

or the quicker it is moving, the further one must aim in front of it; thus, for a target moving at the charge 100 paces distant, one should aim about half the breadth of a man in advance of it; at 150 paces the whole breadth; at 200 paces a breadth and a half, &c. Then follows aiming with the sights at different elevations, subsequently the knowledge and use of the tangent scale. The principles for this shooting at long ranges, with regard to the manner of placing the rifle against the shoulder, and of holding the head against the butt, are the same as with us.

Different appliances for aiming: In order to make their men as perfect in aiming as possible, the company commanders in Prussia may make use of several means and of different apparatus, of which we intend to give an idea.

Dreyse's apparatus: The weapon is placed on a support with two arms, fixed upon a pivot in such way that the weapon may be placed upon it accordingly as may be required, in every horizontal and vertical position, and may be kept fixed in it. It is our aiming support, but improved.

The Alvensleben apparatus: This is an iron instrument ingeniously constructed, which screws on to the weapon, and which indicates by means of a glass and a pendulum the vertical and horizontal deviations of the weapon when aimed for a certain given distance.

Aiming glass: These glasses differ from ordinary glasses, the left hand aperture is filled with an ordinary glass, and the right hand one with a looking glass in which there is a small ring, intended to act as a back sight, in the midst of the tin foil which has been scraped off the necessary space. These glasses having been fixed in the ordinary manner, the man rests his weapon against the picket, and looks through the small circle which has been left transparent; so as to get the bottom of the notch of the back sight, the top of the foresight, and the object into one line. When he considers he has well sighted the object, he says so to the instructor. The latter then examines the exterior of the reflecting glass, which reflects the weapon and the object aimed at, and he can thus ascertain whether the man has aimed properly, or whether he has made any error.

Aiming at the instructor's eye.—If there is no aiming apparatus the soldier is told to aim at the instructor's eye, who can thus see whether his aim is correct or not. A small metal level is also made use of, about the size of a card, on which the target is represented, with three holes in the centre instead of the anchors (a description of the targets will be given further on). The instructor looks through these apertures, and can remark any mistakes the man may have made.

Aiming on Sandbags: Should there be no aiming horse, bags filled with earth or sawdust, one foot broad and one and a half feet long, may be used. The weapon is placed in equilibrium upon them.

Dart rifles and the Wegner arm: Indispensable and important as aiming drill is, still there is no doubt that when continued for any length of time, it is both fatiguing to the man and to the instructor, because no immediate visible results ensue therefrom. Therefore it is highly advantageous to alternate these drills with firing with the Dart rifle, or still better, with the Wegner arm, which is a needle gun into which a second barrel of a smaller calibre is introduced.

We will not say anything as regards judg-

ing distance, which is done in Prussia very nearly the same as with us. Preparatory firing with blank cartridge (*platz-patronen*) is carried on in the same manner as with us, with this difference, that when firing the weapon is supported against the jacket in the manner previously mentioned. If now we pass to target practice, properly so called we shall find in the Prussian instructions the following particulars:—

The Ranges: An infantry regiment should have at its disposition at least one range of 800 paces, six ranges of 400 paces, and, if circumstances require it, a special decision can provide a regiment with two ranges of 600 paces.

A battalion by itself ought to have—1st, a range of 800 paces; 2nd, two ranges of 400 paces; and occasionally, a range of 600 paces. For a rifle battalion, there should be a range of from 1,000 to 1,200 yards, and three ranges of 600 paces. The ranges which are next to one another, should be separated by banks of earth from eight to nine feet high, and about twenty-one feet broad at the bottom; if this is not practicable, the central lines of fire should be at least twenty paces from one another. We shall not enter into all the details relating to the setting up of butts to catch the bullets, &c.; it is sufficient to say that every precaution is taken to avoid accidents, and that the shooting is carried on with the best possible conditions that can be obtained.

Ammunition: The troops receive yearly, first, for the recruits drill, four blank cartridges per man. For target shooting (officers, non-commissioned officers, and soldiers), 100 ball cartridges per man. The author of the article in the *Allgemeine Militar Zeitung* says that last year, 1872, the number was increased to 150. Besides this for experimental firing ordered by the war minister for a battalion of above 600 men strong, 4,000 ball cartridges; for a battalion below 600 men, 3,000 ball cartridges. Besides this there is a certain amount of special ammunition (explosive cartridges, fulminating caps, fulminating paper powder, for the annual manœuvres, &c.) are placed at the officers' disposal. The following particular disposition appears to us to be worthy of attention. The lead which is recovered by the various corps becomes State property, and has to be either returned to the artillery depots or else employed for the further instruction of the troops.

For a battalion of infantry one-half the lead fired during the year has to be returned without compensation being given for it. For any surplus that may be handed in the battalion receives at will either an equivalent in cartridges and balls, or materials for making these cartridges, or else in money, or partly in one or the other, according to the following rates.

For a cwt. of old lead, 625 ball cartridges, or else 14lbs. of powder and 980 bullet and cartridge-cases. When the weight of lead is less than 16lbs. it is given to the artillery without any compensation.

In money, for a cwt. of lead, 13s. 6d.; this money is to be exclusively employed in repairing the ranges, *matériel*, and targets.

Arrangements are in progress for a great rifle meeting, open to all England, to be held at Gloucester on the 13th and 14th of May, when prizes of the value of £1,000 will be offered for competition with the government Snider rifle.

CORRESPONDENCE.

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

FROM BROCKVILLE.

To the Editor of the VOLUNTEER REVIEW.

As the time draws near for the usual yearly drill, and as the question is often asked in the locality where it will be put in this year? I would beg to suggest to those in authority, the advisability of bringing the force together at Ottawa.

For several reasons this place is preferable, it being the most central, considering the location of the different companies composing the several Battalions, it being the head quarters of the 43rd Battalion, and the Field Battery; also one company of the 56th, and the other companies of that Battalion could be taken to Ottawa as cheaply as to its own headquarters; the 18th Battalion can come up for a very small expenditure.

The 41st and 42nd Battalions can assemble at Ottawa at less expense than at their own headquarters. Capt. M. Menzie's Field Battery could be brought to Ottawa, and have the benefit of one year's drill from Capt. Stewart's guns.

The 59th Battalion will be the only one that will have to go out of its way to be there, but the saving in transporting stores would more than make up the cost of bringing that battalion to Ottawa. And would it not be well if Ottawa was made the place of a permanent camp for the force in this district, the Government furnishing the land necessary for camp and drill purposes, and also target ground; and if the necessary guns was provided, earth works could be thrown up, and there would be no necessity of taking Col. Forrest's fine Brigade out of the district, saving the expense, and giving us an opportunity of witnessing the workings of all arms of the service. And another advantage which I nearly forgot, it would give us all an opportunity of seeing the flower of our Canadian army (the Guards) and realizing how much superior they are to us ordinary *sogers*.

OLD VOLUNTEER.

England spends annually nearly ten millions sterling upon her navy, France less than five, the United States under four, and Italy scarcely one and a half; but this economy is explained by the fact that the Italian naval establishment is in a frightful state of neglect. Considerable additions are being made to the arsenals of Venice and Spezia; a naval school has recently been opened at Genoa, and it is anticipated that within a few years the Italian navy will only be inferior to those of England and the United States.