

Whereas, Henry Dearborn, Esq. Secretary of the War Department of the United States, has invited proposals for the manufacturing of musquets with bayonets by a public advertisement, bearing date the 12th day of May last.

And whereas in consequence thereof, a proposal has been made by _____ of _____ State of _____ in the county of _____ to make and deliver

_____ stands of the aforesaid arms : ~~Now know ye~~, that in consequence of the foregoing, it is hereby mutually agreed, by, and between the United States, (by the agency of Purveyor of Public Supplies,) and the aforesaid _____ that the said _____ shall and will manufacture, and will deliver within _____ from the date hereof, _____ stands of the aforesaid arms, and in each and every subsequent calender year, _____ several and successive years, _____ stands, for and during _____ of the United States, in the at _____ of

_____ of the form, kind, dimensions, quality and substance, in all parts of two certain selected pattern musquets, with bayonets, made at the public armory of the United States, at _____

It is further agreed, that the price of each of the said stands of arms, (consisting of a musquet with bayonet complete) is and shall be ten dollars and seventy-five cents, money of the United States, payable to the amount of each and every parcel delivered, on demand, after a full and correct inspection by a person or persons to be appointed for the purpose by the United States, and after such inspector shall certify that the arms, so by him inspected, fully correspond, in all their parts and in their substance, quality, workmanship and value, with the selected patterns aforesaid.

It is expressly conditioned, that no member of Congress is or shall be admitted, to any share or part of this contract or agreement, or to any benefit to arise thereupon.

Witness the hand of the said Purveyor of Public Supplies, and the hand and seal of the said _____ this _____ day of _____ 180

*Sealed and delivered in
the presence of us.*



This form for musket contracts specifies that the contractor will be supplied "two certain selected pattern muskets, with bayonets, made at the public armory of the United States, at _____." The blank will be filled in with the name "Springfield" or "Harpers Ferry." Actually, the contractor got one musket, Cox kept the other.

A Pattern To Work By

Arthur F. Nehrbass

April 2, 1794: the Government, only five years old and in only the third session of Congress, was laying the foundations for the growth of many institutions. This day saw the creation of a U.S. arms industry that was not only destined to reach world eminence but also was probably the major research and development industry for the coming Industrial Revolution.

The Act of April 2, 1794 authorized U.S. arms contracts and established two armories. President Washington chose Harpers Ferry in Virginia and Springfield in Massachusetts as the sites.

The beginnings of these armories did not impart any feeling of great expectations. David Ames, Springfield's first Superintendent, was in place in the fall of 1794. On October 17, 1794 he was issuing a complaint that would echo down the centuries: lack of funds. On December 11 an equally pressing problem for musket production was addressed: "we want a pattern sent on to work by and if you have none that can be sent now, wish that you would be pleased to write whether the work is to be done in imitation of the French or English and what the pieces are to be stocked with and if with black walnut it must be provided . . . for it cannot be obtained here — yet nevertheless (send) a pattern as soon as you can."

Ames had apparently not been informed of the May 20, 1794, decision that a "Charleville" musket would be the standard for muskets "made on purchase."

The pattern apparently arrived and production commenced, but the total configuration was not settled. On November 12, 1798, the Military Storekeeper informed the Commissary General of Supplies "that the pattern muskets (made by Springfield for 1798 contracts?) which had been delivered to you and the Secretary of War do not correspond in every particular with those he (Springfield Armory) patterns after, viz., the nub which holds the bayonet is placed on the underside of the barrel and the upper pipe for the ram rod is bell muzzled, whereas (on) those he patterns from, the nub is placed on the upper side, the pipe smooth."

On December 14, 1798, another letter refers to the November 12th letter and the "Charleville muskets which I have delivered as examples or patterns based on your instruction of September 3, 1798, to have the best finished and most efficient in every respect selected by the workmen from the Charleville kind. The nub of the bayonet being on the back of the barrel and the upper pipe for the ram being belled . . . I will write to those



persons to whom they have been delivered to place the nub on the upper side of the barrel as you have directed." Obviously what we had was a language failure. The Commissary General said, "put the bayonet stud on the *back* of the barrel." What is "back"? Ames thought bottom, Commissary meant top.

From this it appears Springfield muskets, as of 1798, had the bayonet stud on top of the barrel and the top band was relatively straight at the ramrod aperture. Since the letters prefer a "belled" aperture, it would appear probable they changed in this year. My 1800 and 1803 dated Springfield specimens are "bell shaped," whereas a circa 1798 (contract of 1794) musket is smooth, as are Harpers Ferry. The preparation of "patterns" at Springfield in late 1798 appears to be a response to the Act of July 5, 1798, authorizing contract procurement of 30,000 muskets.

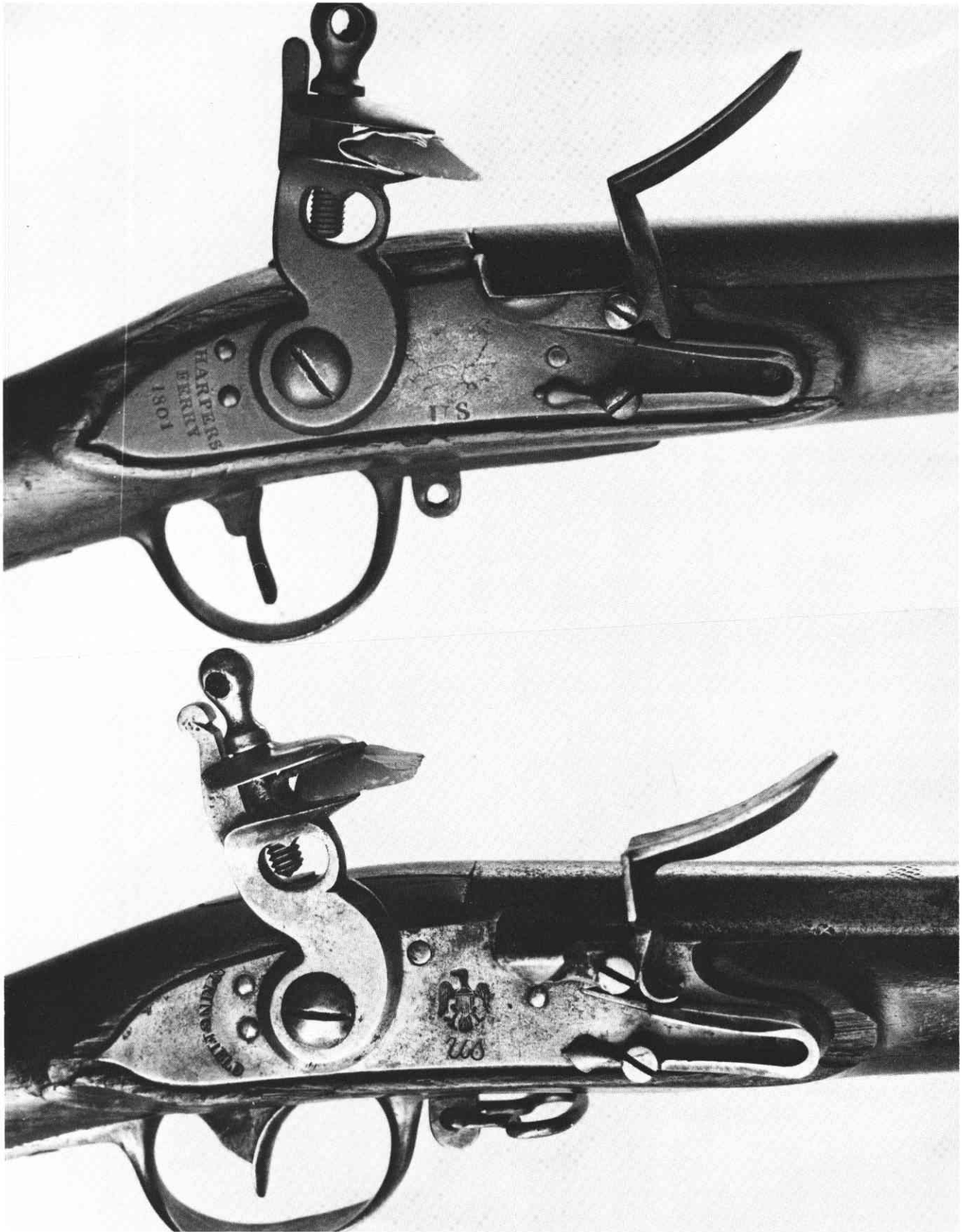
Production at the armory was slow to start. The muskets were literally hand made. In 1798 and 1799 water power became available and machinery replaced some hand labor.

On December 31, 1799, the Military Store Keeper at Springfield reported to the Commissary General that 4,399 muskets were produced that year. On February 4, 1799 he had reported production as:

1798 - 1044
1797 - 1028
1796 - 835
1795 - 245

During the 1795 - 1798 period 31,497 French muskets were cleaned and repaired.

The new Springfield Armory was located on U.S.



Harpers Ferry dated 1801 on lock with serial number on butt and barrel, and Springfield dated 1800 on butt; note difference in cock configuration. Pan on Harpers Ferry is round integral, Springfield detachable faceted; note indentation at tip of frizzen on Springfield while Harpers Ferry is smooth, and the difference where they touch the frizzen spring.

property and had some existing structures from which to begin. The land at Harpers Ferry had first to be acquired from reluctant owners and serious misgivings by government officials overcome. Washington insisted on the Harpers Ferry site against the advice of many. It was not until the French war danger of 1798 that final acquisition and formal establishment of the Harpers Ferry Armory was complete. In August, 1798, Joseph Perkin was appointed the first Superintendent.

Little was done in 1798 or 1799. Washington, as Commander in Chief of the Army (Adams was President and war with France imminent), ordered a heavy troop concentration at Harpers Ferry and apparently was able to pressure Adams into going forward with the arsenal there.

In 1798 Harpers Ferry was a rural village with almost no manufacturing experience or ability. Raw materials had to be brought overland and by river, together with necessary machinery, at great expense. Skilled workers were recruited and had to move to Harpers Ferry.

In contrast, Springfield was in a manufacturing area with skilled labor and with access to raw materials and cheap water transportation.

Perkin had a good background in firearms manufacture. He had worked in Birmingham, England, and at Rappahannock Forge. He followed the gunsmith trade in Philadelphia and later supervised work at New London Arsenal.

By September of 1798, Perkin and James Brindley, an engineer, provided construction proposals to the War Department.

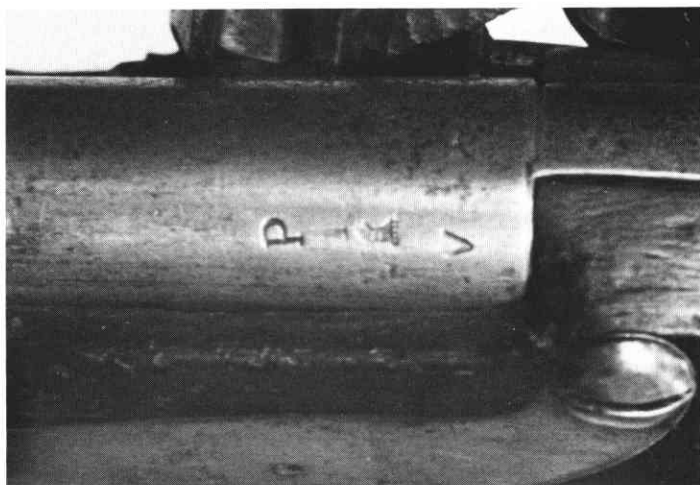
In the fall of 1798 Perkin recruited some gunsmiths from the now-closed New London Arsenal. Some repair of arms was accomplished in a converted warehouse.

In May of 1799 construction of the armory buildings began and between about December, 1799, and January, 1800, they were completed.

Water power was not available. Political considerations outweighed experience and ability. Incompetence controlled the construction of the dam and canal, which began about May, 1799.

John Mackey had been appointed paymaster and storekeeper in August, 1798, and given responsibility for construction. He proved to be a neurotic incompetent who caused a February, 1799, armorer's strike over the bad food he supplied. Here, for the first time, the name Charles Williams appears: Mackey accuses him of being a seditious ringleader. We know him best from his mark "CW" on Harpers Ferry arms and later on 1808 contract arms.

Mackey's incompetence was finally recognized and he resigned in early 1800, and in April, 1800, Samuel Annin became paymaster. The responsibility of pay-



Barrel proofs of Springfield dated 1800, and barrel proofs of 1801 dated Harpers Ferry: note serial number "N° 1948", "US" in oval, and eaglehead P in oval.

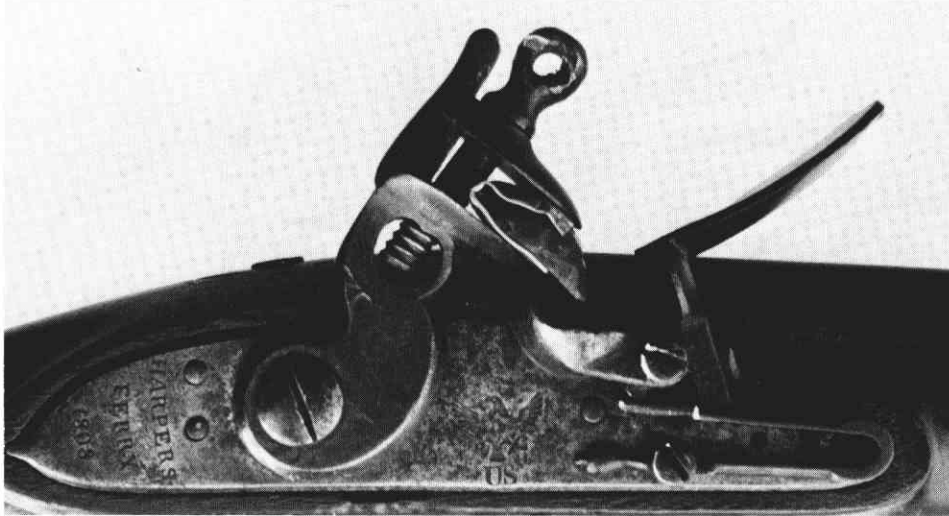
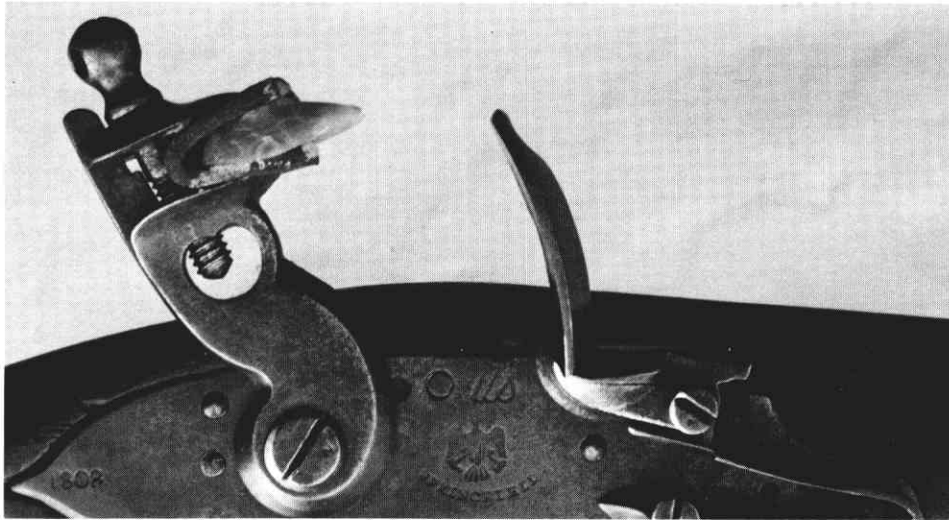
master and superintendent were ill-defined. Despite labor problems, Annin completed the canal in 1801. As late as August, 1801, little heavy manufacture was possible, as the canal was incapable of providing the power required and construction repairs were going forward.

It is difficult to ascertain when actual production of muskets commenced. On August 4, 1801, Perkin wrote Dearborn that the armorers were working "chiefly on old arms." No arms production records exist before 1801. Parts, at least, were manufactured in 1800, since there are lock plates dated 1800.

The means to produce barrels in any quantity were not in place at Harpers Ferry until late 1801. It is believed, therefore, that musket production really began in 1802.

A March 7, 1806, War Department report lists 2,676 muskets produced from 1802 to 1805. Col. Bomford, in his compilation of 1816, puts 1801 production at 293 with a total of 2,974 produced from 1801 thru 1804. The total appears "close enough for government work."

Musket production virtually ceased after 1804, as Harpers Ferry was producing pistols and rifles. It was not



1808 dated Springfield and Harpers Ferry. Note difference in cock top jaw guide: the Springfield is straight; the Harpers Ferry has notch at lower jaw rear and a bulbous tip. The Springfield pan is round detachable (round integral circa 1808-1809) and there is still a notch at the tip of the frizzen. The frizzen springs are also of a different configuration.

until 1808 that musket production on a significant scale was again begun.

Lock plates with early dates (1800 and 1801) are found on high serial numbered arms; Harpers Ferry used serial numbers on muskets, rifles and pistols until 1811/12. Springfield did not use serial numbers. This tends to indicate lock plates and other parts made in 1800-1801 were later assembled into muskets as barrels were manufactured in sufficient numbers.

Production to 1802 is shown as 1765 stands. An 1801-dated original flint musket has serial no. 1948 on barrel and butt.

The following dated and numbered muskets are among those drawn as patterns by Tench Coxe, Purveyor of Public Supplies, in 1808:

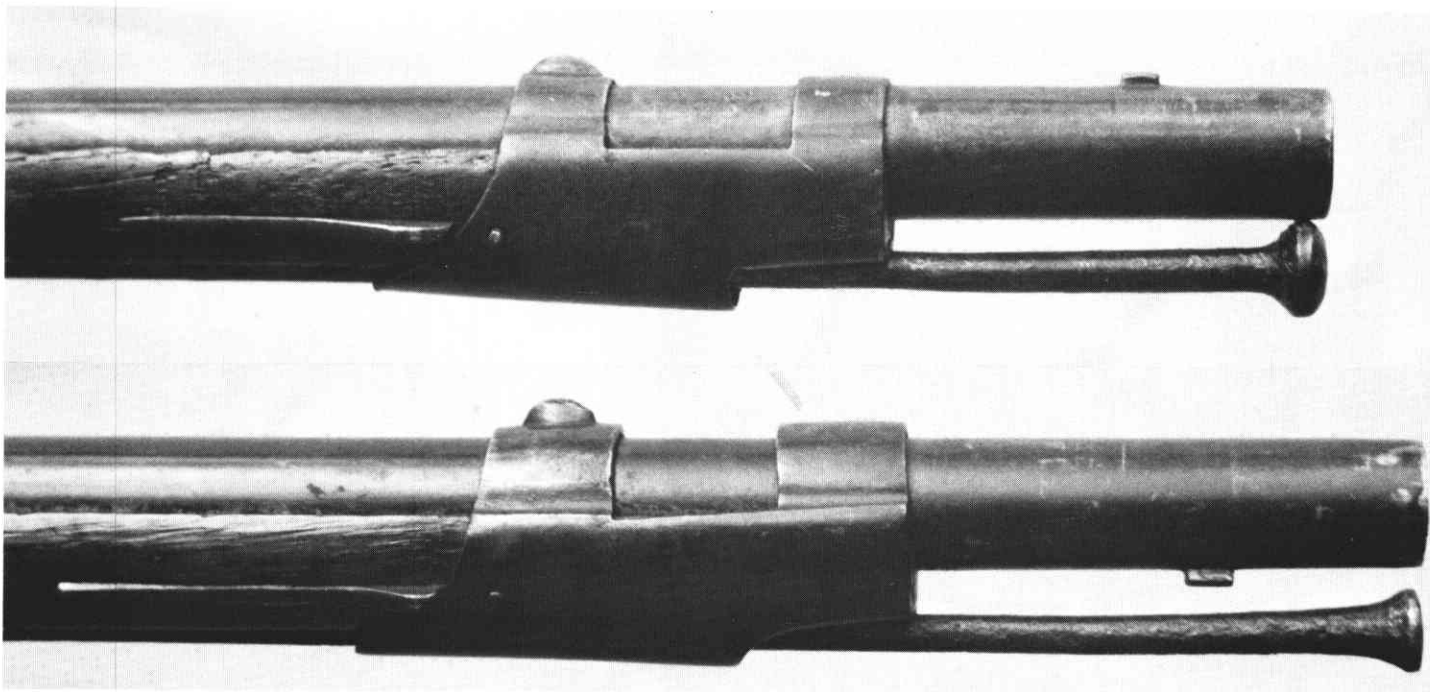
1802 - #2367	1803 - #2213
1802 - #2621	1803 - #2250
1803 - #2089	1803 - #2666
1803 - #2119	1803 - #2867

This list tends to corroborate a theory of stockpiling of parts and fabrication when barrels became available. Note that four 1803 serial numbers are lower than serial numbers on 1802 specimens.

Contemporary accounts do not recognize or refer to a Model 1795 or Model 1808. There was no model per se until 1812 when, on Government instructions, Marine Wickham designed the Model 1812 to "standardize" production. Contemporary records describe the muskets as "Charleville kind" which translates to Springfield or Harpers Ferry. "Charleville pattern" muskets received from contractors translates to 1798 contract musket. Use of "New musket Charleville pattern" and "Common French" in the same letter show the terminology being used to differentiate U.S. manufacture from French.

There was, especially at Springfield, an evolution of design which modern collectors have tried to stylize in terms of Model 1795, Model 1795/1808 and Model 1808.

The difference between Harpers Ferry and Spring-



Top, 1808 dated Springfield; bottom, 1808 dated Harpers Ferry. Note bayonet studs and ramrod apertures.

field muskets, while of slight operational consequence, are important in understanding contracts.

The Springfield stock was thinner at the wrist and had deep grooves or fullers extending toward the butt. Harpers Ferry was thicker at the wrist and flat toward the butt. The Harpers Ferry cock guide for the top jaw had a slight notch where guide and cock joined, and was rounded on top. Springfield was straight-backed and had a curl at top to about 1807/08, when it had a square top. The Springfield frizzen was notched at the tip and had a curl at the point it touched the spring; in 1807/08 it became square-toed. The Harpers Ferry frizzen was smooth-backed and always square-toed.¹

The Springfield pan was faceted and detachable to 1807/08, when it became round and detachable, then round and integral by 1809. Harpers Ferry was always round and integral.

The finials on both Harpers Ferry and Springfield trigger guards were pointed. Springfield went round 1807/08; Harpers Ferry not until about 1815. The bayonet stud on Springfield was on top (usually), the exception being 1803-dated Springfields on which, for that year, the stud usually appears on the bottom of the barrel. The Harpers Ferry stud was on the bottom of the barrel until about 1808/09, when it went to the top.

The top band of Springfield was "bell-shaped" at the ramrod aperture and smooth for Harpers Ferry.

As can be readily seen, there was no standardization between Springfield and Harpers Ferry. It is this absence of standardization, or, put another way, these differences carried through to the Model 1812 period, that caused collectors to speak in terms of "Model 1795 style" 1808 contract muskets and the "Model 1808 style" contract muskets.

Southern contractors as a rule received Harpers Ferry muskets as patterns and northern contractors received Springfield muskets as patterns. Since the contract offering spoke of patterns from Springfield, Harpers Ferry or *Whitney*, collectors have assumed that a new musket design was involved. Fuller and early collectors concentrated their interest in Springfield and judged all U.S. muskets from the Springfield "standard." Hence the Springfield musket circa 1808 was wrongly assumed to be representative of what a 1808 contract pattern or model should be. Then came all the explanations, such as "using up old parts" to account for the differences in appearance among the 1808 contractors' muskets.

The simple truth is the patterns for the 1808 contracts were *both* Springfield and Harpers Ferry muskets taken off the rack and issued to contractors. There was no one "Model 1808" and the differences among contract muskets are because Harpers Ferry produced muskets that differed from those produced at Springfield.

Tench Coxe did not care much if the trigger guard was pointed or round. The shape of the cock and frizzen were of little moment, as was the shape of the stock. What he wanted and what he got was a "Charleville kind."

Research has yielded some data on specific patterns

1. In their period of manufacture, the part holding the flint was called the "cock," and that which it struck, the "hammer." Modern terms call the flint-holder the "hammer" and the other the "frizzen."



Stock Configuration of 1800 Springfield showing deep “flutes” behind the wrist, and an 1801 Harpers Ferry has smooth stock without “flutes”.

issued to contractors for the 1808 production:

Evans was issued Harpers Ferry muskets serial number 2647.

Henry received Harpers Ferry muskets #2144 and #2172.

Jenks received Harpers Ferry #2119.

Miles drew Harpers Ferry #2186.

Wheeler and Morrison received #2850.

Samuel Kerlin, succeeding on the Miles contract, may have drawn Harpers Ferry #2484 which is charged to the contract June 14, 1810.

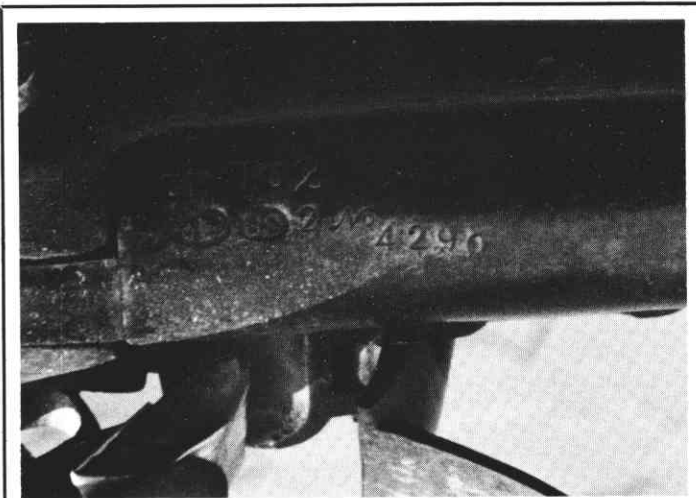
Tench Coxe retained #2706 and #2218 as his patterns. The Fuller Collection is reported to have #2218 today.

In 1811 Coxe issued 2No4194 and 2No4187 to Henry and Kerlin-Young respectively. He retained the following 1811-dated specimens:

2No4199	2No4201	2No4209	2No4204
2No4208	2No4191	2No4198	

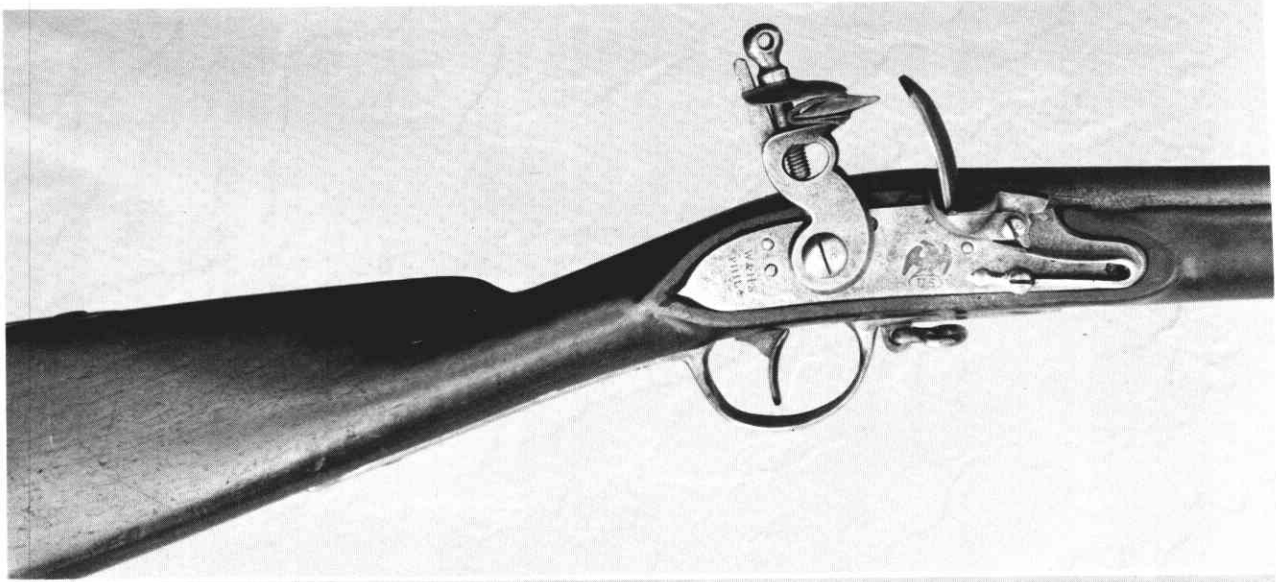
In addition, the following contractors are known by correspondence to have received Harpers Ferry or Springfield muskets as indicated:

Barstow	Springfield	Stillman	Springfield
Bartlett	Springfield	Sweet-Jenks	Harpers Ferry
Brooke	Harpers Ferry	Waters	Springfield
Perkins	Springfield	Winner Nippes	Harpers Ferry

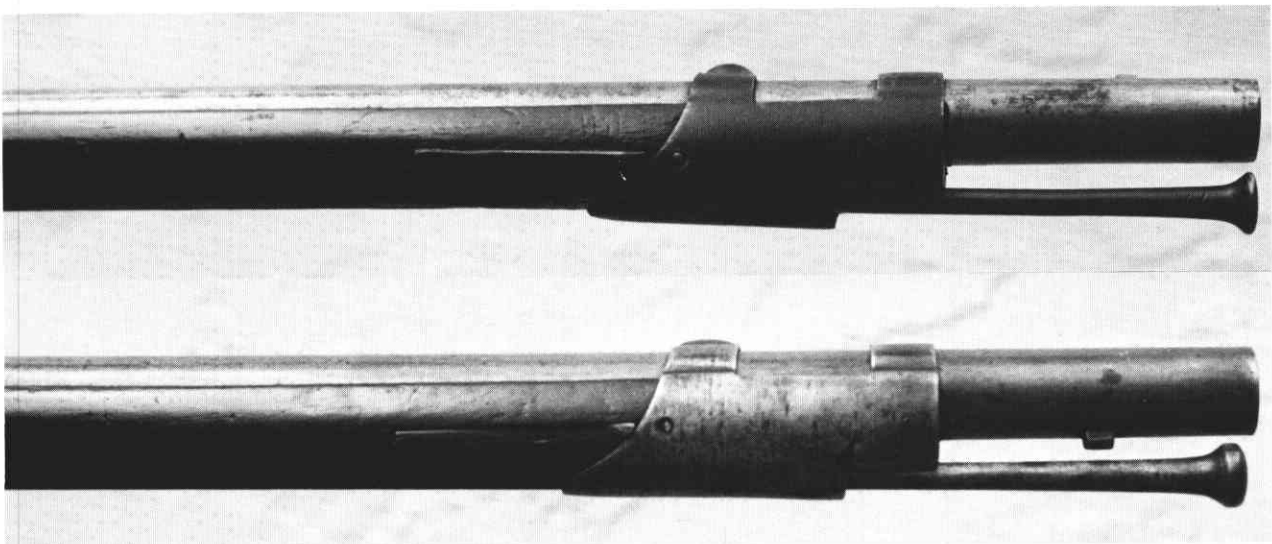


The Mysterious “2No” Numbers

By the close of 1810 Harpers Ferry was probably at or close to the 23,000 mark and numbering in the usual manner. Those muskets dated 1811 that I have observed have this “2No” prefix to the serial number — perhaps indicating a second series? Could this have been adopted in 1811 to signal a second decade of musket production? The use of “2No” at the 23,000 mark would not seem to effect any shortening of the number. I would appreciate further information about Harpers Ferry musket serial numbers, especially those with this marking. The number 702 above is a “CP” number.



1808 Contract muskets: top - William and Hugh Shannon. Their pattern was a Harpers Ferry musket; note cock, frizzen, frizzen spring configuration, and shape of stock. Bottom - Bartlett musket patterned after Springfield; again note the similarity. The indentation in the tip of the frizzen shows well.



Top bands: Bartlett on top, Shannon on bottom. Similarities to their Springfield and Harpers Ferry patterns are evident.

Other contractors can be judged by style but documentation has not yet been found.

One last thought as I close:

The study of Harpers Ferry history and guns has been sadly neglected; we have succumbed to Springfield fever. Perhaps because Springfield continued into our generation and produced a greater variety of arms, we and our predecessors have focused our interest on Springfield. We need to balance our approach and begin to research Harpers Ferry. Alas, so much was lost in its destruction.

Harpers Ferry, during the flint lock period, was the research and development center for small arms. Most of the patterns were made there, even into the percussion era. It produced rifles: the Model 1803 and the great Hall rifle. Precision tools, and true standardization, the "American Way," started there.

Early Harpers Ferry arms were judged by contemporaries superior to Springfield, yet because of the loss of Harpers Ferry in the War Between the States we have not carried her lore into this century. Her guns are much more rare than Springfield. How many 1800 to 1803 dated Springfields have you seen compared to 1800-1803 dated Harpers Ferry? Indeed, how many flint or percussion Harpers Ferry arms do you see at shows compared to Springfield? We need to study and preserve the Harpers Ferry part of our history as we have Springfield.

And in a larger sense we arms collectors have a story to tell the rest of the world.

The U.S. arms industry from circa 1795 was producing, for its time, a complicated machine. A gun lock required close tolerance and had to be fitted to stock and barrel and trigger, all of which also had to meet certain specifications.

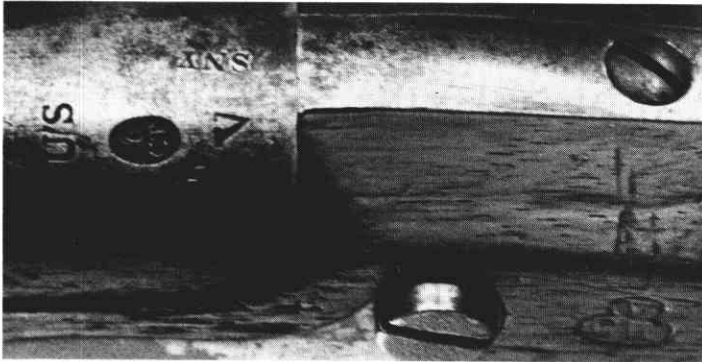
Couple this demand for close tolerance with a demand for mass production of thousands of these items and the stage is set for inventive genius. The dream of Whitney was realized by Hall: complete interchangeability of parts and their machine manufacture.

By 1840 Europe was in awe of the "American Way." Our place among the industrialized nations of the world springs in large measure from our arms production.

We gun collectors appreciate and preserve that history together with the history of the men and women who used these arms. Even today our arms industry is a major research and development area for civilian products.

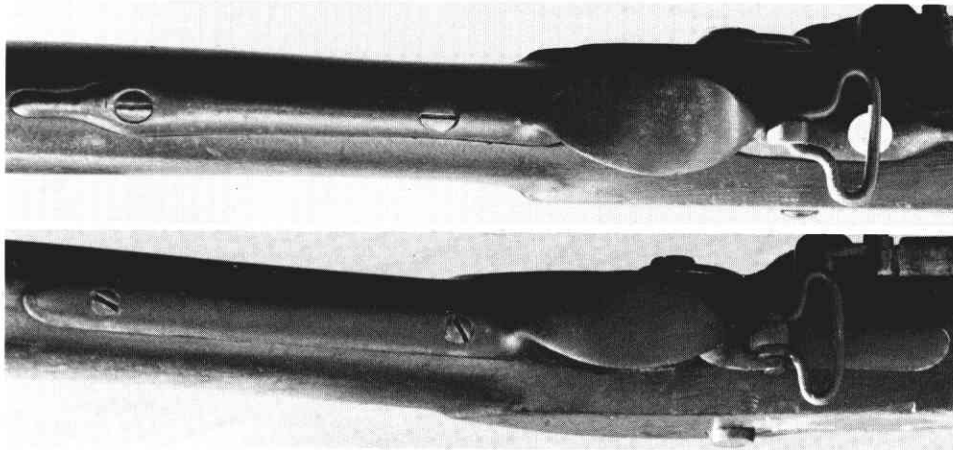
Our nation's debt to the gun cannot and should not be denied; it must be told and recognized as a part of our history. Those who preserve this part of our development deserve respect as historians and conservators of the artifacts of our civilization.

Whether you preserve the works of Masamune or Starr; the product of Harpers Ferry or the Mauser Works; the artistry of the rifles of Lancaster or the wheel locks of Germany; the genius of Colt or Ruger; you owe no man an apology but are deserving of his approbation.



Typical contract proofs: "US" and eagle head "CT" in oval are on all Federal 1808 contracts. "V" sometimes appears as does state ownership as here "SNY". Wood proof is familiar "V" over "CW" of Charles Williams in trefoil.

Top, contract trigger guard where Harpers Ferry is the pattern, and, bottom, where Springfield is the pattern.



Purveyor's Office, Philadelphia,
December 9, 1808.

AS a considerable number of contracts for muskets, with bayonets, has been made, I take an early occasion to address a letter of information and remarks to all the contractors, which may be useful.

The importance of good arms is manifest. They are indeed necessary. The lives of our fellow citizens, to whom the use of them is committed, depend upon the excellence of their arms. The defence and safety of the country, in an unexampled time, also depend upon the real goodness and efficiency of our arms. Their being delivered with punctuality, and in due season, are also essential to prudence, and may be so to the public safety. It has been found easy to keep the workmen at the armories to the manufacturing of such arms as I have received through the War Department from Harper's Ferry. Two stands have been retained as patterns, and the others have been delivered to the contractors, to aid them in keeping their workmen to uniformity and goodness of workmanship, as well in the fitting or joining of the parts, as in the form and finish of those parts respectively.

The purposes and uses of the arms are well known and understood, and the price is a good one, as is proved by the tenor of the proposals, the number of the contracts, and the desire of the contractors to manufacture quantities not only large in themselves, but in most instances greater than could be accepted by this office. It is prudent therefore for the contractors to provide, from their respective commencements, for making *good work* out of *materials really fit and proper*.

I have to inform you, that Mr. Charles Williams, formerly of the United States armories in Virginia, at New London and Harper's Ferry, is appointed by the Secretary of War to the important duties of proving and inspecting. He will probably make his ordinary residence so far in Philadelphia as to render it generally expedient for you to make applications to him here, and you may cover your letters for him, on this public business *only*, to me, as he has not a frank; and in case of his absence, I shall probably know whether to send them. For the information of both offices, he wishes your letters to be sent to me unsealed. I believe you will meet in Mr. Williams a candid and temperate, but a real and faithful judge, and decided inspector of the materials, proportions, workmanship and fitting of arms. He will be strict in rejecting really inefficient and inferior muskets or bayonets. It is necessary for you to expect this, and that arms, inferior to the patterns, in any point, or in putting together, will not be passed by him.

I trust that you will excuse the apparent particularity of this letter. Nothing more than the true meaning of the Secretary's advertisement, and of the contract, is or can be desired by me; but as nothing less can be accepted, I wish to prevent those evils to the United States, and to you, which would arise from the manufacture of inefficient and exceptionable arms.

I am,

Your most obedient servant,

Purveyor of Public Supplies.