

ticians must recognize the fact, and seek the relief which the Dominion stands so sorely in need of from some other source. In fact they must look to themselves and not to us. Reciprocity of trade is but a minor point in the grand problem which lies before them, pressing for a solution. So long as their present relations with the mother country are maintained, our policy must be identical toward both. It would be neither wise nor consistent to have one relation with Canada and another with England.

"The natural result of our refusal to renew reciprocal trade relations with Canada, will be to stimulate the movement for independence, already quite strong across the border. We are assured that the sentiment in favour of it is spreading quite rapidly, and we predict that, when it becomes evident that the movement in favor of Reciprocity has failed, it will receive a fresh impetus. The fact that Canadian independence is favored by prominent English statesmen, is having a strong influence in the Dominion, and takes from its advocacy that taint of disloyalty which has hitherto attached to the movement, and prevented many Canadians from openly favouring it."

#### A FLOATING ELECTRIC TELEGRAPH.

The establishment of a series of floating telegraph stations has long been considered a matter of national importance, and it is an object to which many scientific gentlemen have given attention. There have been a number of inventions as to the peculiar construction of a craft necessary for the purpose of maintaining a communication by means of a submarine telegraph cable between mid-ocean and the land. The last scheme—that of the International Mid-Ocean Telegraph Company—is now to be put upon its practical trial. We learn that the Government yesterday decided to grant this company the loan of Her Majesty's ship *Brisk* which is to form the first floating telegraph station. This will be moored some sixty miles out at sea, off Penzance harbour. The *Brisk*, although a tolerably good vessel, is likely to have her sea going qualities severely tested, as the spot whereon she will be quartered, named in the charts "Admiralty Patch," is exposed to terrific weather during the winter months. She is now being overhauled, and fitted as a regular telegraph station. Her engines and telegraphic machinery are to be supplemented with the latest improvements, the Board of Directors having ordered everything to make her complete for the service. Formerly a general opinion prevailed against ordinary vessels riding out at anchor in a severe gale, owing to the attendant danger. A number of inventors came forward with different designs of ships, all more or less strongly adverse to the employment of an ordinary vessel, or technically speaking, those known to possess "a fine entrance, clearance, and a flat, broad floor," as ocean telegraph stations; the forms of floating body favored by them consisting generally in a huge square iron cistern, rounding off at the corners into a kind of buoy which was said to add materially to its floating powers, at the same time checking the action of the waves upon the whole structure. These constructions, it was proposed should be anchored from their centres. The Persian Gulf and Atlantic telegraph cables, however, demonstrated the practicability for an ordinary ship to "hold on" to a telegraph cable during the height of a southwest monsoon or an Atlantic gale. This has been accomplished in the Indian Seas

and Atlantic Ocean proving that a ship rides comfortably at anchor with plenty of slack cable down. This being evidenced on many occasions during the laying of the Persian Gulf and Atlantic cables, has so far removed the prejudices as to ordinary ships for telegraph stations that the proprietor of the Mid-Ocean Telegraph Company, Captain Knapp Barrow, found little difficulty in securing the assistance of Captain Sherard Osborne, Sir Samuel Canning, with Messrs R. Sabine and Lattimer Clark as engineers for his scheme. These gentlemen have certified to the practicability of the scheme of Capt. Barrow.

The advantages which the people are to derive from a system of floating telegraph stations are insignificant compared with the benefits to be derived by the owners of over 40,000 British vessels and the mercantile community. The *Brisk* is to be in electrical communication with the *Penzance* post office, and a powerful steam tug will act as her tender. She lies in the fair way of every homeward bound vessel, and to Indian, Australian and China clippers she can give their sailing orders, thus saving an immense expense which they would necessarily entail by calling for the same at any port. A ship may report herself to the *Brisk*, and in twenty minutes afterwards her arrival be known at the office of her owner in the city of London, and within an hour of her making the telegraph station her destination can be altered at the pleasure of her owner. For such important orders as these the *Bolton* Code must prove almost invaluable. By the end of next month the *Brisk* is to take up her position, and as soon afterwards as possible the telegraph cable to land will be laid.

THE SUEZ CANAL.—LEVELS OF THE TWO SEAS SETTLED.—The various reports that have reached this country concerning the shallowness of the Suez Canal, and other disheartening news, may be set down to ignorant gossip or a less creditable basis. It appears from the report of the correspondent of the London *Shipping Gazette* that the entire length of the canal is in a very satisfactory condition. The writer, who is a nautical man, specially sent to examine the work, sounded the entire length. From Port Said to Ismailia he took 2,500 casts of the lead, and from Ismailia to Suez 1,500 casts. These soundings varied from 30 feet to 23 feet 6 inches, except in two places—at El Guier, between Lakes Ballah and Timsah, and at Serapeum, between Timsah and the Bitter Lakes, where there were but 17 feet, but dredging and blasting were hourly increasing these depths, and then the canal will be perfectly safe from end to end for vessels drawing 23 feet and over. The width of the canal over all is just 325 feet, mean width at bottom 72 feet, vessels of 35 feet beam being thus able to pass each other in safety. As to the reported filling up of the harbor of Port Said, he says there is no sitting up of sand whatever, except just at the extremity of the long pier, as in every other harbor, and which can be effectually controlled by occasional dredging; and there is just as little truth concerning the reported washing away of the banks which are formed of clay, and have become hardened and consolidated, so that the wash from the passing vessels cannot do serious injury. The manner in which the entrances to the canal are indicated is said to be admirable. At Port Said there are two obelisks, and the way through the lakes are equally well defined, so that by day or night the entrances can be made with ease and certainty. The relative levels of the Red Sea and the Mediterranean,

a question which has excited much controversy, is now finally determined. Throughout the canal a current sets toward the Mediterranean, varying from one and a half knots per hour, in the vicinity of Port Said, to three knots in the neighborhood of Suez, thus showing that the Red Sea has the highest elevation. These facts effectually settle the question as to the success of the enterprise of M. Losseps, particularly as they come from a quarter that has had the credit, whether correct or not, of being deadily opposed to the project. The highway from sea to sea is an unqualified victory; though, as we have before stated, until the navigation of the Red Sea be rendered less dangerous, but few sailing vessels will be benefitted by this shortening of the route to the East. It might take months for one to navigate the entire length of the Red Sea, and if towed through, the cost would render the voyage profitless.—*N. Y. Commercial*.

A Melbourne paper says that imported rabbits had increased to such an enormous extent in Australia that small armies had to be organized to extirpate them. One man reported to the Provincial Assembly that he had employed one hundred men for several months, at an expense of twenty-five thousand dollars, in the work, and that in that time two millions of rabbits had been destroyed.

To avoid the inconvenience that sometimes arises from the "Union Jack," which is the distinguishing flag of the admiral of the fleet, being carried in boats and other vessels by civil and military officials when embarked, Her Majesty, by the advice of the Lords of the Admiralty, has ordered that the military branch shall use a Union Jack with the royal initials, surrounded by a garland on a blue shield, and surmounted by a crown in the centre; that the Union Jack to be used by diplomatic servants, ministers plenipotentiary, charges d'affaires, &c., shall bear the royal arms in the centre on a white shield; the local consular and consular agents, shall be limited to the use of the blue ensign, with the Royal Arms in the fly of the flag. The governors of Her Majesty's dominions in foreign parts, and governors of all ranks and denominations administering the governments of British colonies and dependencies, are authorized to fly the Union Jack, with the arms or badge of the colony emblazoned in the centre.

Some idea of the extent of the Michigan lumber and salt trade may be gathered from the following: The past year, on the eastern shore, there were manufactured 736,541,700 feet of lumber in boards and planks; of shingles, 243,820,000 feet; of lath, 114,550,500 feet. Even the manufacture of pickets foots up 410,500 feet. Many myriads of trees will fall this winter before the ax. The last calculation leaves only thirteen years to exhaust the whole pine growth of the Huron region, though it is computed that 8,500,000 feet of lumber are still standing in those forests. The value of the lumber produced in Michigan in the year 1869 cannot be much less than \$30,000,000, and the business gives employment, in one way or another, to not less than 20,000 men, and support to twice or three times as many persons. The increase of salt making has nearly kept pace with the increase of the saw mills. There are now fifty salt companies in operation, with works covering nearly 10,000 acres, and a capital of \$2,500,000. In the past season, nearly 600,000 barrels of salt have been produced, in quality as good as that of Syracuse, so experts affirm.