

# NOTES ON THE MODEL 1816 U.S. FLINTLOCK MUSKET

By R. N. Kennedy, Jr.

After the close of hostilities during the American Revolution the Armed Services of the new nation found themselves with an accumulation of many varied kinds of weapons in all states of repair and of no standard caliber. Knowing that efforts must be made to remedy this situation as well as the possibility of being faced with a new war with France, Congress authorized the founding of two National Armories in 1794. Since the Government owned some buildings and land at Springfield, Massachusetts, this site was chosen as one of the armories. Harper's Ferry, Virginia was selected as the other location. Springfield offered an inland northern location and Harper's Ferry a Southern river valley location protected by mountains. Neither site could be threatened by a superior naval power.

Production began at Springfield in 1795 on a musket designed after the French Service Arm, Model 1763, which had found favor with the Continental Army during the War for Independence. There is no evidence that Harper's Ferry started production before the year 1800 with their own version of the French musket. The variations in the muskets made at each armory are quite great and will not be discussed in this paper.

There were many varied attempts to standardize the arms manufactured by both armories as well as those of private contractors, but nothing much came out of the attempts except the general style of the musket and a standard caliber of .69 one hundredths of an inch. There were several changes in the arms which are what we collectors call models. These arms were made by both armories as well as by private contractors. They are known today by the terms Model 1808, Model 1812, and the topic of our discussion the model 1816 with modifications. A new model flintlock musket was called for in 1835 and production was begun in 1840 while the last of the 1816's were still being produced.

During the period that Thomas Jefferson was Minister to France, Jefferson had occasion to come in contact with an armorer named LeBlanc. LeBlanc had been pioneering the interchangeability of parts in arms manufacture. Jefferson was so impressed with the success that LeBlanc had achieved that he quickly recommended that Congress take up the consideration of introducing such methods to United States arms manufacture.

Decius Wadsworth, Chief of Ordnance, instructed Roswell Lee of Springfield Armory and James Stubblefield of Harper's Ferry Armory to look into the possibilities of using this method.



John Hall of Harper's Ferry was quick to grasp the importance of this method and began incorporating the principle into arms design.

The concept of parts interchangeability was probably the basic step to the introduction of a model change in musket manufacture now known as the U.S. Musket Model 1816. This was the first step however and few of the early armory muskets or contract arms came close to being interchangeable. Some degree of success was reached during this period of musket manufacture but for all practical purposes the complete interchangeability of parts was not successfully accomplished until the early 1840's. Though the early Model 1816 muskets differ in some degree, this model later was to become the best of the flintlock muskets this country produced.

Many new manufacturing techniques were being developed and 20 years of experience in the arms making industry was beginning to show its effects. One of the single most important developments in arms manufacture would have to be the development of a stock duplicating machine by Thomas Blanchard of Millbury, Massachusetts. This machine was first used at Harper's Ferry in 1819. The milling machine was being used by about 1820 and a rolling mill for barrels soon replaced the trip hammer method of manufacture used at Springfield Armory in 1829. Water wheels were still the main source of power at the armories until 1830 when steam power began taking over.

Labor was the largest cost factor in producing a complete musket. Labor cost accounted for two thirds the price of an entire musket. Raw materials accounted for only \$3.18 of the total price of \$12.40 per musket in 1818 at Springfield. Loss due to wear on equipment, etc. amounted to \$2.25 per musket in the same year.

The cost of materials are of some interest and are as follows for the year 1816:

Wrought Iron per ton	\$160.00
Blister steel per pound	1.25
Cast Steel per pound	.25

There was a gradual price decline from 1816 to 1840 in material cost as well as a reduction in wages at the armory in 1821. Wrought Iron and blister steel decreased about 12% and cast steel dropped about 28%. The average cost of a musket stock was \$0.36 each.

The armories and contractors operated on a piece shop program in that most workers were not complete gunsmiths but made only certain parts of the musket and were paid according to the number of pieces they produced. The foremen and higher supervisory personnel were paid a monthly salary. Springfield Armory employed 203 workers in 1815 at an average monthly wage of \$33.71. A barrel welder, for instance, was paid approximately \$0.35 per barrel and could produce about 1087 barrels per year in 1816. By 1840 production per man was up to 2207 barrels per year but the pay was only \$0.27 per barrel.

Until the production of the U.S. Rifle Model 1903, the Model 1816 Musket enjoyed the longest period of production and possibly longer usage than any other shoulder arm in United States history. The Model 1816 Flintlock Musket was produced from 1816 until the mid 1840's and was still in use by troops during the first half of the War Between the States. Harper's Ferry produced the model until September 1844 and Springfield produced it until September 1840.

The Model 1816 is the most common of the U.S. Flintlock muskets available to the collector today because of the large numbers of this model produced, but the variations within this model and the many contractors involved in production of the arm offer the collector a great variety in collecting. This particular model alone could be considered in the same light as the collecting of the Colt pocket model, the Colt 1851 Navy, or perhaps any particular Winchester or other type of mass produced arm that had many improvements or changes during its production period.

The most typical Model 1816 Musket should conform to the following specifications.

The caliber is .69 smoothbore with an overall length of slightly more than 57½". The lock plate is 6 5/16" wide with the rear portion rounded and beveled, meeting at a rounded point behind the cock while the forward portion of the lock is flat with beveled edges. The lock, cock, and frizzen are case hardened and the springs and screws are blued. The rounded, fenceless, detachable pan is made of brass and downward sloped. The cock has a round face with a heart shaped cut out in the center and straight tail on the top jaw guide. The frizzen has a forward pitch at the top, and the bottom end is square and straight. The stock is of walnut with a length of 54¼". This is the first truly combless stock in U.S. Military arms. The barrel is 42 inches long and may be finished bright or browned depending on the type and year of manufacture. The bayonet lug is on top of the barrel. The band springs are located as follows:

lower band spring forward of the band, both middle and front springs behind the bands. All furniture is iron except for the brass pan and front sight. The trigger is webbed and has no trigger plate except for the early types. The trigger guard is 9¼ inches with rounded ends. The sling swivels may be attached to a stud on the First Type or attached directly to the trigger guard bow on the Second Type. The front swivel is attached directly to the middle barrel band. The butt plate is flat and 4¾ inches long, 2 inches wide, and has a 2¼ inch tang.

Colonel Roswell Lee was the Superintendent at Springfield Armory in 1816 and James Stubblefield held the same post at Harper's Ferry Armory. Colonel Decius Wadsworth of the Ordnance Department instructed the Secretary of War on June 10, 1815, that it was desirable to have a pattern model musket constructed to resemble the French Model 1777.

Wadsworth then instructed James Stubblefield at Harper's Ferry to make the pattern model of the Musket. The musket produced soon lost favor with Wadsworth.

Colonel Lee of Springfield also submitted a pattern model to the War Department at the same time as the Harper's Ferry model. The Springfield musket was somewhat lighter, with the sling swivels riveted in place rather than held by screws.

On May 16, 1816, Lee was instructed to build yet another pattern musket and on June 24, 1816, three pattern muskets were shipped to Washington. The lock size was the only basic difference in the new model. Harper's Ferry also shipped models but neither would interchange parts. Mention was made to both armories of the necessity of parts interchangeability in a letter dated July 24, 1816.

Colonel Lee's letter to James Stubblefield on August 6, 1816, points out the dominant changes in the musket, known today as the Model 1816, such as the brass inclined pan, the top of the frizzen turned forward, the top end of the frizzen spring turned down, and the combless stock. The lock size was also reduced from the Model 1812.

The pattern model was to be completed in August or September 1816 at Springfield, and was approved on November 23, 1816. Six more models were to be constructed as well as six sets of gauges, and an interchange of a case of muskets between each armory was also suggested. The six pattern pieces were completed in January 1817 and marked with the date 1817.

By the year 1817 several advances had been incorporated into helping produce a musket at a much faster rate. Machines were now trimming the stocks as well as performing other additional tasks. Most of the machinery was operated by water power. The grindstone was the main stay of the metal worker, although the trip hammer was used for raw metal processing and the lathe was used for turned cutting and barrel turning. The barrel turning machine was designed by Dena and Olney.



*Type I contract by M.T. Wickham with swivel on stud.*

It produced between 20 and 25 barrels per day with one man working two machines. This reduced the cost of each barrel by 8¢ and produced a much more uniform product.

In 1817 contractors were solicited for making barrels, supplying stock blanks and other parts by the armories. Springfield used barrels by Isacc Hollister & Sons, of Litchfield, Massachusetts, and Springfield Manufacturing Company, of Ludlow, Massachusetts. Hezzeiah Scoville of Haddon, Connecticut, was another contractor. Obviously there were many more contractors, for I am sure Harper's Ferry as well as the contract musket makers did the same as Springfield.

Many of the Contract makers were able to utilize the National Armories for many things such as an exchange of materials, gauges for machinery, and up to date information on improvement of production methods. Workers were also loaned out to the contractors on occasion. Although the contractors had much help from the National Armories, the Armories produced 2½ to 3 times the arms in a year as did the contractors.

The six pattern model muskets produced at Springfield now take an interesting turn of events. The muskets were put into storage in New York. After a year and a half Colonel Lee was again instructed to make six new models with gauges. Lee had felt some improvement had been made in manufacturing techniques since the last pattern muskets were produced.

On August 27, 1821, we find the first order for browning parts, issued by Lieutenant Colonel Bomford. In September, 1821, both Armories were instructed to produce 30 pattern models to be submitted for inspection. These models were shipped on November 23, 1822. There had been previous experimenting with browning of barrels in 1819 when two muskets were shipped to Colonel Wadsworth in December, 1819, but did not arrive until the spring of 1820.

Some browning may have been done by a few contractors in 1820 and Springfield had also begun to brown some muskets in mid 1820.

Each of the 30 pattern model muskets were to be marked with the letters "U.S.P." You will be able

to observe the markings of the gauges of the Springfield model in the display room, but I did not have a picture ready for this lecture.

After all was said and done, Springfield Armory, who had long been favored by the government for pattern pieces, lost favor to Harper's Ferry. The pattern model that James Stubblefield, of Harper's Ferry, had produced was selected and this armory continued to dominate pattern pieces for many years to come.

With the background that I have tried to present to you in mind, I believe you will be able to see that the musket made in 1822 was not a new model, as claimed by some, but only a modification of the Model 1816 Musket itself. The confusion of these facts is complicated by the Ordinance Manual of 1841 referring to the change in the musket in 1822 as a Model of 1822.

There was yet another step in the finish of the 1816 Musket instituted by the government. This was not a major change of finish, but an attempt to preserve the finish existing on the arm. Bomford wrote to Colonel Lee on July 18, 1827, regarding the lacquering of Muskets. This process was an attempt to preserve the musket while in storage. The finish was to be made of the following:

- 1 pound beeswax
- 1 quart spirit of turpentine
- ½ gill boiled linseed oil

This was to be purified and the turpentine redistilled. Both parts were to be melted together in copper or earthen vessels. The solution was then applied to the entire musket with a paint brush.

## **TYPE I MUSKET**

As many of our members may have discovered, there is a great inconsistency of exact dates of changes from the First to the Second and into the Third type within the Model 1816. Once things seem to be setting a particular pattern, something turns up to the contrary. This is especially true in contract arms.

The Type I muskets in my opinion were almost exclusively bright finished. The earliest musket that I have examined which bears most of the 1816 features was a Harper's Ferry musket dated 1816.

The barrel measured 42" and was bright under the wood and appeared to have never been cleaned in modern times. The lock plate measured 6<sup>5</sup>/<sub>8</sub> inches by 1<sup>3</sup>/<sub>8</sub> inches and was of the 1812 type (not rounded) but had an iron pan with a high fence. The hammer and frizzen were of the 1808 type. The stock was not quite combless, the band springs were proper under the 1816 designation, though the middle band was of the 1812 style. The stock bears the stamp "JS" with sub markings "AT." The eagle on the lock plate faces left with wings raised up.

As called for by the pattern models the First type 1816 Musket would appear as follows:

The musket is caliber .69 with an almost combless walnut stock which should be about 54<sup>1</sup>/<sub>4</sub> inches from tip to center of the butt. The barrel is about 42<sup>1</sup>/<sub>8</sub> inches long. The butt plate begins to take on a flat back rather than a rounded ridge back down its entire length. The trigger guard tang is rather wide and is held by two screws. The guard itself is integral with the forward and rear tang. There is a trigger plate which is held in place by the barrel tang screw. The web of the trigger will vary greatly in style.

Early lock plates will vary from the flat 1808 surplus part put to use to the standard round tail lock that was to be standard on all U.S. flint lock muskets. The earliest specimens of the Type I musket may have iron pans which were used until 1817 at which time brass pans were beginning to appear. Lock markings will vary as to position and the eagle may be found facing right or left. The cock or hammer is rounded rather than flat. The rear sling swivel is mounted on a stud forward of the trigger guard bow and is a press fit. The front swivel is mounted in the same manner on the middle band which may be somewhat wider than on later arms. Some arms will have a hammer notch in the stock.

All First Type arms should be finished bright. Dates on these muskets will range from 1816 to probably 1822.

## TYPE II MUSKET

The Type II musket seems to settle into a somewhat of a nondeviating pattern for the period of its manufacture, at least in arms coming from the National Armories. Type II muskets are considered as appearing from 1822 til 1832.

There was a great deal of controversy as to the type of finish that the metal should have at the introduction of the model in 1816 and though there may have been a few browned barrels and parts prior to 1820, I doubt that they could be considered other than experimental as to finish.

The first true attempt at browning of metal parts on this model seems to occur early in 1820 when pattern guns were browned. By March or April of 1820 contractors were being urged to start browning barrels. Muskets with browned barrels remained in controversy until mid or late June 1820 and were evidently still in the experimental

stage until an order was issued to refurbish the model in 1822.

I have examined a number of early Armory and contract muskets dated up to and slightly before 1820 and have found no evidence of browning; therefore, it is my opinion that only test guns and those specified by Colonel Lee for delivery to the United States Military Academy at West Point for test purposes, before final consideration of this type of finish was approved, are the arms browned prior to 1822.

On August 27, 1821, an order for browning muskets was issued as is stated in a letter from Colonel Bomford of the Ordnance Department. It was not until November 1822 that the pattern models of the browned musket were shipped from Springfield Armory. The browning of metal parts was basically an attempt to preserve the steel during storage from the weather and against normal handling.

Several methods of browning were used. The process consisted of equal parts browning solution (4 gallons) to equal parts varnish. The metal parts to be browned were first polished bright, rubbed and immersed in a boiled alkaline solution before the browning solution was applied.

The Ordnance Manual of 1841 describes the method of browning for Type II arms:

"... locks, ramrod, band springs, bayonets for 6" from points, triggers, receivers and screws are not browned.

Instructions for Browning Arms

1<sup>1</sup>/<sub>2</sub> oz. spirits of wine (alcohol)

1<sup>1</sup>/<sub>2</sub> oz. tincture of steel

<sup>1</sup>/<sub>2</sub> oz. corrosive sublimate

1<sup>1</sup>/<sub>2</sub> oz. sweet spirits of nitre

1 oz. blue vitriol

<sup>3</sup>/<sub>4</sub> oz. nitric acid

To be mixed and dissolved in 1 qt. of soft water — the mixture to be kept in glass bottles and not earthen jugs . . . . .

. . . The barrel when cold, should afterwards be rubbed over with linseed oil or sperm oil."

The Type II Musket differs only slightly from the Type I. The lock plate was lengthened slightly. The trigger plate was discontinued in favor of a one piece trigger guard strap and the sling swivel was moved to the forward portion of the trigger guard bow. The guard bow was separate from the strap and was riveted in place. The early guard bows have the swivel attached to a flat area almost forward of the bow itself while the later guards develop a round circular area to which the swivel is riveted.

## CONTRACT MAKERS

Knowing that the two National Armories could not furnish the quantity of arms the Government would need, contracts were let to many independent gun makers at the concept of the first official United States Model, 1795. A number of



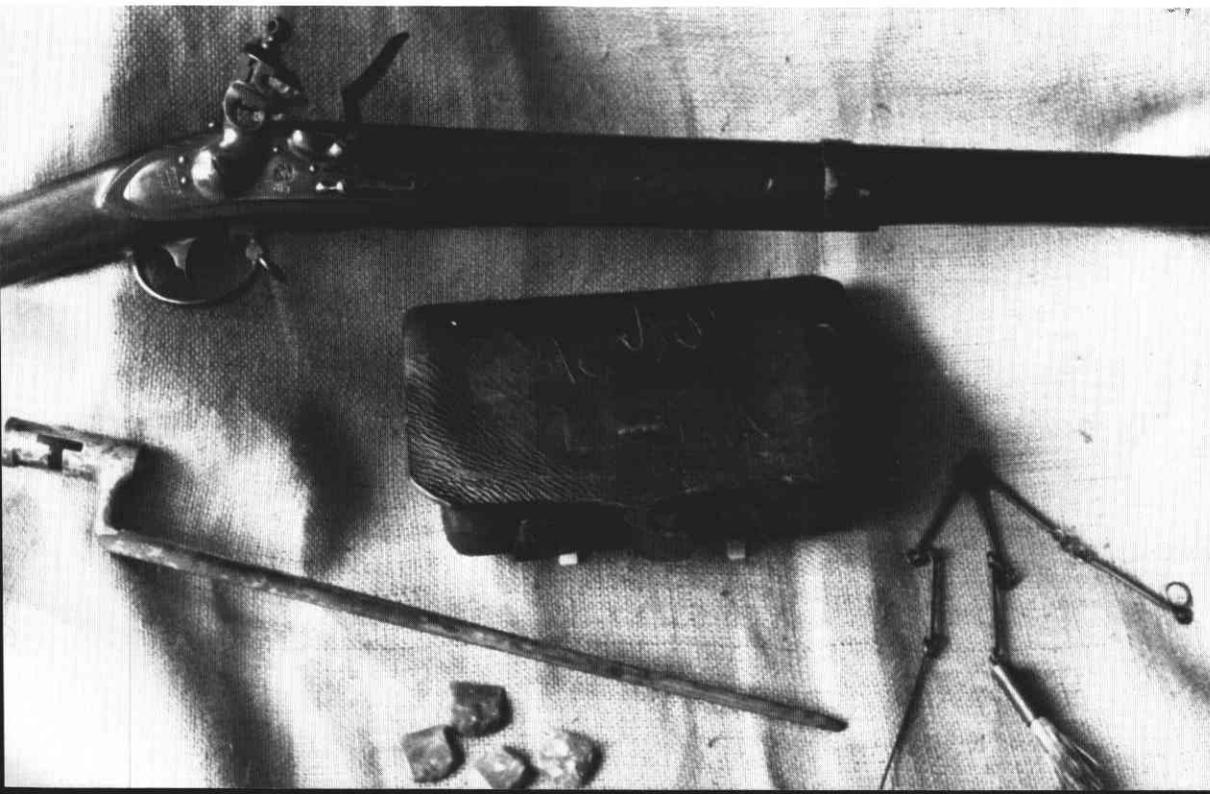
*Type II Springfield, dated 1829 with late type swivel position.*

the initial contractors continued making arms into the 1816 Model. Sixteen individual contractors manufactured the 1816 Musket as well as later models of arms for the government. The contractors and the type 1816 Model they produced are as follows:

- J. Baker — Philadelphia, Pa. — Type III
- P. & E. W. Blake — Old Whitney contract — Type II
- E. Buell — Marlboro, Conn. — Type I, possibly Type II
- A. Carruth — Greenville, S. C. — Type I
- B. Evans — Philadelphia, Pa. — Type I, II, and III
- W. L. Evans — Evansburg, Pa., marked "VALLEY FORGE" — Type I and II
- R. & J. D. Johnson — Middletown, Conn. — Type II and III
- D. Nippes — Mill Creek, Pa. — Type III
- H. Osborne — Springfield, Mass. — Type I, II, and III

- L. Pomeroy — Pittsfield, Mass. — Type I, II, and III
- N. Starr — Middleton, Conn. — Type II, possibly Type III
- A. Waters — Millbury, Conn. — Type I, II, and III
- Eli Whitney — New Haven, Conn. — Type I, II, and III
- M. T. Whickham — Philadelphia, Pa. — Type I and II

Many contract makers used several lock markings as well as eagle stamps. This fact can be confusing unless one is well acquainted with each individual maker's mark. There is a great deal of variation in contract makers trigger web width, as well as pan size and contour. This only proves the still lacking standardization of not only manufacture but also controlled inspection by the government.



*Type II with accessories.*

## TYPE III MUSKET

The third type modification of the 1816 musket was the last and final change for the model. The changes were very minor and the musket closely resembles the second type arm with the following exceptions. The finish of the metal was again changed to bright and the late variation of the sling swivel attachment of the second type arm was adopted. The lock plate markings were reduced in size and depth. Other than these changes it appears that in some cases the hammer recess in the stock behind the hammer in the fired position was eliminated and the overall dimension of the brass pan was decreased.

It is probable that no new pattern models were produced until the order for such was issued in 1833, which called for a Model to be constructed at Harper's Ferry to be patterned after the French Model 1822. This Model was to be produced in 1835, but actual production of the Model did not get under way until the late 1830's. This model is known today as the Model 1840, the last of the U.S. Flintlock Musket series.

The bayonet for the 1816 Musket began as a slight modification of the bayonet for the 1808 - 1812 Musket. Not until 1822 did the full standardization begin to take place as was the case of the musket itself.

The blade of the bayonet was ground concave on the face and is 16 $\frac{1}{8}$  inches long, 15/16 inches wide, and 7/16 inches thick with a plow point. The back of the blade is hollow ground its full length.

The shank is well rounded and the socket measures 3 inches. There is no lock ring on the socket and a "T" shaped mortise is cut in the right side to accept the stud on the top of the musket barrel.

Bayonets will be found finished bright, full brown, or partially brown.

Scabbards were of black leather with brass tips. The throat and belt loop are white buff leather.

In addition to the musket itself, there were other accessories that accompanied the arms that were either produced at the manufacturing sites or

contracted for by the Government. The cartridge box was probably of the same style used with the 1808 and 1812 Musket. The quantity of cartridges a box would hold may vary somewhat but should be as follows:

A sturdy leather box containing a wooden block in the top section, bored to hold 26 rounds. The bottom of the box to be three compartments of tin, both sides to hold at least six cartridges each with the middle for flints, flint caps and an oiled rag. The top or cover of the box to be rounded with a full flap of leather. A bellows hinge of leather provided access to the flint compartment. The box was suspended by a leather shoulder strap retained by two buckles on the bottom of the box.

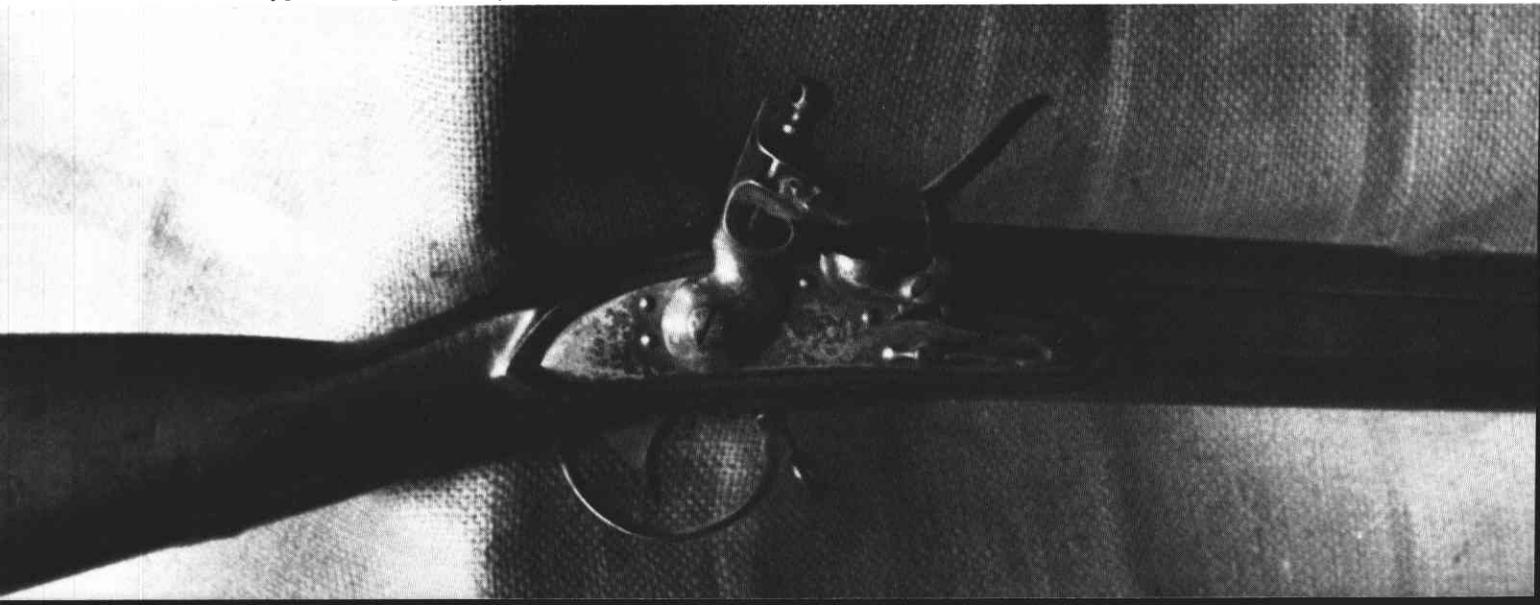
Other necessary accoutrements were the screw driver, wiper, ball screw, and spring vice. Lead flint caps were standard issue and were designed to hold the flint securely in the jaws of the hammer. Regular issue of flints was 1 flint per 20 cartridges. A pick and brush was also furnished with the musket and was suspended from the cartridge box strap by a chain of brass. The brush was of horse hair capped in brass.

The question of rarity is always a problem in the field of collecting when one is dealing with arms produced in large quantities. Opinions on this subject will vary and cause thought for discussion; so what I am trying to give you is strictly my own grading of rarity based on the facts that I have compiled in my study of this arm. I have based my study mainly on Armory guns and this opinion may not necessarily apply to contract arms, so I will let you draw your own conclusion on that factor.

As far as the average condition unconverted Model 1816 musket goes, I classify the first type musket as the most difficult type to obtain as it was only produced for approximately six years. Second would be the third type, as most of these were selected for conversion to percussion. The second type would be the most common of the 1816 models to obtain.

If you are looking for exceptional condition

*Type II. Harper's Ferry, dated 1827 with early swivel position.*



muskets then the picture changes slightly.

First, let me say that I consider any extremely fine to mint condition flint lock musket as a very great find in collecting. These muskets were military arms and though they may not have actually gone into battle, they saw service in military training, ceremonial parade and drill as well as having been sold off as surplus military stores to be consumed by the individual public, foreign government or possibly the fur trade market.

With this in mind I would have to rate both the third and first type musket as being the hardest to obtain in near new condition since they were both finished bright and subject to rust over the years as well as the great majority of third types that were converted. The first type, of course, was a very limited production type.

The second type, which was browned, of course would be next because of its protective finish to the metal parts. This is, of course, not to say that a truly fine browned second type musket is easy to come by, for it is not. We must remember that a large number of these arms were also altered to percussion.

There have been reports of some late model muskets having been rifled and possibly sighted, but I have never had the opportunity to examine one of these in order to begin to comment on such a musket. If this should be the case, I would have to conclude these arms were strictly experimental.

Contract arms will vary in rarity based on the types of the model a contractor may have produced and the size of the contract.

There is also the fact that the government's feelings about the quality of the contract arms also entered into the number of contract arms converted for later use.

With these facts in mind, one should probably consider each maker on his own merit.

In conclusion this paper is offered simply as a summary of what information I have compiled as well as what students have already written on the Model 1816 and I hope that these points may make

the Model 1816 Musket more interesting to the collector so that more knowledge may be gained by further study.

There are many unanswered questions that many of you members may be able to help me answer. Many of the Muskets bear sub inspectors or assembly marks such as "abc" on major parts. Many others bear simply numbers on each part or simply a "V". Pan sizes and angles differ greatly from early to late muskets. Who were the other contract parts makers to the National Armories such as Springfield Manufacturing Co. etc., and if so, how many? These questions are still to be clarified and I would be most interested in any comments or information on these points.

The presence of a condemned stamp on a musket barrel has always held an interest to me because I have seen it on muskets of exceptional condition. I rather like to see this because most of the time you can be sure by visual inspection that this particular musket has not been reconverted, because it should not have been converted to start with.

Although the 1816 Model Flintlock Musket does not enjoy the battlefield charm of the early Revolutionary Arms, I feel that it is quite a worthy arm to collect, because of the importance of its longevity in service plus its importance in the industrial revolution of arms manufacture. The musket is colorful as it was finished bright or browned and it was probably the finest flintlock military musket produced by the United States along with the short lived Model 1840.

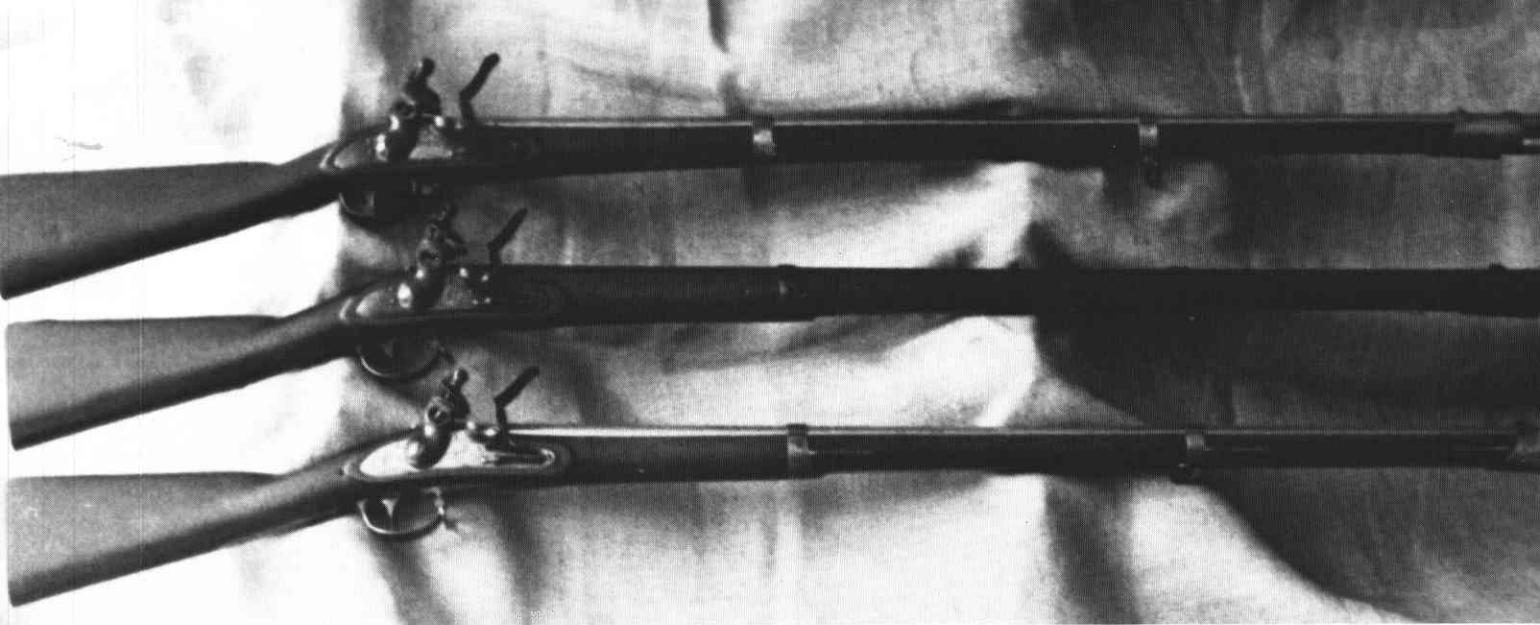
I have included a partial list of government inspectors in the article but I will not take time to read them at this meeting.

I hope that I have been able to interest or rekindle interest in you fellow collectors who may have information on the Model 1816 that will be helpful to further the study of this model and I will appreciate any information that you might be willing to share with me in the future.

Thank you for your indulgence and good day.

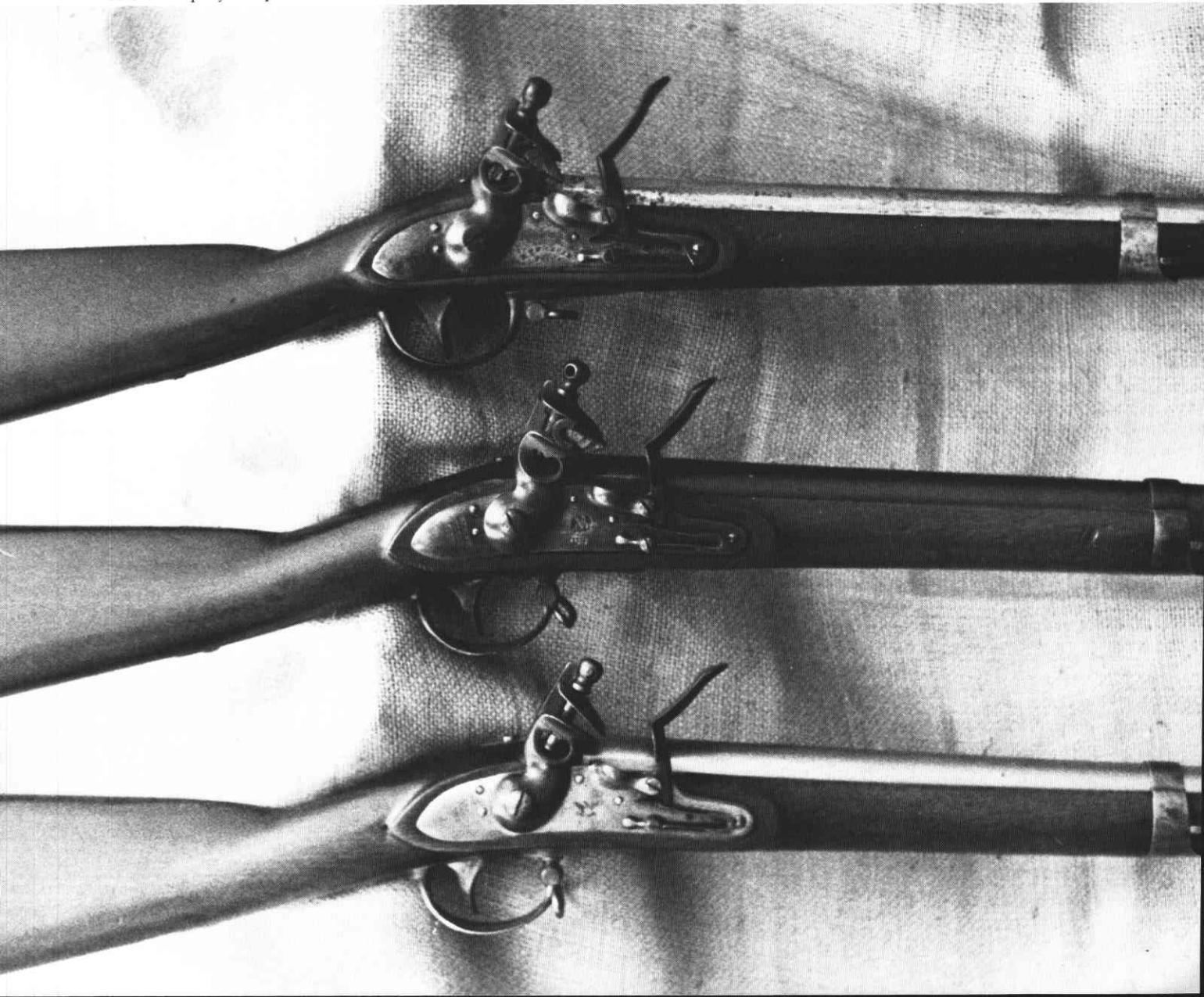
*Type III, Springfield, dated 1838.*





Full view of Type I (top), Type II (middle), and Type III (lower).

A close up of the previous illustration.



# LIST OF GOVERNMENT INSPECTORS

James Stubblefield — Superintendent, Harper's  
Ferry Armory

Roswell Lee — Superintendent, Springfield  
Armory

James Carrington — 1824 to 1830, except 1825

George Flegel — 1823 only?

Asabel Hubbard — 1826 to 1830?

John Norman — 1830 only

Justin Murphy — 1818 to 1830

John Newbury — 1818 to 1826

Jacob Perkins — 1821 only?

Luther Sage — 1818 to 1823? also 1831

Eligha Tobey — 1818 to 1830? except 1822, 1823,  
1825

Joseph Weatherhead — 1821, 1822, 1825?

These men were inspectors of the arms made by  
the many contractors under the 1816 contract.

They were directly responsible to Roswell Lee and  
Springfield Armory.

The following is a list of government inspectors  
working with the contractors. Many of these  
men worked on earlier contracts and others were  
relegated duties of inspecting state Militia arms.

Peter Getz — Pistols and rifles of Pennsylvania

Benjamin Moor — New England

Thomas Palmer — Pistols and rifles of  
Pennsylvania

Henry H. Perkins — New England

Daniel Pettibone — New Jersey and Pennsylvania

Jacob Slough — New Jersey and Pennsylvania

M. T. Wickham — New Jersey and Pennsylvania

In 1831 all inspectors were placed under the  
supervision of Lt. Daniel Tyler, who became Chief  
Inspector. The following is a list of inspectors who  
worked after that date.

O. W. Ainsworth

R. Chandler

C. W. Hartwell

A. D. King

D. LeGro

E. A. May

W. North

N. W. Patch

Luther Sage

James Stillman

J. N. Sollace

W. A. Thornton

H. Tracy

NOTE: This list of inspectors is included only as a  
reference to the collector. Although I feel that the  
names are accurate, I do not feel that the dates of  
employment are correct because I have owned or  
seen muskets inspected by these men that were  
dated much later than the list indicates these men  
worked. Most of these dates were compiled by  
previous students of the arms.

## Reference:

Small arms and ammunition of the U.S. —  
Lewis

U. S. Military firearms — Hicks

U.S. Military small arms 1816-1865 — Reilly

Hall's breech loading firearms — Huntington

The guns of Harpers Ferry — Brown

Arms making in the Connecticut valley —

Deyrup

A.S.A.C. bulletin #11

The American bayonet — Hardin

Personal notes — R.N. Kennedy Jr.

U.S. Ordnance Manual 1841