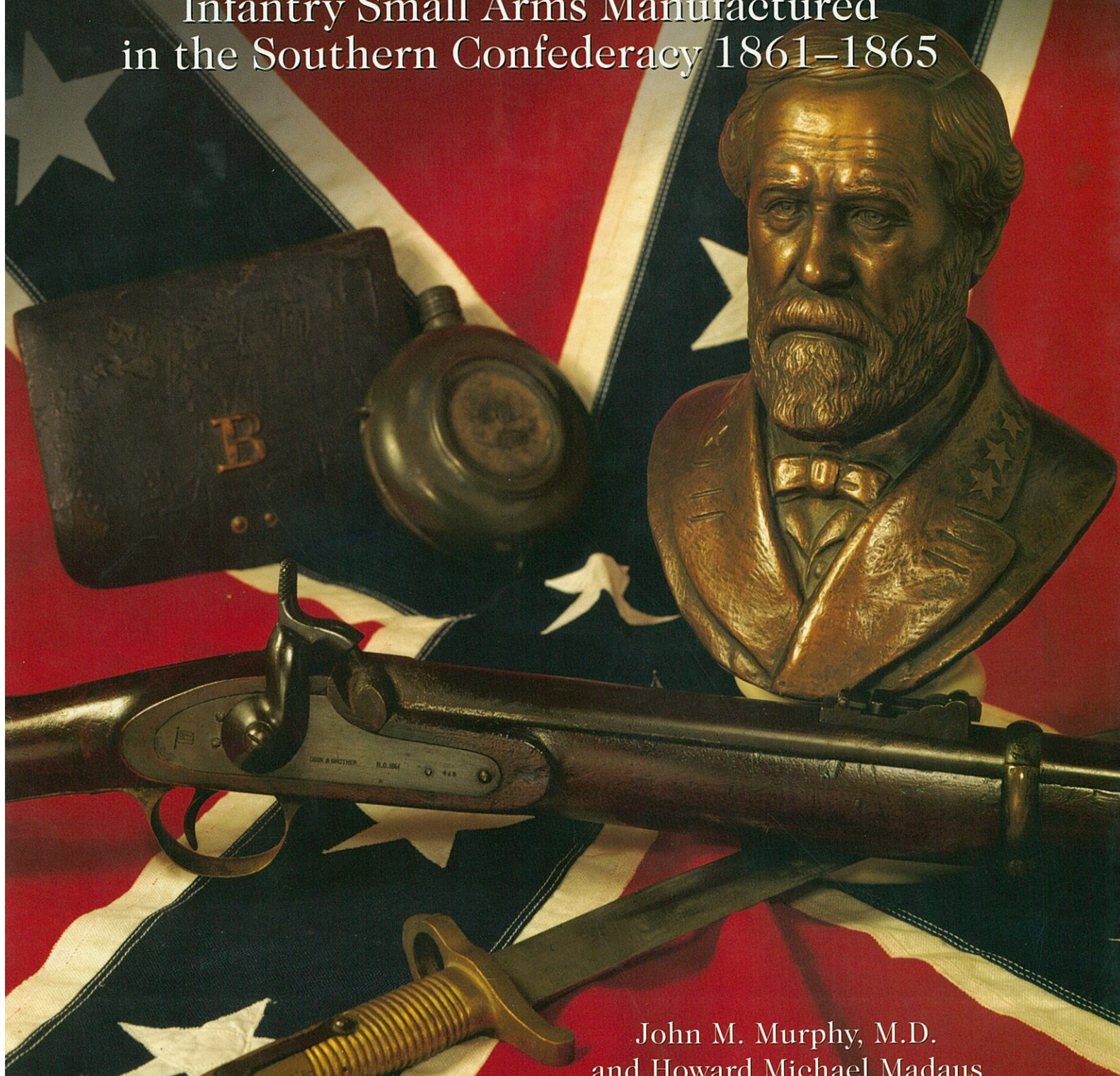


# Confederate Rifles & Muskets

Infantry Small Arms Manufactured  
in the Southern Confederacy 1861–1865



John M. Murphy, M.D.  
and Howard Michael Madaus

# XXIII.

## Hall's Flintlock Rifles Altered to Percussion in the Confederacy

ON 19 MARCH 1819, MAINE INVENTOR JOHN Hall signed a contract with the United States War Department to produce his patented breech-loading rifle. Nearly five years later, having perfected the machinery required to manufacture his rifle with fully interchangeable parts, Hall's "Harpers Ferry Rifle Works" delivered the one-thousand rifles called for under the contract. With the proof of the successful implementation of Hall's concepts, in July of 1824 the 1819 contract was extended to include a second thousand rifles. Those were delivered to the arsenal at Harpers Ferry prior to the end of 1827. Two new contracts, one dated 8 March 1827 for 3,000 rifles, and another dated 23 April 1828 for an additional 6,000 rifles, brought the total ordered to eleven-thousand rifles. All of the additional nine-thousand flintlock breechloading rifles were delivered between 1832 and 1834. A fourth contract, calling for deliveries of 1,000 to 1,200 rifles per annum, brought the total flintlock Hall's rifles manufactured at Hall's Harper's Ferry Rifle Works by 1841 to 19,870.<sup>1</sup>

Of the two-thousand flintlock rifles delivered under the first contract and its extension, the U.S. Navy received slightly more than one-thousand for arming Marine detachments at naval yards and aboard its ships of the line. The U.S. Army received most of the balance, with a significant number distributed in 1832 to the 6th U.S. Infantry, the *de facto* successor to the former rifle regiments. Out of the first contract's deliveries, moreover, a number were set aside as gifts to representatives of five states (including Kentucky, Tennessee, Arkansas, and South Carolina) as an inducement to those states to order the rifles for their respective state militias.<sup>2</sup>

The promotion of the rifle to those Congressional representatives, coupled with subsequent gifts to Congressmen from numerous states, proved partly successful, and South Carolina expressed a desire for the rifles as early as 1832. The promotions bore further fruit, and other Southern states followed suit by also requesting Hall patent rifles under the provisions of the Militia Act of 1808. Of 9,081 Hall breechloading rifles delivered to the states under the 1808 enactment, Southern states that would eventually secede from the Union would account for more than one-third (3,138) of the total. Future Confederate states receiving these arms included:<sup>3</sup>

State	Number	Dates of Order and Receipt
Virginia	1,000	75-15 June 1836/(5 July 1836) 425-22 June 1836/10 Dec. 1838 500-22 Aug. 1838/17 Feb. 1840
North Carolina	700	60- 24 Apr. 1846/18 May 1846 620- 26 July 1848/11 Oct. 1848 20- not accounted for
South Carolina*(100)		100-29 June 1832/11 July 1832 (2) and 11 Sept. 1832 (98)
Florida	300	300-29 Aug. 1846/22 Mar. 1847 (in lots respectively of 125, 75, and 100)
Tennessee	180	180-23 Aug. 1837/(13 Nov. 1837)
Alabama	639 (699)	379-31 Oct. 1835/4 Apr. 1836** 50-31 July 1844/24 Sept. 1844 110- 8 Sept. 1845/31 Jan. 1846 160- 18 Aug. 1846/11 Jan. 1848

Mississippi	313	45–22 Dec. 1838/27 Feb. 1839 200–15 March 1839/22 Apr. 1839
		68– not accounted for
Arkansas	6	6– 7 Dec. 1847/22 Dec. 1847

\* The 100 Hall rifles received by South Carolina in 1832 were initially credited against the account of the Militia Act but were later reccredited under the "War account".

\*\* The number listed as delivered to Alabama in 1836 is recorded as 397 rather than the 379 ordered; however, the former figure is likely a clerical error of transposition of figures rather than an incorrect delivery.

In addition to these rifles, three other Southern states which would not officially secede from the Union accounted for another 615 to 815 Hall rifles (295 to Maryland, 220 to 420 to Kentucky, and 100 to Missouri). Some of these may have been carried South by Maryland, Kentucky, and Missouri militia men sympathetic to the Confederate cause during the opening days of the conflict.<sup>4</sup>

Because the rules of the U.S. Ordnance Department excluded the products of the two national armories from distribution to the militia under the Act of 1808, to meet the demand for the Hall rifles generated by the promotions of the Hall system to the states, on 15 December 1828 the War Department entered into a contract with Simeon North to manufacture 5,000 of the Hall rifles. That number was eventually extended, and between 1830 and 1836, North delivered a total of 5,700 Hall's patent breechloading rifles, all based on the pattern made at Harpers Ferry between 1824 and 1826. These earlier Harpers Ferry rifles (and accordingly the copies produced by North) had their barrels fastened to the stock by means of iron barrel bands secured in place by band springs forward of

the rear and middle bands and to the rear of the double-strapped front band. (In contrast, the other 17,870 rifles made at Harpers Ferry in the decade prior to 1841 had the three barrel bands secured by means of pins that passed through both sides of each band and the intervening stock.) All of the North-produced Hall rifles were delivered to the states under the 1808 Militia Act. However, since the demand (approximately 9,000) for the rifles exceeded the number manufactured by North (5,700), after 1840 many of the later issuances were drawn from the stock made at Harpers Ferry. Nevertheless, by 1860, most of the post-1830 Harpers Ferry Hall rifles were still retained in federal arsenals. As of 10 October 1860, no fewer than 16,045 Hall Model 1819 flintlock and Hall Model 1841 original percussion breechloading rifles were distributed in twelve federal arsenals, many scheduled for sale<sup>5</sup> (see chart below).

If it is assumed that the 3,239 Hall's rifles at Harpers Ferry consisted of Model 1841 percussion Hall rifles (of which only 82 had been issued since the completion of the 3,000 made in 1843), then the balance of the Hall's rifles (13,027) were flintlocks. Of the flintlocks in storage, 7,000 were in Southern arsenals within three months of the secession of South Carolina. Although 5,170 of those 7,000 rifles were scheduled to be sold, the events within the seceding states would insure that an estimated 6,242 would fall into the hands of the Confederacy.

More than 10,000 of the Hall's flintlock rifles in store at federal arsenals were scheduled for sale in 1860, because the technological advances both with muzzle-loading rifle projectiles and with other patented breechloading mechanisms had effectively obsoleted Hall's simple breechloading system. Accordingly, many of the Hall's patent rifles and carbines in federal arsenals at the end of

Arsenal	State	Number of Hall Rifles on hand	Number to be Sold
Watervliet	N.Y.	975	975
New York	N.Y.	238	238
Frankfort	Penn.	676	---
Allegheny	Penn.	278	243
Detroit	Mich.	547	547
Pikesville	Md.	2,992	2,992
Harpers Ferry	Vir.	3,239	---
Charleston	S.C.	566	---
Augusta	Geo.	714	714
Mount Vernon	Ala.	749	748
Baton Rouge	Louis.	2,287	2,287
Little Rock	Ark.	2,684	1,421

1860 were either available for immediate purchase or had been sold to arms speculators.

As the controversy over the expansion of slavery into the western territories divided the country during the winter of 1860-1861, numerous arms speculators offered the obsolete Hall rifles and carbines to anxious Southern governors or their purchasing agents. Alabama's second purchasing agent sent to the North to buy arms in 1860, J.R. Powell, reported on the availability of Hall arms on 6 December 1860:<sup>6</sup>

...I send you by Express also a specimen of Colt's Navy Pistol as a present to you. Also some samples of guns for your examination, *to wit*:

Two from Colt's factory— the revolvers and two of Hall's breechloading carbines, the one musket length... The prices are as follows:

One rifle 31 5/6 in. barrel 56/100 cal (Colt's)	\$43.50
One bayonet for same	\$ 2.50
One artillery rifle 24 in. Bar'l, 50/100 cal.	\$37.50
One sword for same	\$ 4.00
Hall's Carbine from Baltimore, breechloader,	
old Gov't arm with bayonet	\$ 7.00
"    "    Musket length with bayonet	\$ 8.00
	10 per [cent] discount off.

Finding a better bargain in old U.S. flintlock muskets that speculator George Law had purchased a decade earlier, and which had been percussioned and rifled (many by Samuel Colt), Alabama declined to purchase either the Colt revolving rifles or the obsolete Hall carbines and rifles. Meanwhile, however, other speculators attempted to foist the surplus Halls elsewhere.

On 14 November 1860 Georgia's governor, Joseph E. Brown, received the following offer from W. Scarney at Harpers Ferry, Virginia:<sup>7</sup>

I have by purchase from the United States at a late Sale Arms at this Armory 250 Hall's Rifles and appendages, which I am willing to sell if I find purchaser. My price is Ten Dol's each with the necessary implements, *to wit*: screw driver & wrench, wiper & bullet mould. These arms were the last fabricated by the United States at their armory, and are said to be a very superior gun and far better than any manufactured in the early stages of their manufacture.

Upon inquiry you will learn that this gun, being a breechloader, has a merit few arms have of its adaptability of being loaded by the soldier— on the ground— beneath a log, or behind a tree or other protection without exposure of person to the mark of a rifleman. And by a little expertise and skill in its

use, accuracy of projection is said to be very perfect. I will sell them to you, or any company who may wish to purchase, for the above price, and warrant them in perfect order & condition with the necessary appendages.

Mr. Scarney was not alone in acquiring obsolete Hall's patent arms from the Harpers Ferry Arsenal. F.W. Bennett of Baltimore (perhaps the source mentioned in Powell's letter to the governor of Alabama), advertised in the Charleston newspapers that he had available Hall Model 1842 percussion carbines and Hall Model 1836 percussion carbines, as follows:<sup>8</sup>

500 CARBINES "Hall's Patent" Rifle calibre, brass mountings, percussion locks, packed in cases of 20 each, 7½ pounds weight, for Cavalry service.

300 CARBINES "Hall's Patent" Musket calibre, iron mountings, percussion locks, with Sliding or Ram Rod Bayonets, packed as above, 7¼ pounds weight, for Infantry service

Each case contains 20 Carbines, 20 Screw Drivers, 20 Wipers, 2 Spring Vises, 2 pairs of Bullet Moulds, and 20 Hooks.

NOTICE— All the above Guns are breech loading manufactured by the United States Government at Harper's Ferry Armory, Virginia and are in complete order, also packed by the Government in cases of 20 each.

To what extent these private ventures to dispose of Hall's breechloaders in the South may have been successful is not known. Nevertheless, whatever the source, be it sale of obsolete surplus, acquisition under the 1808 Militia Act, or seizure at federal arsenals, the states of the future Confederacy on the eve of the great American Civil War had available no fewer than ten thousand flintlock Hall breechloading rifles. When the war finally came, numerous efforts were made to make effective use of this resource. Although several other attempts also were made to remodel the Hall's rifles, the most common adaptation involved altering the breechblock from flintlock to percussion. In the process, the frizzen and its springs were removed and the top of the chamber block ground smooth to the level receiver. The former flintlock vent was enlarged, threaded, and a percussion cone was inserted. The cock either was replaced with a newly-made percussion hammer, or truncated, and a new striker brazed to the remnant. While the basic process was much the same, details varied from state to state. While few of the Hall rifles so altered received any special marking to distinguish the origin of their alteration, it is possible to posit the distinctions that existed among the work in several of the states.

## VIRGINIA

Although the Adjutant-General of Virginia thought highly of the Hall's patent rifle, that affection was not shared by the militia of the commonwealth. Of the 500 rifles ordered in 1836 (75 of which were from Harpers Ferry and 425 of which were from Watervliet and presumably from North's contract), 238 were issued during the fiscal year ending 30 November 1836, but 69 of them were returned the following year. Of the 500 rifles ordered in 1838 (presumably all from North's contracts), another 50 were issued that year, and the same number again in 1839. During the early 1840s numerous rifles were returned to the state arsenal and issued by it, but no distinction was made between common rifles and those of Hall's patent. However, at the end of 1844 the arsenal at Richmond held 750 Hall's rifles in good order, and 218 in need of repair. Hence, only 22 of the rifles were still in the hands of the militia. Those figures remained unchanged in 1845, but in 1846 the armorers had reworked the damaged Hall's rifles so that 861 were serviceable and only 100 needed repairs. What became of the difference (7) is not known. During the next year, the 100 rifles requiring repairs were made serviceable, and 200 of the serviceable Halls were cleaned and overhauled, with the result that 950 Hall's patent rifles were on hand as of 30 September 1847. Eleven rifles presumably were broken up during the repair process. The number in storage at Richmond remained constant (950) until 1858, when the number reported in store was listed at 926. During John Brown's raid on Harpers Ferry all but 180 of these rifles were issued to the militia; however, most of them were eventually reclaimed.<sup>9</sup>

Knowing the unpopularity of the Hall's rifles among the Virginia militia, Virginia's Adjutant-General made no effort to bestow the flintlock rifles on his state's volunteers in 1861. However, when Colonel Valery Sulakowski's "Polish Legion" (14th Louisiana Volunteers) arrived from New Orleans without arms, Virginia all-too-kindly provided 800 "Hall's Rifles, with Bayonets" and 2,000 flints to arm it on 16 September 1861. Of the 800 Halls, 240 were returned, and in their place Colonel Sulakowski drew 115 Virginia Manufactory flintlock muskets and 60 "altered percussion muskets" on 18 September 1861.<sup>10</sup> No further attempt was made to issue the Hall's patent rifles in possession of the Commonwealth of Virginia until after they had been adapted to muzzle-loading rifles by Read & Watson of Danville. (For the full story of the Read & Watson Adapted Hall Rifles, see Chapter XLVI).

## NORTH CAROLINA

Like Virginia, North Carolina had received a considerable number (680-700) of Hall's patent breechloading flintlock rifles under the provisions of the 1808 Militia Act. As these were not delivered until 1846 and 1848, all should have been from the post-1830 production at Harpers Ferry. Although no Hall rifles were reported in the federal arsenal as of October of 1860, 448 Hall's patent flintlock rifles were at Fayetteville under the state's control in July of 1861.<sup>11</sup> At least 44 others were gathered in during the period from August to December of 1861.<sup>12</sup> Some of those were issued to the North Carolina State Troops in lieu of percussion arms. Captain W.R. Myers' Company G, 34th North Carolina State Troops received 20 "Rifles (Hall's)" on 28 November 1861, as well as 31 "F.&S. Muskets" on 21 December. The latter were returned as "unserviceable" on 9 January 1862, but there is no record of the return of the Hall's rifles.<sup>13</sup> Similarly, Company H, 38th North Carolina State Troops (Captain Noah Rush) was issued 23 "Hall's Rifles" on 6 December 1861; all of these, however, were returned to the state's ordnance department on 4 February 1862.<sup>14</sup> Nevertheless, most of the rifles that the state controlled were percussioned, had their stocks reconfigured, and had both barrel and stock shortened to carbine length at the Fayetteville Arsenal while it was under state control. From figures available, between 623 and 704 arms were so adapted at the Fayetteville Arsenal from July of 1861 through early 1862.<sup>15</sup> With the completion of the work on the adaptation of the flintlock rifles into percussion carbines at Fayetteville, state work at the old federal arsenal ceased. Subsequent alterations of Hall's rifles in North Carolina would be treated on a contractual basis.

The person selected for subsequent alteration of Hall's rifles by North Carolina was Mayor Daniel Holloway, a 43-year-old Virginia native, who had listed his occupation in the 1860 census as a "farmer" residing near Brassfields Post Office in Wake County, North Carolina. Holloway received his first Hall rifle to alter to percussion on 6 February 1862, when the state furnished him with one "flint & steel" Hall rifle and one cone. He evidently had a sample to guide his work, as well, as he returned two altered Hall's rifles four days later on 10 February.<sup>16</sup> The same day Holloway returned the two altered rifles, he was issued 20 more flintlock Hall's rifles (probably from the 23 returned by Company H, 38th North Carolina State Troops on 4 February) and 20 more percussion cones; these he returned altered to percussion on 7 March 1862.<sup>17</sup> For his efforts to date, Holloway was paid \$44.50 on that date, \$42.00 for the 21 rifles he had altered to that date and \$2.50 for making five new springs at the

cost of \$.50 each.<sup>18</sup>

On the 7th of March, Holloway returned home with seven more flintlock Hall's rifles and thirteen "N.C. Country Rifles", evidently all to be altered to percussion, as he was issued 20 cones with them. The seven altered Hall's rifles and the "13 altered N.C. Rifles" were returned on 1 April 1862.<sup>19</sup> For this work, Holloway was paid a total of \$41.60, \$2.00 for the alteration of each of the seven Hall's and thirteen "country" rifles, \$1.50 for three new springs, and \$.10 for a replacement screw.<sup>20</sup> On the next day, Holloway drew another nineteen cones and another nineteen Hall's rifles for alteration, taking with him for some reason a single altered Hall's rifle to serve as a sample. All nineteen altered rifles and his sample were returned on 22 April, for which Holloway was paid \$38.25, \$2.00 each for altering the rifles and \$.25 for replacing a sling swivel on one of them.<sup>21</sup> On departing for Wake County the next day, Holloway took with him nine Hall's rifles and 21 "N.C. Rifles, F.&S." (flint & steel) together with 30 percussion cones. The nine Hall's rifles, but only 20 of the 21 rifles, were returned altered on 28 May, Holloway receiving \$87.25 for his labor and the new parts he provided.<sup>22</sup>

Up to 28 May 1862, the state had received 56 rifles altered by Holloway, as well as the two samples provided him for his work. On the next day the state Ordnance Department took advantage of the accumulation by issuing 60 "Hall's Rifles (alt.)" together with 4,000 rounds of Hall rifle cartridges and 5,000 percussion caps to Captain H. Wiswald, commanding Company K, 17th North Carolina State Troops.<sup>23</sup> Since no further Hall's rifles were then in stock in flintlock, Holloway on the same day took fourteen "F.&S. (U.S.) Rifles" and twelve flintlock muskets to alter, receiving from the North Carolina Ordnance Department 26 cones, twelve cone seats (bolsters) and twelve cone seat screws to accomplish the alterations. Those rifles and muskets were returned on 10 July, having been altered and repaired at the cost of \$77.10.<sup>24</sup> Having met with success in altering flintlock rifles and muskets to percussion, on 10 July Holloway returned to Wake County with 25 percussion cones, another fourteen flintlock U.S. common rifles, and the eleven Hall's flintlock rifles that had accumulated in Raleigh during the six weeks of his absence. He also took with him three U.S. common rifles already altered to percussion, which (together with three of the flintlock rifles) were to be restocked.<sup>25</sup> On 9 August 1862 Holloway returned to Raleigh bearing the eleven altered Hall rifles, but only sixteen U.S. common rifles altered to percussion. One of the flintlock U.S. rifles was returned in flint. Six of the rifles also had been restocked. For his labor and repairs Holloway received \$67.70 from

his state.<sup>26</sup>

As two more Hall's flintlock rifles had been returned to the state arsenal, Holloway took them (and two cones) with him on 9 August 1862. He also took 40 U.S. common flintlock rifles with him, 30 to simply alter to percussion, and ten to both alter to percussion and restock. On 23 August the two Hall's rifles were returned altered to percussion, but not until 6 October were 31 of the common rifles returned. Holloway received \$4.00 (\$2.00 each) for the former work and \$93.00 (\$3.00 each) for the latter.<sup>27</sup>

With the delivery of the 31 rifles, Holloway sought out further work. On 7 October the state provided him with five flintlock Hall's rifles and seven flintlock common rifles for alteration, as well as two Hall's carbines and one percussion rifle requiring repairs, which work Holloway was to accomplish at the rate of \$4.00 per arm. For these alterations and repairs, Holloway was paid \$60.00 on 22 November 1862.<sup>28</sup> Although M.D. Holloway would continue working on behalf of his state through the close of the war, primarily restocking and repairing rifles and muskets, the five Hall's rifles he would alter to percussion between 7 October and 22 November 1862 were the last Hall's rifles altered for the state. All totaled, Holloway had altered 74 Hall's rifles for North Carolina.

The authors have been unable to positively identify by type or marks any of the 74 Hall's rifles altered by M.D. Holloway. Although North Carolina had stamped many of the arms the state had received under the 1808 Militia Act with the single line ownership mark "N. CAROLINA", no known Hall's patent rifle survives with this stamping. Since the carbines made from the state-owned Hall's patent rifles at Fayetteville do not bear evidence of state ownership marks, it seems unlikely that any of the Hall's received in 1846 and 1848 received the stamp. At least two of the carbines made at Fayetteville from Hall's rifles, however, bear an enigmatic letter/number code forward of the chamber block on the upper barrel flat, which mark was applied after the browning of the barrels.

*Plates 1, 2, and 3* depict an altered Hall's rifle, also bearing this enigmatic letter/number code. The rifle is from the later production at Harpers Ferry, as evident by the pin-fastened barrel bands. The chamber block is marked on its top in four lines "J.H. HALL/H. FERRY/U.S./1838". Forward of the block on the top of the receiver is a numerical code "K/42". This same type of mark (but "B/55" and "B/70") has been encountered on at least two of the North Carolina owned "1832"-dated Harpers Ferry Hall's patent rifles altered to percussion and shortened and adapted to carbines. While it was originally thought that



Plate 1. A Hall's patent Model 1819 rifle altered from flintlock to percussion by M.D. Holloway of Wake County, North Carolina, and marked "K/42"; right side. (Courtesy Cody Firearms Museum, Buffalo Bill Historical Center)

the mark may have been struck into the rifles as a code prior to their alteration at Fayetteville, prevailing opinion now posits that the marks were applied at Harpers Ferry during an 1838 reinspection of Hall's rifles and carbines.<sup>29</sup> Nevertheless, the presence of the same mark on the Hall's rifles altered to carbines indicates that rifles with that mark had been issued to North Carolina.

In altering this rifle to percussion, the chamber block was removed and the entire flintlock battery (cock and frizzen) was removed. All frizzen support and pan and fence projections were then ground off the upper and right side surfaces of the block to the level of the top and sides. No effort, however, was made to fill the indentation that had existed for the rotation of the toe of the frizzen. The former flintlock vent was enlarged and threaded, and a percussion cone was inserted at an angle of about 70 degrees from the line of the top of the chamber block. In place of the former flintlock cock, a new percussion hammer was made and screwed in place. The new hammer has many of the characteristics of the original percussion hammers found on Hall's carbines, but the right side is flat from the shank up through the head and the thumb

spur is unknurled, as is typical in many Confederate and Southern state alterations of muskets and rifles. The left side of the head of the hammer bears the Roman numeral "XX" cut with a file. This same Roman numeral is struck into the left side of the stock below the frame, in alignment with the hammer. In many respects, including the use of the Roman numerals on the left side of the hammer head, the alteration is similar to another Hall's patent rifle (North contract, dated "1834") altered to percussion and cut to carbine length.<sup>30</sup>

#### SOUTH CAROLINA

South Carolina came into possession of flintlock Hall's rifles from two sources. In 1832, 100 of the North contract rifles had been issued to the state militia, initially recorded against the 1808 Militia Act but later recredited against the charges for service in the Seminole War. When returned to the state, those rifles were marked as state property with the then-current single line stamping "S. CAROLINA", struck into the left side of the upper flat of frame. Presumably, all 100 rifles were drawn from the deliveries under Simeon North's contract.



Plate 2. Close-up view of lock area of the rifle illustrated in Plate 1, showing high-spur hammer of percussion alteration by M.D. Holloway. (Courtesy Cody Firearms Museum, Buffalo Bill Historical Center)



Plate 3. Close-up view of breech area of the rifle illustrated in Plate 1, showing Roman numeral marking "XX" on side of breechblock and original Hall's markings on top. (Courtesy Cody Firearms Museum, Buffalo Bill Historical Center)

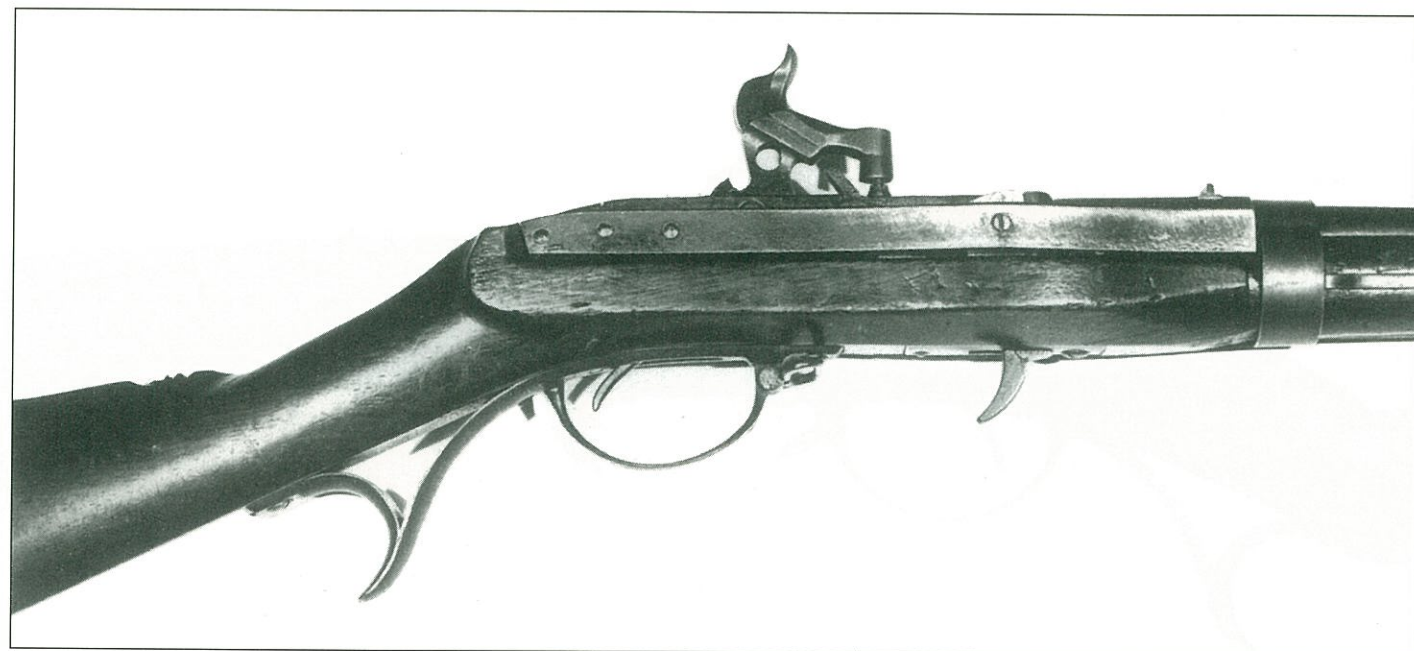


Plate 4. Close-up view of right side of an S. North-made Hall Model 1819 rifle altered from flintlock to percussion, marked "S. CAROLINA" on top of receiver. (Courtesy private collection, Celeste C. and David L. Topper photograph)

The number of these rifles in store at the state's two arsenals (located at Charleston and Columbia) varied from year to year. In 1840, 49 of the rifles were stored at Columbia, while Charleston had none; in 1849 that figure had shrunk to 29 at Columbia, and Charleston still had none. As of the last day of 1860, neither Columbia nor Charleston claimed any of the Hall's rifles; however, 500 were in store at the recently-seized U.S. Arsenal in Charleston.<sup>31</sup>

The latter arms were part of the 566 Hall's flintlock rifles that had been in store at the federal arsenal at Charleston when surrendered to the state's militia on 30 December of 1860.<sup>32</sup> As federal property, those 566 rifles would not have been marked with the "S. CAROLINA" stamping. Based on these figures, it would appear that anywhere from 166 to 75 (more likely the latter) of the Hall's patent rifles had been issued to the Charleston militia during the confrontation between the South Carolina authorities and the U.S. commander at Fort Sumter. What became of the issued rifles (as well as the 500 in the arsenal) after April of 1861 is not known. Nevertheless, a few survive bearing the state ownership stamp that are crudely altered to per-

cussion, suggesting that they were quickly altered in the Charleston area during the crisis of 1861.<sup>33</sup>

Plates 4, 5, and 6 depict one of these rifles, altered from a North contract rifle dated "1830". The alteration was simply effected by removing the breech chamber, and milling or grinding off the projections for the frizzen housing and the pan and its fence from the top and right surfaces. The cock was removed, as were the upper jaw and jaw screw; in its place a percussion striker was brazed in place. The former vent was enlarged by means of a drill and threaded. A cone was screwed into the resulting hole, nearly perpendicular with the upper face of the chamber block, and the now-percussioned chamber was reinserted into the frame.

In the collection of author Dr. John Murphy is yet another of the rifles with a "S. CAROLINA" stamp, the marking appearing on the left top flat of the frame. Like the arm described above, this rifle's barrel, frame, and breechblock are from the contract of Simeon North. However, the bands are pin-retained, a feature of post-1830 Harpers Ferry rifle production never adopted by North, and indicative that the barrel was placed on a different

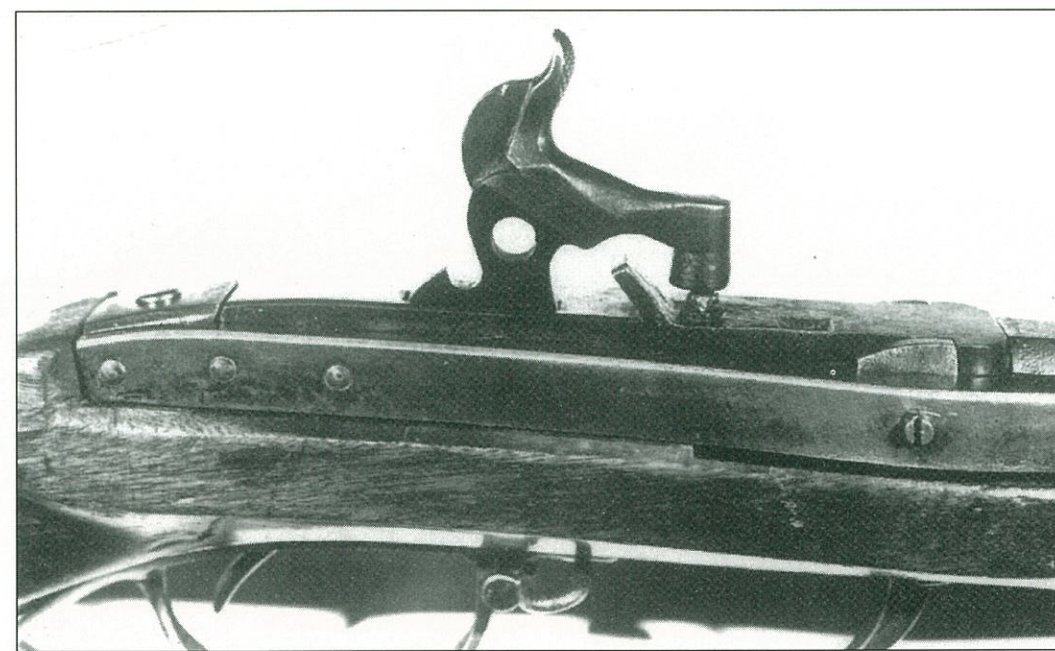


Plate 5. Close-up view of lock area of the rifle illustrated in Plate 4, showing detail of unusual alteration of hammer to percussion. (Courtesy private collection, Celeste C. and David L. Topper photograph)

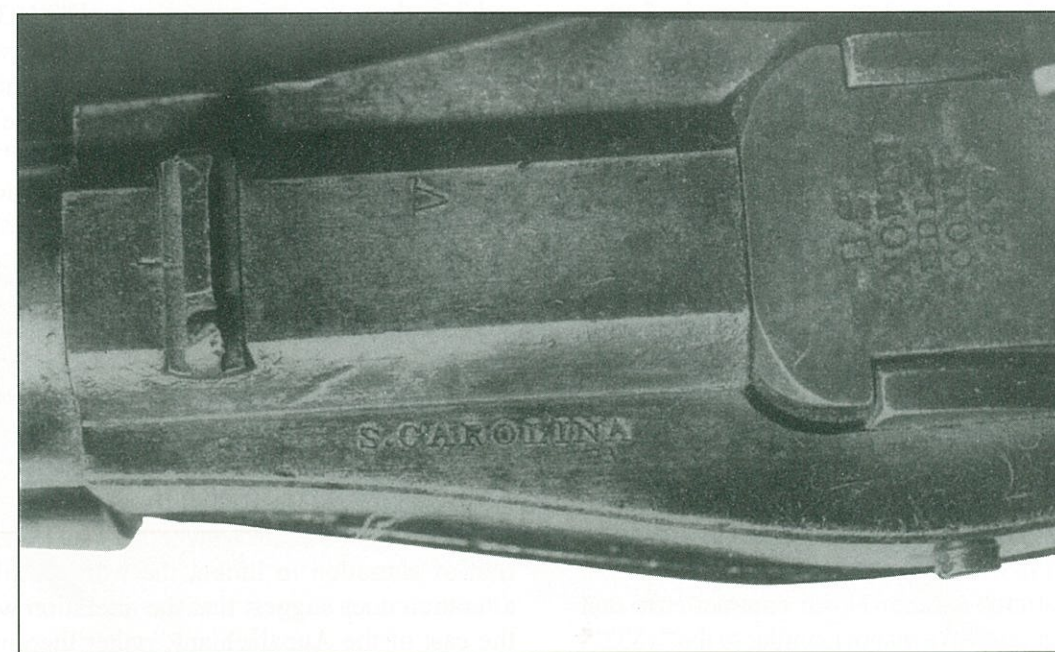


Plate 6. Close-up view of top of receiver of the rifle illustrated in Plate 4, showing "S. CAROLINA" state ownership stamp. (Courtesy private collection, Celeste C. and David L. Topper photograph)



Plate 7. Another S. North-made Hall rifle having Confederate alteration from flintlock to percussion, dated "1830"; right side. (Dr. John M. Murphy Collection)

stock after it had been altered to percussion. In further confirmation of the Harpers Ferry origin of this rifle's stock, the channel inletted into the stock for the barrel and breechblock assembly bears the letter "V" (for "viewed") and the Roman numeral "VII", the former an inspection mark peculiar to the Harpers Ferry production of the Hall's patent rifles.

Unlike the "1830"-dated North rifle, this "1833"-dated example has been altered with an entirely new percussion hammer. The spur of the new percussion hammer is unknurled. While the frizzen mechanism was removed, however, no attempt was made to remove the former fence from the old flintlock pan. Likewise, the indentation for the toe of the frizzen was left unfilled. Except for details of the hammer, this method of alteration is nearly identical to that employed on a North contract Hall's patent rifle dated "1830" that is without state ownership marks.

Plate 7 illustrates another North contract rifle that was altered to percussion in a manner similar to the "1833"-dated North rifle marked "S. CAROLINA". The top of its breechblock bears the five-line mark "U.S./S. NORTH/MIDLTN/CONN./1830." Although dated "1830", this rifle

exhibits the same characteristics as the "1833"-dated rifle described above, including the use of a newly-made percussion hammer substituted for the old flint cock. Plate 8 depicts the breech area of this rifle with the breech raised in a loading position, showing the numeral "1" struck into the right side of the breechblock. While the newly-made hammer is the same overall configuration as the "1833"-dated North rifle, its spur is knurled. The barrel is secured in the stock channel with iron bands held in place by band springs, in conformity with the early Harpers Ferry rifle supplied to North as his pattern. Further confirming that the rifle is from North's contract, the left side of the stock near the wrist displays (as shown in Plate 9) the federal inspector's initials "V" over "OD" (for Otis Dudley), a mark found only on Hall rifles made by Simeon North. While the lack of a state ownership stamp leaves its location of alteration in limbo, the workmanlike method of alteration does suggest that the alteration was effected to the east of the Appalachians, rather than in the Confederacy's western theater of operations.

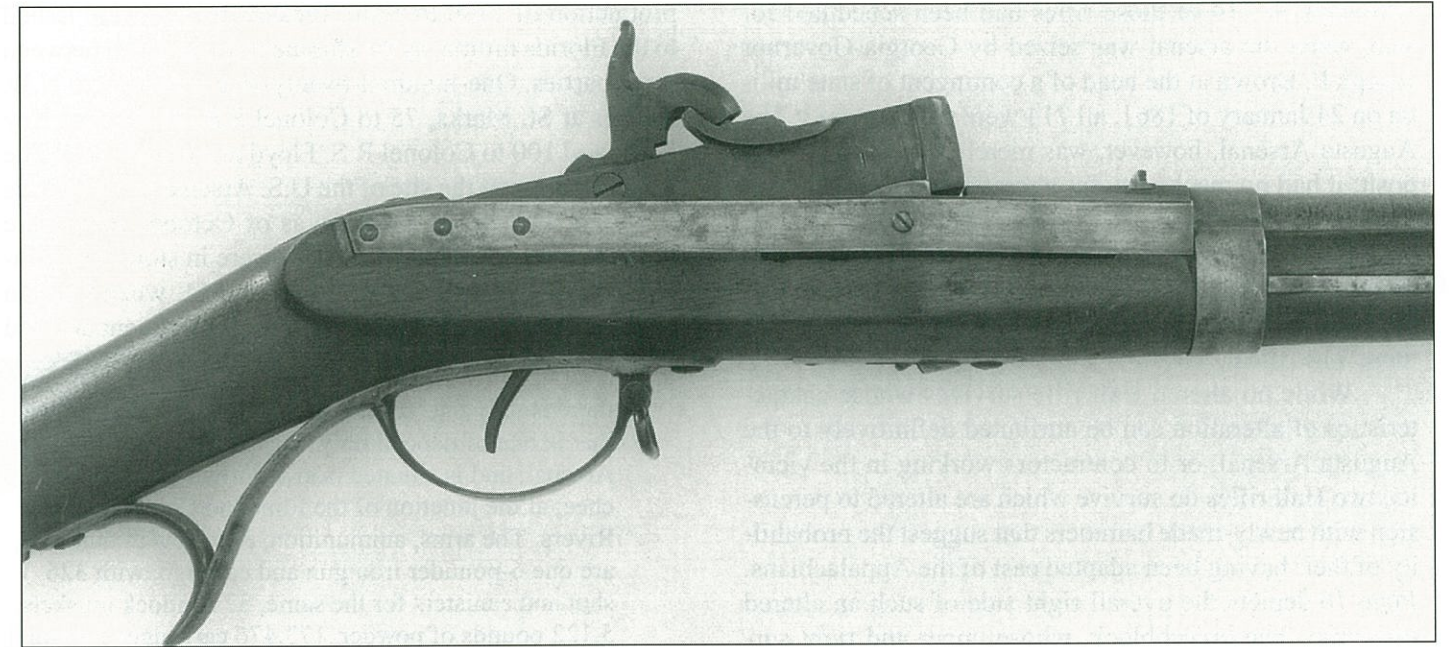


Plate 8. Close-up view of lock area with breechblock raised of the rifle illustrated in Plate 7, showing numeral "1" stamped on right side of block. (Dr. John M. Murphy Collection)



Plate 9. Close-up view of left side of lock area of the rifle illustrated in Plate 7, showing inspector's marks "V" over "OD" stamped in wood of stock at wrist. (Dr. John M. Murphy Collection)

## GEORGIA

Although Georgia had received none of the Hall's patent flintlock rifles under the 1808 Militia Act, the Augusta Arsenal contained 714 of them as of October of 1860. Although all 714 of those rifles had been scheduled for sale, when the arsenal was seized by Georgia Governor Joseph E. Brown at the head of a contingent of state militia on 24 January of 1861, all 714 were still in store.<sup>34</sup> The Augusta Arsenal, however, was merely an arsenal of deposit; it had no machinery for alteration of arms. It is unlikely, therefore, that any of the Hall's patent rifles in store there in 1861 were altered at that arsenal. Like the 500 flintlock Hall rifles in store at the Charleston Arsenal at the end of 1860, there is no record of the disposition of these 714 rifles.

While no altered Hall rifle survives whose characteristics of alteration can be attributed definitively to the Augusta Arsenal, or to contractors working in the vicinity, two Hall rifles do survive which are altered to percussion with newly-made hammers that suggest the probability of their having been adapted east of the Appalachians. *Plate 10* depicts the overall right side of such an altered Hall rifle. The breechblock, whose upper and right surfaces have been ground of any projections for the frizzen support and pan, is marked in four lines "J.H. HALL/H. FERRY/U.S./1839". The indentation for the toe of the frizzen has not been filled. A cone is screwed into the enlarged former vent hole at an angle of about 60 degrees. The "new" percussion hammer is not well formed, but does have knurling on its curving spur.

Another Hall rifle, altered in an identical manner and with the same pattern percussion hammer, also survives. The top of its breechblock bears the inscription "J.H. HALL/H. FERRY/U.S./1831". This rifle is marked on the right side of its buttstock with the carved figures "31" and "K/31", suggesting that it was issued to a soldier of Company K, either of a regiment numbered "31" or whose alphabetical position on the company roster was number 31 of the rank and file.

## FLORIDA

Florida had received 300 flintlock Hall's patent rifles under the Militia Act of 1808, in 1846. Given the date of receipt, they were most likely all from the Harpers Ferry production of 1830 to 1840. Presumably, all were issued to the Florida militia, as the shipment was divided between three parties. One-hundred-twenty-five were sent to N.W. Walker at St. Marks, 75 to Colonel S.R. Mallory at Key West, and 100 to Colonel R.S. Floyd at Apalachicola. The last city also was the site of the U.S. Arsenal in Florida; as a storage arsenal, its holdings as of October 1860 were limited, and no Hall's patent rifles were in store. The situation had not changed by January of 1861, when Captain William Maynadier of the Ordnance Department advised Secretary of War J. Holt on 3 January that,<sup>35</sup>

there is only one arsenal in the State of Florida, and that is one of deposit only. It is called Apalachicola Arsenal, and is situated near the town of Chattahoochee, at the junction of the Flint and Chattahoochee Rivers. The arms, ammunition, &c., now at that post, are one 6-pounder iron gun and carriage, with 326 shot and canisters for the same, 57 flintlock muskets, 5,122 pounds of powder, 173,476 cartridges for small arms, and a small quantity of different kinds of accouterments.

When the U.S. Arsenal at Apalachicola was seized by forces of the 7th Regiment Florida Militia on 6 January 1861, these few arms were still in store.<sup>36</sup>

The occasional appearance of "Hall's carbines" in the hands of Florida cavalry units later in the war has caused speculation that some of the 300 Hall's rifles received under the 1808 Militia Act, like most of those in North Carolina, may have been altered to percussion and cut to carbine length.<sup>37</sup> However, it is equally probable that these arms may represent some of the 118 "Hall's carbines" that were in store at Fort Marion, Florida on 3 January 1861, and which presumably were seized when the state seceded.<sup>38</sup> On the other hand, at least one Hall rifle survives that was altered to percussion in a workmanlike manner, but also was shortened to the length of a musketoon.

*Plate 11* depicts the overall right side of an "1834"-dated Hall rifle made at Harpers Ferry, that was altered to percussion and shortened significantly. The overall length now is  $43\frac{5}{8}$  inches, having a stock that is 36 inches in length. The barrel was cut to the length of  $24\frac{3}{4}$  inches (measured from the muzzle to the face of the breechblock), but remains in its original .52 caliber, rifled with 16 grooves. Although the rear sight was not changed and still consists of an iron block cut with a "V" notch dovetailed

## HALL'S FLINTLOCK RIFLES ALTERED TO PERCUSSION IN THE CONFEDERACY

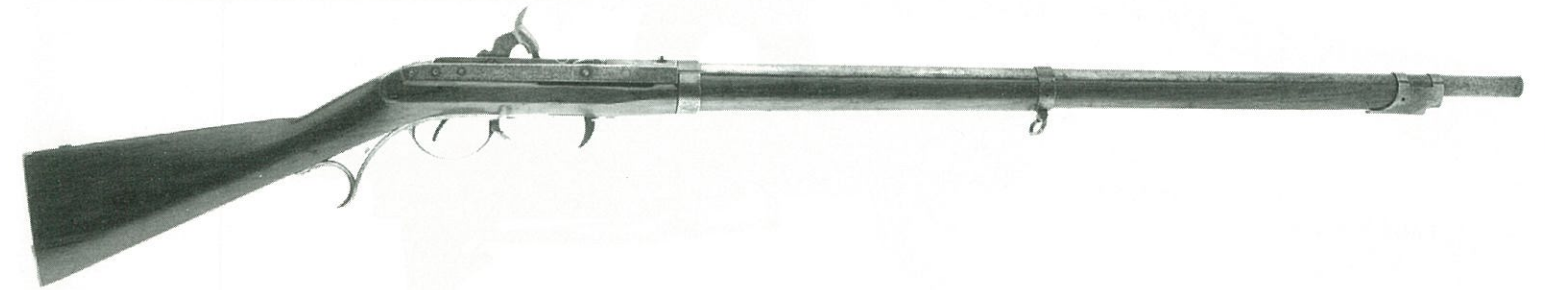


Plate 10. A Hall rifle having alteration from flintlock to percussion attributed to a Confederate (perhaps Augusta) armory; right side. (Courtesy Smithsonian Institution, Eric Long photograph)



Plate 11. A musketoon-length Hall rifle shortened and altered from flintlock to percussion in the Confederacy; right side. (Dr. John M. Murphy Collection)

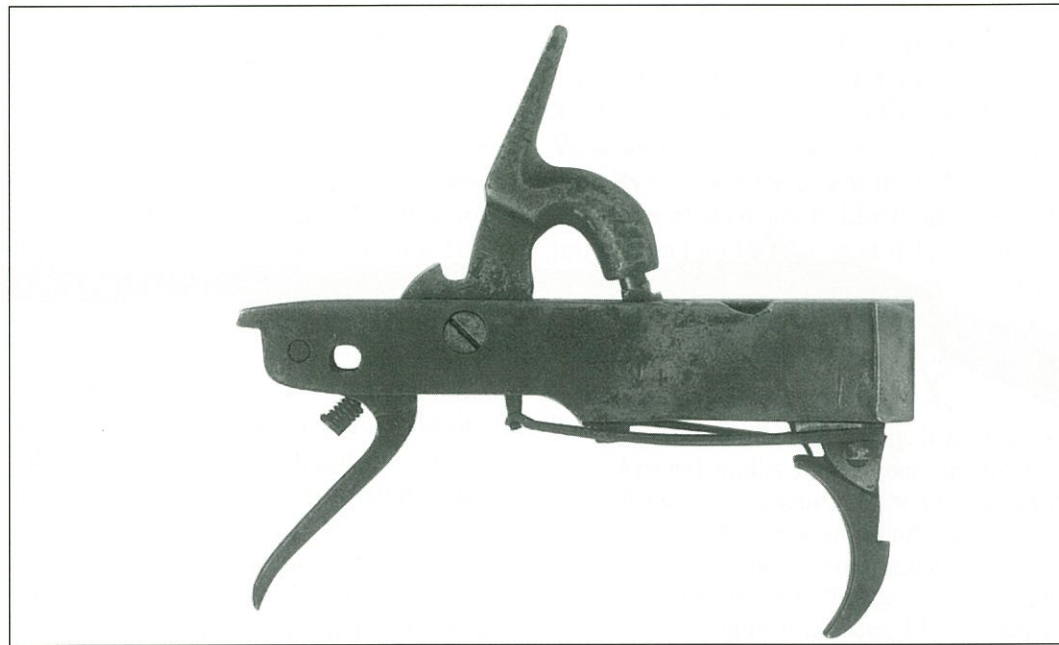


Plate 12. Close-up view of right side of breechblock of the rifle illustrated in Plate 11, showing method of alteration to percussion, mating number "14" stamped on side of breechblock, and knurled, high-spur hammer. (Dr. John M. Murphy Collection)

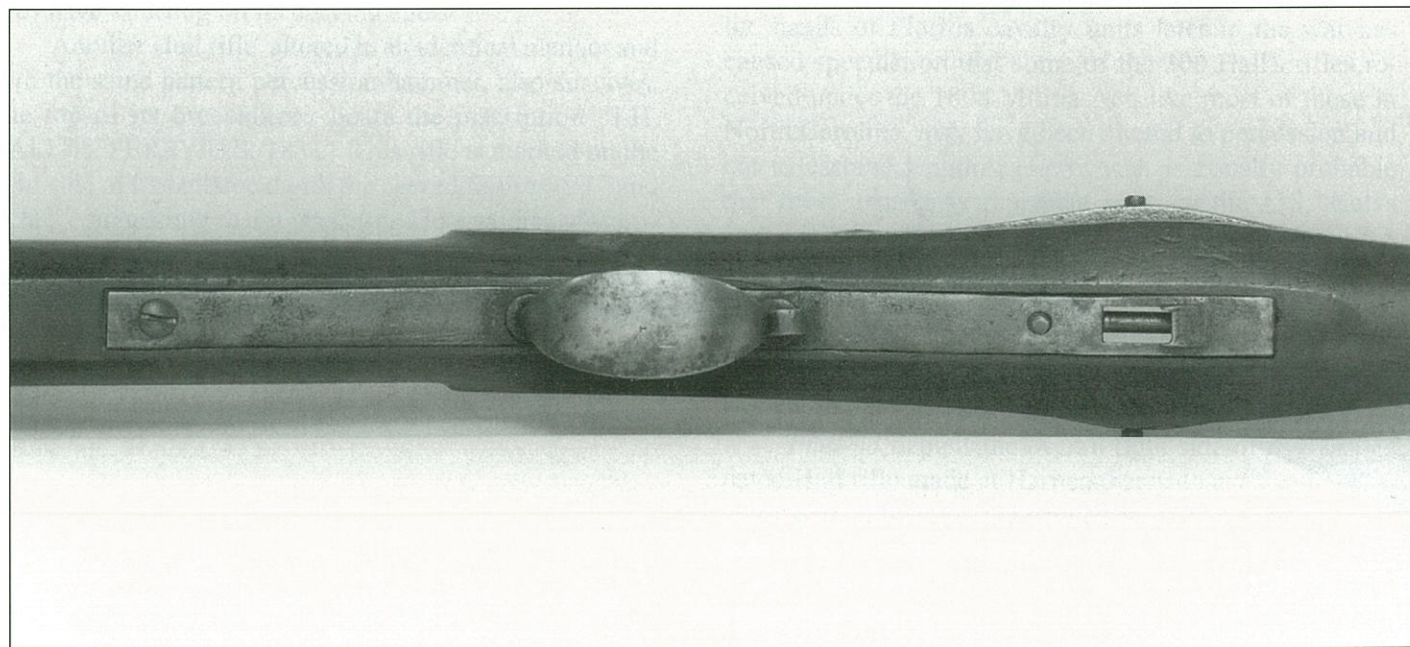


Plate 13. Close-up view of underside of lock area of the rifle illustrated in Plate 11, showing extensive alteration to triggerguard. (Dr. John M. Murphy Collection)

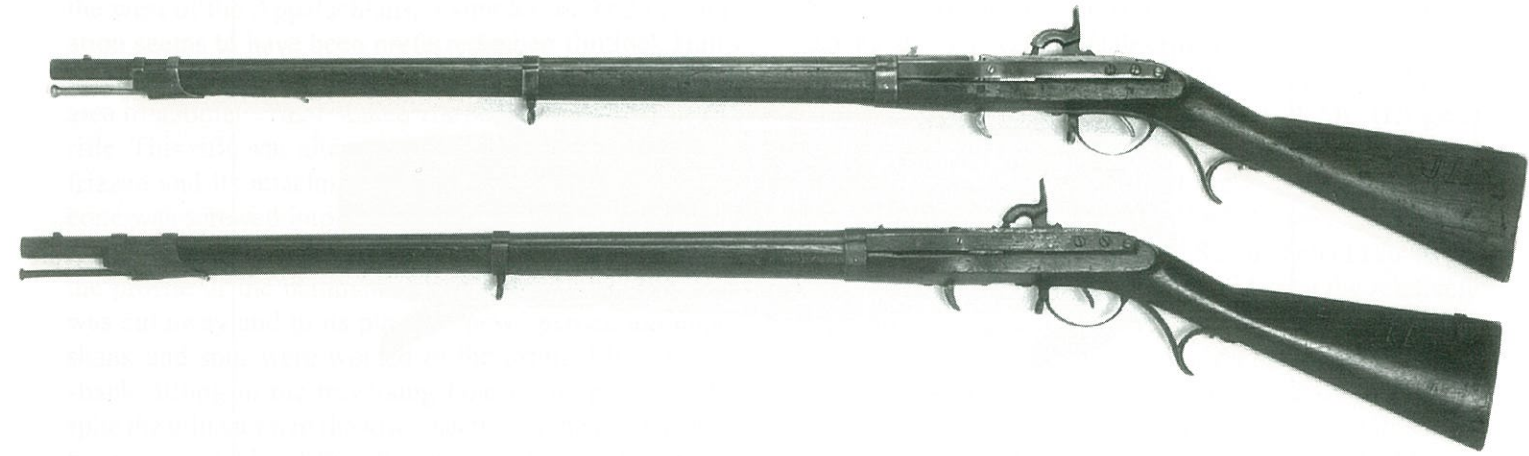


Plate 14. Two Hall's patent Model 1819 rifles, altered from flintlock to percussion at Confederate arsenals; right sides. (Courtesy Chip Beckford [upper]; Charles L. Foster [lower])

$1\frac{7}{8}$  inch forward of the breech face, a new front sight consisting of a  $\frac{3}{8}$ -inch-long low brass blade was soldered to the top of the barrel  $\frac{1}{4}$  inch from the muzzle. *Plate 12* depicts the right side of the breech block of this rifle, removed from the housing. The block itself has been ground flush on its top and right sides, leaving only the small indentation for the toe of the former frizzen unfilled. The newly-added percussion hammer is unusual in that its cocking spur is quite high, and knurled. The right side of the shank, however, is struck with the Arabic number "14". This same number also was struck into the right side of the breechblock, to insure mating of hammer to block if subsequently disassembled for repair or cleaning. Finally, the number "14" was struck into the underside of the barrel approximately  $2\frac{1}{4}$  inches forward of the breech opening.

In altering this arm, not only was it percussioned and shortened, but its furniture was adapted as well. While the rear band is held in place by means of the usual pin passing through both sides of the band and the stock, the former middle band is now secured by means of a spring with a projecting pin that engages the hole formerly used to pin the band in place. The spring is inletted into the

right side of the stock to the rear of the band. This former middle band is devoid of a lug for a sling swivel. Accordingly, the long swivel was removed from the bow of the triggerguard, which also has been significantly altered. As shown in *Plate 13*, the triggerguard strap of this rifle has been changed by the elimination of the iron extension that formed a pistol grip. Instead, a simple flat iron strap was substituted. The exterior of the bow bears the small Arabic figure "1", but this does not seem to mate to any other part of the rifle. Nothing on the arm indicates where the alteration (and presumably the thirteen that preceded it) took place.

While no documentary record survives relating to the 500 and 714 Hall rifles respectively on hand at the Charleston and Augusta Arsenals in 1861, or to the 300 rifles transferred to Florida in 1846, several examples of Hall's patent rifles altered to percussion with newly-made hammers survive, and these rifles suggest that the Confederacy made every effort to make the supply of Hall's rifles east of the Appalachians into efficient firearms.

*Plate 14* depicts the overall view of two altered Harpers Ferry Hall's patent rifles, showing the left sides of the



Plate 15. Close-up view of an "1824"-dated Hall's patent rifle breechblock, showing method of percussion alteration and newly-made hammer. (Courtesy Springfield Armory Museum, Milwaukee Public Museum photograph)

receiver areas of both rifles with the blocks closed for firing. Both rifles have been altered to percussion by grinding the right side of the breechblock of the pan extension, and the upper surface of the breechblock, of nearly all evidence of the pan and frizzen supports. The indentation for the frizzen toe was neatly filled in, as well. While most of the pan's upper projections were ground off the upper surface, a small projecting lip forward of the cone was retained. The cone was screwed into the enlarged vent at an angle of about 60 degrees, and a new percussion hammer was added to each in place of the flintlock cocks. The patterns of the two rifles' hammers vary, the upper having flat sides to the shank, while the lower has a distinctly rounded shank cross-section. Both, however, lack knurling on the hammer spur.

The markings on the breechblock of the lower rifle were totally obliterated during the transformation to percussion. The upper rifle's markings are not recorded; however, the clear remains of the federal inspector's initials "NWP" (for Naham W. Patch) on the upper left side of the receiver clearly indicate that at least the barrel was from one of Simeon North's 5,700 contract rifles. How-

ever, in both cases the barrels are secured to the stock channels by means of pin-retained bands, a characteristic of post-1830 Harpers Ferry manufacture indicating that the top rifle, at least, was mixed when altered to percussion. The stock of the lower rifle is definitely from the Harpers Ferry Rifle Works, a "V" (for "viewed") appearing in the channel inletted into the stock for the receiver.

Both rifles exhibit other characteristics of Confederate adaptation. On the upper rifle, the original rear sight was replaced with a different-style iron block, notched with a "V" cut. On the lower rifle, the front band was replaced during its use by a remodeled musket band, cut and welded to fit the rifle's forestock.

Plate 15 depicts a separate "1824"-dated, Harpers Ferry-made Hall chamber block that has been altered to percussion using a hammer similar in style to that of the lower rifle described above. Its newly-made percussion hammer bears no knurling on its spur, and the indentation for the toe of the frizzen was neatly filled. The chamber block is from the original first one-thousand rifles made at the armory. Since most of the "1823/24"-dated Hall's patent rifles were delivered to the Navy Department, it is

probable that the rifle to which this breechblock was originally attached was seized at either the Norfolk Navy Yard in Virginia or the Warrington Navy Yard at Pensacola, when those facilities were occupied by state forces in 1861, more likely the latter.<sup>39</sup> At any rate, the type of alteration using a newly-made percussion hammer reflects the style of percussioning effected in the Confederacy on those Hall's stored in repositories east of the Appalachians. To the west of the Appalachians, a simpler method of alteration seems to have been preferred when flintlock Hall's patent rifles were percussioned. Plate 16 depicts the breech area of another "1824"-dated Harpers Ferry Hall's patent rifle. This rifle was altered to percussion by removing the frizzen and its attachments, but by leaving the pan; the cone was screwed into the enlarged and threaded vent in the base of the former pan. Plate 16 also clearly shows the profile of the hammer. The top of the old flint cock was cut away and in its place a "new" percussion upper shank and spur were welded to the original lower cock shank, filling in the traversing hole in the process. Despite the utilization of the lower section of the former cock, the workmanship of the alteration evidences the professionalism of a major manufacturing plant or arsenal.

In the western Confederacy, the paucity of more effective arms caused many of the states to resort to the issuance of unaltered flintlock arms at the beginning of the war. The fluid strategic military situation west of the Appalachians in 1861 and early 1862 precluded the alteration of many of those flintlocks until the capture of Forts Henry and Donelson cracked the overextended perimeter that the Confederacy had established around its heartland. Only after the arms shortage had reached crisis proportions did the Confederate and state authorities make major efforts to remedy the arms crisis, by altering obsolete and inferior arms. For some states, like, Tennessee, it would prove too late.

#### TENNESSEE

The state of Tennessee had received a total of 180 Hall's patent rifles under the provisions of the 1808 Militia Act, in 1837. Of those, however, 179 had been issued to Tennessee companies volunteering for service in the War with Mexico. Although those companies deposited a portion of their arms at the Baton Rouge Arsenal when they mustered out of service, the Hall's rifles were not among them. In 1856 Tennessee placed a claim for the arms the state had issued, and the colonel of Ordnance recommended that the state petition Congress for replacement of the issued arms.<sup>40</sup> Although there is no record of further distribution of Hall's patent arms to the state under the 1808 Militia Act, it is likely that the state not only

had secured the return of those 179 rifles issued to its volunteers in 1848 but also obtained a like number from the U.S. Ordnance Department as a result of its 1856 claim, bringing the state's total of Hall's patent rifles to 359. That figure is very near the number reported at the state arsenal in 1861.

On 4 January 1861 the state's "Keeper of Public Arms", John Heriges, indicated that the state arsenal at Nashville contained "350 Hall's carbines, flint lock, badly damaged."<sup>41</sup> (Since only Hall's rifles, and no carbines, were made as flintlock, the reference to these arms as "carbines" is an error in terminology on the part of Mr. Heriges.) Under pressure to arm the state's volunteers, Tennessee was unable to repair or alter those rifles to percussion during 1861. On 13 February 1862, however, Nashville gunsmith F.J. Bitterlich received \$2.50 each (\$120.00 total) for repairing "48 Hall's Rifles."<sup>42</sup> Given the relatively high price charged for the "repair", the work effected by Bitterlich may have included altering the rifles to percussion. The speculation that Bitterlich's repairs may have included percussioning is reinforced by listings of 50 percussioned Hall's patent rifles at the Corinth, Mississippi Ordnance Depot in April of 1862.

Most of the 350 Hall's rifles held by Tennessee in 1861 seem to have been issued to the 51st Regiment Tennessee Volunteer Infantry. This unit had been formed in January of 1862, and was initially armed with an assortment of double-barrel shotguns and 100 sporting rifles, the latter transferred to the six companies not captured at Fort Donelson by the commanding officer of the 52nd Tennessee Infantry, with which the 51st would be consolidated on 25 April 1862.<sup>43</sup> On 3 April 1862, the same day his unit was assigned to provost duty at Corinth, Lieutenant-Colonel John Chester of the 51st Tennessee turned over to the Corinth Ordnance Depot "333 Hall's Rifles" and "1 D.B. Shot Gun". On the following day Colonel Chester completed the cleansing of this unit of its least-effective arms, turning over another "14 Hall's Rifles."<sup>44</sup> The 347 Hall's rifles account for all but three of those in store at Nashville in January 1861. The unfortunate recipients of some of those discarded Halls appear to have been the newly-forming 32nd Regiment Mississippi Volunteer Infantry, and Lieutenant-Colonel Robert P. Blount's "5th"/(9th) Battalion Alabama Volunteer Infantry.

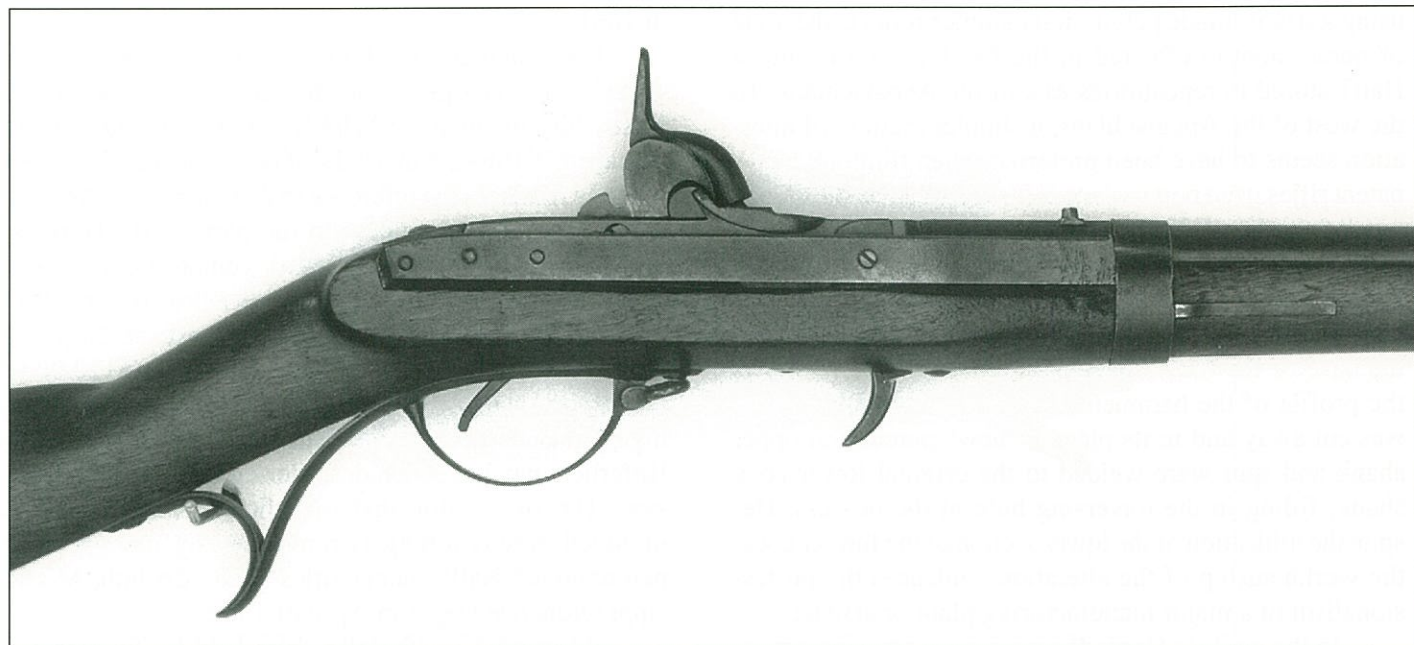


Plate 16. Close-up view of right side lock area of another "1824"-dated Hall's rifle, whose percussion-altered breechblock retains the old flintlock pan, showing profile of newly-made high-spur percussion hammer. (Courtesy private collection)

#### ALABAMA

With nearly 700 Hall's patent rifles that the state had received under the 1808 Militia Act between 1835 and 1848, and another 748 in store at the Mount Vernon Arsenal as of October of 1860, the Confederate forces called to service from Alabama would seem to have been prime candidates for altered Hall's rifles by late 1861. This is especially so as the Mount Vernon Arsenal had the ability to alter Hall's rifles to percussion, having effected one such alteration on a rifle in store there during the fiscal year 1855-1856.<sup>45</sup> Nothing, however, seems to have come of that trial, and by October of 1860, 748 of the 749 Hall's rifles in store at Mount Vernon Arsenal were scheduled for sale. Indeed, the U.S. War Department may have been successful in disposing of those arms prior to the seizure of the arsenal by Alabama volunteer militia on 4 January 1861, for they were not mentioned in either the correspondence of the Alabama governor or the subsequent reports of the arms on hand.<sup>46</sup>

What became of the 699 Hall's rifles delivered to Alabama under the 1808 Militia Act is not known. The

only Confederate unit from Alabama confirmed to have received Hall's rifles was Lieutenant-Colonel Blount's 9th (initially called "5th") Alabama Battalion, that had been assigned to provost duty at Corinth on 3 April 1862 together with the 51st Tennessee Infantry and Desha's 7th Arkansas Battalion. On 7 April 1862, Blount's Alabama Battalion was issued "177 Percussion Muskets .69 cal.," "70 Minie Muskets, .58 cal.," and "134 Hall's Rifles."<sup>47</sup> The last were likely part of the rifles turned in on 3 and 4 April by the 51st Tennessee Infantry. On 23 April 1862, five days before the "5th"/9th Alabama Battalion would be broken up and its men distributed between the 17th and the 18th Alabama Infantrys, Lieutenant-Colonel Blount turned in 24 of his "Hall's Rifles" to the Corinth Depot.<sup>48</sup> What became of the other 110 is not known, but it is possible that they continued to serve in the 17th and the 18th Alabamas after Blount's Battalion was discontinued.

#### ARKANSAS

The third unit to be assigned to provost and garrison duty at Corinth on 3 April 1862 was Lieutenant-Colonel F.W. Desha's 7th Battalion Arkansas Volunteer Infantry. Until this unit was consolidated with the 8th Arkansas Infantry on 1 May 1862 it carried, at least in part, Hall's flintlock rifles. Ammunition issued from the Corinth depot to the 7th Arkansas Battalion included "4,000 Rounds Hall's Rifle Cartridges" on 2 April 1862, and another "1000 Hall's Rifle Cartridges" on 7 April 1862.<sup>49</sup>

The Hall's rifles carried by Desha's 7th Arkansas Battalion were part of the 2,684 Hall's patent flintlock rifles in store at the Little Rock Arsenal in October of 1860. On 8 February 1861 the U.S. garrison at Little Rock, under the threat of a gathering body of secessionists, yielded the United States Arsenal to the governor of Arkansas and vacated the state.<sup>50</sup> On 7 May 1861, the day after Arkansas officially seceded from the Union, Major Josiah Gorgas, Confederate Chief of Ordnance, estimated the number of arms available from that arsenal at 10,000.<sup>51</sup> If his sources were reliable, the number and type of arms had not changed since October of 1860, when a total of 8,930 small arms were in store, *viz*: 5,625 U.S. flintlock muskets, 53 U.S. Model 1822 flintlock muskets altered to percussion, 357 U.S. Model 1842 percussion muskets, 900 U.S. Model 1855 rifle-muskets, 125 U.S. Model 1817 "common" rifles, 54 U.S. Model 1841 "Mississippi" rifles, 2 musketoons (probably U.S. Model 1847), 231 flintlock pistols, 52 U.S. Model 1836 flintlock pistols altered to percussion, 267 Hall's carbines, and 2,684 Hall's rifles. Although all of the flintlock muskets, rifles, and pistols, as well as 1,421 Hall's flintlock rifles, had been scheduled for sale (as well as the altered muskets and 53 of the 357 Model 1842 percussion muskets), all were still in store as of 25 April 1861 when T.B. Flourney notified Confederate Secretary of War L.P. Walker that he would have to arm the 1st Arkansas Infantry (P.A.), further explaining that "There are only thirteen hundred and sixty four percussion guns; balance flint locks. The governor has employed the percussion guns to protect the frontier, and declines giving us any until the convention meets on the 6th of May."<sup>52</sup> Since the 1,364 figure agrees with the number of percussion arms in store in October of 1860 (53 altered muskets, 357 percussion smoothbores, 900 rifle-muskets, and 54 percussion rifles), it is evident that no arms had been sold.

After the secession of Arkansas was formalized on 6 May 1861, the arms at Little Rock would be used to arm Arkansas volunteers for Confederate service. Since the number of percussion arms on hand was minimal, most of the units (particularly those destined for service in the

western theater) were armed with flintlock muskets and flintlock Hall's patent rifles. By 20 May 1861, Brigadier-General Ben McCulloch would report from Little Rock that "although a large amount of arms and munitions of war was secured by the capture of the arsenal at this place, there is now but a small amount left. At present there are only 2,260 flintlock muskets (new), 60 percussion muskets, and 160 Hall's rifles."<sup>53</sup> Inspection reports from January of 1862 indicate that flintlock muskets were the prime armament of the 6th, the 7th, and the 8th Arkansas Infantrys, and probably also of the 5th Arkansas Infantry. Those same reports indicate that the four companies of Kelly's 9th Arkansas Battalion were armed with Hall's rifles.<sup>54</sup> As already indicated, Desha's 7th Arkansas Battalion was similarly armed with Hall's rifles. Receipts of arms at the Corinth, Mississippi Ordnance Depot further indicate that the 9th Regiment Arkansas Infantry, the 10th Regiment Arkansas Infantry, and the 1st Regiment Arkansas Mounted Infantry (afterwards called the 3rd Arkansas Cavalry) were all armed at least in part with Hall's rifles.<sup>55</sup> Since the flintlock muskets had been issued without alteration, it is presumed that the Hall's rifles also were not altered at the Little Rock Arsenal prior to issuance. Of those turned in at Corinth, Mississippi in April of 1862, some would be reissued in flintlock to Mississippi units and others would be sent for alteration to percussion at both the Holly Springs and Columbus, Mississippi arsenals.

#### MISSISSIPPI

The 313 Hall's patent flintlock rifles that Mississippi had received under the 1808 Militia Act evidently were all in the hands of the state militia (or lost) by 1861. While at Corinth in early 1862, at least two Mississippi units were partly armed with Hall's rifles. On 27 March 1862 Major A.B. Hardcastle, commanding the 3rd Mississippi Battalion, turned in a number of arms, including "7 Hall's Rifles without Bayonets."<sup>56</sup> Two weeks later, on 6 April the newly formed 32nd Mississippi Infantry of Colonel M.P. Lowrey was issued an assortment of arms that included "105 Hall's Breech Loading Rifles", as well as 100 altered muzzleloaders and 40 original percussion muskets. On the following day, additional armament was drawn by Colonel Lowrey, including 35 more Hall's rifles, 85 percussion muskets (cal. .69), and 75 shotguns.<sup>57</sup>

Those 140 Hall's rifles were most likely from among the rifles previously turned in by the 7th Mississippi Battalion, the 9th Arkansas Infantry, and the 51st Tennessee Infantry, which receipts by the depot totaled 510 Hall's rifles through 4 April. The practice of reissuing arms recently turned in was confirmed by Military Store Keeper

W.H. McMMain. On 6 May 1862 McMMain advised Thomas Jordan, Assistant Adjutant-General of the Confederate Army of the Mississippi, that "I have in this department a number of arms that have been issued and returned six or seven times since the 1st of April. They are flintlock muskets & Hall's Rifles, both flint & percussion."<sup>58</sup> With the 140 issued to the 32nd Mississippi Infantry and the 134 to the "5th"/9th Alabama Battalion, the number remaining from the 510 recent receipts subject to issue as of 7 April should have been 236. On 16 April 1862, the small arms at the Ordnance Depot at Corinth, Mississippi were inventoried. Among the numerous classes of longarms reported were the presence of "180 Rifles, Hall's flintlock" and "50 Rifles, Hall's, percussion."<sup>59</sup> The total of these two classes (230) would represent all but six of the balance of arms turned in by the Mississippi, Arkansas, and Tennessee units through 4 April, were it not for the shipment of other Hall's patent arms to the two major repair facilities in Mississippi.

On 8 April, seventeen of the Hall's patent rifles at Corinth were sent to the Holly Springs Armory for repair and/or alteration.<sup>60</sup> That shipment was only the first group of those rifles sent to the Holly Springs Armory; a second group of 48 Hall's rifles was to follow on 16 April.<sup>61</sup> On 2 May 1862 three more would follow, for a total sent to Holly Springs of 71 rifles.<sup>62</sup> The Holly Springs Armory shipments were followed by two shipments of miscellaneous arms to the Columbus, Mississippi Ordnance Depot.

Among the 997 damaged arms sent to the Columbus Depot on 3 May 1862 were "9 Hall's Carbines."<sup>63</sup> Three weeks later another shipment of 1,991 arms was sent to the care of Lieutenant-Colonel W.R. Hunt at Columbus, Mississippi. That shipment included another "337 Hall's Carbines."<sup>64</sup> (Despite the reference to these arms as "Hall's carbines", it is more likely that they were rifles. However, it is not impossible that the "carbine" appellation was correct, since at least four southern arsenals had significant quantities of Hall's carbines as of October of 1860: Mount Vernon, 192; Baton Rouge, 616; Little Rock, 267; and San Antonio, 793; totaling 1,868. And, at least four cavalry units of the Confederate Army of the Mississippi were partly armed with either Hall's carbines or Hall's rifles: Colonel W. L. Jackson's 7th Tennessee Cavalry, Colonel Wirt Adams' 1st Mississippi Cavalry, Lieutenant-Colonel Benjamin F. Danley's 3rd Arkansas Cavalry, and Major Lawrence S. Ross' 6th Texas Cavalry.)<sup>65</sup> While it may be questioned whether the 346 Hall's patent arms sent in May were carbines or rifles, the Columbus Depot/Briarfield Arsenal definitely did receive Hall's rifles in June. Among a shipment of 1,108 longarms received for at the Columbus Depot on 14 June 1862 by Military Store

Keeper John E. Logwood were "148 Hall's Rifles."<sup>66</sup>

While it is presumed that the Hall's rifles were forwarded to Holly Springs Armory and the Briarfield (Columbus) Arsenal for either repair or alteration, that may not necessarily have been the case. On 6 May 1862 Military Store Keeper W.H. McMMain, then stationed at the Corinth Depot, advised Thomas Jordan, Assistant Adjutant-General of the Army of the Mississippi, that he had problems with two classes of arms then on hand:<sup>67</sup>

I have in this department a number of arms that have been issued and returned six or seven times since the 1st of April. They are flintlock muskets & Hall's Rifles, both flint & percussion. I would respectfully request instructions what to do with these arms. Would it not be well to send the flintlock arms to be repaired at some armory and altered to percussion? The Hall Rifles I have not issued to anyone from the fact that I am not able to procure sufficient ammunition for those already in use.

McMMain's letter opens the possibility that the Hall's rifles and carbines were sent to Holly Springs and Columbus, not necessarily for repairs and alterations, but rather for want of a suitable supply of ammunition for them. The survival of a number of Hall's patent rifles altered to percussion suggests in a relatively simple manner, however, that a limited number of the Hall's flintlock rifles were indeed altered at one of the two major armory/arsenals associated with the Confederate Army of the Mississippi, later to be redesignated as the Army of Tennessee.

At least six Hall's rifles survive, that were altered to percussion and which bear common characteristics. In each case the breech chamber was first removed at the time of alteration, then the old flintlock battery was removed and the upper and right surfaces of the block were ground level with the sides to remove all projections for the frizzen supports and pan. The vent was drilled and threaded for a percussion cone entering at an angle of about 70 degrees. To present a well-finished upper surface, the indentation for the pivoting of the toe of the frizzen was neatly filled in level with the top of the block. Meanwhile, the top of the old flintlock cock was cut away above the throat hole, and in its place a new section incorporating the striker and spur was brazed to the top of the lower section of the former cock. The new upper portion of the striker was faceted, having top, upper left, upper right, left, and right surfaces. These facets continued into the spur, which bore no cross-hatch knurling. Surprisingly, even though all Hall parts were interchangeable, the blocks usually were struck with an Arabic (and in at least one instance, Roman) numeral that mated the block to its barrel, frame, and stock.

These numbers were struck into the left side of the block, with the corresponding mating number stamped into the top of the wrist of the stock immediately to the rear of the breech supports. To date, the mating numbers that have been observed are all under "50". Examples examined for this survey include:

Mating Numbers	Block Markings	Comments
none	"J.H. HALL/H. FERRY/ U.S./1832"	Rifle barrel and forestock shorted (22½" barrel) for use as a carbine.
"IV"	none	Identified (without substantiation) as having been made at Fayetteville. <sup>68</sup>
"11"	"J.H. HALL/H. FERRY/ U.S./1832"	The "11" is struck twice into the left side of the block; not visible on stock.
"14"	"U S M No. 2"	This rifle is marked in various places as a model arm.
"27"	"J.H. HALL/H. FERRY/ U.S./1834"	This rifle bears the rack number "35" on the comb forward of the buttplate tang.
"35"	"J.H. HALL/H. FERRY/ U.S./1832"	"35" is struck twice into the left side of the block.

*Plates 17 and 18* depict the overall right and left sides of the rifle having mating number "14", altered in this manner. This rifle is doubly unusual: not only is it a Confederate alteration of a Hall rifle, but originally it was one of the Harpers Ferry model rifles for the second-style production at the Armory. The marking "U S M 2" appears on top of the breechblock where the normal armory or contractor name, place, and date usually appear. This same mark also is stamped into the forward top section of the breechblock frame. The figure "2" is stamped into the remnant of the original flintlock cock (on the left side), and on top of the barrel about 1⅛ inch forward of the frame. *Plate 19* depicts the left side of the breech area of the rifle so altered and numbered "14" (with breechblock raised to load), showing the location of the number "14". *Plate 20* depicts the left side of the breechblock removed from the rifle, showing the exact location of the number "14". Comparing the numbering of the model rifle with the similarly-numbered "14" musketoon discussed earlier and shown in *Plate 12*, one can see that, while the numbers are similar, their locations are different. *Plate 21* shows the location and size of the figure "14" to the rear of the model rifle's frame, on top of the wrist of the stock.

As indicated, this rifle bears no marks to indicate its place or date of manufacture. Nevertheless, the pin-fastened bands clearly indicate that the rifle was made at Harpers Ferry, some time after the completion of the 2,000 rifles delivered in 1824 and 1827 under the original 1819 contract and its extension. The "U S M" marks on the rifle also identify it as one of the model rifles used to guide

foremen and inspectors in ensuring interchangeability of parts. The "No. 2" stamping is enigmatic; it may refer to the use of the model rifle to inspect the second variant produced at Harper's Ferry (*i.e.*, that produced with pin-fastened bands), or it may simply be the second model for use at the armory by the foremen and inspectors. Its presence in the field, and with a Confederate-type of alteration, suggests that this rifle may have been one of those sent to Tennessee after the presumed 1856 settlement of the issue of the Hall's rifles used in the Mexican War.

*Plate 22* depicts the overall left sides of two other rifles, both of which are altered to percussion using the original lower section of the flintlock cock as the support for a new brazed shank. The lower rifle is numbered "27" on the left side of the breech block and on the wrist of the stock to the rear of the frame support. It also bears the rack number "35" on the comb of the stock forward of the buttplate tang, and the figure "000" in the stock behind the rear triggerguard strap. The upper rifle, however, differs from others of this style. Although the basic characteristics in the alteration of this arm from flintlock to percussion are similar, the actual head of the hammer is slightly longer than those usually encountered. The mating system, moreover, departs from the use of Arabic figures in favor of a series of dots punched into the metal parts. The mating mark consists of ten dots, struck in two parallel rows of five each. These dots appear on the right side of the shank of the hammer (old portion of the flintlock cock), the top of the breechblock at its rear, and the steel spring support at the rear of the breechblock. The



Plate 17. A Hall's patent rifle used as a model rifle at the Harpers Ferry Armory having alteration from flintlock to percussion attributed to the Holly Springs, Mississippi Armory, and bearing mating number "14"; right side. (Dr. John M. Murphy Collection)



Plate 18. Left side of the rifle shown in Plate 17. (Dr. John M. Murphy Collection)



Plate 19. Close-up view of left side of lock area of the rifle illustrated in Plate 17, showing mating number "14" stamped on breechblock. (Dr. John M. Murphy Collection)

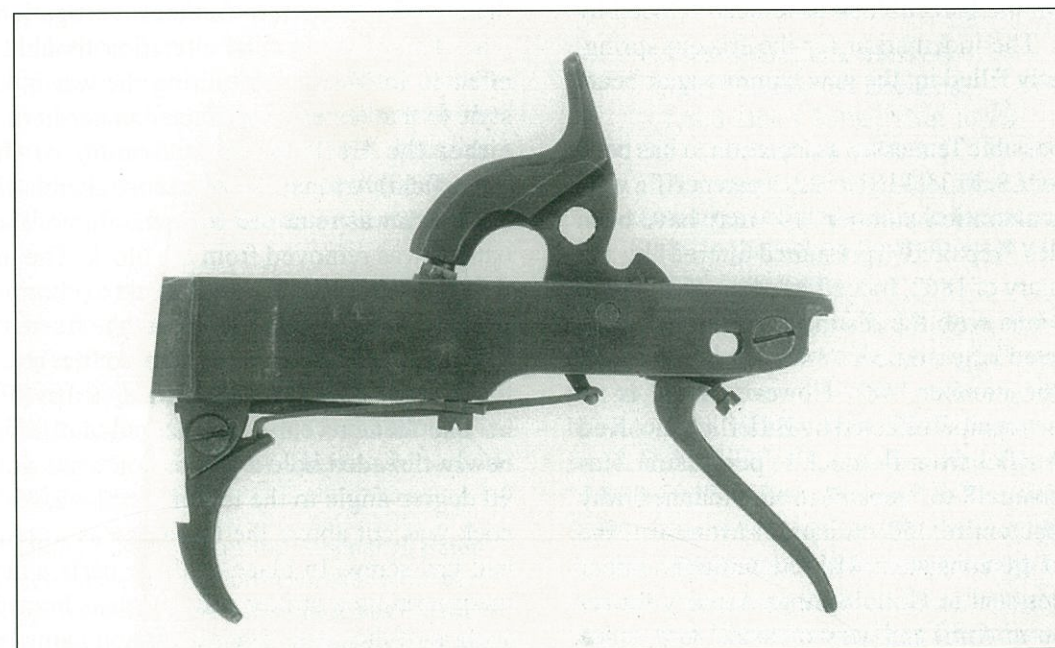


Plate 20. Close-up view showing breechblock removed, and mating number "14", of the rifle illustrated in Plate 17. (Dr. John M. Murphy Collection)

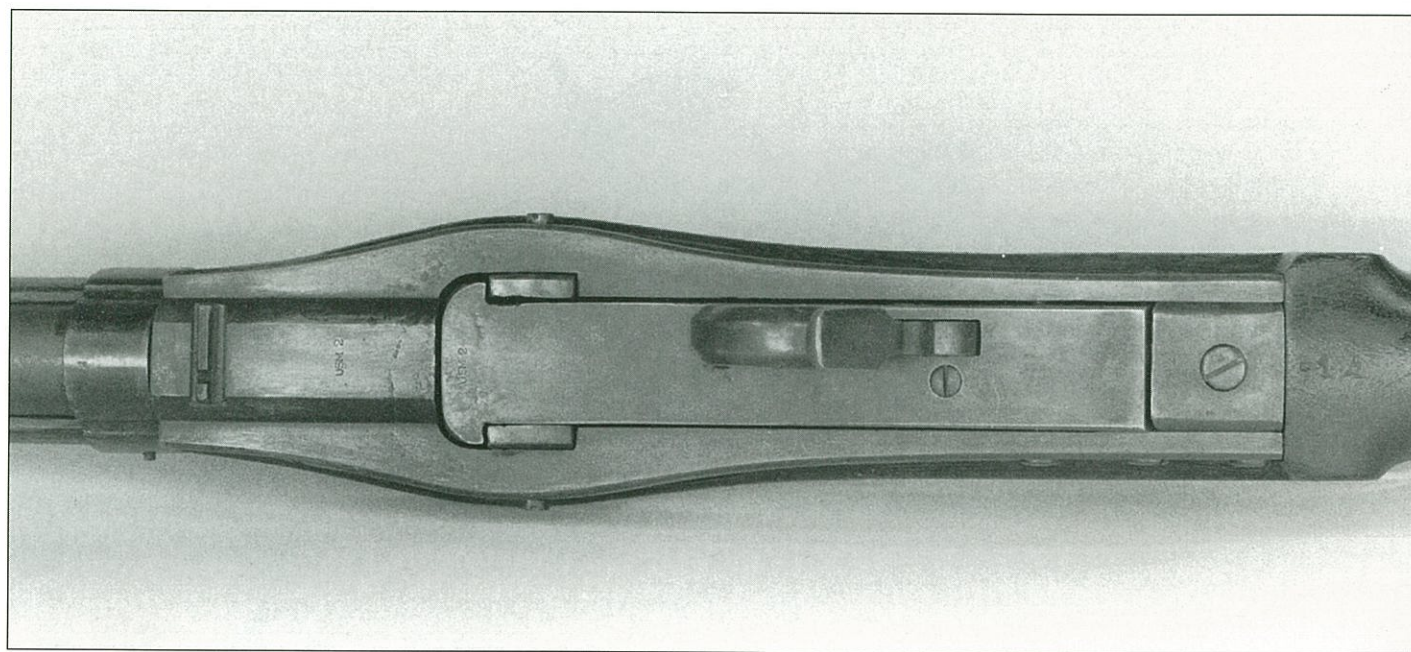


Plate 21. Close-up view of top of breech area of the rifle illustrated in Plate 17, showing "14" stamped in wood of stock at wrist. Note "USM2" marking stamped into breechblock and receiver between rear sight and hammer, denoting this rifle's original use as a model gun at the Harpers Ferry Armory. (Dr. John M. Murphy Collection)

maker and date on the breechblock have been effaced by wear and pitting. The indentation for the frizzen spring, however, was neatly filled in; the new hammer spur bears no knurling.

Due to the possible Tennessee association, it has been suggested that the U.S. Model 1819 Hall's patent rifle with model marks and alteration number "14" may have been one of the 48 rifles "repaired" (presumed altered) by F.J. Bitterlich in February of 1862. Indeed, to date, all observed numbered alterations with the distinctive characteristics applicable to altered rifle number "14" also bear mating numbers under the number "48". However, there is no guarantee that the "repairs" effected by Bitterlich involved altering the Hall's rifles from flintlock to percussion. (Indeed, if he was given 48 to "repair" in that manner, why did he not alter the entire 350 on hand?) Moreover, the low numbers also are consistent with the limited number (68) of Hall's rifles sent to Holly Springs Armory for repair and alteration in April and May of 1862. And, since another similar alteration method has been associated with the work effected in Mississippi in 1861, the authors lean toward a Mississippi association, though admitting that

the question is open to further investigation.

The other form of alteration thought to have been effected in Mississippi during the war is very similar in style to that tentatively effected in northern Mississippi at either the Holly Springs Armory or the Columbus (Briarfield) Arsenal. As with those altered rifles, the chamber block was removed from the frame, and the flintlock battery was removed from the block. The upper and right surfaces of the block were ground to eliminate the projections from the pan, its fence, and the frizzen supports. The indentation in the upper right top of the block that permitted the toe of the frizzen to rotate, however, was not filled in. The former vent was enlarged and threaded; into the newly-threaded hole a percussion cone was screwed at a 90 degree angle to the top of the block. The old flintlock cock was cut above the throat, so as to remove the jaws and jaw screw. In place of those parts a new top section incorporating a striker and spur was brazed to the lower section of the cock. The percussion hammer then was reattached to the chamber block, and the block was reinserted into the frame. No reassembly marks were applied to the rifles during the process of alteration.

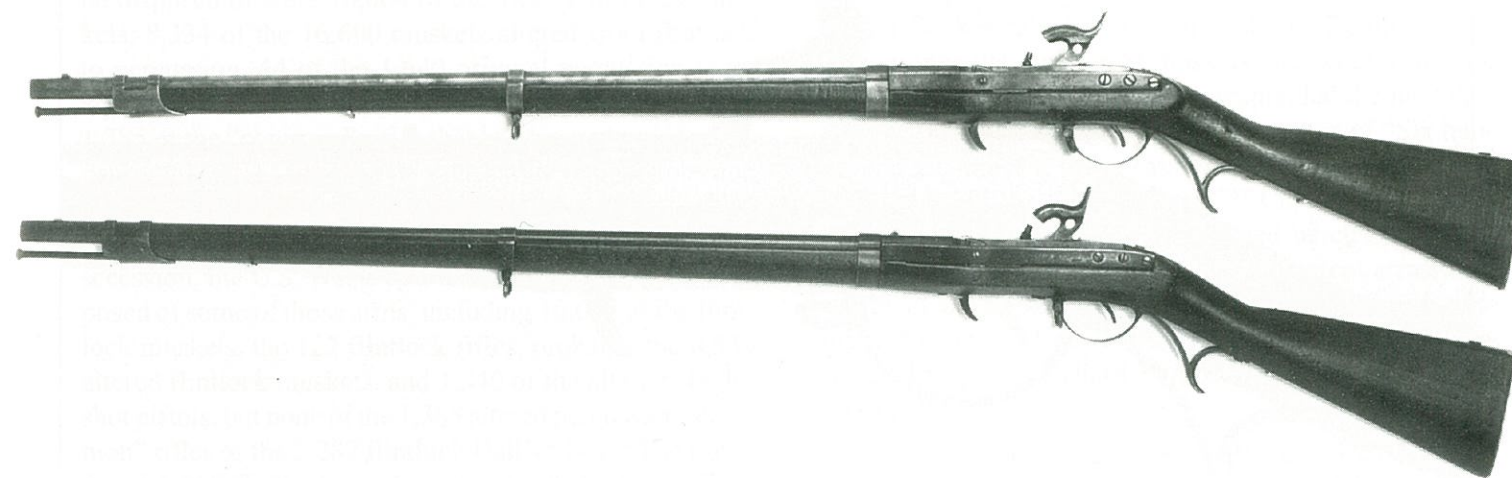


Plate 22. Two Hall's patent rifles altered from flintlock to percussion at Confederate arsenals, showing "Western" alteration style; right sides. (Courtesy Charles L. Foster)

Plate 23 depicts the right side of the breech area of an "1832"-dated Harpers Ferry Hall's patent rifle so altered. Plate 24 depicts the overall right side of an "1834"-dated Harpers Ferry-manufactured Hall's rifle with the same characteristics. In addition to these two rifles, another rifle whose block marks have been obliterated survives, altered in the same manner and also cut to carbine length.<sup>69</sup>

Although bearing no marks to confirm this identification, the rifles so altered have long been associated with alterations effected at the Mississippi State Arsenal in Jackson, on the 1,000 rifles the state had received from Louisiana in 1861. The transfer of those rifles is mentioned in the January 1861 report of Governor Thomas Moore to the Louisiana Legislature.<sup>70</sup>

Soon after taking possession of the Arsenal at Baton Rouge, I received an application from the Governor of Mississippi for aid in arms and munitions of war, in support of the sovereignty of that State against an apprehended attack of a similar character to that against which Louisiana had protected herself... I accordingly directed to be forwarded to the order of

Governor Pettus, the following munitions of war:

- 5,000 Flint Lock Muskets.
- 3,000 Percussion Muskets.
- 1,000 Hall's Rifles, flint locks.

\* \* \* \* \*

The supply of material of these descriptions remaining on hand is ample for the wants of the State. In this action I trust to meet with the approval of the Legislature.

On 29 July 1861, J.M. Baldwin of the Ordnance Department of the "Army of Mississippi" reported from Jackson on the number of "Arms remaining (undistributed) on hand to date." These were "240 Percussion Muskets, altered from flint", "1,430 flint and steel Muskets", and "1,000 Hall's rifles, altering."<sup>71</sup> The alteration of those 1,000 rifles was completed by the end of August, and on 10 and 14 September 1861, respectively, 500 and 100 were issued to Brigadier-General C.G. Dahlgren, commanding Mississippi Volunteers at Pass Christian, Mississippi. On 21 September 1861 the last 400 of those rifles were turned over to the state's Quartermaster-General, W.M. West.<sup>72</sup> No further records survive concerning the rifles thereafter.



Plate 23. Close-up view of right side lock area of an "1832"-dated Hall rifle having alteration from flintlock to percussion attributed to a Mississippi armory. Note unusual hammer configuration. (Courtesy Milwaukee Public Museum)



Plate 24. Another Hall's patent rifle altered from flintlock to percussion with hammer style attributed to a Mississippi armory. (Courtesy Springfield Armory Museum, Milwaukee Public Museum photograph)

LOUISIANA

With the secession of Louisiana that state would inherit the contents of the Baton Rouge U.S. Arsenal. As the locus of deposit for most of the arms used during the War with Mexico, the Baton Rouge Arsenal housed a significant quantity of flintlock arms, many of which had been scheduled for sale as of October of 1860. Among those to be disposed of were 10,004 of the 18,287 flintlock muskets, 8,334 of the 16,600 muskets altered from flintlock to percussion, 44 of the 1,640 original percussion muskets, all 122 of the flintlock "common" rifles on hand, all 1,385 of the "common" rifles that had been altered to percussion, 1,340 of the 3,380 altered single-shot pistols, and all 2,287 of the Hall's flintlock rifles in store.<sup>73</sup> In the three months between the October 1860 report and Louisiana's secession, the U.S. War Department had successfully disposed of some of those arms, including 10,004 of the flintlock muskets, the 122 flintlock rifles, probably the 8,334 altered flintlock muskets, and 1,340 of the altered single-shot pistols, but none of the 1,385 altered percussion "common" rifles or the 2,287 flintlock Hall's rifles.<sup>74</sup> The transfer of 5,000 flintlock muskets and 1,000 flintlock Hall's rifles to Mississippi in January would reduce the respective numbers of the former to 3,283 and the latter to 1,287. The flintlock muskets were enroute to the Mount Vernon Arsenal for alteration in May of 1861, when they were diverted to Tennessee.<sup>75</sup> The Hall's rifles, however, would be sent to the Trans-Mississippi Confederacy.

The arms at the Baton Rouge Arsenal proved to be a matter of controversy between the Confederate Ordnance Department and the State of Louisiana. In late March, the state turned the control but not the ownership of the arsenal over to the Ordnance Department, at the same time removing a large number of arms "sufficient to arm the volunteers being organized throughout the state and to furnish the militia that might be called out in case of an emergency."<sup>76</sup> Even after the arsenal was under Ordnance Department control, the governor of Louisiana continued to order arms from the arsenal for his needs, first at the end of April and then again in early May. By 13 May 1861 the situation had become so exacerbating that the Ordnance Department temporarily withdrew its contingent from the arsenal.<sup>77</sup> On the day after the Confederate Ordnance Department abandoned the arsenal to the state, Louisiana Governor Thomas O. Moore wrote to Secretary of War L.P. Walker, asking "Gentlemen from Northern Texas are here begging for arms. I have some Hall carbines with flintlocks. These will suit them. Will it be agreeable to you for me to give them to the Texans?" Knowing there was little he could do to prevent it, the Secretary of War immediately responded by telegraph: "Exercise your plea-

sure regarding Hall carbines."<sup>78</sup> (Although the Baton Rouge Arsenal had 616 Hall's patent carbines in store as of October 1860, since the arms were initially described as flintlocks they indeed were rifles, not "carbines.") These arms probably were at least in part issued to the 6th Texas Cavalry.<sup>79</sup>

In an attempt to determine the impact of Governor Moore's repeated requisitions, on 11 July 1861 Secretary of War Walker called on Captain John C. Booth to "Report at once the number of muskets and other arms you have in charge."<sup>80</sup> Captain Booth responded the next day, indicating that his meager supplies consisted of "Six hundred and eighty muskets, twenty Hall's carbines, twenty Colt rifles, all the arms on hand."<sup>81</sup> Captain Booth's report may, however, have only covered percussion arms. As late as January of 1862 some Hall's patent arms were still available for the Louisiana militia, for on the 7th Acting Ordnance Officer Major Martin Luther Smith instructed Captain Richard Lambert at the New Orleans "Arsenal":<sup>82</sup>

You will please recognize Gen'l. Graviot's [*sic*—Grivot] orders for arms so long as the Hall's Carbines are on hand, taking Gen'l. Graviot's receipt in each case for the same on the part of the State.

In no case will percussion muskets be issued or muskets that can be altered to percussion.

By virtue of Major Smith's second paragraph, it would appear that he was referring to Hall's flintlock rifles rather than the true Hall's patent percussion carbines. It is unlikely that any of the Hall's patent rifles going into state militia service were subsequently altered to percussion.

Unfortunately, the individuals, firms, or arsenals that altered Hall's patent rifles to percussion did not mark their work. Many individual examples of "crude" or "blacksmith"-type alterations of Hall rifles survive, which cannot be associated with any major attempt on the part of the Southern states or the Confederate Ordnance Department to upgrade those arms for service. These "unique" alterations to percussion may well have been executed in the South. However, where less than two similar examples survive, there is no manner to confirm or deny that speculation. Generally speaking, the more the hammer conforms to a military pattern, the more likely it is that the alteration was the product of a major effort involving more than a single arm.

Plates 25 and 26 depict the breech area of a typical "western" alteration that cannot be attributed to any particular state or arsenal. The rifle is typical of Hall production: the overall length remains 52<sup>3</sup>/<sub>4</sub> inches, and the "browned" round barrel is 32<sup>5</sup>/<sub>8</sub> inches long, bored to within 3 inches of the muzzle in .52 caliber, and rifled

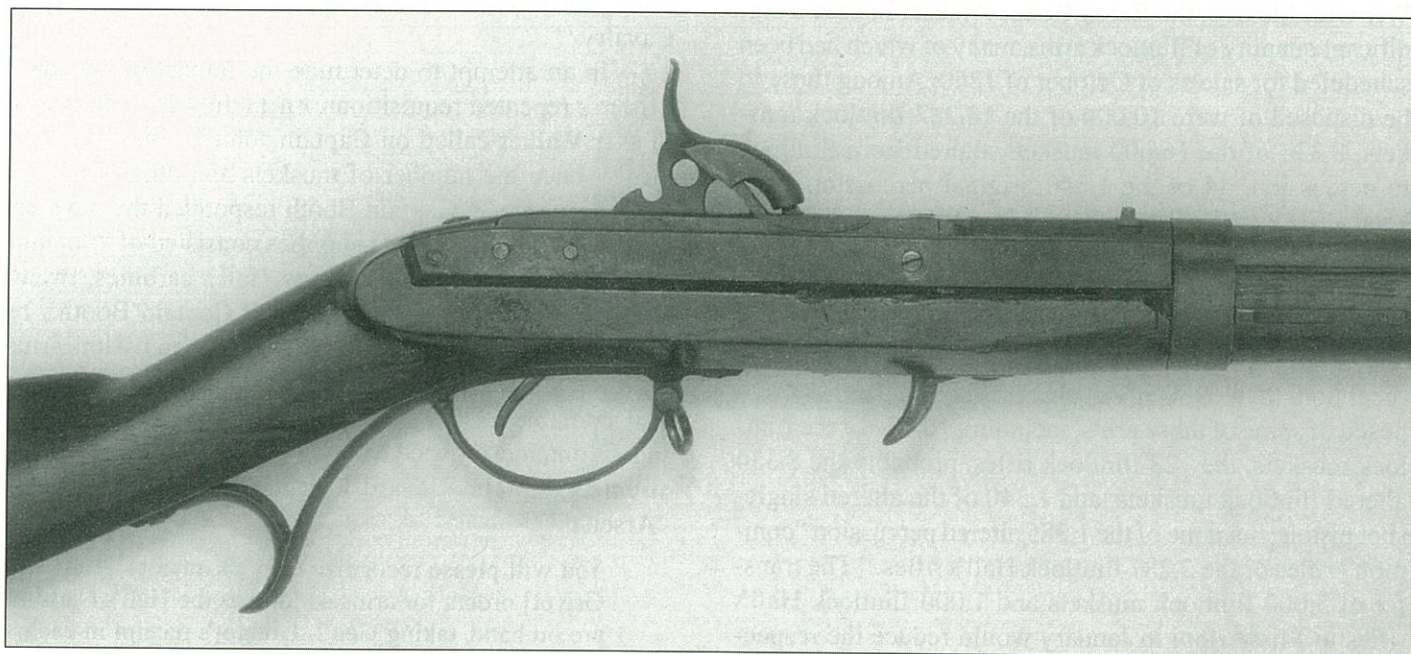


Plate 25. Close-up view of right side lock area of an "1832"-dated Hall's patent rifle having typical "Western" Confederate style of percussion alteration. (Dr. John M. Murphy Collection)

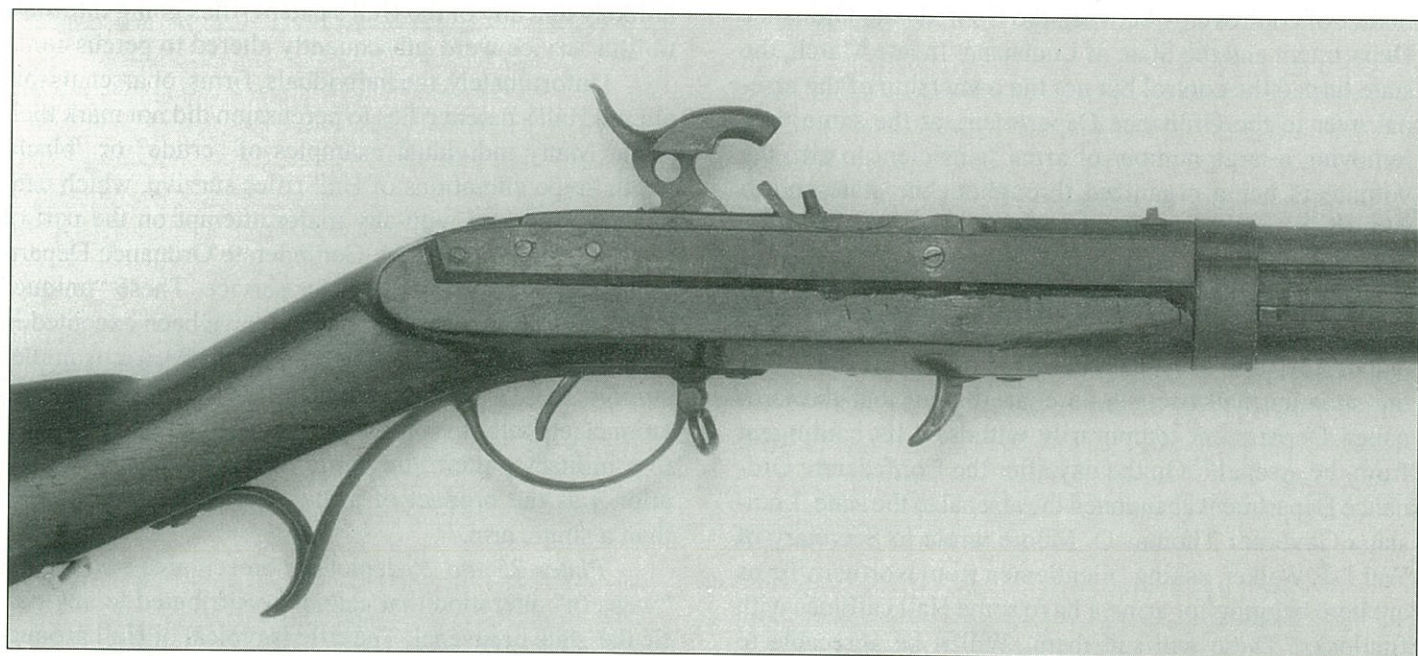


Plate 26. Close-up view of right side lock area of the rifle illustrated in Plate 25, showing hammer raised and fence remaining from old flintlock pan. (Dr. John M. Murphy Collection)

with 16 narrow grooves. To facilitate loading from the muzzle, the upper 3 inches of the bore are larger (.54 caliber), and smooth. The front sight is an offset iron blade integral to an iron block that also serves as a bayonet lug. The rear sight is a fixed iron block with a "V" cut offset to the left, dovetailed into the top of the octagonal section of the barrel's receiver. On this particular rifle the top of the breechblock is marked "U.S./S.NORTH/MIDLTN/CONN./1832", indicating that the rifle was one of the 5,700 arms produced by S. North at Middleton, Connecticut under contract with the U.S. War Department, and that it was made in 1832. In accordance with the early Harpers Ferry pattern rifle furnished to North, the barrel bands of the rifle are secured by iron springs forward of the rear and middle bands, and to the rear of the double-strap front band. Also confirming the contract nature of the rifle, the cavity of the stock below the receiver and breechblock is struck with the inspector's initials "SG", and the left side of the stock near the breechblock has the name of the final

FOOTNOTES:

1. For the annual production figures at Harpers Ferry until 1848, see G. Talcott, Colonel of Ordnance, to Secretary of War W.L. Marcy, 10 June 1848, with enclosures, in "Report of the Secretary of War in Answer to a Resolution of the Senate Calling for Information in Relation to Armories, Arms &c.", Senate Executive Document No. 54, 30th Congress, 1st Session (Congressional serial set no. 509), pp. 14-15.
2. The authors are indebted to Mr. Peter A. Schmidt of Menomonie Falls, Wisconsin for permitting them to review his manuscript, "Hall's Military Breechloaders," scheduled to be published in late 1995 by Mowbray & Company of Providence, Rhode Island.
3. The figures given under "Number" are found in H.K. Craig, Colonel of Ordnance, to Secretary of War Jefferson Davis, 2 March 1855, with enclosure, in "Message of the President of the United States, in Compliance with a Resolution of the Senate of February 28, 1855, Calling for a Statement of the Number of Muskets, &c., delivered to State Armories, Number Sold, &c.", Senate Executive Document no. 75, 33rd Congress, 2nd Session (Congressional serial set no. 756), pp. 3-4. The actual order and delivery dates appear in the ledgers of the "Distribution of Arms to the Militia under the Act of 1808" (entry no. 118), Records of the Office of the Chief of Ordnance (record group no. 156), National Archives, volumes II and III, as follows: Virginia (II, p. 12, order nos. 159 and 163, III, p. 12, order no. 137); North Carolina (III, p. 105, order nos. 106 and 181); South Carolina (II, p. 38, order no. 130, and III, p. 44); Florida (III, p. 76, order no. 419); Tennessee (II, p. 17, order no. 418); Alabama (II, p. 23, order no. 179 and III, p. 98, order nos. 219, 344, and 402); Mississippi (III, p. 70, order nos. 227 and 44); Arkansas (III, p. 75, order no. 629).
4. *Ibid.* Again, the numbers are from Senate Document No. 75 of 1855. The ledgers, however, account for only 95 of the Hall rifles Maryland received, those ordered on 6 Jan. 1836 and delivered on 8 Mar. 1836 (vol. II, p. 49, order no. 3 for 1836), 220 of those Kentucky received, those ordered on 8 Oct. 1839 and

inspector for the U.S. Ordnance Department: "N.W. PATCH."

In altering this arm to percussion the breechblock was removed from the frame, its supports ground off, and the cock and frizzen removed. The block was then shaved of its pan projection on the right side and top, although the fence of the pan was retained. The former flintlock vent was enlarged and threaded, and a percussion cone was inserted at an angle to mate to the blow from the percussion hammer. To create a percussion hammer, the upper parts of the flintlock cock were cut away above the throat hole, and a shank and spur-piece were brazed in their place. The hammer was then reattached to the breechblock and the breechblock reinstalled into the frame, and the alteration was complete. The soldier to whom it subsequently was issued at least now had a percussion rifle, though one that leaked a disconcerting amount of gas at the breech. Still, a leaky gun was better than none at all.

5. "Statement of 'the number and kind of small firearms at different arsenals' and 'The number and kind of these arms now remaining on hand, which were recommended to be sold by the statement of inspections of November-5th 1857 and where they are'—Made in answer to a call from the Secretary of War dated October 10th 1860." A copy of this manuscript document from the Records of the Office of the Chief of Ordnance (record group no. 156), National Archives, was kindly furnished to the authors through the courtesy of Mr. Paul Davies.
6. Alabama Governor's Papers (A.B. Moore), 1857-1861, "Military Correspondence 1860-1861", record group no. SG 6435, Alabama Department of Archives and History; folder 1 (1860), J.R. Powell to Governor A.B. Moore, 6 December 1860; see also letter of 7 December 1860 in the same file. Alabama's first agent sent North in 1860 had been Ben McCulloch, who traveled to the north in July of 1860.
7. Georgia Governor's Papers—Brown, Joseph E, 1857-1861, in Telamon Cuyler Collection (record group no. 1170), University of Georgia Library, Special Collections Division; Athens, Georgia; box 55, folder "November, 1860."
8. Charleston *Daily Courier*, 30 November 1860, p. 3, col. 2. The advertisement was repeated in the *Courier* on 4 Dec. (p. 3, col. 3), 5 Dec (p. 3, col. 3), 6 Dec. (p. 3, col. 1), and 7 Dec. (p. 3, col. 3). It is not known if any purchases were made in South Carolina as a result of Bennett's offer.
9. The figures in this paragraph are based on the published annual reports of the Adjutant-General of the Commonwealth for

the years cited.

10. Supplemental Message from the Executive of the Commonwealth, Showing the Military and Naval Preparations for the Defense of the State of Virginia, doc. no. 36, of the Journal of the 1861 Virginia Convention, pp. 39 and 41.
11. Military Board, Letter Book, July 1-August 19, 1861; North Carolina Adjutant-General's Records, A.G. 17, North Carolina State Archives, p. 25—Warren Winslow, Secretary Military Board, to Colonel James A. J. Bradford, N.C. Arsenal, Fayetteville, N.C., 5 July 1861. Winslow inquired in response to Bradford's letter of 4 July: "...what sort of arms are the 448 breech loading guns? Can they be used for Cavalry?" On 16 July 1861, Winslow instructed Bradford: "You will please have the Hall's rifles now at the arsenal under your command prepared for cavalry service, cutting them off, and altering them to percussion Rifles." See Letter Book, p. 66.
12. Ordnance Department, Record of Issues, May, 1861-July, 1862, North Carolina Adjutant-General's Records, A.G. 22, North Carolina State Archives, pp. 40 and 202. These pages cover the delivery to the North Carolina arsenal of 6 "Fl. & St. Hall's Rifles (in bad order)" on 6 August 1861 (p. 202); 26 "Flint & Steel Hall's Rifles" on 26 August 1861 (p. 40), and 12 "Fl. & St. Hall's Rifles" on 20 December 1861 (p. 202). The last delivery is also recorded on 23 December 1861 (p. 494), but as 12 "Hall's Carbines".  
The confirmation that these 12 arms were indeed rifles is found in a letter from Adjutant-General J.G. Martin to Captain C. M. Andrew, 2nd North Carolina Cavalry, at Washington, NC, dated 10 December 1861, wherein Martin states "Send the box containing the twelve Hall's Rifles to this City to Captain Lawrence." (Adjutant-General, Letter Book, March 15, 1847-July 13, 1861, North Carolina Adjutant-General's Records, A.G. 13, North Carolina State Archives, p. 49.)  
The 26 Hall's rifles received on 26 August 1861 came via the Raleigh & Weldon North Carolina Central Rail Road Depot on 22 August (see A.G. 22, p. 419), and included "(1 broken)". Evidently these had been in Weldon, North Carolina, for on 2 August 1861 Warren Winslow instructed Captain W. W. Pierce at that place to "sent to Lt. Lawrence, Raleigh... 15 "Call's [sic—Hall's] Rifles, 12 condemned do..." (A.G. 17, p. 122.)
13. Ordnance Department, Records of Issues, May, 1861-July, 1862, North Carolina Adjutant-General's Records, A.G. 22, North Carolina State Archives, pp. 8-9.
14. *Ibid.*, pp. 466-467.
15. For the full story of the creation of the adapted cavalry carbines from these rifles, see John M. Murphy, *Confederate Carbines & Musketoons* (Dallas: Taylor Publishing Co., 1986), pp. 93-100.
16. Ordnance Department, Day Book, December 16, 1861-June 1, 1863, North Carolina Adjutant-General's Records, A.G. 27, North Carolina State Archives, pp. 52 and 57. Hereafter this record group will be cited simply as "Day Book (A.G. 27)", with appropriate page numbers.
17. Day Book (A.G. 22), pp. 57 and 89.
18. Confederate Citizens & Business File (entry no. 18), War Department Collection of Captured Confederate Records (record group no. 109), National Archives; microcopy M346, roll 459, file of M.D. Holloway, NC voucher no. 112 of 7 March 1862. Hereafter references to this source will be simply cited as "Confederate Citizens & Business File" with appropriate roll number and name file.
19. Day Book (A.G. 27), pp. 89 and 113.
20. Confederate Citizens & Business File, roll 459, file of M.D. Holloway, NC voucher no. 1, 1 April 1862.
21. Day Book (A.G. 27), pp. 113 and 138; Confederate Citizens & Business File, file of M.D. Holloway, NC voucher no. 50 of 22 April 1862.

22. Day Book (A.G. 27), pp. 139 and 187; Confederate Citizens & Business File, file of M.D. Holloway, NC voucher no. 169 of 28 May 1862. The included \$18.00 for altering the 9 Hall's rifles at \$2.00 each, \$5.00 for restocking one of the rifles, \$60.00 for altering the 20 rifles at \$3.00 each, \$.25 for "1 new tube" (presumably a ramrod tube), and \$4.00 for 8 springs at \$.50 each.
23. Day Book (A.G. 27), p. 188.
24. Day Book (A.G. 27), pp. 187 and 230; Confederate Citizens & Business File, file of M.D. Holloway, NC voucher no. 90 of 9 August 1862. The alterations on the 12 muskets amounted to \$33.00 (\$2.75 each) and on the 14 rifles to \$42.00 (\$3.00 each); in addition to the alterations, Holloway replaced 3 missing sling swivels (for \$.75), made 5 ramrod heads at \$.15 (for \$.75), and repaired a breech pin and made 1 sear spring and 2 tumbler screws at the respective prices of \$.15, \$.25, and \$.20.
25. Day Book (A.G. 27), p. 230.
26. Day Book (A.G. 27), p. 247. For the price paid for the work, see Ordnance Department, Ledger, 1861-1865, record group A.G. 32, North Carolina State Archives, p. 132. Further references to this source will be simply cited "Ledger (A.G. 32)" with appropriate page number.
27. Day Book (A.G. 27), pp. 247, 254, and 274; Ledger (A.G. 32), p. 132. See also Confederate Citizens & Business File, file of M.D. Holloway, NC voucher no. 8 of 7 October 1862.
28. Day Book (A.G. 27), p. 274; Ledger (A.G. 32), p. 132. See also Confederate Citizens & Business File, file of M.D. Holloway, NC voucher no. 67 of 22 November 1862.
29. John M. Murphy, *Confederate Carbines & Musketoons* (Dallas: Taylor Publishing Co., 1986), pp. 96-99. In addition to the two 1832 Hall's rifles altered to carbines ("B/55" and "B/70") and the rifle described in the text ("K/42"), it should be noted that this same letter/number code has been encountered on at least one original flintlock Harpers Ferry Hall's patent rifle, also dated "1838" and numbered "H/74". The letter/number code is thought to represent a means of numbering the reinspected arms by lots, each alphabetic letter representing a lot of 100, and the number below the letter representing the individual gun in the lot. Because the highest number observed ("K/42") would, therefore, represent the tenth lot (presuming the letter "J" was deleted from the series), at least 1,042 rifles were so marked. And, because North Carolina only had received a maximum of 700 rifles, the mark could not have been applied at Fayetteville.
30. This percussioned carbine adapted from a Hall's patent flintlock rifle is in the collections of the Springfield Armory Museum, old collection no. 688, SPAR no. 6234. For an illustration of this carbine, see John M. Murphy, *Confederate Carbines & Musketoons* (Dallas: Taylor Publishing Company, 1986), pp. 242-243, illustrations 281 and 282.
31. The figures for the three dates appear in John Henry Spangler's *Arming the Militia: South Carolina Longarms 1808-1903* (MA Thesis, University of Florida, 1977), pp. 58, 71, and 100. Unfortunately, Mr. Spangler confused the flintlock Hall rifles received by the state in 1832 with a shipment of 120 U.S. Model 1807 Indian carbines that had been modified by Springfield Armory by affixing bayonets to them so as to suitable for cadet usage; see pp. 62-64 of his thesis.
32. U.S. War Department, *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies* (Washington: Government Printing Office, 1880-1901), series I, vol. 1, pp. 6-9. Further references to this compilation will be simply cited as *O.R.*, with appropriate series, volume, part, and page numbers.
33. One of these rifles is fully illustrated in Celeste C. Topper and David L. Topper's *Civil War Relics from South Carolina* (Fairfax, SC: C.C. & D.L. Topper, 1988), p. 100.
34. *O.R.*, series IV, vol. 1, p. 292—J. Gorgas, "Statement of

- small-arms on hand at the different arsenals when taken possession of by the several States", 7 May 1861. For details of the surrender of the U.S. Arsenal at Augusta on 24 January 1861, see *O.R.*, series I, vol. 1, pp. 320-321.
35. *O.R.*, series I, vol. 1, pp. 349-350.
36. *O.R.*, series I, vol. 1, p. 332.
37. As an example, in his inspection report of units in Florida, dated 10 February 1864, Captain L. Jaquelin Smith, Assistant Chief of Ordnance for the Department of South Carolina, Georgia, and Florida, indicated that Company I, 2nd Florida Cavalry was armed with 40 Maynard rifles, 6 Mississippi rifles, 5 Enfield rifles, 30 carbines of various calibers, 5 double barreled shotguns, and 7 "Hall's carbines." See *O.R.*, series I, vol. 35, part 1, pp. 582-588, esp. p. 583.
38. *O.R.*, series I, vol. 1, pp. 349-350, Captain William Maynadier to Secretary of War J. Holt, 3 January 1861.
39. As of 30 June 1861, the Warrington Navy Yard at Pensacola had yielded 53 muskets, 398 Colt's revolvers, 1,000 unserviceable navy pistols, and 50 short swords; see *O.R.*, series IV, vol. 1, p. 620—"Statement of small-arms subject to the order of the Ordnance Department, with their places of deposit, on the 30th of June, 1861." No report had been received from the Norfolk Navy Yard at that time; however, the Charleston *Mercury*, under an article titled "Recovery of Arms at Norfolk", reported on 28 June 1861 (p. 4, col. 1), that: "Carbines, which the Lincoln scoundrels, in their flight threw over board, are daily being recovered and made almost as good as new. They are represented as very accurate, and throw a ball with great velocity, and are sold for a little over six dollars a piece. This is not one-quarter of the value of the piece, but is made a charge by those who get them as a light compensation."  
Another "1824"-dated Harpers Ferry rifle altered to percussion, but with a flat-sided new percussion hammer, survives in the collection of Dr. John M. Murphy. This rifle has been shortened to carbine length. See John M. Murphy, *Confederate Carbines & Musketoons* (Dallas: Taylor Publishing Co., 1986), pp. 240-241, illustrations 278, 279, and 280.
40. Benet, Stephen V. (ed.), *A Collection of Annual Reports and Other Important Papers Relating to the Ordnance Department* (Washington: Government Printing Office, 1878), volume II, p. 587—H.K. Craig, Colonel of Ordnance, to Jefferson Davis, Secretary of War, 10 October 1856.
41. Report of the Keeper of Public Arms, of Tennessee, 4 January 1861, in *Senate Journal of the Extra Session of the Thirty-Third General Assembly of the State of Tennessee, which Convened at Nashville on the First Monday in January, A.D. 1861* (Nashville: J.O. Griffith & Co., 1861), p. 24.
42. Confederate Citizens & Business File (entry 18), War Department Collection of Captured Confederate Records (record group no. 109), National Archives; microcopy M346, roll 67, file of F.J. Bitterlich, voucher no. 257 of 13 February 1862.
43. —, *Tennesseans in the Civil War: A Military History of Confederate and Union Units with Available Rosters of Personnel* (Nashville: Civil War Centennial Commission, 1964), Vol. 1, pp. 288-291.
44. Record of Ordnance and Ordnance Stores Issued, Ordnance Depot, Corinth, Miss. Feb.-May, 1862, War Department Collection of Captured Confederate Records (record group no. 109), National Archives, chapter IV, vol. 123, unpaginated, see receipts for 3 and 4 April 1862. The arms that the 51st received in return were not that superior; on 7 April for example, Captain Edward O. Shelton, commanding Company A, received "50 flint muskets" as his armament.
45. (Colonel H.K. Craig), Report of the Chief of Ordnance, 11 November 1856 (appended to the Report of the Secretary of War for 1855-1856, Congressional serial set no. 894, p. 402-

- 404—report on Mount Vernon Arsenal by Captain J. Gorgas.
46. For the seizure of the Mount Vernon Arsenal, see *O.R.*, series I, vol. 1, pp. 327-327. The report by Major Gorgas of 7 May 1861 indicates only 19,455 arms were turned over to the Confederacy from the Mount Vernon Arsenal, comprising 20 rifle-muskets, 17,370 muskets, 2,032 percussion rifles, and 33 percussion pistols; no "Hall rifles" are listed. See *O.R.*, series IV, vol. 1, p. 292.
47. Record of Ordnance and Ordnance Stores Issued, Ordnance Depot, Corinth, Miss., Feb.-May, 1862, War Department Collection of Captured Confederate Records (record group no. 109), National Archives, chapter IV, vol. 123, unpaginated, issue column for 7 April 1862.
48. *Ibid.*, receipts column, 23 April 1862. With the 24 "Hall's Rifles" Blount turned in "3 Muskets" and "24 Bayonets". A separate receipt, also dated 23 April but incorrectly listing Blount as commanding the 25th Louisiana Volunteers, records Blount's delivery of "60 Minie Muskets", "48 Shot Guns", and "126 Country Rifles."
49. *Ibid.*, issue columns for 2 April 1862 and 7 April 1862. It should be noted that the Hall's patent rifles were not the only armament of this battalion, as the issue of 2 April 1862 also included 11,000 rounds of musket cartridges.
50. *O.R.*, series I, vol. 1, pp. 638-646.
51. *O.R.*, series IV, vol. 1, p. 292.
52. *O.R.*, series I, vol. 1, pp. 688-689—T.B. Flournoy to L.P. Walker, 25 April 1861; see also p. 688, T.B. Flournoy to L.P. Walker, 24 April 1861.
53. *O.R.*, series I, vol. 3, pp. 579-580, Brigadier-General Ben McCulloch to Secretary of War L.P. Walker, 20 May 1861.
54. The armament of Brigadier-General S.A.M. Wood's Brigade during either January or February of 1862 indicated that the 5th Arkansas Infantry was armed with "muskets" (Companies B through K) and a limited number of "rifles" (Company A), while the 7th Arkansas Infantry (except for Company K, which was armed with percussion muskets) and the 8th Arkansas Infantry were armed with "flintlock muskets"; it also noted that the 9th Arkansas Battalion (companies A-D) was armed with "Hall's rifles." See Inspection Reports and Related Records Received by the Inspection Branch in the Confederate Adjutant & Inspector's General's Office (entry 15), War Department Collection of Captured Confederate Records, (record group no. 109), National Archives; microcopy M935, roll 18. According to the "Consolidated Weekly report of the Central Army of Kentucky, Bowling Green, January 31st 1862", the 6th Arkansas Infantry was then armed with 551 "flint & steel" muskets, 51 percussion muskets, and 4 "Mississippi" rifles. See Post, Department and Army Rosters and Lists, 1861-1865 (entry 65), War Department Collection of Captured Confederate Records (record group no. 109), National Archives, folder 83.
55. Record of Ordnance and Ordnance Stores Issued, Ordnance Depot, Corinth, Miss. Feb.-May 1862, War Department Collection of Captured Confederate Records (record group no. 109), National Archives, chapter IV, vol. 123, unpaginated, receipt entries for 1 April 1862 ("158 Hall's Rifles, 125 Bayonets, 4,000 Hall's R. Cartridges, 1 box flints (all in bad order)" from the Quartermaster, 9th Ark. Regiment; 28 April 1862 ("15 Muskets, 22 Hall's Rifles") from S.H. Nieman, Q.M., 10th Ark. Regt.; and 30 April 1862 ("3 Hall's Rifles, 2 Sporting Rifles") from Col. Borland's Ark. Cavalry.
56. *Ibid.*, receipts column, 27 March 1862; among the other receipts from the unit at this time were 8 flintlock muskets without bayonets, another with its bayonet, 25 shotguns, 6 percussion muskets, and 1 rifle.
57. *Ibid.*, issue columns of 6 and 7 April 1862.
58. Ordnance Department, Letters and Telegrams Sent by W.H.

- McMain, Military Store Keeper of Ordnance, Apr. 1862-June, 1864, War Department Collection of Captured Confederate Records (record group no. 109), National Archives, chapter IV, Vol. 25, p. 23.
59. Compiled Service Records of General & Staff Officers and Nonregimental Enlisted Men; War Department Collection of Captured Confederate Records (record group no. 109), National Archives; microcopy M331, roll 190—file of H. Oladowski, "Inventory of Small Arms at Ordnance Depot, Corinth, Miss. (16 April 1862)."
60. Record of Ordnance and Ordnance Stores Issued, Ordnance Depot, Corinth, Miss. Feb.-May, 1862, War Department Collection of Captured Confederate Records (record group no. 109), National Archives, chapter IV, vol. 123, unpaginated, issue column for 17 April (8 April).
61. *Ibid.*, issue column for 16 April 1862.
62. *Ibid.*, issue column of 2 May 1862. This last delivery to Holly Springs (McElwaine) probably represented the 3 Hall's rifles turned in by the 3rd Arkansas Cavalry and recorded on 30 April 1862.
63. *Ibid.*, issue column for 3 May, 1862.
64. Record of Ordnance and Ordnance Stores Issued, Ordnance Depot, Corinth, Miss. May 1862, War Department Collection of Captured Confederate Records (record group no. 109), National Archives, chapter IV, vol. 122, unpaginated, issue column about 16 May 1862.
65. For the listings of the number of Hall's carbines at U.S. arsenals as of 10 October 1860, see "Statement of the 'number and kind of small firearms at different arsenals'..." fully cited in footnote 5. The evidence that Colonel Jackson's Tennessee Cavalry was at least partly armed with Hall's arms was the issue of "2,000 Hall's Rifle Cartridges" to the unit on 17 April 1862; Colonel Wirt Adams' Cavalry (erroneously recorded as "Jno Adams 1st Ky. Cavalry") received "2 Hall's Carbines" and "2,000 Hall's Rifle Cartridges" on 25 April 1862; "3,000 Hall Musket Cartridges" were issued to Lt. Col. Danley of the 3rd Ark. Cav. on 28 April 1862; and Major L.S. Ross of the 6th Tex. Cavalry received "3,000 Hall's Carbine Cartridges" on 28 April 1862; see Record of Ordnance and Ordnance Stores Issued, Ordnance Depot, Corinth, Miss. Feb.-May 1862, fully cited in footnote 42.
66. Compiled Service Records of General & Staff Officers and Nonregimental Enlisted Men, War Department Collection of Captured Confederate Records (record group no. 109), National Archives; microcopy M331, roll 159, file of John E. Logwood.
67. Ordnance Department, Letters and Telegrams Sent by W. H. McMain, Military Store Keeper of Ordnance, Apr. 1862-June 1864, War Department Collection of Captured Confederate Records (record group no. 109), National Archives, chapter IV, vol. 25, p. 23.
68. This rifle is depicted and described by Richard Taylor Hill and William Edward Anthony's study, *Confederate Longarms and Pistols: A Pictorial Study* (Charlotte, NC: Taylor Publishing Co., 1978), p. 80. The authors did not examine this arm in person.
69. See Dr. John M. Murphy, *Confederate Carbines & Musketoons* (Dallas: Taylor Publishing Company, 1985), pp. 143-145.
70. *Annual Message of Thomas O. Moore, Governor of the State of Louisiana to the General Assembly, January, 1861* (Baton Rouge: J.M. Tayler, 1861), p. 12.
71. (Lieutenant-Colonel S.G. French), Report of Chief of Ordnance, 5 August 1861 (with appendices), in *Journal of the Senate of the State of Mississippi, at a Called Session Thereof Held in the City of Jackson* (Jackson: E. Barksdale, 1861), p. 164.
72. *Ibid.*, p. 474.
73. "Statement of 'the number and kind of small firearms at different arsenals' and 'The number and kind of these arms now remaining on hand, which were recommended to be sold by the statement of inspections of November 5th 1857 and where they are'..." fully cited in footnote 5.
- Note that the figures for Baton Rouge are confusing, as in some categories the number on hand does not include the number to be disposed of. Moreover, the shipments of 31 January 1860, incorporating 11,480 altered U.S. M1822 muskets, 18,580 original percussion M1842 muskets, and 2,000 U.S. M1841 Robbins & Lawrence contract rifles, seem to have only been partially entered. (The category for the U.S. M1841 rifles, which had listed 103 rifles as of 12 November 1859, accounts for 2,052 rifles in October of 1860 and, therefore accounts for the shipment from Watertown arsenal. The category for altered U.S. M1822 muskets, which accounted for 8,266 in November of 1859, shows the original 8,266 from the 1859 report and another 8,334 among the disposable arms as of 10 October 1860—a total of 16,600. However, the 11,480 altered muskets transferred in January of 1860 do not appear to be part of this report. Of these, 1,000 were sold to Alabama on 27 September 1860, and another 10,000 altered flintlock muskets were disposed of from Baton Rouge between 14 November and 15 December 1860 by sale to the states Alabama, Mississippi and Louisiana, leaving a balance to be accounted for of only 480, if the 8,334 were sold to other parties. The 18,580 original percussion muskets sent from Springfield Armory in January of 1860 definitely do not appear in the October 1860 listing; only the 1,596 U.S. M1842 muskets that appeared in the November, 1859 report appear in the October 1860 list, plus 44 condemned similar muskets scheduled for sale.) However, when the number of arms reported as taken at the arsenals by the states was compiled in May of 1861, the Confederate Ordnance Department credited Baton Rouge with having 29,222 percussion muskets. This figure included both original and altered percussion muskets, and is only 300 off from the total of altered muskets on hand as of 12 November 1859 (8,266) plus the number from the 11,480 January 1860 shipment not sold (480) = 8,746 and the number of original percussion muskets on hand as of 1859 (1,596) plus the number added in January of 1860 (18,580) = 20,176, or a grand total of 28,922.
74. *O.R.*, series IV, vol. 1, p. 292— "Statement of small-arms on hand at the different arsenals when taken possession of by the several States" 7 May 1861 (compiled by Major J. Gorgas).
75. *O.R.*, series I, vol. 52, part 2, pp. 111, 112, and 117-118, respectively Major-General Gideon J. Pillow to Secretary of War L.P. Walker, 7 and 11 June 1861, 20 June 1861, and 3 July 1861. 1,200 of these flintlock muskets were evidently issued to the 2nd Arkansas Infantry and to Marmaduke's 1st Battalion/18th Regiment Arkansas Infantry (afterward redesignated 3rd Confederate Regiment). The other 2,000 may have been issued to the newly formed 12th and 15th Tennessee Infantry; see *O.R.*, series I, vol. 4, p. 555, and vol. 52, part 2, pp. 122-123.
76. *O.R.*, series I, vol. 53, pp. 667-668.
77. *Ibid.*, series I, vol. 53, pp. 675-676, 678, and 681-682.
78. *Ibid.*, series I, vol. 53, pp. 682-683.
79. The 6th Texas Cavalry received "3,000 Hall's Carbine Cartridges" from the Corinth Depot on 28 April 1862; see footnote 65.
80. *O.R.*, series IV, vol. 1, p. 444.
81. *Ibid.*, p. 466.
82. Compiled Service Records of General & Staff Officers and Nonregimental Enlisted Men, War Department Collection of Captured Confederate Records (record group no. 109), National Archives; microcopy M331, roll 230, file of Martin L. Smith, Major M.L. Smith to Captain Richard Lambert, 7 January 1862.