

rich line between Paris and Goderich. But this is not carried out to any large extent, and a considerable proportion of the freight interchanged between the lines at Paris is transferred from the cars of one company to the other. After considerable difficulty we have been allowed to send any cars, loaded in Montreal for Hamilton, through by the Western from Toronto, but the cars have been sent back empty, although, in many cases, there may have been freight at Hamilton waiting transport to Montreal or other places on the Grand Trunk Railway.

You will see from this that the interchange of cars between the two companies is exceedingly limited, and has tended, of course, to a great restriction of trade between the different sections of country served by the two companies.

I proposed some years ago, before a Parliamentary committee at Ottawa, to insert clauses in a bill then pending, requiring the interchange of cars freely between the two companies to and from stations west of that city on both the Grand Trunk and Great Western lines. To this the Great Western Company declined to accede, and in the absence of their consent the committee were not prepared to pass the clauses which I proposed. The result has been that the interchange of cars between the two companies is extremely limited, and is not now conferring any practical accommodation upon the trade of the country. The policy of the Great Western Company has been, for some time back to isolate itself from any interchange of car stock with the Grand Trunk Company, although they have gone to a larger expense to render that interchange easy with American railway companies. In fact, their whole policy is to develop their through business and their trade in connection with the American lines, and to throw all impediments in the way of its being conducted in connection with Canadian railway companies, and Canadian channels of trade.

These are matters of fact, about which there is no dispute, and I have therefore no hesitation in thus replying to the letter which you have addressed to me.

You are aware, I have no doubt, than my own conception, the true policy is to allow of an interchange of car stock between the several companies, but I am bound to add that this is not the policy which is adopted by the Great Western Company, who have repeatedly taken measures that have limited almost to prevention any interchange of cars where their line comes into contact with that of the Grand Trunk Company.

Yours truly,

(Signed) C. J. BE GES.
G. Laidlaw, Esq.
Toronto.

FREE TRADE IN ENGLAND.

WHAT IT HAS ACCOMPLISHED.

THE following letter on this subject, reference to which has been made in recent cable telegrams, has been addressed by Mr Edmund Ashworth to the *Manchester Examiner and Times*—

"Sir,—With your permission I propose to lay before your readers a few plain facts which may help to expose some fallacies just now so widely broadcast over the country. I purpose to compare our condition at the present time with what it was before the free traders, and if it be found that employment, wealth, and all those conditions which make comfort and happiness in a community possible have been promoted by it, then surely we shall not hear that free trade is a 'gigantic mistake'."

"In their pamphlets and speeches the modern anti-free traders have attached immense—and not too much—importance to the pauperised condition of our population. I agree with them in saying it is a most lamentable fact that in this country one man in every twenty is a pauper. But when that fact is adduced as against free trade, we must inquire what was our condition in this respect before free trade was adopted. Have we a greater proportion of paupers now compared with the population that under the system of protection I answer emphatically—No. For several years prior to the adoption of free trade one man in every 11 of the population was a pauper. It follows, then, that, bad as things are at present, we have little above one-half of the pauperism under free trade that we had under protection. Tested by our pauperism, then, free trade is not a 'mistake.'"

"And now as to the effect of free trade upon employment. In defiance of the experience of the last twenty years we are gravely told that protection would give more work, and that the present want of work is attributable to free trade. Let us see, taking as our test the cotton trade of Lancashire—in 1857 we consumed 25,379 bales of cotton per week of 377 lbs. each; in 1859 we consumed 63,689 bales of cotton per week, of 353 lbs. each.

"Thus in twenty-one years the quantity of cotton consumed in Lancashire has been doubled; and will it for a moment be pretended that so vast an increase could have been effected except by a free trade policy? The effect of this upon employment must be obvious. To convert this double quantity of raw material into goods, as everybody must see, more workmen have been required and an immense impetus has been given to all branches of industry. More mills have been needed, more machinery, more warehouses, more dwellings, &c., and additional employment has been followed by increase of wages. Therefore, as tested by employment, free trade is not a 'mistake.'"

"But it is not in the cotton trade alone that we find the benefits of free trade; they are alike conspicuous in as they have contributed to the prosperity of the whole nation. Let us see the effects of free trade as exhibited in the total exports of the United Kingdom.

"In 1854 (the earliest record) our exports were £116,821,043; in 1859 £222,823,553. Thus in 14 years our export trade has been doubled, which means that free trade has enabled us to send double the quantity of goods to other countries, and thus increased employment has been found or ourselves, and every branch of industry has participated in the advantage. England has opened her ports to all the world, and nations that do not reciprocate our policy and freely to our shores their produce: we send to them ours, and we profit by the transaction."

"Here, however, the new politicians who would raise protection from its grave step forward and tell us we do not benefit by this enormous increase in our business with foreign nations, and avow that it is leading to the utter ruin of our manufacturing industry. A table of figures is before us, and it is boldly asserted that because our imports exceeded our exports last year by £116,000,000 we had to pay the balance in gold, and are, therefore, in a worse position for having done so large a business. Why, surely everybody must see that unless we receive back more for our goods than they cost us we should soon come to ruin. But, in order to exhibit the fallacy of this error let us examine the manner in which our trade with other countries is carried on. Take our trade with Russia, for example, in 1853 Russia sent to us corn, tallow, hemp, linseed and timber to the extent of 12 millions sterling, and only took back of our goods 6½ millions. Now according to the 'Revivers,' we paid the balance in gold, and were losers by the transaction. But this is entirely a mistake. Russia consumes largely of coffee, sugar and other articles which we by our manufactures pay for elsewhere; and so when the balance was paid, the sum of £10,167 was all the gold England sent to Russia to settle the account."

"And precisely by the same process the French treaty is beneficial to our commerce. Both nations have increased commercial intercourse, and both are benefited by the transaction."

"In 1853 we sent to France 9½ millions sterling; in 1859 23 millions sterling. In 1859 we took from France £16,570,833; in 1857, £33,734,863. Thus England increased her exports 13½ millions per annum, and France £16,804,000. And yet there are men who talk of abandoning the treaty and discontinuing the trade of the two countries! Pray, what would our manufacturers do with the 13½ millions of goods if they were not sent there? Where would they find sale for them?"

"But I suppose our new-fangled 'Revivers of British Industry' want to know how we paid the balance of 10½ millions, the difference between what France took from us and what we took from them. This our friends may safely leave to the bankers. If the individuals on both sides who have thus done business together are satisfied, it must be admitted that both nations are benefited, and if they are not the business must be discontinued. As in the case of Russia, an indirect trade had been done, and so I find that £7,659,977 in gold paid the balance. But it must be borne in mind that we obtained this gold by selling British produce elsewhere, and to that extent our trade was increased by the treaty. It must not be supposed, as the Protectionists appear to think that France was richer for receiving the balance in bullion than if she had taken it in cotton, coffee, or wool, because bankers readily adjust the relative value of gold in different countries. Rothschilds, for example, have establishments in London, Paris, Vienna, Brussels, &c., and if gold is dearer at one place than another they very soon adjust the difference. Gold is as much an article of commerce as anything else. We buy gold from Australia and pay for it with goods. England imported last year 24 millions in gold, and exported 20 millions, but this does not prove that the Bank of England was made the sole depository of the balance. It is a great fallacy to assume that the Bank of England is the only receptacle of gold, or that it retains all it can. The fact is otherwise."

"If free trade be tested by the extent to which industry has been promoted in proportion to the number of working people I find that in 1854 we exported 43,108 2d per head of our population; in 1857, 43 0/2; in 1859 we imported 45 10s 2d per head of our population; in 1857, 49 2s 6d."

"Looking at the countries to which we send the largest amount of our exports, in spite of all our tariffs, I find that to France we send 12s 2d per head per annum to 63 millions population; America we send 15s per head per annum to 32 millions population; India we send 2s 3½d per head per annum to 200 millions population; and of cotton goods to India only is 3½d to each individual, showing what a large business we do with the former countries, if spite of protection, and how greatly we are neglecting India."

"Every way, therefore, the compass is turned, it shows that we do immensely more business by a free trade policy than under the old protective system."

"But much stress is laid upon the fact that we have free trade upon one side only, and it is argued that we ought to discontinue our free trade policy, unless we can obtain 'reciprocity.' Now, I wish to ask if

the advocates of this policy have thoroughly considered its effect. Does anybody suppose that a duty upon the importation of French or Belgian goods would protect the people of these countries from manufacturing goods? And if they continued to manufacture, is it not plain that if we did not meet their goods as at present on the Manchester Exchange, we should meet them in neutral markets? Were it possible to stop foreign goods from coming to us, the only effect would be that A B might sell goods at Manchester in place of a Belgian merchant, but C D would find his customer supplied in the neutral market by the Belgians. And where would be the benefit to our industry?"

"I also wish to ask—how can we put a duty upon French goods, for instance, if we are to keep faith with our agricultural and other industries? If we insist upon corn being imported free, and require the farmer to accept the price for his produce which we pay to all the world, we cannot in fairness refuse him the privilege of buying a silk dress or any other article he wants in the cheapest market. It is clear that we must either have free trade all round or give protection to all, and having regard to the price of food, are we prepared to do this? Ten million quarters of corn per annum come to us from other countries, and are we about to lessen the quantity imported by placing upon it a duty which we ourselves would have to pay? Last year foreign countries sent to us cattle, sheep and beef to the value of £4,623,533. Now, I want to know whether, with beef and mutton at 3d per lb., we are prepared to increase the cost by making their importation more difficult? And yet this is precisely what must follow if our free trade policy is to be reversed. The Revivers would limit our industry by checking exportation, and raise the price of our bread and beef in the bargain."

"No one will suppose I am contending that what is called one-sided free trade is better than perfect freedom of trade on both sides. Doubtless it would be better for us, and other nations too, if all the trade of the world were free and unrestricted. But surely, with the above results before us, it must be admitted that even one-sided free trade is better than protection on both sides."

"Another point, however, must not be overlooked. If reciprocity were obtained to-morrow, it would not cure the ills of which Lancashire just now complains. If reciprocity did bring more orders for goods, how could they be supplied with the present scarcity of cotton? As everybody knows, trade is bad because cotton is dear; and cotton is dear because there is not enough of it to keep the mills in full employment. This is the gist of the whole question. Other causes may have aggravated the existing state of trade. The action of trades' unions has doubtless been favourable to the importation of foreign manufactures, while at home there is an enormous waste of money in expenditure for drink which would otherwise flow into channels of trade. But the cause which has prostrated Lancashire is unquestionably want of cotton, and the remedy is more cotton. Until more cotton is procured Lancashire will suffer, but as soon as enough can be obtained to keep our mills running at full speed everybody will want as much free trade as can be got, and it will be seen that the Revivers, in pronouncing free trade to be a gigantic mistake, have been trying to palm upon the public a gigantic delusion."

Yours truly,

EDMUND ASHWORTH.

"Egerton Hall, near Bolton, Sept. 13."

ENAMELS.

THE fine enamels of trade are generally prepared by fusing at high temperatures, alloys, oxide of tin, and oxide of lead, and spreading the mixture over the surface of a sheet of copper, of gold, or of platinum. The objections to these enamels are, in the first place, their high cost, and, secondly, the impossibility of giving them a perfectly flat surface. Mr E. Duchemin has advantageously replaced them by the following economical and efficient compound:—Arsenic, 20 parts by weight; saltpetre, 80, silica (fine sand), 80, litharge, 220. This is spread on plates of glass of the required shape and size, care being taken however, that the kind of glass employed be not inferior in point of fusibility to the enamel. Enamelled glass prepared from the above substances may be drawn or written on as readily as if it were paper, and in less time than one minute the writing may be rendered indelible by simply heating the plate in a small open furnace or muffle. Drawings, autographs, legal acts, public documents, historical facts and dates of importance, labels for horticultural purposes or destined for out-of-door exposure, coffin plates, sign boards, and signs, and all the other cheaply made, which will resist atmospheric influences for ages. First-class photographs, either negatives or positives, may be taken on such enamels without collodion, by using bitumen, or chloride of iron, or perchloride of iron and tartaric acid, or bichromate, or any other salt. A good solution for this purpose is, water 100 parts by weight; gum, 4 parts; honey, 1 part; pulverised bichromate of potash, 8 parts. Filter the liquid, spread it over the enamel, and let it rest, after which—1. Expose it to the camera. 2. Develop the image by brushing over it the following powder—Oxide of cobalt, 10 parts by weight; black oxide of iron, 90 parts; red lead, 100 parts; sand, 30 parts. 3. Decompose the bichromate by immersion in a bath formed of water 1.0 parts by weight, hydrochloric acid 5 parts. 4. Wash it in clean water and dry it. 5. Verify the proof on a clean piece of cast iron, the surface of which has been previously etched. One minute will suffice for indelibly fixing and glazing the photograph, which must be carefully and slowly allowed to cool. Photographs on enamel of any size, taken in this manner, are perfectly unalterable under all atmospheric conditions, and may consequently and aptly be called " everlasting photographs."