

# THE PALMETTO RIFLE, AN EXAMINATION OF THE SURVIVORS

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Figure 1 Palmetto Rifle. This Palmetto Rifle is original, as issued and unaltered. THIS RIFLE WAS FORMERLY IN DON BRYAN'S COLLECTION, VA CURRENTLY IN THE FREDERICK G. NOVY COLLECTION, CA

The Palmetto Rifle, (Figure 1), and the short-lived Palmetto Armory (1851-1853) were a direct result of the Secession Crisis of 1850 and the victory of the "Fire Eater" Radicals in the South Carolina elections of 1850.<sup>1</sup>

South Carolina believed that the expansion of slavery was critical to the future of Southern interests within the Union and eagerly participated in the Mexican War (1846-1848). South Carolina sent more than 1,000 volunteers into action and suffered over 400 casualties in the campaign. The Palmetto Regiment fought bravely and planted the first flag over the Chapultepec Castle in Mexico City. Following the victory, the United States acquired vast new lands in the West. These new territories would eventually become states and whether these new states would enter the union as free or slave was critical to determining future Southern power within the union.

In South Carolina, Whitemarsh Seabrook was elected Governor in 1848. South Carolina's defenses were among his greatest concerns.<sup>2</sup> In 1849, he contracted with William Glaze, a young entrepreneur and supplier of arms in Columbia, to purchase 274 of the new, battle proven, "Mississippi" US Model 1841 rifles and 100 Model 1842 percussion muskets. Apparently, William Glaze contracted directly with Eli Whitney of New Haven, Connecticut for the 274 Model 1841 rifles which were specially equipped to take a socket bayonet, a specific South Carolina requirement. George Moller pointed out that "these arms were the first Model 1841 rifles known to have been equipped with bayonets."<sup>3</sup>

This unique South Carolina requirement for the Model 1841 rifle to be equipped with a socket bayonet would be a feature of Palmetto rifles as well. Benjamin Flagg, partner of Asa Waters of Millbury, Massachusetts supplied the 100 percussion 1842 muskets

to Glaze through the arms merchant, William H. Smith & Co. of New York. In early 1850, Governor Seabrook again contracted with Glaze for an additional 660 muskets. These muskets again were supplied by Waters and Flagg, and were delivered in May 1850, but by then Governor Seabrook and the State had run out of funds for arms so the South Carolina military authorities simply "condemned" the muskets to avoid payment. In October, Waters dispatched his partner and armory supervisor, Benjamin Flagg to South Carolina to deal with the military authorities and meet with Glaze.<sup>4</sup>

Meanwhile in Washington, Congress passed a patchwork legislation called the "Compromise of 1850". In it, California was admitted as a free state upsetting the balance of power. The South was placated with a strengthened "Fugitive Slave Act". Neither the North nor the South was satisfied with this Compromise. In South Carolina, the "Fire-Eater" Radicals viewed the Compromise as a defeat. These Radicals, who were for immediate secession, swept the elections of 1850 and won both the State House and the Senate. In December 1850, the Radicals took control of the General Assembly, elected one of their own, John Means, Governor, and immediately passed a huge, \$350,000, arms appropriation for the defense of South Carolina. During this brief moment, there was a great business opportunity for Glaze and his new-found partners. It was fortunate Flagg was in South Carolina and with Glaze and Waters, they began to plan for this unexpected but welcome arms contract. Within months, Secession Fever cooled and moderation returned. By the fall elections of 1851, the "Fire-Eaters" were soundly defeated and did not return to power until Lincoln's election in 1860.<sup>5</sup>



Figure 2. This photograph was taken after General Sherman's incendiary visit to Columbia, South Carolina on February 17, 1865. - COURTESY OF THE CAROLINIANA LIBRARY.

In 1850, Glaze formed a partnership with James Boatwright to form the Palmetto Iron Works and acquired a three-story brick building on the corner of Laurel and Lincoln streets in Columbia, South Carolina. This structure would become the Palmetto Armory<sup>6</sup> (Figure 2).

On April 15<sup>th</sup>, 1851 Glaze and Flagg signed a contract with State of South Carolina to provide 6,000 muskets, 1000 rifles, 1000 pairs of pistols and 2000 sabers.

Key provisions of this contract included:

"These arms and their component parts, to be manufactured within the State of South Carolina, of the best material and workmanship as far as practicable, of material and mechanics in the State foresaid"

and:

"..... all arms manufactured under this contract shall be after the patterns adopted and now in the Army of the United States but that the State reserves to herself the right to alter all or any of said patterns by the direction and according to the Judgement of the said Major James H. Trapier, Ordnance officer.... or the Board of Ordnance...."

and:

"It is further understood that all arms.... shall in the process of their fabrication, be subjected at all times to inspection and proof by the Board of Ordnance, or Ordnance Officer...."

Confident in their plans, Glaze and Flagg posted a double surety bond of \$260,000 for completion of this contract.<sup>7</sup>

It should be pointed out here that Glaze, Flagg and Waters had a loop hole in this contract by the term "as far as practicable". Apparently, they never planned to establish a complete and fully operational armory in Columbia but rather from the outset, they intended the "Palmetto Armory" to fit, assemble and finish the requisite arms from parts acquired in New England.

On May 31, 1851, the ambitious and confident Glaze, Flagg and Boatwright signed an additional contract with the State to convert the state's nearly 6,000 flintlock muskets to percussion.<sup>8</sup>

Arms assembled at the Palmetto Armory were obtained by four different pathways.

First, in the Palmetto musket project George Moller showed that the 6,000 Palmetto 1842 muskets were assembled from parts obtained largely from the US Armory at Springfield, Massachusetts.<sup>9</sup> These parts are *not* "Condemned" or second quality. On examination, these parts appear to be surplus or over-run parts of the same quality as Federal standard. Only rarely, is a punch mark found.



Figure 3. This photo shows a Palmetto Musket barrel retaining Springfield "VP Eagle" proof marks. - Courtesy of the Virginia Historical Society (#990.100.125).

Here on the Springfield barrel Galze overstruck the Springfield Eagle with his Palmetto Tree proof mark and added the "W.G&CO." stamp to the left barrel flat. (Note the Eagle's beak appearing out of the top of the Palmetto Tree proof, (Figure 3).

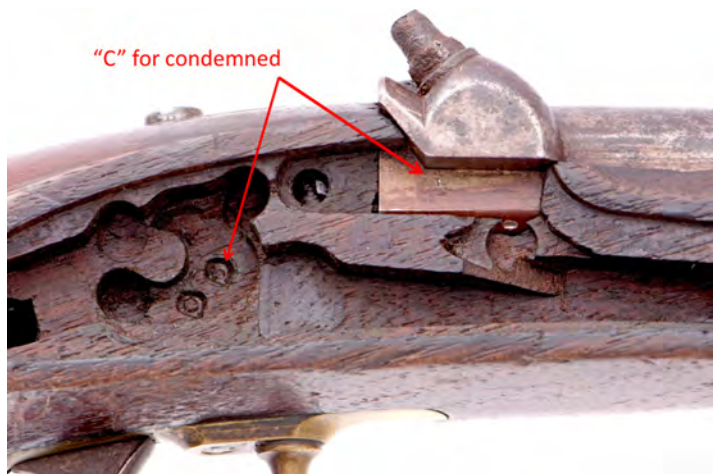


Figure 4. Palmetto pistols were assembled from Federally "Condemned" parts. Note the large Condemnation letter "C" on the barrel below the bolster and twice inside the bridle mortise.

The origin of Palmetto pistols however is an entirely different story. Lewis Southard documented that Asa Waters obtained parts for the assembly of 1000 Palmetto pistols from Ira N. Johnson who had purchased the Henry Aston factory along with his Federally Condemned parts (stamped with a "C" or punch mark). Waters obtained these condemned parts at undoubtedly a very favorable price as they were of little use to Johnson (Figure 4). It is important to note that the Palmetto pistol project was also put off until 1853 at the same time as the Palmetto rifle project.<sup>10</sup>

Robbins & Lawrence, there is evidence of a business relationship between Asa H. Waters and Robbins & Lawrence in the Waters Family Papers at the American Antiquarian Society in Worcester, Massachusetts.

In a 1852 letter (Figure 6), Waters is complaining to Robbins & Lawrence that:

"We have now waited patiently for nearly three months for the Stocking Machinery (for muskets) which you are building for us".<sup>12</sup>



Figure 5 On the left is the large Condemnation "C" struck in a hidden location, in this case the backstrap of an 1842 pistol. On the right is a small fine Federal Inspector initial "c". In this case, the "c" was struck on the exposed surface of a Robbins & Lawrence 1841 rifle trigger bow.

Obviously, the use of the letter "C" for two different purposes could lead to confusion. It should be pointed out that the larger Condemnation "C" marks were struck in non-visible places on a fully assembled arm, whereas the Federal Inspector initials are smaller like the "c" pictured here and struck in visible locations (Figure 5). In this case, the Federal Inspector is James P. Chapman, a civilian employee at Springfield, who also inspected arms for H. Aston and Robbins & Lawrence.<sup>11</sup>

Palmetto Rifles are yet again a different story. Apparently, the Palmetto Rifles were assembled from parts made in New England for this very special rifle. Although there is no archival information from

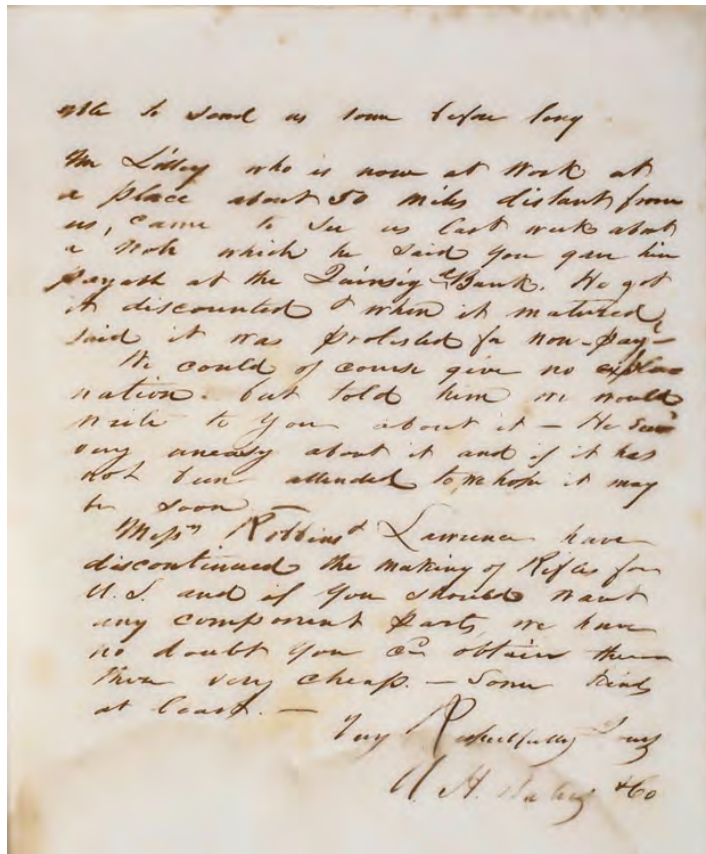


Figure 7 A letter dated December 16, 1852 from Waters to Glaze suggesting that Robbins & Lawrence might be able to supply Model 1841 rifle parts. - Courtesy of the American Antiquarian Society, Worcester, Massachusetts.

It is clear from this December 1852 letter that the Palmetto Rifle project, like the pistol project, had not yet begun (Figure 7). The letter reads:

"Messer Robbins & Lawrence have discontinued the making of Rifles for U.S. and if you should need any component parts we have no doubt you can obtain them there very cheap - Some kinds at least - Very Respectfully yours A.H. Waters & Co."

A letter dated May 16, 1853 (Figure 8) reveals that in April of 1853, Benjamin Flagg was at the Springfield Armory purchasing additional items for the continuing Palmetto musket project. While in New England, it is likely that he was in contact with Asa Waters and working on both the Palmetto pistol and Palmetto rifle projects as well.<sup>13</sup>

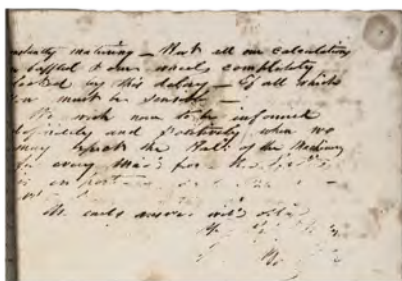
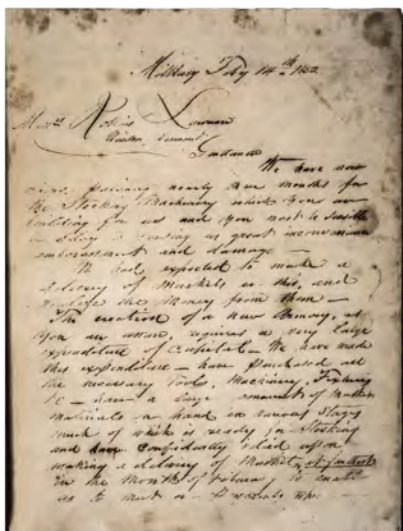


Figure 6 Letter from Asa Waters to Robbins & Lawrence dated "Feby 14<sup>th</sup> 1852". - COURTESY OF THE ANTIQUARIAN SOCIETY, WORCESTER, MASSACHUSETTS.

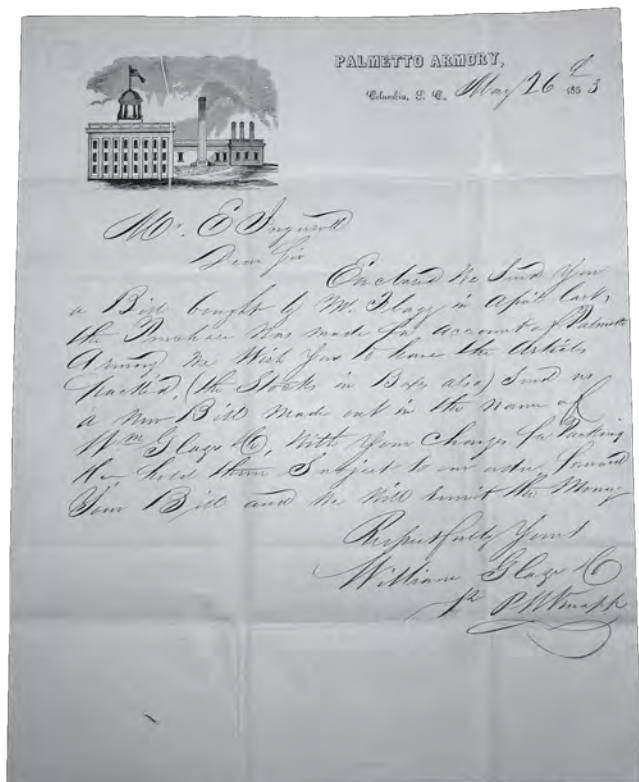


Figure 8 May 16, 1853 letter from W. Glaze to E. Ingersoll, US Army, Springfield Mass. - COURTESY OF PAUL BRILL AND ERNIE HINSON.

Palmetto Swords are yet again an entirely different but far simpler project. Glaze apparently simply purchased all the 2,526 swords, directly from Schnitzler & Kirschbaum of Solingen, Germany likely through the New York arms dealer W.H. Smith & Co. In this case, the swords arrived new, hardened and fully finished requiring only the stamping of the "W. Glaze & Co." and "Columbia SC" markings on the ricasso<sup>14</sup> (Figure 9).



Figure 9 This rare early sword has both Palmetto Army sword markings. Courtesy of The Charleston Museum, Charleston, South Carolina.

Stamping these hardened swords caused a progressive deterioration of the dies. It appears that the "W. Glaze & Co.", die was lost very early in the process and thus it is quite rare but not before it was used on at least one musket barrel.

Palmetto Rifles depart from US standard Model 1841 rifles in number ways.

This "Model" Rifle, No.1 was 1 of 8 made at Harpers Ferry in 1841 and was used as a model for all future

rifle production (Figure 10). Of particular interest is the "implement" or toolbox. Note In the center, there is a circular 50 cent sized mortise. This mortise was intended to hold a round brass handle that screwed on the end of the ramrod and served as a palm-handle to facilitate loading the .54 caliber round ball down the tight 7 groove rifling (Figure 11). This concept was quickly discarded and few of these brass "handles" were ever made and thus are incredibly rare. Although this idea was discarded, the mortise remained and has become a valuable clue to identity of the stock maker. Nearly 93,000 Model 1841 rifles were made and all had this unused mortise. Conveniently, the cutting of this mortise was done in a different manner by each manufacturer and thus leaving a fingerprint by which to identify the stock maker.

Model Rifle Number 1



Figure 10 This rare "Model" 1841 rifle is marked "No.1". - COURTESY OF DONALD R. THARPE, VA



Figure 11 A rare round brass handle is present in its proper mortise in the toolbox. - COURTESY OF GEORGE D. MOLLER, CO.

The Palmetto Rifles appear to be made primarily of new parts. Only some of the buttplates bear the US marking which were then overstruck with SC. All other parts are unmarked. No Federal inspector's initials nor "C" condemnation marks have been found to date. Note the US Model 1841 Rifles and the 1842 muskets and pistols were the first US arms made to gauge, thus allowing interchangeability of parts. So, over the years, some Palmetto rifles acquired Federal parts while Palmetto parts drifted away into Federal rifles. To draw any conclusions, one must seek pure uncontaminated Palmetto Rifles to establish a baseline (Figure 12).



Figure 12 This Palmetto Rifle is original, as issued and unaltered. This rifle was formerly in Don Bryan's collection, VA. and was shown on page 141 of the 1998, "Arming the Glorious Cause"<sup>15</sup>. - COURTESY OF FREDERICK G. NOVY, CA.

The Palmetto Rifle lock has several notable features (Figure 13):



Figure 13 This Palmetto Rifle Lock Plate shows the early intact COLUMBIA S.C. 1852 stamp with both periods, a fine intact "Spiral Tree" Palmetto Armory insignia, and the Palmetto inverted "V" checkering of the hammer spur.

The shape of the hammer seems a little different than either the Eli Whitney or the Robbins & Lawrence. The hammer checkering is an inverted V pattern unlike either Whitney or Robbins & Lawrence, suggesting this may have been done in Columbia.

The lock plates are marked with the Palmetto Armory "Spiral Tree" surrounded by the letters PALMETTO, ARMORY, S\*C. forward of the hammer and "COLUMBIA / S.C. 1852" on the lock tail. Palmetto Rifle lock plates are found both with and without the period following the S in "S.C." following "Columbia" on the lock plate tail. The loss of the period is part of the deterioration of the die. Both Palmetto Rifles and Palmetto Pistols exhibit this finding which would indicate that they were being assembled and marked at the same time.

The Palmetto Rifle lock is struck with the "Spiral Tree" Insignia. There have been many attempts to duplicate this insignia but there is always some obvious imperfection when the suspect plate is compared to an original. This photo shows clearly the features of the genuine marking (Figure 14).

While there was progressive deterioration of the frond and leaflet detail over time, due to the wear and tear of the stamping process, the lettering and the trunk remained intact throughout the use of the stamp to the end (Figure 15).

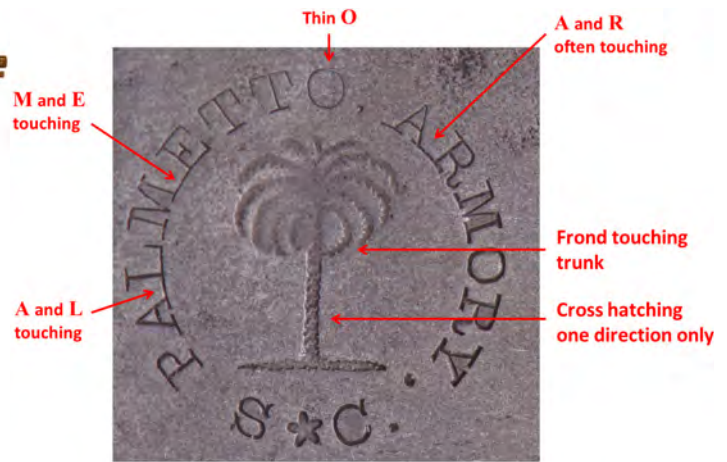


Figure 14 Here many of the key features of the "Spiral Tree" insignia are shown. Comparison of these features with a suspect plate will determine whether the stamp is an original or a fake.



Figure 15 Here is seen the progressive deterioration and loss of Palmetto Tree frond and leaflet detail on later struck examples.

No "bushy tree" markings as seen on muskets have been found on Palmetto Rifles or Pistols, thus far.<sup>16</sup> There is however a report of a "Bushy Tree" Palmetto Pistol published by Topper & Topper in 1988. Although the text states: "Variation of Palmetto pistol. Note bushy palmetto tree encircled with PALMETTO ARMORY S.C.", these photos appear to be of a Palmetto Musket lock with the "Bushy Tree" insignia. It is unclear as to why the authors implied that the "Bushy Tree" insignia was on a pistol.<sup>17</sup>

The Palmetto Rifle toolbox has unique features, which allows us to identify its maker. The router tooling used to cut the "implement" or toolbox is unique to each maker. In this manner, we can eliminate Harpers Ferry, Remington and Tryon as possible makers. The two most likely manufacturers of the Palmetto rifles are Robbins and Lawrence of Windsor, Vermont and Eli Whitney of New Haven, Connecticut.

The US Model 1841 rifle toolbox was drilled for a spare nipple or cone, while the Palmetto Rifle toolbox was never drilled.<sup>18</sup> (Figure 16). Thus, these stocks must have been newly manufactured for the Palmetto Rifle project and cannot have been made from recycled Federal stocks.



Figure 16. Note the US Model 1841 toolbox with spare nipple in place and the Palmetto Rifle toolbox without the hole for a spare nipple.

The Robbins & Lawrence and the Palmetto toolboxes show they are cut with two rows of dime sized router tools and the center mortise was cut in such a fashion as to create a central slightly elevated nubbin which is the hallmark of Robbins and Lawrence toolboxes (Figure 17). These findings are present in all Robbins & Lawrence stocks from 1847 to 1852.

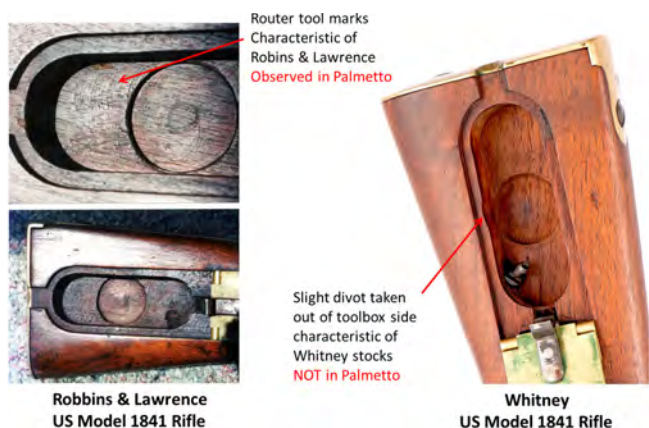


Figure 17 Note the two rows of router cuts and the central nubbins characteristic of Robbins & Lawrence and Palmetto toolboxes. Note the divot cut in the bottom wall of the Whitney toolbox.

In comparison, the Whitney toolbox is cut with a larger 50 cent sized router. In addition, the Whitney router always cuts a slight divot in the bottom wall of the toolbox while cutting the center mortise. This is a constant feature of Whitney toolboxes from 1844-1855.

These physical findings indicate without a doubt that Palmetto rifle stocks were initially cut on Robbins & Lawrence machinery. Drilling of the band spring holes, the ramrod spoon spring mortise and pin, fitting the buttplate and final finishing were done at Columbia. Drilling the holes for the band springs was particularly difficult and there are numerous examples of the pins protruding into the barrel channel.

There must have been an unusual problem fitting the buttplate to the Palmetto stock. Two sets of matching letters would indicate that at two different times, the parts were separated (Figure 18). This is

truly a unique feature of Palmetto rifles and is not seen on any other 1841 rifles. This might suggest that the buttplates came from a different source than the stocks.

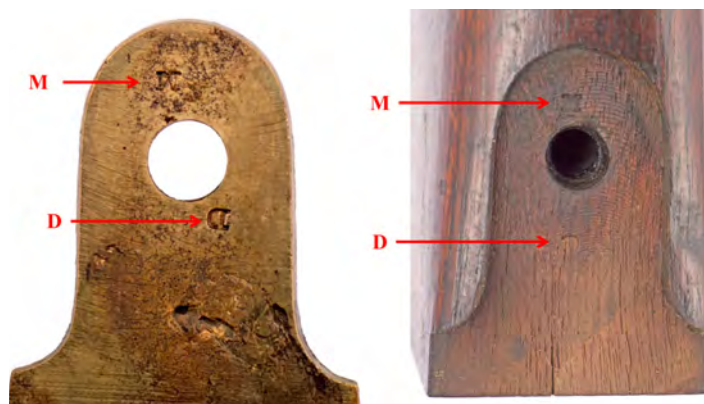
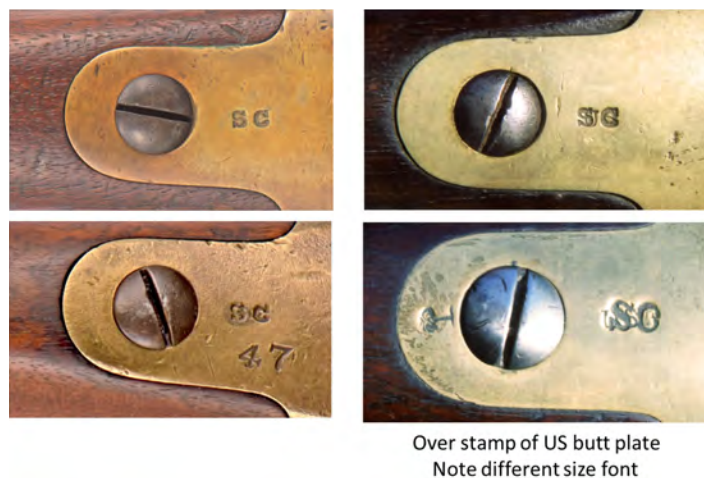


Figure 18 Note matching letters on the underside of the buttplate tang and its corresponding site in the tang mortise of the stock.

Palmetto Rifle buttplates are struck with a plain SC or an SC overstrike of US indicating that some left over buttplates were used (Figure 19). Two different SC fonts were used in overstrikes. Of particular interest is the Palmetto Tree Proof Mark struck on the buttplate tang. This oddity is documented in "Arming the Glorious Cause" 1998, page 160. Don Williams acquired this rifle in 1946 and it remains in his family to this day. One other example is known. These proof mark strikes on a buttplate shows extreme lack of stamping supervision.



Over stamp of US butt plate  
 Note different size font

Figure 19 Buttplate tang markings, some US butt plates were used and overstruck with SC.

Apparently, another activity at the Palmetto Armory was the assembly of the sling swivels to the nose caps and the trigger guards. Here, the protruding rivets or pins were not dressed off as was the Federal standard, a unique Palmetto Armory feature (Figure 20).



Figure 20 Note protruding rivets or pins of sling swivels on both the nose cap and trigger guard.

As noted earlier, South Carolina had required that the 274 rifles made by Eli Whitney in 1849 be equipped for a socket bayonet. This requirement continued with the Palmetto Armory rifle (Figure 21). This tapered muzzle modification allowed use of the Model 1816 bayonet which was likely in good supply rather than the newer M1835/40/42 bayonet, which was then the current Federal standard for the 1842 musket (Figure 22).

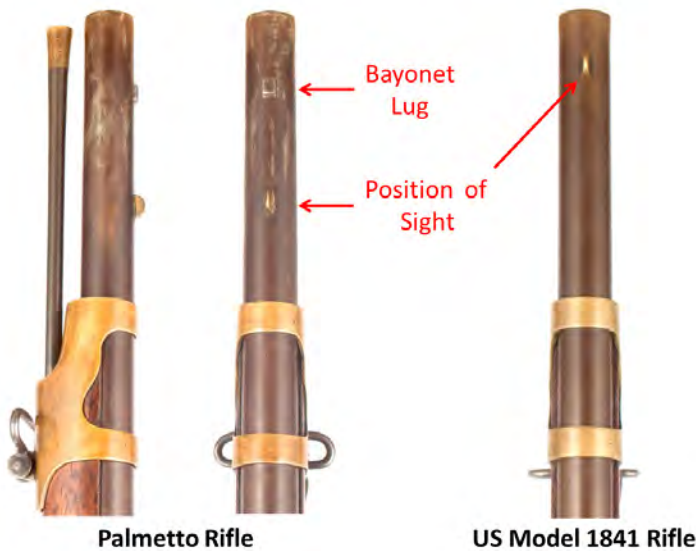


Figure 21 South Carolina had a special requirement that the Palmetto Rifle be equipped for a socket bayonet.

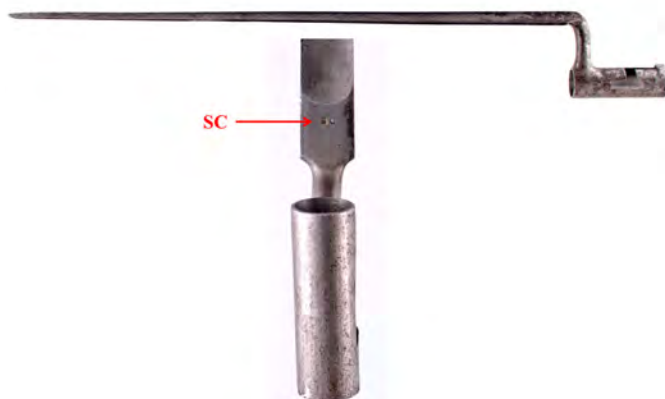


Figure 22 Palmetto Armory Rifle bayonet with simple SC marking.

The origin of the Palmetto Rifle barrels is a more difficult problem. Logically, one would think that all Palmetto Rifle parts came from a single source, in this case Robbins and Lawrence, as the evidence shows that that company supplied the stocks. However, the mating of the breech plugs to the barrel leads us in different direction.

It may be significant that these matching letters are the mirror image of the matching letters found on Whitney rifles (Figure 23).

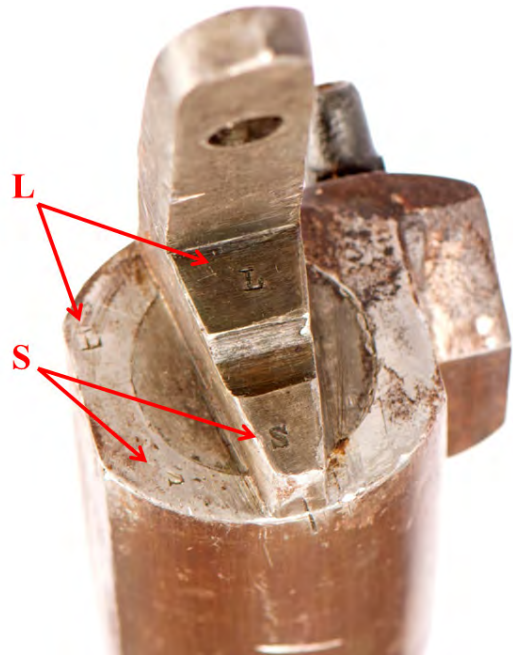


Figure 23 Here the Palmetto Rifle has two sets of matching letters L to L and S to S on the breech plug and the left side of the barrel.

The similarity of the Palmetto and Whitney assembly markings suggests the possibility that Palmetto barrels were sourced from Eli Whitney (Figures 23 & 24). By 1853 Whitney was producing steel barrels and marking them "STEEL" however it is likely that Whitney still had plenty of iron barrels available. There is one report of a Palmetto rifle with a "steel" barrel in Albaugh's Confederate Arms, 1957.<sup>19</sup> This Palmetto rifle is again referred to in Albaugh's Confederate Handguns and is noted as "Courtesy Battle

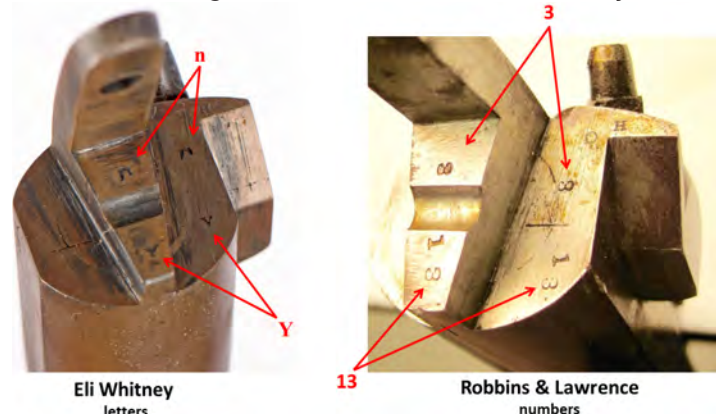


Figure 24 The Whitney method of matching letters is similar to Palmetto whereas Robbins & Lawrence uses two sets of numbers at 90 degrees to the bore.

Abbey, Richmond, Virginia".<sup>20</sup> This rifle has not been examined by the author and is no longer present at Battle Abbey.

Palmetto Rifle and Pistol barrels are inconsistently marked with the letters V and P interchanged (Figure 25). This might infer that the individual striking the letters did not understand their meaning.

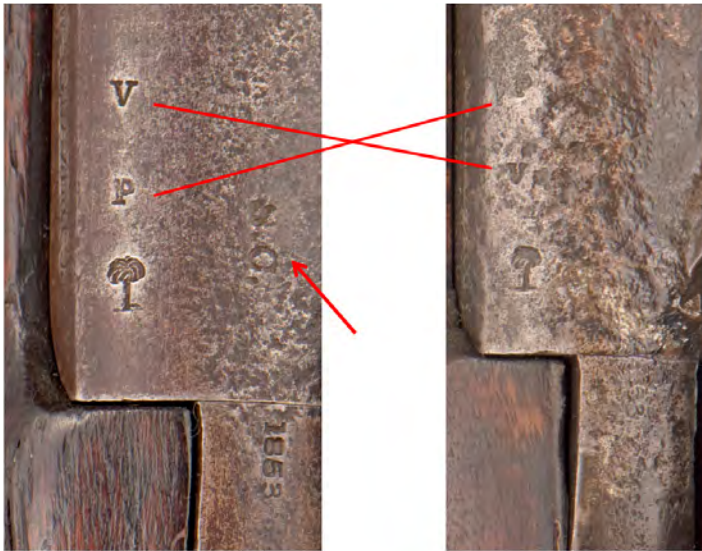


Figure 25. Palmetto barrels are inconsistently marked. Here correctly is the V above P and incorrectly P above V. Note also the S.C. near bolster and the 1853 tang date and the loss of these markings as a result of pitting from the firing of percussion caps.

The standard barrel markings are a "V" (Viewed) above "P" (Proofed) above Palmetto Tree proof mark on the left rear of the breech with "Wm.GLAZE&CO." stamped on the left barrel flat (Figure 26).



Figure 26. An excellent example of Palmetto Rifle breech markings.

The date "1853" is stamped on the barrel tang. Here is an example of the date struck up-side-down (Figure 27). Again, this indicates carelessness or lack of understanding and most certainly poor supervision.



Correct orientation of date



Date stamped upside down

Figure 27. Note the upside down 1853 date found on Don William's fine Palmetto Rifle which appears on page 158 of Whisker's 1998, "Arming the Glorious Cause".

There are also examples with the Wm.Glaze&CO. address struck upside down and the barrel marks "V P and Palmetto Tree proof" are mistakenly struck at 90 degrees to the bore (Figure 28). This is an example of chaos in the stamping room of the Palmetto Armory.



Figure 28. Catawampus markings found on a Palmetto pistol. FREDERICK G. NOVY COLLECTION.

The presence of the two Palmetto sword markings casually struck on a Palmetto pistol and a musket would indicate that all these markings were taking place in one location namely at the Palmetto Armory in Columbia (Figures 29 & 30).

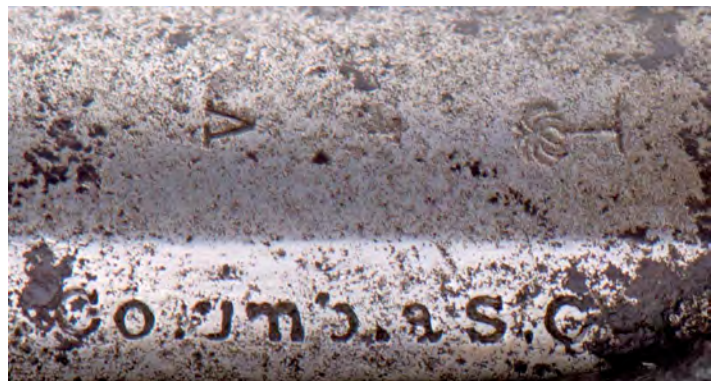


Figure 29. This is the only known example of the common Palmetto Armory Sword marking, "Columbia S.C", appearing on a Palmetto pistol, thus far. Since Columbia is already on the lock, this strike makes no sense. It does however indicate that pistol and sword marking dies were in close proximity. FREDERICK G. NOVY COLLECTION.





Figure 30. Rare sword marking "W. Glaze & Co." on a musket barrel. COURTESY OF DR. JACK A. MEYER, SOUTH CAROLINA STATE MUSEUM, COLUMBIA, SOUTH CAROLINA.

Generally, marking of Palmetto Armory arms was haphazard or careless or even whimsical. Perhaps the workers were illiterate and did not understand the meaning of the marks that they were striking. Certainly, the marking of Palmetto arms was poorly supervised. In any event, this is certainly not the work of serious experienced New England armory workers (Figures 25, 27, 28, 29, 30 & 31).



Figure 31. Apparently even a blurred double strike of the "Spiral Tree" Palmetto Armory insignia was not a sufficient cause for rejection of this pistol lock plate. COURTESY OF THE SMITHSONIAN INSTITUTE, WASHINGTON, DC.

Perhaps the most mysterious finding in the examination of Palmetto Rifles is the simple tang screw (Figure 32). Logically, one would assume that either Robbins & Lawrence or Eli Whitney could have easily supplied 1,000 Federal tang screws along with all the other parts necessary to assemble the 1,000 Model 1841 rifles. But that is not the case. The Palmetto tang screw is truly unrelated to the rest of the rifle. It is not a condemned part. It is not a copy of a missing



**Palmetto Rifle**

**US Model 1841 Rifle**

Note semi round screw heads and mechanical defects

Flat heads and no defects

Figure 32. Here pictured are 4 Palmetto Rifle Tang screws and a standard Federal tang screw. Note the non-standard semi-rounded screw heads and significant mechanical flaws in the screw shanks. FREDERICK G. NOVY COLLECTION.

Federal screw. It is wholly different. This seemingly unnecessary effort may indicate last minute manufacture in South Carolina of these wrought iron screws with non-standard semi-rounded heads and large mechanical defects. Eli Whitney made a number of "Good & Serviceable" Model 1841 rifles called "Derivative Rifles" by Howard Madaus.<sup>21</sup> Some of these rifles had semi-rounded tang screws however they do not match those of the Palmetto rifle. So, the mystery remains unsolved. Why would Glaze or Flagg seek an outside source for these screws when the efficient course of action would be to simply include them in the package deal from the original company?



Figure 33. The Palmetto Armory had the capability to brown barrels. This rifle barrel retains nearly 90% of its original Palmetto Armory Brown finish.

In February 1853, an article on the Palmetto Armory appeared in the *Southern Agriculturist* and mentioned: "In the basement story....Here, too, are to be seen the bronzer's room, where by a peculiar process, .....musket barrels are bronzed."<sup>22</sup> Examination of Palmetto musket, rifle and even pistol barrels reveals original Palmetto Armory Brown finish in many cases. Another uniquely South Carolina and Palmetto Armory feature is the Browning of Palmetto 1842 Pistol barrels. Federal standard for 1842 pistol barrels was "Armory Bright". This Palmetto Armory Brown finish has a beautiful high luster chestnut brown color

which is identical in quality to that found on any Federal Model 1841 rifle barrels (Figure 33).

No discussion of Palmetto arms would be complete without a discussion of Palmetto Replicas and Fakes. For purpose of definitions, I think we can agree that a Replica is a copy of an item for some benign purpose such as to fill an empty spot in a personal collection or to complete a re-enactor's outfit. Whereas a Fake is intended to deceive for financial gain. Below are several different examples of both Replicas and Fakes.



Figure 34. This FAKE Palmetto Rifle lock was a simplistic attempt to deceive using a scrubbed 1853 lock plate and adding the letters "C" - spaces - "A" above the 1853.

One Fake example came from an Estate in Charleston South Carolina in 1998. It consisted of a genuine Palmetto Rifle barrel, a Robbins & Lawrence stock and an 1853 dated lock with all markings removed (Figure 34). Examination of the lock showed that it was a cleaned Remington plate dated 1853. A tantalizing "C-----A" was added above the date. This was a crude attempt to give the illusion that perhaps the word "COLUMBIA" had been there in the past, not recognizing that the date itself was wrong. Note the "C" is an entirely different font than the "A". A very low level of faking.

Early, in my search for a Palmetto Rifle, I purchased a Palmetto rifle with a very fine and genuine barrel, a Federal stock and a questionable lock (figure 35). After much discussion with knowledgeable collectors and careful comparison to original locks, I came to the conclusion that this lock was a FAKE. Prior to selling this rifle, I had an engraver cut deeply the word "REPLICA" into the space between the hammer at rest and full cock. Thus, the rifle could be displayed but not resold without revealing its true nature.

There is a strong market today for Reenactor fire-arms. Newly manufactured Southern arms including Palmetto Rifles and Muskets are very popular. This



HAMMER COCKED

Figure 35. A rather good quality FAKE on the left and a genuine insignia on the right. Cocking the hammer reveals my improvised solution to this FAKE lock.

newly manufactured 1842 musket plate was made to resemble a Palmetto musket plate using a laser to cut the markings (36, 37, & 38). These plates are sold as replicas but are not otherwise marked. No doubt some have been resold as the genuine article to the unsuspecting and the inexperienced.



Figure 36. Replica Lock Plate for Reenactors. This lock plate is newly cast and machined for assembly into a new Palmetto 1842 musket. COURTESY OF MIKE DYCHES, ANDERSON, SOUTH CAROLINA.



Figure 37. Note the Laser Cut Replica markings are very good facsimiles but careful examination shows the edges are not sharp. With a hand lens tiny individual laser hits or divots can be seen in the bottoms of the letters.



Figure 38. Replica Palmetto Insignia and Genuine Palmetto Insignia. Note the lack of sharpness in the replica.

Looking towards the future of replicating markings, Ralph Shepard commented:

“Modern LASER etching technology can transform a high resolution digital image of a rare marking into a machine language program and make an exact duplicate of the design. The process used is called Rastering. The image is transformed into a series of dots and the LASER shoots a pulse of energy to form each dot of the design. Generally, this leaves a series of small pit marks within the design being created. By contrast, stamped letters and symbols generally had smooth lines. Rust pitting exhibits a randomness, whereas Rastering dots have a very uniform appearance!”

Perhaps the earliest known replica of a Palmetto Rifle is that of Claud E. Fuller. In 1944, Fuller and Stuart published the first major work on Confederate arms under the title “Firearms of the Confederacy”.<sup>23</sup> On page 50, PLATE V shows two spurious 1841 rifles: Fig.4. Palmetto Rifle, Fig.5. Republic of Texas Rifle. In this Plate, the barrel of the Palmetto Rifle is clearly that of a standard 1841 Rifle without a tapered muzzle, top bayonet lug or rearward placement of the front sight. On the following page, PLATE V (a) Fig. 1 shows the spurious Texas lock and Fig. 2 shows his Replica Palmetto lock (Figure 39).



**Replica**

Figure 39. Here is the Fuller Replica Palmetto Rifle Spiral Tree insignia.

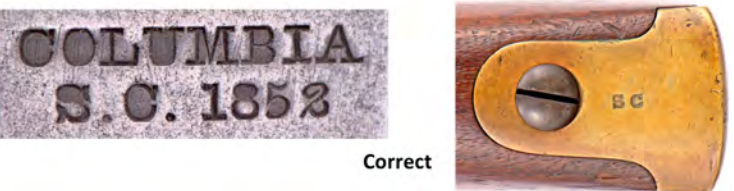


Figure 40. Above are the Fuller replica markings on the lock tail and buttplate tang. Below, genuine lock plate tail and buttplate tang markings.



Barrel date should be 1853, not 1852 as on the Fuller example



Figure 41. Here Fuller was apparently unaware that an S.C. belongs near the bolster and uses the wrong date for the tang marking.

Fuller donated his collection and notes to the Chickamauga and Chattanooga National Military Park where his collection is on display to this day. Fuller's Replica Palmetto Rifle, number CHCH798, is most likely an effort by Fuller to fill a gap in his collection rather than to make a fake for profit. Peculiarly, the co-author, Richard Steuart, had a very fine example of a Palmetto Rifle in his collection which he donated to the Virginia Historical Society in 1948. It is a mystery why Steuart's genuine rifle was not used in the book. Clearly, Fuller's rather poor imitation of the Palmetto Rifle Insignia, address, date and SC on butt plate should be obvious to all (Figures 39, 40 & 41). The barrel of this rifle was made by Harpers Ferry and the stock by Eli Whitney. Fuller's unfortunate efforts to fake these two rifles, and most importantly his lack of transparency, accomplished little except to diminish his reputation.

Finally note the National Rifle Association's National Firearms Museum in Fairfax, VA has begun a reference collection of FAKES and it includes 3 different Palmetto Pistol fakes thus far.

In the end, Glaze and Flagg managed from May to November 1853, to assemble from parts: 1,000 Palmetto Rifles and 500 pairs of Pistols (reduced in 1853 due to lack of funds) in addition to completing the assembly of 6,000 muskets, converting nearly 6,000 flintlocks, and stamping the 2,526 swords. Quite an accomplishment considering all the obstacles of the day. The contract was completed and on time.

The contract was completed on time and accounts were settled with the State of South Carolina on the 28th of November, 1853. Then, the Palmetto Armory closed its doors forever (Figure 42).



Figure 42. The Palmetto Armory building as it stands today, was deeded to the City of Columbia in 1941 and serves as a city office today. Courtesy of John Stanton at FORTWIKI.com, (Historic US and Canadian Fortifications web site).

In conclusion, there remains many unanswered questions about the sources of the parts that the Palmetto Armory used to assemble the Palmetto Rifle. Logically, Glaze and Flagg would source all the need-

ed parts from one armory but this is not clear from the evidence. The only physical evidence that is reasonably certain is that the unfinished stock blanks sent to Columbia were turned out on the stocking machines of Robbins & Lawrence in Windsor, VT.



Figure 43. This relic remains of a Palmetto Rifle was found near Charleston, South Carolina, William "Kerry" Elliot collection. PHOTO COURTESY OF WILLIAM "KERRY" ELLIOT.

Glaze had a working relationship with Eli Whitney from the 1849 contract. Whitney had supplied rifles equipped with socket bayonets. Could Glaze have obtained the barrels for the Palmetto Rifle from Whitney? The similarity of the mating marks suggests this is possible.

The mysteries of the mating of the buttplates and the origins of the tang screws remain unresolved.

Finally, in regard to survival of Palmetto Rifles, completely intact original, untouched specimens are rare and even if you include all the isolated parts and relics, I believe a survival rate of 10% is generous.

FREDERICK G. NOVY, ASAC

PS – Feel free to contact me, if you have any questions, comments or wish to discuss Palmetto Rifles at (805) 550-9869 or email me at [fgnovy@hotmail.com](mailto:fgnovy@hotmail.com)

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## FOOTNOTES

1. Edgar, Walter, South Carolina, A History, University of South Carolina Press, c. 1998, pages 340-344.
2. Meyer, Jack A., William Glaze and The Palmetto Armory, Museum bulletin Number 6, South Carolina State Museum, c.1982, pages 5-7.
3. Moller, George D., American Military Shoulder Arms, Volume III, University of New Mexico Press, Albuquerque, New Mexico, c.2011, pages 122-123 and 203-210.
4. Ewing, John R., "Asa Holman Waters and the 1842 Musket", American Society of Arms Collectors Bulletin Number 81, 1999, pages 81/44-45.
5. Edgar, p.344-346.
6. Spangler, John H., Arming the Militia: South Carolina Longarms 1808-1903, (Thesis, University of Florida, 1977). Page 80.
7. Benet, Jr., Hugh, "The Palmetto Armory, Columbia, South Carolina" American Society of Arms Collectors Bulletin Number 6, Fall 1962, pages 17-19.
8. Albaugh, William, Benet, Hugh, Simmons, Edward, Confederate Handguns, Riling & Lentz, Philadelphia, Pennsylvania, c.1963, page 174.
9. Moller, George D., "Waters Muskets for South Carolina - Part 1," The Gun Report, Vol. 45, Number 4, pages 16-24, 1999 and - Part 2, Vol 45, Number 5, pages 16-21. 1999. A detailed "Memorandum of Musket Work made up to July 22d, 1852" is included which shows that virtually all parts supplied came from Springfield.
10. Southard, Lewis F., "The Origin of the Palmetto Pistols," American Society of Arms Collectors Number 81, 1999, pages 29 - 42.
11. Daum, Anthony C., and Charles W. Pate, U.S. Military Arms Inspector Marks, Andrew Mowbray Publishers, Woonsocket, R.I., 2016, pages 59-60.
12. "Waters Family Papers," (Worcester, MA: The Antiquarian Society). Blotter copy Asa Waters to Robbins & Lawrence, Feb 14, 1852.
13. Brill, Paul, "1853 Palmetto Armory Letter," North South Trader's Civil War, Volume 37 No.1, 2013, pages 22 - 29.
14. Spangler, page 85.
15. Whisker, James, et al, Arming the Glorious Cause, Old Bed-

ford Village Press, c.1998, page 141.

16. Meyer 2<sup>nd</sup> edition 1994, pages 37-39.
17. Topper, Celeste, David Topper, Fairfax, S.C., c.1988, page 77.
18. Murphy, John M., M.D., and Howard Michael Madaus, Confederate Rifles & Muskets, Graphic Publisher, Newport Beach, California, c. 1996, pages 283-285.
19. Albaugh, William, and Simmons, Edward, Confederate Arms, Bonanza Books, c. 1957, plate 63., page 50.
20. Albaugh c.1963, pages 175-176.
21. Madaus, Howard, The Percussion Martial Longarms of Eli Whitney, JR., ARMAX, The Journal of the Winchester Arms Museum, Buffalo Bill Historical Center Cody, Wyoming Volume II. Number 1, 1988, pages 7 -76.
22. Southern Agriculturist, (Laurensville, S.C.), February 1853, pages 50-51.
23. Fuller, Claud E., and Richard Steuart, Firearms of the Confederacy, Standard Publications, c.1944, pages 50-51.

## BIBLIOGRAPHY

- ★ Albaugh, William, Benet, Hugh, Simmons, Edward, Confederate Handguns, Riling & Lentz, Philadelphia, Pennsylvania, c. 1963.
- ★ Albaugh, William and Simmons, Edward, Confederate Arms, Bonanza Books, c. 1957.
- ★ Benet, Hugh, Jr, "The Palmetto Armory, Columbia, South Carolina" American Society of Arms Collectors Bulletin Number 6, Fall 1962.
- ★ Brill, Paul, "1853 Palmetto Armory Letter," North South Trader's Civil War, Volume 37 No.1, 2013.
- ★ Daum, Anthony C., and Charles W. Pate, U.S. Military Arms Inspector Marks, Andrew Mowbray Publishers, Woonsocket, R.I., 2016.
- ★ Edgar, Walter, South Carolina, A History, University of South Carolina Press, c.1998.
- ★ Ewing, John R., "Asa Holman Waters and the 1842 Musket", American Society of Arms Collectors Bulletin Number 81, 1999.
- ★ Fuller, Claud E., and Richard Steuart, Firearms of the Confederacy, Standard Publications, c.1944.
- ★ Hill, Richard Taylor and William Edward Anthony, Confederate Longarms and Pistols, Hill and Anthony Publishers, Charlotte, North Carolina, c.1978
- ★ Madaus, Howard, The Percussion Martial Longarms of Eli Whitney, JR., ARMAX, The Journal of the Winchester Arms Museum, Buffalo Bill Historical Center Cody, Wyoming Volume II. Number 1, 1988.
- ★ Meyer, Jack A., William Glaze and The Palmetto Armory, Museum Bulletin Number 6, South Carolina State Museum, c. 1982. And Second Edition c. 1994.
- ★ Moller, George D., American Military Shoulder Arms, Volume III, University of New Mexico Press, Albuquerque, New Mexico, c. 2011.

- ★ Murphy, John M., and Howard Michael Madaus, Confederate Rifles and Muskets, Graphic Publishers, Newport Beach, California, c. 1996.
- ★ Southard, Lewis F., "The Origins of the Palmetto Pistols," American Society of Arms Collectors Number 81, 1999.
- ★ Southern Agriculturist, (Laurensville, S.C.), February 1853.
- ★ Spangler, John H., Arming the Militia: South Carolina Longarms 1808-1903, (Thesis, University of Florida, 1977).
- ★ Topper, Celeste and David Topper, Civil War Relics from South Carolina, Fairfax, South Carolina, c.1988.
- ★ Waters Family Papers, 1850-1853, The Antiquarian Society, Worcester, Massachusetts.
- ★ Whisker, James B., Daniel D. Hartzler, Larry W. Yantz, Arming the Glorious Cause, Old Bedford Village Press, c.1998.

## APPENDIX 1

### Museums with a Palmetto Rifle in their collection:

#### Alabama, DA&H, Montgomery, AL

Palmetto Rifle intact, complete and original  
(DA&H #86.3755.13, ~ 3" barrel muzzle cut off.)

#### Atlanta Historical Center, GA

Palmetto Rifle intact, complete and original.  
(#2005.200.M46, Purchased from George Wray)

#### Chickamauga NMP, GA

REPLICA - Palmetto Rifle - No original parts.  
(CHCH 798 - Claud E. Fuller collection)

#### Cody Firearms Museum, WY

Palmetto Rifle Lock only.  
(#1988.8.1542, Stock R&L, Barrel R&L).

#### J. M. Davis Museum, Claremore, OK

Palmetto Rifle, intact, complete and original.  
(Accession # 9003)

#### Greensboro Historical Museum, NC

Palmetto Rifle intact, complete and original.  
(1996.35.58, gift of John Murphy)

#### Gettysburg NMP, PA

Palmetto Rifle Lock only.  
(GETT 11751, Stock & Barrel Harpers Ferry)

#### Gettysburg NMP, PA

Palmetto Rifle Lock & Butt plate only.  
(1938 - Ft. McHenry #145, GNMP 549)  
(Stock Harpers Ferry, Barrel R&L)

#### Milwaukee Public Museum, WI

Palmetto Rifle, Lock and Barrel only.  
Stock (R&L).

#### South Carolina State Museum, Columbia, SC

Palmetto Rifle intact, complete and original  
(purchased from George Wray)

#### Virginia Historical Society, Richmond, VA

Palmetto Rifle, intact, complete and original.  
(#990.100.092 Gift of Richard Steuart 1948)