

men, in firing line, on a front of 424 paces. The proportion of men to pace is the same in both cases, viz., 2.02 paces to 1 man.

Thus, the front of artillery section, 47 paces, would be represented by  $\frac{100 \times 47}{21 \frac{1}{2}} = 22.1$  rifles.

This is the proportion up to the "first phase of the third zone." This phase begins at 800 yards and ends at 150 yards from the enemy. At the commencement of this phase "reinforcements are to take place to keep the line at its most efficient density." This density may be taken to mean one man per yard of front. At a distance of 800 yards from the enemy the firing line should therefore be increased to 39 rifles.

CALCULATION OF TIME.

(a) *Infantry.* At 1,200 yards range, infantry will fire deliberately 2 volleys in 1 minute; at 800 yards, 3 volleys in 1 minute; at 400 yards, 7 rounds individually in 1 minute.

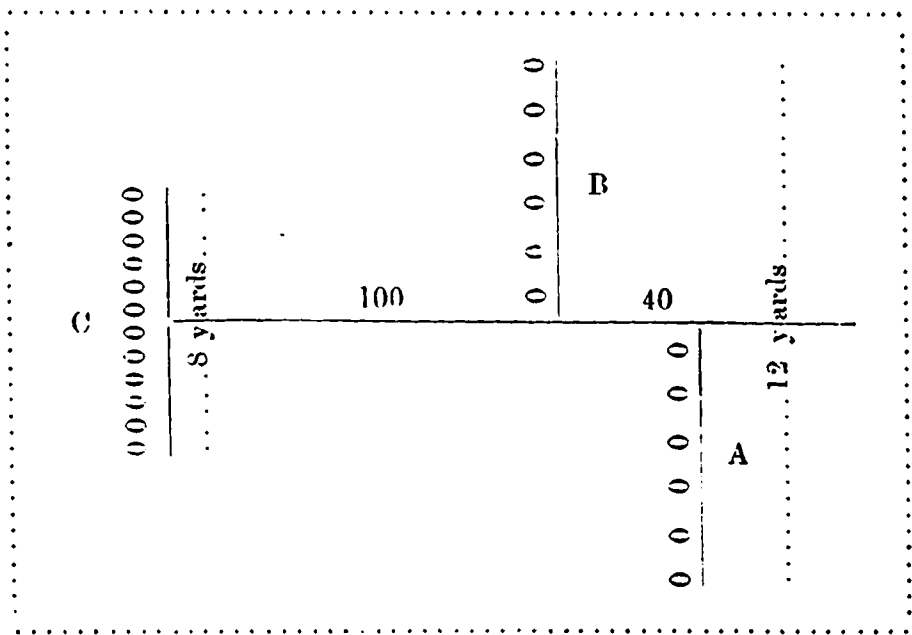
(b.) *Artillery.* At 1,200 yards, 2 field guns may be calculated to fire 1 round (2 shots) in 1 minute; at 800 yards, 1½ rounds (3 shots) in 1 minute; at 400 yards, 2 rounds (4 shots, case) in 1 minute.

TABLE OF TIME, MEN AND AMMUNITION.

	INFANTRY.	ARTILLERY.
<i>1st Period.</i> 1,200 yards. 5 minutes.	22 men. 10 volleys. 220 bullets.	2 guns. 10 shrapnel. 650 bullets.
<i>2nd Period.</i> 800 yards. 3 minutes.	39 men. 9 volleys. 351 bullets.	2 guns 9 shrapnel. 585 bullets.
<i>3rd Period.</i> 400 yards. 1 minute.	39 men. 7 individual shots. 273 bullets.	2 guns. 4 case. 432 bullets.

THE TARGET.

The target represents a section of infantry, 24 men, 12 men being extended to occupy two paces of front each, 6 of these standing, 100 yards in front of the support, and 6 lying down, 40 yards in advance. Thus:



The front of the extended portion, A and B, will be 22 paces, or 18 yards. The front of the support will be 8 yards, the depth of the target 140 yards. The target is painted *natural colours*.

RULES FOR PRACTICE.

1. The artillery will first pick up the range with common shell and percussion fuze. The range found thus will be communicated to the infantry party.
2. The range party will *count* the hits on the target after each period of fire, and will *cross them off* after entering them on the range report.
3. The range party may communicate the results of each period to the superintendent by telephone. This information will not be made use of by the firing parties, but will be used to determine the end of each period of fire.
4. The period of fire at each range may be altered as required in order to get sufficient results, but the proportion between the number of rounds of infantry and artillery is to be kept as in above table.
5. The battery, infantry party and range reports to be carefully kept. A comparative report embodying the total results to be drawn up after the practice.
6. All firing to be deliberately carried out without hurry.

March 28, 1889.

Correspondence.

(This paper does not necessarily share the views expressed in correspondence published in its columns, the use of which is freely granted to writers on topics of interest to the Militia.)

That Artillery Competition.

EDITOR MILITIA GAZETTE,—I heartily thank Captain Bliss for giving the public an example of the manner in which the protest of the Hamilton Field Battery was considered by the anti-protesting members of the D. A. A. Having formed a foregone conclusion, they can see but one side of this question, and having decided in their own minds that one who would say that the Executive Committee made a mistake and should correct it, is a very wicked person, they unconsciously impart a suspicious colour to every little circumstance. If I make a direct statement, the truth of which cannot be questioned, it is an "insinuation to which I lend my name." If for illustration I draw a parallel, it is a "direct misstatement," and Captain Bliss being persuaded of the unfathomable guilt and wickedness of one who would dare to question the infallibility of the Executive Committee of the D. A. A. from the cloud-land of his imagination conjures up "misstatements" I have made, and sees offence in my peroration. I cannot understand what offence Captain Bliss would have your readers infer I committed. I wrote that in 1885 Hamilton was out of the competition for any place in the efficiency list, and that after '84 Hamilton had been on an equality (equally weighted) with the fortunate batteries in these competitions once in four years. The context plainly shows that there was not the most remote intention—nor can I see how it can be distorted into that shape—to have any one infer "that Hamilton would have been any more successful as to winning prizes" with the dismounting credits allowed. Captain Bliss has discovered what I did not mention, that Hamilton's place in the efficiency list was through loss of dismounting credits changed from third to fifth, "a matter worthy of note." All this, which is only the language of prejudice, looks like the wickedness of deliberate defamation.

All the arguments Captain Bliss brings forward have already been disposed of in my letter of March the 14th, and no praise of the Executive Committee can change the unnecessarily varying conditions pointed out in that letter, and no talk of artillery fire as the "essence of efficiency" can offer any reason why there should not be an efficiency competition not at the disposal of the accident of varying conditions. According to Captain Bliss the Executive of the D. A. A., after in the past having left no stone unturned to secure an equal competition—with the result I have pointed out—have now outdone themselves, and have done away with many of the necessarily varying conditions, thanks, I suppose, to Captain Bliss and others who were satisfied with the perfection of the old state of affairs.

Captain Bliss does not lack confidence in his own ability—for he kindly gives the officer commanding the battery which won the efficiency prize in '87, and which came 1.4 credits of winning it in '88, a few pointers on winning this prize, and explains to L. H. Irving, range officer at Niagara—the most experienced range officer in Canada, an authority on the subject—that he did not fully comprehend instructions quite clear to Captain Bliss. Turn to Captain Bliss's letter, to the paragraph in which he begins to remove the erroneous impressions that readers would undoubtedly conceive by perusing "A Field Artillery Handicap." I quote briefly from his letter: "Major Van Wagner hardly places the matter of signalling blind shrapnel before your readers correctly; the error was caused by the range officer not having fully comprehended the instructions laid down by the Inspector of Artillery. To my mind the instructions are quite clear; the range officer attempted to improve on the signalling as laid down." Captain Bliss was, I believe, present at the last annual meeting of the D. A. A. At this meeting L. H. Irving, in reply to a remark of the Inspector of Artillery, said (I quote from memory): "Sir, You were present at the range, Niagara—and I thank God you were—when a shrapnel fuze blind struck; I signalled fuze good; you enquired why I did so, when I handed you the rules for signalling, and asked you how I should signal; you replied, 'you are correct.'"

I need not explain again about the blind shrapnel, and advantages of using a telephone (see letter March 14th), but might say that the practice is carried out under artificial conditions, and with an artificial scoring and credits, that the credits allowed the same shot have been different different years, that the competitor does not care whether a shell is blind or not, but for the credits he receives for it, that the competitors at Niagara having fired to fit the scoring have a right to ask that the scores awarded them by the register keeper should not be changed, that all the officers of the three batteries at Niagara complain of the target practice as carried out at Niagara, and attribute their low scores to their firing under more unfavourable conditions than the other batteries fired under.

Captain Bliss writes: "The battery that would fire 13 blind shrapnel, signal or no signal, could hardly be called efficient, as the unnecessary