

## Chapter V.—Continued

collective fire, especially at the longer ranges, short lectures will be given with blackboard diagrams showing the dispersion of shots and shot groups made by expert marksmen, and the resulting cone of fire caused by these shots. The instructors are referred to Plates XII. to XIV., Musketry Regulations, Part I., 1914.

A full explanation of the cone of fire caused by a number of rifles fired at the same target to be given with blackboard diagrams showing the trajectory of the bullet at various ranges and its effect upon the dangerous space, beaten zone, and the zone of effective fire, and instructors are referred to Plate XVI., Musketry Regulations, Part I., 1914.

The height of the trajectories for Mark VII. ammunition are as follows, and the culminating point is approximately at 60 per cent. of the range:—

At 500 yds.	2.3 ft.	Culminating point at about	300 yds.
“ 600 “	3.8 “	“ “ “	350 “
“ 700 “	6.1 “	“ “ “	400 “
“ 800 “	8.9 “	“ “ “	500 “
“ 900 “	12.8 “	“ “ “	550 “
“ 1000 “	17.8 “	“ “ “	600 “

The zone of effective fire, which is the area of ground beaten by the best 75 per cent. of shots fired, with Mark VII. ammunition, may be taken as follows:—

At 500 yard range.....	300 yards deep and	7 feet wide
“ 1000 “ “ .....	180 “ “ “	14 “ “
“ 1500 “ “ .....	120 “ “ “	22 “ “

Blackboard illustrations should also be drawn to explain the contour of the ground in relation to fire effect, and how this increases or decreases the area of the zone of effective fire. Instructors are referred to Plate XVII., Musketry Regulations, Part I., 1914.

The importance of the correct estimation of ranges must be thoroughly understood, especially on rising ground at long ranges, owing to the rapidly decreasing area of the zone of effective fire.

The definition of “searching fire” should be clearly explained, and the difference between collective fire, individual fire, and controlled fire; why and where combined sights are necessary, and why combined sights should not be employed by bodies of less than two platoons.