

Harper's Ferry Sword Bayonets Model 1841 and Model 1855

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During the 1850's, warfare in Europe changed; armies could no longer march face to face and fire volleys from smooth bore muskets. The French Rifle a'Tige and the Pattern 1853 Enfield Rifled musket, fielded in European conflicts, demonstrated that the rifled barrel and conical bullet were superior to the smooth bore musket in both range and accuracy. New small arms technology had drastically changed the face of war.

A letter written by J. Pierce Jr. in Portland, Maine, in May 1854, to the Secretary of War, Jefferson Davis, could have been the impetus for the Ordnance Board to formalize a new series of rifled arms utilizing the "Minie" -type bullet. The Board's report of June 26, 1855 included recommendations for the alteration of the 1841 Rifle and the new 1855 Rifle, both of which were to be fitted with sword bayonets.

Portland, Maine
May 30th 1854.
Hon. Jefferson Davis
U.S. Sec of War:

Sir,

Permit me respectfully to ask your attention to the letter regarding experiments with the Minie' Rifle, Published in a newspaper I send herewith—the N.Y. Tribune of Dec 16, 1853, which paper, however false in political statements, may be correct in these details. I take this liberty, Sir, from a strong conviction that it would be of very great advantage to our army if one or two regiments were provided with these weapons; and having no doubt that the contemplation of the experiment may have been seriously held in your mind, believe as a mere citizen, in hope of forwarding some reasons for the measure, possibly unnoticed by you before, I may communicate this statement without your deeming it obtrusive or ridiculous even if it is unimportant—The value of the Minie' Rifle for military purposes appears established in England and France by these facts . . .

I remain Sir, with great respect,

Your obedient servant,

J. Pierce Jr.¹

After extensive testing of arms and projectiles, a projectile design developed by James Burton, Master Armorer at Harper's Ferry Armory, was adapted by the Ordnance Board



in 1855. Work was underway at the national armories to develop the models for the 1855 pattern and to bring older arms up to this new standard. Smooth bore muskets were rifled and sighted. The 1841 Rifle was adapted for the sword bayonet and new sights were affixed to the rifle to take advantage of the increased range and accuracy of the Burton design Minie' bullet.

Albert Harden, in his early book, *The American Bayonet*, classified the sword bayonets used on the 1841 Rifle into the three categories: Type I Ring Attachment, Type II Stud with Guide, and the Model 1855 Sword bayonet (stud without guide). The classifications are based on the method of attachments described in Figures 2 to 6.

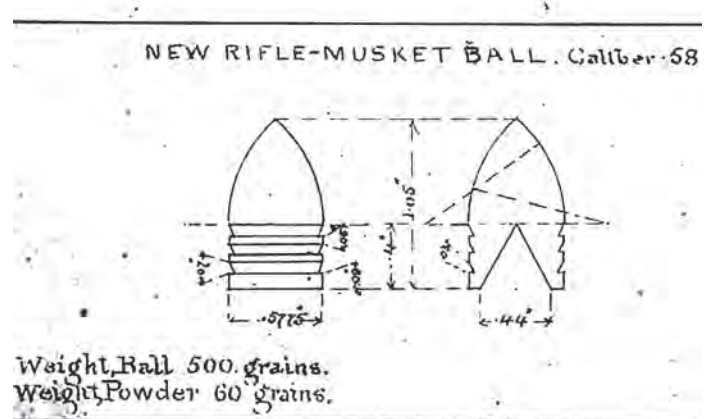


Figure 1. Burton's modified design for the Minie bullet (from Harper's Ferry NHP).



Figure 2. Left to right: ring attachment; stud with guide; stud without guide.



Figure 3. Left to right: ring attachment, stud with guide, stud without guide.

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 (Figures 7 and 8). The Type I bayonet uses 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 has a stopped fuller and the bayonet has an S guard. There are two 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 upper finial of the cross guard. The corresponding rifle was also stamped with matching mating numbers on the face of the

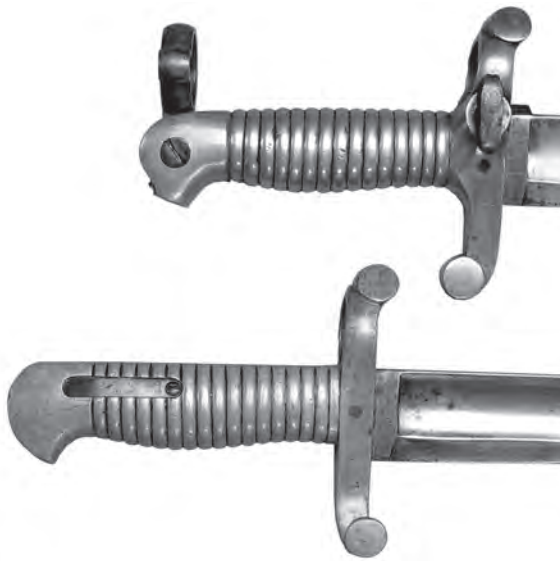


Figure 4. Top: S guard: upper finial points forward, lower finial points aft. Bottom: C guard, finials point forward to tip of blade.

muzzle and the tang of the butt plate. (Figures 9 and 10)

The rifle adapted for the Type I bayonet was fitted with a screw adjustment rear sight and the muzzle had two grooves cut at right angles to lock the bayonet in place. The caliber remained .54. Harper's Ferry correspondence (Clowe to Colonel Craig) indicates shipment of the Type I rifles and bayonets to the Saint Louis Arsenal for distribution.

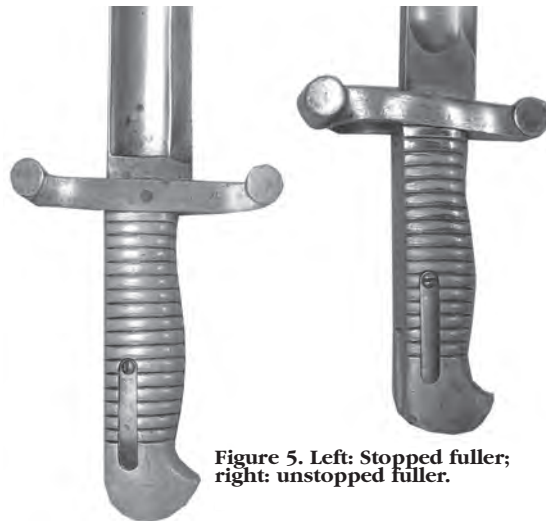


Figure 5. Left: Stopped fuller; right: unstopped fuller.



Figure 6. Markings on ricasso.

May 3rd

I respectfully inform you that the 200 long-range sights screw pattern, will be shipped to St. Louis Arsenal, today; and the 300 Rifles with Ring attachment, long range sights of same pattern, will be shipped to same arsenal on Monday next. . .

May 25th

I have the honor to inform you, as requested that 200 Rifles with Sword Bayonet, Ring attachment and screw sights for long ranges, with appendages, will be issued tomorrow to St. Louis Arsenal, under Order for Supplies No 180. dated 24th May. Inst.²

In 1855, the Regiment of Mounted Riflemen was refitted with new uniforms and arms at Jefferson Barracks in St. Louis (Figure 11). Their newly issued dark blue jacket had a high hiked collar trimmed with emerald green lace. The

dark blue cap had green piping with a green pompom, and the trousers were sky blue. It is likely the Regiment was issued the Type I Model 1841 Rifle. Unfortunately, the Type I bayonet attaching ring and key lock proved to be complex, fragile, and costly—all possible reasons that so few rifles were fitted with the Type I bayonet. Clowe reported the cost of fabrication to Colonel Craig:

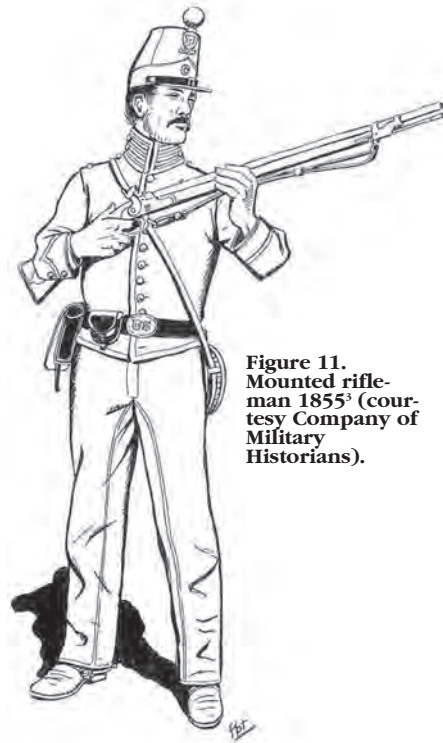


Figure 11. Mounted rifleman 1855³ (courtesy Company of Military Historians).

The cost of fabricating Sword Bayonet with Ring [including labor & materials] \$4.25

The cost of fabrication Sword Bayonet with Stud attachment [labor & materials] \$3.87²

TYPE II STUD WITH GUIDE BAYONET

The Type II bayonet used a stud with guide on the barrel of the rifle to attach the bayonet to the barrel. The bayonet's hilt was cut to accept the one-inch stud guide. The blade has a stopped fuller, and all examples of the Type II bayonet have a C guard (Figures 12 and 13).

Harper's Ferry production reports for FY 1854 show that 1,639 sword bayonets for rifles, stud with guide attachment, and 40 musicians bayonets were produced at the armory. During FY 1855, 3,179 Type II 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

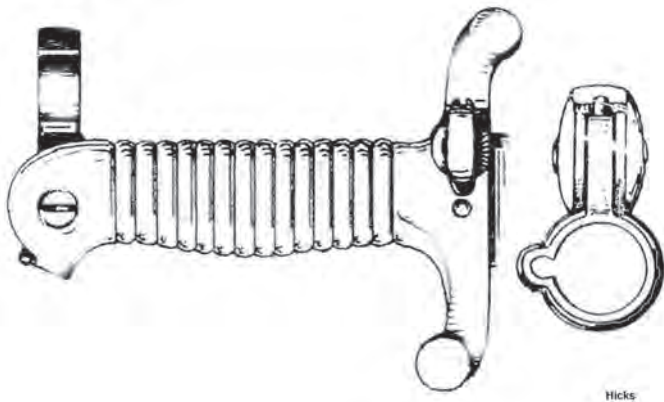


Figure 7. Ring attachment bayonet.

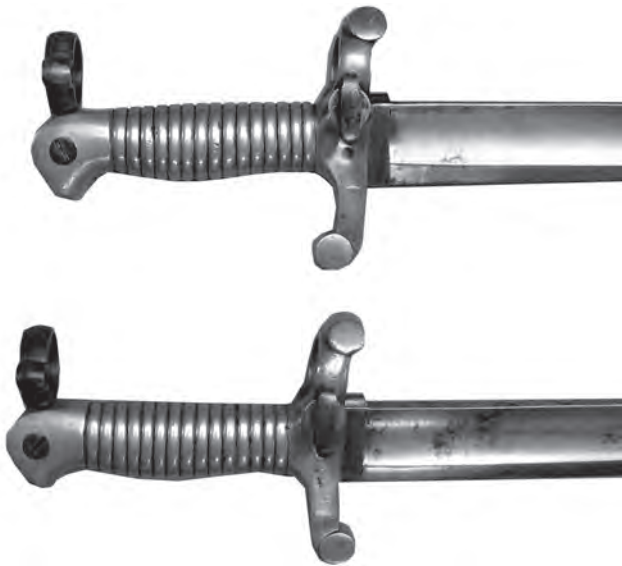


Figure 8. Top: Type I S guard. Bottom: Type I C guard.



Figure 9. Screw adjustment sight.



Figure 10. Alterations to muzzle to secure Type I bayonet.



Figure 12. Type II bayonet stud with guide.

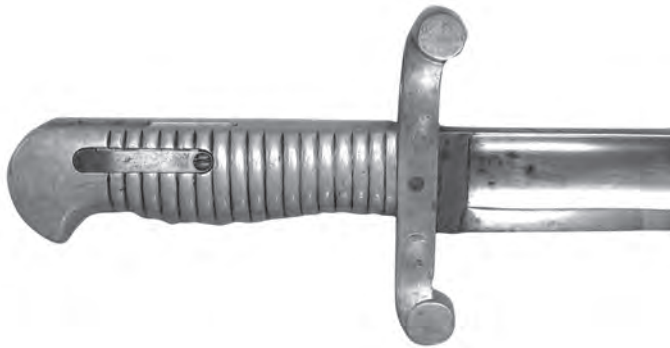


Figure 13. Type II bayonet showing stopped fuller and C guard.

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. The Type II alteration is found in both .54 and .58 caliber (Figures 14 and 15).

Some examples of early production Type II bayonets have an alphanumeric mating number stamped on the upper 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.

Clowe to Craig

March 13th 1855:

In consequence of the Rifles heretofore made at the Army without Bayonets, it was never deemed necessary to



Figure 14. Type II rifle soldered on rear sight.



Figure 15. Type II short front band, stud with guide, iron-tipped ramrod.

size the barrel at the muzzle with the exactness necessary for the interchange of bayonets of a particular uniform size—In making Sword Bayonets for the Rifles heretofore fabricated, the hilts have been made to fit the smallest sized muzzles, and Reamers have been prepared to facilitate the fitting when needful, one of which will be sent to St. Louis and the other to Carlisle Barracks, where these kind of Rifles have been sent, or will be sent.” The barrels are now being made of accurate diameters so that the Bayonets will interchange.²

The 1841 Rifles of this type, modified to accept the Type II bayonet and with soldered-on slide adjustment rear sights, were issued to the newly formed 9th and 10th infantry (Figures 16 and 17).

The 9th and 10th Infantry Regiments were new, raised in 1855, when the Army had been increased by two regiments of foot and two of horse. These were uniformed much like their older counterparts, but with slightly different equipment—knapsack straps and belts, and the musicians were buglers instead of drummers. Also they were rifle regiments.

Upon activation at Fort Monroe by Col. George Wright, the 9th Infantry was sent to the west coast where it held the frontier in the Cascade region, building forts and roads necessary for expansion and defense. Part of it served under the Colonel in the Spokane Expedition in 1858. Some of its troopers were detailed as escort of the Fort Benton—Walla Walla wagon road construction project.

The 10th Infantry, organized at the Carlisle Barracks in 1855, was the last of the new regiments

It received a rigid course of instruction, especially in marksmanship with much target practice while it was spread all over the West. Individual proficiency records were kept by which men were classified. The Tenth, with its specially uniformed men, was given the honor of leading the Utah Expedition of 1857. Two of her companies wore white shirts; three more wore gray ones with hats of the same color and two with black.



Figure 16. Alphanumeric mating numbers.



Figure 17. Mating number on tang of butt plate.

Another company wore blue shirts and black hats. It is said that this organization established the "double quick" as the marching time in the formation of the line in 1858.⁴

Records indicate that 40 Musicians Bayonets were fabricated in FY 1854. Fortunately, one example of the Type II Musicians Bayonet was available for study and permits dating the characteristics of the early production Type II bayonets.

DATE _____

"I have forwarded by Express today a small box containing a sword hilt, adjusted to a slide, for a Sword Bayonet for Musicians in conformity with your instructions of the 16th inst, differing only in a single point, which it was thought a sufficient justification for a departure from the letter of your instructions. The groove in this hilt is cut somewhat longer than is necessary for the length of the stud, in order to secure the Slide close down to the flats of the hilt. This is effected by a dovetail at the end of the groove, and a corresponding one in the end of the tongue of the slide."

June 20 1855

"I have to inform you that I have shipped this day by Adams & Co Express, 100 Rifles, with Sword Bayonets, adjusted with long range sights, with appendages complete except bullet mould, and 4 Musicians Swords in further execution of Order No 198 to Carlisle Barracks." (Figures 18-21)

The Musicians Bayonet was made so it could be used on Type II 1841 rifles; however, the slide would only fit the bayonets fabricated for musicians because the tongue on the slide was longer than the guide slot on standard Type II bayonets. Later production Type II bayonets can be identified by

the inspector initials stamped on the ricasso. All examples examined have *PB* over *P* for Phillip Burkhart (Figure 22).

MODEL 1855 SWORD BAYONET

The Model 1855 Sword Bayonet was designed for the new Model 1855 Rifle. Armory reports for FY 56 indicate that two sword bayonets for the Model 1855 Rifle were produced: the Model 1855 Sword Bayonet, which was used on altered Model 1841 Rifles (1855 alteration); and the Model 1855 Rifle, in which the bayonet has a C guard, the fuller is unstopped, and the stud attachment has no guide (Figures 23 and 24).

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 25-27).

Examination of Model 1855 Sword Bayonets shows examples with no marking on the ricasso, with US stamped on the ricasso, and with US stamped on the ricasso and an iron pin in the grip to act as a stop in the guide slot (Figure 28).

ALPHANUMERIC MATING NUMBERS

When Type I and Type II Sword Bayonets were fitted to individual rifles, they were numbered in an alphanumeric sequence beginning with A1 and progressing to A99, B1 to B99, and so forth.



Figure 18. 10th Infantry Musicians on Utah Expedition (courtesy Utah Historical Society).

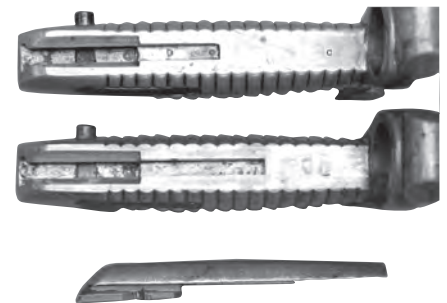


Figure 21. Top: Type II bayonet guide slot; center: Musicians bayonet; bottom: slide.

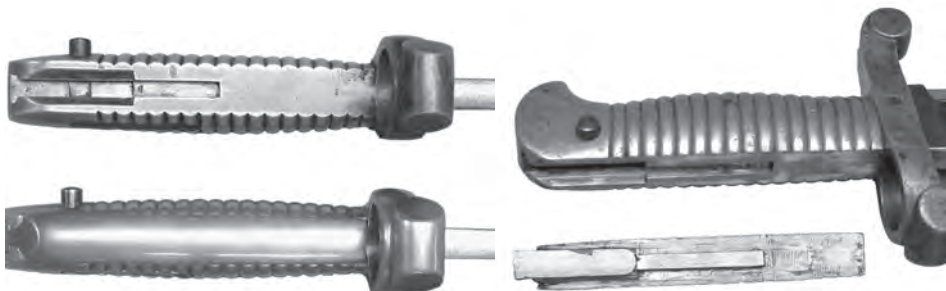


Figure 19. Musicians bayonet with slide attached.

Figure 20. Musicians bayonet and slide.



Figure 22. Later production Type II bayonet, inspected on the ricasso PB over P.

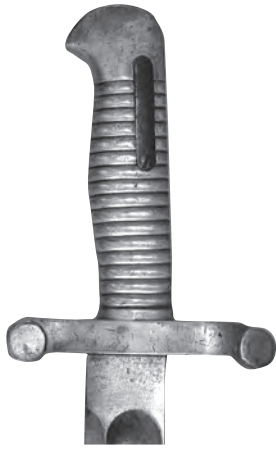


Figure 23. Model 1855 sword bayonet showing unstopped fuller.



Figure 24. Model 1855 sword bayonet guide slot.



Figure 25. Model 1855 screwed-on long-range rear sight.



Figure 26. Model 1858 rear sight.

- A1 to A99 = 99
- B1 to B99 = 198
- C1 to C99 = 297

This system enables exact identification of the fitting, for example, F 39 would be the 534th bayonet mated (fitted) to a rifle, calculated as follows:

- A to E = 5 letters
- $5 \times 99 = 495$
- $495 + 39 = 534$

Mating numbers of Type I and Type II sword bayonets have been observed as follows:

Type I

- Manufactured in FY 1854 at Harper's Ferry
- 1,646 Ring Attachment Bayonets produced
- 590 Rifles altered to accommodate the Ring Attachment Bayonet



Figure 27. Model 1855 alteration, short front band, lug without guide, 1855 rifle front sight, and iron-tipped ramrod.

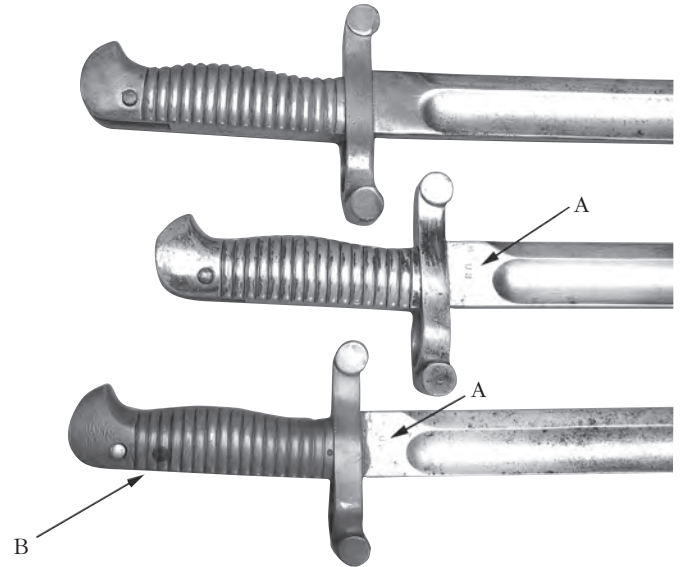


Figure 28. A: U.S. on the ricasso; B: iron pin.

Known Mating #'s

- A 19* (Figure 29)
- A 21
- A 35
- A 54
- A 61
- B 29
- B 43
- C 1
- C 18
- C 25
- C 36
- D 3
- D 4
- D 23**
- D 24
- D 40
- F 7
- F 39**
- F 39 = 534; Total observed examples: 18.
- *Stamped on the flat of the cross guard.
- **C Guard.



Figure 29. Mating numbers.

Type II

- 1,639 Stud Attachment and 40 Musicians Bayonets manufactured in FY 1854
- 3,179 Stud Attachment Bayonets manufactured in FY 1855
- **Total FY 54 and FY 55 production = 4,858**
- 2,690 1841 Rifles altered for the Stud Attachment Bayonet FY 1854
- 1,050 1841 Rifles altered for the Stud Attachment Bayonet FY 1855
- 945 1841 Rifles altered for the Stud Attachment Bayonet FY 1856
- **Total = 4,685**

Mating Numbers

Type II

Sword Bayonet

A 19

E 10

J 8

J 16

J 31

K 25

N 7

O 15

R 38

S 1

S 16

T 14

Total observed examples 12

T 14 = 1895



Figure 30. Alexander Zang, Co. H, No. 80, 39th New York State Volunteers (from the Vernard Bond Collection), outfitted with a Model 1841 rifle (note short front band), sword bayonet, and the 1855 rifleman's belt.

The Harper's Ferry Model 1841 Sword Bayonet evolved over a period of several years to its last and final form, the Model 1855 Sword Bayonet, which was manufactured for the altered 1841 Rifle and the 1855 Rifle until 1861 when the armory ceased to operate under federal control (Figure 30).

ACKNOWLEDGEMENTS

I thank the following individuals for guidance and assistance: Frank Harrington, Birdie Partridge, Paul Davies, Fred Gaede, Paul Johnson, Dan Altheimer, and Phil Leveque.

NOTES

¹National Archives and Records Administration (NARA), Records Group 156, *Entry 5 1855 Letters Sent to the Secretary of War 1812-1889*.

²National Archives and Records Administration (NARA), Records Group 156, *Entry 21 1855C Letters Received 1812-1894*.

³Todd, Frederick P. *American Military Equipage 1851-1872, Vol. II*. Providence: The Company of Military Historians, 1977.

⁴Ness, George T., Jr. *The Regular Army on the Eve of the Civil War*. Harms: Toomey Press, 1990.

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