“Hidden Histories”
American Small Arms-Making (1798-1830)

By Stephen C. Small, PhD
As of 18 May 11
Agenda

- The United States – 1789
- Classical Liberal Economics
- Report on the Subject of Manufactures
- American War and Warfare
- Public and Private Arms-Making
- The National Armories
- Postscript
Classical Liberal Economics
Adam Smith
Alexander Hamilton
Domestically Produced Armaments
Figure 1.1. Average Tariff Rates: Tariff Revenue as a Fraction of All Imports (Imlah, 1958; Lévy-Leboyer and Bourguignon, 1985).
Thomas Jefferson
America’s developing industries
American “Infant industries”
Tariff Act of 1789
1791 - Congress Forbids Export of Arms and Ammunition

Congress Hall, seat of the U.S. Congress (1790 – 1800)
Burr–Hamilton Duel
1804
American War and Warfare

Capture and burning of Washington by the British, in 1814.
Public and Private Arms-Making
Foreign Small Arms Purchases
Preindustrial Gun-making
Sample Contract

• 2 ½ years
• No cash advances
• Arms conforming to pattern musket
• Proof and Inspection by Government
• Fixed price per stand of arms
The System of Inspection

APPENDIX 1

Names and parts of a Flintlock

1. Lock
2. Stock
3. Barrel
3A. Barrel band
4. Breech plug (also called "breech pin" or "breech screw")
5. Breech plug ring (inner ring of breech plug)
6. Upper barrel band
6A. Front sight
7. Middle barrel band
7A. Upper sling swivel
8. Lower barrel band
9. Butt plate
9A. Butt plate tang
10. Trigger guard
10A. Forward trigger guard hand
10B. Rear trigger guard band
11. Trigger plate
12. Trigger
13. Trigger suspension pin
14. Lower lever spring and latch
15. Sling swivel retaining pin
16. Trigger guard screws (2)
17. Butt plate screws (2)
18. Side plate
19. Side screws (also called "side nails" or "side pins")
20. Breech tang screw (aka. "breech screw" or "pin")
21. Barrel band springs
22. Barrel
Lack of Standardization

- Overall length
- Barrel Length
- Caliber

- 55” to 58”
- 40” to 42”
- .69 to .70
Eli Whitney
Eli Whitney's first Government Contract as an Arms-Maker
Simeon North
A partial listing of New England Arms-makers
(1770-1870)

Aloep, C. R., Middletown, Conn., 1859-1866.
Amer, David, Bridgewater, Mass., 1790.
Amer, John, Bridgewater, Mass., 1790.
ames, Nathaniel, Boston, Mass., 1800.
*ames Arms Co., Chicopee, Mass., 1832-1860's.
Andrew & Osborn, Canton, Conn., in Civil War.
*Anton, Henry, Middletown, Conn., about 1843-1852.
Aston, William, Middletown, Mass., about 1854.
Austin, Thomas, Chardon, Mass., Committee of Safety (i.e., Revolution).
Babcock, Moses, Chardon, Mass., 1777-1781.
*Bacon Arms Co., Norwich, Conn., 1832-1838.
Baggett, Elijah, Attleboro, Mass., contractor of 1798.
Balder, Elijah, Bradford, Conn., Committee of Safety.
*Ball & Williams, Worcester, Mass., 1861-1866.
Barnes, Thomas, North Brookfield, Mass., active to 1800.
Barrett, Samuel, Concord, Mass., 1775 and later.
Beckley, Elias, near Berlin, Conn., blackstock period, died 1816; son, Elias Jr. carried on business, died 1828.
Bell, Joseph, Waltham, N. H., 1799-1801.
Bennis, Edmund, Boston, Mass., active 1746-1785.
*Beutler Bros, New Haven, later Meriden, Conn., before and after 1890.
Bidwell, Oliver, Hartford, active 1776-1810.
Bishop, Henry, Boston, Mass., before and after 1847.
Blackman, Elijah, Middletown, Conn., Committee of Safety.
Black's, Jonathan, Amesbury, Mass., Committee of Safety.
Bliis, New Haven, about 1856-1863; probably the same as Bliis & Goodyear.
Boardman, Samuel, Boston, Mass., 1796.
*Brand Arms Co., Norwich, Conn., 1866-1875.
*British Fire Arms Co., Bristol, Conn., 1835-1859.
Brown, Elisha, Providence, R. I., active 1799-1801.
Buell, Elisha, Hebron, Conn., 1776; probably the same Elisha Buell of Marlborough Conn., about 1805-1806.
Buell, Elisha, son of Elisha, succeeded father about 1825-1850.
Burnham, Elisha, Hartford, chartered and repaired guns for Connecticut, 1877, accounts rendered 1871.
*Burnside Rifle Co., Providence, R. I., organized 1860 by creditors of Bristol Fire Arms Co., made government arms up to 1865.

Chase, Amos, Enfield, Mass., before 1830; Hartford, 1830-1834; later New London, Conn.
Chittick, Darius, Rutland, Vt., active 1798-1801; Contractor associated with Royal Crofts, Thomas Hooker and John Smith.
Chipman, Samuel, Vergennes, Vt., associated with Thomas Townsey in contract of 1798.
Clark, Charles, Windsor, Vt., 1856-1868.
Clark, Ezra, Hartford, Conn., 1850.
Clark, Joseph, Danbury, Conn., contractor of 1798.
Clayton, W. T., associated with W. S. Norris in Springfield in Civil War.
Cobb, Nathan and Henry, Norwich, Conn., contractors of 1798.
Coffin, H. B., Boston, Mass., before and after 1847.
Coffin, Elijah, Boston, Mass., 1807-1812.
*Cold Patent Fire Arms Manufacturing Co., Hartford, Conn., 1848 to present.
*Connecticut Arms Co., Norwich, Conn., about 1864.
*Continental Arms Co., Norwich, Conn., 1866-1867.
Cowles and Smith, Chicopee, Mass., 1866; W. L. Cowles, Chicopee, 1870.
Curley, Jesse, Waterbury, Conn., associated with Thomas Fancher in work for Committee of Safety.
Darlington, Barton and Benjamin, Bellingham, Mass., and Woosneck, R.I., 1836.
Denlow & Chase, Hartford, Conn., about 1847.
Dewson, R., Boston, Mass., before and after 1847.
Dewey, Samuel, Hingham, Conn., 1775-1776.
Dike, Bridgewater, Mass., 1867.
Dighton, H. D., Beckertown, Mass., before and after 1847.
*Eagle Manufacturing Co., Mansfield, Conn., Civil War.
Earl, Thomas, Leicester, Mass., 1790-1776.
Eaton, J., Boston, Mass., before and after 1847.
Eggers, Samuel, New Bedford, Mass., 1840-1840.
Elliot, Nathaniel, Boston, Mass., 1818-1860.
Elliot, Matthew and Nathan Kent, Conn., contractors of 1798.
Elm, Martin, Springfield, Mass., about 1770-1775.
Emmons, Nathaniel, Boston, Mass., 1800.
Faller, Richard, Montgomery and Westfield, Mass., active 1774-1801 and later.
*Fugitive Repeating Rifle Co., Boston, Mass., about 1867; changed to American Repeating Rifle Co.; sold to Winchester 1869.
French, Biske and Kingsley, Canton, Mass., contractors of 1808.
Gilbert, Daniel, North Brookfield, Mass., 1796-1808.
Goodwin, Jonathan, Lebanon, Conn., Committee of Safety.
Gray, Henry, Pittfield, Mass., 1856-1858.
Hill, John, Yarmouth, Me., until 1916; later at Harper's Ferry, Va.
Hill, G. A., East Hadley, Conn., Committee of Safety.
Hill, Thomas, Carlotta, Vt., Committee of Safety.
Hinks, Uriah, Mansfield, Conn., Committee of Safety.
Harrwood, Nathaniel, Brookfield, Mass., about 1825-1840.
Hill, Thomas, Carlotta, Vt., 1790-1810.
Government Subsidy?

1822

- 20,000 Pistols
- 17,000 Long-Arms
- 15,000 Swords
The National Armories

State Owned Enterprises
David Ames
Springfield Armory Superintendent
1794 - 1802
Armoury Department,
Springfield, August 13, 1798.

Those persons that have engaged to work at the fire at the Public Factory in this place are desired to come on immediately, and those that have engaged to work at filing, in ten or twelve days. An opportunity still presents for good hands that are in want of cash, to engage at the fire, the bench and the other different parts of the business; a monthly payment for encouragement is promised by the Secretary of War.

The best encouragement is still offered for a number of likely boys as apprentices to the Gunsmiths Business.

David Ames, Superintendent.

P.S. The Printers of public papers who are willing to insert the above advertisement without reward, are requested to do it.
User Need and Technological Push

U.S. Model 1816 Flintlock Musket

Militia Act - U.S. Model 1817 “Common Rifle”
Lt. Col. Roswell Lee
Springfield Armory Superintendent 1815 - 1833
## Armory Monthly Pay

### 1802

<table>
<thead>
<tr>
<th>Position</th>
<th>Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superintendent</td>
<td>$70.00</td>
</tr>
<tr>
<td>Master Armorer</td>
<td>$50.00</td>
</tr>
<tr>
<td>Master Blacksmith</td>
<td>$34.00</td>
</tr>
<tr>
<td>Artificer</td>
<td>$17.00</td>
</tr>
<tr>
<td>Laborer</td>
<td>$15.00</td>
</tr>
</tbody>
</table>

**Manufacturing Muskets**

![Image of manufacturing processes](image-url)
Harpers Ferry

The Hall Breech-Loading Rifle
Machine Age Technology
Blanchard lathe
Gunstock Production

Thomas Blanchard
(1788-1864)
## Springfield Armory

### Annual production of Muskets, Rifles, and Carbines

<table>
<thead>
<tr>
<th>Year</th>
<th>Weapons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1798</td>
<td>1,044</td>
</tr>
<tr>
<td>1804</td>
<td>3,566</td>
</tr>
<tr>
<td>1808</td>
<td>5,870</td>
</tr>
<tr>
<td>1811</td>
<td>12,140</td>
</tr>
<tr>
<td>1814</td>
<td>9,585</td>
</tr>
<tr>
<td>1822</td>
<td>13,200</td>
</tr>
<tr>
<td>1825</td>
<td>15,000</td>
</tr>
<tr>
<td>1832</td>
<td>13,600</td>
</tr>
</tbody>
</table>
Labor
Business Ethics
National Armories
Postscript