

equitable for them to become vendors to the public of articles which it is their business to carry for hire, not rent for profit. Besides, in their capacity as common carriers they are guilty of a grave breach of duty in refusing to carry cordwood for the public. There is a lesson to be learned from the Cumberland-Ladlaw revelations, and it is this.—Railway Companies ought to be compelled to deal with cordwood as with lumber and wheat. This is a period fall of railway projects, let the guardians of the public interest see that a stringent cordwood clause is inserted in every new charter.

NOTES ON THE TRADE OF CANADA FOR 1866. ARTICLE III

THE statistics of the Provinces of our new Dominion for 1866, do not exhibit the full effects of the abrogation of the Reciprocity Treaty, because sufficient time had not elapsed to test the change thoroughly. Short, however, as the period was, until the returns were sent in, the injurious effects of placing barriers in the way of commerce between the United States and this country, are only too plainly seen.

VII.—TRADE WITH THE UNITED STATES.

Under the treaty of 1854, International trade kept steadily augmenting. That augmentation benefitted the people on both sides of the boundary line, and was a just theme for congratulations; the statistics of 1866 show, however, that the increase of International trade has been checked, to our joint loss. The United States themselves have probably suffered more than we have, but this, after all, is but poor satisfaction to us. Their exports to all the Provinces last year fell off as compared with those of 1865, with the exception of Ontario and Quebec, and the increase in our case is very small. We annex a statement of the United States exports to British America for 1865 and '66, with the per centage of difference between them.

U. S. EXPORTED.	In 1865.	In 1866.	Difference.
To Canada.....	\$19,589,055	\$20,421,682	4 1/2 increase
To Nova Scotia....	4,625,857	4,611,844	1/2 decrease
To N. Brunswick....	3,056,362	not given	4 decrease
To Newfoundland	1,677,855	1,339,038	16 2/3 decrease
To P. E. Island....	454,000	469,778	19 1/2 decrease

These figures show the American side of the account, and it certainly cannot be very gratifying to them. No country likes to see its trade contracting where formerly expansion was the rule, and it does not sugar the pill in the least that this result has been produced by the action of the sufferers themselves. The Canadian side of the account looks better—indeed as we have already shown in a former article, the trade of Ontario and Quebec was never so great as in 1866, and despite all prognostications to the contrary, we sold Brother Jonathan over 50 per cent. more than we did during the previous twelve months. Our sales to the United States during 1865 and '66, with the per centage of difference, were as follows:

U. S. IMPORTED.	In 1865.	In 1866.	Difference.
From Canada.....	\$22,939,691	\$31,770,261	51 1/2 increase
" Nova Scotia....	3,619,797	3,228,550	10 1/2 decrease
" N. Brunswick....	1,737,268	1,855,944	7 increase
" Newfoundland	527,218	428,438	19 1/2 decrease
" P. E. Island....	694,040	107,825	82 1/2 decrease

Some of the Lower Provinces do not seem to have got on so well with their American trade without Reciprocity, as Ontario and Quebec, but it must not be overlooked that our statistics exhibit scarcely four months' experience of the want of the Treaty. A complete revolution seems to have taken place in the trade of Prince Edward Island, for the large decrease in their sales to the United States (82 1/2 per cent.) is exactly made up by their increased sales to Great Britain. As compared with those of 1865, our exports to the mother country last year decreased 12 per cent, those of Nova Scotia 6 1/2 per cent, those of Newfoundland 6 1/2 per cent whilst those of New Brunswick augmented by 1 1/2 per cent.

VIII.—A NEW TREATY.

When our next statistics are laid before Parliament, the effects of abolishing Reciprocal trade will be more clearly seen. Although Ontario and Quebec have so far felt it but little, yet we have no doubt that our transactions with the neighbouring Republic would have been larger had no hostile duties met our pro-

ductions on the frontier. About January last, Mr. Derby gave his opinion to Congress that their trade with British America had fallen off at the rate of twenty per cent, instead of steadily advancing, as was formerly the case. If this opinion be anything like correct, nothing but the shrewdest folly and stubbornness can long prevent a new Reciprocity Treaty, or some similar arrangement, from being entered into by the two countries. That time will not come, however, until our new Confederate Government is fairly set in motion. But when its wheels begin to move freely, and the Americans find that we are in earnest about maintaining a separate political existence, then we certainly expect to witness a return to that close and friendly commercial intercourse which formerly existed between the two countries.

BANK NOTE ENGRAVING.

WE happened to see in a London paper, the other day, that the new bank notes of the Canadian Bank of Commerce, lithographed by the British American Bank Note Company of Ottawa, were in circulation, and looking exceedingly well. It is quite excusable, even for a journalist, to make an error of this kind in Canada, since bank note engraving is a new industry in the country, but happening to possess some information on the subject, we design to show how they really are made, so that in future it may be less pardonable to call them lithographed.

The conflict between good and evil, active in almost every part played by men upon the world, is nowhere more actively, resolutely, cunningly, patiently carried on than in the business of fabricating money. There were counterfeiters, we hardly doubt when bits of leather, bone or iron, were the circulating medium. And though in time the Constituted Authorities enlisted in their service the advancing Science and the higher Art of a more developed civilization, they could not distance the counterfeiters, who matched his skill against that of the artists of Government. It would be interesting to unearth the records of the trials and convictions of the makers of counterfeit coin—to learn by the light of such documents on what various governments relied for their protection; whether on the tining of their silver or the color of their gold; on the sharpness of the impression on the face of their pieces; on the milling round the edges—and to see by what strange arts the counterfeiters managed to defraud, not only the unwary general public, but even the wariest of money changers; by the compounding of artful alloys; by the splitting of the coin in two, extracting gold from the centre, and filling up the hollow with base metal; by "sweating" or shaking together sovereigns in horse-hair bags.

With this, however, we are not so much concerned at present as with the various arts by which the issuer of lawful paper money tries to protect the public and himself, and those by which the counterfeiters endeavor to imitate this lawful money, and yet elude detection and the heavy penalties which attend his crime. Issuing counterfeit bank notes, you see, if it could be easily done, would be such a profitable thing! Who would commit small larcenies, steal plate or trumpery portmanteaus, if he could render himself comfortable for life in worldly circumstances by issuing only a thousand ten dollar bills—ten thousand dollars? And compared with a circulation of ten or fifteen millions, in Canada, ten thousand dollars are such a trifle! It is, however, not an easy thing, as we shall show.

First, the paper on which bank notes are printed is of a peculiar description. In England, the Bank of England relies almost exclusively upon its paper. Made of the best linen cloth, not rags; stamped with a fine bold water-mark; thick and tough, with a peculiar feel, it is a good protection, doubtless. But though this may answer in a country where almost all the circulation is the issue of one establishment, it is not sufficient here, for in the Dominion there are thirty-seven banks, all issuing notes, besides three Government issues. It is not even relied upon in Scotland, much less in the United States. All that is done here is to provide a good paper, known to the trade as bank note paper—stout enough to bear handling, fine enough to bear distinctly an impression from the most delicately engraved plate. Experiments have been made to produce a parchment paper, which should be too costly for any paper manufacturer to make, except under a contract with a rich bank or with a Government, but they have not yet been successful, and we hardly think that success in checking the counterfeiters is to be looked for in that di-

rection. We may add to this that even in the case of the Bank of England, this protection has not been found in practice to be absolute, paper has been made to resemble the Bank of England's paper, and sheets of the identical manufacture have been abstracted without attracting notice.

Secondly, the engraving of bank notes is executed by the most talented artists that can be found. A \$5 note of the Bank of Commerce is now before us. Let us see how the engraving of this note is done. In the centre is the beautiful portrait of Her Majesty, which has been so much admired, in widow's weeds, with her favorite Mary Queen of Scots cap. This, we believe, was copied from a photograph brought by Notman from the best studio in England. Mark the delicacy of the finer lines, the regularity, the boldness of others, the distinctness of the whole. There is no appearance of blurring, no uncertainty about the treatment of flesh or drapery. This is the work of an artist who commands in such places as New York or Philadelphia as high a salary as the manager of a bank; a man who evidently loves his work. Nor is it dashed off in five minutes with a coarse blue pencil on tinted paper, like Gustavo Doré's later sketches; it is the work of at least a month, and cut with a graver of the hardest steel on a plate of steel but little softer, every line of which is examined with a microscope to see that it is cleanly graven. This cutting on steel is a very different thing from cutting on stone. As much as the steel is harder than the stone, so much finer can the lines be cut, so much more practice is required to do it well, so much higher is the art of steel engraving than lithography. Had there been no photograph from which to copy, a replica drawing would have been required, and many of these are purchased to engrave from at prices summing up to hundreds of dollars. Around this portrait we see the lettering. This is done by a different artist altogether, practiced in this specialty, and, like Her Majesty, is graven on a piece of steel. Then around the note are geometric traceries, intricate and symmetrical, which no human hand, however cunning, could execute. This is designated lathework, and is cut by a graver fixed in a machine made up of a dozen wheels or more set on their axes awry, fellows which run crookedly enough to look at, and puzzle the uninitiated as do the movements of the planets, comets, moons. Yet like these they all move according to fixed laws, and the mathematical principles which underlie for you the mazy dances of the heavenly lights will help you to evolve out of the movements of the eccentric wheels the beautiful series of curves which adorn the border and the back of our note. This lathework costs some five thousand dollars, and it, too, is worked by a gentleman, part mathematician, part machinist, part artist, who makes this work the business of his life.

Well—these various parts of the bank note face are cut on steel—how to bring them all together? This again is in itself a separate profession. The steel plates, the handwork of the various engravers, are hardened in the fire, and a roller of soft steel rolled over each, under a hydraulic pressure of from five to twenty tons. No wonder that under such compulsion the plates should yield up their beauty to the rollers. The rolls, in fact, become the counterparts of the plates, each sunken line on the plates becoming a raised one on the rolls. The rolls are hardened in their turn, and then each roll is re-transferred to the proper portion of a plate the size of four bank notes.

One would imagine that all this engraving would be an effectual bar to counterfeiting, but alas, no! There have been engravers whose virtue is not superior to the temptations modern rogues can offer, and men who are masters of their art have been led to work at night at plates for counterfeiters, after laboring in the day time in the service of established Companies, and such clever artists have, ere now, been made acquainted with the interior of Penitentiaries. This is, however, but of rare occurrence, and were it the only risk, it might in practice be disregarded. The counterfeiters, however, pressed the sun into their service, and by photography managed to get copies of the best engravings.

We now come to the material point on which the authorities depend for their protection against the criminals, and here the battle was long and skillfully waged. The banks, or the engravers and agents they employed, put yellow, red or blue colors across the face of the notes. These colors, it is known, come out black when photographed. But the counterfeiters washed them out with acids and alkalis, afterwards photographed the notes, printed them in black, and then