

On the assumption that 225 grains of lead driven by the explosion of 13 grains of powder were not strong enough to stop so vigorous an animal as the ordinary type of the *genus homo*, the charge of powder was raised to 18 grains, and the weight of the bullet to 265 grains, and the diameter was increased by .005 (five thousandths of an inch), but it was found that if, say three shots had been fired from an Enfield revolver-pistol, and it was desired to reload the discharged chambers, when the extracting apparatus was brought into play the three unfired cartridges came out as well as the exploded shells. So, in order to obviate the mechanical defect in the screw-pistol the calibre of the bullet was raised to .476, the nose was made blunter, and the base more hollowed out. This charge, doubtless, prevented the live cartridges being extracted, as well as the exploded ones, but at what a price!

Every private-made revolver in the hands of every officer in the army required to have the cylinder rechambered, otherwise it would not take mark III ammunition at all, and no officer is allowed to draw a service-revolver from store, or purchase one at any price. He is obliged to go to a private gunmaker.

2. The jamming of a .476 bullet through a .450 barrel sets up such an enormous amount of friction that the bullet loses much of its initial velocity, and the amount of penetration is largely diminished.

3. Owing to the increased recoil it is impossible to make accurate shooting.

4. The amount of the mischief may best be judged by the fact that when mark III ammunition is used the bullet is sometimes broken into pieces, the front part is driven out, and the base sometimes follows and sometimes remains behind in the barrel, and endangers the life of the person using the weapon.

To obviate this state of affairs revolver-makers are raising the calibre of the barrel to about .470 in new revolvers, and thus imitating a break of gauge.

In short, the Enfield revolver-pistol and mark III ammunition are on a par with the guns that burst, the rifles that jamb, the bayonets that bend, and swords which won't cut, and are the result of the system in vogue in England of putting square pegs into round holes, and trusting skilled and able officers, educated to one line of business, to superintend another particular branch of which they know nothing, and then at the end of a five years' apprenticeship, when an intelligent man will have picked up some special knowledge, shifting him to some other berth.

The Reform of Infantry Drill.

WE have so often quoted Col. Macdonald, of the Queen's Edinburgh Rifle Volunteers, that we are glad to have the opportunity of calling attention to a lecture delivered by him on the above subject to the Glasgow Tactical Society. Col. Macdonald's views are well known to most of our readers, and to a very great extent we are in accord with them. The sum of them is, that the experience of modern campaigns has shown that soldiers can no longer advance under heavy fire, in anything like a close formation of the ranks; that the whole of our infantry drill should be based on a formation in which the soldiers are no longer required to keep touch; that as fighting is the business of soldiers, the formation which they are compelled to use in battle should be the one most practised in peace; and that, whilst he will concede to the martinet a parade drill for show, it should be quite subsidiary to action drill, instead of making, as our drill book does, action drill a mere excrescence on parade drill. Col. Macdonald quotes in favor of his propositions such soldiers as Lord Wolseley, Sir Archibald Alison, Sir F. Roberts, Gen. Fielding, and such an acute military critic as Mr. Archibald Forbes. Col. Macdonald says: "All notion of a dressed line accurately constructed after parade fashion is absurd. All that can be done is to thicken up the advance with as much regularity of strength as good officering and good discipline may make feasible, delaying and minimising the inevitable mixture of units up to as late a stage as possible, and doing everything that can be done so to organise that recovery from the confusion incident to the tremendous stress of the modern combat shall occupy the least possible time." To that we say, "Hear, hear." But for all that the fact remains that the "attack formation"—we may say in any form—is not appreciated or believed in by the bulk of the army. Question officers, high and low, on the subject, and you hear the same objections in different forms—"It does not answer—the confusion is frightful at Aldershot—what would it be in war?—the men get out of hand," etc. It is quite arguable that the confusion of war would be less than the confusion of peace. There would not then be the same frantic rushes on all sides to get to the front, it would take a much longer time to advance 100 yards, under fire than it does to dash at speed in mimic warfare across the Long Valley, and the eyes of the men would be a deal more anxiously turned to their leaders in action than they are in Bourley Bottom. Confusion there would be, doubtless, but would it be greater

than that which occurred in the struggling line as it emerged from the banks of the Alma under a heavy fire? The conservatism and dogmatism of the army is proverbial, and Col. Macdonald gives an amusing illustration of this when he relates how a military writer in the last year of the last century wrote a book to advocate a return to the use of the longbow and pike, and how the proposal was favorably entertained by a military periodical of the day. Col. Macdonald concluded his lecture with a general summary of the points which he thinks demands attention in adapting infantry drill to modern requirements:—(1) A simplification of the formations, giving the utmost freedom of movements, and developing an individual order. (2) All infantry work to be studied in relation to the character of the modern fight, the hard and fast line which separates the parade drill from the practical exercise being removed, and rapid and frequent change from the one to the other being a distinct feature of the training. (3) A general principle for advancing into action which would apply to all bodies of men, large and small, so as to maintain a control of cohesion from the highest officer down to the lowest point. (4) A direct movement after the troops were launched into the fight, so that they should not be required to manœuvre under the terrible fire of modern weapons, but should be free to push forward as required, according to the ground. (5) Adjustment of all details, so as to give speed of movement, while saving the troops from all unnecessary fatigue. (6) In addition, a thorough control of command, a development of comradeship in small groups, giving rallying power on the small scale, which is the very soul of recovery of order on the large scale from the disintegration of the battle crisis. (7) Training in the athletic sense to be a distinct aim in all drill.—*Broad Arrow.*

The War Game.

IT is satisfactory to observe that the practice of the War Game is becoming more and more one of the recognised and legitimate occupations of volunteer officers during the winter months. It is perhaps to be regretted that the word "game" has been applied to these tactical exercises, for it leads casual critics to the not un pardonable conclusion, that it is really a game and not a valuable lesson in the military art. Briefly speaking, the advantages of the War Game may be summed up under the following headings:—First, it teaches how to read a map properly; secondly, it impresses on the minds of those who take part in it, a very forcible appreciation of the relative values of the three arms of the service; thirdly, it gradually brings home to even the most enthusiastic and irrepressible light horseman, a knowledge of the fact that whatever larks he may be inclined to have with his cavalry and guns, after all, the success of the movement depends on the performances of the slower infantry—in other words, the result is practically determined by the manner in which the slowest moving unit of a column is handled. There is nothing which so conclusively brings this home to the mind of an officer who is studying tactics as playing what is called the War Game, and trying to move a convoy across the front of a watchful enemy.

Playing the War Game on the maps of the country is of great value in another direction. This teaches officers the physical characteristics of the ground over which, in the event of possible invasion, they might have to manœuvre. It is evident that an officer who is endeavoring to conduct a force from Maidstone to Sevenoaks, or from Guildford to Farnham, on the map, will know a good deal more about the country than one who is not a resident in that district, and who has not studied the map itself. If for no other reason, therefore, than for giving a knowledge of the country and a clear insight into the art of map reading, the practice of the War Game is strongly to be recommended. There are, however, more abstruse lessons to be learnt by those who take the trouble to go into the matter. It will be seen that it is not sufficient to have different arms of the service at one's disposal, but it becomes compulsory to study the question whether cavalry, guns, or infantry can or cannot be manœvered over any particular piece of ground. The player of the War Game soon finds out that it is no good sending a regiment of cavalry into an enclosed country, cut up into small fields, with sunken roads and impassable streams. Infantry officers would very soon find out the danger of moving in column through a defile without crowning the heights on either side first. Artillerymen also would learn that it is no good blazing away at five thousand yards, whilst they also learn with great rapidity how a trifling rise in the ground or a small wood will both conceal and protect an hostile force.

There is one great defect in the practice of the game as it is at present conducted, which can only be overcome by a keener appreciation on the part of the players of the exact nature of the problems involved. With a view to provide for orders and intelligence being transmitted from the front to the commander-in-chief, as they would be actually in the field, it is necessary that the players should have a knowledge of the exact conditions under which they would conduct