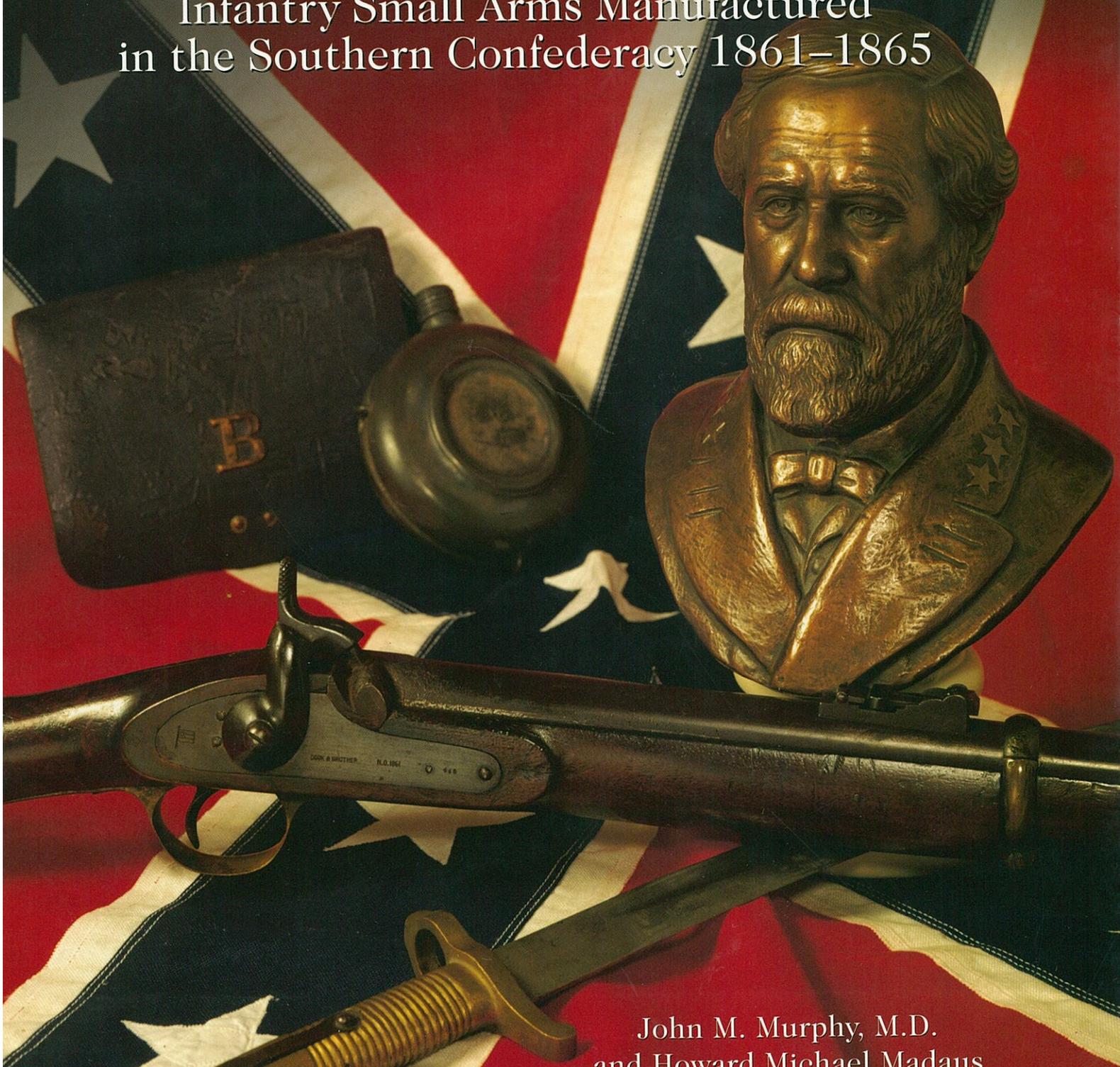


Confederate Rifles & Muskets

Infantry Small Arms Manufactured
in the Southern Confederacy 1861–1865



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and Howard Michael Madaus

Mendenhall, Jones & Gardner
North Carolina Contract Rifles

ON MAY 20, 1861 THE STATE OF NORTH CAROLINA officially withdrew from the Union. In 1862, after exhausting the state's supply of small arms, North Carolina contracted with five firms to produce military rifles. One of these was the firm of Mendenhall, Jones & Gardner. The principals of this firm were Cyrus P. Mendenhall, an attorney, legislator and landowner of Greensboro, Ezekiel P. Jones, a tobacco merchant with considerable holdings throughout North Carolina, and Grafton Gardner, a mechanic and gunsmith who is said to have been superintendent of the plant.¹ It is to be noted that in its early operations the firm was known as "Mendenhall, Jones & Co."² Apparently Gardner became a partner somewhat later on, after which the firm became "Mendenhall, Jones & Gardner". Initially the firm leased the factory of Clapp, Huffman & Co., known as the Cedar Hill Foundry and Machine Shop, and located on Alamance Creek eleven miles east of Greensboro and four miles south of Gibsonville. There, they began the manufacture of rifles for the State of North Carolina.³ This plant had been in successful operation for several years before the war, selling, manufacturing, and repairing all sorts of farm and mill machinery, gears, castings, and fixtures.⁴ Mendenhall, Jones & Gardner paid Clapp, Huffman & Co. \$110.00 per month for the use of all of their buildings, except the foundry, a shed, and part of the barn, indicating that Cedar Hill was a sizeable operation.⁵

The initial contract with Mendenhall, Jones & Co., as authorized by Captain A. W. Lawrence of the North Carolina Ordnance Department, called for a rifle that essentially was a copy of the U.S. Model 1841 "Mississippi"

rifle, with the following exceptions: the bores of the rifles were to be 1/2 inch or .50 caliber, the patchbox and its lid were to be eliminated, and the rifles were to be iron mounted (a specification almost totally ignored). The state agreed to purchase these rifles for \$21.00 each.

A copy of this initial agreement signed by Mendenhall, Jones and Co. and by Henry T. Clark, Governor Ex-Officio of North Carolina, is as follows:

It is agreed between Mendenhall, Jones & Co. on the one part, and the State of North Carolina on the other, that the said firm shall manufacture Five Thousand Rifles of the make specified below, to be bought by the State at the rate of Twenty One Dollars each. The said rifles to be made and delivered as fast as the said firm can turn them out. The said firm, til the rifles are delivered are to work for no one else, except that they have the privilege of delivering Four Hundred Rifles, already partly made on a contract with Capt. Pettis of Mississippi. The make and pattern of the said rifles to be as follows —

Pattern of the Mississippi rifle with the following exceptions —

Mountings of blued iron instead of brass —
Diameter of the bore *half an inch* (1/2 in.) Grooves circular and shallower than the model, stock to be six inches shorter than barrel — Stud for sword bayonet like that of Harpers Ferry rifle, near muzzle of barrel — Barrel to weigh Five pounds — Bullet mould for Wilkinson ball, according to pattern furnished — Mould to be furnished with every ten rifles — Point blank to be 150 yds. Ramrod of iron. Charge of powder in fixing the point blank to be about 1/8 the

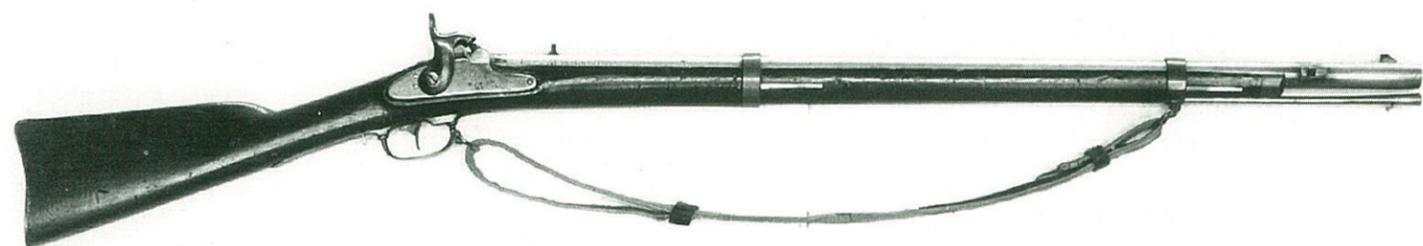


Plate 1. Mendenhall, Jones & Gardner Type I rifle serial number "66"; right side. (Courtesy George W. Wray, Jr.)

weight of the ball — Patchbox to be omitted — Lock, of the model exhibited by the firm.

With each gun to be furnished 1 screw driver and cone wrench, 1 wiper, and 1 spare cone for every ten guns. 1 ball-screw, and 1 bullet mould —

Proof charge 140 grs Troy weight with a service ball and 2 wads.

Payment to be made on each hundred guns delivered.

In proof of which agreement the following signatures are annexed.

Mendenhall, Jones & Co.

Henry T. Clark

Governor Ex-Officio of North Carolina.⁶

These early production rifles are designated as Type I, and have the following characteristics. The caliber is $\frac{1}{2}$ inch or .50 and the barrels are rifled with seven lands and grooves. The bayonet lug is of an elongated "footprint" type. The front sight is a small brass blade, and the iron rear sight is fixed and notched. The barrels behind the rear sight are stamped "N.C." over "P". These stampings are upright when viewed from the left side. The buttplates are

of iron, curved to fit the shoulder, but the remainder of the furniture is of brass. The flat, spring-retained brass barrel bands are of heavy construction. The top of each band is stamped with a small "U", with the open end facing forward. The bottom of the front barrel band has a pronounced groove to accommodate the ramrod, a feature which is unique to MJ&G rifles. The brass noscap is fastened by a rivet. The brass triggerguard assembly is of two-piece construction. The trigger is of iron. The brass sideplate on the left side of the stock is of the Mississippi pattern. The lockplate forward of the hammer is stamped "MJ & G" over "N.C." in two lines. To the rear of the hammer is stamped "C.S." over "1862" in two lines, vertically. The serial number of MJ&G arms on the majority of specimens studied is stamped on various internal metal surfaces of the arm. Typically, the serial number appears on the raised, blocklike section on the inner surface of the lockplate which secures the forward end of the mainspring. It also is stamped on the under surface of the barrel tang, on the under surface of the brass triggerguard's rear tang at its rear extremity, and on either side of the trigger plate. The serial number range of Type I rifles cannot be stated,



Plate 2. Close-up view of lockplate area of the rifle shown in Plate 1. (Courtesy George W. Wray, Jr.)



Plate 3. Close-up view of area opposite lockplate of the rifle illustrated in Plate 1, showing serial number "66" stamped in wood of stock just to rear of the brass "Mississippi"-style sideplate. (Courtesy George W. Wray, Jr.)

as only one specimen of the Type I has been available for study. There was a high percentage of rejections of Type I rifles at the Raleigh Arsenal, because of the poor quality of the stocks, barrels, and mainsprings in the locks.

In February of 1862 Mendenhall, Jones & Gardner Co. transferred their operations to Jamestown, North Carolina. This new facility was a frame building on Deep River, about a mile below Jamestown at what used to be called Old Jamestown. This frame building survived the war but was later demolished and replaced by a brick woolen mill.

On 9 June 1862 the Confederate Chief of Ordnance, Josiah Gorgas, issued instructions that steps were to be taken to insure that all arms henceforth made at Confederate armories and under Confederate contract were to be made in caliber .577, and on 22 September 1862 the firm was notified of this change.⁷

Rifles produced following this notification, during the remainder of 1862 and part of 1863, are designated as Type II rifles. These pieces, in conformity to the authorized change in specifications, are caliber .577 and rifled with seven lands and grooves. It is to be noted that several specimens examined have larger calibers, such as .60 or .64. It is thought that these barrels were either shot out, or were later bored out to the larger dimensions. The iron buttplates now are straight, or with a very slight curvature, rather than having a pronounced curvature, and the bayonet lug is shorter and of the U.S. Model 1855 style. On both Type I and Type II rifles the barrel lengths are roughly 33 inches, with considerable minor variation among different pieces. Stampings similar to those seen on Type I rifles appear on the lockplate and on the barrel, except that the date "1863" now appears on later pieces. On some early Type II pieces the stamping "GUILFORD" appears between the "M.J.&G" and the "N.C.", indicating the county in which these arms were made. On one specimen examined there are no external lockplate markings; however, the remainder of the piece is typically MJ&G. Serial numbers of Type II rifles known to the authors range from "33" to "951". The brass sideplate opposite the lock is of the Mississippi pattern. On many rifles an oblong, rectangular cartouche containing the script letters "MJ&G" appears on the left side of the stock opposite the lockplate. On some pieces the serial number of the arm is stamped in the wood of the stock in this same general location.

On 1 August 1862, Captain Lawrence was replaced by Captain Thomas D. Hogg as procurement officer for the Ordnance Department, and he made immediate efforts to standardize the confusing contractual arrangements with the various firms producing rifles for North Carolina.⁸

The following is a copy of a statement signed by

Mendenhall, Jones & Gardner, dated 1 November 1862, detailing the production of rifles and financial arrangements relating to this:

The subscribers Messrs. Jones, Mendenhall & Co. agree to furnish to the State of North Carolina 5,000 rifles, commencing to deliver them on the 1st day of November 1862 delivering on that day forty rifles and continuing to deliver eighty rifles on or before the last day of each month until the expiration of this contract. The said party are to be credited with every rifle furnished before the date of delivery but for each rifle not delivered in time for this contract they are to forfeit to the State the sum of Five dollars. The agreement is, that the said Jones, Mendenhall & Co. have deposited in the Ordnance Department of the State of North Carolina one rifle, with the necessary appendages attached thereto, on the stock of which they have pasted the following statement and signed the same *e/g.*, "We agree that this rifle shall be a standard in every respect, by which the rifles made by us shall be inspected." The State shall reserve the sum of Ten dollars on each rifle delivered until she has received the sum of one thousand dollars, out of which she is to be paid the above forfeiture, and when the full number of rifles contracted for have been delivered, Messrs. Jones, Mendenhall & Co. are to receive the remainder that has not been forfeited. She also agrees that the burning of the factories, or the breaking of the mill dam, or the conscription of ten of their hands shall suspend this contract until the same are replaced and further to pay on the receipt and acceptance of each gun the sum of Thirty dollars during the war and for six months thereafter and afterwards twenty-one dollars for each gun, until the completion of the contract, subject to the above detention on the first one hundred guns. Provided the party chooses to make said guns after six months after the war ends for that price.

E. P. Jones
Cyrus P. Mendenhall
Grafton Gardner.⁹

Problems subsequently developed concerning the cost of production of the rifles. On 1 January 1863 the state proposed the following new contract with its five suppliers:

Whereas the State of North Carolina contracted with certain parties sometime since, for the manufacturing and delivery of arms, & whereas the great advance on provision and material has so far surpassed all calculations that it is evident that the said contractors must sustain heavy loss at the price heretofore agreed upon, and the State not wishing to injure those who

are thus engaged in making guns, has agreed to bind herself as follows, to pay a profit of \$10.00 on each gun manufactured, so long as she chooses to receive them as per contract filed with Messrs. Clapp, Gates & Co., Mendenhall, Jones & Co., Gillam & Miller, H. C. Lamb & Co., & Searcy & Moore. In case the State shall not receive all the guns contracted for, & finds it to her interest to suspend the making of guns, she agrees to pay said contractors the sum of \$10.00 for each gun agreed to be made & the contractors are then relieved from their said contract, the object being to leave said contractors whole, in expense incurred in preparing to manufacture guns as aforesaid.

Mendenhall, Jones & Co.	4,500
Clapp, Gates & Co.	2,350
Gillam & Miller	2,000
H. C. Lamb & Co.	1,000
Searcy & Moore	500

It is further understood and agreed that the several parties shall make a monthly statement under oath of the actual cost of said guns & that every effort will be used to keep the cost down & further that they furnish all that they can per month.^{10,11}

Under this agreement, MJ&G delivered 1,961 rifles in 1863 and 1864 at prices (inclusive of the \$10.00 profit) of \$51.82, \$63.52, \$80.00, and finally \$164.31, before the state terminated the contract on 31 October 1864 by paying \$10.00 each on the 2,529 rifles not delivered.

The machinery of the firm was auctioned off, following cancellation of the contract by Governor Vance. On 30 March 1865 an ad appeared in the *Charlotte Bulletin*, stating that the partnership between Cyrus Mendenhall, Col. E. P. Jones, and Grafton Gardner had been dissolved by mutual consent of the parties.

Type III rifles are essentially similar to Type II pieces, except that the brass escutcheons about the heads of the bolts securing the lockplate are of the Enfield pattern. Hammers on many of this type continue the U.S. Model 1841 pattern, but others are fitted with Enfield-type hammers. Type III rifles are dated either "1863" or "1864". It is believed that Type III rifles continue the serial number sequence of Type II rifles, but that the digit "1" has been omitted before the three-digit serial numbers seen on these rifles.

Type IV rifles have a two-leaf rear sight, Enfield-type hammers, and Enfield-type brass escutcheons about the bolt heads securing the lockplate. Only two specimens of this type have been available for study, and both have light engraving on the margins of the lockplate and on the hammer. One is dated "1864" and the other bears both "1863" and "1864" dates. One piece continues the serial

number sequence with a serial number of 2,356; the other has no serial number.

It is to be noted that recent excavations at the site of the Cedar Hill Foundry, which produced Clapp, Gates & Co. rifles, have yielded a wealth of artifacts. Mixed in with Clapp, Gates & Co. rifle parts recovered at Cedar Hill are various pieces distinctive of other contractors. Locks, hammers, and buttplates in various stages of production have been found that are identical to those used by H.C. Lamb & Co., Tarpley, Garrett & Co., and by Mendenhall, Jones & Gardner. It is speculated that Clapp, Gates & Co. was furnishing parts to these firms.

Plates 1 through 3 illustrate a Mendenhall, Jones & Gardner Type I rifle, having the serial number "66". As far as is known to the authors this is the only example of a Type I MJ&G rifle to exist. The overall length is 48³/₄ inches and the barrel length is 33 inches. The caliber is .54 and the barrel is rifled with seven lands and grooves. The front sight is an iron block blade located ¹³/₁₆ inch back from the muzzle. The iron fixed-and-notched rear sight is located 2¹⁵/₁₆ inches forward of the barrel breech. There is a "footprint" type bayonet lug located 3³/₈ inches back from the muzzle on the right side of the barrel. There are no markings on the exposed surfaces of the barrel; "66" is stamped on the under surface of the barrel near the breech. The lockplate forward of the hammer is stamped "MJ&G" over "N.C.". To the rear of the hammer "C.S." over "1862" is stamped vertically. The inner surface of the lockplate is stamped "66". There are two flat brass, spring-retained barrel bands, each being ⁵/₈ inch in width; no "U" markings appear on the barrel bands. The brass noscap is ¹³/₁₆ inch in length and is fastened to the stock by a single copper rivet. The brass triggerguard is of two-piece construction. The brass sideplate is of the U.S. Model 1841 Mississippi pattern. The heads of the bolts securing the lockplate and barrel tang are unmarked. Iron carrying swivels are attached beneath the front barrel band and at the front of the triggerguard bow. The rear surface of the iron buttplate is curved to fit the shoulder.

Plates 4 through 10 illustrate a MJ&G Type II rifle having the serial number "63". The overall length is 48³/₄ inches and the barrel length is 32⁷/₈ inches. The caliber is .58 and the barrel is rifled with seven lands and grooves. The front sight is a small brass blade located one inch back from the muzzle. The high iron rear sight is fixed-and-notched, and is located 3 inches forward of the barrel breech. A bayonet lug of the U.S. Model 1855 style is located 3¹/₂ inches back from the muzzle on the right side of the barrel. Stampings of "N.C." over "P" using moderately small letters are located one inch back from the rear sight. These markings are at right angles to the long axis



Plate 4. Mendenhall, Jones & Gardner Type II rifle serial number "63", having an unmarked lockplate; right side. (Dr. John M. Murphy Collection)



Plate 5. Left side of the rifle shown in Plate 4. (Dr. John M. Murphy Collection)



Plate 6. Close-up view of lockplate area of the rifle illustrated in Plate 4, showing lack of lockplate markings. (Dr. John M. Murphy Collection)



Plate 7. Close-up view of interior of lockplate of the rifle illustrated in Plate 4, showing serial number "63" stamped on raised upper section of the lockplate. (Dr. John M. Murphy Collection)



Plate 8. Close-up view of area opposite lockplate of the rifle illustrated in Plate 4, showing cartouche containing the script letters "MJ&G" stamped into wood of the stock. (Dr. John M. Murphy Collection)

of the barrel, and are upright when viewed from the left side. The barrel originally was finished in the bright but has turned dark brown with age. The stamping of "6*3" appears on the underside of the barrel tang. A small windmill-like (or Maltese cross) stamping is positioned slightly above and between the digits of the "6*3" stamping. The lockplate is unmarked externally; the inner surface of the lockplate is stamped with "6*3", with the same small windmill marking in the location just noted. The hammer has three small, crude slash marks, but no other markings. There are two flat brass, spring-retained barrel bands. The front barrel band has a grooved enlargement on its underside to accommodate the ramrod, a feature characteristic of many MJ&G rifles. The upper surfaces of both barrel bands are stamped with a "U", with its open end facing forward. The brass sideplate is of the Mississippi pattern. The heads of the bolts securing the lockplate and the barrel tang are unmarked. The brass triggerguard is of two-piece construction. The under surface of the rear triggerguard tang near its rear tip is marked "63". The trigger is of iron. The left surface of the trigger plate is stamped "63". The brass nosecap is secured by a rivet. The buttplate is of iron and

its rear surface is straight. A silver or pewter plaque is affixed to the right side of the buttstock, and is inscribed "PVT SOLOMON HAYES" over "CO. G" over "34th N. CAR. INF." over "C.S.A." in four lines. Official Confederate records of North Carolina troops indicate that Solomon Hayes was a farmer born in Union District, South Carolina. He enlisted at Guinea Station, Virginia on 4 May 1862, and was discharged by reason of general disability on 10 April 1864, at which time he was 59 years of age. The wood of the stock opposite the lockplate is marked with a large, oblong cartouche containing the script letters "MJ&G". Above this cartouche is stamped the serial number "63". The ramrod is a simple swell tip with cupping.

Plates 11 through 13 illustrate a Type II MJ&G rifle having the serial number "485". The overall length is $48\frac{3}{8}$ inches and the barrel length is $32\frac{11}{16}$ inches. The caliber is .58 and the barrel is rifled with seven lands and grooves. The front sight is a small brass blade located one inch back from the muzzle. The low iron, fixed-and-notched rear sight is located 3 inches forward of the barrel breech. A slot (which has been filled in) for a bayonet lug is located $3\frac{1}{2}$ inches back from the muzzle on the right side of