waste of ammunition with such a battery on service, where neither telephone nor flag signalling could be expected, would render its employment a very useless expense. It appears to me that this is the attainment of an efficiency that would put the marksmen of the old smoothbore to blush." Tu quoque, Captain Bliss. Take this home to the Ottawa battery, and ask your brother officers what they think of you and your estimate of their battery. You are apparently satisfied that Ottawa's score represents its efficiency at target practice, while Hamilton emphatically denies that the score credited it represents its firing efficiency. Here are the shooting credits, representing the comparative waste of ammunition, which will show, according to Captain Bliss, what a useless expense to the country the Ottawa battery is. Hamilton's shooting credits (with 13 blind shrapnel) 56.8; Ottawa's, 57.8. The exhibition of the military attainments of Ottawa's captain will add much weight to this, his own deduction.

According to Captain Bliss the field artillery of the Dominion is in a most disgraceful state of inefficiency after all "the gigantic work that has been done by the D. A. A.," for (the battery that made a good inner and lacked only a trifle of being) the most efficient battery is a very useless expense. In what a state of inefficiency is the Ottawa battery, which is not as efficient as this one by sixty credits. We might be pardoned for accepting the Ottawa's captain's estimate of the value of his own battery, but we cannot accept his estimate of the other batteries.

Captain Bliss enquires how the falling off of the score of the Hamilton battery as compared with that of the Welland Canal field battery in the final practice is to be accounted for, and offers as an explanation that the commanding officer of the Hamilton battery was not present at the final practice of his battery. Captain John S. Hendrie was in command of the team at the final practice, and to write that the team was not properly overlooked is a direct reflection on an officer competent to overlook a battery anywhere. Captain Hendrie had with him at the final practice Instructor Kerley, many years instructor R. S. A. There were also on the team four n. c. officers holding 1st class R. S. A. certificates, and I believe one or two other n. c. officers holding 1st class R. S. A. certificates were on the detachment, but not on the team. Is it likely that this team was not properly overlooked?

Captain Bliss writes that "Major Van Wagner should have made the most complete enquiries." Do the D. A. A. make the most complete enquiries to ascertain the facts before they publish them? Here is a quotation from the reply of the Executive Committee to the protest of the Hamilton Battery, which is published in the annual report of the D. A. A.: "Moreover, the Welland Canal field battery, firing man for man alternately with the Hamilton field battery under exactly the same conditions, made 41 points more in the aggregate score." The Hamilton battery did not fire under exactly the same conditions as the Welland Canal battery, but fired its final practice at the tattered remains of a target only one half the size of the original target, and through which any number of shells might have gone through without being credited with a direct hit. Captain Bliss after hearing this correction made at the D. A. A. meeting blindly follows his torch-bearer, and brings up again the difference in the scores of these two batteries as a "matter worthy of note." I leave to your readers whether this is ingenuous or not. Having quoted from the reply of the D. A. A. to show their fairness, I will quote farther: "The London battery score at Toronto shows that low scores may be made under presumably the most favourable conditions." Turn to the record of practice, D. A. A. report, and note the very large proportion of n. c. officers in the list of competitors of the different batteries. Look to London and note there were only fifteen marksmen, of whom three (corporals) only were n. c. officers; note that the other two batteries firing at the same range had five staff-sergeants, nine sergeants, seven corporals and three bombardiers, twentytour n. c. officers among their marksmen. The battery making the highest score at this range had only two gunners on its list. It appears from this that London could not get a team, much less a picked team, to go from London to Toronto to fire, and the presumption is rather that London fired under most unfavourable conditions.

Captain Bliss has made full inquiries and the Quebec battery had studless shell issued to them through an error and through no fault of the D.A.A. or its executive. Where has Captain Bliss got all his light? I looked through the militia report and the report of the D.A.A., and find no mention of an error. I wrote the officer commanding the Quebec Field Battery, and he wrote nothing of an error. Where else should I have inquired? Twice had the D. A. A. had an opportunity of explaining that Quebec fired studless shell through an error; in their own and the militia report. In the militia report 1886, there is a foot note after the battery credits explaining a misunderstanding, and if there was an error in 1888 we would expect to find a foot note mentioning it in the militia report. I had no grounds for assuming anything else than that the D. A. A. merely considered firing studless shell one of the varying conditions. In the report of the D. A. A. there is an explanatory note that the practice of the schools of artillery was carried on with experi-

mental common shell, and that of Quebec was carried on with shells fitted with gas checks. Does it make a difference whether the Regiment of Canadian Artillery or another battery fires the same shells, in these shell being experimental or not? The D. A. A. are very careful that the scores of the R. C. A. should not be misunderstood but it is not thought necessary in the case of Quebec and Woodstock to explain that the shells were experimental

If there was an error, which I do not believe, who is responsible for the supply of artillery ammunition? If mistakes occur in time of peace what might be expected in case of active service? Every one knows what disasters have occurred in wars through blunders in the supply of ammunition. Common report last fall said that Major Lindsay protested against firing studless shell, and complained bitterly of the treatment of his battery. Captain Bliss, after full enquiries, goes tar to confirm this report, by wr ting that Major Lindsay applied to fire his common shell over again, and did not protest because he did not wish to blame the D.A.A. Can anything greater be said against the firing competition of 1888, than that the two best drilled batteries complained bitterly to the D. A. A. of their treatment.

I will pass over Captain Bliss's personalities as I have no wish to continue a controversy with him, in which I might soon expect to find myself in the predicament Mark Twain found himself in when he ran for Governor of New York.

H. P. VAN WAGNER.

Hamilton, April 20th, 1889.

The Signalling System.

EDITOR MILITIA GAZETTE.—Captain Bliss in a letter to the GAZETTE under the heading "Alleged Field Artillery Handicap," refers to the signalling of blird shrapnels, and says that "the error in signalling would appear to him to have been caused by the range officer (which I was on this occasion) not having fully comprehended the instructions, and by attempting to improve thereon by allowing his private judgment to decide whether a shell was a common or a shrapnel. That I allowed private judgment to interfere with the regulations I deny; the signalling was carried out strictly in accordance with the instructions given me.

Captain Bliss says that blind shrapnel should be treated as common, and as such should be signalled. A blind shrapnel "120 yards under" is then 70 yards out of bounds, but the diagram shows that shrapnel limits commence at 120 under. He would signal this shell as a common by "7 waves, white, left." At the guns, where it is known that it was a shrapnel, it would be read as "70 yards out of bounds," therefore being a shrapnel, 190 yards under! That's Capt. Bliss's fallacious argument put into practice.

Capt. Bliss takes no notice of the fact that a shrapnel, blind or otherwise, 100 yards under, is within shrapnel limits—but outside common bounds, and must have its value—not the distance under—signalled. Such being the fact, a shrapnel bursting between bannerols 4 and 5 would be signalled 3, a blind between bannerol 1 and target would be sent up as 2,—its proper marks had it burst—and the range officer would enter on the score, at least I did, 3, i.e., half common marks at that point. But Capt. Bliss says that blinds should be treated as commons, therefore he would signal 6 for this blind shrapnel. Honesty and regulations would afterwards compel him to change this 6 into a 3. Does Capt. Bliss think this an accurate system?

On the range, it has been customary for the umpire to inform the range officer that the order of firing would be "4 common, then 8 shrapnel," or "2 common, then 4 shrapnel." Is it then very hard, knowing the number of the round, to distinguish a common from a shrapnel, or a shrapnel from a common?

I have gone over the blind shrapnels so far as the Hamilton Battery is concerned, and I find that Capt. Bliss would have signalled these shells as having an *actual* value of 20 points, but as they happen to be blind shrapnels and not commons, they stand *recorded to-day as 10*. Still Capt. Bliss advocates signalling as against the telephone!

I have no intention of writing on other points raised by Major Van Wagner and Captain Bliss, but one must be drawn attention to. Capt. Bliss has made full inquiries respecting the Canadian shells supplied to the Quebec Battery. In equal justice, he should have ascertained the class of foundation upon which the Executive Committee of the D.A.A. make the statement that Welland and Hamilton fired "under exactly the same conditions." There was a difference of 6 points between Hamilton and Welland in the preliminary, but in the final Hamilton fell off 47 points. How, he asks, is this falling off to be accounted for? That question he should have sifted before going into print. In D.R.A. matches at Ottawa, for instance "the Gzowski," a target 2 feet 6 inches high and 6 feet long, is exposed for firing at. Should one team fire at this target, and another at one 5 feet high and 12 feet long, could it be called firing "under exactly the same conditions?" Wouldn't there be a protest? Yet, this is what happened with the Hamilton Battery,