

between the 7th Cavalry and the hostile Sioux, out of 380 carbines in my command, six were rendered unserviceable in the following manner (there were more rendered unserviceable by being struck with bullets): failure of the breech block to close, and leaving a space between the head of the cartridge and the end of the block, and when the piece was discharged and the block thrown open, the head of the cartridge was pulled off, and the cylinder remained in the chamber, whence with the means at hand it was impossible to extract it. I believe this a radical defect, and in the hands of hastily organized troops would lead to the most disastrous results. The defect results, in my opinion, in two ways: In the manufacture of the gun the breech block is in many instances so made that it does not fit snug up to the head of the cartridge after the cartridge is sent home, and it has always been a question in my mind whether the manner in which it revolves into its place does not render a close contact almost impossible to be made; another reason is, that the dust, always an element, to be considered on the battle-field, prevents the proper closing of the breech block, and the same result is produced. There may be a want of uniformity in the flange of the head of the cartridge, which would also render the action of the extractor null, in case it was too small, although, when the shell was left in the chamber, the head would not be torn off. I also observed another bad fault of the system, although it did not render the guns unserviceable, viz., the weight of the breech block is such that the hinge on which it revolves is very soon loosened, giving to the block a lateral motion that prevents its closing.

I can also state that the blowing up of the breech block was a contingency that was patent to members of the Board which adopted the system, and induced strong opposition to it on the part of a minority.

I send you these observations, made during a most terrific battle, and under circumstances which would induce men to fire with recklessness, as our capture was certain death and torture, and the men fully appreciated the result of falling into the hands of the Indians, and were not as cool, perhaps, as they would have been in fighting a civilized foe.

An Indian scout, who was with that portion of the regiment which Custer took into battle, in relating what he saw in that part of the battle, says that from his hiding place he could see the men sitting down under fire and working at their guns—a story that finds confirmation in the fact that officers, who afterwards examined the battle-fields as they were burying the dead, found knives with broken blades lying near the dead bodies. I also desire to call attention to the fact, that my loss would have been less had I been provided with some instrument similar to the trowel-bayonet, and, I am sure, had an opponent of that arm been present on the night of June 25th, he would have given his right hand for 50 bayonets. I had but three spades and three axes, and with them loosened ground, which the men threw into piles in front of them with tin cups and such other articles as could in any way serve the same purpose.

Very respectfully,

M. A. RENO, Major 7th Cavalry,
Commanding Regiment.

Amount of Ammunition Expended:

Carbine, 38,030 rounds.
Pistol, 2,954 "

We copy this letter as well as the remarks of the U. S. Army and Navy Journal because

our own force is armed with a rifle which we believe to be the best military weapon in existence—the Snider-Enfield—and we know it has stood heavier tests than ever the Martini-Henry; but it is necessary that in all cases in the field or in store careful attention is the principal requisite to keep the arms in effective condition. Is it not just possible that the exigencies of active warfare with troops practically demoralised by constant forced marches prevented that care of arms so necessary when the marching is both delicate and complicated.

This is a very interesting question, and we quite agree with our contemporary in the style of arm necessary for Indian or any other warfare in which celerity of movement and efficiency in action with *little care* is requisite. He says:—

"The Springfield Carbine, as at present constructed, is evidently imperfect and not adapted to the uses of our Cavalry. The most recent complaints come from the commanders of two regiments serving respectively in Texas and Wyoming. Major Reno, 7th Cavalry, reports several radical defects which came under his notice at a critical moment, and Colonel Mackenzie 4th Cavalry, has applied to have his regiment armed with the Winchester rifle, thereby preferring to transform his light horsemen into mounted infantry, rather than risk any more campaigns on the merits of the present carbine. In this connection we publish the views of the Ordnance Office on a letter from Captain Reilly, Ordnance officer on General Sheridan's Staff, who comments on Colonel Mackenzie's request. The Ordnance Office furnishes the result of comparative tests of the Springfield carbine and Winchester rifle now in use on the frontier. However, all the tests in the world made at Springfield will not weigh very heavily against actual field tests made by the troops. A short barreled long range, light, strong rifle, to be slung and carried like the present carbine, is wanted by the most active and essential part of our Army; that portion which is brought in closest contact with the Indians and which should be armed and equipped to have at least an equal chance for success with the enemy. The man who supplies this want first will make his fortune and gain an immortality more enduring than marble. We invite the serious attention of arms manufacturers all over the world, although we would prefer that American ingenuity and American hands should fashion the weapons for American soldiers."

It is abundantly evident that the real test of arms, tactics or strategy must be made on the field of battle, and the experience acquired by Major Reno goes far to discredit the tests of the Ordnance Bureau; but it has yet to be proved whether the requisite care was taken of the arms which displayed such defects when submitted to the crucial test of actual service.

We leave this question to the consideration of our readers, more than one of whom are capable of dealing with it in all its bearings, appending the letter and documents referred to by our contemporary.

SPRINGFIELD VS. WINCHESTER.

The following official reports with reference to the complaints made by cavalry officers on the Springfield carbine, are published as in-

teresting and as additional to the letter of Major Reno to the Chief of Ordnance on the same subject, published in the *Journal*, Aug. 19th:

ORDNANCE NOTES.—LVI.

WASHINGTON, August 17, 1876.

Headq's Military Division of Missouri,
Office of Chief Ordnance Officer,
Chicago, Ill., August 2, 1876. }
Chief of Ordnance, Washington, D. C.:

SIR: As telegraphed to you today, Colonel Mackenzie requested Winchester rifles for the Fourth Cavalry. I informed the Lieut. General that we did not furnish these arms, but that by using the rifle cartridge in the carbine some causes of complaint would be removed; or, if this was not sufficient, the calibre .45 rifle could be issued to replace the carbine, thus making the regiment mounted infantry. The Lieutenant General awaits Colonel Mackenzie's arrival here before taking decided action in the case. I quote this as an illustration of the dissatisfaction with the carbine; and while it is impossible to gratify all the caprices of officers, yet the very general complaints at the inefficiency of the carbine must be based on some real grounds. Its defects are inaccuracy and short range. It may be said that it is not expected to be as complete as the rifle in these respects, but the nature of our cavalry service demands equal capabilities in both arms, and I think this can be obtained by adopting, instead of the carbine, a longer arm, of the dimensions of the officers' model of Springfield (sporting) rifle and using the 70 grain cartridge in it. I would suggest setting the front and rear sights as far apart as possible, the rear sight being on the top of the small of the stock. In general, I would suggest getting out of the gun everything possible, running the arm to its extreme limits of range and accuracy. This model should also be provided with a ramrod, to remove cartridge shells which the extractor fails to eject, and to clean the arm.

Very respectfully, your obedient servant,
J. W. REILLY, Captain of Ordnance,
Chief Ordnance Officer.

(First Indorsement.)

ORDNANCE OFFICE,

WASHINGTON, August 4, 1876.

Respectfully referred to the Commanding Officer of National Armory for report.
S. V. BENET, Brigadier General,
Chief of Ordnance.

(Second Indorsement.)

NATIONAL ARMORY, August 8, 1876.

Respectfully returned to the Chief of Ordnance.

For Captain Reilly's information I would state that the most powerful Winchester rifle for frontier service carries a cartridge of 40 grains of powder and 200 grains of lead; the extreme range for which this arm is sighted is 300 yards. The cartridge of the Springfield carbine contains 55 grains of powder and 400 grains of lead, and is sighted for an extreme range of 1,300 yards. The penetration of the Winchester rifle, in place, at a distance of 100 yards, is less than one half of that of the Springfield carbine at the same distance, and not so much as the penetration of the latter arm at the distance of one half a mile. I hope in the course of today or tomorrow to forward a report of a very careful test of the Winchester rifle now used on the frontier.

As regards a ramrod for the carbine, I can only say that it has *always* been customary to issue wooden rods with carbines, in the