

and fall. The immense reservoir of waters in the Bitter Lakes with an ebb tide, and in the Gulf of Suez with the flood, will prevent the tide ever having a greater range. With a strong southerly wind in the Gulf of Suez the water rises to from eight to nine feet at the head of the Gulf, and may affect the water in the canal to some small extent. From two or three hours before high water at Suez the flood with a spring tide was running a knot and a half at Chalouf, increasing to two or two knots and a half at Madana, with the water very much discoloured. By starting from Suez an hour before low water a vessel will arrive in the Bitter Lakes before the flood tide overtakes her, and having nearly slack water all the way.

"Ships passing Each Other.—Every five or six miles a short widening in the canal (a *gare*) gives room for a vessel to haul in and allow another to pass her with ease. Vessels can pass each other at any part by using warps, but they cannot do so without stopping, except at great risk of running on shore and delaying the whole traffic of the canal.

"Time taken to pass through the Canal.—A single ship to pass through in from 14 to 16 hours; and two small ships, entering one at each end, could pass each other with out slackening speed. But it is impossible to carry a train of large ships through in one day. Lake Timsah and the town of Ismailia are conveniently situated and sufficiently large for a stopping-place; and doubtless arrangements will be made for ships to start from each end on one day, for all to meet and anchor for the night at Lake Timsah, and to start from their respective ends the following morning. This, allowing eight hours for passing through each end of the canal, and twelve hours for remaining at Ismailia, will give 26 hours for the transit. With a full moon, a handy ship, by entering the canal in the evening and arriving at Ismailia in the morning early enough to join the train of vessels, might perform the voyage in from 16 to 20 hours. With a train of only two or three ships, and no delay at nights, the transit would occupy about 18 hours.

"Damage to the Canal by the Wash of Steamers.—There is no doubt that every vessel will cause more or less damage to the banks on passing, but screw ships only going five or six knots will hurt the canal very slightly, except in the lagoons, where the banks are formed of very fine sand. The *Pera*, a large paddle-wheel steamer, on passing with very great speed (eight knots), and displacing the water in the whole breadth of the canal, did considerable damage, the wave she made swamping several boats. Large vessels should be made to reduce speed more than small ones.

"Damage to Ships touching the Ground.—Should a vessel touch the ground in any part of the canal, except in the tidal part of the Suez end, she will sustain no damage, merely being thrown out of her turn in the line. A good coating of sand has formed at the bottom of the canal in the sandstone cuttings. In the tidal part, near Suez, if a vessel is passing through with a following tide, and the bow touches either bank, there will be great danger of her swinging across the canal, with a two-knot current running against her broadside. With a wind blowing across the canal, vessels touching the lee side will be blown at once against the bank, but without any damage.

Pilots and Navigation.—The present pilots will rapidly gain experience; with trained leadsmen and a lead going on each side of the ship, there is no difficulty whatever in navigating the canal and keeping in mid-

channel. Should a bank form, it will be at once detected, and ample means are ready for reducing it. The precautions necessary are similar to those in any river, with the advantage of there being fewer and better curves, and nearly a straight course throughout.

"Sand-drifts.—Thirty-five miles of the canal are subject to the sand-drifting. One squall was experienced (force 6) when the drift was as thick as an ordinary fog, and most distressing to the eyes; so much so, that, had the ship been in a curve at the time, there would have been great difficulty in keeping her in the proper channel. Fresh water pipes run along the west bank of the canal for the greater part of its length, and, doubtless, as soon as the water is no longer required for the engines, it will be used to irrigate the banks and endeavour to stop this nuisance.

"Present State of Canal.—In the total 86½ miles 65 may be considered as quite completed. Throughout the remaining 21½ miles there is either dredging or embanking work going on. For five miles in the worst parts of Lake Ballah and the lagoons south of Lake Timsah constant dredging will be required, until means are found to keep the banks solid enough to prevent the water communicating. In the *Sérapium* cutting there is a rocky ridge of a few yards with only 18ft. water upon it, which will soon be removed. Except for about ten miles there are 24ft. of water throughout the canal. Vessels drawing 17ft. can pass through with ease. When the barrier at *Sérapium* is removed the canal will be open to ships drawing 20ft. The largest ship that passed through the canal at the opening was the *Peluse* Egyptian yacht, drawing 16ft., about 250ft. long. Several ships grounded on the passage, but all got off again with a little delay. The grounding was caused more by the desire of the 40 or 50 ships to get quickly through than through any fault in the canal.

"By command of their Lordships,
"GEO. HENRY RICHARDS, Hydrographer.
"Hydrographic Office, Admiralty,
London, Dec. 10.—*Broad Arrow*.

ROYAL CANADIAN RIFLES.

(To the Editor of the Globe.)

SIR,—In view of the present disturbances in the North-West Territory, does it not appear most inopportune and inexpedient that the Dominion should be in danger of losing the services of the Royal Canadian Rifles Regiment, now believed to be doomed to dissolution? I think there can hardly be a difference of opinion on this point—the only question is, how the services of the men can be rendered available to the Dominion at the lowest possible outlay—whether by taking the Regiment on as a whole from the home Government, or by establishing Military Settlements on the Russian plan, in the North-West Territory, where reliable men are most wanted.

The enormous expense entailed by the number of women (making the Rifles cost nearly as much as two Line Regiments, without being so moveable,) would appear to render the first plan out of the question, except the Regiment could be re-organized and single men only retained. The question is, if thus re-organized, could the men be trusted on the frontier any more than the men of a line corps, whom experience has

shown us cannot be kept on the frontier at all.

The very large number of desertions this autumn from the Prescott detachment, composed of single men, I am informed, something like 10 or 12 per cent. within 3 months, would seem to answer the question in the negative.

On the whole, I think the military settlement scheme would be found the most feasible and the least expensive. When the home authorities disband the Regiment, offer each man a free grant of land on the line to be settled, and a gratuity of fifty dollars to buy tools, &c., the land to be held on terms of military service against insurgents or raiders, and for roadmaking when required. Send a few time-expired men of the Engineers with them, to superintend the building of the houses which should be uniform in pattern; and until they are finished make co-operation compulsory. Many of the officers if placed on half pay, would remain among the men until brought into other Regiments, and some would doubtless remain permanently.

The men, already accustomed to the Canadian climate, would do much better than raw, helpless emigrants, fresh from England or Ireland.—the children of these first settlers (some of whom have families ready made) would grow up as native born Canadians; and the next generation would find the country well stocked with a hardy and loyal population, able to defend themselves, needing no repression, and developing the resources of the Territory in a very different way from the turbulent half-breeds now causing so much trouble.

I am, Sir,
Your obedient Servant,
ECONOMIST.

Dec. 31, 1869.

An Irish journal of the 23rd ult., says:—"It is stated that a basis of settlement has at length been arrived at between the Earl of Clarendon and Mr. Motley, and that in all probability the negotiation will be so far advanced by the end of the ensuing month that Her Majesty will be able to announce in the speech from the throne, on the opening of Parliament, that this protracted and delicate dispute has been definitely and satisfactorily adjusted."

CORRESPONDENCE.

FROM HALIFAX.

BY OUR SPECIAL CORRESPONDENT.

The Volunteers belonging to the city of Halifax were inspected a few days ago by the Brigade Major, Col. Laurie, and they made a very creditable appearance although none of them, except the Rifles and Field Battery who furnish their own, have received uniforms.

The following is the number of officer and men present on parade:—

Field Battery, Capt. Campbell.....	53
Rifles, (6 Cos.) Lt.-Col. Cheamley.....	307
Garrison Artillery, (5 Batt.) Lt.-Col. Creighton.....	220
Infantry, (6 Cos.) Lt.-Col. Bremner.....	216
1 Co. not out.....	
Naval Brigade, 1st. Division, Major Wyld.....	153
Total.....	949