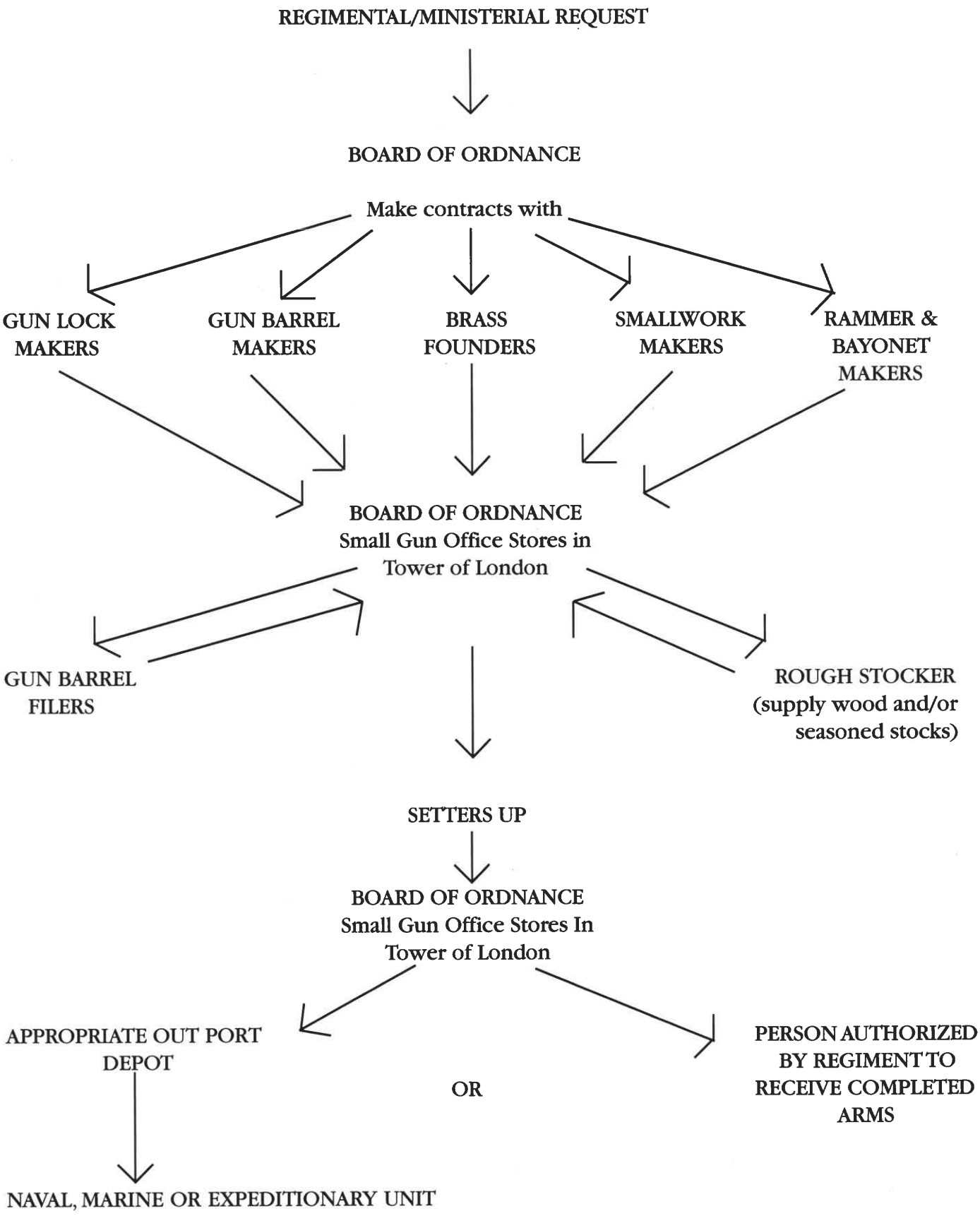
# SMALL ARMS PRODUCTION SEQUENCE
(1728 - 1783)

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# BRITISH MILITARY SMALL ARMS IN NORTH AMERICA, 1755-1783

De Witt Bailey, Ph.D.

There are a number of fundamental factors which need to be understood before any meaningful discussion of 18th Century British military small arms and their issue and use is undertaken. Several additional items must be added to this list when considering the sending of these arms to North America. The evolution of these factors and their significance to the study of 18th Century British military small arms is based on more than twenty-seven years of study of the records of the Board of Ordnance, War Office, Colonial Office and the Admiralty. Only through the study of these primary source materials, often with several repeated examinations of critical areas, has it been possible to extract, collate, analyse and evaluate the information gained, and when combined with examination of the arms themselves, to reach these conclusions. In a few areas the drawing of conclusions is not yet complete, due to anomalies and lack of clarity in the records and an absence of examples to study. These fundamental factors may be briefly listed as follows:

During the 18th Century British military small arms were:

1. manufactured to fixed patterns which were decided by the Board of Ordnance, after which pattern arms were distributed to the manufacturing contractors, and moulds and jigs for the several components were made up under the supervision and inspection of the Master Furbisher of the Tower or his deputy. Adherence to "the pattern" by the use of inspection gauges throughout all of the manufacturing processes (what is known as "the Ordnance System" of manufacture) was insisted upon, and both arms and components which failed to meet the standard were rejected (see Plate 1).

2. stamped with the King's Proof and View marks on the breech of the barrel; with a small Crown over Broad Arrow below the pan on the lockplate; with a Storekeeper's mark in the right side of the butt, and with Crowned numerals representing inspector's marks at various stages of the manufacture on the barrel tang, inside the lockplate, in the rammer channel, and just below the lower tang of the trigger guard.

3. issued from Ordnance Stores only in response to a specific demand from a regiment or other recognized unit, on the basis of clearly established need; need was defined as loss or irreparable damage in service, or being worn out in service.

4. issued on a basis of oldest patterns first, until all of the older pattern had been exhausted from the stores.

5. strictly accounted for by the Ordnance, were signed for by a receiving officer of the unit appointed by the commanding officer of that unit, and were expected to be returned into Ordnance stores at the end of their useful life or at the disbandment of the unit concerned.

6. marked by the Ordnance, on receipt of a warrant to issue the arms to a particular unit, with engraved information according to the official Establishment for that unit as approved by Parliament, not according to the actual number of men in the unit at the time the issue took place. For example, a line infantry regiment according to the last Establishment might consist of ten companies totalling 730 men. The arms for this regiment would then be engraved with the commanding colonel's name (or the number of the regiment after 1751) on the barrel; and with the number or letter of the companies 1-10 or A-J, and with the number for each man allowed to that company from 1 to 73. When, especially during wartime, increases to the Establishment of a unit were decreed by the King, arms would be authorized to be issued for these men whether they had been recruited or not, usually remaining in the Tower, local Ordnance, or regimental stores until actually required.

These extra arms were normally treated by the regiments as spare arms, and not applied strictly to the men for whom they were intended. Hence, for a wide variety of reasons, the unit markings found on a particular weapon cannot be related to any individual soldier, except thorough the discovery of the responsible NCO's company notebook covering a limited time period.

7. when returned into stores according to regulations at the end of their useful life were examined by Ordnance officials and if no longer serviceable were broken down into their several components; the locks and barrels if repairable were repaired and if not repairable were sold by auction at the Tower; the brasswork was returned to the founders and re-cast into other gun furniture; and the stocks either repaired, sold at auction or destroyed.

8. when returned into stores at the time of a unit disbandment, were examined, and where found serviceable, were cleaned and repaired, the unit markings removed by the Tower workforce, and the arms then returned to store to await re-issue at some future date.

*The French and Indian War, 1754-1760*

Prior to the arrival of General Braddock's troops in March, 1755, no current-issue regulation British military arms had reached North America through Ordnance sources since the abortive Canadian expedition of 1711: this was simply because no British regular troops carrying them had been sent over. There were some arms sent out by the Ordnance for the small local units of Crown troops represented by the New York and South Carolina Independent Companies, and to the several posts in what are now known as the Maritime Provinces of Canada which came under British control after 1713. Between 1737 and 1755, during King George's War and the earliest period of the French and Indian War, some 12,600 muskets were sent to colonies from the Maritimes to Georgia. These were to equip locally raised colonial militia, rangers, and frontier garrisons as well as a portion of the troops bound for the West Indian campaigns of the early 1740s. But the records suggest that these were second-hand, out of date, often "Dutch" (i.e. Liege-made, or more generally Liege-made barrels or locks from earlier Ordnance purchases) arms. There was nothing unusual in this.

Throughout the period under examination here, as well as before and after it, it was standard Ordnance policy to send to colonial stores, and with troops for colonial service, what can best be described as "second-quality" arms. It was assumed that these arms would see rough service in conditions where maintenance and repair work would be both difficult and costly, and probably executed, at least in part, by workmen not as skilled as those working in Britain.

In view of the above, it should come as no surprise to learn that the 3000 muskets sent out in 1754 to Governor Dobbs of North Carolina were of Liege manufacture purchased as far back as 1741, and fitted with their flat-bladed bayonets; and the 300 to Maryland in the same year had single-bridle locks and were therefore made prior to 1740. The 2000 arms ordered to General/Governor Shirley in the Spring of 1755 had double bridle locks, wood rammers and old pattern, (i.e sheet-brass) nosebands. These arms were distributed to the men on the Chignecto expedition and came back into store at Boston in very poor condition. For Shirley's and Pepperell's (the two "American" regiments, the 50th and 51st), one was to have 1000 muskets with single-bridle locks, wood rammers and nosebands, probably more of the 1741 purchase.

Of the four regiments who arrived with Braddock, Halket's 44th and Dunbar's 48th (the two "Irish" regiments) with 700 men each received 1400 muskets and bayonets made during the 1740s and converted from wooden to steel rammers; Hopson's 40th and Warburton's 45th with 730 men each had worn out arms which were replaced before departure with muskets having double-bridle locks and wood rammers, made in the 1740s.

Of the 3741 Long Land muskets which came over with Lord Loudoun in June, 1756, the 3377 intended for miscellaneous colonial volunteers were not even described.

Early in 1758 a further 14,000 muskets with wooden rammers were packed up and shipped to America, arriving in midyear and not quite in time to avert a local arms shortage and some purchasing of available civilian arms by army agents. These arms were intended for the provincial troops being raised in the several colonies, but thanks to the general shortage, some were issued to the regulars.

In December, 1758, a further 5000 muskets with bayonets and 5000 carbines, both types with wooden rammers, were earmarked for shipment to America with Admiral Saunders' fleet which brought General Wolfe, and which eventually sailed in Feb-

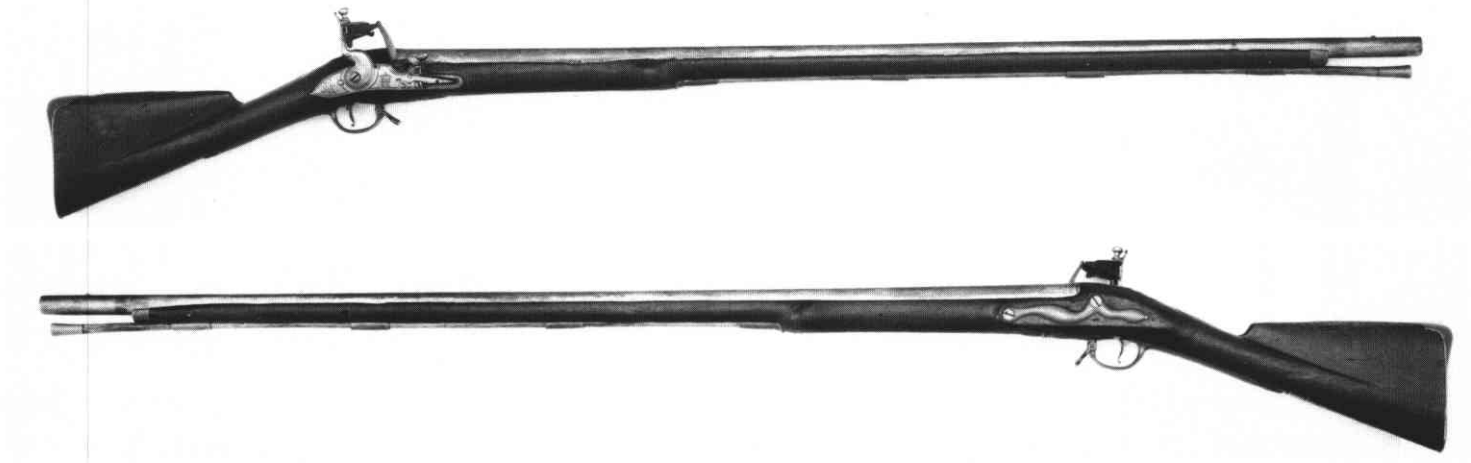
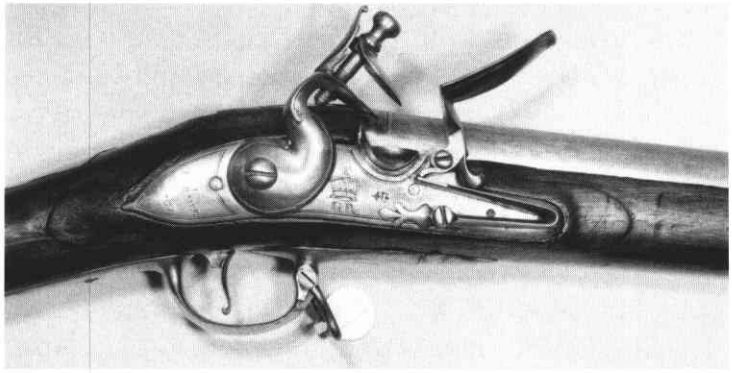
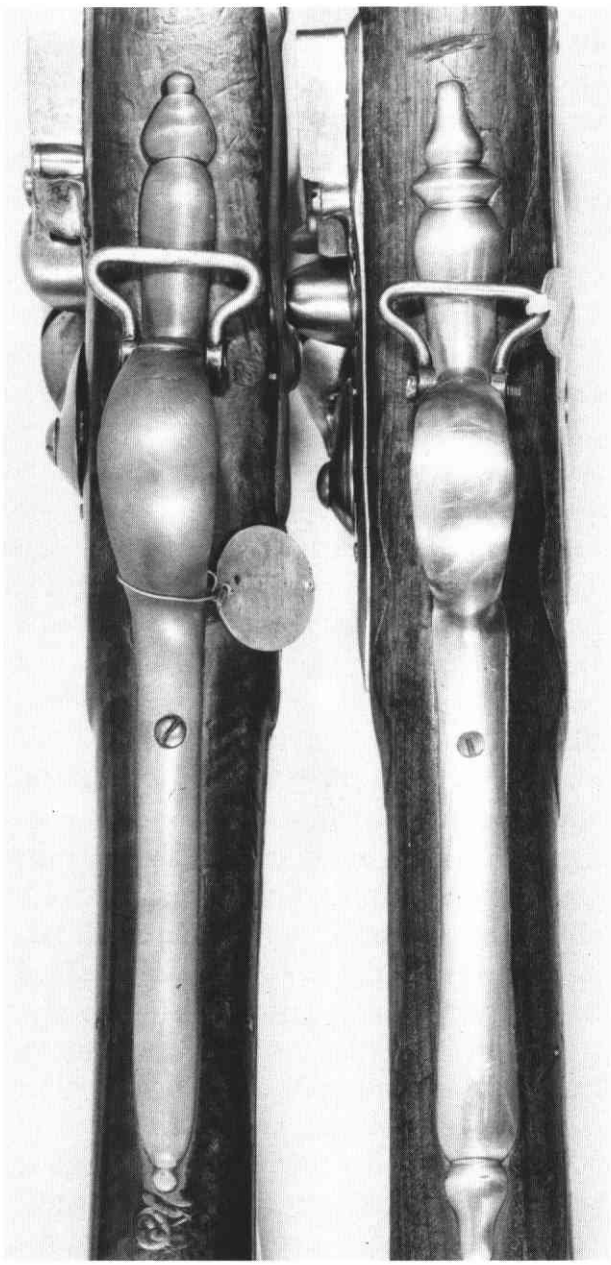


Plate 2, & 6. Pattern 1730 Long Land Musket. Salient features shown include the single-bridle lock, the full aprons carved ahead and behind the lock, and the trigger guard with the pear-shaped finials shown on the right of the close-up view; the trigger guard on the left with the hazelnut front finial is the standard Land Pattern used from the Pattern 1742 onwards. The buttplate, which is standard for all Long Land patterns, is shown in Plate 6. The sheet-brass nose band is a regimental addition.





ruary, 1759. These were the last arms shipped in bulk to America during the French and Indian War.

Of the more than 30,000 muskets and bayonets sent in bulk to North America during the French and Indian War, all were fitted with wooden rammers and will have been of either the Pattern 1730 (Plate 2, a, b), the transitional Pattern 1730/42 or of the Pattern 1742 (Plate 3). Early war shipments would have concentrated upon the Pattern 1730 and its modification, while those sent in 1758 will have been of the Pattern 1742 with a double-bridle lock. Once in America there is evidence that some regiments fitted steel rammers to their muskets at regimental level, but the totals would number in the low thousands at best, and the war was fought in practical terms with wooden-rammered muskets. Of individual regiments sent to America, several left England with muskets which had been recently converted from wooden to steel rammers, but most carried the unconverted types mentioned above. There is no firm evidence for the presence in America of any Pattern 1756 muskets with steel rammers during the French and Indian War.

There are three areas of particular interest to arms students of the French and Indian War: the arms

Plate 3. Pattern 1742 Long Land Musket. Characterized by a double-bridle lock, simplified stock carving around lock and barrel tang, and the "standard" Land Pattern trigger guard shown on the left closeup of Plate 2.

carried by the rangers, by the Highland regiments, and the use of the rifle. The ranger's raising order of 30 April 1756 clearly states that "firelocks are to be delivered to them at Boston, which they are to return at the end of the service." An order on the Ordnance Storekeeper at Boston dated 20 May 1756 called for the issuance of 100 muskets and cartouche boxes. Several ranger officers specifically requested the Old Pattern muskets, i.e. those of Pattern 1730, because of their lighter weight. No documentary evidence has thus far come to light in British archives to support the suggestion that the rangers carried either rifles or carbines during the war.

The 42nd Highlanders began the French and Indian War equipped with regulation King's Pattern muskets with wooden rammers. In May, 1759, a warrant was issued for their re-equipment with carbines and bayonets with wooden rammers which would have brought them into line with the other Highland units in America, but the Ordnance claimed they could not do this and had always previously supplied muskets. Montgomery's and Fraser's Highlanders carried 37-inch barreled carbines from their arrival in America in 1757. Fraser noted on his arrival that "Our arms are the Carabines the horse had before they were reduced to Dragoons, and are excellent Arms in every respect, but that they are rather slight for hard use....and but 300 Pistols, the rest I expect in every Ship." Highland pistols were always supplied by the regimental colonels, and not by the Ordnance; the Ordnance paid the colonels a fixed sum per pair for what they called "side-pistols with straps" in lieu of the pistols themselves.

The presence of carbines in North America during the French and Indian War continues to be clouded with some uncertainty. We know that they came over with the two regiments of Highlanders raised in 1757. In May, 1758, the seasonally-raised light infantry companies were ordered to exchange their muskets "for those of the Artillery, and of the additional companies of Colonel Fraser's Highlanders . . ."; and that 5000 were reported sent with Saunder's fleet early in 1759. It is further clear that all of these had 37-inch, not 42-inch, barrels as has been reported in the past. The so-called Artillery and Highlanders carbine does in fact have a 37-inch barrel and was common to both the Royal Artillery and the Highland regiments with the apparent exception of the oldest regular Highland unit, the 42nd. The 42-inch carbines with their special furniture (Plate 4) do not appear to have been manufactured until 1760, by which time no further carbines were sent to America. These carbines appear to have been made between 1760 and 1762, and were apparently first issued to the Light Infantry companies established for each Line Infantry regiment in 1771. Apart from the fairly limited numbers of Ordnance-made carbines, the chief reliance for light arms for British troops (and apparently officers as well) serving in America during the French and Indian War was upon captured French arms.

Colonel James Prevost arrived in New York in January, 1757, with 300 rifled carbines fitted with bayonets and steel rammers in his luggage. By order of the Commander in Chief he was promptly paid for them. These were undoubtedly made in Germany for Prevost while he was recruiting there during 1756. Not more than a month after their arrival, 100 of the rifles with their bayonets and moulds were sent to Ordnance Stores at Albany, and saw service with the troops in the three following campaigns. Although there are numerous references to marksmen and light infantry, there is only one suggestion that the rifles were used by them. An officer's diary entry indicates that on 12 June 1758 at Fort Edward, New York

> . . . that there might be a less Expense of Provisions, orders were given on the 12th to reduce the Allowance of every person in the Army to one Ration, and 10 Rifled Barreled Guns were delivered out to each Regiment to be put into the hands of their best Marksman . . .

It is not entirely clear whether this is a typical 18th Century run-on sentence, or whether the rifles were

Plate 4. Pattern 1760 Light Infantry Carbine. The 42-inch .66 calibre barrel and the non-standard pattern furniture characterize this carbine, which did not see service in North America until 1775. Prior to that date most light infantry was equipped chiefly with captured French muskets, or with 37-inch barreled carbines.

intended primarily as ration-supplement tools. Frequent requests for accounting for the rifles went out from headquarters, although none of the returns themselves have been located. The latest reference to the rifles occurs in September, 1759, in the form of a reward offered by the sergeant-major of the 60th Foot at Oswego for the return of "a waist belt & Rifle Bayonet Dropt or misLaid". In addition to these 300 rifled carbines, none of which has been identified at the time of writing, there is ample evidence that American-made rifles were carried by provincial troops.

### *The Inter-War Years, 1763-1774*

The last campaign of the French and Indian War closed with the capture of Montreal in September, 1760, but the military situation in North America remained sensitive, and no sooner had a peace been signed between the European Powers than Pontiac's Rebellion against the British takeover of former French territory broke out on the Great Lakes frontier. There were no new arms shipped from England to deal with this emergency, but since it was standard practice for regiments returning to England to leave their arms in the local Ordnance Stores and to receive a new set of arms on reaching home, there were sufficient arms in the hands of the remaining regiments.

Despite this practice, in July, 1768, there were reported to be between 20,000 and 30,000 arms

> remaining at New York and other Places which are deposited in common Warehouses only, and not appropriated to any particular Services. . . whether Directions should not be given for bringing such of the said small arms as are not absolutely necessary for the Service there, to England or such part of them as shall be judged proper.

The Commander in Chief (General Gage) was given discretion in deciding how many arms should be kept in America, and in August, 1769, he ordered that 5200 arms should be kept and the balance returned to England. The overwhelming majority of the arms kept in America, despite a probable selection of all those having steel rammers, would have been wooden rammer muskets of Pattern 1742.

The rotation system in which regiments which had served for a period on one station were brought home before being assigned to another began to be practiced from 1763, and it was the replacement regiments coming out from England in 1764-7 that brought the first Pattern 1756 Long Land muskets (Plate 5) to North America. These arms had a heavier stock and barrel but retained most of the brass furniture of the Pattern 1742, exchanging a cast nosecap for the earlier sheet-brass noseband; a new pattern lock which dropped the "banana" shape of the lockplate tail was introduced, and they were produced with a steel

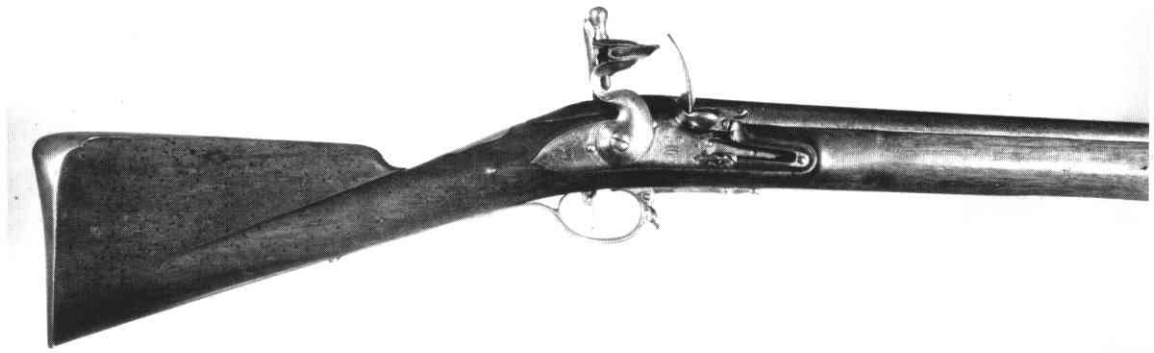


Plate 5. Pattern 1756 Long Land Musket. The final basic Long Land design (those made after 1777 will have the lock shown in Plate 7). Note the new straight-line lock-plate without the "banana" configuration of all the earlier patterns, plain teardrop rear terminal to the lockflat carving, and the heavier stock lines.

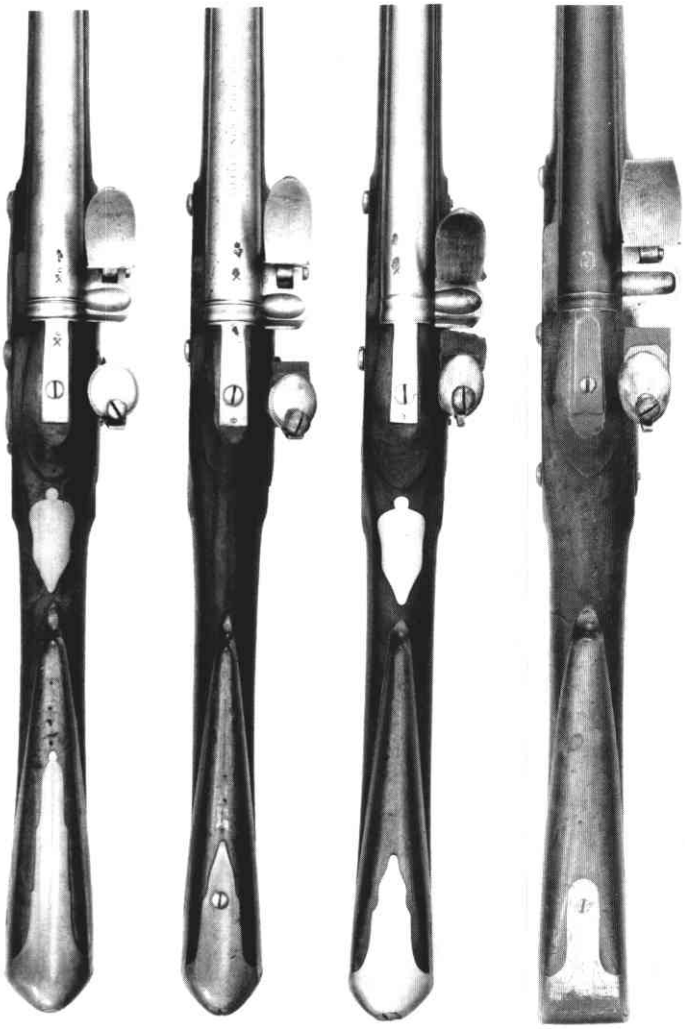


Plate 6. Buttplate tangs of the four major musket patterns used in North America to 1783. Left to right: Long Land as used on all of this series; Marine or Militia, the only type to have a screw-held tang; Short Land Pattern from 1769; Sea Service. The buttplate tang is standard for all patterns, but the 3-screw lock with flat-top steel is pre-1756. Note the heavier stock lines. Note also the standard Land Pattern thumbpieces inlaid in the wrists, the oval apron carving at the barrel tang which was standard on all arms from the Pattern 1742 onwards, and the change in the shape of the top jaws from nearly circular to oval on the Short Land after 1777.

rammer.

By a Royal Warrant of 11 June 1768 a new 42-inch Short Land Musket was adopted for the use of the Line Infantry regiments. It was intended that the Guards continue to carry the Long Land Pattern. Production of components to complete 40,000 of the new arms began in July, and the first complete arms were delivered into Store in the Spring of 1769. The only new features of this Pattern 1769 Short Land musket were its shorter barrel length and the design of the buttplate tang (Plate 6). Its weight differed from the Long Land Pattern of 1756 by a mere four ounces. The adoption warrant specified that none of these new muskets were to be issued until the supply of old Long Land arms had first been issued.

A carbine intended initially for the use of sergeants of grenadier companies of line infantry was approved in March, 1769, a design was accepted in January, 1770, and a small initial batch were completed by September, 1770. Its use was extended to Fusilier regiments by November, and in June, 1771, they were ordered to the sergeants of grenadier companies in the three Guards Regiments.

The formation of a Light Infantry company of 39 men for each of the forty-four line infantry regiments on the British Establishment was approved in January, 1771, and inspection returns show the regiments receiving them from as early as February, 1771. Returns for thirty-six regiments show their light infantry arms (and special accoutrements) being received between 1771 and 1773, during which period no unaccounted-for carbines were manufactured. I have therefore concluded that the arms they received must have been the carbines made between 1760 and (mainly) 1762 (Plate 4) just when the previous war was coming to an end, and which had been kept in Store unissued until this time.

To summarize the above, at the outbreak of the American War in 1775, the small arms situation in the British Army was as follows: there were at least 5200 muskets, mostly with wooden rammers, left over from the French and Indian War and subsequent regimental exchanges lying in Ordnance Stores in North America, chiefly in New York and Quebec; the line regiments were armed with the Pattern 1756 steel-rammered Long Land musket, with perhaps two or three of the regiments stationed in Ireland having already received the new Pattern 1769 Short Land muskets during 1774. The light infantry companies of all these regiments had received their Pattern 1760 42-inch barreled carbines, and the sergeants of the grenadier companies had received their Pattern 1770 39-inch barreled carbines.

### *The American War, 1775-1783*

The increasing unrest in the thirteen colonies did not elicit any great response from the Board of Ordnance with respect to an increase in small arms production. The military situation was not seen to be either serious or large scale, and there were ample sup-

plies of muskets already in the racks to deal with the perceived threat. Just under 5000 muskets were produced during 1775, and in July of that year orders were given to convert all of the wooden rammered long and short Land muskets in Store to steel rammers; it is clear from subsequent developments that this conversion was not fully carried out. Several gunmakers applying to become contractors for small arms were turned down as not being needed. During 1776 just over 15,000 muskets were produced. These were considered as replacements for the arms taken overseas either by the troops themselves or in bulk shipments, as well as for the new recuits for the augmented regiments. During 1777 the situation was at last perceived as perhaps developing into more than a local difficulty, which was reflected in the production of the same number of muskets in this one year as had been produced during the previous two: some 21,000.

The entry of the French into the war in the Spring of 1778 finally brought home to the British Government and to its Board of Ordnance the scale of the task they had taken on so lightly in 1775. In the course of 1777 three new contractors joined James Hirst as setters-up to the Ordnance and one of them, John Pratt, was to become the major supplier of muskets from 1778 onwards. Not only did domestic musket production increase to more than 47,000, but a contract was signed in Liege for the manufacture of 20,000 muskets of the Short Land Pattern. Land Service musket production peaked in 1779 with domestic deliveries totalling almost 70,000, representing one-third of the total wartime production of these arms. Production was somewhat enhanced by the addition of four new contractors, although the bulk of the arms were produced by Hirst and Pratt. In addition to this number a further 40,000 muskets were ordered from Liege. By this time the Liege contracts were considered as much a means of preventing arms reaching the rebels as necessary for British use. Clearly the supply of arms was considered adequate for contingencies in the foreseeable future, and deliveries for 1780, despite greatly increased military activity in America, were down by half on the previous year. Ordnance Storehouses at the Tower and the Out Ports were full to overflowing and additional space had to be acquired. Musket production during 1781 was the lowest since 1775, at just under 12,000, with only a slight increase to almost 14,000 in 1782. The total of Land Service musket domestic production for the eight years of the War amounted to just over 218,000, or an annual average of about 27,000. Add to this number between 90,000 and 110,000 muskets from Liege, and a very healthy small arms supply situation emerges at source.

The Long Land musket continued to be the principal weapon of the British Army in America until at least 1777, and was carried by the regular Provincial forces, often with wooden rammers, in some instances until the end of the war. It also was the arm of the composite Guards Brigade serving in America, and continued as the Guards' primary arm until 1790. Some Guards light infantry may have received Short Land muskets in 1780. There are a number of recorded instances of Long Land muskets being supplied as replacement arms for German auxiliary regiments.

There were three important changes to the basic Short Land Pattern musket which occurred during the war on all muskets made under the Ordnance System. The earliest of these was a change from the conventional convex-surface sidepiece, which was ordered on 21 July 1775 "for the future" to be flat in the same manner as those for the Marine or Militia muskets. The second change came in the Spring of 1777 as the result of difficulties over the supply of musket locks. The lock workmen had been monopolized by the East India Company, who paid a shilling per lock more than the Ordnance was willing to pay, and failed to deliver to the contractors the numbers which had been contracted for. Many threats and much ill-feeling resulted, and too few locks came in. The Board refused to lower its price, and a solution was found in simplifying the design of the lock by bringing it into line with the pattern then being produced for the East India Company. This change involved the introduction of a short sear-spring, which now showed two screw-ends through the lockplate behind the cock; the substitution of a narrow pillar-form comb of the cock for the earlier leaf form, the simplification of the feather-spring finial to a teardrop, and the elimination of the double border lines engraved on top-jaw and on the back of the steel (Plate 7). The third change involved a change to the design of the second ramrod pipe from conventional barrel-shape to a straight-tapered design, the innovation of the contractor John Pratt. (Plate 8). Despite the Board's approval of the design "for the future" in May, 1777, the records clearly show that none were produced for the Ordnance until a single contract of 22 January 1779, all of which had been delivered by 31 March 1779. Muskets made by other contractors than Pratt with this pipe fitted cannot therefore have been made, at the very earliest, before the Spring of 1779. Those furnished complete by Pratt probably had them from the time of his first contract deliveries at the end of May 1777.

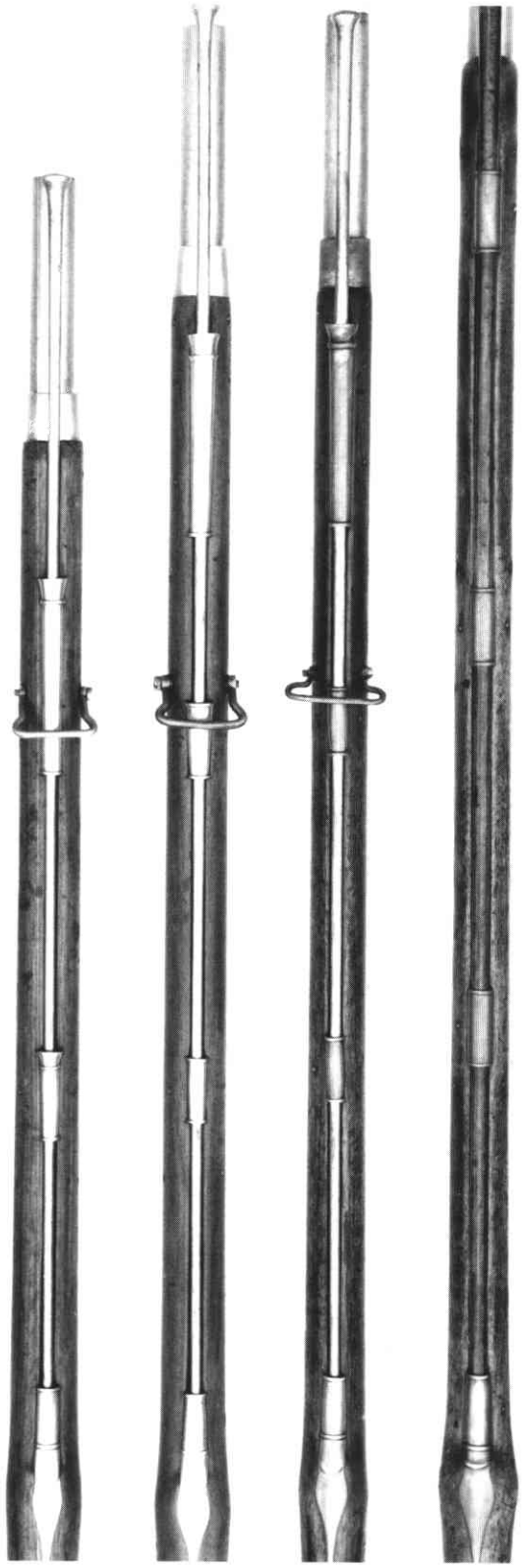


Plate 7. Rammer Pipe arrangements, The 3-pipe example on the left is the India Pattern of the 1790s to show the sharp contrast to all earlier patterns with four pipes. From right to left: Long Land Patterns from 1730 until 1756; 1756 has long upper trumpet pipe in place of barrel-shaped pipe; Marine or Militia and Short Land muskets until 1779; Short Land from 1779 with Pratt second pipe: compare with second pipe on India Pattern; the Pratt is a straight-taper without flare at the mouth.

Plate 8. Pattern 1777 Lock. A simplification of the earlier design. Note the two screw ends showing through the lockplate behind the cock; the narrow notched-pillar comb of the cock, the teardrop finial of the feather-spring, and the absence of border engraving on the top-jaw and back of the steel.

Because of limitations on space it is not possible to go into the several Short Land muskets which were produced by the contractors and received by the Ordnance as wartime expedient arms. The fact is that the strains put upon it by the demands of a world-wide war were too great for the Ordnance System and from 1778 exceptions and compromises in its operation began to be accepted as necessary to deal with the situation. This breakdown was, as one would see from the production figures, at its peak during 1778-79, and by early 1780 a variety of circumstances brought the situation back to something approaching normal. The Ordnance System continued to operate, but several thousand weapons were allowed to be received in the complete state from the contractor, he having often furnished his own lock, or barrels, or furniture, or stocks. If any of these components differed from the current Ordnance pattern, they had to be approved by the Board before production began. The only one of these design changes at contractor level which has been identified at this time was called either the "ess-" or the "S sidepiece (Plate 9), a close copy of the current India Pattern design. Great care should be taken in identifying one of these to make certain that all other features are of the Short Land, and not India Pattern design. A few thousand of these were delivered into Store by both Hirst and Pratt in 1779 and 1780.

British carbines carried in North American during the war, all of nominal .66-inch calibre, include the Pattern 1760 Light Infantry Carbine and the Pattern 1770 Serjeant of Grenadier's Carbine described above; the Artillery Carbine (Plate 10) with a 37-inch

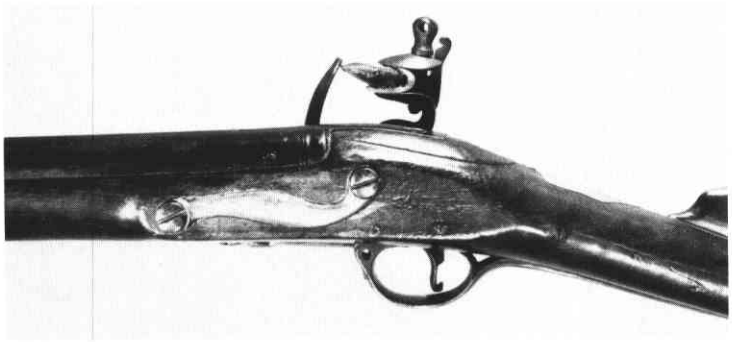


Plate 9. Wartime expedient Short Land musket with S-sidepiece. Note also the Pattern 1777 narrow notched-pillar comb of the cock.

barrel, and three carbines used by the mounted troops. There were only two regular mounted units of the British Army which served in America during the war: the 16th (Queen's or Burgoyne's) and 17th (Preston's) Light Dragoons. There is little question that the 16th carried the Royal Forester's Carbine (Plate 11 upper) which they had originally received from the parent regiment (then the 21st Light Dragoons) in 1764, along with the Light Dragoon pistol introduced with Eliott's Light Dragoons in 1759 (Plate 12). The armament of the 17th included the same pistol, but the type of carbine which they received prior to embarkation for America in May 1775 remains unclear, and they were certainly re-equipped with a new carbine a year later. Although it is generally of the Eliott pattern (Plate 11 lower) this carbine has yet to be positively identified. Carbines for Horse (or "homestocked" carbines, referring to the fact that they are stocked right "home" to the muzzle) of two pattern variations (Plate 13) were issued to the Provincial cavalry, dragoons and mounted militia.

The use of rifles by the British Army during this period is the subject of a forthcoming book by this writer, *The Rifle in British Service 1740-1783,* which is scheduled to appear in the coming year. Suffice it to say here that the Pattern 1776 Rifle (Plate 14) played a far greater role in British service than did the much better-known breech-loading Ferguson rifle which the

Plate 10. Pattern 1776/77 Artillery Carbine. Artillery carbines were first made with steel rammers in 1776, and this example is fitted with a Pattern 1777 lock. In over-all outline this 37-inch barreled carbine represents the "typical" Land Service carbine of the 1755-83 period, if one substitutes a wooden rod, earlier pipes and the earlier form of lock. The steel, sling swivels and steel rammer are missing from this example.

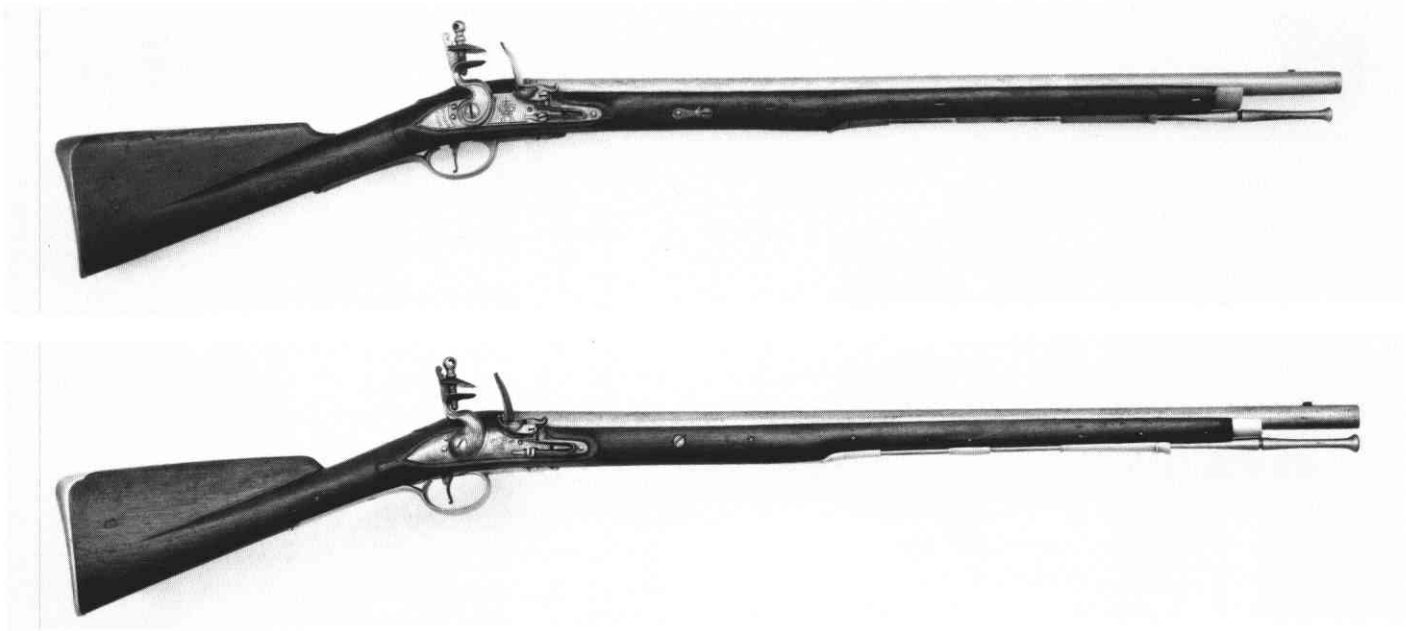


Plate 11. The two Light Dragoon Carbines carried by the two regular mounted corps serving in America 1775-82. Upper: the Pattern 1776 Royal Forester's Carbine with its flat lock and double-screw forward base for the sling-bar. Lower: Eliott's Carbine with conventional round lock and plain screw forward sling bar base. Both carbines have .66 calibre 28-inch barrels, and swell and groove ramrod head and notched nosecap adopted in 1773 for the Eliott.

Plate 12. Pattern 1759 Eliott Light Dragoon Pistol. The type carried in America by the 16th and 17th Light Dragoons during the American War. This is a post-1764 example, but has the standard features of a .66 cal. (carbine bore) 9-inch barrel, round lock with steel-pivot screw from the inside, and short spur buttcap.

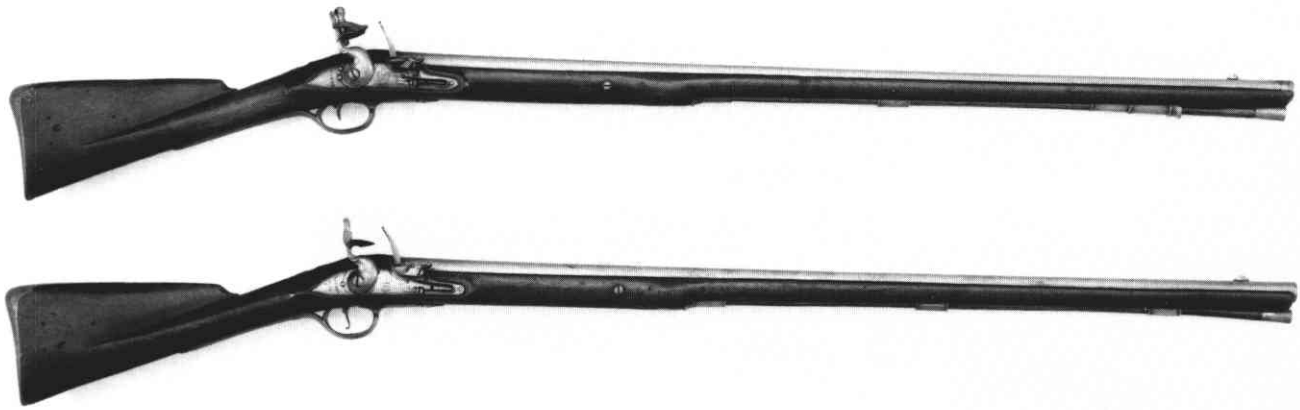


Plate 13. Carbines for Horse as carried by Provincial mounted troopers during the American War. Both have .66 cal. 37-inch barrels and are stocked to the muzzle with a steel blade foresight. A sling bar is mounted on the left side. Upper: Pattern 1779 with the Pattern 1777 lock and a trumpet forepipe; Lower: Pattern 1756 with lock of that year (cock incorrect replacement) and plain barrel-shaped pipes. Both were issued with wood rammers.

Plate 14. Pattern 1776 Rifle. A combination of German and British features this .65 cal. 28 1/2-inch octagonal barreled rifle fitted with a heavy iron swivel rammer (the first in British service) was the British response to the American longrifle. Carried by light infantry of the regular line regiments and Loyalist rifle companies, it was in issue from 1777 to the end of the war. The brass blade foresight and block backsight with two hinged leaves are missing.

records suggest disappeared from use after the Battle of Monmouth, when Clinton's army reached New York. It is perhaps an amazing statistic that the regular British Army, including its Provincial units and German auxiliaries, appear to have carried far more rifles as regular equipment than the seasonally raised temporary rifle units of the rebel American army. All 1000 of the Pattern 1776 rifles contracted for in Hanover and Birmingham were delivered into Store by late 1776 and shortly afterwards shipped to America, with the 100 Ferguson rifles arriving in May, 1777, with their inventor.

Apart from the Land Service muskets, carbines and rifles in the hands of the British Army, there were also muskets for the Marines and for the Royal Navy which saw service in North America. The activities of both the Marines and the Navy in America having been far more significant in the overall military situation during the period after 1775 than before it, discussion of these arms has been held until this point. Both the Sea Service and Marine weapons underwent changes at the beginning of the Seven Years (French and Indian) War, and it is very unlikely that either of the new pattern weapons saw much, if any, service in Ameri-

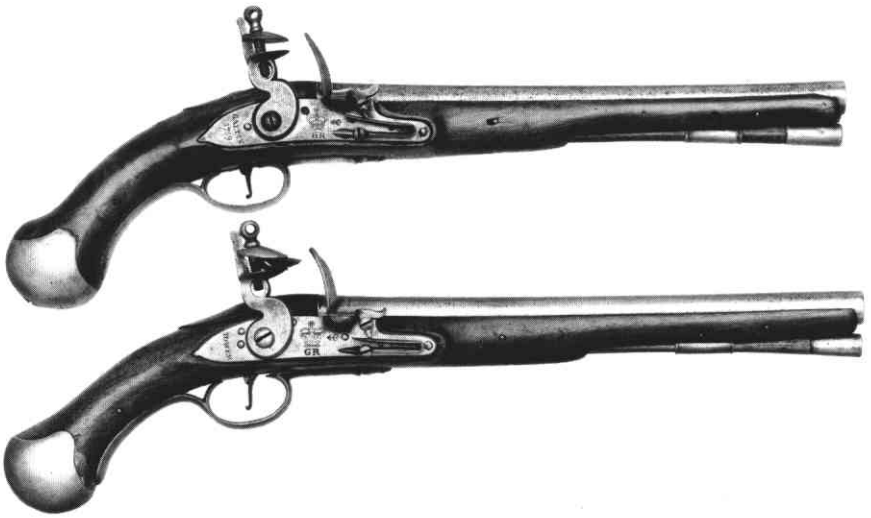


Plate 15. Sea Service Pistols. Upper: Pattern 1756 with 2 screw lock and sidepiece adopted in that year. Lower: Pattern 1756/77, with improved lock of the latter year. Both have .56 cal. 12 inch barrels and 'plain' or bridle-less locks.

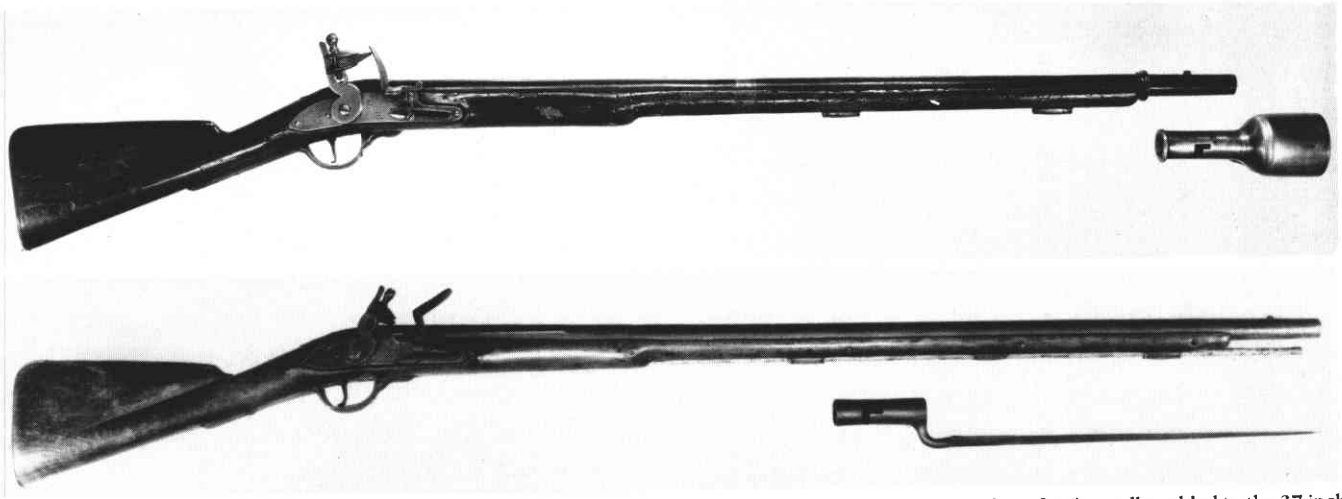


Plate 16. Sea Service Muskets. Upper: Pattern 1738 Black (Short) version with stock cut back from muzzle and reinforcing collar added to the 37-inch barrel for the grenade-launching cup shown. This 3-screw lock pattern was superseded in 1756 by a two-screw lock but remained in service for many years afterwards. Lower: Pattern 1756 Bright (Long) musket and bayonet. Apart from its old and possibly foreign half octagon barrel (old and/or foreign barrels were frequently used for Sea Service muskets) and the modified lock, and sidepiece, the overall pattern of the arm did not vary.

can waters until at least late in the war.

The Sea Service musket was supplied in two barrel lengths and in two finishes, the Black musket having a draw-filed and blackened 37-inch barrel and the Bright musket having a brightly polished barrel of 40 to 46 inches (Plate 16). Apart from these two features their overall construction and components were the same. The Pattern 1756 Sea Service musket differs from earlier types in having a two-screw lock and sidepiece and there were no other changes in the design until the late 1780's. During the war the Board allowed the delivery of more than 16,000 complete Sea Service muskets fitted with Land Service locks , a wartime expedient. Sea Service pistols carried on the ships of the Royal Navy during the period of this article were of three patterns, the latter two shown in Plate 15. There is some evidence that a small number of Sea Service pistols may have been issued to arm Provincial mounted troops in 1780.

The musket carried by the Marines during the American War, generally known as the Marine or Militia musket, stems from the original Pattern 1757 which had a 42-inch barrel, a wooden rammer and no nose cap or tailpipe for the first two years of its production. Leaving aside the complications of the militia development which does not concern North America, the Marines continued with the Pattern 1757 until August 1768, from which time they began to be issued with steel-rammered muskets of the improved Pattern 175 which had been introduced in that year for the militia

Plate 17. Pattern 1759 Marine or Militia Musket and bayonet. Characterized by a 42-inch barrel, flat sidepiece as used on the new (1756) Sea Service musket, lack of thumbpiece and distinctive buttplate tang (Plate 6), this pattern musket was first issued to Marines in 1768 and saw service through the American War.

incorporating a cast-brass nosecap, long trumpet forepipe, and tailpipe (Plate 17). This pattern was last produced during 1776, and records as late as autumn 1780 show that they were still being sent as replacement arms for the Marines, and very probably lasted in issue through the end of the American War.

### *Conclusion*

Since the appearance in 1961 of Howard L. Blackmore's classic *British Military Firearms 1650-1850* the study of these arms has progressed, through long-term intensive study of the records of production and issue, to the point where it is both possible and appropriate to assign very specific designations based on individual designs and their modification to various patterns of arms. The system of manufacture was sufficiently organized so that the amount of detail which is relevant to the positive identification of a particular piece can approach Colt-variation level. This concept has been applied to the weapons discussed in this article, and those interested in the subject are informed that within the year a new publication, *Pattern Dates for British Ordnance Small Arms 1718-1783*, covering in the greatest possible detail the identification and naming of the various muskets, carbines, rifles and pistols produced for the Board of Ordnance between c. 1715 and 1783, will be appearing. Also virtually completed is *British Military Small Arms in North America 1737-1783* which will greatly expand and develop the general material in this article for all branches of the service, as well as issues, marksmanship training, ammunition and accoutrements, implementing the pattern-date designation system.

In conclusion I would like to express my gratitude to the American Society of Arms Collectors for the opportunity to present for the first time in print the initial results of more than twenty-seven years' research, and to Herman Benninghoff, who got the ball rolling and did so much essential groundwork, and who has been in general a tower of strength and encouragement. To the Royal Armories at the Tower of London, the National Army museum, the Scottish United Services Museum, the West Point Museum, and Colonial Williamsburg my sincere thanks are due for the opportunities and assistance which they have given me in building up the corpus of information which will now begin to appear.

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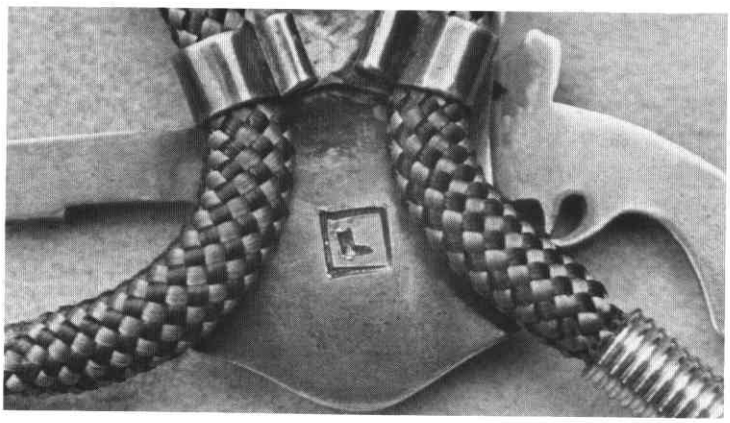
*PICTURE CREDITS*

Unless otherwise noted, pictures are courtesy of The Trustees of the Royal Armorers; plate 7, the late A.D. Darling; plates 9 and 17, C.M. Miller; plate 15, lower West Point Museum; plate 16, R.S.A.F. Pattern Room.

Herschel Logan told the story of the origin and his designing of the ASAC emblem in Bulletin No. 20, page 24. He was not only a woodcut artist and writer; he could work in metal, too, and one of his works is shown here: his silver bolo of the ASAC emblem, with his personal logo hand-cut in the back.