

In order to realise the practical advantages of this invention, it is only necessary to remember that the gun is supplied with a metallic reservoir charged with liquefied gas, fixed under the gun, and holding, charged in rapid succession as may be desired, without loss of effect. To re-charge the weapon it is only necessary to substitute a full reservoir for the empty one; this can be instantly done, the reservoirs being made interchangeable. They are light and cheap, practically indestructible, and can easily be supplied through gunsmiths.

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The Artillery.

In the last *Proceedings* of the Royal Artillery Institute, Woolwich, there is a useful paper by Captain W. J. Honner, R.A., on the subject of the control of artillery fire in action, in which he lays down these measures:—

(a) Except under very exceptional circumstances never change the equipment, ammunition, or organization of a battery about to proceed on service; or, in other words, train and equip each battery in peace time for the service required from it in war.

(b) Establish a uniform system for "Controlling fire in action," and let nobody practise any other system.

(c) The officer commanding a battery or controlling its fire when in action should never be spoken to or interrupted except on very urgent affairs.

(d) "Section commanders" should not as a rule lay a gun or bore a fuze. (It must be remembered that a section commander has to superintend two guns. If he lays one he neglects the other. He should, however, watch the laying and boring of fuzes most carefully, and always look over the sights when the gun is laid.)

(e) Fuzes should never be bored at the gun. A man requires all his time to lay correctly.

(f) Men should be able to lay a gun or set a fuze with almost mechanical perfection. (Constant practice against time will tend to produce such a result. The work is dry, tedious and monotonous, but its importance cannot be overlooked.

In conclusion, Capt. Honner remarks: "Have we any provision for supplying casualties amongst our Nos. 1 or pointsmen? I hope this point will not be overlooked. Would it not be advisable to grant an extra retaining pension to men who have proved themselves to be good pointsmen. They will surely be required on the morning after our first artillery duel."

SIEGE OPERATIONS.

The principal artillery camp to be held this winter in India, is, it is stated, to be devoted to siege operations, for which purpose two regiments of infantry, besides six batteries of artillery, and the necessary sappers, have been detached. *Appropos* of this camp, the *Times of India* has a useful article, pointing out that siege artillery is a branch in which absolutely no progress has been made in India. Mountain batteries have their screw-guns, which are at least an improvement on the 200-lb. gun. Horse and field batteries are getting their 12-pr. breech-loaders, which place them on a level, if not above, the best armed artillery in Europe; fortress artillery are being furnished with 6-in breech-loaders, and are looking forward to the 10-inch guns of the same type; while even the present muzzle-loaders are capable, as Sir F. Roberts said last year, of great development if differently mounted. Siege-trains, however, are exactly where they were. The 40-pr. and the 25-pr. muzzle-loading guns with the 6-3 in. howitzer, form the only ordnance available for breaking earthworks, and yet there are really good siege-guns in England, if only India would adopt them. Our contemporary says:—"Allowing the howitzers to remain for the present (though the possibility of taking really heavy pieces to the front when the loads are divided on the screw system should not be overlooked) we have a really good siege-gun in the 5-in. breech-loader, which, though it weighs 5 cwt. more than the present 40-pr., throws a heavier shell containing a much larger bursting charge. Its muzzle velocity is greater than 300 ft. a second, while its energy, the true measure of power, is double that of the 40-pr. The 4-in. breech-loader could well replace the 25-pr. R.M.L., though heavier. It is a gun, like the 10 in. B.L., that is surprisingly good for its size, even when compared with its sisters. In muzzle velocity, it equals the 6-in., while its shell, though weighing only 25 lbs., carries more powder than the present gun. It is also possible that the 4-in. quick-firing gun may find a position for itself in a siege-train, as a rapid succession of shell on one spot in an earthwork will soon make a breach. Truly, our siege artillery needs a camp of exercise, but it needs modern guns still more. Possibly they may follow the camp." Meanwhile, the re-arming of the

Royal Horse and Field Artillery proceeds but slowly. Eleven batteries in India have received the new 12-pr. guns. The home authorities have promised to re-arm 27 batteries during the current financial year.

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