mr. MacIver has brought up the question in the House once or twice only, to be summarily snuffed out by the taunt that he could not find a second of his way of thinking. Mr. Eckroyd, however, will be an able combatant. Thoroughly identified, as I have said, with the great manufacturing interests of Lancashire, his return by a majority of over 1,800 votes is substantial evidence of the growth of the new movement, which, if there is any truth in the old legend that "as goes Lancaster so goes England," will make itself felt and respected at the polls wherever a manufacturing constituency is opened. This victory was achieved, too, in spite of the large Irish vote being cast for Mr. Thompson, out of gratitude for the Pall Mall's opposition to the Coercion Act. Mr. Bright, like the trusty old war horse that he is, sniffed the battle from afar. The debate on the Irish Land Bill kept him in the House, but he delayed the constituency with letters addressed to the leading Liberals of Preston, calling upon them to rebuke the reactionary policy of which Mr. Eckroyd was the champion. Mr. Bright does not stop to argue with the retaliatory people. He simply sets them down as the heathen of political economy, and advocates their extermination as a matter of faith and morals. "Thank God," cried the French bigot after a Huguenot massacre, "there are no heretics here!" and Mr. Bright is full of similarly intolerant derision to trade orthodox. Mr. Thompson, the Liberal candidate, came out as a Bright Free Trader, and many old veterans of the Corn Law League went to his aid, but the alibi-boloth of Manchester has lost its potency. What is the use of quoting Adam Smith, Bastiat or Cobden to a lot of cotton operatives who know from bitter personal experience that the trade of England and the bread and butter of the workmen are threatened by the system which throws open the home market to nations which bar their doors against British goods? Mr. Eckroyd and his friends, in reply to the stock aphorisms of the Free Trade speakers, simply pointed out to the gangs of operatives who walked the streets because of "short time," at the mills, and called upon the manufacturers to explain why "full time" has become a rarity in Lancashire. It was a question between theory and experience, between the doctrines and the workmen, and the latter swept the constituency. Mr. Bright would not be convinced, though one rose from the dead, of the fact that England is tiring of one-sided Free Trade, but unless the signs of the times are misleading the triumph of the MacIver party at Preston is only the precursor of a national victory before very long. The Times, in its city article on Friday, reluctantly admits "that it is be-

coming necessary in this country to fight the whole battle of Free Trade over again," and the other day the Glasgow Herald frankly acknowledged that even in Scotland, the fortress of the Liberal party, the working class and manufacturers are beginning to discredit Free Trade, or rather that Free Trade which puts England against nations armed with high tariffs and expected her to win. Even Mr. Gladstone is beginning to waver. On Thursday a deputation of sugar refiners waited upon him and stated their case, viz that the almost closed colonial market on the Clyde. It will be recalled that a commission appointed to consider the subject some months ago reported in favour of countervailing duties. This report although made by men above the suspicion of being actuated by selfish motives, was ridiculed by the Free Traders, but it is now being discussed with respectful attention. In reply to the deputation the Premier made some remarks which have been interpreted as implying that he is open to a change of opinion. France is not the only nation on whose exports the agitators propose to clap retaliatory duties, the feeling against the free admission of American goods is even more intense. Because in many lines your competition is more keenly felt than that of the protected French artisan, and there is widespread belief, moreover, that to the example of the United States is also the reactionary policy which now prevails on the Continent. The younger Liberals, those who are not personally identified with the Corn Law League, are inclined to break away from the Free Trade tradition and to join if not to lead the new movement. The cry of Mr. Thompson's friends at Preston was, "Vote for cheap bread!" but the magic of the old slogan was lost upon workmen to whom "cheapness" means nothing when they do not earn enough to be able to distinguish it from "dearness." "If you could buy bread for tuppence a loaf," said the Yankos to the Irish emigrant, "why did you come to New York?" "Because," replied Pat, and there is a whole volume of political economy in the answer, "because I could not get the tuppence." The Ministerial papers this morning are all silent on the great defeat at Preston. The Tory Globe of this evening, however, comes out flatly for retaliation. "The patience of the English working classes," says the Globe, "is fairly worn out, and come what may, they insist on receiving fair treatment in the matter of reciprocal commerce."—New York World's Cable Letter

BRITISH AND FOREIGN MERCHANT SHIPPING STATISTICS.

The annual return of the British Board of Trade on this subject consists of a variety of statistics under special heads. The tonnage of sailing and steam vessels—with cargoes and in ballast—entered and cleared at ports in the United Kingdom during last year was 56,738,063 tons, of which British ships contributed 41,348,984 tons, the remainder 15,389,079 being distributed amongst twelve nationalities, and others not specifically named. Of these, Norwegian heads the list, with German second, French third and Swedish fourth. The lowest is Austria, which is represented by only 329,232 tons. As compared with 1879, the total of all nationalities shows an increase of 6,020,813 tons, British ships alone having increased to the extent of 6,914,993 tons. Of steam vessels the total which entered and cleared "with cargoes and in ballast" represented 37,243,942 tons, British ships 30,976,037 tons of the total, Germany coming next, then France, Holland, Sweden, Denmark, and so on. It is worthy of note that, whereas Norway utilised British ports to the extent of 4,051,768 tons, only 201,297 were represented by steamers. The steam tonnage of Austria reached 601 tons. On a comparison with 1879 it is found that the steam tonnage of all nations increased in the aggregate by 4,236,928 tons, of which British claimed 3,471,020; there was a decrease in Austrian, Dutch and Italian. Tables are also given as to the sailing and steam tonnage "with cargoes only" entered and cleared, in which some interesting variations are to be noted. The total amount was 49,678,950 tons, an increase over 1879 of 5,730,249, Great Britain leading the way with an increase of 3,751,143 tons. But whereas in the table which includes "in ballast," Norway was nearly 1,000,000 tons in advance of Germany, in that "with cargoes only" the difference is reduced to 337,000, Swedish coming next, then Danish, French, Dutch, etc. Of the total vessels "with cargoes only" steamers were represented by 37,124,056 tons, an increase of 3,863,305, of which Great Britain contributed 27,052,131 tons, an increase of 3,217,962, all other nations advancing to the extent of only 450,343 tons. It may be remarked that the United States occupied the eighth place in the list of sailing and steam vessels "with cargo and in ballast," and the tenth in the list of steamers alone under the same designation; and in the aggregate table "with cargoes only" it was ninth, and in steamers alone under this designation it was eighth, Norway being only 300 tons behind. In the table giving the tonnage of the principal maritime countries it is shown that in 1880 the tonnage of the British Empire (including the United Kingdom) was 3,447,171 tons, and of the United Kingdom alone 6,519,772, but it is explained in a foot note that in consequence of steps taken to clear the British Register in and since 1854, and in

conception of alterations in the system of measurement, the British tonnage, as compared with previous years, is a great deal less than it would have appeared to be if the old plan of taking the figures had continued. The only other figures for 1879 are those of the United States, which show the tonnage of vessels registered for the foreign trade to be 1,325,510 tons. In that country, however, vessels representing 2,712,221 tons were enrolled for home trade (including lake and river steamers), and are prohibited by law from going on a foreign voyage. The proportion of steam vessels only in the British Empire was in the aggregate 2,949,282 tons and in the United Kingdom alone 2,720,551. The addition to the tonnage of British ships last year amounted to 411,750 tons which applied to all vessels, whether British, foreign or colonial built. The tonnage of vessels built in the United Kingdom during last year was, for home and the colonies, 401,895 tons, for foreign 69,656—total 472,551 tons, an increase over 1878 of 60,921. This amount is the largest on record except those of 1872, when it reached 474,718, and of 1874, when it rose to the extraordinary figure of 603,807 tons. It may be interesting to know that the tonnage of vessels built last year in the United States was 167,400, the lowest since 1859, which, however, was an exceptional year, as the ten preceding years was largely in excess of it. The return further shows that trade with British possessions was conducted last year in British ships of 8,384,505 tons, and in foreign ships of 1,107,542 with British North America in 2,412,458 British tonnage, and 670,847 foreign, and with the United States in 6,939,245 British, 612,834 United States, and 1,441,952 of other countries. Of the number of ships which cleared under the Passengers Acts from the United Kingdom to ports out of Europe, 704 of 1,550,857 tons were British, and 35 of 69,059 tons foreign. The total number of passengers carried was—in British ships 285,863, and in foreign 12,494. The figures, as to passengers, show in all respects a marked increase over those of 1879.—American Ship.

ALL ABOUT QUININE.

There are consumed in the United States annually 1,000,000 ounces of quinine. New Jersey is largely responsible for this, of course. Since the duty on quinine was removed the richest bark has gone to London and the poorest comes here. The quinine extracted from each is the same in quality, but more of the lower alkaloids are found in the poorer grades of bark. The stock in the world's market has increased in five years from 53,134 bales to 110,105 in 1880. This increase is owing largely to the increased popularity of quinine as a tonic, and does not actually show an epidemic of malaria. To-day there is an band in the United States of the world only about four months' supply. Since the duty on quinine was removed it has become an article of speculative trade, whereas formerly it was a simple matter of supply and demand. Owing to this the price of quinine has increased instead of fallen off, as it was expected it would do. This advance has not been felt by the retail buyer. Last year there was a fair, healthful demand, and consumption of quinine in the United States, unequally divided between the east and west, but aggregating 1,000,000 ounces. In the east the consumption was extraordinary. In the west it fell off proportionately. During January and February of this year there was an unusual demand for quinine in this country, but it is considered to be almost entirely speculative. Just at this time dealers are waiting for an expected decline in price from \$2.50 an ounce, which quinine brings at wholesale. If the recent wet season is followed by a period of drought, quinine will hardly be a drug in the market, for just these conditions are necessary to the development of the malaria which makes quinine active. The lower alkaloids extracted from the quinine sell at wholesale at from 25 cents to \$1 an ounce, and are sometimes used in the west. Great quantities, too, of the lowest grade are exported to China, where they command about 50 cents an ounce. It is not denied that the cinchona and other alkaloids thus extracted are to all purposes nearly as useful as quinine, if the buying public but believed it. About 600,000 ounces of cinchona are consumed in the United States. In Europe nothing but the best quinine is consumed.—N. Y. Sun

Concerning the value of autographs, a letter written by George Washington will sell for \$25, but one by John Adams may be had for \$10. Benjamin Franklin's letters bring \$10 and \$15 each. A letter written by Robert Fulton is worth \$4. Autograph letters by the signers range from \$2.50 to \$40 or \$50. Andrew Johnson, the rarest signature of the presidents, sells for \$10. A fine signature of John Hancock may be had for \$3. Benedict Arnold's autograph is quoted at \$8; Patrick Henry's brings \$2; Gen Robert Howe's \$15; and one of Jefferson may be had for \$4; that of Rip Van Dan, Colonial Governor of New York, sells for \$2. Among the autographs of literary men, Edmund Burke commands \$5, Carlyle \$2.50; Colly Cibber \$10; Crabbe \$3; Emerson 75 cents; Hawthorne \$1.50; Thomas Hood \$1; Washington Irving \$5; Lamb \$8; Longfellow \$1.50; Moore \$4; Poe \$12; Tennyson \$4; Thackeray \$3.

BOSTON BOOT AND SHOE MARKET.

The boot and shoe market, in all the various lines of seasonable goods, shows considerable activity, and during the past week the jobbers who are here have placed a great many large orders. Manufacturers, while they feel that they must advance prices at no distant day if leather continues to advance, are very reluctant to do so now, and as most of them have covered what orders they have taken thus far with leather, they are accepting contracts from their regular customers at the same prices named on early samples. In fact it is next to an impossibility for them to obtain any advance over sample prices. Those who have not purchased leather and have taken orders based on prices of two or more weeks ago do not feel very cheerful over the advance, and others who have sufficient leather for their immediate wants are rather inclined to hold back. The market is firm and steady. A legitimate and healthy condition of things exists, and the market is devoid of excitement save in sole leather. The heavy goods thus far have monopolised the attention of jobbers, and they are now turning their steps toward the finer goods. In every department there is a better feeling, for the valid reason that the season is far enough advanced to expect a brisk trade. The shipments have about reached their lowest point, and fall short of last week's figures about 600 cases. There have been forwarded since last week 21,690 cases, making a total since January 1 of 878,166 cases, an increase over any preceding of 30,416 cases.—Shoe and Leather Reporter

SOME OF THE ANCIENT USES OF SKINS AND LEATHER

In these days of steel pens and note paper but little thought is given to the fact that our trade was among the first to provide man with an article whereon he could inscribe the history of his times and hand it down intact and well pre-

Buyers of woollen goods, both clothiers and distributors, continue to a large extent to limit their purchases to early wools. This policy, however, brings them into the market the oftener, and makes them more urgent for the immediate delivery of what they buy. This feeling, if not much improved, seems certainly to tend in favour of mere business and better prices. Many of the more popular makes of goods are fully sold up to or ahead of production, and prices are very fully sustained. In spring goods, however, cassimeres, etc., the business being of the closing out order, prices are not so firm. Heavy fancy cassimeres have been taken freely. Beaver and fancy backed overcoatings have also been taken in satisfactory amounts. Black and coloured cloths have a fair inquiry, chiefly for the better qualities. Indigo blue flannel suitings are more inquired for than heretofore. Flannels have also been in some request and improved takings by the shirt trade, and a fair volume of sales are reported. Kentucky jeans are quiet, with some attention from a few buyers for the finer qualities, without, however, any results of importance. Small transactions are reported in a few makes of satinetts, but the general demand is sluggish. For blankets there is some inquiry from a few early buyers, while supplies are light and prices steady, with a favourable outlook, but actual business is small. Carpets rule quiet at first hands, and there is still a fair business among jobbers. A marked improvement is noticeable in the cotton goods market since our last report. It is now generally admitted that stocks of all the best and most desirable makes of brown, bleached and coloured cottons are unusually light for this period of the season. This fact, in connection with the large and increasing demand for export, has given renewed confidence to package buyers. While as yet there have been few quotable changes in prices, there is an increased firmness, and the tendency is towards higher values. The improvement has extended to the lower grades of cotton goods, which have moved with more freedom than for many weeks past. The jobbing trade has been quiet but steady, and of fair aggregate proportions, with prices generally well sustained. Corsot jeans and satteens have had a fair distribution in modern sized parcels, and rule steady and unchanged. Cheviots are unchanged, and the most popular makes have sold to a fair extent. Brown drills are in moderate supply with agents, and with a fair demand prices rule firm. Stark drills have been advanced. Ducks and donlins have had a fair distribution, both on new and previous orders, and prices are firm. Ticklers are in good request at firm prices. Grain bags have been in good demand both from agents and jobbers' hands. Quilts have ruled quiet, but the best makes of croquet and Marsellios styles are sold ahead of production, and values remain very steady. Glazed cambrics, Silses, etc., are in moderate request, but with light stocks are firmly held. Slators

SCIENTIFIC AND PRACTICAL.

ADVANTAGES OF BRONZE PISTONS.

Design and Work states that the Lords of the Admiralty have ordered the Columbus now in course of construction at Portsmouth, to be fitted with a manganese bronze propeller in place of the one of gun metal originally ordered. This decision has been arrived at after a series of comparative experiments made with the two metals in the presence of Mr. Farquharson, of the Admiralty, at the works of Messrs. Massey, Sons & Field, the contractors for the engines.

STRENGTH OF BRONZES.

In a paper lately read before the American Society of Civil Engineers, Professor R. H. Thurston describes a new bronze alloy of maximum strength. The properties of this alloy were ascertained by Professor Thurston in the course of his examination in the mechanical laboratory of the Stevens Institute of Technology of a series of thirty-six alloys of copper, tin and zinc, in which the proportions of the copper were varied from 10 to 80 per cent; of the tin, from 10 to 20 per cent, and of the zinc, from 10 to 70 per cent.

SOUNDS IN THE TELEPHONE.

Having remarked that telephones transmit along with speech sounds of an unknown origin, the author has undertaken experiments in order to find out if the causes of these sounds are not those which oppose telephonic communication at great distances. To eliminate all possible sources of error, the following arrangement was adopted. A line of twenty meters was laid on the floor of several rooms, all the doors of communication being closed. It was connected at one end to a pair of telephones by means of flexible conductors, designed to arrest sounds which might communicate themselves mechanically along the metal to the telephones.

cause may occasion such trouble, since these lines are formed of pieces of iron wire connected to each other and to the stretchers by means of wires of less perfect, which are in a state of constant agitation. But this cause of failure may be removed by soldering the wires instead of tying them. Unfortunately there is another cause, the currents due to the influence of the vibrations themselves. To verify this hypothesis, the author placed in the circuit, at the end opposite the telephones, a rod of iron 1.50 meters in length, and connected to the system by supple conductors. This rod was struck sometimes transversely and sometimes longitudinally by a hammer. The sounds occasioned by the blows were distinctly reproduced by the telephones with their peculiar characters. This experiment if repeated with copper or brass rods, gave merely negative results. It seems that the phenomenon is only produced as an effect of the vibrations occasioned in the wire. Future experiments must decide whether it is due to a molecular change which the metal undergoes or to a peculiar action. If, as it is probable, the vibrations caused by the wind act upon the lines of iron wires like the blows upon a rod, it appears difficult to correspond at great distances with the existing means of transmission, till a method has been found of causing the telephones to speak by the aid of electric action so powerful that the currents arising in the line itself cease to be an appreciable cause of disturbance.

SCIENTIFIC PROGRESS IN BRITISH SHIPBUILDING.

British shipbuilding has made more advances during the last half century, according to the Westminster Review, than in the thousand years preceding it. Seventy years ago the science of naval architecture had no home in England, forty years ago it had no official recognition, and was but little studied by the great majority of British shipbuilders. Twenty years only have passed since the scattered adherents of the scientific method formed themselves into a professional association, and initiated a movement that has placed the country at the head of the maritime nations in both the science and practice of shipbuilding. The progress already made is great; and there is reason to hope that even greater progress will be possible.

NOVELTY IN SAFETY-LAMPS.

At the recent meeting of the members of the South Wales Institute of Engineers an interesting paper "On Patent Safety-Lamps and the Prevention of Explosions in Collieries" was read by Mr. William Crossley, M.I.M.E. The constant and increasing number of explosions in mines, consequent loss of life, damage to property, and their attendant evils, has, he says, been to him the subject of much thought and consideration, resulting in the working out of a form of safety-lamp which will, he feels confident, ensure the attainment of the objects desired, and at the same time increase the lighting power. The principle of the lamp and the method of supplying it with air are both very old, but in matters of detail which make the difference between failure and success, the flame is surrounded by two concentric cylinders between which air circulates, and it is also proposed to supply the lamps with atmospheric air through pipes. He considers that the safety-lamp should be worked with atmospheric air, extraneous to the colliery itself, which can be readily done by distributing air pipes through the colliery main roads and workings, exactly in the same manner in which gas pipes are now distributed through the various streets of towns and throughout houses. The pressure required is about equal to that of gas in an ordinary supply pipe, and it can be readily supplied from the gasholder, which is in turn kept full by means of a fan or other blowing appliance.

The lamp itself is entirely closed to the outside atmosphere, except the outlets at the top for the escape of the products of combustion. It consists of an ordinary or other suitable oil vessel and wick; a closed air reservoir which is used for distributing the air to the parts required for keeping up combustion, and for keeping the lamp itself cool; and further, of two glass cylinders arranged concentrically with small air spaces between them. The air for combustion passes up through the inner glass cylinder. There is also a current of air between the outer and inner glass cylinders which keeps the outer one cool; and mixing with the products of combustion from the inner one also cools them to a point at which they may safely be allowed to escape. His suggestion also includes taking the lamps from the place where they are cleaned and prepared to the working parts of the colliery, which he proposes to effect by the aid of a tank boat, which is so arranged as to contain atmospheric air at a high pressure—(say) 200 to 300 lbs per square inch. This boiler is fitted with small stop-cocks, and capable of carrying at least 100 lamps at a time, for distribution in the workings. The lamps can also be arranged to burn in the same manner as an ordinary safety-lamp during the time it is being carried from the place where it is prepared to the place where it is to be fixed for use; but he prefers to make the matter doubly secure by having no such provision, and by working it with compressed air from the boiler, as suggested.

lamp. This high luminosity can be safely assumed with this lamp, because it is possible to reduce the temperature of the escaping gases to any required extent by increasing the quantity of air forced through. Many explosions have taken place—notably that at the Rhoads Valley, with a loss of 178 lives—through the opening of the Davy lamp to produce more light, and he has, he says, in his lamp secured the maximum light-giving power. The additional cost consequent upon the introduction of his lamp in place of the ordinary safety-lamp would be from £500 to £800, but this sum forms only a comparatively small item in the large expenditure necessary in a colliery of any importance.—London Mining Journal.

GYMNASTICS AS A CURE OF DISEASE.

Physical vigor is the basis of all moral and bodily welfare, and a chief condition of permanent health. Like manly strength and female purity, gymnastics and temperance should go hand in hand. An effeminate man is half sick; without the stimulus of physical exercise, the complex organism of the human body is liable to disorders which abstinence and chastity can only partly counteract. By increasing the action of the circulatory system, athletic sports promote the elimination of effete matter and quicken all the vital processes till languor and dyspepsia disappear like rust from a busy ploughshare. "When I reflect on the immunity of hard-working people from the effects of wrong and over-feeding," says Dr. Boethava, "I cannot help thinking that most of our fashionable diseases might be cured mechanically instead of chemically, by climbing a bitterwood tree or chopping it down, if you like, rather than swallowing a decoction of its disgusting leaves.

The medical philosopher, Aesclepiades, Pliny tells us, had found that health could be preserved, and if lost restored, by physical exercise alone, and not only discarded the use of internal remedies, but made public declaration that he would forfeit all claim to the title of a physician if he should ever fall sick or die but by violence or extreme old age. Aesclepiades kept his word, for he lived upward of a century and died from the effects of an accident. He used to prescribe a course of gymnastics for every form of bodily ailment, and the same physio might be successfully applied to certain moral disorders, incontinence, for instance, and the incipient stages of the alcoholic habit. It would be a remedy ad principium, curing the symptoms by removing the cause, for some of the besetting vices of youth can with certainty be ascribed to an excess of that potential energy which finds no outlet in the functions of our sedentary mode of life. In large cities parents owe their children a provision for a frequent opportunity of active exercise, as we owe them antiseptic diet in a malarious climate.—Dr. Felix L. Oswald, in Popular Science Monthly.

John Grison, who undertook to fast 45 days at Chicago, shows a loss of 11 pounds after 72 hours fasting.

The receipts at Halifax (N.S.) Custom House during May amounted to \$115,609, an increase over receipts in May, 1880, of \$23,504. Island Revenue receipts amounted to \$20,881, an increase of \$961.

It is stated in Chicago that there is a sharp war between Vanderbilt and the Lake Shore and the New York Central on one side, and Gould with the Wabash and system on the other. The aggressor was Gould, who withdrew the eastern freight from Vanderbilt's line and sent it over other roads to Chicago. Vanderbilt retaliated by sending freight for southwestern points via Bloomington, Chicago and Alton, as chief gainer by the fight.

An interesting chancery case was decided in the Court of Chancery, at Belleville yesterday. It was that of the wife of David Robbin, of Sidney, to whom he was married 17 years ago, but with whom he had not lived. The parties were married by a Justice of the Peace in the United States, and defendant alleged that a conspiracy on the part of the woman and her friends, who had, he stated, got him drunk, and had the ceremony performed when he was in that condition.

A ballist went to serve writs on the property of Hutchins, near Mallow, county Cork, on Saturday. Some women seized him, destroyed the writs, stripped him naked and threw him into the river. They caught him as he came out and thrashed him with furze. The man, more dead than alive, was then tarred, feathered and hunted out of the county. A large party of police went from Mallow to rescue him, but was unable to find him. Elaborate preparations are being made to renew the attempt to carry out New Pallas evictions.

Mr. A. Larmer, of Montreal, is making extensive shipments of phosphate from this section, his works being under the superintendence of Mr. G. S. Peters, of Kingston. Mr. Larmer has purchased from the mine in Templeton, owned by Mr. Mark Haldane, of Aymer, 600 tons, which is being shipped from Ironsides to Montreal, 200 tons of which left by barge on Tuesday. At East Templeton, chiefly purchased from the McLaron mines, Mr. Larmer has nearly 2,000 tons, part of which will be shipped east, and part west to Chicago. Last week Mr. Larmer shipped to the latter port 500 tons by the schooner Trade of America. The finest quality of the phosphate goes to Europe, where it commands the highest price, and the No. 2 is shipped to the west. The best quality of the ore is now worth \$16.50 per ton.—Citizen.

MISCELLANEOUS.

TELEGRAPH LINES IN THE NORTH WEST.

Mr R. S. Tupper, inspector of Government telegraph lines, has returned to the city from an official trip to the Rocky Mountains.

The St. Paul Pioneer Press contains the following information concerning his movements.

Mr R. S. Tupper, inspector of telegraph lines for the Government of Canada, who has just returned from one of his expeditions across British territory to the Rocky Mountains, gives some interesting descriptions of that almost unknown region of the great North West. The Dominion Government operates a line of telegraph entirely distinct from that of the Canadian Pacific Railway. From Thunder Bay to Winnipeg the lines coincide; but from that point to the Rocky Mountains they diverge, and the public line serves the double purpose of effective competition, and of keeping up a communication with the districts settled, but not having the advantages of railroads. This line is already constructed to Edmonton, a point 925 miles from Winnipeg. Mr. Tupper is very enthusiastic upon the merits of the vast country which he believes is designated to be the future garden of America. His journey of 132 days was performed in the severest part of the winter the thermometer reaching as low as fifty-two degrees below zero. Yet he reports no suffering from the cold and no inconvenience in spending the nights in his tent. The stretch of country westward to the Rockies is not to be judged by Manitoba Lake, that the soil is deep and rich, but the country is rolling prairie with occasional higher elevation. Open country and timber land alternate, the largest prairie in the whole reach being but thirty miles wide. The whole is abundantly watered. The Upper and Lower Saskatchewan, rising within a few miles of each other, diverge to the extent of 100 miles, and then approach and unite some 700 miles from their source. The magnificent Peace River is navigable for boats drawing six feet of water a distance of 1,800 miles. All this region, each division of which is from six to eight times the size of Manitoba, Mr. Tupper describes as exceedingly fertile and blessed with a climate which differs from that of the north-western States as theirs does from that of New England. Only six inches of snow fell last winter. There was so little rain, and the transition from summer to winter was so sudden, that the grass did not rot, and horses and cattle could obtain abundant pasturage during the severest weather. In the most sparsely settled portions you travel not more than seventy-five miles, without coming upon habitations. Edmonton is a settlement numbering from 2,000 to 3,000, situated on the upper Saskatchewan; on the third and last step of the prairie, as it ascends to the foothills of the mountain range, it is described as a busy little town where the telegraph receipts last year were \$800. It is on the proposed line of the Canadian Pacific, but the most interesting point about it is that in this vicinity is an immense coal field. This promises to be of the highest importance to the whole North West, as an essential factor in rapid development. Mr. Tupper brought back with him a specimen of this coal. It is lignite of a purity rarely seen. Very faint traces of sulphur can be detected in it, and its heating qualities are said to be little inferior to anthracite. It is of the same class as the Souda coal, near the line of the Northern Pacific, which was tested with such satisfactory results at Paterson, N.J. This specimen was taken from an outcropping ledge, but over an area of 200 miles square the principal streams cut coal veins. This would indicate a supply sufficient for centuries. It is possible that the resources and attractions of this region are overrated by enthusiasm and patriotism; but there seems to be no reason to doubt that here, in the heart of the continent, are waiting homes for millions, and thousands of square miles of most productive soil. To us of the North West this cannot fail to be interesting, promising, at it does, with the completion of the Canadian Pacific, the birth of a new dominion, whose wealth and commerce will be but an extension of our own.

THE RIVERS, STREAMS AND CREEKS BILL.

The following is the text of report of the late Minister of Justice recommending the disallowance of an Ontario Act of last session:—

"Application for the disallowance of this Act has been made by Mr. Peter McLaren, of the town of Perth, lumber manufacturer, who is ground in a suit that the Act in question deprives him of vested private rights without compensation, and practically reverses the decision of the Court of Chancery in a case brought by him against one Caldwell, whereby Mr. McLaren's exclusive right to the use of improvements erected by him or those through whom he claims on certain streams in the Province of Ontario was established by a decree of the court.

RAILWAY MEETING AT LANCASTER.

Lancaster, 30th.—The meeting of the Directors of the Canada and Atlantic Railway took place this afternoon. Present—K. McGillivray, President; A. McNabb and W. O. Perley, Vice-Presidents; Mayor Mackintosh, J. R. Booth, R. S. McDonald, Hon. D. A. Macdonald, O. O. Noble, A. O. Helmer, P. Kennedy, J. A. McArthur, Duncan A. McDonald, J. Fraser. The Directors absent were Messrs. J. S. Casselman and John Rankin.

The President submitted a report stating that satisfactory bonds had been secured from the contractor, Mr. Lindsay, and that the work was progressing favourably. A Committee was appointed to audit the accounts, which were passed.

The Secretary, Mr. Macdougall, who resigned, received \$1,200 for his two years' services, and \$1,000 were paid to Mr. Tiffany for legal services.

At a meeting of the shareholders Messrs. Perley and Booth retired from the Board and were replaced by Messrs. Patton and McLeod Stewart. A by-law was introduced to remove the Directors' meetings and all the company's business to Ottawa. A lengthy discussion ensued, Hon. D. A. Macdonald expressing his opinion that action should be postponed. Mr. Mackintosh said that three months ago when the by-law was first introduced those who now asked for postponement expressed their willingness to have it settled at the regular annual meeting. This being so, he saw no reason for a change of base. Subsequently the by-law was read and adopted.

The following officers were then elected.—President, K. McGillivray; Vice-President, A. McNabb; Secretary-Treasurer, R. H. Tiffany; Solicitor, R. H. Tiffany; Auditors, James Lindsay, of Ottawa, and John Simpson, of Alexandria.

After the transaction of some routine business the Board adjourned.

PURE SHORTHORNS.

At a meeting of cattle-breeders of Toronto, held on Monday, the following resolutions were adopted:—"Whereas the breeding of pure shorthorns has become an interest of Canada, and whereas such interest would be best advanced through an organization of breeders, and whereas it is desirable that a public record of pedigrees of shorthorns should be kept, having a standard not lower than that adopted in the United States and England, therefore resolved, that in the opinion of this meeting such organization should be formed with as little delay as possible, having for its object the publication of a herd-book, and for any other purpose deemed in the interest of breeders of shorthorns; second, that in order to carry out the above view, the chairman and secretary of this meeting be instructed to issue a circular calling a larger meeting at the Walker House on Thursday, June 2nd, at 11 a.m., of breeders who may be favourable to the formation of such society, to consider the best means to be adopted in order to carry out the object."

The fourth section empowers the Lieutenant-Governor in-Council to fix the amount which any person entitled to sue under the Act shall be at liberty to charge on the logs.

The fifth section extends the previous provisions of the Act to all such constructions and improvements as may hereafter have been made, as well as those heretofore constructed.

The sixth section gives to all persons digging saw logs, &c., down the streams, the right to go along the banks.

The seventh, and last, section declares that if any suit is now pending, the result of which will be changed by the passage of this Act, the suit may order the costs of the suit to be paid by the party who would have been required to pay the costs if the Act had not been passed.

It is tolerably clear that this section refers specially to the suit of McLaren against Caldwell above referred to. It appears that Mr. McLaren is the owner of certain streams and improvements on streams which he makes use of for the purpose of floating down saw logs from the lumber limits from which he takes the same for the purposes of his business as a lumber manufacturer.

Mr. Caldwell is also a lumber manufacturer, owning timber limits in the neighbourhood of those owned by Mr. McLaren.

He attempted to float his logs down Mr. McLaren's streams and through his improvements. To prevent his doing so, the late Chancery Court referred to was instituted, and a decree was made declaring Mr. McLaren exclusively entitled to the use of the streams and improvements, and restraining Mr. Caldwell from floating his logs down the same.

That case has been appealed to the Court of Appeal. The effect of the Act now under consideration must necessarily be to reverse the decision of this suit.

Had the Act, instead of giving to any person desiring to make use of the streams the right to use the same upon payment of certain tolls absolutely appropriated to the use of the streams for the public use, and provided a means for compensating the owners, it would be less objectionable in its features.

The effect of the Act as it now stands seems to be to take away a use of his property from one person and give it to another, favouring the owner practically, by becoming a toll-keeper against his will, if he wishes to get any compensation for being thus deprived of his rights.

I think the power of the Local Legislature to take away the rights of one man and vest them in another, as is done by this Act, is exceedingly doubtful, and assuming that such right does in strictness exist, I think it devolves upon this Government, to see that such powers are not exercised in flagrant violation of private rights and national justice, especially when, as in this case, in addition to interfering with the private rights in the way alluded to, the Act overrides a decision of a court of competent jurisdiction by declaring retrospectively that the law always was and is different from that laid down by the court.

In reporting upon a reserved bill of the Prince Edward Island Legislature in 1876, the then acting Minister of Justice reported to Council, and his excellency was advised to withhold his assent from the bill, on account of its grounds being that the bill was retrospective in its effect; that it dealt with the rights of those then in possession, and that there was no provision saving the rights of private parties.

On the whole I think the Act should be disallowed, I recommend, therefore, that the Act passed by the Legislature of Ontario at its last session, intimated in an Act for Protecting the Public Interests in Rivers, Streams and Creeks, be disallowed."

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INTELLECTUAL DEVELOPMENT OF THE CANADIAN PEOPLE

Montreal, June 1st. The intellectual development of a country like ours must be a certain result of the progress which is made in the various branches of knowledge. In a few words, the intellectual development of a country is the result of the progress which is made in the various branches of knowledge. In a few words, the intellectual development of a country is the result of the progress which is made in the various branches of knowledge.

Some years ago, now in Ontario, the intellectual development of a country like ours must be a certain result of the progress which is made in the various branches of knowledge. In a few words, the intellectual development of a country is the result of the progress which is made in the various branches of knowledge.

amount received from the Dominion on general account, \$2,000,000. The Dominion general account making \$1,877,000. In 1914 the gross expenditure per capita in the Dominion was \$127.90, from which is deducted the amount of temporary loans \$1,000,000 and paid on account of the construction of railways \$2,000,000 and the amount in Q.M. and R.R. way traffic expenses, amounting to \$1,000,000.

multiplicities able to pay, and when in some special cases owing to the indebtedness being too large and other exceptional cases there will be held before the House from time to time for consideration. I am aware that some will say that the amount received from collection of the Municipal Land Fund debt should not be applied to the expenditure of any one year and that the interest only should be calculated as a surplus of receipts over expenditure.

which proceeds are set apart for the benefit of our manufacturing industry, though no good reason has ever been assigned for such a policy. The loan authorized at the last session of the House, the net proceeds of which were \$1,000,000, was authorized for the purpose of exchanging, etc., amounted to \$1,722,717.25 exclusive of some interest and \$1,000,000 which was placed in the funds in Paris, the state of the exchange market not permitting us to draw on it at a considerable rate. We have disposed of the proceeds of the loan as follows: To pay the New York loan made by the late Government, exclusive of interest \$200,000; to repay Consolidated Revenue Fund for money borrowed paid towards railways—in fact, a loan to the Consolidated Railway Fund, \$12,000,000; to pay a loan to the Bank of Montreal made by the late Government, exclusive of interest \$200,000; to pay payments of debts contracted for railway purposes before it was effected, \$200,000; paid towards contracts of the Q.M. & R.R. Railway, \$1,222,717.25.

THE BUDGET SPEECH

On Monday last, in the Quebec Legislature, Mr. Robertson made his budget speech. Mr. Robertson said—Mr. Speaker, in making the usual motion on occasions like the present, that you do now leave the chair and that the House form itself into Committee of Supply, I hope I may rely on the consideration and kindness from honorable members which has always been accorded to others and myself in similar circumstances.

The Hon. Commissioner has given his estimate of the receipts for the year. I have adopted his statement, though I am inclined to think he might with perfect safety have increased it. The amount is \$630,380. Already \$187,189.67 have been received from the Crown Lands Department. Up to the 1st of May the sale of crown land limited in October last proved very successful. The prices realized were good, the competition between the lumbermen for possession of the limits, and I am sure all will wish them success in their business.

Estimates of the expenditure of the Province of Quebec, for the fiscal year ending 30th June—Legislation, \$123,203; Civil Government, \$3,699; Administration of Justice, etc., \$428,087; Public Instruction, etc., \$329,415; Agriculture, Immigration, Repatriation and Colonization, \$107,400; Public Works and Buildings, \$178,707; charities, including lunatic asylums, reformatory and industrial schools, \$288,350; miscellaneous, \$20,000; charges on revenue, \$163,228; to be voted, \$1,630,078; total voted and to be voted, \$2,733,938.

HOW TO CHANGE A VESSEL'S NAME. The customs authorities have received a Treasury circular defining the routine that must be pursued by yacht and other vessel owners desiring a change of name, under the authority conferred by the recent act of Congress. Sworn application must be made to the Secretary through the chief officer of the Customs at the vessel's home port, and satisfactory evidence must be furnished of seaworthy condition, freedom from debt, and the time and place of building.

Normal schools were founded

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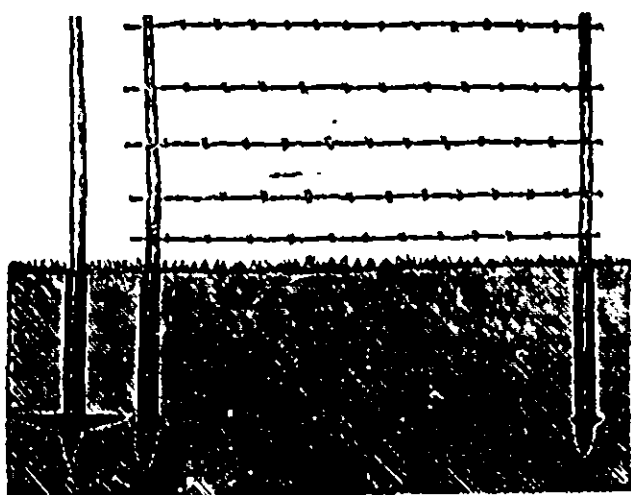
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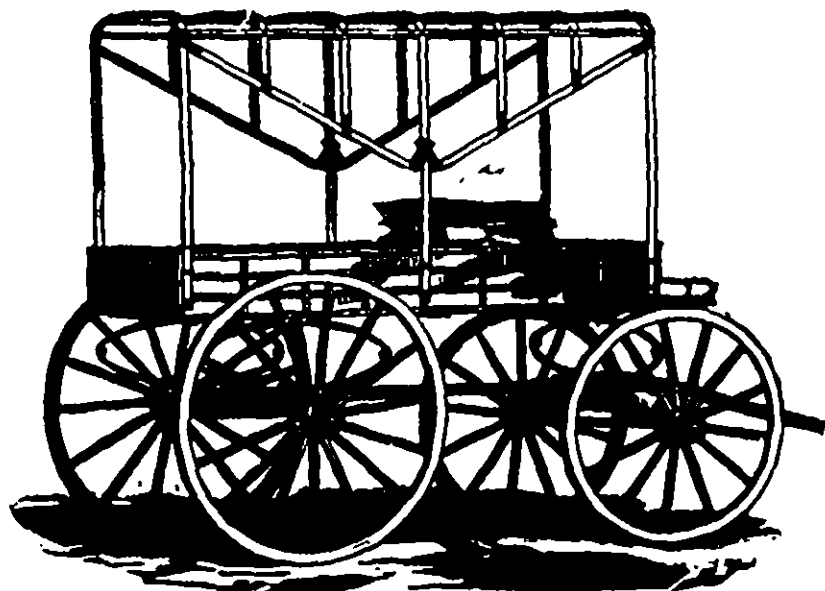
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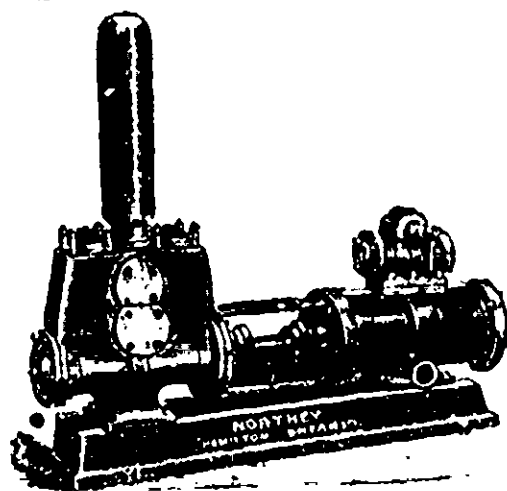
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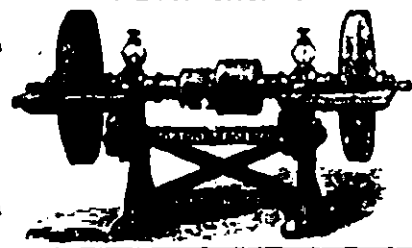
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THE SECRET CHEMICAL PROCESS OF TEMPERING,
 which toughens and refines the steel.



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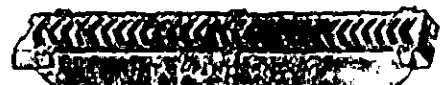
2nd.—The two strands of No. 12 Wire are twisted together just enough to allow for the contraction and expansion of the metal, caused by heat and cold, and not so much as to injure the structure of the steel.

3rd.—The Barbs on our Wire are four-pointed, and always presenting a Barb laterally or at a right angle, which is a great advantage over the Two-Barb Wire, as cattle are unable to get against the fence to break it or push it down.

4th.—The Barbs are fastened to the Wire at intervals of 7 inches, in a manner entirely different from any other, but securely locked around and between both wires, so that they cannot slip or move toward each other, and they also prevent the untwisting of the cable should either wire get broken.

5th.—The machinery by which the Barbs are put on is perfect, so that the Cable Wires are not injured or weakened by the process, as is the case with other Four-Pointed Barb Wire.

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