

The visual angle method—the apparent size of the object, if its size is known. Put out two fatigue-men at 200, 300, 400, 500, and 600 yards (the limit of individual fire), so that the recruits may get impressed on them what a man looks like at those ranges. If one man is in khaki and the other in dark clothing, an additional lesson will be learned, as to the effect of clothing, background, light, &c. Also, get the fatigue-men to stand, kneel, and lie down. The latter position will convince the recruits that 600 yards is the limit of individual fire, because (1) it is the limit of useful individual eyesight; (2) that beyond fire would be controlled by a leader using glasses; and (3) that an expert shot, knowing the range, fired twelve shots at a service target before getting a hit. In elementary training the recruit is warned against any unnecessary movement when in a firing position, as in most cases it will only be by movement on his part that he can be detected. To illustrate, get the fatigue-men to move their limbs about at the different points. The recruits are then taught the influence exercised by ground and features in the landscape on general impressions of distance, and when objects are over- or under-estimated (Paragraph 315, Musketry Regulations, Part I, 1909). Make a man always give his reasons for his estimate—discourage guessing. Let him check his estimate by trying the different methods of judging distance. Paragraph 323 of the Musketry Regulations says: "In every company, in addition to instructional exercises, at least one test in judging distance of four objects will be held for all ranks in every three months, distances from 200 to 800 yards." Paragraph 327: "Officers, N.C.O.s, and men whose mean error exceeds 20 per cent. and those who have attended less than two tests will be regarded as inefficient."

Subheads of a progressive course of judging distance for recruits:—

- (1.) Show them a short unit of measure, say 100 yards, and then make them pace it.
- (2.) Study the comparative visibility of the human figure at various ranges up to the limit of useful individual eyesight. The same with different-coloured background.
- (3.) The same in light and shade, according to the position of the sun.
- (4.) The influence of open and crowded landscapes, noting objects of known size in the vicinity of the target.
- (5.) Explain the various methods in judging distance.
- (6.) Judge short distances first, making each man give a definite reason for his answer.
- (7.) Judge distance from service positions, decreasing the time-limit.

AIMING INSTRUCTION.

Sequence of instruction as follows:—

- (1.) Explanation and adjustment of sights.
- (2.) Explanation of rules for aiming in detail (illustrate with diagrams).
- (3.) Reasons for taking a full sight.
- (4.) Reasons for aiming at the bottom of the target.
- (5.) The instructor, with sling unloosened, will take an absolutely correct aim from a tripod rest with his eye in the correct position at a point above and in line with the butt, and will explain system of focussing the vision—(a) Look at back sight and see that it is upright; (b) look at fore sight and see it is correctly centred; (c) direct eye to the mark. Finally cause each man to look along the sights and so get a photograph in his mind of what a correct aim looks like.
- (6.) Each man to set his sights and aim from a tripod, and to be told common faults when aiming.

Adjustment of Sights.

The instructor explains the reasons for the sights being placed on the rifle, and then assumes the loading position and shows how they are adjusted, after which men are ordered to set the sights for some particular range, remaining in the loading position until the instructor has verified the adjustment. They should then lower the slide, centre the wind-gauge, and order arms. This practice is continued until the men adjust quickly and accurately. (See tests.)

ALLOWANCE FOR WIND.

Explain the wind-gauge and how it is adjusted. All recruits should know the wind-tables. To give men practice, place a target in charge of a fatigue-man at a distance where it would be necessary to aim off the mark with a strong wind blowing, then tell men to set their sights and estimate the allowance to be made for the wind then blowing, and aim off; next signal to the fatigue-man, by means of a flag, how much to the right, or left, he is to place the disc, showing the correct allowance to be made. Then check the aims and point out any errors. The difficulty when aiming off is to keep the correct elevation. This can only be done by aiming on the six-o'clock line, so that the mark can be seen over straight edge of cap of the back sight.

AIMING INSTRUCTION: SECOND STAGE.

1. (a.) Develop rapidity of aim by constant practice with the eye disc. (b.) Explain how to aim at moving and vanishing targets. (c.) Cause men to aim and snap at fatigue-men moving across their front, appearing and disappearing.

2. Train men to aim at features of the ground by posting a few fatigue-men under cover at ranges between 200 and 600 yards. Cause each man, by signal, to expose himself for a few seconds, fire a blank round and disappear again five or six times, when the recruit should (a) locate, first by sound and then by sight, the position of the firer, (b) judge distance and allow for wind; and when fatigue-man has finished firing, set his sights and aim from a tripod rest at the ground supposed to be occupied. When all have aimed, order them to stand clear of the tripods. Fatigue-man signalled, to stand up, when instructor should check each man's aim and point out errors.