

will no doubt be challenged, but our idea is that for Canadians, who, whenever they turn out, whether for annual drill or on actual service, have to "rush things" all should be of the simplest and most serviceable description. Regulation helmets are, however, infinitely preferable to some of the makeshifts which we have seen at our summer camps, and which commanding officers were forced to adopt because the men, out of their 50 cents per diem, could afford nothing better. Have-locks of limp linen, of a different pattern for every company, crushed and dirty before they had been worn three days, or cheap grey cotton caps with peaks before and behind, looking neither like helmets nor have-locks. Such head covers make us respect those corps that let their faces peel under glengarries or forage caps in preference to looking untidy or ununiform.

"C" company in the 90th has been stripped as bare of officers as were some of the British regiments in the Crimea. A private letter from Winnipeg says: "Frank Jackes got back from Batoche the other night with his left hand in a sling and the tops of two fingers missing. At Fish Creek Jackes stopped to tie up the head of poor Corpl. Code, who was shot down just beside him, and as he started to regain his company a bullet singed both his eyebrows and knocked him on his back silly for awhile. At Batoche during the charge he was aiming at one rebel when another's bullet carried away his fingers, cut his rifle band off and split the stock, passing over his shoulder. When taken to the hospital he complained of a sore neck, and the doctor extracted a slug near the throat which he never knew he had got."

In his company Joe Tees is the only officer left. Both corporals and one lieutenant (Swinford), are killed, Jackes and his captain wounded, and the other lieutenant is in command of the Sharpshooters. Joe says he started as a junior sergeant but is now in command of his company, and guesses he will be gazetted major, at least, for acts of bravery in capturing chickens for the crowd at Batoche."

THE WEEKS' MOVEMENTS OF CORPS ON ACTUAL SERVICE

Since our last issue General Middleton, having found Big Bear in full retreat, selected out of his force 260 mounted men with whom he started in pursuit on the 3rd inst. In the meantime the Mounted Police left at Prince Albert were ordered to proceed to Green Lake to intercept the runaway in case he should attempt to escape in that direction; while somewhat later we hear of General Strange leading his force in the direction of Beaver River, and arriving at Chippewyan mission crossing on the 9th. Col. Otter also was ordered, with the bulk of the Battleford contingent, to proceed to Turtle and Jackfish lakes, also for the purpose of intercepting Big Bear, while the 10th Grenadiers, detached from the General's column, were sent to Fort Pitt for a like purpose. General Middleton, meanwhile, followed Big Bear's trail with good prospects of overtaking him, until, on the 9th, he was stopped by meeting at Loon Lake a tract of country that seemed to defy the best efforts of his troops to traverse, when the direct pursuit of the hostile chief was abandoned.

RIFLES AND RIFLE SHOOTING.—V.

BY CAPTAIN HENRY F. PERLEY, HEADQUARTERS STAFF.

At the battle of Fournoui, a number of Italian knights being unhorsed, could only be killed after the armor had been broken off them, like so many lobsters, with axes. James I remarked that defensive armor was a double protection, as it prevented the wearer from being injured or from injuring others. The knights were, however, powerless against villainous saltpetre, and loudly they inveighed against its use, characterizing it as an unchristianlike mode of fighting, but public opinion overcame their remonstrances, as it had become apparent that war could not any longer be carried on as a pastime. Many knights gave it up, whilst others grew accustomed to fire-arms and took their chance, whilst loud and deep were the execrations of the armorers who found their occupation gone.

Portable fire arms were a somewhat later invention than cannon, and are first mentioned as having been used among the Flemings in the

14th century. They were continued to be improved until in 1820, at the siege of Bonifacio in Corsica, leaden bullets were fired which penetrated armor. They were at first called hand cannon, and as they were altered they received several appellations, such as: Hand-cannon, Hand-gun, Arquebus, Haguebut, Demi-hague, Musquet, Pistol, Tricker-lock, Wheel-lock, Currier, Snaphaunce, Caliver, Carabine, Fusil, Musquatoon, Petronel, Blunderbuss, Dragon, Hand-mortar, Dag. In the collection of arms in the tower of London, is a harquebus, which is dated 1537, and is said to have belonged to Henry VIII. It is a breech loader, the breech block opening as in the Snider rifle, only to the left. The barrel is 1 foot 11 inches in length. In 1580 a repeating gun was invented "that shall contain 10 balls or pellets of lead, all of which shall go off one after another, having once given fire, so that with one harquebus, one may kill ten thieves, or other enemies, without re-charging." Hand-guns are mentioned as early as 1414, and were of a very rude construction, consisting of a tube of iron or brass, with a touch-hole at the top, and fixed in a straight wooden stock about 30 inches in length. It had no lock, but was fired with a slow match, the end of the stock being passed under the left arm pit in doing so. From time to time improvements were effected, and in the reign of Edward IV the match was held by a cock, which was brought down on to the priming by pulling a trigger, and the gun was thus discharged with more certainty and quickness. This form of hand-gun was called an "arquebus," and was held against the chest to be discharged. To obviate the difficulty experienced of getting the eye down low enough to take good aim the Germans introduced the crooked stock, which elevated the barrel, and the arm thus improved was called a "haquebut." The next change was the adoption of the wheel lock, in the place of the slow match. This lock consisted of a steel wheel roughened on the edge, a strong spring, and a cock holding a piece of iron pyrites. To discharge the gun the lock was wound up by a key, the cock let down to the priming pan, the pyrites resting against the wheel. When the trigger was pulled, the wheel was set in motion, and revolving against the pyrites produced sparks and ignited the powder. The "snaphaunce" was invented about 1600 in Germany, and was so called from its having been used by a set of Dutch marauders, designated "snaphans," or poultry stealers, who, finding the light of the match betrayed them on their nocturnal trips, and the wheel lock too expensive, used a lock similar in its action to the old flint lock, now almost obsolete.

In the reign of James I the musketeer carried his powder in small cylindrical cases made of leather, tin or wood, each containing a charge. A belt or band was worn over the left shoulder, and twelve of these cases were attached to it, the whole being termed a "bandolier." A bag to contain bullets was affixed, as also were a couple of flasks, one containing a reserve of loading powder, the other—a small one—called a touch box, filled with fine powder for priming. At the same time the musketeer carried a rest on which to place his musket when firing; and as in wet weather it was found to be difficult to keep the cases containing the powder dry, cartridges and cartridge boxes came into general use in 1677.

The first bayonet, invented in 1650, and supposed to be named from Bayonne, (France), the place of its invention, was a kind of dagger which the soldier stuck in the muzzle of his gun to shield him from a cavalry charge, and being found to be useful was brought into general use. It is stated that in a campaign in Flanders, the 25th Regiment, whose bayonets screwed into the muzzle, were engaged by a French regiment, having their bayonets affixed over the muzzle, which gave them the advantage of firing a volley into and then charging the 25th, much to their astonishment. The bayonet was introduced into the British army in 1672, and in 1679 General Mackay improved it by attaching it to the barrel of the musket by two rings. The socket bayonet was adopted and in general use in 1703. The steel or iron ramrod was invented in 1698 by Prince Leopold of Anhalt Dessin, and used by the Prussian infantry.

At the commencement of the present century the regulation musket weighed 11½ lbs. and with the bayonet 12 lbs. 6 oz. The barrel was 3 ft. 6 in. in length, the same as the long Snider of to-day, and ¾ of an inch diameter in the bore. The bullets were spherical, 14½ weighing a pound, and the charge was 6 drams of F. G. powder, or over twice the charge contained in a Snider cartridge. Three flints were furnished with every sixty rounds of ammunition.

The flint lock of the musket possessed the grave objection that it did not perfectly preserve the priming from wet, and also that the flint at times failed to produce sparks and a non-ignition of the charge. In 1807 the Rev. Mr. Forsythe obtained a patent for priming with fulminating powder, and in 1834 the invention was tested at Woolwich, the results proving the soundness of the percussion principle, that the shooting was more accurate—due of course to the arm used, that the charge could be reduced from 6 to 4½ drams, thus lessening the recoil,