

The following account of the movements of the Adjutant General is taken from the *Manitoba Trade Review* of the 3rd inst.

"Colonel Robertson Ross, Adjutant General of Manitoba for the Dominion arrived here by the Dawson route on Wednesday July 31st and on Thursday afternoon inspected the force in camp. The parade was formed and the men marched to the ground selected on the prairie opposite the camp, headed by their excellent band, and shortly after 3 o'clock, received Colonel Ross with a general salute. Open columns of companies was then formed and each man thoroughly inspected both in arms and accoutrements. They were then formed into line and put through the manual exercise by Major Irvine after which close column was formed and they marched past at the shoulder and the trail in quick time, and concluded the review exercise by going past at the double. It would be useless to particularize any company, for everything was well done. Col. Ross then put through a few movements in skirmishing drill, and at the termination of this addressed them in a short speech. He said that it would be his duty to report at headquarters that he had found the battalion in a good and efficient state. That their camp was a model one, and better for its size than any he had hitherto visited, in point of cleanliness, order and arrangement. He then reminded them of the necessity of discipline and obedience to orders, and that they were not to suppose that although far away from home, their conduct was not watched, but that every dereliction of duty would be noticed, and exhorted them to continue to pursue that good line of conduct which has hitherto characterized them, and impressed on them the necessity of strict soberness. He called their attention to the flag under which they served, and reminded them that whilst clothed in Her Majesty's uniform, they were not to take cognizance of any political party whatever, but in all cases to strictly obey the orders of their officers. He stated it was his intention, after inspecting the detachment, to proceed over land to British Columbia, and that probably he would want an escort, how large he could not say, but he would inform Major Irvine, who would recommend the men who were to accompany him as such. He then called for three cheers for Her Majesty, which were given and joined in by the spectators with a will.

Amongst the visitors present were His Excellency Governor Archibald and guests, Dr. Shultz and ladies, and several others, both residents and recent arrivals.

In the evening Col. Ross, Major Irvine and Mr. Ross, left by the "Selkirk" for Pembina, to inspect the detachment stationed there; after his return he proceeds to the Lower fort for the same purpose.

On Wednesday next the troops in camp are to have some games, boat races and other amusements, at which Col. Ross will be present. It would be well if our townspeople would show by the numbers present at these games, that they are interested in the welfare of the gallant fellows. It is much to be regretted that the militia of Manitoba are not in a more thorough state of organization, so that they could be inspected by the Adjutant Gen. Major Kennedy's battery of artillery are prevented from being inspected by the absence of all the members who are busy cutting hay and could not be conveniently mustered.—*Manitoba Trade Review*,

RECENT EXPERIMENTS AT SHOEBOURNE.

(From the Engineer.)

Such a programme of experiments as that carried out at Shoeburyness on Thursday, June 20th deserves special notice, as fixing what may be called landmarks of progress in the various branches of artillery. The experiment of the day was the first trial of the 35 ton gun—the "Woolwich Infant" against armor, a matter of such importance that it deserves to be dealt with alone, consequently our readers will find that we have devoted a separate article to it exclusively, in preference to allowing it to rank in the array of heterogeneous trials which made up the happy family like programme of the day. We must not, however imply that the other trials that were made did not deal with matters of importance, but rather that each particular test was not of any importance, because it was only the repetition of some well established result, and therefore could not be spoken of as an experiment.

The first trial consisted in the firing of the 9 inch Woolwich gun on the Moncrieff carriage. This was only the repetition of a previous experiment. There was, however a new feature in the details of the system of laying the gun, namely, the marking on a disc, low down on the carriage, of the elevation given to the piece with reference to the horizontal plane, by the use of which the laying of a gun by a man under cover at the bottom of the pit is facilitated. The carriage in all its parts acted well, although by no means better than on the previous occasions.

The second performance of the day was namely, the trial of Mr. Quick's torpedoes, was certainly in every sense an experiment. We have heard it said that a New York detective masters a ruffian who suddenly presents a loaded pistol at his head, by simply standing in an apparently passive attitude, with his hand in his coat pocket, while in that hand he quietly points a small pistol towards his adversary, and at length shoots him unawares from inside his own pocket, the ball passing through both of their clothes. Mr. Quick appears to contemplate a somewhat similar "artful dodge." He proposes to furnish a man of war with a tube closed with valves fixed in the vessel's side, about 8 feet below the water line, from which a locomotive or rocket torpedo suddenly emerges, passing under water into the unarmored vitals of an adversary. Thursday was the first occasion on which his design was tried on large scale. A 10-inch gun was laid on the beach at about five degrees elevation, at a spot where it would be covered by about 4 feet deep of water at high tide. The bore was closed at the muzzle by a disc of glass fixed in a wood washer tightly sealed round the edge, while an electric wire led through the vent of the gun to a small igniting charge in the centre of the base of the torpedo. The torpedo itself was a cylinder something over 5 feet long, with a sharp pointed head, and immediately behind it a hollow space intended to be filled with gun cotton. The after part of the body contained four rockets, which were in communication with the igniting charge, and whose gas escaped on ignition through spiral vents designed to give rotation to the torpedo and keep its axis steady while projecting it through the water. On this occasion the gun cotton bursting charge was dispensed with, the object being to ascertain what range and direction might be obtained.

On firing, the torpedo burst open close to the muzzle of the gun, two rockets rising in the air, one of which descended almost immediately, while the other flew high over the heads of the spectators. The conditions governing a rocket's motion under water are even more complicated than in air; the pressure of the gas in every case, of course increases with the depth of water above the rocket. In fact to obtain the full development of force without risk of bursting the case, a certain given depth is required. Success could hardly be expected to follow a preliminary trial on a large scale. Even supposing such an engine to be desirable, Mr. Quick's torpedo has hardly reached the stage of development desirable for a public trial; the same forces which cause the ricochet of shot in water, or, in fact, the bounds of a stone thrown by hand to skim in "ducks and drakes," would always give a submarine rocket, if it moved with a high velocity, a tendency to rise like Venus out of the sea.

At about a quarter to twelve o'clock the 10-inch Woolwich gun fired common shell. This practice would have been more interesting had the piece been mounted on Capt. Scott's carriage; and this would probably have been the case but for a comparatively trifling accident which had occurred to prevent it. Very good shell practice was next made from four 64-pounder Palliser guns, being 8 inch converted smooth bores.

The morning's programme was concluded by the firing of Hale's war rockets and Boxer's life-saving rockets with lines. Our readers probably are aware that the use of a life saving rocket is to carry a light line over a stranded wreck by which a double rope and whip may be passed to the crew, and eventually a hawser to be made fast to the mast, on which runs a slung or "breach buoy," affording men the means of passing safe to shore, in cases where a lifeboat could not save them. The attempt has been made lately at Shoeburyness to get rid of one of these successive operations by firing two rockets together, and making them carry the whip and double line at once, instead of the preliminary light line. The two rockets thus fastened together are, in fact, a copy of Denhot's twin rockets, on a more powerful scale, and are, unfortunately subject to the same liabilities. Should the two rockets ignite and start together, they may do well, but should either one ignite before the other, or from any cause commence to act much more strongly, the whole is deflected and may fly indefinitely wide of its proper direction. This danger arises only at the moment of ignition, for if the rockets get away for any considerable number of yards, the pull of the heavy line behind them is a great safeguard against deflection. On this occasion, however, probably the ignition—which was effected by raw quick match strands—was not simultaneous as the rockets parted into the sea about thirty yards from the firing point. In a shipwreck, time is a great object, but time is generally best secured by making the first communication to the vessel as easy as possible; in fact the saving of the crew is generally rapidly effected after any kind of line is once thrown clear over the ship. Hence it seems doubtful if this method of using the rockets is likely to be so successful as the use of the lighter one.

After luncheon some firing at ship's sides took place. Two targets had been constructed—one representing an ordinary iron one, and another an ordinary wood ship's side—both without plating of any kind. The