time when soldiers were only known by the distinctive cognisances or badges of the leaders under whom they fought. As an example of the disadvantages of this, he mentioned that at the battle of Barnet, the cognisances of King Edward and of the Earl of Oxford were so alike that the latter was mistaken for a Yorkist leader and beaten off the field by his own friends. In 1526 the coats of all the yeomen of the household were made of red cloth. This is the first time we hear of red as a military color in England. The color was changed to white in Mary's time, and became blue in the reign of Elizabeth. The various changes which took place as years rolled on were carefully gone over and made clear by illustrations, and Lord Macaulay was quoted as the authority for the statement that the British army was for the first time clothed in red during the Commonwealth. The reference made to the dress of the Foot Guards was particularly interesting. During the reign of Charles II the officers were exceedingly richly habited, some in coats of cloth of gold, others in crimson velvet, embroidered or laced with gold or silver, but most of them in fine scarlet cloth buttoned down the breast, and the facings of the sleeves ornamented with silver plate. Their scarves, which they wore about their waists, were either network of gold or silver or crimson taffeta richly fringed with gold or silver, and their hats were adorned with rows of white feathers. The captains were distinguished by corslets or gorgets of silver plate doubly gilt; the lieutenants by corslets of steel, polished and sanguined and studded with nails of gold, and the ensigns had their corslets of silver plate. Scarcely less gorgeous were the private soldiers with coats of red broad-cloth lined and faced with blue, their hats of black, laced with silver, turned up and garnished with blue ribbons, their breeches of blue broad-cloth and their stockings of blue worsted. The two companies of Grenadiers were distinguished by caps of red cloth lined with blue shaloon and laced with silver galoon about the edges and on the frontlets of the said caps (which were very long and high) was embroidered the King's cipher and crown.

Modern dress and equipment were then taken up and exhaustively treated. The necessity for smartness and uniformity was especially dwelt upon. Each article of dress was minutely described and the manner of wearing was carefully explained.

The lecture was made more interesting and instructive by being profusely illustrated by large and carefully prepared drawings representing the different weapons and articles of dress spoken of. These drawings, which showed signs of great natural talent, were understood to have been made by a son of Capt. Toller, a lad about 13 years of age.

Magazine and Repeating Rifles.

A paper on this subject, by Captain Walter H. James, late Royal Engineers, was read at the Royal United Service Institution on the 25th February, Major-General E. H. Clive, Commandant of the Staff College, in the chair. In the course of his exhaustive paper the lecturer said: The sudden intensity, the conversion of the shower of bullets into a blinding rain, is to be obtained from the magazine rifle alone. It is for this gain that we face the additional complication due to the repeating action, it is for this great quality that the nations of Europe are spending millions of money in the re-armament of their infantry, and that we too must follow their example.

The magazine rifle has two advantages. Besides the one to which I have already alluded there is the moral support which it gives to the soldier, who feels that he has a reserve of power constantly at hand. No breech action, however rapid, can give the same rapidity so long as the magazine supply lasts. In a properly constructed magazine rifle the time taken to press the cartridge into the barrel is eliminated. Drawing back the action cocks, throws out the old case, brings up a fresh cartridge, closing the breech, pushes the cartridge home, which is therefore never touched by the man's hand, nor has he to take it from pouch to the breech. No single-loader can give that confidence which a man feels who has five or more shots at his instant command. A repeating rifle, therefore, is of advantage both on the offensive and defensive. Troops, whether acting on the one or the other, have to pass through that supreme moment when the combat trembles in the balance, and to both alike the special quality of the magazine arm is of the highest importance. Conceive for a moment two lines holding one another in close action, one is suddenly enabled to quintuple its fire-rate, what will be the fate of the other? At times when surprise is of moment, such as counter attacks, it is also of the utmost value. To sentries, to small bodies of men acting by themselves, such as reconnoitring parties of cavalry, the use of a repeater is of the greatest assistance.

To anticipate a little, allow me to assume that we have a weapon which holds five or more cartridges in the magazine, that the latter can be easily loaded, and that the rifle can be used as a single-loader. Under ordinary circumstances the rules of fire discipline will remain the same as heretofore. Fire should be by volleys alone, the frequency of which will depend on the range and object, but on the offensive the final rush should be prepared by the use of the magazine which should be reloaded the moment the position is carried. On the defensive the magazine may be similarly employed, but possibly a little more often and earlier, i.e., at longer ranges, when it can be rapidly loaded. For instance, at the advancing troops during their rushes, when they are so much more visible and form so much better targets than when lying down to fire. The fire during these transitory moments should be intensified, because good results may be obtained from it. In fact we may say generally that either on the offensive or defensive the magazine is chiefly for the close combats, though occasionally it may be used at longer ranges. Should it ever be employed for real long-range fire? Rarely. For it would probably give rise to a great expenditure of ammunition without correspondingly adequate results. Against favorable targets which from their nature are exposed only for a short time to fire it may be made use of. For example, against masses of infantry, the staff of the enemy, cavalry or artillery unlimbering. But it will always remain chiefly reserved for the decisive stage, when its proper employment may decide the issue.

Will the introduction of repeaters increase the expenditure of ammunition? To a certain extent yes. Hence it is highly desirable to lighten the cartridge. To this I shall allude farther on. But as a practical fact the increased expenditure of ammunition is not so much due to the magazine rifle, which, if its employment were limited to the last moment in a fight, would not greatly increase the number of rounds fired. Rather is it due to the fact to which I have before drawn your attention in this institution, in the first instance nine years ago, that having rifles of long range it would be very foolish to limit their employment to short distances. The school of fire is gradually gaining the day, to it belongs the future, and I look forward to the now not far distant day when it will be universally acknowledged in England as it is on the Continent to a great extent now, that in the proper use of long-range fire, in the adequate training of the men to pour in closely delivered showers of lead at distances up to 1,500 yards or over, lies the path to military pre-eminence. To this training the magazine rifle forms the proper complement. Armed with it the duly trained soldier possesses the power of multiplying his fire enormously at close range, or increasing its volume at long ranges when necessary. Such weapons require careful training, both of the officers and men. Frequent practice in their use, careful working out of the problems they give rise to. How are you to carry the increased number of rounds the soldier must have? He cannot carry beyond a certain weight, and that weight must in the future consist very largely of cartridges, his kit must be carried for him, the regimental supply of ammunition must be increased until each man at the moment of battle can have 100 rounds on him, and at least 40 to 50 in the regimental supply. Is it possible under modern fire to send cartridges to the fighting line? I doubt it.

Every nation has either definitely adopted, or is experimenting with a view to deciding on some form of magazine. We, too, have, I believe, made up our minds to follow suit, and I venture to think our authorities are to be congratulated on having determined to do so rather than to re-arm our infantry with an ordinary breech-loader, as was proposed but six months ago. I have here, by the kindness of the Secretary of State for war, two rifles, the one known as the Lee-Burton, the other as the improved Lee. Of each of these rifles a limited number will be manufactured and issued to the army for trial, but no pattern of magazine rifle has as yet been definitely settled on for the armament of our troops. In England we are about to adopt a magazine rifle. I should, speaking for myself, like to see experiments conducted under public conditions with bores smaller than 0·4. It must not be forgotten that a government rifle designer has not the free hand a private one has. He can do as he likes with regard to cartridge case, powder, and bullets. The government official has to consult two other departments, who may not agree in his views. To have a rifle to fulfil the most necessary quality in a good military arm, viz., flat trajectory, a small bore is an absolute necessity.

On the continent a large number of experiments have been made with compressed powder, and it seems destined to come into universal use, because with it the charge can be made more uniform, and hence more uniform velocities obtained. Here let me draw your attention to the desirability of using smokeless powder. A considerable amount of attention has been given to this question on the continent, and I need hardly point out the enormous advantage to be gained from it.

All forms of magazine can, so far as their position is concerned, be divided into four classes;—1. In the butt. 2. Under the barrel. 3. Over the barrel. 4. Under the breech. No nation has the first-named, except Russia, in the Evans repeater. The second has been adopted in France (Kropatscheck), Germany (Mauser), Switzerland (Vetterli,) Sweden (Jarmann), Portugal (Kropatscheck.) It has the advantage of giving room for a number of cartridges, but the very great disadvantage, which it shares with first position, of being difficult to load. Moreover, the balance of the rifle is altered each time a shot is fired. The German rifle is very faulty in this respect, and is, when the magazine is filled, an