LECTURE ON SMALL ARMS BY LIEUT. COL FLETCHER.

The third lecture of the winter series delivered under the auspices of the Ottawa Literary and Scientific Society was given last evening in their rooms on Sparks street, by Lieut. Col Fletcher, of the Coldstream Guards, Aide-de Camp to His Excellency the Governor General. The audience, which was numerous, included several ladies, and among the gentlemen present we noticed Major Futvoye, Deputy Minister of Militia, Lieut. Col. Powell, Acting Adjutant General, Lieut.-Col, Brunel, Lieut. Col Wylie, Lieut. Col. Stewart, Major White and Captain Wickstead, of the Governor General's Foot Guards, Major and Pay-master Wickstead, the Rev. T. D, Phillips, Drs Grant and VanCortlandt, Mr. Austin, Mr. E. A. Meredith, and others of the leading residents of Ottawa. The lecture was of a character highly

INSTRUCTIVE TO MILITARY MEN

and all who take an interest in firearms, Col. Fletcher, from his extensive practical acquaintance with every detail of his subject, being able to afford the most complete information and intelligent explanation of its technical and historical branches; his experience gained while serving on the Small Arms Committee appointed by the Government to decide upon the best weapon for the British Army and Navy having afforded him every opportunity for acquiring the knowledge which he last evening imparted to his hearers in such an able manner. The President of the Society, Mr. Thorburn, occupied the chair.

The lecturer opened his remarks with a

HISTORY OF THE STEPS

by which the authorities came to the conclusion to arm the forces with a breech loading weapon. He observed that until near the middle of the nineteenth century very little improvement had been made in the firelock used for many years by the British army, with the single exception of the substitution of percussion caps for the method of ignition by the flint lock. Up till the time when the value of the cylindro-conical bullet was discovered very little trouble had been taken to instruct the troops in firing. A certain amount of ammunition was certainly issued for what was called

"BALL FIRING,"

but no attempt was made to afford any instruction, the apparent object being just to fire off so many cartridges and have done with it. There was to a certain extent an exception made as regards the "Rifle Brigade" who were provided with a somewhat superior weapon to the ordinary musket. It was not until 1854 that the Enfield rifle, to carry the Minie bullet, was sent out to the army in the Crimea and even there Sir George Cathcart's Division was still

ARMED WITH "BROWN BESS."

At Inkerman, the peculiar penetrative power of the cylindro-conical bullet was observed, in the damaging effect it produced upon the Prussian columns. Then came the era of "Musketry Instruction" as established at Hythe by the late Colonel Hay, who encountered extraordinary opposition in his task, which, however, accomplished by the force of character which distinguished him, though unfortunately he did not live to witness the full fruits of his labors. From 1856 to the Danish war

NO GREAT ADVANCE

in improvement of the weapon was to be noticed, the muzzle-loader still continuing unsuperseded, but in that war the terrible effect of the Prussian needle-gun, which that power had already had in use for many years, was manifested; and here Colonel Fletcher expressed his astonishment that the Austrians, who were the allies of the Prussians, did not have their eyes opened at the time to the inferiority of the weapon with which their own troops were armed, and that it wanted the ensanguined

BATTLE OF SADOWA

to bring the vital importance of the subject to their conviction. In 1865 a committee appointed by the British Government reported that it was essential that the troops should be armed with a breech-loading weapon, leaving it to the subsequent investigation to determine what peculiar pattern should be permanently adopted. The emergency was met by the Snider system of converting to breech-loaders the rifles then in use. Shortly after the Government

OFFERED £1,000 REWARD

for the best weapon, £100 for the best mechanism applied to it, and £600 for the best form of ammunition, and appointed a committee to decide upon the merits of the patterns submitted for competition, a member of which was himself (the gallant lecturer). Col. Fletcher proceeded to explain the stringent conditions by which the committee were bound to decide, and the number of *desideratea* to be considered. All good judges held that the following qualities of the weapon were of primary importance, viz:—Strength, lightness, safety, flatness of trajectory, accuracy and penetration. Then there was serviceability, and the lecturer gave some amusing instances of the dismay which filled inventors when they observed the

RIGID TESTS APPLIED

to their patterns, such as the pouring of fine sand over the lock so as to find out the weak points of its mechanism. It is still a fact that muzzle loaders shoot better in a slight degree, than breach loaders, and the reason has not yet been discovered, but Col. Fletcher gave his own therory of the cause. He showed how the various inventions, if they met one requirement, failed in another, and explained how the committee finally arrived at the conclusion that no one perfect weapon had been submitted to them, ultimately deciding to recommend a combination of the principles of the Henry and Martini systems, which was at length the arm adopted by the Government and which

PROMISED THOROUGH SATISFACTION.

It would be difficult for us to make our readers understand, as Col. Fletcher was able to make his audience, the advantages of the new weapon, which he produced and exhibited for their more complete enlightment, afterwards illustrating by the use of a carefully drawn diagram the simplicity of the interior mechanism. He then touched upon the trials of ammunition, and the adoption of a particular cartridge; also on the question of bayonet or sword-bayonet. He observed that,

THE MARTINI HENRY RIFLE.

is cheaper than the Snider, being manufactured in large quantities for about $10, and explained how this happened. He quoted various authorities in its favour. It will be interesting to volunteers to learn that the new arm weight only about the same as the short rifle now served out to sergeants. It has no exterior hammers, and is loaded so readily that it is unnecessary for a sentry even, except in special cases, to carry his piece loaded. When loaded, by a simple lever the interior hammer is locked, so that the weapon can be safely handled. Twenty rounds can be fired with it in 48 seconds, and 30,000 rounds have been fired without any signs of wear appearing. The trajectory also was much flatter than that of the Snider, and that was a point for a military weapon of even greater importance than accuray, which statement was fully explained. The lecturer proceeded to enumerate by name the different weapons adopted for the armies of other European powers, and remarked that his committee, with the single exception of that now chosen by the Prussians, have investigated the merits of each and rejected them in favour of the Martini-Henry. The committee for substantial reasons had not recommended the adoption of any repeating weapon, though the Winchester Henry pattern was that which seemed most advantageous. Colonel Fletcher then touched upon.

THE MITTRAILLEUR

ne*mitlralleuse* (he said the gender had never yet been definitely settled) and stated that it had still to be proved whether such an arm would form an advantageous substitute for artillery, thought for certain specific purposes, which he instanced, it certainly promised usefulness both in military and naval warfare. The principle would at all events have some trial during the present Ashantee expedition. The lecturer concluded a most instructive and entertaining discourse, listened to with marked attention, with the following remarks upon the effect which the employment of improved small arms would have upon

MODERN WARFARE.

"And now, having very briefly described the course which led, first, to the adoption of breechloaders by the English army, and then to the introduction of the Martini-Henry; and having also shown that the Continental nations have universally replaced the muzzle-loader by the breech-loader, it may not be out of place if I put before you a few suggestions on the changes which this alternation will probably cause in the operations of war. I have already mentioned how the breechloaders was first brought prominently before the eyes of Europe in the campaign of Sadowa, when, notwithstanding the greatest bravery on the part of the Austrians, they were defeated and forced to treat for peace in the short period of about fourteen days, and when, even in the one success they obtained, the loss was so terrible as almost to render the success abortive. On the conclusion of the war, the Prussians, with their usual energy and clear-sightedness, proceeded to draw deductions from the changes the new arm had introduced into tactics; and among other treatises, a pamphlet published anonymously, but subsequently found to have been written by Lieutenant Meri, and called the "Practical Retrospect of the War of 1867," engaged the attention of the military students, and, I may say, practical soldiers of Europe. So great was the sensation created, that the highest staff authority in Germany is said to have prompted a reply to some of its more radical opinions. Notwithstanding, however, the opposition which the treatise met with, the ideas which it set forth received confirmation from the incidents of the great war of 1870, when the Germans, armed with the needle gun, met the French carrying the far superior weapon the chassepot. Then the Prussian or German troops partly influenced by the ex-