

sponded to the call of the civil authorities to aid in the preservation of peace. The burial of Guibord, the labor riots in Quebec, the Orange troubles here; even down to our recent friend—or rather I should say enemy—M. Picotte*, and the dangers that lurked under and from his unwholesome skin; disagreeable as those duties were, they were cheerfully performed by our troops and the peace has been preserved. The citizens, the merchants, the lovers of peace and prosperity in this good city of Montreal, have to thank the volunteers for more than they may imagine. It is true that at the call of duty sons have to leave their homes, clerks give up their desks for the drill shed, workmen forsake their tools, the pen of the business man himself is not unfrequently laid aside in order to take up the sword, and all this “upsets business,” and is therefore unpopular. But all the same, had this not been done the alternative would have been that the business, the trade, the manufactories even the credit almost of many of our citizens would have suffered severely on more than one occasion. Therefore, I think that instead of grudging the services of the young men to the militia force they ought to be encouraged to join it. Physically the drill does them good, and the necessity of learning the first duty of a soldier, obedience, is good training. A good soldier will always be a faithful servant. That our militia force has grown in public favor and estimation within the last few years is undeniable, for unlike the treatment meted out to those who returned from the frontier in 1870, I am glad to be able to say that the men who came back from the recent North-West campaign were, as a rule, fairly treated by their employers. I know of comparatively few cases in my own brigade in which situations were lost, and in not a few instances the men's wages were continued while they were away. I trust this excellent spirit may continue, and still increase.

(To be continued.)

The Enfield-Martini Rifle.

A letter from Mr. C. Frederick Lowe to “The Times.”

LORD Wemyss has given an interesting epitome of the action of the committee whose labors resulted in the Martini-Henry rifle and the so-called Boxer-Henry cartridge. It may be well to view the decisions of the committee from a non-official and practical point of view.

The problem submitted by Lord Hardinge to Sir Joseph Whitworth was to determine the proper calibre and twist of a rifle to carry a bullet of the specified weight of 530 grains, which was at that time fixed as the lightest bullet that could be possibly used in war. Sir Joseph Whitworth fixed upon .45 as the bore of the rifle and one turn in 20 inches as the proper twist. When the committee came to deal with the question, the opinion as to the proper weight of the bullet had undergone a change and a lighter bullet of 480 grains was adopted, but it is extremely doubtful whether .45 is the proper bore for a bullet of that weight.

While in one sentence of his letter the noble lord contends that the Martini-Henry rifle is sufficiently accurate, in another he admits that greater accuracy would be attainable by adopting the Metford or Rigby system of rifling. The law of the survival of the fittest obtains at Wimbledon, and the best proof of the inferiority of the Henry barrel is to be found in the fact that in various M.B.L. and match competitions at long ranges it is as extinct as the Dodo, and it has been found necessary to cut out the 1,000 yards range from the final stage of the Queen's Prize, because the most skilled volunteers found it impossible to keep seven consecutive shots on the target at that distance. What can be done with a Martini-Metford M.B.L., with 80 grains of powder and 530 of lead, was proved in the match in 1880 between the North London and Midland rifle clubs by Major Sweeting, who in the back position (which is tabooed in the army and which the National rifle association have done their best to stamp out), put 27 consecutive shots into a parallelogram of 24 inches high by 48 inches wide, making a total of 126 points out of a possible 135—the bull being three feet in diameter:—I believe it was this particular score that first opened the eyes of the military authorities to the deficiencies of the service arm.

The noble lord deprecates any increase in the weight of the rifle. The Martini action is about the heaviest known, and if a lighter action were used part of the additional weight would be saved. Taking off 1 lb. from the weight of the barrel simply ruined the rifle as a shooting iron, and thus increased the recoil. The committee poohpoohed the criticisms of Mr. Dunlop as to the shape of the stock, and produced an arm which is a terror to the young soldier, and the spliced stocks of many of the second class arms and the bruised and bleeding cheeks so frequently seen are the consequence, and the final result is to be found in the statement of the staff officer quoted in my last letter—“The fire of our men appears to have been relatively as ineffectual in Egypt as it was in the Soudan.” It is certainly a great pity from a national point of view that

the committee had not before them the Westley Richards breech and the Metford barrel.

Although solid drawn shells had been in use in America as early as 1837 with the Morse rifle, and it was obvious that the machine gun would be the weapon of the future, the committee deliberately recommended the so-called Boxer-Henry cartridge, the main feature of which, the coiled brass case, was invented and patented by Mr. Rigby, but whose patent had lapsed. They refused to adopt the solid drawn case because of the extra weight and slight extra cost, ignoring the fact that solid brass shells can be used over and over again. I have one which has been fired about 700 times. When exposed to wet, as in the Zulu war, the powder in a Boxer cartridge cakes and the cartridge misses fire, and after knocking about in a soldier's pouch for a day or two it gets out of shape and unfit for use.

Last year I met four troopers at a railway station. They had just returned from Egypt, where they had formed Lord Wolseley's body-guard. I asked them whether the alleged jamming was a fact or a fable; they all said it was a fact, and the corporal said, “What is more, sir, after three or four hours' galloping I have found the service cartridges all to pieces, the bullets, powder, wads, and cases all knocking about loose at the bottom of my pouch. The Egyptians had solid brass cartridges, but what can we do with stuff like that?” What the corporal said was confirmed by his three comrades. I do not know if Gen. Boxer still maintains that “stuff like that” is fit for Her Majesty's service. I remember seeing in the Paris exhibition of 1878 a board on which were given specimens of all the military cartridges in use in the different European armies, and to the best of my recollection there was only one other coiled brass case besides those of England.

If the committee had had sufficient forethought to adopt a cartridge like that of the Turks, we should not now have to be “swopping horses” in the face of an impending war.

When the authorities did adopt machine guns into the service, the coiled brass cartridge was too flimsy of construction, and, moreover, not the proper shape, so the Gatling cartridge became a necessity.

When the reserve forces were armed with the Martini-Henry it became necessary to replenish the exhausted magazines, and the question arose what should be done.

I believe at the Shipka Pass the Turks lost 20,000 lives in regaining a position originally lost owing to a panic which arose in consequence of the wrong ammunition being sent to the front. I have recently heard on good authority that the panic at Majuba Hill arose from the same cause, and this has been kept a close official secret; and more recently Capt. Rolfe, R.N., providentially found out in time to prevent any mischief that Gatling cartridges had been distributed to some of the troops at Suakin. With these examples before them the authorities have seen fit to add a fourth pattern of cartridge to the three existing patterns now in the service. I have always contended that the proper course would have been to adopt the Gatling cartridge as the standard cartridge, possibly with a lighter bullet, and to bush the existing stock of rifles to take that cartridge, so that away from Canada and India, where the Snider is still used, there would be only one cartridge for all small arms and machine guns.

I believe that the main cause of the jamming of the cartridges is that the troops are not properly taught how to handle their weapons. After firing the soldier is instructed to bring his rifle to the “ready” before setting to work to extract the fired shell. If the shell sticks there is no proper fulcrum to resist the action of the lever; the soldier should be taught to depress the lever immediately after firing, while the rifle is still at his shoulder, giving the rifle a slight cant to the right, so that his shoulder acts as a fulcrum to resist the action of the lever. If a shell sticks the breech should be closed, the toe of the butt should be placed firmly on the ground, and the lever smartly depressed, and this will serve to remove the greater part of the shells that are supposed to have jammed. Any shell that has been got into the chamber fits it accurately after the explosion of the powder. If the shell has burst, or a cap blown back, the gas escapes and fills the breech action with fouling and sometimes causes a jam. Mr. Northcote most courteously placed a Martini-Enfield rifle at the disposal of the members of the Middlesex rifle association for their final shoot about a month ago. This rifle differed from those used at Wimbledon in that it had a leather boot instead of the wooden hand guard, an indicator of the ordinary pattern in place of the half cock, and the short range leaf was on the bed instead of at the breech. The pull off of this particular arm was defective, the cartridges were frequently stuck, and it was necessary to close the breech again to extract them, but they could not be said to have “jammed.” There seemed to be an excessive amount of fouling. It took a long time and much labor to get the rifle clean; the main deposit of fouling when the barrel was examined with a mirror seemed to be about a foot from the muzzle.

The first shot I fired out of this rifle in the prone position produced

*The smallpox.