

Joshua Barstow and His 1808 Contract: A Story

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The year was 1808, and our war for Independence from Great Britain had been over for 25 years. Our young nation was experiencing the internal growing pains inherent in any fledgling nation; States rights vs. federal government, interstate commerce, westward expansion, Indian problems, taxation to support the growing federal government and on and on! But they were family problems, problems that could and were being worked-out as they arose.

More frustrating and sinister, if you will, were the external pressures from abroad. The last thing a new nation, with a totally new form of government needs is a war. Even with our isolationist policies, we were constantly being pressured to take sides with one or the other of the belligerent nations in Europe as they fought their bi-weekly wars among themselves. By failing to take sides we were subject to constant abuses by these foreign powers, large and small, and were perceived to be weak both politically and physically.

In 1797, we engaged in what today is called the quasi-war with France. Constant abuses by France of American shipping on the high seas caused us to rapidly build our first real navy: the U.S.S. Constitution and others like her. In 1801, the barbary pirates in Tripoli accelerated their campaign of harassment, demanding tribute from American ships in the Mediterranean. Again we went to sea to defend our rights of free commerce—hence the line in the marine corps hymn “to the shores of Tripoli”. We were beginning to establish ourselves internationally, at least as a naval presence.

By 1803, England and France were again at war, and again we were stuck in the middle. Remember, both belligerents still had large colonial holdings surrounding us in North America. Internationally, our relationship with England was rapidly deteriorating. American vessels were being stopped on the high seas and sailors were impressed into the British navy on the spot. These abuses to our national honor continued, when in June of 1807, the U.S. frigate Chesapeake, while undergoing sea trials off the coast of Virginia was fired upon and boarded by the British frigate Leopard. Three Americans were killed, eight wounded and four of the American crew were removed and impressed into the British navy. War was averted but the nation was in an increasingly



belligerent mood. The building of an army and procurement of new arms increased with an urgency. War was coming!

So what was the state of our army during that 25 year period? In two words—woefully inadequate!

For some time after the Revolutionary war our military policies provided for an army of one regiment. A total strength of about 1,000 men. In 1790, almost one quarter of our whole infantry was wiped out by Ohio Indians on the western frontier. In 1791, Congress authorized three additional regiments for a total of about 5,000 men. The following year, the militia act of 1792 established state enrollment of a national militia. All able bodied, free, white men between 18 and 45 were required to enroll. They were also required to furnish their own muskets, powder, and ball. In 1808, eight regular army regiments were authorized, doubling the size of our national army. War was coming!

And what was the state of our nations arms supplies during that same period? Again the same two words—woefully inadequate. At the end of the Revolutionary War there were thousands of surplus muskets literally stacked like cordwood in temporary wooden warehouses throughout the eastern seaboard. But with almost no money to support an army, the new nation could not maintain surplus arms. By 1792, when the militia act was passed it was obvious we did not have enough useable arms on hand to supply our national army, let alone the militia. So in 1794, national armories



Figure 1. Typical Barstow lockplate markings.

were authorized at Harpers Ferry in Virginia and at Springfield, Mass., for the purpose of producing new arms and repairing old ones. In April 1808, President Thomas Jefferson signed into law "An act for arming and equipping the whole body of militia of the United States", i.e., the federal government would procure and supply muskets for each of the states militias, while reserving the arms production from the two national armories for use by the federal army.

At that time there were over 600,000 men in the various state militias with Over 25,000 in tiny New Hampshire. An appropriation of \$200,000 per year was authorized to buy new weapons, an amount the young federal government could live with and support.

Accordingly, in May 1808, Secretary of War, Henry Dearborn through the purveyor of public supplies, Mr. Tench Cox of Philadelphia, advertised throughout the states for proposals from gun makers for the manufacture of muskets, true to a given pattern, at a price of \$10.75 per stand (a stand being a musket and bayonet). Cash advances of up to

10% were to be available. Nineteen gun makers, or would-be gun makers mostly, were eventually awarded contracts for a total of 85,000 muskets to be delivered over a 5-year period. These contractors were scattered from Virginia to New Hampshire with the majority being in Massachusetts, Connecticut, and around Philadelphia.

And so Joshua Barstow of Exeter, New Hampshire now enters the picture. On July 4th 1808, he submitted a proposal to the Secretary of War Henry Dearborn offering to supply 500 muskets per year for a 5-year period. Attached to Barstow's proposal was a letter of recommendation signed by several very prominent New Hampshire citizens. Barstow's original proposal cannot be found but the letter of recommendation still exists. In it those six very prominent New Hampshire citizens, movers and shakers of their day, describe "Captain Barstow" as an honest, industrious patriot ready and able to serve his country in its time of need. They go on to praise his mills and foundry and mention his previous experience manufacturing cannon and field pieces for



Figure 2. Early chicken eagle markings.

public use. They end with a statement typical of the times: "That the said Captain Barstow and son are suitable persons for undertaking in the business, and, if they become contractors no doubts are entertained, of their zealous and vigilant efforts to fulfill their engagements with fidelity and punctuality." This letter was addressed directly to Secretary of War Henry Dearborn and signed by John Langdon, Mike McClary, Henry Butler, Charles Cutts, Nicholas Gilman, and Joseph Hilton.

This letter probably carried some weight because the six signers were all heavyweights in New Hampshire business and politics of the day. John Langdon was the current Governor of New Hampshire, Mike McClary and Joseph Hilton were Colonels in the New Hampshire state militia. Nicholas Gilman was a U.S. senator and signer of the Constitution. Henry Butler was a Major General in the state militia. Secretary of War, Henry Dearborn just happened to be a resident of Hampton, New Hampshire, the town adjoining Exeter, and was a highly honored patriot and officer in the Revolutionary War. He was, at the very least, an acquaintance of fellow wartime officer Joshua Barstow, if not a close friend.

Further research reveals, with no surprise, that Mike McClary fought alongside Henry Dearborn at Bunker Hill and that Langdon, Hilton, Butler, and Gilman all served in the

same regiment with Henry Dearborn in 1776 and 1777. All were close friends of the Secretary of War. Yes, implied or not, there was some influence there. The old-buddy network was alive and well even then!

So who was this Captain Joshua Barstow they spoke of so glowingly? Joshua Barstow was born in Hanover, Massachusetts in 1748 and was in fact a descendant of elder William Brewster of the Mayflower. His family had been prominent in Hanover and had operated a forge and mill there since 1720. During the Revolutionary War Joshua was a sergeant in Colonel John Bailey's regiment which marched on the alarm at Concord and Lexington on April 19, 1775. Later he was an ensign, then a 2nd lieutenant, and after that a 1st lieutenant of artillery. When not soldiering he ran the family forge and produced among other things bar steel and cannon balls for use during the war.

In 1795, Joshua sold the forge and most of his land in Hanover and moved with his wife Margaret and seven children to Exeter. He had recently purchased 20 acres surrounding Kings Falls on the Exeter River. His purchase included "all the buildings, mills, iron works, and stream of water passing through." This forge and mill had been in use since 1652 and had previously been a nail manufactory, a saw mill, a grist mill, and during the revolutionary war had been a gunpowder mill, vital to the cause of the patriots.

Just where was/is Exeter in the Colony of New Hampshire? Exeter sits about one mile up a navigable river, that flows into a large bay connecting directly to the Atlantic Ocean, at Portsmouth, a thriving seaport town 40 miles north of Boston.

At any rate, Joshua had been operating his forge and nail slitting mill there for 13 years when in May of 1808 he heard his country's call to arms and stepped forward to do his patriotic duty...or he saw a chance to make a buck and took it (probably a little of both). The government's reply to his proposal through Tench Cox, Purveyor of public supplies was as follows:

"Among sundry proposals for making arms referred to me, I find one from you. The general instructions contemplate a preference to established, practical gunsmiths. Your recommendations are truly respectable, but I do not find that the certificate, or your letter states, that you have ever made any quantity of fire arms, of the kind wanted. Cannon foundering is a very different operation. Be pleased to favor me with any evidences that either of your concern has practical knowledge and experience in the Manufactory of Muskets & Bayonets."

In other words, the government was asking, What experience do you have—you say you can make muskets, prove it!



Figure 3. Official looking private sale barrel marks.

So, Joshua replied to the purveyor with another letter assuring him of his abilities to produce muskets, and again he enclosed a recommendation from one of New Hampshire's most prominent citizens, U.S. Senator Nicholas Gilman. In Joshua's letter he mentions his new partner James Purinton "who is by far the most accurate gunsmith in the state, to join with us in the manufacture and executing of the business if we should obtain the contract".

Senator Gilman's attached letter also recommended partner James Purinton saying he was highly qualified as a locksmith and gun maker, and that Barstow and company was indeed qualified to receive a contract.

Now here is an interesting point: James Purinton, who was brought in as a partner solely because they needed gunmaking experience, was touted as the best gunsmith in the state, but there exists today only one known gun with his name, a well made long fowler/musket circa

1800-1810. Nor is he mentioned in any of the most comprehensive studies on national, New England, or New Hampshire gunsmiths from the 1600s to the present. Good gunsmiths of that era virtually always signed their work—besides being a form of pride, it was an essential form of advertising. Yet, only one Purinton gun and not a single advertisement has ever been found. No offence to Mr. Purinton but it seems exaggerated to describe him as the best and most accurate gunsmith in the state.

Shortly after Joshua's letter, a letter was sent from the Secretary of War to the Purveyor of public supplies inquiring as to the status of Barstow's request for a contract. Needless to say, with that little "hint" from the boss, Barstow got his contract.

At any rate, a contract was eventually signed on Oct 21, 1808 to supply 2,500 muskets at 500 per anum at a price of \$10.75 each, packed 25 to a box (about 250 pounds), and

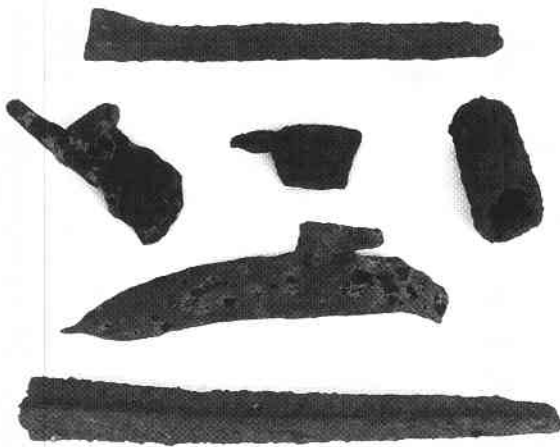


Figure 4. Relics from the Barstow mill site.

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OLIVER BRIARD has this day
 received a general assortment
 of Spring and Summer Goods,
 which are now ready for sale at
 Store No. 2, Market Street.
Just received and for sale by
G. W. Tuckerman,
 25 stand of Musquets of the
 Exeter Manufactory.—Also,
 Military goods of every description Rich
 Jewelry and Silver Plate—Plated Ware,
 Gilt, Fancy, Britannia and Japanned Goods,
 Shell Combs, &c. &c. wholesale and retail
 on the best terms.
 Cash given for old Gold and Silver
SPRING GOODS.
EDWARD PARRY, has
 just received a general assortment of
 Superior light and dark Chintzes, of su-
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Figure 5. New Hampshire Gazette, May, 1813.

delivered to Fort Constitution in Portsmouth. Oh Yes, Barstow was to be paid an additional one dollar for each box; a 10% cash advance was also negotiated.

Research shows that Joshua actually signed the contract with four other partners. Who were these last minute partners? The principal partner, it would seem, was his youngest son Charles, then 23 years old. His occupation at the time was described as blacksmith, so it might be assumed he worked alongside his father operating the family business. The second partner was Daniel Conner of Exeter, described as a gentleman though it would seem he was also in the shipbuilding business. Joshua's oldest son Ezekial married Mary Conner, in Exeter in 1799, so Daniel Conner was also family! The third partner was Simon Magoon, described as a gentleman, of East Kingston, an adjoining town. Simon was married to Joshua's oldest daughter Betsy, which also made him family. That leaves James Purinton as the fourth partner. He was no relation but apparently a skilled gunsmith whose knowledge would be desperately needed if they wanted to land and complete this new business venture. By the way, the term Gentlemen, in 1808, meant wealth, so by taking partners, Joshua was increasing his capital while at the same time spreading his liability.

How were muskets, in large quantities, made in 1808? We can all visualize the skilled craftsman standing by his forge or sitting at his bench carefully filing or carving each part then skillfully hand fitting each one into a finished musket.

Well, that's not the way it was done in 1808. Actually it was more like Henry Ford's assembly line of 1908. The key was division of labor and specialization. Unskilled workmen could be hired and trained to perform just one or two tasks, using standardized patterns, jigs and dies to make the various parts. Only then were the skilled lockmakers, and stockers used to hand fit the parts into the final musket. Locks for

instance were stamped with Barstow's markings, hand fitted, and assembled while still in soft iron, then disassembled and heat hardened. The bearing surfaces were polished and the whole lock re-assembled. Labor intensive yes, but it was state of the art mass production in 1808.

In Joshua's case how many men did it take to produce 500 muskets per year? That depends on how many of the components were purchased from outside sources. Records show seasoned stock blanks came from a supplier in Philadelphia. He made everything else himself in Exeter, so he would probably have needed 12 to 15 employees at any one time. Evidence shows, for instance, that over a 5-year production period Barstow employed seven different lockmakers, logically not all at the same time, but it is obvious there must have been turnover even in the highly skilled positions.

With the contract signed and with the advance of almost \$2,700 in hand, Joshua had to begin setting up a gun manufactory. Workmen had to be hired and trained, supplies of raw materials such as wrought iron and seasoned black walnut stock blanks had to be found, specialized machinery had to be built on the spot, and tools had to be purchased. As an example; files and emery were vital in gun manufacturing for shaping and smoothing and as they rapidly wore down and were discarded, they would need a constant supply at the lowest possible price.

But before he could start making any parts he had to know what the parts should look like, what the musket itself should look like. The promised pattern musket never arrived ...and never arrived...and never arrived. Finally in February 1809, 4 months after the signing and start date, Joshua went to the federal armory at Springfield to get one but was turned down. Apparently the commander had no authorization to give a government musket to a civilian. He returned again in March, and finally got one. So 5 months after the

beginning date of his contract he had a pattern to work from. Little did he know his troubles with government bureaucracy were only beginning. But he set to work with vigor learning how to make muskets.

The existing records for 1809 are woefully scant, but we do know that early in the year Joshua asked for a further cash advance. Lo and behold on April 1st he received an additional \$1,600 bringing his advance now to 16%, not bad! We also know that in the summer, probably July, the government inspector, Mr. Charles Williams arrived in Exeter and proved about 70 barrels, and said he would return in October. Proving, proofing, or testing gun barrels was a critical point in musket manufacturing. If a barrel was faulty or weak it had to be found out early in the manufacturing process, before additional time was spent smoothing and finishing it. After a barrel had been hand fitted into the stock and assembled into a complete musket, it was almost impossible to replace it with another, should the barrel prove faulty. A reasonable, expected rejection rate of most musket parts (tumblers, triggers, band springs, etc.) was about 10%. Whereas records show the rejection rate among barrels during proofing was about 20%. A standard proof in 1808 was 1 oz. of powder below a double patched ball. After firing, the barrel was filled with water, allowed to stand for 6 hours, then visually inspected for leaks and cracks.

The government inspector would normally arrive and stay for several days and prove all the ready barrels then return a few months later to inspect the finished muskets and prove more ready barrels, and so on. In Joshua's case he had been told the government inspector would be at Exeter every 4 months.

October came but the inspector didn't. Poor Joshua needed to have his now completed muskets inspected and approved so he could get paid and his ready barrels proved so he could complete more muskets. But the inspector never came!

In May of 1810, 7 months after the inspector was due, Joshua wrote, a plaintive letter, the last of several, to the purveyor of public supplies, the inspector's boss. Here Joshua, who still hasn't made a cent, pleads his case for an inspector to come immediately, or at the least advance him some more money:

"Sir,

When we addressed you in our letter of the 28th of October last, no doubt on our part was then entertained but, Mr. Williams the inspector, would be on in the course of a few days from that time, to examine and inspect the muskets then finished, and to prove a number of musket barrels already prepared for that purpose; for when Mr. Williams, before that time was at our factory, he gave us reason to hope that he would call again in all the month of October.

The few barrels that he had before proved, were stocked, and the muskets then completed for inspection. We were extremely anxious for his arrival. There was a risk in our stocking and finishing the muskets without the barrels first being proved. Therefore rather, than the workmen, should be discharged, or remain idle at our expense, they were for some time employed in forging and preparing various parts, and pieces for future use.... In March last one of our workmen saw Col. Williams at Canton, Mass. When we were informed Mr. Williams expected to soon to be able to come. Early in April we wrote to him and have hoped and expected his arrival every day to this moment but, without effect...Could we have been favoured with the inspection on time to prove the barrels and inspect the muskets when finished, we should long before this day have been able and ready to turn in five or six hundred muskets complete and have received in payment to support the undertaking. The want of which increases our embarrassment. Not one cent of the money to us advanced has been misapplied. We have now in store, muskets, parts, pieces and stocks on hand to a much larger amount and value than the money we received ...We wish again Sir to perceive our situation, having expended in the business much larger sums than we have received from government and every day increases our need of that necessary article. While we have no right to ask for more till the muskets are delivered. When it has been our misfortune not our faults, that they have not been proved, inspected and delivered over to the public. In this disagreeable situation, unable to avail ourselves of the fruits of our labours, it will be impossible for us to continue the business with vigor unless we can obtain money by anticipation, or by loan, and must discharge our workmen till relief can be obtained. To you, Sir, and to government, we look with confidence for such arrangements as may prevent the like embarrassment in future and request your immediate advice for present relief."

Quite a letter. He told it like it was and as politely as he could. Your delays are killing me!

Well, a month later, early June 1810, a year and three months after starting up and 8 months after he said he would, the government inspector finally returned. He proved the ready barrels and inspected the finished muskets on hand. Joshua delivered them, 275 total, to Portsmouth and sent the receipts, in triplicate, to the purveyor of public supplies for payment, finally!

The purveyor sent back a draft for the appropriate amount, to be cashed at the Bank of the United States in Boston, along with a letter saying, and it's almost getting comical now—"I've received your bill for 275 muskets and 11 boxes and have sent a draft to your order to the bank of the U.S. in Boston...p.s. the accountant at the war dept has advised me they are late in sending funds to the bank in

Boston to cover this draft. I trust they will however reach Boston before you.”—in other words here’s the government’s check but it may not be any good.

At the same time the purveyor sent a letter to the President of the bank in Boston requesting that when Joshua Barstow arrives and presents his draft for \$2,967.25, would the bank please honor it as the money from the war department to cover it is on the way.

They wouldn’t, and the government check bounced... poor Joshua! Just days later the purveyor wrote a short but urgent letter to the war department requesting that they please immediately cause to be placed in his account at the bank of Boston the sum of \$10,000 to cover drafts to Barstow and others.

Apparently the check eventually cleared and Joshua finally got his money. Two weeks later he sent a very upbeat letter to the purveyor beginning...“We now progress with great energy and are executing every nerve to complete as many muskets as possible by the beginning of October, being the time when Mr. Williams, the inspector has appointed to come on again to our gun factory.”

Back to those 275 muskets inspected and accepted by the government inspector. Correspondence shows he only proved about seventy barrels when he was in Exeter in July, 1809, yet when he finally returned in June of 1810, he inspected and approved 275 finished muskets with proved barrels. Where did those other roughly 200 already proved barrels come from? There are several possible answers. First, the muskets could have been finished up using unproved barrels. However with a rejection rate during barrel proofing approaching 20% this would be time consuming, very risky, and seems highly unlikely. Try swapping barrels in circa. 1810 muskets, you almost can’t.

Second, Joshua could have been proving the barrels himself and finishing up muskets using barrels he knew would pass the government test...a possibility!

Third, he could have bought those other 200 or so barrels, already government proved from someone else... another possibility, but more promising. In one of his letters Joshua briefly mentions that one of his workmen was in Canton, Massachusetts in March, 1810. Canton was the place of business of R & C Leonard as well as French, Blake and Kinsley, both larger musket manufacturers also making muskets under the “1808 contract”. So why would one of Joshua’s employees be visiting another gun makers manufactory? Logically, it seems he was there to buy something he needed but didn’t have. Since he was buying his seasoned stock blanks from Lucius Enters in Philadelphia, and making all his other components himself what did Joshua need? At that point in time he desperately needed proved barrels.

In a database of forty-seven Barstow muskets only two were listed as all original with barrels having bayonet lugs on the bottom, ala Harper’s Ferry pattern while all the rest have top lugs ala Springfield. Why these two anomalies? Logically they were barrels purchased, already proved, from another contractor. But from whom? As luck would have it both Canton contractors made muskets from the Harper’s Ferry pattern with bottom bayonet lugs. So from which one did he get his barrels? The proofs on one of the anomaly barrels are indistinct; however, the other quite clearly shows that the eagle over the letters C.T. is facing to the left. With the help of other members, a series of both Leonard and French muskets were examined which showed that Leonards which were dated 1810, invariably had eagles facing to the right while French muskets, dated 1809 and 1810, had eagles facing to the left and those dated 1811 and later had them facing to the right. So then logically it would seem that because the government inspector didn’t arrive on time, Joshua was forced to buy already proved barrels from French, Blake and Kinsley. Mystery solved.

Things were finally looking up! However, October came and again the inspector didn’t. In late November, Joshua received a short but to the point letter from the purveyor.

“Gentlemen...I am sorry to inform you that the non performance of the contract by Messrs. Barstow, Purington, etc. places the public wants on a footing which is not in my power to assent to. I shall be under the necessity to adopt painful but prompt and effectual means of remedy.”

Just what poor Joshua needed. The government inspector had caused him to fall behind in his contract and now the same government is threatening him with a lawsuit for falling behind.

Virtually the same letter was sent to eight of the other musket contractors. So apparently for unknown reasons they were all having problems. We do know that several of the other contractors had also complained about the lack of timely inspections.

It appears that no action was ever taken against Joshua—why we don’t know. We do know, however, that right around this same time Joshua wrote a letter to his friend the Secretary of War, Henry Dearborn. The contents of that letter are unknown, but remember Henry Dearborn, Secretary of War was the purveyors boss. In fact, records show that at some time during that summer Joshua received another cash advance, bringing the total to 20%. It pays to have friends in the highest places.

A month later, December 1810, we find another letter from Joshua to the purveyor bemoaning the fact that the inspector still hasn’t come for his scheduled visit in October. Joshua says he has over 400 muskets ready and another 600 in great forwardness. He is now completing muskets using

unproved barrels, which would be near total loss should its barrel not stand the proof. He is also laying off skilled workmen. The letter concludes: "we beg, sir, your kind and immediate attention and aid to procure the forming of such arrangement as may afford us immediate relief and effectually provide against occurrence of like embarrassment in future". Again, he says I'm doing the absolute best that I can, and am myself in dire financial straits. But its not my fault. It's your inspector, or lack thereof that is the problem!

Now, we don't know if Joshua Barstow was the direct cause, but we may be sure his plight and pleas helped in the government decision to hire another inspector, Mr. Benjamin Moore, late that very month. This apparently at least partially relieved the backlog of barrels and muskets waiting for inspection. Available records show deliveries by Barstow to Portsmouth in January, July, and December of 1811 of 925 muskets that year. We still, however, find correspondence from Barstow as well as the other contractors continuing through 1813 and to the end of the contracts complaining about their losses due to lack of timely inspections.

Joshua's losses were not total losses, however, because the market for military muskets for private purchase, i.e., privateers and foreign governments was very strong and prices were high.

In fact the purveyor at one point wrote to the secretary of war, "muskets rejected here are being sold to foreign governments for prices much greater than ours", and in fact it was true!

By now the war of 1812 was underway, and there were literally dozens and dozens of American privateers up and down the eastern seaboard, the Caribbean, and across the Atlantic. Most but not all were officially sanctioned by letters of Marque from a state or the federal government to raid the ships of American enemies, weather they be declared or undeclared. A privateer might need, depending on size, half dozen to maybe 20 or more muskets. Exeter, being in those days a seacoast town, for all intents and purposes was an ideal place to purchase supplies for a fighting voyage.

Also, foreign governments mostly central and South American were actively purchasing military muskets for use in their various struggles for both internal and external independence. Contemporary records show muskets on the private market in 1813 were selling for \$12.50 to \$14.00 each. That is considerably more than the government was paying.

Did Joshua Barstow sell muskets privately that had been made for the U.S. and proved or unproved at public expense?—yes he did. Did he sell to privateers and foreign governments?—we don't know, but no doubt he did.

Interpreting the available records shows that the rate of Barstow's musket sales, to the government, dropped by

almost 40% around the time the war of 1812 got into full swing. Was he making fewer muskets—Not likely.

Joshua was a patriot, but also a businessman and had payrolls to meet and suppliers to pay. So, rather than laying off employees while waiting for the government inspector, why not make-up muskets for private sale at a premium price in order to maintain employment and cash flow. Also if a musket was rejected by the inspector for a minor defect why not just turn around and sell it to a foreign government—it's still a perfectly useable musket, and the profit is higher.

Further proof of Joshua's activity on the private market is evidenced by an advertisement in the New Hampshire Gazette, a Portsmouth newspaper, from May 1813, in which G. W. Tuckerman a Portsmouth merchant advertises "just received and for sale fifteen stands of muskets of the Exeter manufactory" So there you have it, he was openly selling on the private market.

Since the inspector had just been there and accepted 350 muskets, one would assume the advertised muskets were mostly those rejected at the time for minor defects, fixed then re-sold. So Joshua was selling, in quantity, on the private market to offset the losses taken in the inflexible government contract and the rising costs of supplies in general. He was a businessman and apparently a good one at that! He advertised again in August that he had additional "Exeter" muskets for sale.

So how many muskets did Joshua sell on the private market? We really don't know, but it can be said that for every fully proofed and accepted military musket seen today, one will find almost three private sale muskets. Assuming a much lower survival rate for the 2,471 verifiable military muskets he delivered vs. privately sold muskets observed mostly in New England, it is estimated that he sold between 600 and 900 muskets privately. He had to make his profit by any means possible and apparently he did it well.

How does a collector tell if his Barstow is a military issue or private sale musket—not by lock markings alone. It would seem the worker whose job was to stamp the eagle, Exeter, J&CB etc. into the soft iron lock plate had carte blanche to stamp whatever he wanted wherever he wanted, or else he was drunk when he stamped them. The same mark might be found forward of the hammer, behind it, vertical, horizontal, even upside down. The only constant is the word Exeter found somewhere on all lock plates, military or private. The only positive way to identify a military issue musket is by the appearance of the inspectors cartouche in the wood opposite the lock plate. Both Charles Williams and Benjamin Moore are known to have stamped Barstow muskets. Government barrel proofs, i.e., US, V, eagle over C.T. only indicate the barrel passed the government proof test.

Many other marks and combinations of marks can also be found stamped into the barrel. Joshua was much too smart to sell muskets on the private market with completely unproved barrels, so it is believed he proved them himself. He also knew that even the unsophisticated civilian buyer expected to see some sort of official looking "proof mark" on the barrel. So he obliged by stamping all sorts of marks into the barrel to make it look "official". One will find Ps, Vs, Exeter, J&CB, and eagles either alone or in groups. A few muskets have been observed with no barrel markings. Barstows are found with seven different lock makers initials inside the lock plate and five different stockers initials behind the trigger guard tang; a few are found with neither.

Early Barstows have a scrawny "chicken eagle" and a script US stamped into the lock plate while later examples drop the script US and display a more robust eagle standing on an oval with a US inside. With apparently only one exception, Barstow never dated any of his muskets. That exception has the "chicken eagle" and script US on the lock with 1811 and Exeter behind the hammer. Since he apparently didn't need or own a date stamp, the 1811 is stamped using the same small numerals he used to identify screw heads and other interior parts. At any rate, private sale muskets today are more common than military ones and early "chicken eagle" markings are more common than the later eagle/oval/US marks.

A database of 45 uncut Barstow barrels show that lengths varied from 42 to 45 inches. Military accepted muskets stayed between 44¼ and 44¾ inches while private sale muskets ran to both extremes. Joshua's personal gun a pinned barrel fowler has a 50-inch barrel that was made in his factory as evidenced by barrel and stock assembly marks. Many Barstow barrels have a sighting groove filed into the tang and breech; some front sights are of yellow brass and others have a distinct orange color.

Joshua made his own bayonets, unfortunately he didn't mark them distinctively and so we can't positively identify a Barstow bayonet. Relics show a blade length of ±15½ inches with a short narrow groove fuller. A complete socket has not been found so we don't know if it had a bridge or what the mortise looked like.

Joshua and his gun manufactory continued through 1813 with again long frustrating delays between inspections—at one point, 11 months between visits. Frustrating as the times may have been there were a few humorous occurrences. At one point Joshua asked for and received from the government a \$1.50 to cover expenses for traveling to and from Portsmouth to pick up additional gunpowder so that the inspector could finish proving some barrels. That is about 3 cents a mile for gas, oil and oats. Another time when the government chastised him for being so late in answering

their letters, he replied... "Its because of late you have been sending my letters to Exeter in Mass."

Joshua was still being positive, in fact positively positive, for in one of the last pieces of direct correspondence we have from him he says he had delivered so far 1,975 muskets and plans to finish the remainder of the contracted 2,500 by October next...If you will please to send the inspectors. He also says:

"Will your candor permit us to further state that we have an excellent stand for the business, Large and ample buildings, works and accomodations all in good order and condition on one of the best water priviledges in the US. At sufficient distance from the seaboard to prevent annoyance by naval attack or sudden surprise by land forces and yet within about one mile and a half of good water transportation. The site, stand and establishment would answer very well for a public armory and are worthy the patronage, favorable notice and attention of the United States"

He is suggesting the federal government establish another national armory in Exeter. He's positively thinking big. He also said he is willing and able to continue supplying muskets to the government at a rate of 1,500 per year, that is triple his current production, if the proper encouragement is given., i.e., the price is right.

Bits and pieces of receipts and other government correspondence shows that Joshua did indeed complete his contract and the government was still accepting additional overruns of muskets as late as March of 1814.

So what happened to all those Exeter muskets? We can only speculate about those sold on the private market: they could have gone to sea on privateers, gone overseas to foreign governments, or stayed locally. No doubt some of each. Of those delivered to the government at Fort Constitution in Portsmouth, we do know the state of New Hampshire took delivery of 1,000 muskets from there in November 1812, with further deliveries in 1814 and 1817, totaling 2,136; almost all of Barstows government production went to the state of New Hampshire militia. The small number of military Barstows found in New England today would tend to suggest that when they became obsolete the state of New Hampshire sold them in bulk to someone "out of state".

Joshua Barstow died on Dec 22, 1821, at age 73 and was buried near his home in Exeter. Prior to his death he had given over to his son Charles most of the mill buildings and water rights. As a side note, Charles Barstow was granted a patent in 1820 for a machine to make ramrods. The mills at Kings Falls continued in operation under various owners as a cotton cloth and canvas manufactory, a nail factory a gunpowder mill, which of course blew up 3 times; in 1840, '43, and '50. Then it was grist and saw mill making

shingles, spokes, axe handles etc. By 1900, all operations had apparently ceased.

Joshua Barstow was a patriot, a businessman, an entrepreneur, and one of the beginners of what we call today the industrial revolution in America.

In closing, here is a direct quote from the last paragraph in the last existing letter from Joshua:

"Although our manufacturing efforts and other exertions in the cause of our country have been violently opposed and embarrassed by combined hoards of torics, federalists, and British panders—yet our energy and perseverance have as yet surmounted every obstacle."

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NOTE

All quotations are taken from correspondence to, from, or about Joshua Barstow as found scattered randomly in our national archives.

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