

Beautiful Rifles with Pointy Things

Richard L. Berglund and Peter A. Albee

This paper will examine some of the methods used to adapt bayonets to the Model 1841 Rifle. Alterations of the rifle by the federal arsenals and the individual states will be discussed. The alterations of the Model 1841 Rifle took place in two phases. First, the federal government adapted the Model 1841 Rifle for long range between 1855 and 1860. The state alterations commenced with the secession of the southern states. Information that is available from many scattered sources will be drawn upon to describe the major Union 1841 rifle bayonet alterations.

The decade 1850-1860 was both exciting and tragic. President Polk's Mexican War and his forceful diplomacy expanded the national borders from the Atlantic to the Pacific Ocean. It was a time of Manifest Destiny, westward expansion and the search for the great riches held by the newly acquired lands. The additional territory placed new demands on the military. The regular army was now charged with opening the west, building roads, and protecting the settlers from the hostiles. These new duties led to the development of new and improved weapons.

The settlement of the new territories and statehood decisions brought forth unintended consequences that eventually divided the nation. The industrial north and the agrarian south were placed at odds. The fragile bond holding the nation together fell apart, leading to the secession of the southern states.

In the north, efforts were made to modify and update weapons held in inventory as the northern states prepared for the inevitable conflict.

FEDERAL SWORD BAYONET ALTERATIONS 1853-1860

Military tactics of the day called for infantry in a tight formation to deliver volley fire followed by a bayonet charge to rout the opposing forces (Figure 1). These engagements



Figure 1. In 1850 the U.S. Infantry armed with muskets continued to use Napoleonic War tactics. Units in tight formation closed with the enemy, fired in volley, and charged with bayonet. (Courtesy of Parks Canada)



typically took place at less than 100 yards and were perfect for the smooth bore musket using the round ball.

Flank companies armed with rifles acted as skirmishers and scouts (Figure 2). The patched round ball in a rifle provided greater accuracy than the smooth bore musket, allowing aimed fire that was accurate over a greater distance.



Figure 2. Flank companies armed with rifles acted as skirmishers and scouts.

This all changed when James Burton, the Master Armorer at Harper's Ferry Arsenal, perfected the elongated Minnie' style ball (Figure 3). The ease of loading, accuracy, and extended range of the Burton Ball made the 1841 rifle an ideal arm for the infantry.

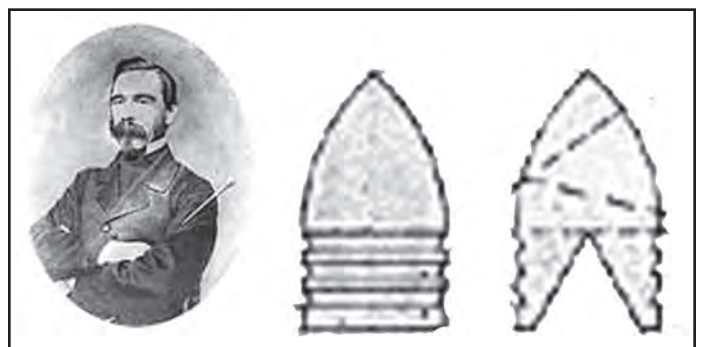


Figure 3. James Burton, the Master Armorer at Harper's Ferry Arsenal, perfected the elongated Minnie' style ball. Photo courtesy of Harper's Ferry NPS.



Figure 4. The 1841 rifle as designed had no method to mount a bayonet. It became necessary to adapt the rifles issued to infantry units to accept bayonets. Photo courtesy of the Utah Historical Society.

The smooth bore musket had a bayonet that served a dual purpose—to charge the enemy and to protect against cavalry attack. However, the rifle as designed had no method to mount a bayonet, so it became necessary to adapt the rifles to accept bayonets.

Harper's Ferry was given the task to upgrade the rifles for long range. Starting in FY 1854 two methods of bayonet attachment were developed: the Type I ring attachment bayonet for rifles already in the field, and the Type II stud with guide attachment for rifles altered at Harper's Ferry.

TYPE I RING ATTACHMENT BAYONET

Harper's Ferry production reports for FY 1854 show that 1,646 sword bayonets for rifles with ring attachment and 590 percussion rifles for the Type I bayonet were manufactured. The Type I bayonet used a folding ring as the upper barrel attachment and a complex rotating key in the cross-guard to lock the bayonet to the barrel. The blade had a stopped fuller and the bayonet has an S guard. There were several examples of ring attachment bayonets with a C guard. Some Type I bayonets were fitted to rifles and have an alphanumeric mating number stamped on the finial of the

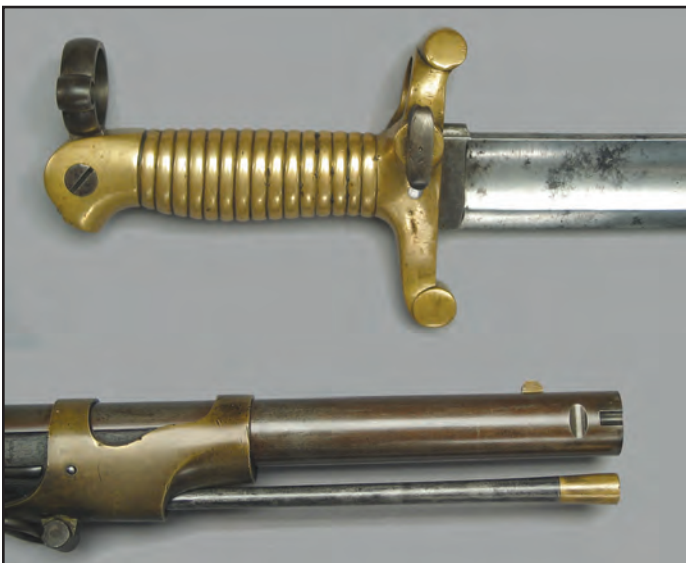


Figure 5. The Type 1, ring attachment bayonet was designed to be fitted to arms already in service.

cross guard. The corresponding rifle was also stamped with matching mating numbers on the face of the muzzle and the tang of the butt plate.

The rifle adapted for the Type I bayonet was fitted with a screw adjustment rear sight and the muzzle had two 1/2-inch grooves cut at right angles to lock the bayonet in place (Figure 5). The caliber remained .54.

TYPE II STUD WITH GUIDE ATTACHMENT

The 9th and 10th infantry regiments were formed in 1855. The new regiments were to be armed with 1841 rifles adapted for long range with a different method of bayonet attachment, the stud with guide, Type II.

The Type II bayonet used a stud with guide on the barrel of the rifle to attach the bayonet to the barrel (Figure 6). The bayonet's hilt was cut to accept the stud guide. The blade had a stopped fuller, and all examples of the Type II bayonet had a C guard. Harper's Ferry production reports for FY 1854 show that 1,639 sword bayonets for rifles, stud with guide attachment were produced at the armory. During FY 1855, 3,179 bayonets were produced for a total production of 4,858 bayonets.

The rifle modified for the Type II bayonet was affixed with the screw adjustment rear sight or a soldered-on slide adjustment rear sight. The front band of the rifle was replaced with a shorter band made to clear the bayonet stud on removal. The stud with guide was braised to the barrel, and an iron tipped ramrod cupped for the conical bullet was used (Figure 6). The Type II alteration is found in both .54 and .58 caliber.



Figure 6. Rifles with the Type II, stud with guide alteration were issued to the newly formed 9th and 10th infantry.



Figure 7. Whitney adapted the last 600 1841 rifles in their contract for long range. Ames provided the sword bayonets for these rifles.



(Left) Figure 8. The model 1855 rifle alteration to 1841 rifle included fitting of the 1855 sword bayonet, and the 1855 rifle front and rear sights.

(Right) Figure 9. Soldier armed with Harper's Ferry rifle adapted for long range. Photo courtesy of Richard Carlile.



ation), and the model 1855 rifle, has a C guard; the fuller is unstopped; and the stud attachment has no guide.

The model 1855 alterations of the model 1841 rifle used a screwed-on rear sight (the long range slide adjustment or the model 1858 rifle sight), model 1855 rifle front sight, short front band, bayonet stud without guide, iron tipped ramrod, and is found in .54 and .58 caliber (Figures 8 and 9).

FEDERAL AND STATE ALTERATION DURING THE WAR BETWEEN THE STATES

Colt Alteration

In 1861 the Colt Firearms Company purchased 11,368¹ model 1841 rifles from the Ordnance Department. Colt performed the following operations on these rifles: 1) bored and rifled to .58 caliber, 2) installed a Colt revolving rifle rear sight, 3) installed an iron spline band with a bayonet lug, 4) rebated the brass ramrod tips, and 5) provided a Collins & Co. sword bayonet.² The rifle, spline ring, and bayonet each had a matching mating number (Figures 10, 11 and 12).

Originally, the Ordnance Department sold Colt the rifles to alter and then supply the updated arms to state militia units. The federal government, finding itself short of arms, agreed to purchase 10,400 of the Colt altered rifles. The State of Connecticut purchased 460 rifles; the rifles in this grouping remained unaltered and were supplied with unnumbered splined ring bayonet lugs and sword bayonets (Figure 13).

New York Remington Alteration

The State of New York contracted with Remington to alter 5000³ Remington 1841 Rifles for sword bayonets. A bayonet lug without a guide was brazed to the barrel, and the guns were fitted with a Collins & Co. sword bayonet.

Some examples of early production Type II bayonets have an alphanumeric mating number stamped on the finial of the cross guard. The rifle is also stamped with corresponding mating numbers on the face of the muzzle and the tang of the butt plate.

Whitney, one of the contract manufacturers of the 1841 rifle, was about to complete its production of the rifle. The Ordnance Department requested that Whitney alter the last 600 rifles for long range. This group of rifles is dated 1855. The lock date stamp has a small five and a large five (1855.)

Harper's Ferry produced and sent to Whitney the slide adjustment sights, the short front bands and iron tipped ramrods. Ames produced 500 Type II sword bayonets for the Whitney rifles. Harper's Ferry produced the remaining 100 bayonets for these rifles. The Whitney rifles altered for long range were .54 caliber (Figure 7).

1855 ALTERATION

The model 1855 sword bayonet was designed for the new model 1855 rifle. The model 1855 sword bayonet, which was used on altered model 1841 rifles (1855 alter-

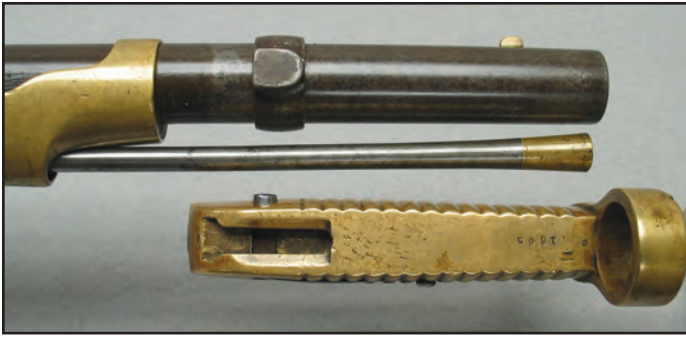


Figure 10. The Colt alteration used a splined ring to mount the sword bayonet.

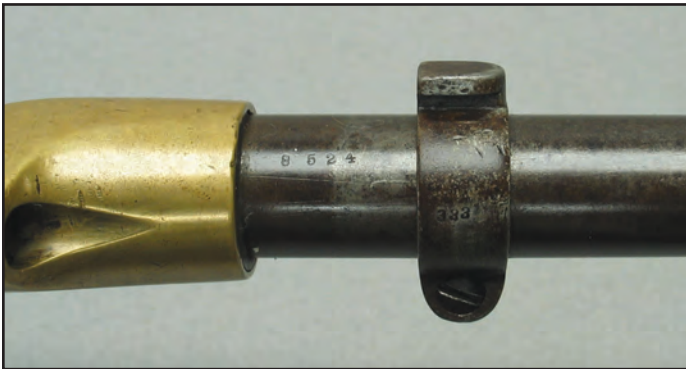


Figure 11. Colt placed mating numbers on the barrel, mounting ring and bayonet.



Figure 14. The New York Remington alteration used a stud brazed to the barrel and applied mating numbers to the stud and Collins bayonet.



Figure 15. New York Zoaves armed with Remington altered 1841 rifles.



Figure 12. The rear sight was replaced with a Colt revolving rifle rear sight.



Figure 13. Soldier armed with a Colt altered 1841 rifle.

The rifle had a mating number on the bayonet lug to match the number on the bayonet grip. Remington was unable to obtain enough sword bayonets to complete the contract and delivered 3,268 altered rifles and bayonets to New York state. All of these rifles remained in the original .54 caliber (Figures 14 and 15).

New York Grosz Alteration

The State of New York obtained 1842 socket bayonets from Springfield Arsenal and contracted with Frederick H. Grosz to alter the rifles to fit the bayonets. The muzzle was turned to fit the bayonet; a lug was brazed to the bottom of the barrel and the front sight was moved back on the barrel to provide clearance for the bayonet socket. Grosz altered 1,600 Model 1841 Rifles to accept socket bayonets. All Grosz altered rifles remained in .54 caliber (Figure 16).



Figure 16. New York Grosz alteration to fit 1842 socket bayonet to rifle.



Figure 17. The New Hampshire alteration screwed the bayonet lug and guide to the barrel.



Figure 18. Lemman alteration for Pennsylvania.



Figure 19. Soldier armed with 1841 rifle altered to accept a socket bayonet.

New Hampshire Alteration

New Hampshire received 961⁴ Robbins & Lawrence 1841 rifles from the State of Massachusetts. New Hampshire altered the rifles to accept a sword bayonet by attaching a stud with guide held on with machine screws. The sword bayonet was numbered to mate with the bayonet lug on the rifle. The rifle remained in .54 caliber (Figure 17).

Pennsylvania Lemman Alteration

The State of Pennsylvania contracted with H. E. Lemman in 1861 to alter 2,352⁵ Model 1841 Rifles to accept bayonets. Tryon manufactured the majority of these rifles. The rifles were bored and rifled to .58 caliber; the muzzles were turned, a lug was brazed on the bottom of the barrel to accept a socket bayonet, and the front sight was moved further back on the barrel to provide clearance for the bayonet



Figure 20. Massachusetts Drake alteration used a socket bayonet.



Figure 21. The Drake alteration replaced the front and rear sight.

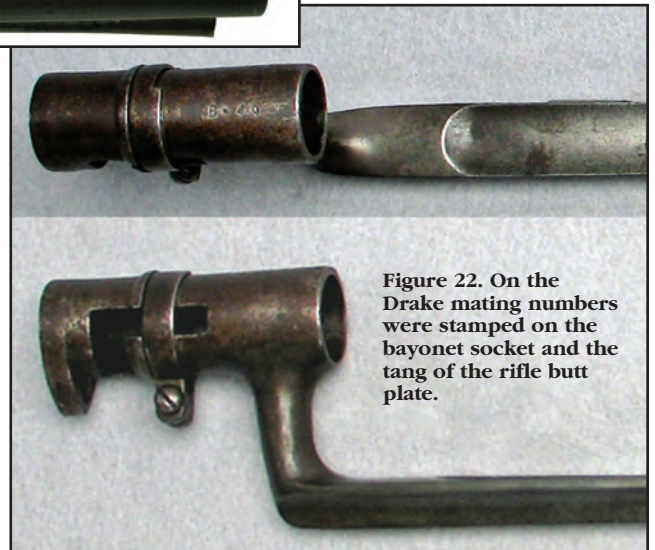


Figure 22. On the Drake mating numbers were stamped on the bayonet socket and the tang of the rifle butt plate.

socket. Assembly numbers were stamped on major parts of the rifle during the alteration process (Figures 18 and 19).

State of Massachusetts Alterations

Massachusetts contracted with A. J. Drake to alter their allotment of 1841 rifles. The Drake alteration consisted of installing a new rear sight that was similar to the Model 1858 short US rear sight, dovetailing and brazing a rifle musket style front sight that would also act as a bayonet lug, and providing a socket bayonet that would fit the original diameter of the rifle muzzle. The bayonets were stamped with an alphanumeric matching the stamp on the rifle butt plate. The regiment was also stamped on the butt plate. Drake-altered rifles remained in .54 caliber and were issued to the Massachusetts 46th and 51st Infantry Regiments (Figures 20, 21 and 22).



Figure 23. *Top:* Federal Linder alteration. *Bottom:* Linder alteration for Massachusetts.



Figure 24. Linder alterations with breech open. Federal alteration on bottom.

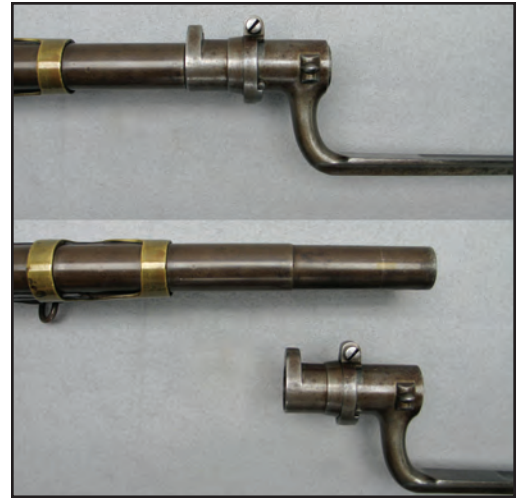


Figure 25. The New Jersey Alteration is unique. The front sight is on the socket bayonet.



Figure 26. New Jersey socket bayonet showing placement of front sight.

Lindner Alterations

Massachusetts contracted with Enos Allen to alter 100⁶ of the Drake altered rifles to the Lindner breech loading system. The metal supporting frame on these rifles was iron. These rifles accepted the Drake style socket bayonet.

Two hundred model 1841 rifles that had been transferred from Massachusetts to General Butler's federal troops were also altered to the Lindner system. The supporting framework was brass. The rifles were fitted with a detachable peep sight, a rifle musket style front sight, and accepted a Drake style socket bayonet (Figures 23 and 24).

New Jersey Alteration

The method used by New Jersey was simple and unique. The muzzle of the rifle was turned to accept a socket

bayonet. The bayonet appeared to be European and the front sight was mounted on the bayonet socket. Aimed fire required that the bayonet be mounted on the rifle. The rifle remained in .54 caliber (Figures 25 and 26).

The model 1841 may be the most modified rifle ever issued in the U.S. There were numerous bayonet alterations—some simple and well thought out, and others that leave one wondering why they were designed the way they were. There are several other known alterations not included in the authors' collections as well as a number of Confederate alterations to pique collectors' interest.

The 1841 rifle was much sought after for its beauty and its reputation as an accurate hard-hitting rifle. Collectors are fortunate to have so many of these beautiful service rifles to study and collect.