

visited the new quarters, and Sir Adolphe Caron made a critical examination of the whole building, and expressed the greatest satisfaction with everything about the institution. When they again assembled in the officers' quarters they were joined by a number of citizens who had been invited to take part in the after festivities, which, with sparkling wine and song, lasted until a late hour. During the evening the Oddfellows' and Military band rendered sweet music, which was appreciated by all present and reflected credit on Prof. Riggs.

Major Mayne on Infantry Fire Tactics—III.

(Continued from Page 395.)

The dangerous zone of a collective fire is the beaten zone (about 100 yards on horizontal ground), plus the grazed zone of the bullets falling at the end of the beaten zone nearest the firer. This grazed zone is the distance over which the bullet remains under the height of the target above the ground on which the target stands.

If the beaten ground slopes upwards with reference to the line of sight, the extent of beaten and dangerous zones are diminished; but if the beaten ground slopes downwards with regard to the line of sight, the beaten and dangerous zones are greatly increased. For this latter reason the reserve troops of the defence should be kept well in rear of the firing line at the early stages of the fight, and close up to them at the latter stages, which is a favourable condition for the defence.

Further, it must never be forgotten that in collective firing, as in all kinds of firing, a careful watch must be made as to the effects of the fire, so as either to stop it if no effects are being produced, which only depresses the men and elates the enemy, or to correct the elevation used if necessary, for atmospheric conditions, the inclination of the line of sight, and the slope of the beaten ground, and for the unavoidable errors made in judging the range, all of which affect the fire and the proper elevation to be used.

On account of the longitudinal spread of the bullets in a collective fire, we must be very careful not to be misled in watching the strike of the bullets. We must remember that even though many of the bullets fall short yet the fire may be well directed. If either side is stationary, or if the ranges are rapidly decreasing from either side advancing, it is better for a fire to fall short of rather than over the target, for in the former case we get the benefit of ricocheting bullets, which are lost when the mass of the bullets pass over the target. If the ranges are rapidly increasing, oversight for the supposed ranges.

Use of Combined Sights.—Sometimes it is necessary to cover a greater zone than 100 yards with bullets. This is done by making half the men fire with an elevation for 50 yards under the supposed range, and the other half with an elevation for 50 yards over the supposed range. In this way a zone of 200 yards is covered with bullets. But at least a whole company should be used in this way so as to get a result as rapidly as possible, because prolonged firing ought always to be avoided when possible from the bad effect it has on the men in reducing their offensive spirit. A bold use of men and ammunition is always a good policy when once the fire is effective. But as such a use of combined elevations means a proportionately great consumption of valuable ammunition, it should only be used when there is ample ammunition, when the enemy offers a good target, when the range is not accurately known, when one side is in movement, and when the atmospheric influences and the slopes of the ground near the enemy are not favourable, and the strike of the bullets cannot be observed. Further, such a use of combined sights is only possible at the long and at the longer of the medium ranges while men are sufficiently under control for the purpose.

But in all cases it cannot be too strongly impressed on both officers and men that as the range increases (even when only one elevation is being used), the amount of ammunition expended has also to be greatly increased in order to get the same results in the same time, and if more than one elevation is used a proportionate amount of ammunition must be used.

The Question of Long Range Firing.—But much has been said for and against long range firing. No doubt long range firing has never produced any decisive results in war, though it may have produced excellent results in special cases. Victory is decided at the short ranges, but it is prepared for in the medium ranges. Hence these are the important ones. Long range firing to be effective requires a large consumption of ammunition and a prolonged concentration of fire. But this prolonged firing takes away from the offensive spirit of the men. But where there is ample ammunition, which can be easily replenished, and if the ranges are known or the effects of the fire can be observed, if the atmospheric condition and the slopes of the ground of reception are not too unfavourable, if the object fired at is of suitable dimensions especially as regards depth, and if the fire is executed by troops specially detailed for the purpose, there is no reason why the long ranging power of modern rifles may not be judiciously and cautiously indulged in as a

treat. But it should be stopped if, after some minutes, no results are observed from its use, and it should never be permitted without the consent of the senior officer within reach.

The Direction, Control, and Discipline of Fire.—We now come, perhaps, to the most important part of our subject—the direction of, the control of, and the discipline required for modern Infantry fire. The duty of directing the fire falls on the company leaders and officers senior to them; the duty of controlling the fire falls on the junior officers and the N.-C.-O's; the discipline required to enable this direction and control to be carried out rests with the men.

A good fire discipline is obtained when the soldiers will not fire until ordered, nor when in motion, when they will only fire at the object named and with the elevation ordered, and when they will cease firing when ordered. Simple as these requirements are, yet they can only be attained by a careful peace training.

The control of the firing consists in imparting to the men the orders given by the company and higher commanders, and in seeing that these orders are obeyed and even in enforcing their execution.

The direction of the fire consists in determining, at each moment of the fight—(1) the opening and the ceasing of the fire; (2) the amount of ammunition to be expended at each moment to attain the object in view, taking into account the available supply of ammunition and the facilities for replenishing it; (3) the number of men required in the firing line to expend this ammunition in the desired time; (4) the selection of the objects to be fired on, and their allotment to different portions of the firing line; (5) the range and elevation and number of elevations to be used; (6) the observation of the results of the fire; (7) the kind of fire to be used; (8) the rapidity of the fire; (9) the moments of advancing and halting; (10) the attitudes of the men during each halt; (11) the moment for fixing bayonets; and (12) the replenishing of the expended ammunition, etc.

Some of these points have already been touched on, and so I shall confine my remarks briefly to such points as have not already been referred to.

(1). With regard to the distances at which infantry fire may be opened in battle under normal conditions, the following may be said:—

(To be continued.)

Militia General Orders (No. 15) of 5th December, 1890.

No. 1.—STAFF.

Colonel Ivor John Caradoc Herbert, C.B., of Her Majesty's Regular Army, is appointed to the command of the Militia of the Dominion, with the rank of Major General in the Militia.

Major General Herbert having arrived at Headquarters assumes command from this date.

Lieutenant Eric Streatfeild, Gordon Highlanders, having been appointed Aide-de-Camp to Major General Herbert, C.B., commanding the Militia of the Dominion, assumes his duties from this date, with the rank of Captain in the Militia while so employed.

No. 2.—ROYAL MILITARY COLLEGE OF CANADA.

Board of Visitors.—President, Colonel W. Powell, Adjutant General. Members, Colonel Sir C. S. Gzowski, K.C.M.G., Honorary A.D.C. to the Queen; Lieut.-Colonel T. J. Duchesnay, Deputy Adjutant General, Military District No. 7; Lieut.-Col. Hon. G. A. Kirkpatrick, late 47th Battalion; Lieut.-Col. W. D. Otter, Deputy Adjutant General, Military District No. 2.

No. 3.—ACTIVE MILITIA.

WINNIPEG FIELD BATTERY.—2nd Lieut. R. McD. Thomson resigns.

YARMOUTH GARRISON ARTILLERY.—*Brevet.*—To be Major from 5th November, 1890: Capt. T. R. Jolly, Q.F.O.

GOVERNOR GENERAL'S FOOT GUARDS.—To be Lieut.-Col.: Major A. H. Todd, M.S., *vice* J. Tilton, placed upon the Special List.

To be Major: Captain and *Brevet* Major W. E. Hodgins, V.B., from the Adjutancy, *vice* A. H. Todd, promoted.

To be Adjutant, with rank of Captain: Lieut. C. F. Winter (late N.C.O. Royal Fusiliers), *vice* W. E. Hodgins, promoted.

To be Captain: Lieut. P. B. Taylor, R.S.I., *vice* Gerald H. Bate, who retires retaining rank.

To be Lieutenants: 2nd Lieut. S. C. D. Roper, R.S.I., *vice* G. R. White, who retires retaining rank.

2nd Lieut. D. A. Macpherson, R.S.I., *vice* C. F. Winter, appointed Adjutant.

2nd Lieut. E. E. F. Taylor, R.S.I., *vice* P. B. Taylor, promoted.

2nd Lieut. E. E. F. Taylor, R.S.I., is confirmed in his rank from 30th November, 1890.

10TH ROYAL GRENADIERS.—2nd Lieut. D'Arcy H. K. MacMahon, R.S.I., is confirmed in his rank from 30th November, 1890.

12TH YORK RANGERS.—2nd Lieut. A. Curran, R.S.I., No. 1 Company, is confirmed in his rank from 30th November, 1890.

2nd Lieut. W. C. V. Chadwick, R.S.I., No. 4 Company, is confirmed in his rank from 30th November, 1890.

14TH BN.—2nd Lieut. D. R. Dupuis, R.S.I., is confirmed in his rank from 30th November, 1890.

20TH BN.—2nd Lieut. W. McDonald, R.S.I., No. 1 Company, is confirmed in his rank from 30th November, 1890.