

weight, to recoil down under cover of an unpierced parapet, or at sea below ship's deck immediately on being fired, and to rise again by the bottling up, as it were, of the recoil force after the operation of reloading has thus been performed in security. It is not, of course, supposed that the Moncrieff system can ever entirely supersede casemates and iron shields, for in certain positions these cannot be dispensed with, but it may be safely assumed that the days of embrasures are numbered, both in fortresses and field entrenchments. The following extracts from the Proceedings of the Director of Artillery, dated 5th October, 1871, speak for itself:—"The experience derived from the siege of Paris by the Prussians as compared with that of the Versailles Army when Paris was held by the Commune, has clearly established the fact that in these days of rifled artillery embrasures in siege works must be altogether abandoned, or, at least, very seldom resorted to, and the only principle at present known to the committee (i.e. the Committee on High-angle and Vertical Fire) as likely to afford the protection which has become essential, is that of Captain Moncrieff." The principle then alluded to was that known as the "counter weight"; as already stated, the "hydro-pneumatic" is an improvement on it, and is especially valuable as regards siege trains; the whole apparatus required for a 40 pounder gun with Moncrieff carriage, weighing not above half-a-ton, and it may be carried in a single trench cart. The 40-pounder gun and 8 inch howitzer will probably be the heaviest siege train pieces we should use in future European warfare, while for India the 25 pounder will be the heaviest siege train gun, with the newly-proposed howitzer weighing about one ton.

In September, 1872, the Committee on Rifled Shell Guns informed Major Moncrieff "that they attach the greatest importance to the production of a carriage, for siege purposes, which will recoil into cover"; and they suggested his "hydro-pneumatic arrangement, resembling that which is now being made for trial by the Italian Government," as a feasible one.

In 1874, the Committee on High-angle Fire recorded their opinion that the quality of recoiling into cover with siege carriage "is much to be desired," and this is practically admitted by the manufacture of the 64-pounder hydro-pneumatic siege carriage. With reference to guns of position, in September, 1872, practice was carried out at Shoeburyness with a 9 inch and a 7 inch gun, throwing shot 250lb., 113lb. weight respectively. The Secretary of State for War and foreign officers attending our autumn manoeuvres were present. The result was so favourable that the superintendent of experiments reported in October as follows:—"The carriage worked easily, and no damage was done to it." In December the same year, further practice was made with a 9-inch gun, on a Moncrieff carriage. Five rounds were fired to ascertain the effect upon the concrete surface of the parapet, the gun firing immediately over it, and the report was that—"The concrete did not suffer any damage."—"The carriage will now be taken into use for instructional purposes." Had these rounds been fired through an embrasure, its condition would probably have been very different. So far, we see different committees, year after year, recommending Moncrieff's system for service on land. And the late Sir William Denison, an Engineer officer not altogether unknown to fame, when returning from Madras, where he had been Governor, took the opportunity of looking over the forts at Malta. This was in 1866.

He then strongly represented to Government the comparatively undefended condition of the island, in the face of the improved naval gunnery and the ironclad ships of that time, and urged the adoption of the iron shield system as indispensable; but having seen the Moncrieff system experiments after his arrival in England, he, in 1868, gave it as his opinion that it was superior. (He thought the "counterweight carriage" of that day "as perfect a mechanical adaptation as could possibly be required," and the system "perfect as to its weapon in an artillery point of view and its capacity for delivering fire," while its risk from vertical fire he thought "exaggerated.")

So long ago as June, 1870, Major Moncrieff submitted designs to the Admiralty for the application of his hydro-pneumatic carriage to gunboats, but it was not until 1871, and then through the accident of a foreign order, that he was enabled to carry out his principle in the gunboat *Hydra*, and this it is understood he did, with most satisfactory success.

Here then, we have strong testimony in favor of this system for siege trains, and in permanent land defences wherever open batteries are suitable, and we have presumptive evidence of its efficiency for gunboats and armoured vessels. In the latter it would replace the much more expensive and weighty "turret," nevertheless up to this date, and although numerous "gun pits" have been made in our coast defences, it is believed not a single gun has yet been mounted in them on the Moncrieff system, which on account of its simplicity and economy, foreign nations will probably adopt before we do. Whatever is most expensive seems most popular with John Bull; Brother Jonathan has already taken the initiative and is applying this principle, under a different name and slightly modified, to his land defences; we delay doing so although some of our most distinguished Engineer and Artillery officers have expressed themselves strongly in favour of it, and as strongly against the embrasure parapet. But the Moncrieff system is also warmly advocated by some of the most distinguished foreign Engineer officers. The Belgian Colonel Brailmont writing of it in 1868, says; "I believe this idea is destined to have a great future." And His Excellency Baron von Scholl writes to Major Moncrieff from Vienna in 1873 as follows:—"The application of the mentioned principle to siege carriages, either by counterweight or by hydro-pneumatic agency will in every case be a very great improvement, for the Germans have already found at the siege of Strasbourg in 1870, by elevated carriages (the old open barbette system) that the losses of men were not so great as it used to be with common siege carriages (that is the embrasure). But elevated carriages are very far from containing your disappearing principle, the gun itself remaining always at the same level. From a comparative estimate of the expense of a 9-inch 250lb. gun, with carriage and platform, on the present iron shield system, and a similar gun mounted in a Moncrieff gun pit, including the expense of magazine accommodation, &c., &c., it would appear that the balance in favour of the latter is £450, where open battery emplacement is compared, and no less than £1800, where the comparison is between it and the existing casemate defence. This estimate was furnished by the Inspector-General of Fortifications, at the request of a committee in April, 1872. With all this evidence in favour of the Moncrieff system it seems unfortunate that some of the members of the last year's committees, were, as it is be-

lieved they were, men who were avowed opponents of anything but shield, which they had for years been employed in perfecting. In saying this no reflection is intended on those gentlemen, but in our courts of justice we guard a prisoner against any unfavourable bias, by not allowing any to sit on his jury who have an interest in finding him guilty. Surely Major Moncrieff was entitled to be secured an equal impartiality in his judges. By refusing further trial of his system for the present (and it is rumoured such is the case), the authorities at the War Office prevent its merits being placed beyond reach of cavil, and the Indian and Colonial Governments are stopped from availing themselves of its economy and efficiency, while such is the urgency of preparation that they must be forced to adopt iron shields in coast defence as the only system officially known. The War Office virtually shoves the system, so far as coast defence is concerned, if it declines to apply it to heavier guns than the 54-pounder, which was last year so successfully tested.

I must not conclude without apologising to Major Moncrieff (whom I have never even seen) for the liberty I have taken in so freely mentioning his name without his knowledge or consent previously obtained: my only excuse is that the whole matter has now become one of national importance, and he by his abilities and disinterested patriotism, may be considered rather in the light of a public than a private character.

EMERITS.

February 15, 1875.

### CORRESPONDENCE.

The Editor does not hold himself responsible for individual expressions of opinion in communications addressed to the VOLUNTEER REVIEW.

HALIFAX, N.S., 19th April, 1874.

To the Editor of the VOLUNTEER REVIEW.

DEAR SIR,—I hope it will not be considered offensive, if I beg to differ from you in some remarks in your editorial of 13th inst inspired no doubt by Fixed Bayonets, Ixion, and Tompion's several communications which have appeared at different times in the columns of the REVIEW. For instance, on page 174, 2nd Column, you say alluding to Fixed Bayonets' third query. "The repetition has been avoided at page 101 Field Exercises and was not necessary at page 116." Now I contend that the two sections are altogether different. That on page 101. Inspecting a Company. It is expressly laid down that the Company shall take Open Order without shouldering arms, for the reason explained in the next paragraph, viz. The inspecting officer will pass down the ranks to see that the appointments, clothing &c., are clean, and in good order. If arms were shouldered it would be impossible for the officer to examine the bayonets. This is the only instance in which arms are not shouldered before taking open order. Ixion's answer is correct. The answer to Fixed Bayonet's sixth query is contained in the fourth par. 3rd column of your editorial. The same answer is given by Tompion, but Ixion avoids it. You mistake Fixed Bayonet's seventh query, as to distance between ranks with