

fill a curiosity shop. Out of all that company but two were non-smokers. These gentlemen did not smoke but they were smoked. Added to the programme however, was a list of songs and readings that served to pass the hours still more pleasantly. Songs were sung by Capt. W. A. Wilkes, Capt. McGlashan, Asst. Surgeon Bishop, Mr. F. D. Reville and Mr. L. F. Heyd; Lt.-Col. Jones recited the Charge of the Light Brigade, Lieut. Jos. Ruddy read an amusing selection from Mark Twain's *Innocents Abroad*, Mr. C. L. Daniel gave a humorous sketch, *The Irish Widow*; Surgeon Harris and Capt. Leonard contributed some exercises in mind reading; Asst. Surgeon Bishop gave a club swinging exercise, Capt. Wilkes and Mr. Reville a piano duet, and there were several choruses by the company. The evening was thoroughly enjoyable and future evenings "at home" with the "Duffers" will be sure to be largely attended. Before the company separated, as they did at 11 o'clock, Col. Jones announced that the next gathering was dated for the evening of the first Monday in March. These are informal affairs to which no formal invitations are sent and should all prove as pleasant as the first, will be very popular.

### Captain Cooper's Rifle.

(Toronto Globe.)

Captain Wm. M. Cooper, of the 12th Battalion, has scored a great success in the new military and sporting magazine rifle, which, in conjunction with Mr. Cashmore, he has invented and patented in Canada, the United States, England, Germany, France, Italy, Australia and Belgium. In conversation with a *Globe* representative yesterday, Mr. Cooper explained the mechanism of the new rifle and illustrated his points by reference to a splendid rifle of the new pattern made at his premises on Bay street. For years he has worked on the perfecting of a rifle that would not be liable to injury through defective shells or water, the great causes of the failure of magazine rifles. He has succeeded, and specimens of the invention will soon be in the hands of the various governments. A large number of prominent business men in the province have examined the weapon and have pronounced it a wonderful advance on even the advanced Lee, Remington and new Winchester rifles. Mr. Cooper believes that at present there is no weapon for military purposes that seems to meet the requirements of modern warfare, and as a consequence almost every government is on the lookout for a perfect weapon. As a case in point, both the English and German Governments, although they have been experimenting for years with new rifles, have not yet definitely decided upon one.

The coming rifle must, in the first place, be a magazine rifle capable of being used either as a single shot breech-loading weapon for ordinary use, or in emergency having such a reserve of firing power as will enable the users to keep up such a continuous fire as to render the approach of an enemy to bayonet distance an utter impossibility.

It must be of a smaller calibre than the present weapons and possess a much longer range. In order to secure the latter a stronger class of explosives will have to be used, thus necessitating a very much stronger breech action than any now in use. The calibre must be smaller in order to enable the soldiers to carry the larger supply of cartridges rendered necessary by the more rapid firing the weapon will be capable of.

The Cooper-Cashmore rifle meets these requirements in the highest degree and in every particular. The principle feature is of course the loading mechanism, and in this it differs from all other magazine rifles, inasmuch as the breech block, which takes up the recoil of the explosive, has almost no connection with the loading, and firing mechanism.

The breech is so strongly built that it will stand the strain of the most powerful explosive ever used in a rifle without any danger whatever of being blown to pieces. It is tight-fitting and so perfectly gas tight as to render it impervious to water or dust.

The barrel and magazine are made out of a single piece of steel and so constructed as to render it strong enough to prevent the bending of the barrel if used in a bayonet charge, or of having the magazine rendered unserviceable by a sword cut. It can also be arranged to be used with an attachable and detachable magazine for military purposes and possesses the advantage of having its 20 or 25 cartridges situated directly in front of the trigger guard, thus preserving under all conditions of firing the equilibrium of the rifle.

The calibre of the rifle is .32 and the cartridge, which is of special pattern and construction, is of more than ordinary length and can be made up in any other calibre. The operation of loading and firing is performed by a simple lever action, similar to that of the Martini-Henry, but having the advantage of a much shorter stroke. This rifle has also the peculiarity of an automatic bayonet, which is so constructed as to slide up and down the magazine. It is very simple in its workings and can be loaded at any angle, can be instantly changed from a repeater to single shooter and vice versa, contains fewer parts and is stronger than any magazine rifle ever made, and is so simple in its construction that any person of ordinary intelligence can take it apart and put it together.

### Military Handbooks.

[Published by Messrs. Keegan, Paul, Trench & Co., 1 Paternoster square, London, Eng.]

**MILITARY SKETCHING AND RECONNAISSANCE**—By Col. F. J. Hutchison, late 64th Regt., Garrison Instructor Western District, and Major H. G. MacGregor, late 29th Regt., and Garrison Instructor Home District. With 16 plates. Being the first volume of military handbooks for regimental officers. Edited by Col. C. B. Brackenbury, R.A. 5th edition; p.p. 120.

A perusal of this excellent handbook will repay the reader, be he a soldier or civilian, and to those officers who desire to acquaint themselves with this most important part of their professional qualifications it is invaluable. The scope of the work is ample, and the subject is treated in a clear and comprehensive manner. The subject, though an important one, is unfortunately much neglected by militia officers, whose professional and theoretical knowledge should be of a high order. We therefore heartily recommend this little work to all who desire to render themselves fitted for the active work in the field. A careful study of its contents will enable the company officer to lead his handful of men to the best advantage, and the commanding officer so to dispose of his battalion as to deserve success if not to command it. The officer must, indeed, be dull who cannot learn by its aid to read the details of ground on a military map, and to produce a readable and fairly accurate sketch of ground, accompanied by a "reconnaissance report." We hope the knowledge of the fact that in the Canadian militia we possess no "Intelligence Department" and but few opportunities of perfecting ourselves in the subject under consideration, may stimulate the more actively inclined and ambitious soldiers amongst us to devote themselves to this work. The book is divided into two portions, first, *Military Sketching*, comprising amongst others the following subjects: Objects of military sketching and the instruments used; scales and measurements of distances; sketching with Field book and with the plane table; flatness of ground; contouring; execution and finishing of sketches; shading; reading maps; drawing sections of ground; copying, reducing and enlarging maps. Second, *Reconnaissance*, including topographical reconnaissance; the report; reconnaissance of a road, river, wood, railway, villages, camping and bivouac ground, mountains; a position; arrangements for concerted reconnaissance of a district; coast reconnaissance; notes on estimation of supplies; instructions for a course of field sketching and reconnaissance of ground.

An officer who will take the trouble to practically acquaint himself with the details and principles which are so clearly enunciated in this little work, could not fail if the occasion for his services should arise, to render himself of great service to his commanding officer and the force with which he might be serving.

A correspondent of the *Army and Navy Gazette* gives the following account of the origin of the military salute:—"Within the last few years, among the many changes which have been introduced into the army is that of the salute. Why the old time-honoured salute was abolished no one knows; but it is an interesting fact, and one probably unknown to most of our readers, that the old salute, which consisted in the hand being brought into a horizontal position over the eyebrows, has a very old origin, dating, in fact, from the commencement of the history of the English army. Its origin is found in the tournaments of the Middle Ages, and was as follows:—After the Queen of Beauty was enthroned, the Knights who were to take part in the sports of the day marched past the dais on which she sat, and as they passed they shielded their eyes from the rays of her beauty. Such was the very interesting origin of the old salute, and it is a question worthy the attention of our military authorities, why should not the old salute, possessing such an origin, and associated with our army from the very earliest times, be restored? It is difficult to discover for what purpose it was ever abolished. The principal part of the officers' salute, kissing the hilt of the sword, dates also from the Middle Ages. When the Crusaders were on the march to the Holy City, the Knights were in the daily custom of planting their long two-hand swords upright in the ground, thereby forming a cross, and before these they performed their morning devotions. On all military occasions they kissed the hilts of their swords in token of devotion to the Cross, and this custom was perpetuated after the Crusaders were numbered among the things of the past, and when the religious origin of the salute was forgotten.

Improvements in missile weapons have, partly by keeping the combatants wider apart, tended materially to reduce the cost of victories in their most costly element—human life and suffering. The French War Office has worked out the statistics of this question, and the following are some of the results: At the battle of Friedland, the French lost fourteen per cent. and the Russians thirty per cent. of their troops; and at Wagram, the French lost thirteen per cent. and the Austrians fourteen per cent. At Moscow, the French lost thirty per cent. and the Russians forty-four per cent.