

# THE RICHMOND ARMORY

by Benjamin P. Michel

## HISTORY

Any study of the arms produced at Richmond by the State of Virginia and the Confederate States of America must begin at the Harpers Ferry Armory, the source of Richmond's machinery and, hence, the types of arms produced.

Harpers Ferry, which apparently began to produce arms about 1800, ended production in 1861 when Lieutenant Roger Jones in command of the small body of U.S. troops there, and in the face of advancing Virginia forces, set fire to the arsenal and the armory buildings to prevent their capture. He and his men apparently made this last ditch effort none too soon, starting the conflagration at nine or ten o'clock in the evening of April 18, 1861, only to have Captain Turner Ashby arrive with his troops by midnight. The Virginians, aided by local citizenry and employees of the Armory, worked to put out the fire but were unable to save some 16,000 to 17,000 finished rifles and muskets which were destroyed along with the arsenal building and the carpentry shop. The rifle manufactory, located some distance away from the other buildings, apparently escaped damage. These efforts to save the armory and its equipment were, incidentally, directed to an extent by the Master Armorer, Armistead M. Ball. Although the buildings were burned, a large portion of the gunmaking machinery, material and several thousands of unfinished arms were preserved.

It should be noted that I refer to Virginia troops in the foregoing because the force which arrived at Harpers Ferry that April night had not yet become a part of the Confederate army, Virginia having seceded from the Union only the day previous, April 17, 1861.

The machinery and the material so preserved from destruction were gradually boxed and then sent to Winchester and from there by wagon to Strasburg where they were placed on the Manassas Gap Railroad for the final leg of the journey to Richmond. This transfer was apparently completed about June 18, although some weapons were assembled before the transfer to Richmond was accomplished. On April 22, 1861, General Harper reported that the rifle factory was "turning out several hundred minnie muskets" and, of significance in connection with those arms first produced at Richmond, that there were components to fit up seven to ten thousand stand. On April 24, 1861, Martin E. Price, who was in charge of the removal of the Harpers Ferry machinery to Richmond advised General Harper that, after examination of the arms, burned, he could make servicable guns of them and also notably, as regards subsequent production, that



"the stocks are here and can be made up." A report from Jackson to Lee dated May 7, 1861, advised that "Mr. Buckhart, who is in charge of the rifle factory, reports that he can furnish fifteen hundred rifle muskets in thirty days."

As the material from Harpers Ferry began to arrive in Richmond, it was temporarily set up in an old tobacco warehouse under the supervision of Lt. Col. James H. Burton. At this warehouse, the parts captured at Harpers Ferry were assembled into finished muskets, until the old Virginia Manufactory buildings could be refurbished to receive the equipment to begin production there.

It is perhaps ironic that the death of the Harpers Ferry Armory meant the rebirth of the Virginia Manufactory. The Virginia Manufactory, which had last produced arms in 1821, became the Virginia State Armory and then the Richmond Armory, the new home for the equipment taken from Harpers Ferry. Using this equipment, Virginia continued to produce arms for its own use until August 23, 1861, when the Armory was officially turned over to the Confederate Government, though remaining under the command of Colonel Burton. He directed its operations until ordered to Macon, Georgia, in the summer of 1862. Burton's successor at Richmond was Captain Sloan who was in turn replaced by Captain W. S. Downer, formerly of Harpers Ferry. The last commanding officer was Major F. F. Jones.

While August, 1861, is generally given as the date of the transfer of control of the Armory from Virginia to the Confederacy, the formal correspondence reflecting the transfer, which was exchanged between George W. Munford, Secretary of the Commonwealth of Virginia and Jefferson Davis, President of the Confederate States of America, is dated one month earlier. In Munford's letter to Davis of July 12, 1861, he advises, in the name of the Governor of Virginia, that he has "... the honor to turn over and transfer to the

Government of the Confederate States, for use during the war, all the machinery and stores captured by the Virginia forces at Harpers Ferry, now in the possession of the State, reserving the right of property therein . . ." and ". . . the use of the Armory buildings at Richmond for the operation of said machinery." President Davis, responding on July 29, informed Governor John Letcher that the "operations . . . (of the Armory) are only such as this Department fully approves and will doubtless be faithfully and satisfactorily executed by the officers now charged with them . . ."

Also, there exists a letter from James H. Burton designating himself as Lieutenant Colonel, Virginia Ordnance, in Charge, the Confederate States Armory, dated July 20, 1861, to Major Josiah Gorgas, Chief of Ordnance, in which he discusses the feasibility of transferring the captured rifle machinery to Fayetteville, North Carolina, while retaining the rifle musket machinery at Richmond. Both the date and the letterhead obviously contrast with the accepted date of the transfer. In this letter Colonel Burton takes exception to the separation of the equipment. He concludes that, in certain cases, even dispatching an ostensibly duplicate piece of machinery could have the effect of reducing the product of the Armory to one half what it could otherwise turn out. His admonitions that the machinery, described as being 'now in this armory' should be preserved as a 'whole system in its present entirety,' apparently went unheeded, however, the rifle machinery being dispatched to Fayetteville in 1862. Burton estimated in this same letter that, undivided, the equipment could be used to produce 15,000 arms per annum.

Whether the result of this separation of the equipment, the problems of trying to manufacture in a war zone or, for whatever reason, production never reached Burton's expectations. The production report of January 1, 1864, indicates that for the preceding two years a total of 23,381 rifle muskets were produced at Richmond of the Model 1855, along with 1,225 muskets Model 1842 (probably assembled from captured parts) and 2,764 rifle carbines. (Note the use of the term *rifle* carbines.) On December 21, 1864, General Gorgas

reported to the Confederate Secretary of War, James A. Sedden, that as of the year ending November 30, 1864, some 12,778 more rifles and 5,354 carbines had been manufactured and made up of parts derived from capture. Because of this habit of mixing the returns of manufactured and assembled arms, it is difficult to accurately determine the total arms actually produced at Richmond. It may be roughly assumed that the total rifle musket production was between 30,000 to 35,000 and carbine production somewhat less than 10,000, perhaps as little as half that, assuming the 1864 returns for carbines must include a significant number of federal weapons and the Richmond Sharps as well. Gorgas estimated in this last report that the Armory was capable of producing 25,000 arms per year, using some 450 workmen. The expectation never, of course, could be realized, the city of Richmond being evacuated in 1865, and the buildings comprising the Armory being gutted by fire on the morning of April 3 of that year.

That the Confederacy hoped to renew production at some other location is evidenced by the fact that when the buildings burned, the contents had apparently already been removed. The final postscript appears in Major General Wright's reports from Danville, Virginia, of April 27, 1865, advising of the capture of 500 prisoners, 4 locomotives, 67 box and platform cars, the iron work for 10,000 stand of arms, and last 'the machinery for manufacturing muskets, etc., taken from Harpers Ferry and subsequently from Richmond.'

## ARMS PRODUCED

The Richmond Armory produced four categories of weapons, the rifle musket, the rifle, the carbine and the musketoon.

## THE RIFLE MUSKET

As with all the arms produced at Richmond, the rifle musket (figure 1) has its origin in the Model 1855 rifle musket produced at Harpers Ferry. As that standard 1855 is too well known to require

Figure 1. Richmond Rifle Musket.

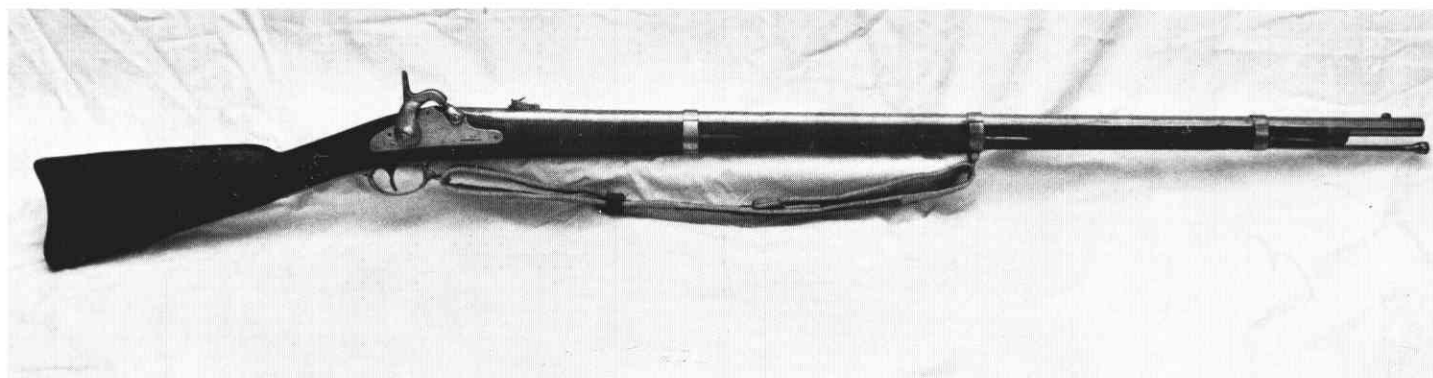


Figure 2. 1861 dated lock, marked RICHMOND, VA.



Figure 3. 1862 dated lock, marked CS. RICHMOND, VA.

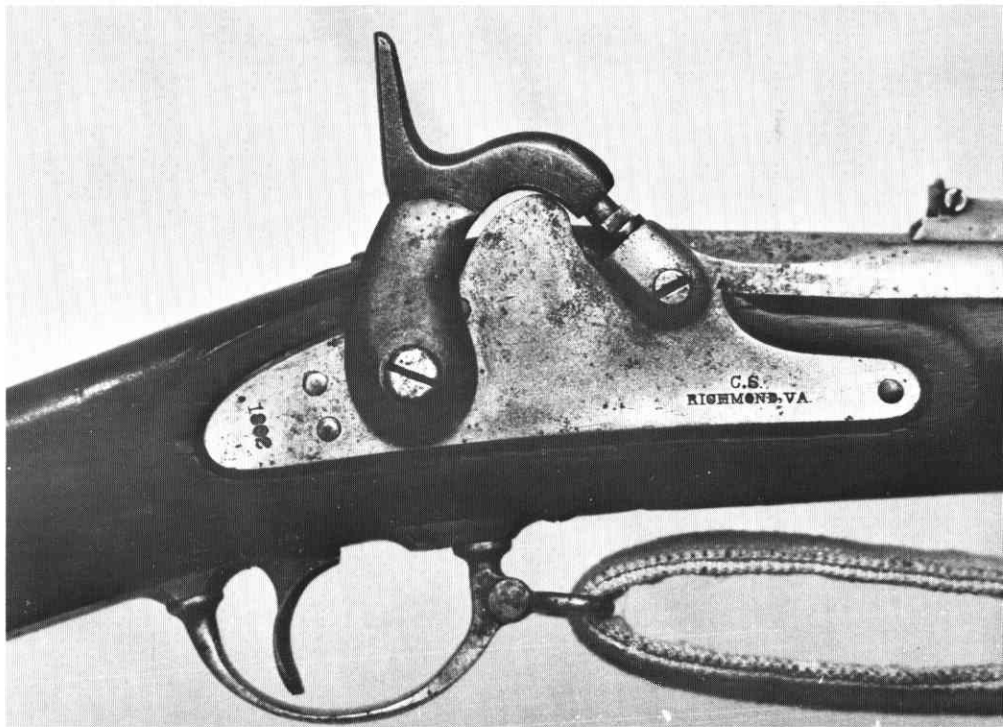
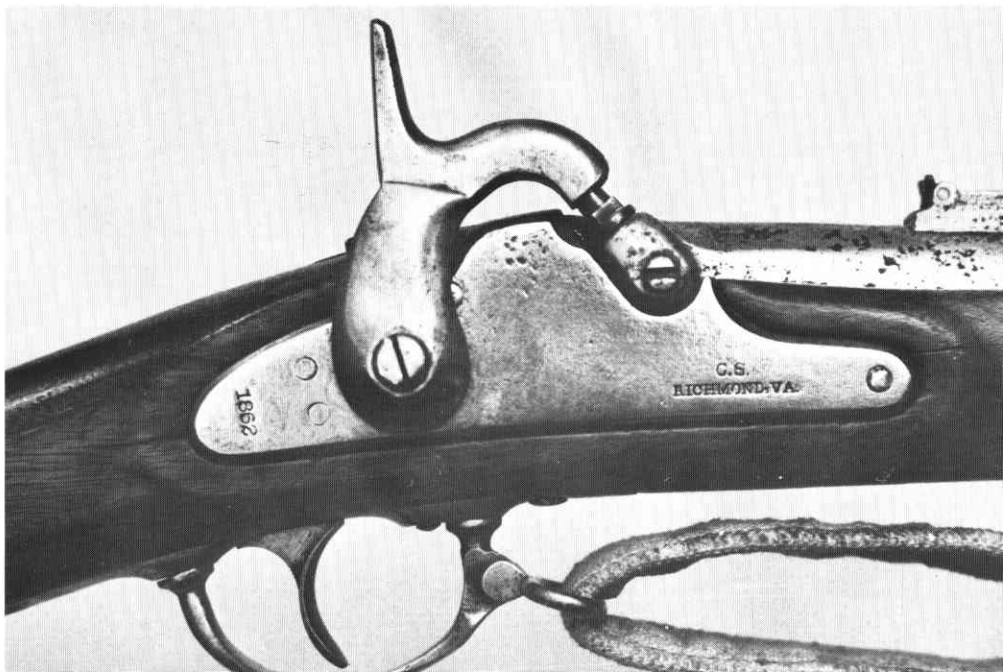


Figure 4. 1862 lockplate, later type.



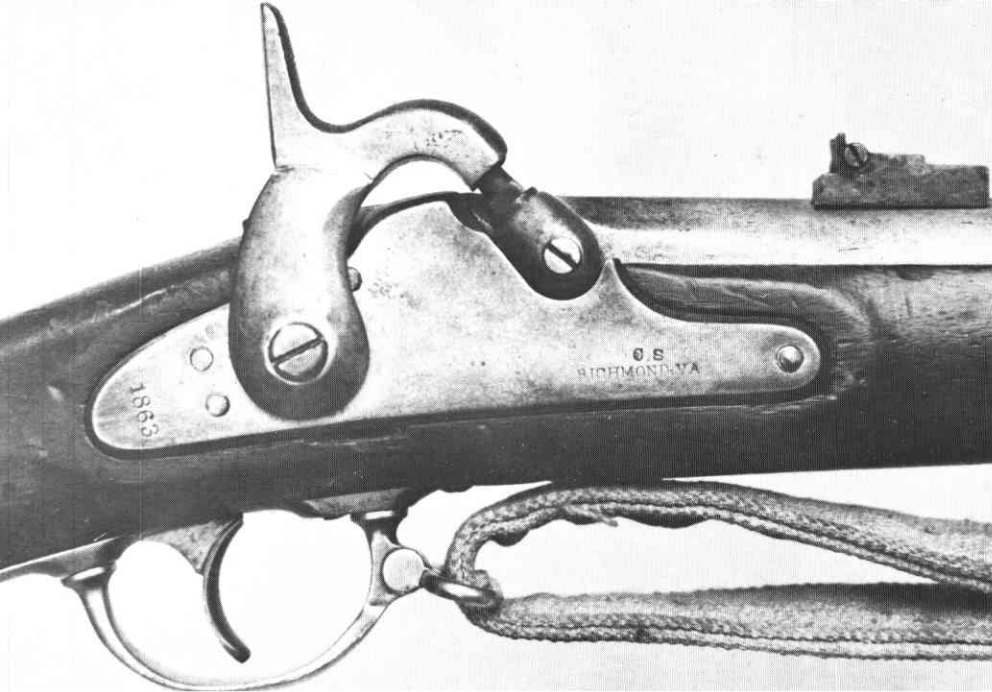


Figure 5. 1863 dated lock.

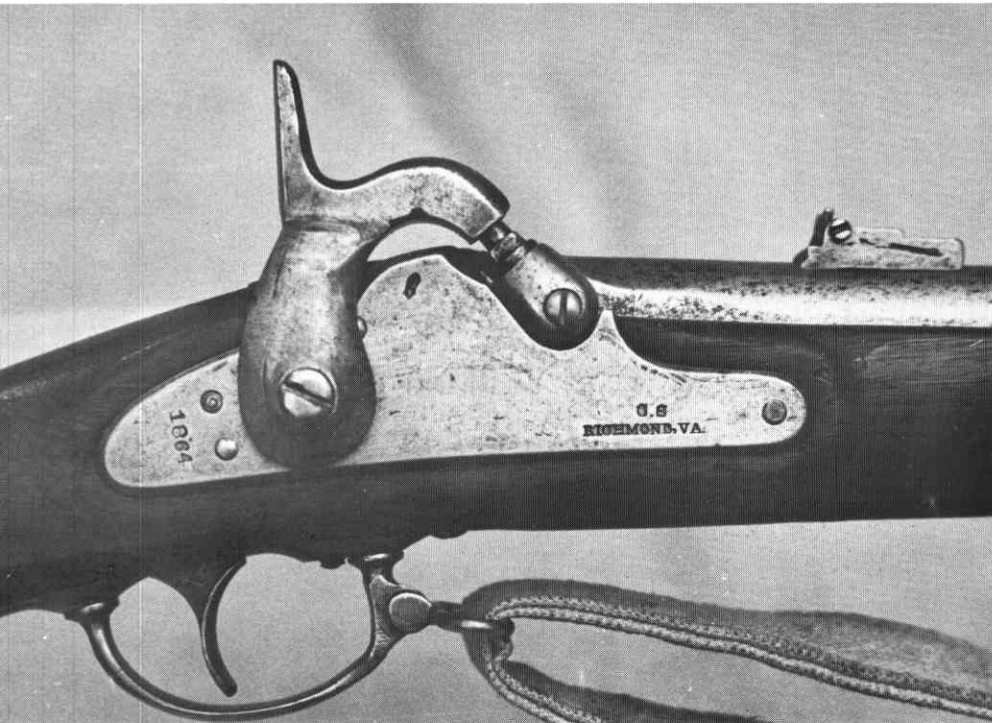


Figure 6. 1864 dated lock.

description, I shall concentrate on the contrasts to be found between it and the weapons produced on the same machinery in Richmond.

The first weapons produced after the machinery arrived at Richmond probably used the stocks, mountings and even barrels captured at Harpers Ferry. I say probably as there is some variety to be found in the few existing specimens. Most seem to have 1855 stocks and bands, iron buttplates either unmarked or with the U.S. Stamp on the tang and either brass or iron nose caps. The distinctive lockplate is, of course, 1855 in outline but has not been milled for the Maynard primer. The date 1861 appears to the rear of the hammer and the words "Richmond, Va." in block letters at the front of the plate. (Figure 2.)

Examples of the rifle musket dated 1862 show the takeover of the Armory by the Confederate Government and the exhaustion of the spare parts captured at Harpers Ferry. The lockplate remains the same shape as the 1861, the high hump rising up to follow the bottom curve of the hammer, but now marked CS above the Richmond stamp and, of course, dated 1862 behind the hammer (Figure 3). Most of these specimens have Confederate-made stocks, barrels, bands, bronze buttplates and nose caps. The 'Confederate' wood can be distinguished from the 1855 stocks or 1861 Springfield and contract stocks by examining the lock cavity. The 1855 pattern stock (Figure 7 top) has the wood cut at an angle parallel to the slant of the nipple bolster and is slotted diagonally

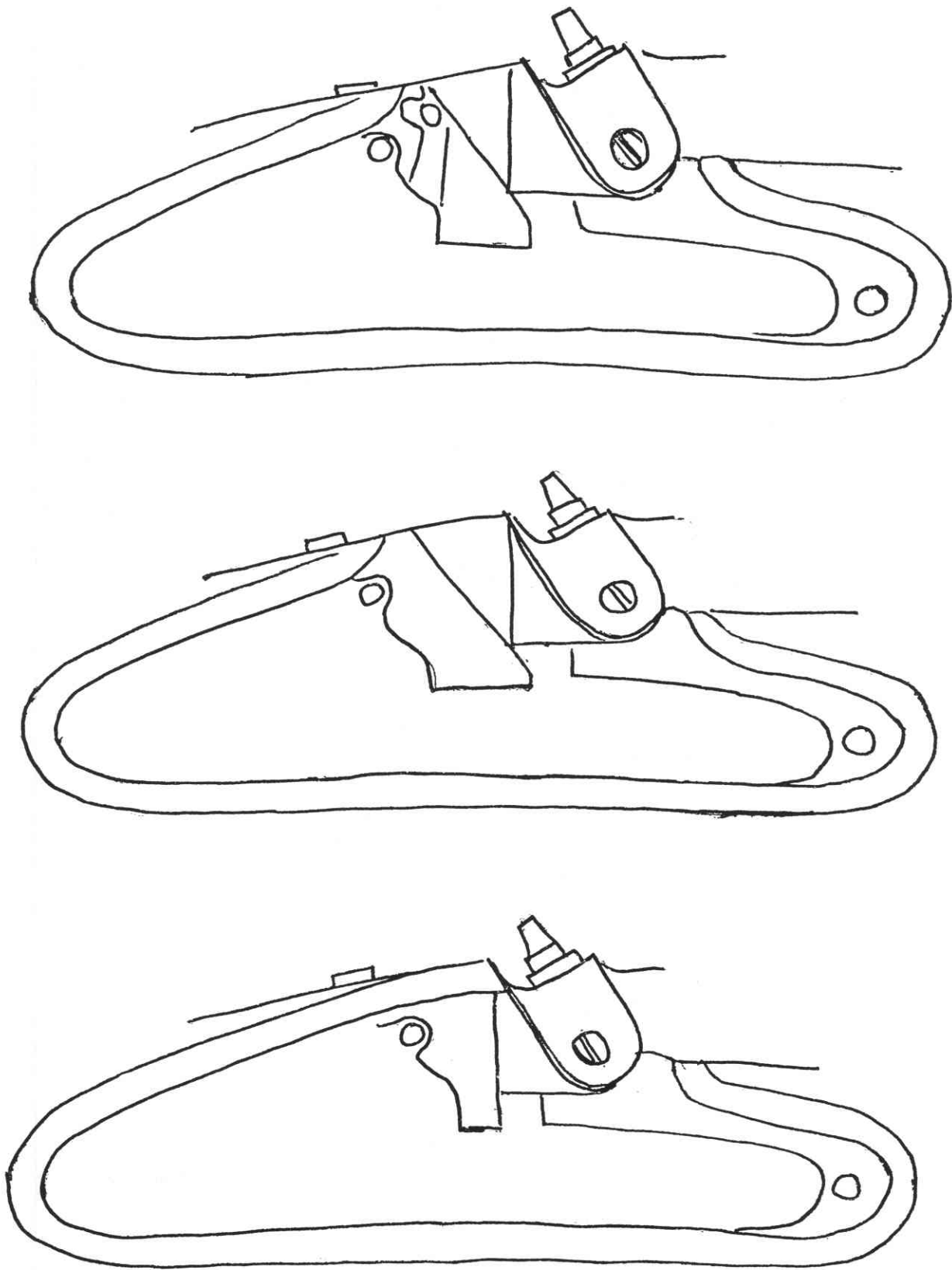


Figure 7. Stocks at lock cavity.  
Top - 1855 pattern  
Middle - Richmond pattern  
Lower - 1861 U.S. pattern



for the arm which activated the tape-pushing device in the Maynard lockplate. Confederate wood is cut on the same diagonal but is not, of course, slotted for this arm (Figure 7 middle). The 1861 U.S. pattern arms have wood cut on the perpendicular and parallel to the rear of the barrel (Figure 7 lower). I mention this because of the number of 1861 stocks containing Richmond lockplates, unlikely to be wartime assemblies and more apt to be recent concoctions with profit in mind. Some very few and usually early 1861 or 1862 Richmonds have the letters 'JB' stamped to the rear of the trigger guard plate. Otherwise, the stocks are devoid of the inspector's marks generally seen on the wood flat opposite the lockplate. The Richmond barrel is distinguishable from the U.S. barrel by the presence of a small cut-out to the front of the rear sight slot - this to accept a small teat in the bottom of the 1855 type two leaf rear sight and to prevent the sight from shifting from side to side on the barrel. This same cut-out will be found on 1855 barrels, of course, but these may be distinguished by the respective dates atop the breech. The U.S. Model 1861 is not cut out for this teat. The barrel has the Harpers Ferry type proofs - V, P, and eagle head - on the top left of the breech. Confederate bands resemble the standard U.S. type with the 'U' stamp to indicate how they are to go on the barrel to face the band springs, but they may be identified by the fact that the 'U' generally does not neatly face the spring as on U.S. arms—sometimes the 'U' stamping will even be found facing in the wrong direction. The bronze buttplate is unmarked. The noscap, also bronze or brass, can be distinguished from the U.S. noscap as it is held to the stock by a screw rather than a rivet as on the 1855's. Some of the earliest pieces (1861 and 1862) have swelled ramrods like the U.S. M1855 and M1861, the wood cut out between the front band and the

noscap to accommodate the swell. These stocks and ramrods probably further evidence the continued use of Harpers Ferry material. Later pieces have straight ramrods with the same tulip head, lacking the swell but retaining the thin dimensions of the rod itself. The ramrod superficially resembles a U.S. 1863 ramrod which is actually so much thicker that it will not even fit the channel in the wood of a Richmond, eliminating that as a substitute.

Presumably the high hump lockplates described above in use in 1861 and 1862 were leftovers from Harpers Ferry, perhaps unmilled blanks. I say this because at some point in 1862 the supply of these too were either exhausted or else a decision was made to build a lockplate of different design, known now to collectors as the 'low hump.' The 1862 low hump (figure 3) is an all Richmond-made weapon, and after this all substituted U.S. parts on 'Richmonds' should be regarded as suspect. In the 'low hump' the lockplate retains an upward curving configuration forward of the hammer but now only to the height of the wood stock behind the bolster. The rest of the piece is now pure Confederate from buttplate to noscap.

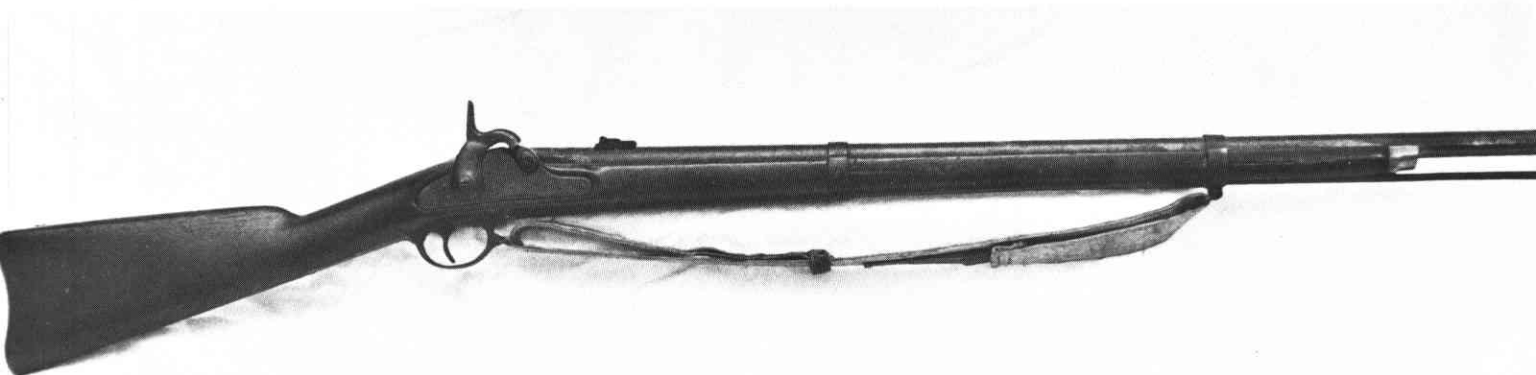
Some few specimens exist which have been called the 'medium hump.' They were made by grinding off the tops of high-hump plates to the level of the wood, as in the design of the low hump. All appear to be a modification of a high-hump plate rather than a new casting like the low hump.

Production of this same rifle musket continued unchanged through 1863 (Figure 4) and 1864 (Figure 5), the only distinguishable difference being the changes in the dating on the lockplate.

#### THE RIFLE

In 1864 a significant change was introduced in

Figure 8. A dated 1864 rifle.



the design of the rifle musket, modifying it to rifle length (figure 8). I have heard of the documentation for this change but have not personally seen or read it. The change is the reduction in barrel length to 33 inches and the reduction of the stock to a two-banded model, though retaining the same spacing between the rear two bands, eliminating the front band and moving the brass nosecap to a position five inches to the rear of the muzzle. The front sight has also been changed to a larger base, like the carbine front sight to be discussed later, which, incidentally, will not, to my knowledge, accept a known bayonet. I have owned two exactly similar specimens of this type and examined one other, each cut or made to precisely 33 inches and all dimensions precisely alike. As I say, I have no documentation to present, but it is my understanding that there exists a directive, dated in 1864, that in the future all rifles to be produced will be of 33-inch barrel length, deemed as effective as the 40-inch barrel on the original model. I might also note that none of the specimens on close examination showed any evidence that the barrels were ever any longer or, if cut, were cut 'of the period.'

You will note that I have made no reference to arms produced in 1865. I know of no example of such a weapon. Fuller and Steuart show an 1865 dated lockplate, but close examination of the photo will show the numerals comprising the date to be apparently individually stamped unlike those of the other plates. Those of you who were subscribers to the October, 1974 Arms Gazette may recall our member, Ralph Arnold's observations on the 1847 Springfield musketoon lockplate in the 1841 Mississippi in the Fuller collection. It would appear that even our most eminent collectors were not above creating an example of a model which was believed to exist but for which no specimen could be found.

#### THE CARBINE

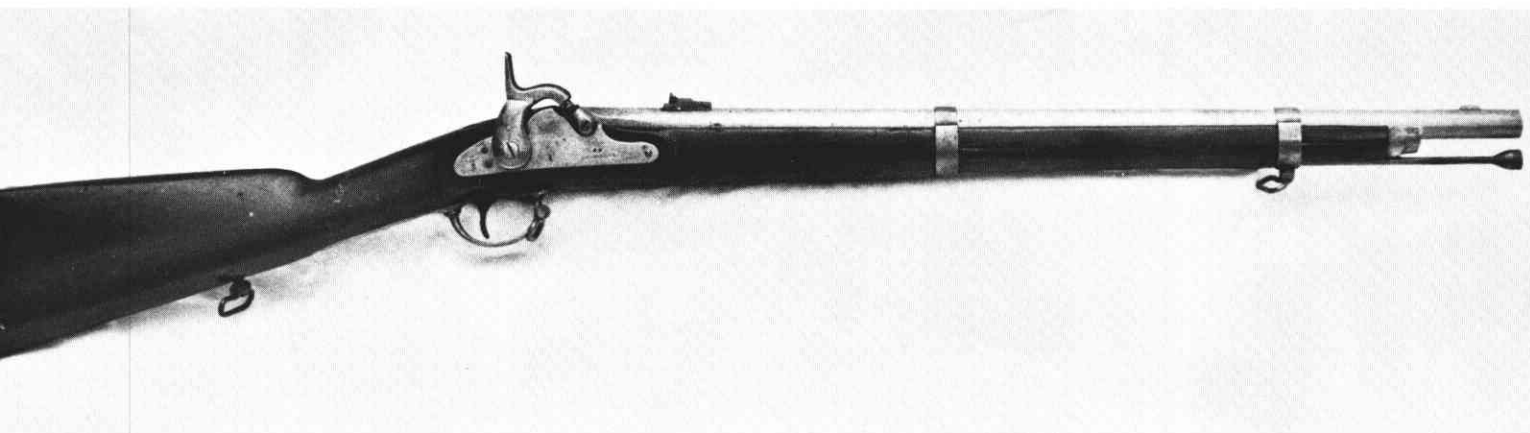
The Carbine production of the Richmond Armory has no exact parallel in the U.S. pattern of arms, so a brief and basic description is in order.

The specimens are all based again on the 1855 rifle musket, two banded, with a 25-inch barrel (figure 9). The buttplate is bronze like the rifle musket and the lockplates are the same as those for the rifle musket. The barrel has the 1855 type two leaf sight and is also cut-out for the teat as quoted previously. The front sight is larger than that of the rifle musket, the base being one-half inch in length rather than five-sixteenth's inches as in the case of the rifle muskets. The rear band is the same distance from the front of the lockplate (7 $\frac{1}{8}$  inches) as on the rifle musket but the front band (the same as the middle band on a rifle musket) is closer, 8 $\frac{1}{4}$  inches from the rear band. The brass nosecap is the same as on the rifle musket. The trigger guard and the front band carry sling swivels as on the rifle musket but there is, in addition, a third sling swivel mounted on a long stud which screws into the bottom of the stock behind the trigger guard plate. The carbines are .58 caliber like the rifles. The carbines which I have observed are all dated 1863 and 1864 on the lockplates. Earlier dated specimens may exist.

#### THE MUSKETOON

Fuller and Steuart show a musketoon which is described as having been designed specially for naval usage, to permit easier handling with a barrel cut to 30-inch length, and for more rapid loading on ship service where long range and accuracy were not so important, being smooth bored to .62 caliber. The conclusion that it was for naval use is, to my knowledge, undocumented. I respectfully question that conclusion as being the sole plausible explanation for this arm and will offer an alternative suggestion as my description progresses. The five specimens of this weapon with which I am familiar, two in Battle Abbey from the Steuart collection, two in other private collections, and my own (figure 10) are all alike in configuration and all have the same distinctive and significant differences from other Richmond-made arms. First the 30-inch barrels are definitely not just cut rifle barrels. They are carefully tapered

Figure 9. A carbine.



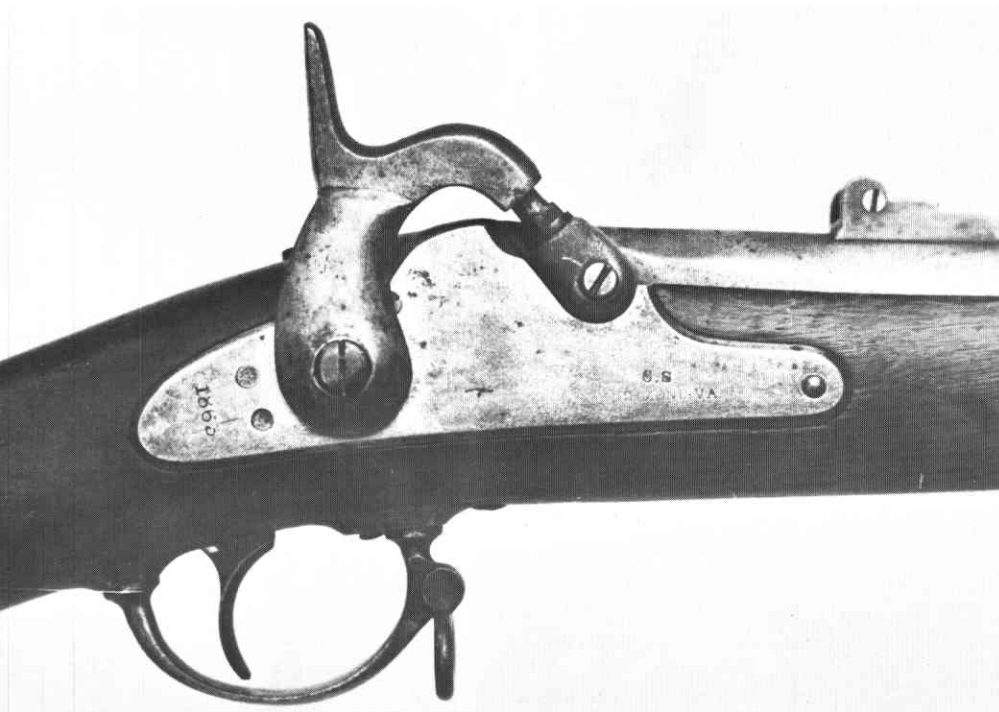


Figure 10 (top), 11 (middle),  
12 (lower) of a musketoon.





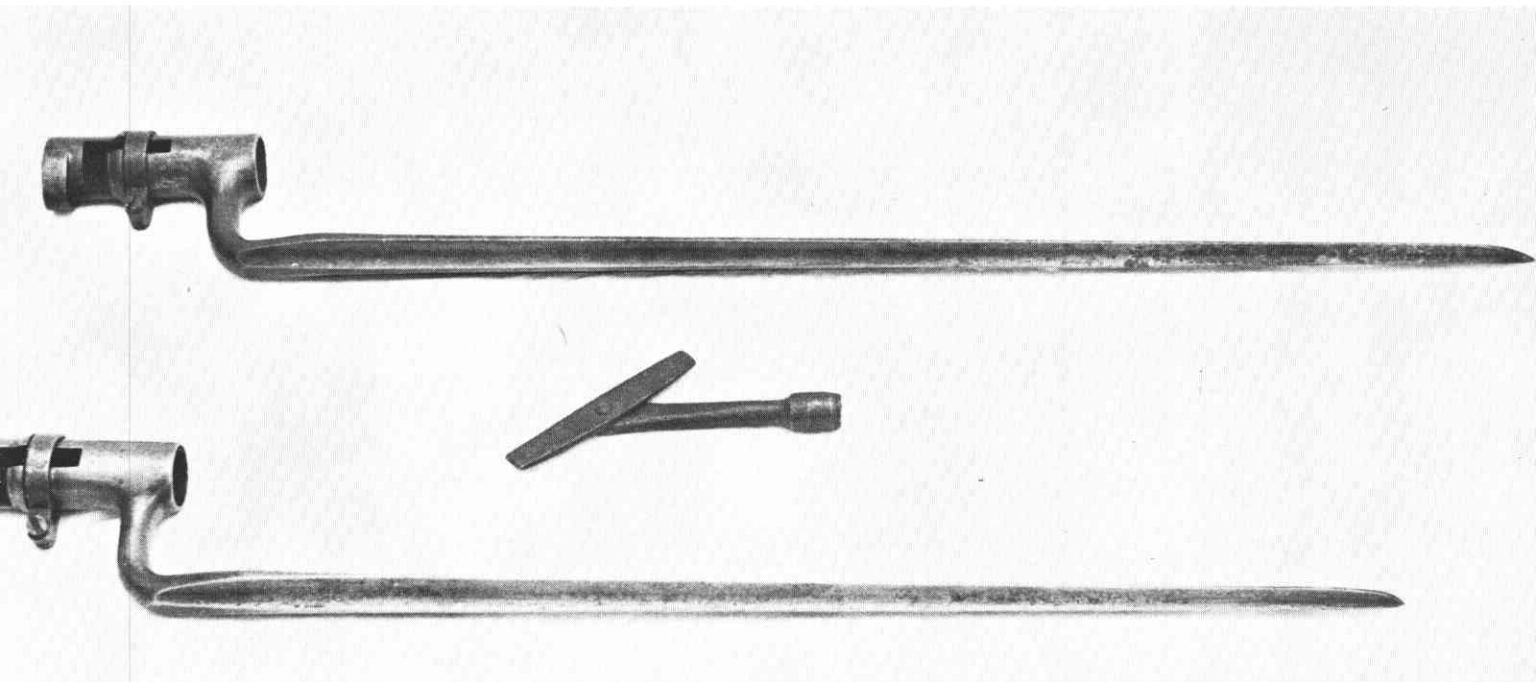
from breech to muzzle so that at the muzzle they accept a standard .58 caliber socket bayonet locking on the front sight. This, of course, would not be possible if a rifle musket barrel were merely cut at that length. The stock is also unique as it fits this barrel exactly which would not be the case if an ordinary rifle stock were used. Even more readily notable is the configuration of the stock shaping around the lockplate which does not have the usual beveled flats in the wood surrounding the plate but rather slopes away from the plate much like the U.S. 1873 45/70 rifles and carbines (Figure 11). The same is true of the wood on the left side opposite the lock, sloping down to the trigger guard and up toward the barrel, greatly reducing the usual large flat on this side (Figure 12). The lockplates on the five examples vary from a darkly rusted but apparently unmarked high-hump plate, to a high hump marked only Richmond, Va., to two dated 1863 and one dated 1864 with the CS over Richmond, Va. All have iron buttplates, some have brass nosecaps, others iron. They are all two-banded, the rear band and forward band being spaced the same distance from the lockplate and from each other as the rifle musket, with sling swivels on the trigger guard and the forward band like the other models. My conjecture that these may have been intended for other than naval usage is based upon the high percentage of specimens with very early to 1863 type lockplates, the special configuration of the wood around the lockplate, the absence of many specimens of the usual carbines dated before 1863, and the reference noted previously to rifle carbines in the production reports. My speculation is that these arms may

actually be the earliest form of cavalry arm, predating the more familiar 25-inch barrel specimens described in the foregoing section. They are quite similar in design to the Model 1847 U.S. Cavalry Musketoon, but perhaps of the greatest significance is the special design of the wood around the lock. The removal of the flats on both sides streamlines these arms, of obvious advantage for mounted usage and of only questionable import for use aboard ship. It is unlikely the Confederacy would be simultaneously producing two types of carbines, especially as this one required more effort to produce than the standard carbine. It is possible, therefore, that the 'musketoon' represents the first design for use by mounted troops, in production until 1863 when the shorter rifled version was substituted as easier to produce and perhaps more efficient for distant skirmishing with union troops armed with more far-ranging and breech-loading carbines. The presence of one specimen with an 1864 date is easily explained by the possible substitution of the lockplate for an earlier one damaged in service. It would also seem strange to design a piece for naval usage and give it an iron buttplate, when even the regular rifle muskets have bronze ones. Similarly, the sling swivels would also seem superfluous for naval usage. I offer this for consideration, and in the hope that further study may provide the answer as in the case of the short rifle muskets.

#### BAYONETS

In the Burton letter of July 20 referred to above,

Figure 13. Bayonets and gun tool.



he makes mention of the fact that there was apparently taken, along with the other machinery, the 'set of machines for milling bayonets.' The appearance of that bayonet as produced at Richmond continues to be debated. It is only logical to assume that, being made on the machinery that produced bayonets for the Model 1855, it should conform in all respects, save perhaps in the U.S. stamp, to the standard bayonet for this arm. Despite the 'logic' of this, the only textual attempt to identify this bayonet, to my knowledge, appears in Hardin's study of *The American Bayonet*. He describes the bayonet as being only different from the 1855 in blade length—15¼ inches for the Richmond as against 18 inches for the 1855. Strangely though, the three Confederate Scabbards shown are all for an 18-inch blade. Hardin explains that this was done so that they would be long enough to accept an 1855 blade should one be available in the field.

Accepting that the Richmond Armory had the machinery to produce copies of the M1855, why should there be a difference in blade length? I offer the following as a possible solution. The two bayonets shown (figure 13) each roughly conform to the U.S. M1855, one the type described by Hardin with a 15¼-inch blade, the other having a blade of 18 inches, the same as the U.S. M1855. Neither ever bore the U.S. stamp, and each, on close inspection, shows a marked crudeness in finish compared to the U.S. bayonet. I believe that the longer bayonet was the standard for rifle muskets produced at Richmond and the shorter intended for the musketoons. It may be noted that its length is about the same (given ½ inch) as that for the U.S. Musketoon Model 1847 which Hardin describes at 15½ inches long. This further associates the Richmond musketoon with the U.S. M1847 musketoon as discussed earlier. That this

association between the short bayonet and the musketoon is not pure conjecture is the fact that one of the five examples of this musketoon known to me was recovered many years ago with this exact length bayonet fitted to it. Admittedly, this is a dangerous means of drawing a conclusion, but until some more substantial evidence appears, it is at least, I hope, a reasonable conclusion.

## GUN TOOL

Generally overlooked by collectors, but indispensable to the soldier, is the tool for the disassembly of the weapon and especially for the removal of the nipple in a percussion piece. The tool illustrated in figure 13 is the one which has become generally accepted as having been made at Richmond for use with the weapons produced there. It is somewhat different from the U.S. implements, the nipple wrench being contained in a socket at the end rather than in the form of an open jaw and the double screwdriver being affixed by a rivet at the center, forming a crosspiece. It is, though effective for its purposes, quite crudely made, all hand forged and may well have been obtained on contract from a blacksmith.

## CONCLUSION

I thank you for your kind attention. I can only express my gratitude and profound respect for those more eminent writers in this field whose efforts have made my task so much easier. Where I have disagreed with some of their conclusions or questioned a particular specimen, I have done so only to try to advance the study of the field and with regret for having to do so, rather than for any personal satisfaction. Nothing could please me more to be found wrong in my own observations, if the result was greater knowledge.

