

## RARE TRAPDOOR SPRINGFIELDS

### PART 1

By Archer L. Jackson  
Edgewater Beach Hotel, Chicago, Ill. April 1, 1966



ARTHUR L. JACKSON

"Arch, you've got a fake! A genuine fake!" "This trapdoor Springfield of yours is not the Marksmans rifle." In his predictably blunt way, Bill Edwards shocked me into many hours at National Archives in a search of government records to prove him wrong. The records I uncovered however, proved him right.

My search revealed, and I am going to deal with four different model trapdoor Springfields that I feel are the rarest of the regular production models -- the Sporting model Springfield, the Officers model Springfield, the Long Range model Springfield and the Marksmans model Springfield. Also I will touch on Army marksmanship medals and note how they were tied in with the rifles.

#### THE SPORTING MODEL

The earliest letter I was able to find referred to the Sporting model Springfield as follows:

"Col. J. G. Benton          "Office of Machine Shop  
                                         Commanding          "National Armory  
                                                                                  "Springfield, Mass.  
"Sir:                                                                                          March 17, 1870

"The labor on the Gen. Dodge's sporting gun over and above the cost of the ordinary Springfield Rifle Musket model 1868 is as follows: \$56.50.

"Total cost including screw driver \$70.00.

"Very Respectfully,  
"Sam W. Porter  
"Master Machinist."

This letter was an inter-office memo from the machine shop to the front office at the armory regarding the completion of General Dodge's sporting rifle. I could find no other letters pertaining to this rifle in any of the records.

A number of years ago an article appeared in a gun magazine about this General Dodge's sporting rifle. It obliquely identified their subject piece as the rifle of Union Pacific builder Gen. Grenville M. Dodge, which looked as though it was initialled "T.E.D." I cannot believe that even the most careless engraver could confuse a "G" with a "T" nor an "M" with an "E." Their gun was a half stocked 50-70 action Springfield with a 28" blued barrel, a German silver trigger guard that was not military, and a double set trigger. There were inspector's marks on the left side of the stock. I have taken this piece apart and compared it with one in my collection (which I think to be a Sporting rifle), and find they match very closely. In all the letters I have found, most do not describe the rifles very well. The letters are from Chief of Ordnance, Brig. Gen. S. V. Benet to Springfield Armory: "You are directed to manufacture and send to this office as soon as possible one Sporting rifle Cal. .45 or .50 with fine sights, hair trigger, light stock" or sometimes they say "half stock;" or "select a handsome piece of wood, etc." and always close by saying "forward to this office as soon as possible with report of cost price."

In one instance though, I found a letter from 2nd Lt. C. Gardener 19th Inf. Camp Supply Indian Territory who ordered six Sporting rifles made to his specifications. These were for himself and five other officers and were to be sent care of the Postmaster at Dodge City, Kansas. The letter dated December 13, 1874 orders:

"Six Springfield Rifled muskets cal. .45. Stocks to be cut down and made smaller at the grip, the butts to be crescent shaped after this manner (drawing) and so arranged as to allow the insertion of a jointed ramrod in four sections.

Stocks to be cut off to within five inches of the lower band and tipped with German silver or brass.

## SIGHTS

A sight on the stock after enclosed engraving for target shooting.

A Buckhorn sight for 100 yds.

An elevated sight somewhat after the one now used except having a finer notch to sight through in front of the buckhorn, for 1200 yds.

A front sight of German silver of this shape (Drawing).

We would like beside this front sight a windgauge front sight with an open bead as shown in the engraving:

Hair trigger and set trigger

Ordinary trigger to pull 5 lbs.

The trigger guard to be somewhat this shape (drawing).

A jointed ramrod in four sections to be inserted in stock when not in use.

The gun to be sighted."

These guns were finished and delivered on April 19th, 1875, at \$41.17 each.

These officers seem to have ordered some quite fancy rifles. You will note the similarity between the description of these rifles; the General Dodge, and my rifle.

General George Armstrong Custer had a sporting Springfield with him when he had his picture taken with the Grand Duke Alexis in St. Louis in 1872. We can see from the photo that it was a 50-70 similar to the one described previously. This gun is now in the Historical Society Museum in Monroe, Michigan, Custer's home town. As yet I have not gone to Monroe to examine it, but plan to do so this summer.

In the book "Boots and Saddles" by Mrs. Elizabeth Custer there is a quote as follows:

"Official Report of the Engagements with Indians on the 4th and 11th ultimo.

"Head-quarters Battalion 7th Cavalry,  
"Pompey's Pillar, Yellowstone River, Montana, Aug. 15, 1873.

"Acting Assistant Adjutant-General, Yellowstone Expedition:

"Sir:

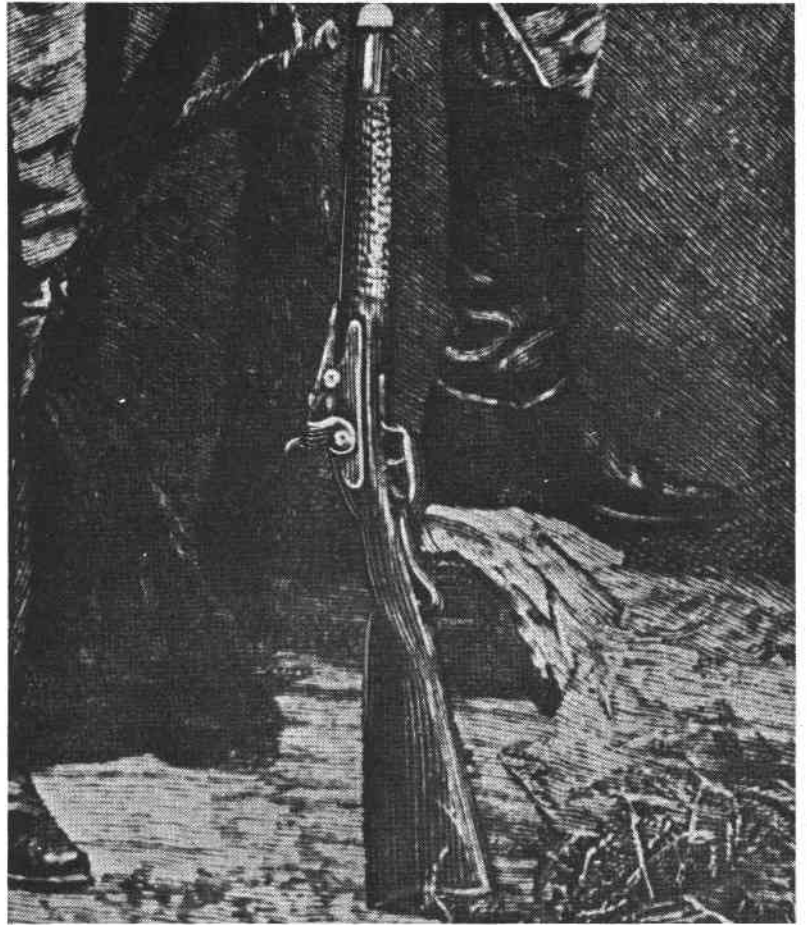
"While this was transpiring I had mounted my command and formed it in line close under the bluffs facing from the river, where we quietly waited the attack of the Indians in our front. The sharpshooting across the river still continued, the Indians having collected some of their best shots -- apparently armed with long-range rifles -- and were attempting to drive our men back from the water's edge. It was at this time that my standing orderly, Private Tuttle, of "E" Troop, 7th Cavalry, one of the best marksmen in my command, took a sporting Springfield rifle and posted himself, with two other men, behind cover on the river bank, and began picking off the Indians as they exposed themselves on the opposite bank. He had obtained the range of the enemy's position early in the morning, and was able to place his shots wherever desired. It was while so engaged that he observed an Indian in full view near the river. Calling the attention of his comrade to the fact, he asked him to 'watch me drop that Indian,' a feat which he succeeded in performing. Several other Indians rushed to the assistance of their fallen comrade, when Private Tuttle, by a skillful and rapid use of his breech-loading Springfield, succeeded in killing two other warriors. The Indians, enraged no doubt at this rough handling, directed their aim at Private Tuttle, who fell pierced through the head by a rifle bullet. He was one of the most useful and daring soldiers who ever served under my command."

"Respectfully submitted,  
(Signed) "G. A. Custer,  
"Lieutenant-Colonel 7th Cavalry,  
"Brevet-major-general, U.S.A., commanding."

You notice that Custer said "sporting Springfield rifle." Now in all my search of the records I have only once found a sporting rifle sent to a member of the 7th Cavalry. On March 19, 1874 a Lt. George Wallace, 7th U. S. Cavalry, Fort Lincoln, Dakota Territory, ordered a Springfield Musket Cal. .45 with fine sights, hair trigger, light stock, etc. sent to him.

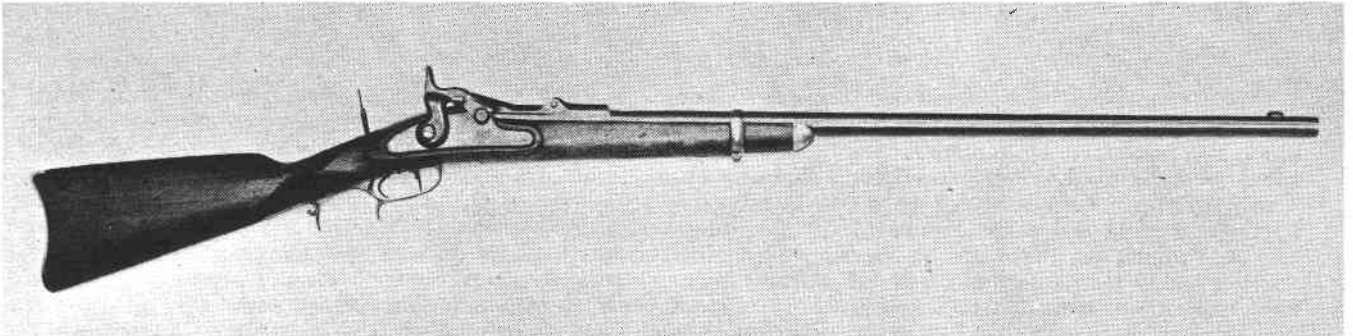
In the collection of trapdoors in the Springfield Armory Museum is a Sporting rifle acquisition card of which says "picked up on Custer Battle Field." This rifle is engraved similarly to the Officers model, has a

# SPORTING RIFLES

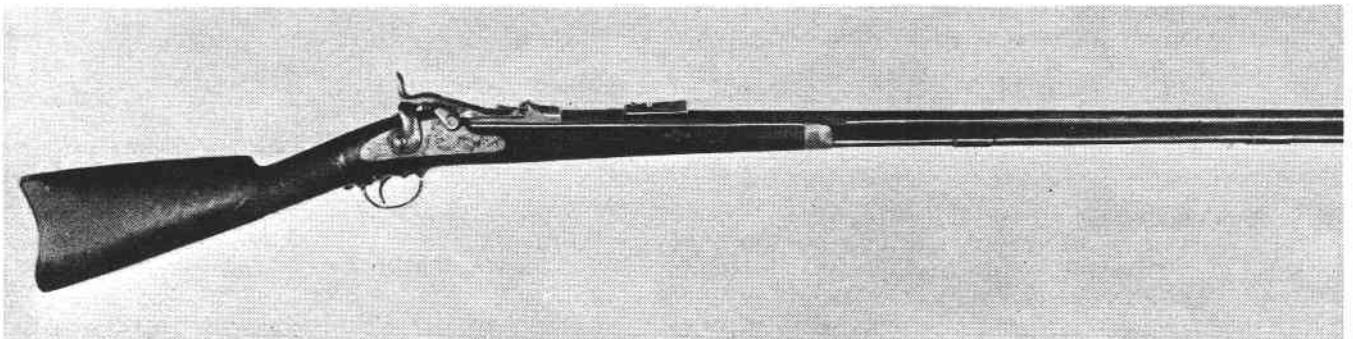


Gen George A. Custer dressed in hunting outfit with his sporting model Springfield. Picture taken in Feb. of 1872 with Duke Alexis of Russia.

Enlargement of Gen. Custers Sporting Model Springfield, Cal. .50-.70.



Sporting Model Cal. .50-.70, barrel 28-3/8", 47-1/2" O.A. Note similarity to General Custer's rifle.



Sporting Model Cal. .45-.70, design very similar to Officers Model. Barrel 32-3/8", 52" O.A.

long barrel with ramrod under it and the barrel held to the stock by a wedge instead of a band. It appears to be a transition model Officers Model rifle. If this piece was "picked up" on the Custer battlefield, the Indians sure missed a beautiful rifle. Somehow, I doubt it though.

As to the number made I have no exact count for I cannot get any of the different government ledger books to coincide, and other ledgers are missing. The Register of Contracts Ordered Made from 1874 to 1877, list 20 as ordered. While in the Register of Ordnance Stores Sold shows 11 sold from 1872 to 1875. The year of 1874 is the only year wherein they both agree on 7.

In the "Statement of Manufacture at Arsenal Quarterly-Springfield" from March 1871 to June 1875 under the heading of "Sporting Rifles and Cadet Sporting Rifles" it lists a total of 25. You will note the heading "Cadet Sporting rifles." In the book Register of Ordnance Stores Sold, it mentions "Cadet rifle modified," "Springfield rifle modified;" and some "carbines modified," along with the "Springfield Sporting rifles." If we add the arms modified to the number of Sporting rifles we come up with a total of 26 made from 1872 through 1875. Most of the arms were made at the Armory, but some were made by the workmen at home. In the daily work book of the Springfield Armory for 1870 it shows L. F. Bruce, toolmaker in the machine section, Feb.-7-1/8 days at 3.50 per work day on sample arm for General Dodge, and in March, 10-1/2 more days on the same rifle. In a letter dated Feb. 2, 1875, Lt. Col. Benton to the Chief of Ordnance, writes about Lt. Gardener's six sporting rifles:

"Please inform me if I am authorized to supply this number of ordinary sporting rifles. Any extra device that may be required will be supplied by one of our workmen, who is a practical gunsmith and will do the work in his own shop and on his own time." The work on these rifles was authorized by the Chief of Ordnance.

#### THE OFFICERS MODEL

Now we come to the Officers Model Springfield and as you have probably guessed, the Chief of Ordnance got fed up handling these requests. On May 25, 1875 he sent this order to the National Armory:

"Commanding Officer  
"National Armory

"Sir:

"In view of the many applications by officers to purchase the standard rifle arranged for sporting purpose, you will be pleased to make a rifle suitable for such purposes which will hereafter serve as a model from which to manufacture and sell to officers. A model being adopted, no sporting arms differing from it will be made at the Armory.

"S. V. Benet  
"Brig. Gen. Chief of Ordnance

This order created one of the most ornate rifles ever turned out by a military arsenal as a regular production. The rifle was for army officers only, although in a few cases it was sold to civilians with political connections. The first Officers model rifle was sold to Capt. R. P. Farley on Aug. 31, 1875 for the sum of \$36.00. These first rifles did not have the detachable wood pistol grip. During the year of 1875 the rifle was called the Officers Sporting Rifle cal. .45, but by 1876 the name was changed to the Officers Rifle model 1875.

A number of collectors and authors have used plate 63 in Maj. Hicks "Notes on United States Ordnance Vol. I" to say that there are three different models of Officers rifles. There is only one model with a number of variations in the sights, the engraving, and the addition of the detachable wood pistol grip. The third rifle shown in plate 63 with an integral pistol grip is in reality the Marksmans Model rifle. The detachable wood pistol grips were added to the rifles by an order from the Chief of Ordnance on April 6, 1877. It is interesting to note that the U. S. Government was sued by F. W. Freund of Sharps Rifle fame. Mr. Freund had patented the detachable pistol grip on October 19, 1875. He never collected on his suit with the government but his family finally did in 1922. There were three different types of adjustable rear peep sights mounted on the small of the stock. The first type was purchased from the Sharps Rifle Company and then was reworked by the armory. The second type was made at the armory and had a round base that was inletted into the stock and held by one screw. This was soon discontinued for the sight could be twisted around and around. The third type used had an oblong base held by two screws that were covered by the sight leaf spring. The upper part of the sights remained the same with the adjustable eye piece. The front sight a tip over gold plated Beech sight, was used throughout the production. All the rifles had a single set trigger, that is to set the hair trigger after the gun was cocked, you simply pushed forward on the trigger.

For years I looked for a letter or order to say who did the engraving and other work on the rifles. One day when I was going through a box of orders for coal, straw, etc., I finally found a letter from the Office of the Machine Shop National Armory dated January 5, 1876 to Lt. J. Rockwell, Jr., officer in charge.

"Sir:

"In compliance with Col. Benton's order of the 4th instant, I have the honor to report that I have made arrangements with Mr. J. H. Clayton to complete the stock for the Springfield Rifle cal. .45 Officers Model for the sum of four dollars and fifty cents per gun.

"Mr. Clayton is to take them in shaped stage and do the checkering, putting on and finishing the metallic tip, letting and adjusting the peep hole sights, varnishing and rubbing down and completing them in a workmanlike and satisfactory manner ready for issue.

"signed) "Sam W. Porter  
"Master Machinist"

Another letter from the machine shop dated April 5, 1877 to Col. Benton:

"Sir:

"I have the honor to report the following agreement with persons for labor on one hundred Officers Rifles.

"J. H. Clayton agrees to make 100 stocks complete with pistol grip and do such necessary work thereon as will be required in completing the rifle for the sum of \$4.25 dollars. Mr. Clayton to take the stocks in the shaped stage.

"Wm. Tegethoff agrees to make 100 set triggers complete with fly tumblers and adjust the same for the sum of \$2.88 dollars.

"F. W. Martin agrees to engrave 100 Springfield Rifles to the satisfaction of Col. Benton for the sum of \$1.50 dollars each.

(signed) "Sam W. Porter  
"Master Machinist"

Now all these persons worked for the armory and took this work home so as to earn extra money for themselves. The name Clayton you will often find stamped in the wood under the trigger guard tang.

The Officers rifles sold for \$36.00 until the price was reduced to \$27.00 on August 28, 1879 by Ordnance order No. 38. There are no serial numbers stamped on the receiver behind the breech block as there are on the regular model trapdoor rifles and carbines. Although I have one in my collection and I have seen other Officers Models with 1881 stamped on the receiver, I have never found any letters pertaining to this date marking. When I first saw this I had assumed these to be left over receivers from the Marksmans rifle order, but the 1881 is engraved on it -- not stamped.

How many Officers models were made? Again, we have conflicting reports from the different ledger books. In the Report to Chief of Ordnance 1875-1885 it shows 300. In Orders and Contracts letter copies it adds up to 550. The Register of Contracts book shows 450 were made. The Statements of Manufacturers at Arsenal Quarterly for Springfield Armory adds up to 477 rifles. I have an idea that this last figure is more nearly correct. I went through the Register of Ordnance Stores sold from 1875 to 1902 when this type of bookkeeping system changed and found the names of 294 officers and civilians who purchased Officers Model Springfield Rifles. I am quite sure that I missed some, for I have found letters ordering 25 officers rifles sent to the San Antonio arsenal for sale to officers.

In the 1907 Banerman catalog they offered Springfield Officers models for sale, so I am assuming they must have bought these at a surplus sale. I have searched the government records of sales to Banerman but could find none listed. The last record of a rifle sold to an officer was in 1900.

I have an Officers model in my collection that has had some special work done on it by the armory on the request of J. G. Nicolay, Marshall of the Supreme Court in April 1878. He requested a receptical in the stock to hold four or five spare cartridges to use while hunting. On April 20 the rifle was sent to the "Chief of Ordnance and in the covering letter was this sentence: "This rifle has a receptical for carrying four cartridges in the butt of the stock; a greater number could not be inserted without diminishing the length of the cover spring." This receptical for four cartridges is just ahead of the butt plate screw along the top comb of the stock. The cover is of steel, engraved as the rest of the gun is, and is of the same contour as the stock. It has a small knurled boss on each side so it can be opened. The hinge is toward the butt. In checking some of the experimental trapdoors in the Armory museum I found a rifle with a receptical in the butt for four cartridges, with a hinged cover marked "Stillman's Cartridge Holder." All the armory did was modify and engrave the cover and insert it in Mr. Nicolay's rifle. The cost of the rifle with this cartridge holder was \$50.17. Most of the Officers Models you see today are in fine condition and show little or no use. I think that most of the rifles were purchased by the officers as a prestige item and then just hung on the wall to show off to friends.

## THE LONG RANGE MODEL

The Springfield Long range rifle was first manufactured at the armory in July of 1879. For many years authors of gun books have called it the Marksmans rifle or the Sharpshooters rifle because it was used for long range shooting at the Creedmoor matches. The Marksmans rifle is an entirely different model.

I think Capt. H. G. Litchfield stationed at Governor's Island New York should be given the credit for the inspiration of design of the Long range rifle. On February 18, 1879 he wrote a letter to the Assistant Adjutant General, Headquarters, Department of the East.

"Sir:

"I have the honor to request, that requisition be made for twenty (20) special Military Rifles cal. .45, to be issued under the authority of the Dept. Commd. to such marksman as may be selected to represent the Army in the International and other contemplated matches during the present season.

"It is suggested that a rifle may be furnished at a very trifling additional cost over that in use, equal in point of accuracy to the Sharps Borchardt, which at Creedmoor has made scores of 27 points out of a possible 35 at 1,000 yards, for two of the four members of the team using it. These special rifles might also serve a most valuable purpose as prizes for meritorious shooting by the enlisted men of the different Regiments, and perhaps no prize of like cost would be held in such esteem by the soldier marksman as a fine long range military rifle.

"The 'special ammunition' now used for the longer ranges is equally well suited to this rifle, as to the one mentioned, and is readily within reach of the soldier, now that the re-loading system is in use.

"In order to avoid the chance of injury from recoil consequent upon the use of the increased powder charge, and heavier, hardened bullets, these rifles should be provided with full shot-gun butt plates.

"I would also suggest the pistol grip now furnished with the 'Officers Rifle' and the present most approved long range military sights, allowing liberal space for windage, and white lines in place of the V notch. I would further suggest that the barrels be finished with a view to the use of patched bullets of about 500 grains, with a powder charge of 80 to 85 grains, which is maximum charge that the 2-1/10 in. shell can be made to hold.

"With the rifles above described the marksman of the Army, will not hereafter be found doubly-handicapped in long range competitions, with the sharp-shooting teams, selected from the militia of the different states, with whom the latest improvements in the rifles are always certain to be found in use."

(This letter was approved by Chief of Ordnance, March 4, 1879.)

The sixth endorsement sent from the Comm. officer of the armory, Lt. Col. J. G. Benton, to the Chief of Ordnance says, June 30, 1879:

"To suit the increased charge required for accurate fire at long range it was found necessary to increase the twist and number of grooves of these rifles over those of the service rifles.

"Ten of the twenty rifles asked for are finished with Springfield systems and are ready for issue.

"Capt. Litchfield desires the remaining ten barrels or a portion of them, to be fitted to the Hotchkiss system and as there are some extra systems of this kind on hand I will fit them if I understand your endorsement (the 5th) to authorize it.

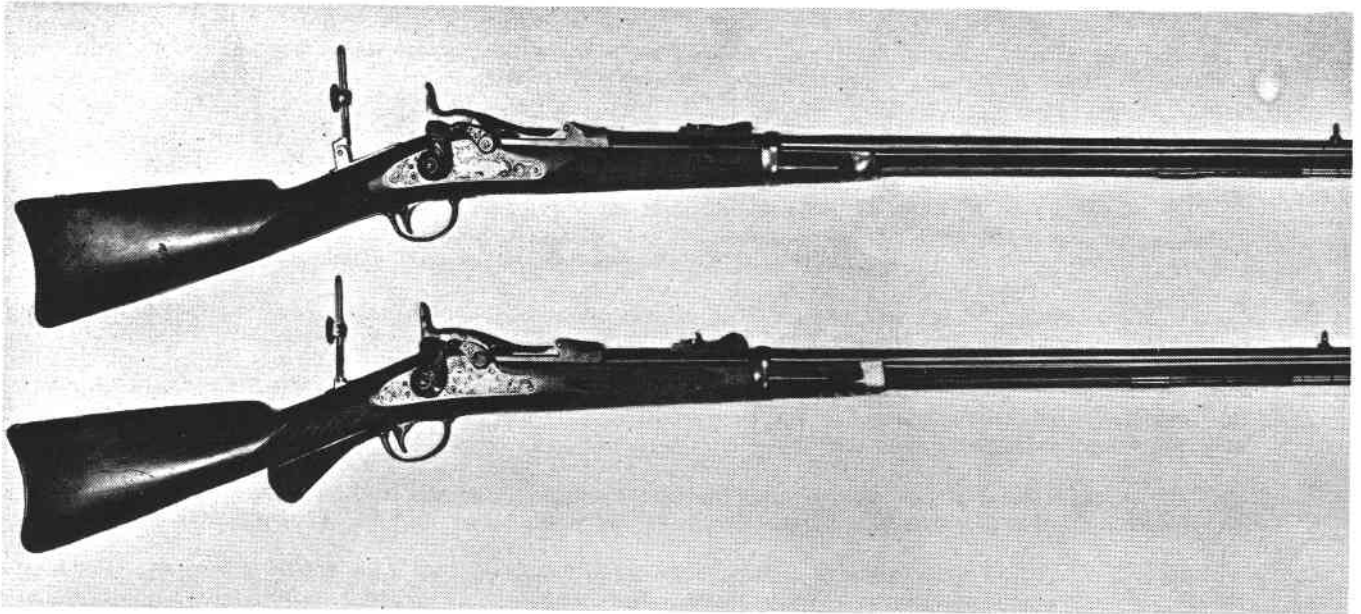
"The bullets are purchased from the Winchester Company -- 500 grains, paper patched, and are without cannellures.

"These barrels are for the present rifled by hand, the stocks have a Hotchkiss butt plate and a wooden wiping rod accompanying each arm in addition to the usual steel rod.

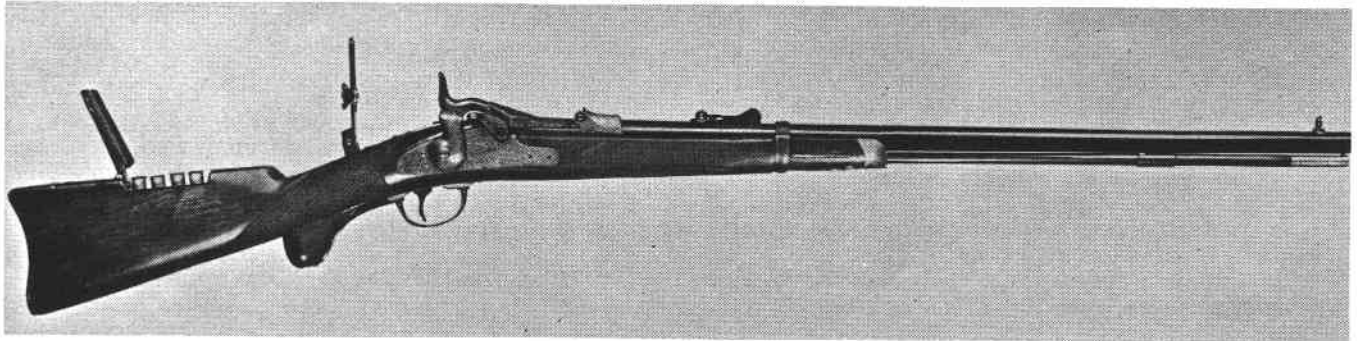
"The additional cost of making them will be about \$4.50 each rifle."

On July 30, 1879, "18 Long range Springfield rifles cal. 45 and 2 Long range Hotchkiss magazine rifles cal. 45." were issued to Capt. H. G. Litchfield at Governors Island, New York Harbor, along with "2,000 prepared metallic cartridges cal. 45." The Hotchkiss buttplate they are talking about is longer and straighter than the one on the regular service rifle. It measures 5" from toe to heel. Twenty more Long range rifles were ordered by Gen. Hancock on August 31, 1879 for the upcoming Creedmoor rifle matches. These new rifles were used at the rifle matches with great success. After the matches, Special Order Number 70 dated October 1, 1879 stated that Capt. Litchfield was to issue a Long range rifle to the best shot in each of the Army teams for him to practice with upon return to his own post.

# OFFICERS MODEL



Officers Model Rifles, Top: Early model, first type of sight and no detachable pistol grip. Bottom: Last of production, third type of sight with detachable wood pistol grip, barrel 26-1/8", O.A. 45-1/4".



Special order Officers Model for C. J. Nicolay with Stillmans cartridge holder in the stock and Bull's barrel sight.

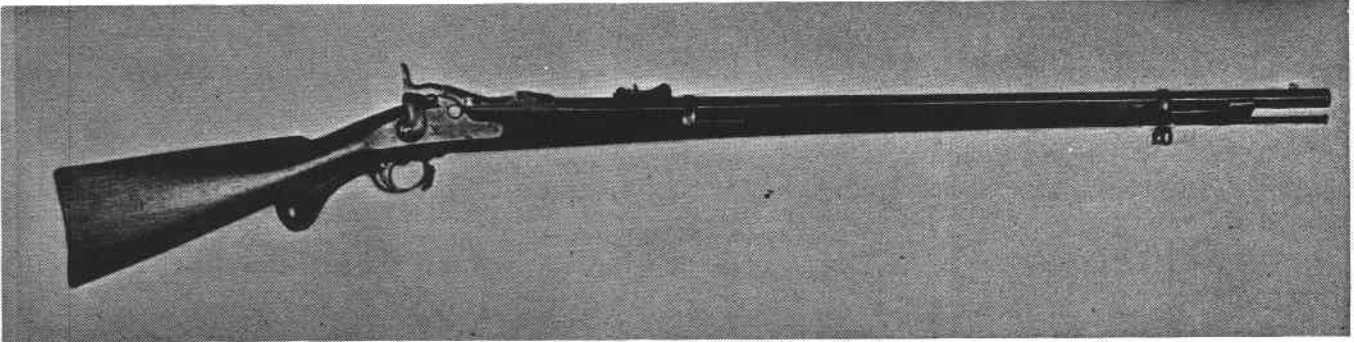


Sharps tang sight were purchased by the armory and then modified.

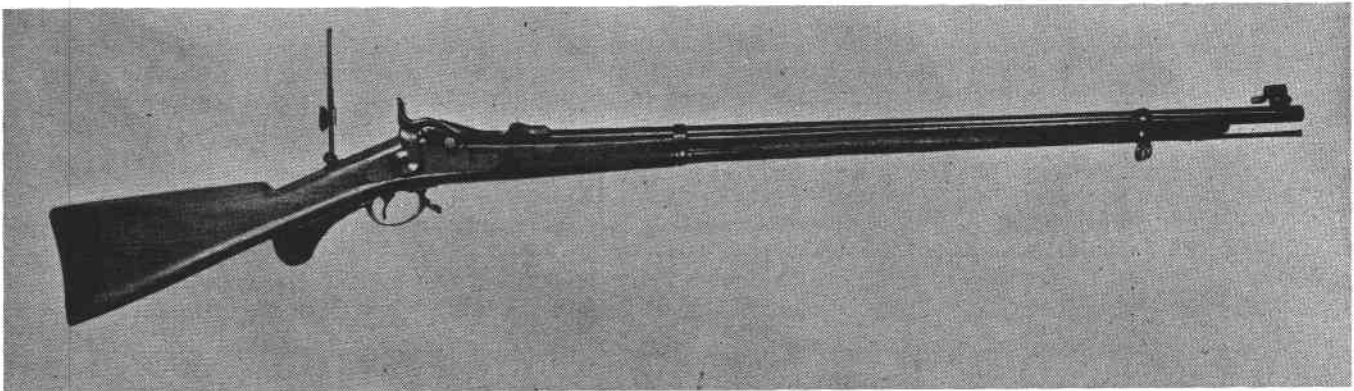


1st type of Officers Model Sight after it was revamped. Sharps name appears on sight leaf.

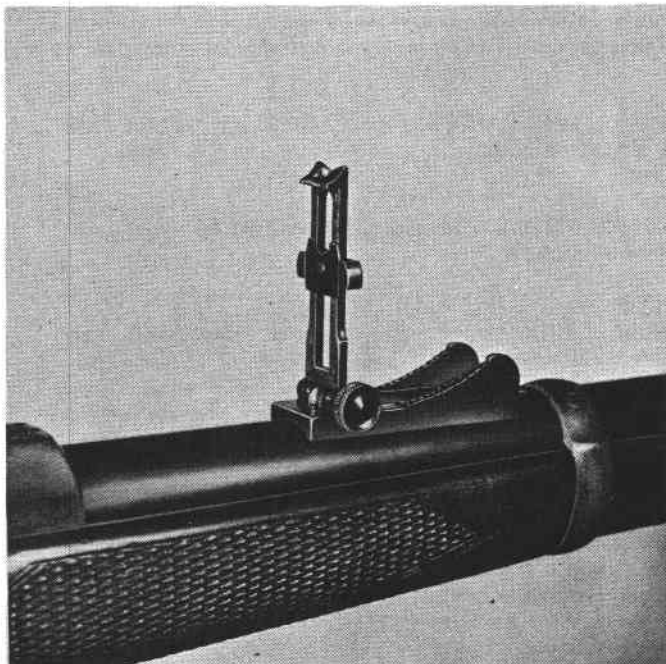
# LONG RANGE MODEL



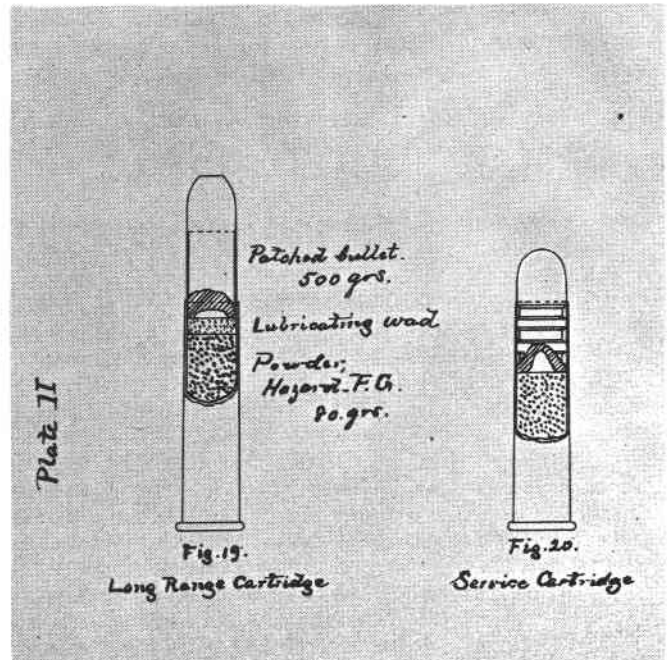
Long Range Rifle, cal. 45-80 six groove barrel, Hotchkiss butt plate, Bull's rear sight, detachable wood pistol grip.



Long Range Rifle, cal. 45-80 with Sharp's sights. 24 ordered in 1881. Barrel 32-5/8", 52" O.A.



Freman R. Bull's rear sight for the Long Range Rifle.



First Long Range Cartridge, patched 500 grain bullet in service case, caliber 45-80 (Left). Compared to service 45-70 cartridge with 405 grain bullet.



Upon return to their posts, a number of the men who had been on the different teams started writing letters to the Chief of Ordnance wanting a Long range rifle. On January 15, 1880 the Chief of Ordnance wrote to the Springfield Armory for a report as to how many Long range rifles had been made, how did they differ from the service rifle, the character of the cartridge, and how more than one pattern been made? Col. Benton commanding the national armory answered on January 16, 1880:

"Respectfully returned to the Chief of Ordnance--

"The arm referred to herein as the 'Springfield Long range rifle' only differs from the service rifle in the grooves which are six in number, and the twist, which is one turn in 19-3/8 inches.

"The throat of the chamber is slightly rounded to prevent the paper patch from wrinkling when the cartridge is inserted; and the sight, which is of the buck-horn pattern and is adjusted, sidewise by a screw instead of by pressure or rapping on the slide. The cartridge shell is the same as the service shell, but it contains 80 grains of powder, a lubricating pellet and a smooth patched bullet weighing 500 grains.

"Thirty two of these Long range rifles in all have been made -- thirty of which were issued on Gen. Hancock's requisition and have been distributed to the Army under his instructions by Capt. Litchfield of his staff. Some 10,000 bullets and Winchester re-loading cartridge shells were purchased and issued with the rifles.

"The extra cost of these rifles was \$3.00 each, the rifling having been done by a hand machine.

"A specimen of the cartridge is enclosed from which it will be seen that it is not suited for actual service in the field. The experiments made by Capt. Greer at Sandy Hook, and especially those which are now being made at this armory show that the Long range rifle itself is no wise superior to the service rifle.

"The superiority of its fire is due solely to the greater weight of the bullet. Since the results of the Sandy Hook experiments have been known I have prepared a service cartridge with a bullet weighing about 500 grains. This is found to give with the service rifle fully as good results as are obtained with the so-called long range rifle and its unserviceable cartridge. I also enclose a specimen of this bullet and cartridge. I would recommend therefore, that no further action be taken in supplying special long range rifles to the Army until the matter is fully investigated and the actual necessity for one is manifested.

"Only one pattern of long range rifle has been made at this Armory and issued to the troops."

In the ordnance correspondence for the remainder of 1880 we find increasing demand for more long range rifles by the different Army rifle teams. On May 5, 1880 twenty more were ordered for the upcoming Creedmoor shoot, these being delivered on August 13th and another five on August 31st.

At the Creedmoor Long Island Rifle Match in September of 1880 Capt. J. E. Greer who was observing the match for the Ordnance Department reported: "It only remains to add that the Springfield rifle was decidedly the favorite on the range; and it deserved all praise winning in the large majority of cases over long range guns of other makers provided with peep and globe sights and over military arms when it was in competition with them.

"All of the Army teams in the great match beat the militia teams, two of which were armed with Sharps throughout, while the Connecticut team two-thirds were armed with the Peabody and the remaining third with the Springfield.

"Civilians and militiamen spoke highly of the Springfield which has grown into favor by its own excellence without the pushing given other arms by private manufacturers."

Finally on December 30, 1880 orders came from the Ordnance Office to "Make 150 of these rifles. Twenty-four of them to have the sights pages #174 and 175 of 'Laidley's Rifle Firing.' The grip and trigger, etc. are left to his discretion. Make the arm as perfect a shooting weapon as you can." The figure of 151 Long range rifles manufactured appears only in the "Report to the Chief of Ordnance" for the year of 1881, while in the book "Register of Contracts made, or orders given, by the Ordnance Department" it shows the number as 150. But in a handwritten letter listing the fabrication of arms for the year ending June 1881 it lists 183 Long range models, while in still another letter of 1881 it lists 158 Long range rifles at \$14.81 each and 25 Long range rifles \$33.60 (Sharps sights no doubt). Also the 4th endorsement of a letter dated May 3, 1882 to the Headquarters of the Army from Capt. Litchfield, "The 180 Long range rifles, if equally distributed, would give 15 to each Department, and it was contemplated to utilize them in certain contests, at Long range, gotten up outside of the regular contests provided for by the proposed order. This species of firing is growing in favor in the Army, keeping pace with improvements and skill in marksmanship . . ." Again we seem to have a conflict in the different government reports, but knowing how they operated in this period of time I am inclined to believe that there were 183 Long range rifles manufactured.

In Capt. Litchfield's original letter he asks that the rifles be stocked with the Hotchkiss butt plate. Both of my Long range rifles and the other four I know of are so stocked, all but one, and this has the conventional stock. A detachable wood pistol grip was used with the rifle in most cases depending on the preference of the shooter. This grip was the same size and shape as the one on the Officer's model Springfield except that it was smooth, not checkered. In March of 1882 the checkered metal pistol grips became available to the army shooters.

The front sight was the regulation sight but a number were changed to dovetail blade sights by the different shooters. "Bull sights" were the type of rear barrel sight found on all models. This sight is the brainchild of one Mr. Freeman R. Bull, a legend in his own time at the Springfield Armory. He took the regulation rear service sight and added windage to it by replacing the sight hinge pin with a threaded shaft operated by a knurled knob (see photo). The records show that 65 were made in 1878 and another 155 in 1879. It is interesting to note that the Ordnance Department was sued by a Mr. Charles F. Robins in September in 1879 for infringing on his patented vernier tang sight with windage in its base. He wanted a royalty on all the sights which the Armory had made since he had patented his sight in May of 1877. Col. Benton said that they had made the Bull sight some years prior to his patent. If Mr. Robins ever collected from the Ordnance Department, I never found it out. Lt. Col. Kelton wrote to the Chief of Ordnance on December 17, 1880 requesting 6 Long range rifles ". . . to have the globe and peep sight described on pages #174 and 175 Laidleys' Rifle Firing." The sights shown on those pages was the wind gauge spirit level front and the vernier tang sight produced by the Sharps Rifle Company for their Borchardt Creedmoor model. Twenty-five sets of these sights were purchased in February of 1881. Twenty-four Long range rifles were equipped with them, six being sent to Lt. Col. Kelton April 18, 1881 and six to Lt. Carpenter June 3, 1881. (see photo of rifle with sight). I know of three specimens to exist, one in the West Point museum, mine and another one in a private collection.

The ammunition used in these Long range rifles is .45-80. For the first year they used the regular .45-70 brass service cartridge case with 80 grains of black powder, a thin lubricating disk and then a 500 grain smooth paper patched bullet seated just inside the mouth of the case. There was so much powder in the case that you could not seat the bullet in the cartridge case properly. That is why Col. Benton called this ammunition "unserviceable" in his letter describing it to the Chief of Ordnance (see photo). The early experimenting with the .45-80 cartridge really brought about the improved .45-70 service cartridge by the increasing of the bullet weight to 500 grains. For they found that they could get almost the same accuracy as they could with the paper patched .45-80 cartridge. For the first Creedmoor match the cartridge cases and the patched bullets were purchased from the Winchester Company, and later they were supplied by the Frankford Arsenal. In 1881 the .45-80 copper cased fixed ammunition was first issued as the standard long range rifle cartridge as we know it today. This shell is 3/10 of an inch longer than the .45-70, in other words it is the same length as the old 45-90 Winchester case.

By the spring of 1881 the Army's marksmanship program had grown tremendously both in interest and in cost. The cost of sending teams to Creedmoor Long Island each September from all over the United States had become a great drain on the Army's budget. So Congress decided not to make specific appropriations to degray the expense. Thus General order #44 was issued on May 10, 1881 to clarify the whole subject of target practice and set forth new rules governing it; the arms to be used, and prizes to be awarded. This order stopped the Army from sending teams to Creedmoor and set up three grades of competitions within the Army itself. These were the Department, the Division and the Army. In paragraph VIII it states that the long range rifles will be issued from time to time for experimental purposes and not in Department, Division, or Army teams.

In the later years I found that the Long range rifle was issued to state militia units on request, as late as 1893, 20 were issued. The last place they made their appearance is in Banerman catalog of 1907, "60 U. S. Army Sharpshooters Long Range Rifles . . . practically new . . . with box of 20 long range cartridges for \$6.80." How many do you want?



TO BE CONTINUED NEXT

ISSUE

2nd type of sight with round base, soon abandoned as impractical.