



Tower of London. Lithograph by Daniell, 1804. The Proof House and smiths' workshops are on the wharf in the foreground.

American Arms in the Tower

Howard L. Blackmore

For the purpose of this short paper, I have used the words 'American Arms' in their widest sense, to mean not only weapons *made* in America but those *used* or *invented* in America. It is not my intention to list all the various firearms (they are nearly all firearms I am afraid) which come into those categories in the Tower — that would be a lengthy and tedious process — but rather to comment on the interchange of firearm design and development that took place between the two countries on either side of the Atlantic and to highlight some of the more interesting weapons. Perhaps I can also emphasise the special relationship which has always existed between the Tower of London and North America.

May I first briefly review the activities of the Board of Ordnance in London as it affected the contents of the Armouries collections of today. The Government Department responsible for the supply of weapons to the British Army and Navy from the 16th century up to the middle of the 19th century, its headquarters in the Tower of London, consisted of a large number of offices, store rooms, workshops and a proof house.¹ At one stage there was even a cannon foundry there.² For much of the time it looked like the closely packed conglomeration of towers, buildings, small gardens, and dwelling houses that can be seen in the lithograph of the Tower by Daniell in 1804. It could be described best as a fortified manufacturing town. Here were designed the latest type of firearm; some were actually made or assembled within the walls; and all had to pass the official view and proof before being stored ready for issue. These were the guns which were engraved with the word TOWER and the Crown and Royal Cipher, and have found their way into public and private collections all over the world.

Not only did the Board of Ordnance keep sealed patterns of its own official designs but it maintained a close watch on the weapons of its allies and enemies, acquiring specimens wherever possible. It was also only too willing to try out any new design of weapon no matter what its source. Many of these sealed patterns and experimental pieces are still in the Armouries today. One of my last tasks before retirement was to gather them together in what is now known as the Board of Ordnance Gallery. In that Gallery and in the supporting Study Collection are to be found the finest display of British Government weapons including representatives of what may be termed a two-way traffic in arms and ideas between London and America.

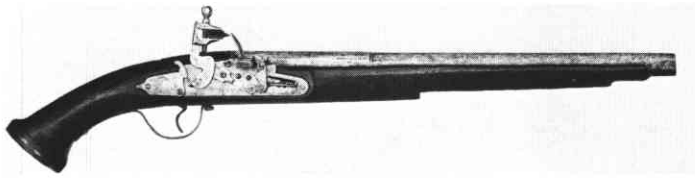
To start with the flow of arms was entirely in a westward direction. The first English settlers in America took with them a motley assortment of firearms. I use the word 'motley' adviseably because in the first half of the 17th century no standard form of firearm existed either for military or sporting use. Barrel lengths and calibres varied



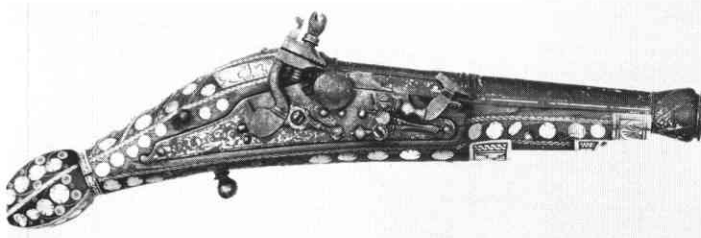
according to the whim of the maker and the lock systems, matchlock, flintlock and wheellock, were in their most confused state of evolution. There were the early lever-operated matchlocks and those worked by sear and trigger; flintlocks included what we now call 'English' locks, dog-locks (then known as 'ketch' or catch locks) and 'French' locks; as for English wheellocks, they are still to be identified. Excavated remains of nearly all these gun locks have been found on the early colonial and Indian sites at Jamestown, Yorktown, Rochester, Fort Albany, etc.³

Because the Tower of London was essentially an arsenal, no attempt was made to keep obsolete weapons unless of some historical importance. Whenever possible the Board of Ordnance unloaded its out-of-date guns on unsuspecting citizens as far away as possible. The recipients did not always appreciate such generosity. At the beginning of the 18th century the Governor of the Leeward Islands protested that the matchlocks issued to him were 'dangerous in marches through a Country full of Sugar Canes'; the Governor of Jamaica complained that 'he had received about 200 pieces of Iron that had been Firelocks but never can be made so again'. Other disused firearms and bayonets were employed in the decoration of the walls of Windsor Castle, St. James's Palace, and Hampton Court. Until recently, therefore, the museum part of the Tower, the Armouries, possessed few examples of early matchlocks or flintlocks.

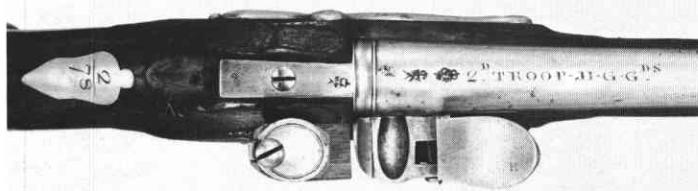
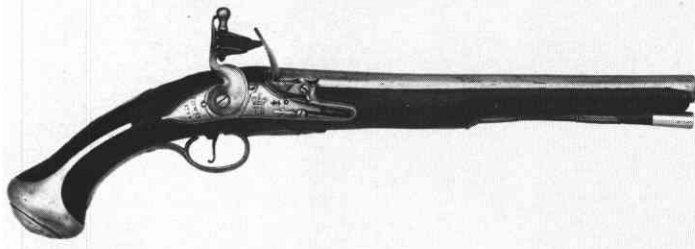
Happily this has been remedied and the Armouries now has a good selection of military and sporting guns of the early colonial period. In 1587, the historian, Holinshed, wrote 'for self protection the honest traveller is now enforced to ride with a case of dags at his saddle bow or with some pretie short snapper'. A good example of the latter pistol is the decorated snaphance recently exhibited in the



English-lock pistol. Barrel stamped with London Gunmakers' Company proofmarks. c.1640.



Snaphance pistol. Stock inlaid with engraved bone and mother-of-pearl. Barrel and lock with traces of damascening. English, c.1600.



Heavy cavalry Tower pistol, dated 1738. 12 in. barrel marked for 2nd. Troop Horse Grenadier Guards.



Butt trap lid of rifle below.

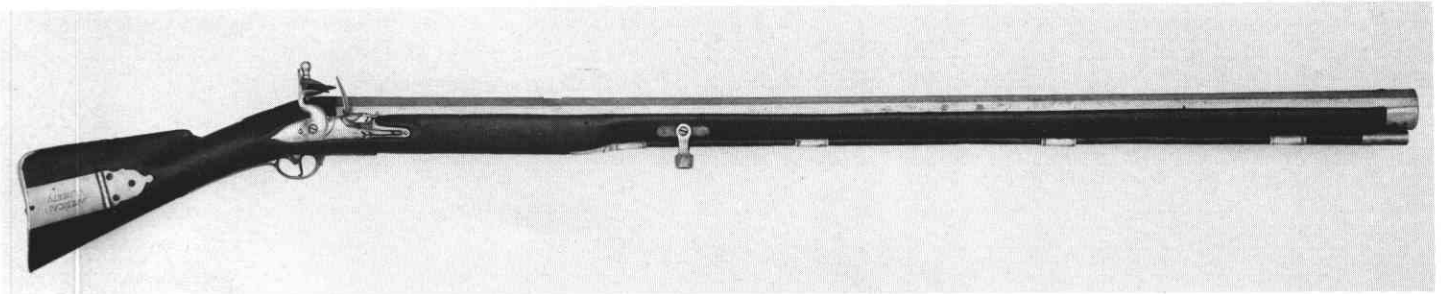
Treasures of the Tower Exhibition at Philadelphia and Toronto.⁴ In overall shape it is similar to John Thompson's plain pistol at Pilgrim Hall, Plymouth, Mass. In not quite so good condition is the Elizabethan snaphance pistol which was dug out of the Thames River mud not far from the Tower and placed by its finder in a pressure-cooker to dry it out quickly!

In the 18th century we enter the domain of the Brown Bess, that Queen of muskets which was captured, copied and used by some American forces during and after the War of Independence. I do not propose to discuss all the models and variants of the Brown Bess except to say that specimens of every kind together with accompanying wall-pieces, carbines and pistols are now displayed in the Board of Ordnance Gallery.⁵ Incidentally there are some guns which are in their original condition and reveal just how well some of these oft-despised military arms were actually made.

Facing the Brown Bess at the start of the Revolutionary War were the long rifles of Pennsylvania, and although the British forces had had some experience of rifles during the French and Indian Wars of 1756-63,⁶ this was the first time that the rifles made any real impression not only on the unfortunate troops concerned but on the British people back home. I think modern historians tend to underestimate the sympathy felt in many quarters for the colonists. Certainly the public were fascinated by the exploits of the American riflemen. One of these was brought prisoner to Bristol and interviewed by the press. His dress was described in detail and when he demonstrated that he could hit his mark at 200 paces, great admiration was expressed and he was set free. The newspapers were, of course, keen to follow the prowess of the British troops in this activity. A London newspaper gave this report of the Guards practising with rifles at the Kensington Gravel Pits:

'Some of the soldiers were called riflemen and had a target fixed to exercise their dexterity at, but alas! there was not one hole in it. However they made the thistles fly that surrounded it and peppered the gravel pits with a vengeance.'⁷

Officers began to bring back specimens of the long rifles as souvenirs of the war. In the Royal Collection at Windsor Castle are two American rifles given by that eccentric character, Colonel George Hanger, to George IV, including the one which bears the emotive message STATES UNITED WE ARE ONE.⁸ In the Tower we have an equally interesting wall-piece. Although fitted with Brown Bess



American wall rifle with swivel mount. 54 in. barrel, 7 grooves; .90 in. cal. Lock and furniture of 'Brown Bess' type.

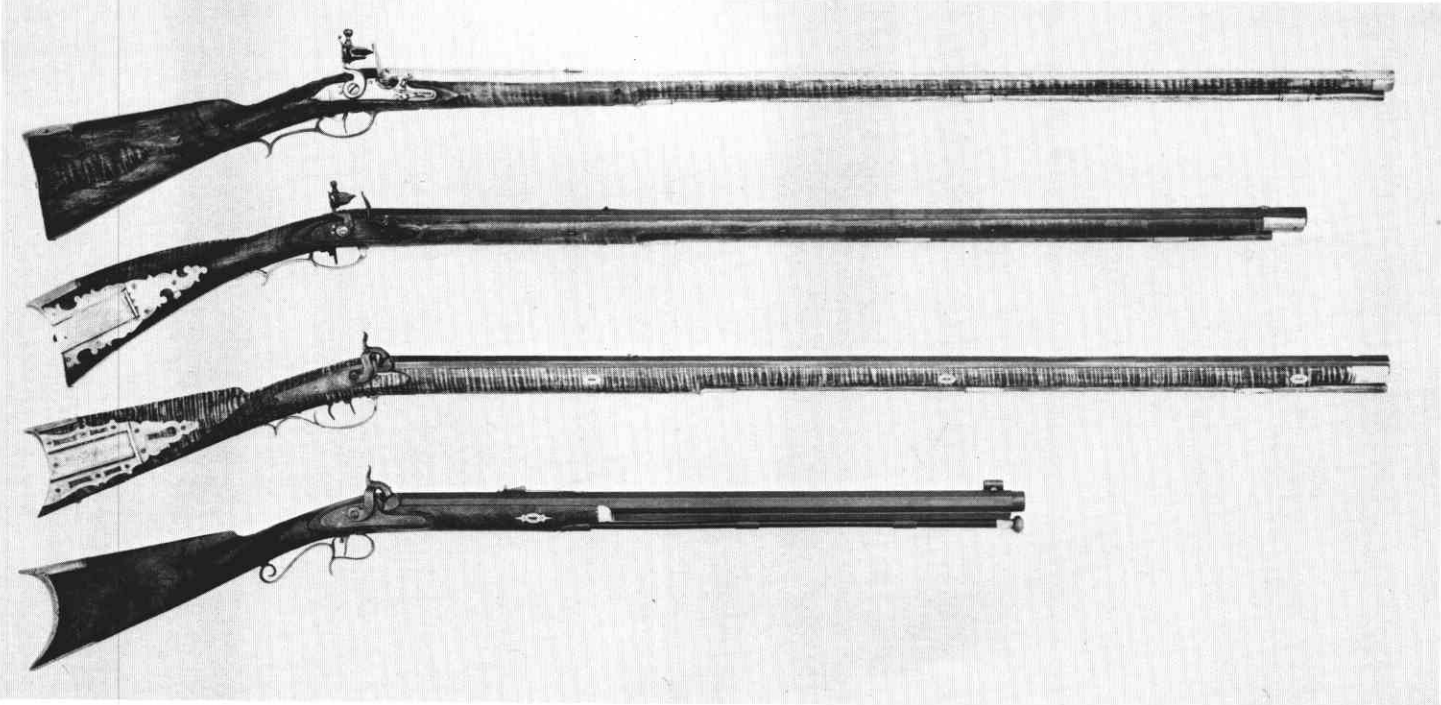
furniture it has a rifled barrel of American origin and the butt box is engraved with the motto AMERICAN LIBERTY. Undoubtedly a relic of the war, I wish we knew the story of its capture.

The Armouries has a good selection of Pennsylvania long rifles, two of which are worthy of mention. One is an early example, unmarked and dating to ca. 1765;⁹ the other is later but is particularly appreciated as it was presented by the Massachusetts Arms Collectors Society in 1953. The lock, incidentally, is marked LONDON WARRANTED. Accompanying these rifles are two examples of American powder horns. The first, dating to ca. 1760, bears the royal arms, and is engraved by a professional artist with a map of the Mohawk and Hudson Rivers from Albany to Lakes Ontario and Champlain. Obviously a well-loved accessory, it has been fitted with a later brass nozzle and base. The second horn portrays the well-known scene "The City of Havana illuminated at the Embarkation of the British Troops July 7th 1763."¹⁰

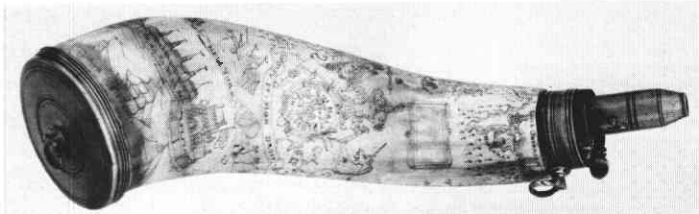
In 1775 the Board of Ordnance began to take seriously the threat of the American rifle. It rejected the long American model, basing its own muzzleloading pattern on the German short-barrelled Jaeger rifle. Regrettably no specimen of this first British rifle, made in Birmingham, exists in this country. The British rifle which won most acclaim was the Ferguson breechloader. Its story is too well known for me to repeat here, but it is not generally known that the Board of Ordnance had tried out these screw-plug breechloaders before Ferguson's impressive demonstration in

1776. In the Armouries there is a heavy wall gun of c. 1750, engraved with the royal arms and cypher, which has a trigger guard attached to a screwed breech-plug. In 1762 the Board ordered five rifled breechloaders from John Hirst, the London gunmaker, including "Two Rifled Bullet Guns plugged at the Handles & Steel Mounted" for 15 guineas.¹¹ These can be seen in the Board of Ordnance Gallery.

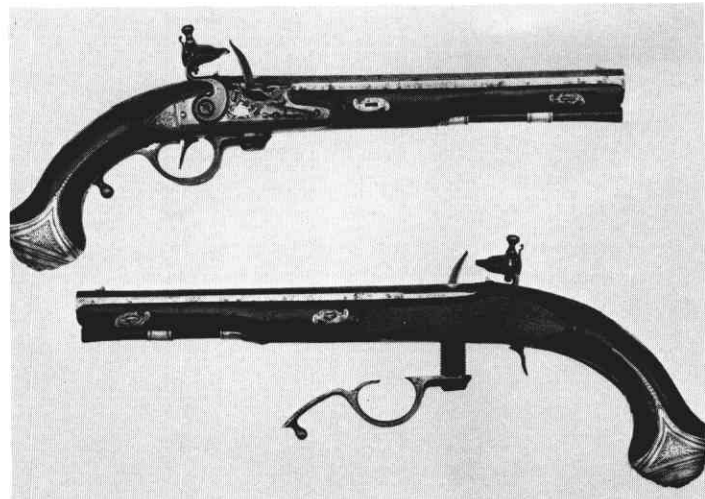
Although lacking a military version of the Ferguson, the Gallery does have on show at the moment the finest of all these rifles, made by Durs Egg for the Prince of Wales in 1782, and lent by H.M. The Queen.¹² A pair of silver-mounted holster pistols with Ferguson breeches made by William Jover, London, completes an excellent group of these early breechloaders. Officers on both sides of the war carried as part of their equipment the traditional pair of holster pistols with brass or iron barrels according to choice. The Armouries have probably the largest collection of English pistols which includes a very representative selection of these pistols. The pair illustrated is by James Barber, London. Only the sideplate and escutcheon are of silver, and these bear Birmingham hallmarks for 1777. Of similar design are the several pistols said to have belonged to George Washington. Incidentally the portrait of George Washington by Charles Peale in 1772 shows him wearing an English silver smallsword,¹³ as did many other officers for formal dress, both in the Navy and the Army. It is interesting to note that during the formative years after the Revolution, while designers of U.S. military firearms tended to copy French patterns — the Model 1812 contract model of Eli



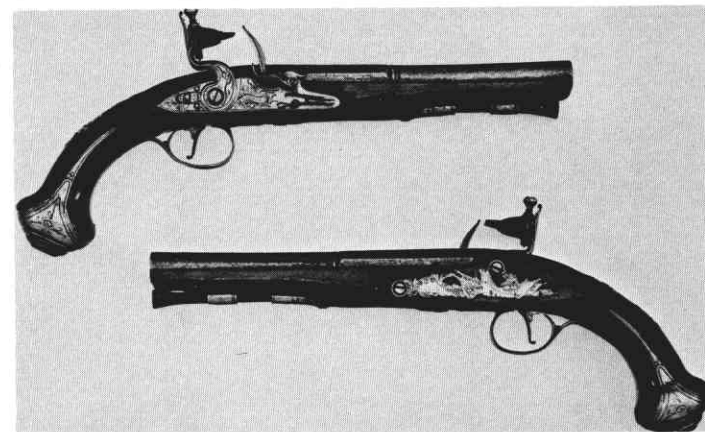
a) Pennsylvania flintlock rifle. 45 in. barrel; .45 in. cal. Maple stock. Butt plate engraved with initials SH.
 b) Pennsylvania flintlock rifle. 43 in. barrel; .52 in. cal. Lock marked LONDON WARRANTED. Presented by Massachusetts Arms Collectors Society, 1953.
 c) Percussion rifle by H.W. Leman, c.1850.
 d) Percussion target rifle by P. Soper, London, Ontario, 30 in. barrel, 6-groove rifling; .39 in. cal.



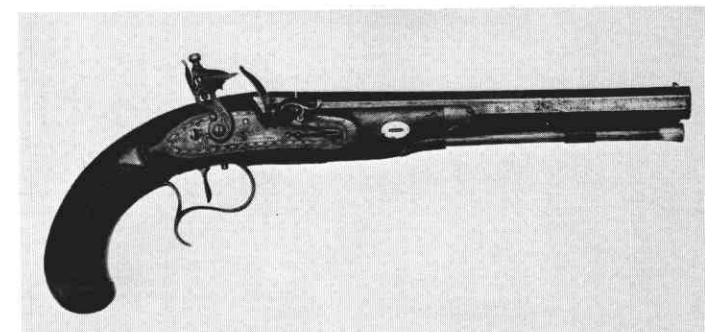
Powder flask engraved with Royal Arms, view of New York and map of Hudson and Mohawk rivers, c. 1760. Fitted with later brass nozzle and base. Detail below.



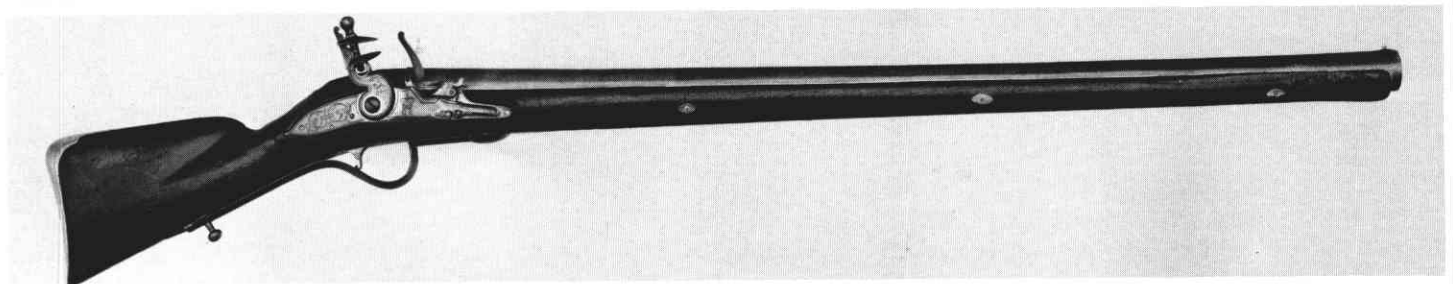
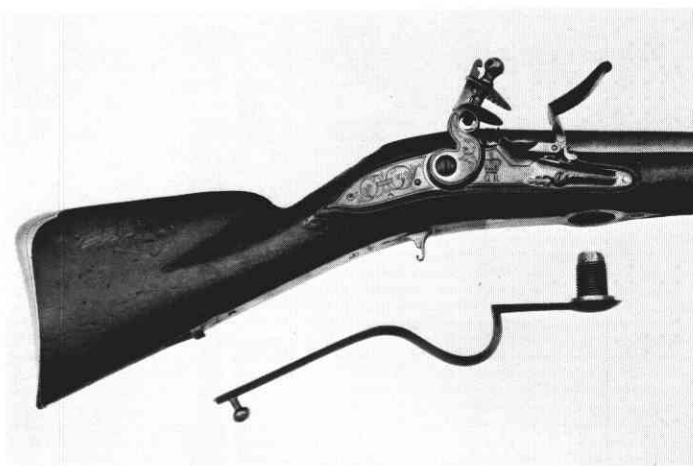
Pair of breechloading holster pistols by William Jover, London, c.1780. 8-groove rifling. Ferguson-type screw-plug action. One quick turn of trigger guard opened top-loading breech.



Pair of officer's pistols by James Barber, London. Steel mounts with silver sideplate bearing Birmingham hallmarks for 1777.



Flintlock duelling or target pistol by Simeon North, Middletown, Conn., c.1820. 10 in. barrel with gold stamp of maker. Serial No. 10.



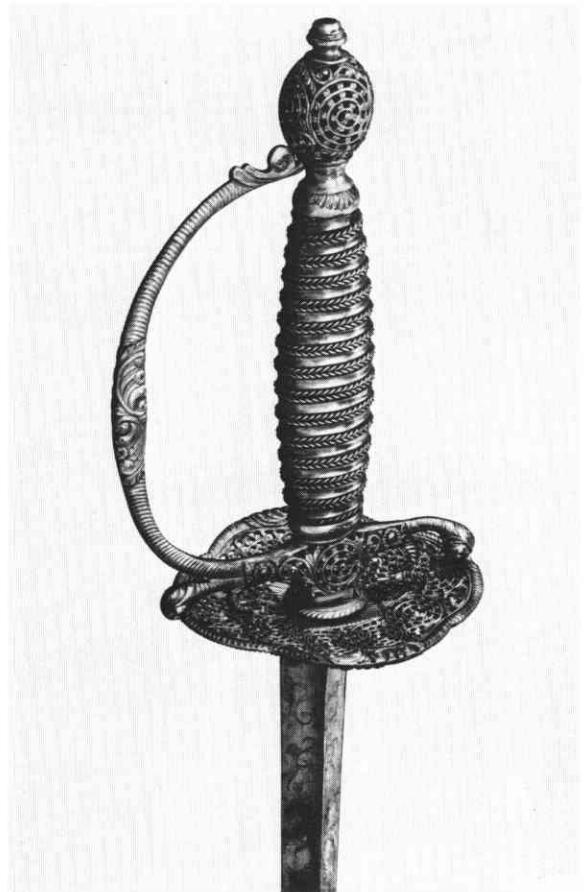
Breechloading rifle, c. 1750. Escutcheon engraved with the Royal Arms surrounded by the Garter. Detail above left shows trigger-guard and screw-plug removed for loading.

Whitney is a good example — gunmakers like Simeon North at Middletown, Conn. still favoured the English style of duelling pistols for private customers.

After the War of Independence there began a reversal of the westward flow of ideas on firearm design. There was also a return to Britain of some American craftsmen who refused to give up their allegiance to the Crown and were consequently driven out of business. Let me briefly describe the fate of two of them. Thomas Harper, born in Bristol, England, emigrated to America and, by 1773, was working as a goldsmith at Charlestown, South Carolina. On the outbreak of war, as a Loyalist, he first sought refuge in the Dutch West Indies. Temporarily returning to Charlestown after its capture by the British in 1781, he was finally forced to flee to England where he soon became established as one of the leading goldsmiths in London. He was responsible for a number of gold presentation swords including the smallsword presented to Vice Admiral Lord Collingwood in 1806, now in the Armouries. He died, much respected, in 1832.¹⁴

Not quite so successful was the gunsmith, Walter Dick. Also at Charlestown, where he advertised his work as “equal to any London work,” he was first imprisoned and then compelled to leave the country for refusing to repair arms for the rebels. Arriving in London, he started working as a gunmaker for the Ordnance in the Tower. In 1786 he was awarded £100 for his invention of a flintlock with an external, combined mainspring and frizzle-spring. A musket fitted with his lock is in the Ordnance Gallery. Walter Dick then went into business as a lock-maker supplying both musket and cannon locks to the Army and Navy. In 1813, however, at the age of 65, he petitioned the board of Ordnance for financial assistance. Unfortunately the Board sent someone to find out Dick’s true circumstances. The official report recommended refusal on the grounds that he kept “a house of *Ill Fame* in St. Catherine’s Lane of the *very lowest description*.”¹⁵

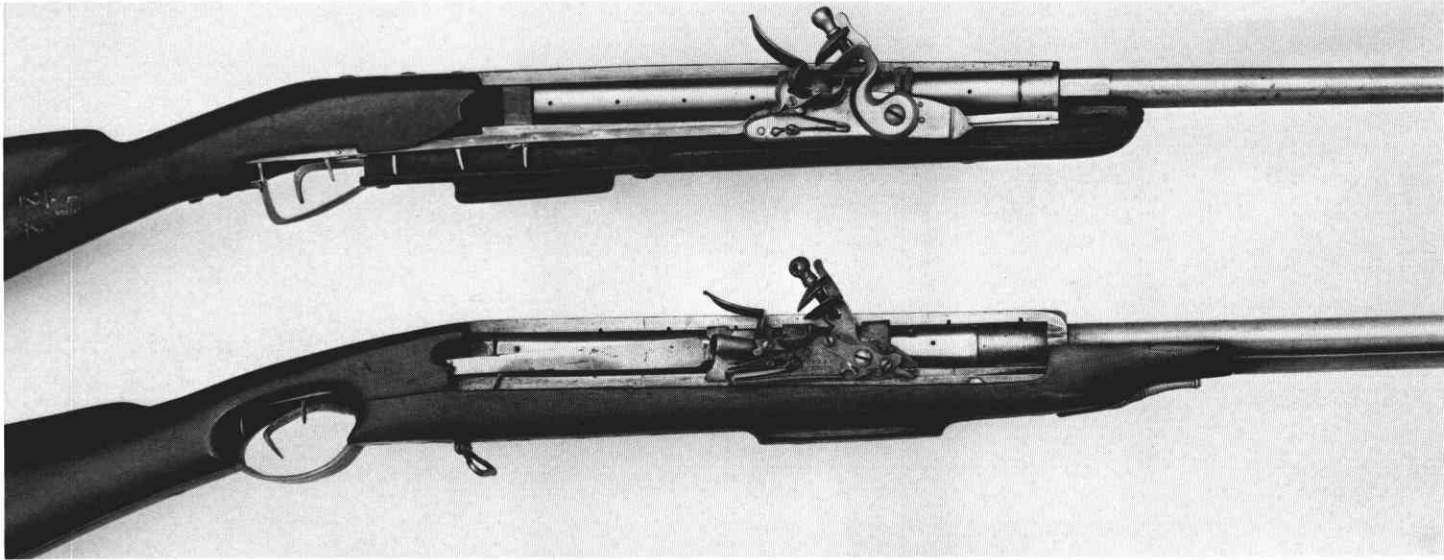
After the War, with its resounding defeat for British arms, officials in London were understandably wary of any new firearm development in America. They were particularly concerned over reports of successful multi-shot guns. When, therefore, Joseph Belton of Philadelphia, who had previously persuaded Congress to buy some of his superimposed-charge guns, came to London in 1784, he was invited to demonstrate a musket on the new principle. With the



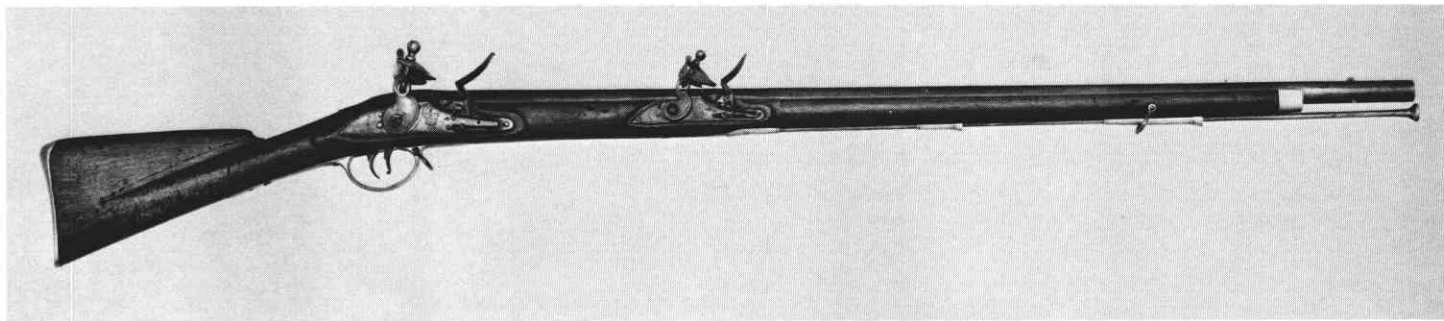
Silver-hilted smallsword by Joseph Clare II, London, hall-marked 1766–7. Type worn by both British and American officers.



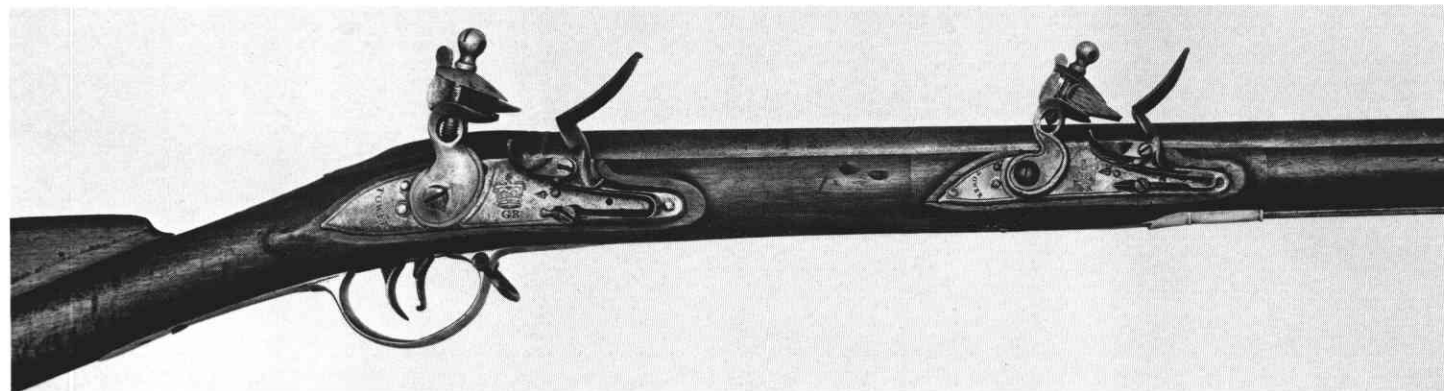
Walter Dick’s experimental flintlock, 1786; fitted to a short land pattern musket. One of three made in 1787. A single external spring acts as mainspring and frizzle spring. Dick was a Charlestown gunsmith who came to the Tower of London after the Revolution.



a) Superimposed-charge gun with sliding lock made by Joseph Belton of Philadelphia for the Board of Ordnance in London, 1784.
b) Similar gun made by Jover & Belton for East India Company, 1786.



Superimposed-charge gun on the Roman Candle firework system with two locks. The rear one could be held in reserve and the gun fired like a single-shot if necessary. Made by John Bland in London, 1815. Bland was one of the workmen making the Chambers guns in Philadelphia.

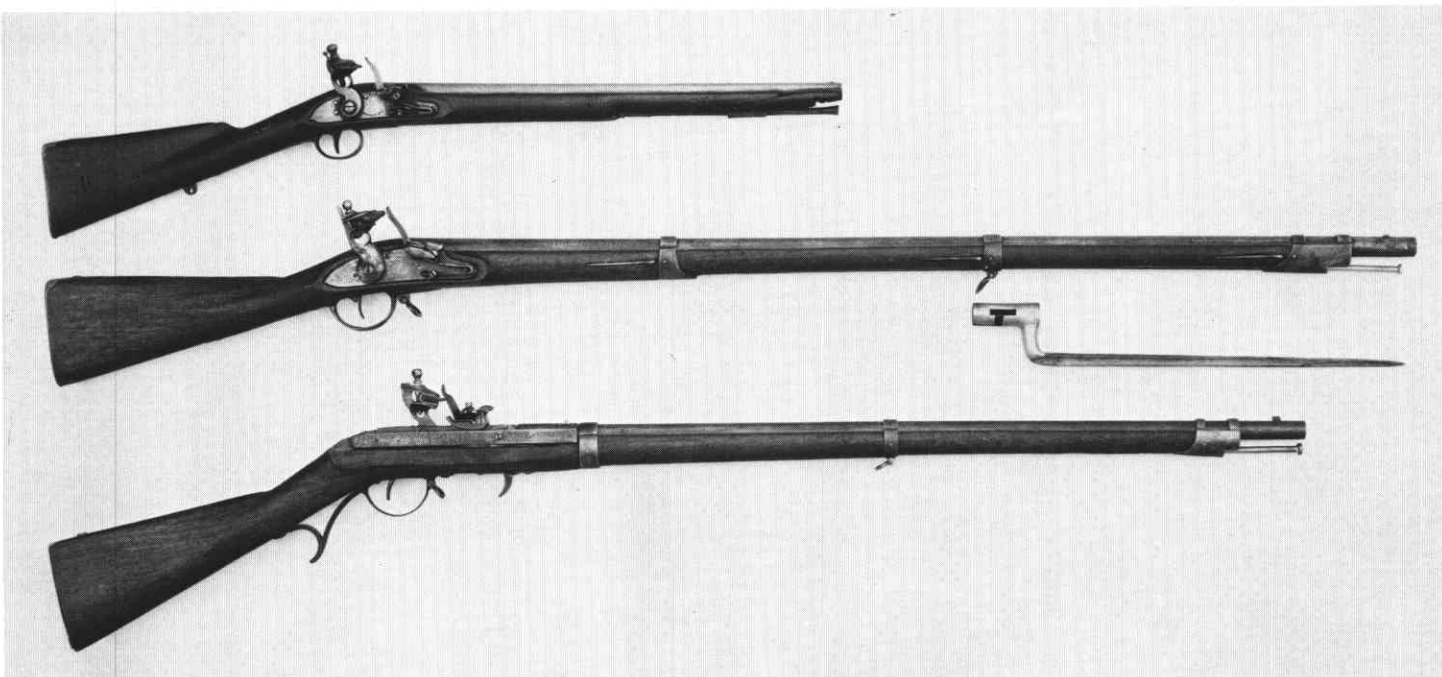


Detail of the locks on the gun above.



Collier revolving guns.

- a) Flintlock gun serial No. 4. Barrel, 25.7 in.; .69 in. cal.
- b) German copy by F.L. Kolb, Berlin, dated 1824. Barrel, 25.5 in.; .585 in. cal.
- c) Percussion conversion marked 'Collier's Patent' by Francis Edwards, London, c.1825. Barrel, 27 in.; .64 in. cal.



American Longarms

- a) U.S. Model 1807 Indian or cadet carbine.
- b) Model 1812 Contract musket by Eli Whitney. Presented by Louis Polk, Sheffield Corporation, Dayton, Ohio, 1956.
- c) Model 1819 Hall breechloading rifle. Made at Harper's Ferry, 1831.

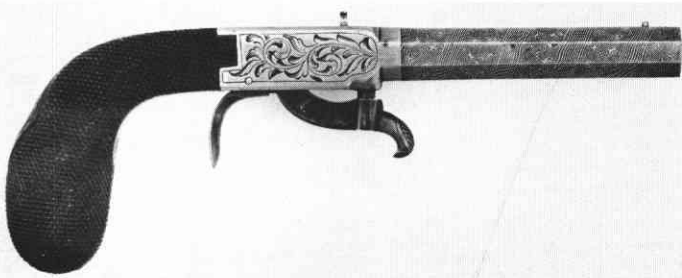


Gold smallsword presented by City of London to Vice Admiral Lord Collingwood, 1807. Supplied by Thomas Harper of London, formerly of Charlestown, South Carolina.

successive charges fired by a sliding lock, the musket was considered by the Ordnance far too complicated to be placed in the hands of the Common Soldier. The East India Company, however, gave him an order for the guns and he went into partnership with William Jover to market them.

Another American superimposed-charge gun to be considered by the Ordnance was that patented by Joseph Chambers in the U.S. in 1813. His system was based on the operation of the Roman Candle firework. Once the front charge was ignited, there was no stopping the rest. The Board of Ordnance heard that the U.S. Navy had adopted Chambers' muskets and swivel guns and when one of the gunsmiths concerned in their manufacture, John Bland, arrived in London, in 1815, they agreed to construct a musket and a swivel gun for trial. This time Naval officers decided that the method and ammunition necessary to load the guns were too complicated for the Common Sailor.

It is obvious that officers of the British Army and Navy had a poor opinion of the intelligence and dexterity of their lower ranks. Weapons had to be simple, serviceable and, of course, cheap. The complicated flintlock revolving gun patented by Captain Artemus Wheeler in the U.S. in 1818 had little chance of military adoption, either in America or in Europe. Nevertheless, it was brought over and patented by the engineer, Elisha Collier, in England, in 1818,¹⁶ and by Cornelius Coolidge, in France, in 1819. After its inevitable rejection by the Ordnance, Collier set up business in London and managed to sell several hundreds of sporting guns and pistols. The Armouries collection of revolvers includes a Collier gun, Serial No. 4, which originally had a mechanically revolving cylinder, and a pistol, No. 25. After about 1830, Collier seems to have lost interest in the revolver and he turned to the construction of steam boilers and other machinery for which he was granted several patents.¹⁷ However, percussion conversions of his revolvers were made under his patent which was taken over by William Mills. Like many other inventions patented in England, the Collier was almost immediately copied on the Continent. Illustrated is a German copy made by F.L. Kolb



Underhammer pistol with 'Damascus' barrel, made in Liege for the American market, c.1840.



Underhammer rifle stamped N. KENDALL WINDSOR VT PATENT. 28 in. barrel; .42 in. cal Serial No. 504. Similar rifle inscribed SMITH'S IMPROVED PATENT STUD LOCK. Serial No. 302.

of the Royal Industrial Institute, Berlin, in 1824.

Although the musket remained the main military arm in most parts of the world, the rifle began to play an increasingly decisive part in warfare, and the British Army, aware of the limitations of its own Baker rifle, watched closely developments elsewhere. It was convinced that the Americans must know best in this field of shooting but was always surprised at what was chosen by the U.S. Army. In 1828, the Ordnance tried out a Hall rifle, model 1819, but decided that it was 'constructed upon a bad principle.' They were probably influenced by the knowledge that guns with hinged breeches of similar design made by Durs Egg in 1784 had been tried and soon discarded. The hinged, pivoted breech-block was, in fact, a very old idea. The Armouries has a gun using this system, made by John Bicknell of London in ca. 1670. It is probably an example of the action described in Abraham Hill's patent of 1664 whereby the breech "rises upon a hindge by a contrivance of a motion from under it, by which it is alsoe let downe againe and bolted fast by one and the same motion." In 1834, the Rt. Hon. Sir John Sinclair published in London a leaflet on *The Advantages of the American Rifle*. On this occasion the Board of Ordnance, was moved to make three copies of Hall's rifles at its own factory at Enfield, but again nothing came of the experiment.¹⁸

By this date most attention was being given to the conversion of flintlock firearms to the percussion system. The invention of the percussion lock was due to the experiments of the Rev. Alexander Forsyth in the Tower of London. I do not need to go into those except to say how regrettable it is that we do not know in what part of the Tower Forsyth had his workshops. It is some consolation that we do have some of those famous bits and pieces which he was so abruptly ordered to remove after his experiments were declared an official failure. It is ironical that whereas Forsyth and his friends had to fight hard to gain some reward for his invention, an Englishman, Joshua Shaw, who emigrated to America and patented the percussion cap there in 1822, was handsomely rewarded by the American Government.

Not enough credit has been given to the work of another English inventor, John Day, who in 1823, patented a percussion-cap lock (incidentally the first English patent to mention a cap) of revolutionary design.¹⁹ It was an under-hammer lock of few parts with a folding trigger. Day later set up a business in London making walking-stick guns, but his design also formed the basis of American under-hammer guns and pistols of all kinds. Many gunmakers seemed to have made claim to the idea. In the Armouries are two almost identical under-hammer buggy rifles. One is marked N. KENDALL WINDSOR VT. PATENT; the smaller, SMITH'S IMPROVED PATENT STUD LOCK. It would be interesting to know to which patents these refer.

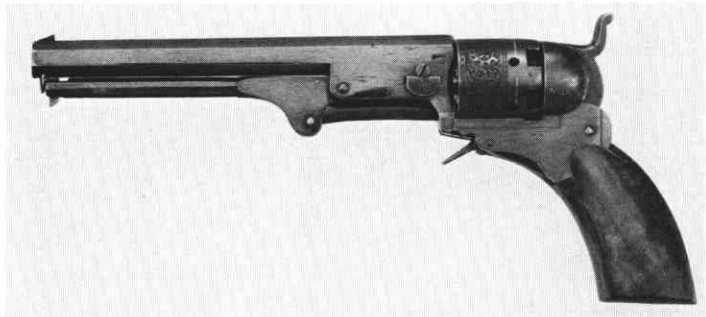
The adoption of the percussion cap had an immediate effect on the development of the revolver. Two American inventors, John Webster Cochran and Samuel Colt, vied with each other for the markets of Europe. Colt was first off the mark by patenting his revolver in England and France in



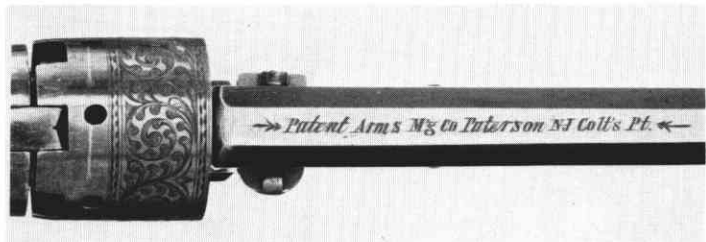
Cochran-type turret or wheel rifle by James Wilkinson & Son, London. Serial No. 4 Patent 5124. Made for the Marquis of Breadalbane, 1839.



Cased Wilkinson wheel pistol. Serial No. 5 Patent 5125. Made in 1839 for Lord Francis Egerton and described in his book *Mediterranean Sketches*.



Belgian copy of the Colt Paterson revolver, probably by Renkin, Liege, c.1845.

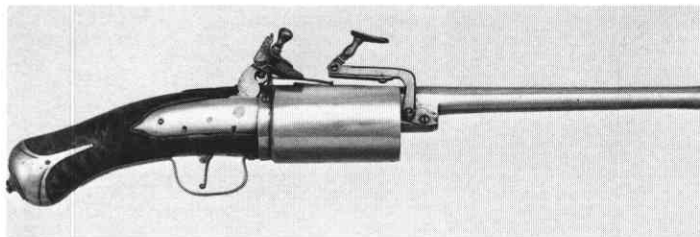


Top view of barrel and cylinder of Belgian Paterson.

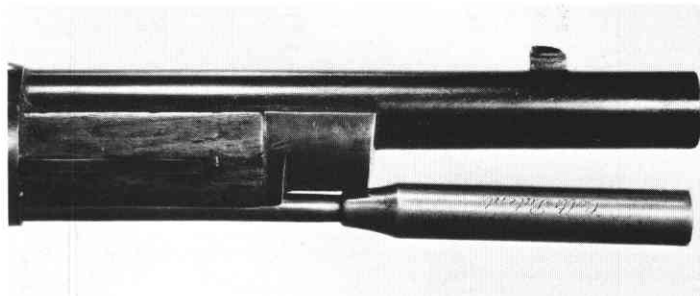


Colt revolvers and copies.

- a) Engraved 2nd Dragoon Colt, serial No. 9625. A presentation revolver from the Great Exhibition, London, 1851.
- b) Engraved Colt Navy Model of 1851, made at London factory. Barrel inscribed COL COLT LONDON. Serial No. 69368.
- c) Continental Colt by St. Klett & Grimm of Suhl.
- d) Belgian copy of Colt Navy pistol. Serial No. 8736. Barrel engraved COLT BREVETTE and COLT'S PATENT. Cylinder stamped with Liege proof mark and crowned M (Inspector's mark).



All-brass snaphance revolving pistol, English, c.1680. One of the revolvers examined and drawn by Samuel Colt in 1851, then at the Royal United Services Institute, now at the Tower.



Colt's 1856 Patent bullet lubricator fitted to the rammer of an Enfield rifle.

1835, but it was Cochran's hand-revolved 'turret' gun which achieved the initial success. Patented in England by Moses Poole, a small number of guns and pistols were made under licence by James Wilkinson & Son in 1839-41. Known in England as 'wheel guns' they had only a limited success, their rate of fire and weight, not to mention the possibility of a back-fire, comparing unfavourably with the fast pepper-box revolvers which were now being made all over the Continent.²⁰

Colt at first made sure of consolidating his position at home before once more venturing on to the European scene. He was aware that illegal copies had been made of his Paterson revolver, and, in 1849, he took out another English patent to protect the various improvements made to his original model.²¹ Then, in 1851, he entered a massed stand of revolvers for the Great Exhibition held in London. It is difficult to judge which made the greatest impact, the obvious efficiency of the revolvers themselves or the fact that they were all machine-made with interchangeable parts. To say that Colt shook the gunmaking industry in Britain to its roots is to put it mildly. It was an industry based on a system whereby hundreds of out-workers supplied hand-made parts which were assembled by an elite class of setters-up. All had to serve long years of apprenticeship and work for another master before being allowed to conduct a business of their own. Colt's gunmaking machines, handled by men with only a little training, threatened the whole traditional structure of their lives.

Accordingly, every obstacle was placed in Colt's path. He, for his part, endeavoured to win friends among the ruling establishment and the officer class. He gave hand-somely engraved examples of his revolvers to all those who he judged could help him win orders: the Prince Consort, the Duke of Wellington, the Marquis of Anglesey, all the foreign ministers, the editors of the national newspapers — even the British Museum. He then applied and received permission to inspect the ancient revolvers in the Tower of London.

The Armouries were now recognised as the National Museum of Arms and Armour and could offer Colt a reasonable selection. He duly inspected and made drawings of an Indian matchlock revolver which he supposed to be of the 15th century, a German wheellock revolving carbine of c. 1610, and a German flintlock revolving gun, dated 1732. He also examined an English all-brass revolving pistol of the 17th century, then in the United Services Museum, and now in the Armouries. All these he described and illustrated in a lecture he gave to the Institution of Civil Engineers on 25 November 1851.²² In his assessment of the all-brass English revolver, Colt was less than fair. While admiring its ingenuity, he asserted that it could never have been practically tested as 'it would have been blown to pieces by the first discharge.' He took care not to disclose that it had a cocking and revolving action almost identical to his own.²³ However, the Civil Engineers were vastly impressed, Colt was elected an Associate of the Institution and awarded its Telford Medal.

Colt now received sufficient support to start his London factory on the Thames at Millbank. It began operations in 1853, supplying several thousands of Navy models to the British forces engaged in the Crimean War and to private customers. With the end of the war and the cessation of Government orders, Colt was forced to close his factory in 1856.²⁴ However, he continued to maintain his London office and manager, and made one last attempt to gain orders from the War Department and the East India Company for two little-known accessories which he patented in 1856.²⁵ These were a bullet lubricator and a friction-adjustable back-sight. Both were fitted experimentally to an Enfield rifle in the Armouries. The lubricator was a small cylinder filled with oil which was released when a valve in the cupped end was pressed down on the bullet in loading. At a time when the design of rifle bullets and sights was constantly changing, Colt's own ideas for once failed to make any impression and no orders resulted.

The success, limited though it was, of Colt's pistols encouraged the Ordnance to try all revolving guns being offered. In 1853 they bought one of P.W. Porter's 1851 patent turret rifles,²⁶ only to reject it on the familiar grounds that it was too complicated — even dangerous. It was one of their last ventures into the trial of repeating weapons. In 1855 the Board of Ordnance was abolished; its tasks were taken over by the War Department and the Tower of London became more of a museum than an active arsenal. The first museum curators were appointed, catalogues were published and antique arms and armour began to be purchased from dealers and auctions.

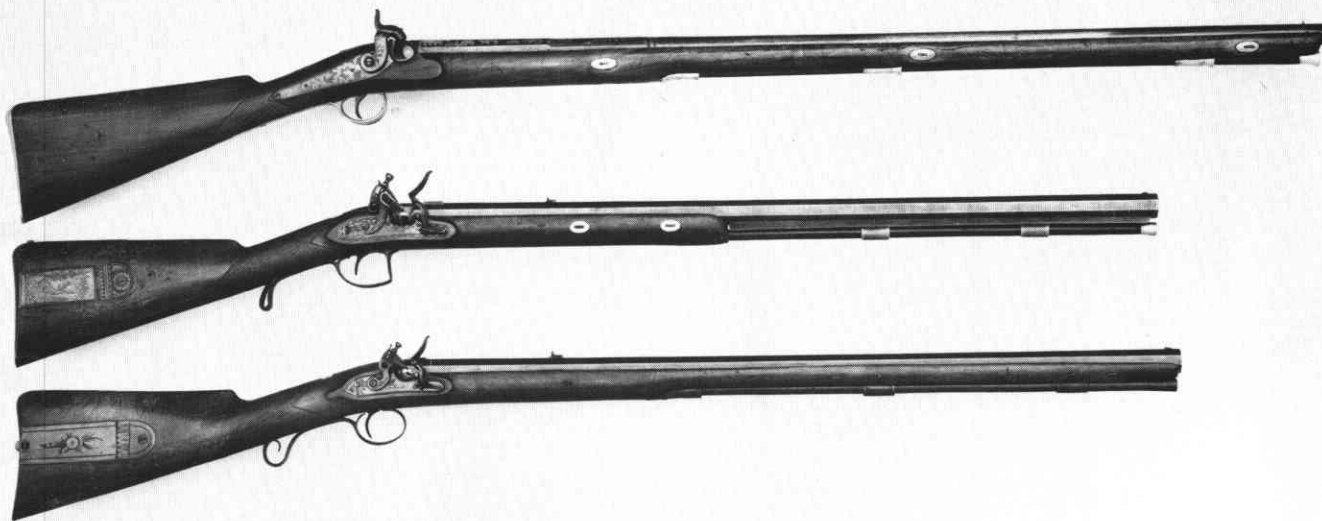
Before leaving the Board of Ordnance, I should like to mention briefly one of their least publicised activities. This was the supply of 'Presents for the Indians.' The term



Porter's Turret rifle, patented 1851. Serial No. 660. 28 in. barrel; .50 in. cal. 14-groove rifling. Bought by the Board of Ordnance, London for trial in 1853.



Indian tobacco-pipe tomahawk supplied by Board of Ordnance and bearing its mark of BO and Broad Arrow.



Presents for the Indians.

Top Percussion gun with gilt decoration.

Below Flintlock rifles made by Henry Tatham, c.1816, intended for the Chiefs of the Five Nations but never issued. 30 in. barrel; .55 in. cal., 10-grooved rifling. The half-stocked rifle has decoration and the Royal Arms inlaid in gold. The full-stocked rifle is similarly treated in platinum.



Deringer pistols with German silver mounts, made in Liege. The top pistol is marked on the lock J.C.G. & Co. for the retailer J.C. Grubb & Co. of Philadelphia.

'Indian' is slightly misleading as it was applied to natives in all parts of the world. From the 17th century onwards, whenever it was of political or military advantage, the Board arranged for the supply of arms (military or sporting according to demand), domestic articles and mechanical novelties to such diverse characters as the Sultan of Bantam, the King of Fez and Morocco, and a host of Moorish and American Indian chiefs.

As a result of all this activity, the Armouries today has a large selection of guns and rifles made for trade and presentation purposes. Without doubt the finest pieces are the flintlock rifles made by Henry Tatham ca. 1816.²⁸ There are two types of single-barrelled rifles, full and half-stocked, and one double-barrelled over-and-under rifle/shotgun. Made to the best London specifications, with blued and engraved mounts including butt-boxes, they all bear the Royal Arms stamped in gold or platinum. Apparently intended for the Chiefs of the Five Nations, the majority were never issued and remain in the Armouries.

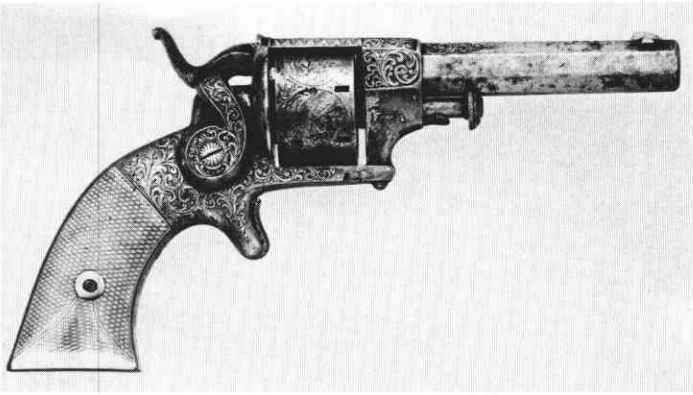
In the last fifty years the Armouries has been fortunate to acquire several collections of arms and various individual items, but of most significance to the study of American arms, was the purchase in 1968 of the arms collection of the Liege gunmaking family of Renkin Freres.²⁹ This included not only examples of their own and other firm's products, but a number of guns of English and American design apparently made as patterns. There are Brown Besses, Enfield rifles, Paget carbines, cavalry pistols, all with correct official Tower markings, but of Belgian manufacture; correct in all details also are Pennsylvanian long rifles, New York state rifles, Ohio Valley rifles and Deringer pistols, but never made in America. In the Musee d'Armes, Liege, there are more examples. On a visit in 1977 I noted a long rifle with the lock stamped H. ELWELL WARRANTED (Henry Elwell, Birmingham maker, 1845-65), the barrel marked J.C. GRUBB PHILA, and the stock and rammer made of imitation striped maple. All, I was assured, were made in Liege.

In the Liege Museum Library and in the School of Armourers are pattern books of Renkin Freres (c. 1840) and L.J. Falisse (1854) which can be identified with these arms. They contain detailed coloured drawings of the guns which these gunmakers were prepared to supply to any customer with, as far as one can judge, any name or mark to order. One drawing I noted was of a North West gun bearing the "Sitting Fox in a circle" mark and the name of the London gunmaker, Barnett. In 1851 it was said of Liegeois gunmakers, with some justification, that "they can imitate anything, very quickly, very well, and very cheaply." It might be as well for all collectors of American guns to take a closer look at their prized pieces.³⁰

It was as a result of post-war Firearm Amnesties that the Armouries acquired its greatest intake of firearms. My predecessor, Mr. A.N. Kennard, and I were able to tour police stations throughout the country examining weapons handed in by the public and making some exciting finds like a Henry 1866 rifle with a Bavarian copy. We also gathered together a large assortment of Colts, Winchesters, Sharps,



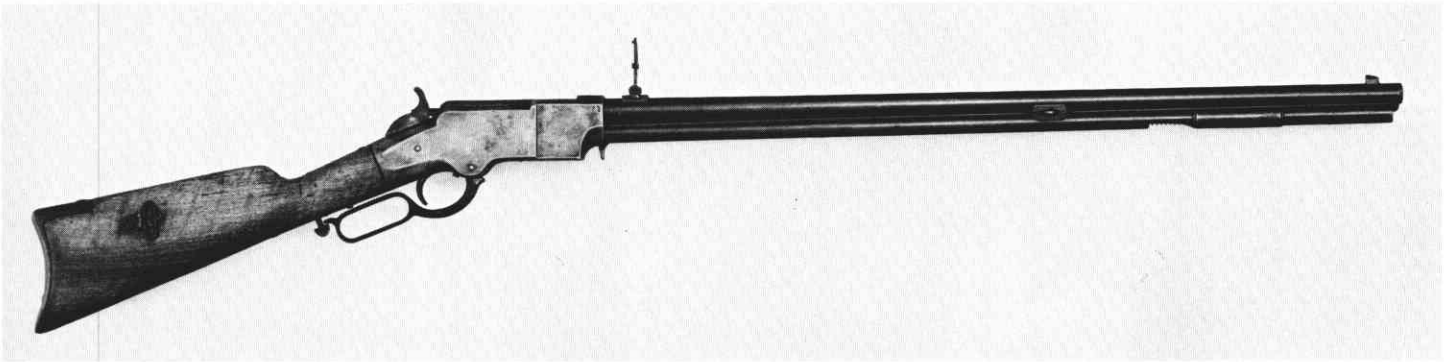
Reverse side of the two Deringer pistols. Note the characteristic sideplates and checkering.



7-shot single-action revolver by ALLEN & WHEELOCK WOR-
CESTER MS, c.1860. Engraved action, ivory grips. Serial No. 765.
3 in. barrel; cal. .22 in. R.F. London proof marks.



Single-shot 'Hammond Bulldog' pistol by CONNECTICUT ARMS &
MANF'G CO. NAUBUC. CONN., c.1868. Serial No. 7212. 4 in.
barrel; cal. .44 in. R.F.



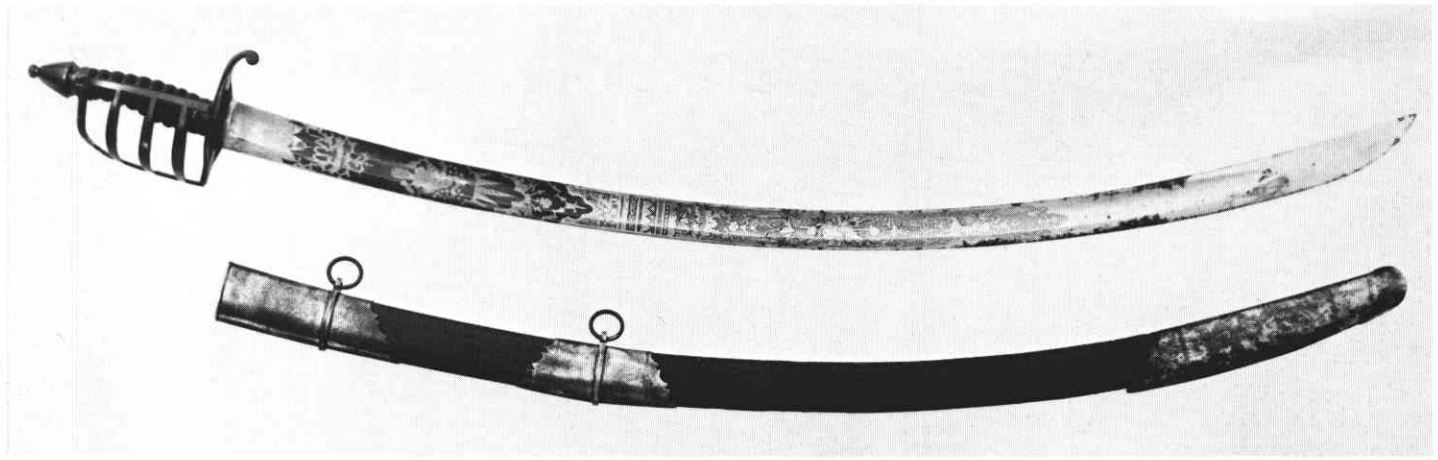
Continental copy of Henry repeating rifle, probably Bavarian. 28 in. barrel; .44 in. cal. R.F. Serial No. 331W. Sighted up to 900 metres.



American (?) long rifles.

- a) Lock marked J. GOLCHER; barrel J.C. GRUBB and W. PANNEPACKER. Brass furniture.
- b) Lock marked R.S. CLARK EXTRA; barrel MOORE & BAKER N.Y. German silver furniture
- c) Lock marked H.J. COOPER. Brass furniture, German-silver key-plates.
- d) Lock marked JAS GOLCHER; barrel J.C. GRUBB PHILA. Brass furniture.

The longest barrel is 47 in.



Cavalry sabre and scabbard. American, c. 1795. Blued and gilt blade bearing the arms of America and the motto E PLURIBUS UNUM.



American sporting rifles.

- a) Ballard Patent rifle by Brown Mfg. Co., c. 1870. Serial No. 21897. .44 cal. adjustable for Henry R.F. or Winchester C.F.
- b) Sporting rifle by Spencer Repeating Rifle Co., c. 1867. No serial number. 26 in. barrel; cal. .44 in. for .56/46Spencer R.F.
- c) Sharps Model 1853 De Luxe Sporter, c.1857. Serial No. 21308. 27½ in. barrel; .55 in. cal.
- d) Evan's model 1877. Serial No. P4013. 25½ in. barrel; .44 in. cal. R.F.
- e) Winchester Model 1876 Express rifle, c.1881. Serial No. 13003. 22 in. barrel; cal. .50/95.

Remingtons, Marlins, etc. I can give you only a few examples here. Our initial task was to save all worthwhile pieces from destruction, and preserve them for students of the future. Many of them still await proper examination and cataloguing, and who knows what rarities there are amongst them.

You will have observed, no doubt with pleasure, that I have mentioned only a few swords in this somewhat disjointed survey of American arms in the Tower. Unfortunately, while we have a full quota of British military swords which were used in Colonial America, and a good selection of continental types, there are, I believe, only one or two working swords which can be with any degree of accuracy labelled as American. The fault may lie with our traditional ignorance of American bladed weapons. In the past the Armouries have been most appreciative of help from U.S. visitors. At the moment, shortage of staff and a crippling reorganisation program make almost impossible any real study of our reserve collections, but I hope that it will not be too long before we can once more welcome American students and learn from their efforts. I look forward also to the next visit of the A.S.A.C. when the last of the Tower's new galleries, the 18/19th galleries, should be finished and so many of the treasures now lying in store will be properly displayed.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

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- 1) For a full account of the Board's organisation and buildings see John Charlton (Ed.), *The Tower of London; its Buildings and Institutions*, London, 1978, Chap. 12. H.C. Tomlinson, *Guns and Government*, Royal Historical Society, London, 1979.
- 2) H.L. Blackmore, *The Armouries of the Tower of London, I Ordnance*, London, 1976, pp. 3-10.
- 3) Harold L. Peterson, *Arms and Armor in Colonial America, 1526-1783*, Harrisburg, 1956. Joseph R. Mayer, *Flintlocks of the Iroquois, 1620-1687*, Research Record No. 6, Rochester, 1943. John L. Cotter, *Archaeological Excavations at Jamestown*, Washington, 1958. S. James Gooding, 'Trade Guns of the Hudson's Bay Company, 1670 to 1700,' *Canadian Journal of Arms Collecting*, Vol. 13, No. 3.
- 4) A.V.B. Norman & G.M. Wilson, *Treasures from the Tower of London, Arms and Armour*, London, 1982, No. 62.
- 5) Those described in my *British Military Firearms*, London, 1961 can now be seen displayed properly for the first time.
- 6) In 1754 the Expedition being sent to the relief of the American Colonies was issued from the Tower with 12 rifles with their moulds and ½ cwt. of lead for bullets. Anticipating return fire from enemy rifles, three sets of bullet-proof armour (Civil War breast-plates, back-plates and helmets) were also issued for the use of Engineers. (*British Military Firearms*, p. 67)
- 7) *The Craftsman*, 13 October 1775.
- 8) H.L. Blackmore, *Royal Sporting Guns at Windsor*, London, 1968, Nos. L270, 276.
- 9) Illustrated in detail in George Shumway, *Rifles of Colonial America*, York, Pa., 1980, Vol. II, No. 108.
- 10) For similar examples see Stephen V. Grancsay, *American Engraved Powder Horns*, New York, 1945, Nos. 29, 36. Nathan L. Swayze, *Engraved Powder Horns*, Dallas, 1978, Nos. 8, 19, 20, 22.
- 11) Public Record Office, London, Bill Books of Board of Ordnance. WO 51/217. Identified by Mr. De Witt Bailey.
- 12) Blackmore, *Royal Sporting Guns*, No. L 420.
- 13) *General Washington's Military Equipment*, Mount Vernon, Va., 1963, pp. 12-13. George Neumann, *Swords & Blades of the American Revolution*, Newton Abbot, 1973, No. 222 s.
- 14) Norman & Wilson, *Treasures from the Tower*, No. 37. Another of his swords was sold at Christies, London, 2 May 1984, Lot 173.



7-shot single-action Model No. 1 revolver by SMITH & WESSON SPRINGFIELD MASS., c.1870. Engraved nickel-plated frame and barrel. 3 in. barrel; ca. .22 in. R.F. short.

- 15) From the writer's forthcoming *Dictionary of London Gunmakers, 1350-1850*.
- 16) English Patent No. 4315.
- 17) Patent No. 7415 of 1836 was for a steam boiler. Other patents from 1837-45 were for machinery for making nails, raising fluids, and for the construction of furnaces and flues.
- 18) Public Record Office, London. Minute Book of Board of Ordnance, WO 47; 7 November 1834.
- 19) English Patent No. 4861.
- 20) See H.L. Blackmore, 'Development of the Wheel or Turret Revolving Firearms,' *The Canadian Journal Arms Collecting*, Vol. 21, No. 3 (Aug 1983), pp. 75-94.
- 21) English Patent No. 12,668.
- 22) "On the Application of Machinery to the Manufacture of Rotating Chambered-Breech Firearms and their Peculiarities," *Proceedings*, Vol. XI, 1853.
- 23) J.N. George noticed this in *English Pistols and Revolvers*, Onslow County, 1938, p. 145. The revolver is fully described in Norman & Wilson, *Treasures from the Tower*, No. 67.
- 24) For the story of Colt's London factory see H.L. Blackmore, "Address Col. Colt London," *Gun Digest*, 1958, pp. 79-84, 309-12. J.G. Rosa, *Colonel Colt London*, London, 1976.
- 25) Patent No. 908, taken out in the name of the agent H.V. Newton.
- 26) Formerly in the Rotunda, Woolwich (No. 10/82); now Tower Armouries, No. XII 2440
- 27) H.L. Blackmore, "Guns for the Sultan of Bantam," *Journal of the Arms and Armour Society*, Vol. X, No. 2 (December 1980), pp. 61-6.
- 28) Henry Tatham Senr. Worked at 37 Charing Cross, London, 1800-1801; in partnership with Joseph Egg, 1801-14; then on his own until death in 1835.
- 29) The business was started by Jean Renkin in c. 1710. An old photograph of the Renkin Collection of Arms is illustrated in Claude Gaier, *Four Centuries of Liege Gunmaking*, Liege, 1976, p. 140.
- 30) Some firearms made in Belgium for the American market were included in the 1976 Travelling Exhibition "Belgian Gunmaking and American History" (*Catalogue*, pp. 13-16). See also Claude Gaier, "Les Carabines 'Kentucky' du Musee d'Armes de Liege," *AMI*, April 1981, pp. 26-32.

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THE ARMOURIES

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ARMOURIES PRESS NOTICE 84/1

A NEW START FOR BRITAIN'S OLDEST MUSEUM

1. The National Heritage Act 1983 transferred control of the Armouries of H.M. Tower of London from the Secretary of State for the Environment to a new Board of Trustees on 1 April 1984.
2. The Armouries, the oldest museum in Britain and one of the oldest in the world, is designated by the Act as the National Museum of Arms and Armour. Its collections have a long and intimate connection with the history of this country.
3. Viscount De L'Isle, Chairman of the Board of Trustees of the Armouries, is convinced that the new status offers the museum a great opportunity. "The Board intend to take a fresh look at this ancient museum. We shall seek to develop and improve the services offered by the Armouries and to make the public more aware of our magnificent collections. Whilst seeking to maintain and develop the Armouries' historic association with the Tower of London we shall be looking to expand beyond the walls of the Tower by establishing parts of the collections outside London so that they can be appreciated by an even wider audience than at present. The Armouries has a considerable reputation for scholarship. Our long term intention is to establish the Armouries as the world-wide centre for the study of arms and armour".
4. The Master of the Armouries, A V B ("Nick") Norman is equally convinced of the benefits of the new status. "These are exciting times for the Armouries", he said, "The whole staff look forward to the prospect of developing and extending the work of this museum under our new Board of Trustees".
5. On 11 April 1984 the Secretary of State for the Environment, Mr Patrick Jenkin, is host at an evening reception at the Tower of London to celebrate this new start.
6. At this reception the Chairman of the Board of Trustees of the Armouries will announce a number of new schemes already being considered by the Board:
 - a. The establishment of parts of the Armouries' collection outside the Tower. Presently under consideration are:
 - A "rural sports" museum to be located in a suitable country house;
 - An artillery museum to be located in a suitable fort.
 - b. The production of a comprehensive series of publications.
(A series of inexpensive well-illustrated booklets on different aspects of the collection is already in production).
 - c. An emphatic development of the educational potential of the collection, both by increased use of the Armouries Education Centre, and by closer contact with the media and schools, as well as by a more outgoing approach.
 - d. The expansion of the Armouries' large world-wide loan service.

This recent news release from the Armouries of the Tower tells of its new status, title, and plans for its museum. Courtesy Bob Rubendunst.



Nelson's column in Trafalgar Square. On the left edge, the National Gallery.