BIRMINGHAM AND WELLINGTON'S MUSKETS

David Williams

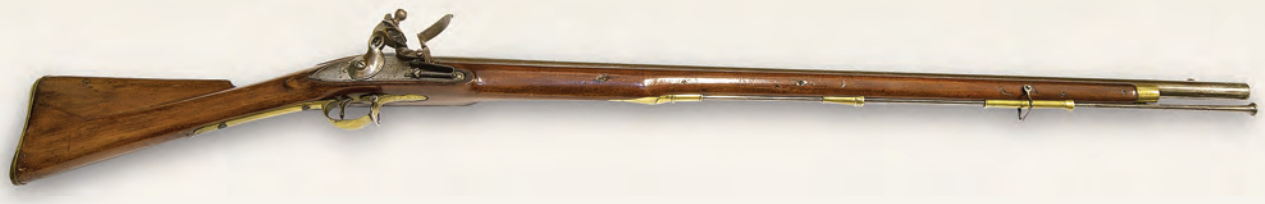
The Birmingham gun trade was well established by the time the Napoleonic Wars broke out in 1803. Driven by technical innovators such as the Galton and Ketland families, the munitions industry helped to turn Birmingham and the Black Country into a global economic powerhouse which supplied weapons to the military – and for the slave trade.

During the Napoleonic Wars close to 750,000 men served in the British Army. At Waterloo, Wellington fielded an allied army of 67,000. Many of these were infantry men – the Foot – all of whom would have had access to gunpowder weapons and small arms. The Foot fought *en masse*, either in a two-deep 'thin red line' formation, or in a square when attacked by cavalry. Fighting was done at close quarters with volley firing of the musket and fixed-socket bayonet. Among the ranks, the cry 'give them the Brummagem' was often heard as the signal to go in with the bayonet.

The primary infantry weapon of the Napoleonic Wars was the India Pattern Brown Bess musket. This robust flintlock was adequate and significantly better suited to mass manufacture in wartime than the highly-finished earlier patterns of Brown Bess. Brown Bess was the affectionate name that British soldiers gave to their muskets. From the 1720s these smooth-bore weapons were made under the Ordnance System, which meant that they were essentially assembled and finished at the Tower of London from components supplied by the London and Birmingham makers. The first India Patterns had been diverted to the British Army from the stores of the East India Company and originally were made to the design of Colonel Windus, the Company's Inspector of Small Arms, in 1771. Supply and scale-up in war have always been a problem for the British. We rarely prepare for war at scale, and there was a crisis of supply when the French Wars re-ignited in 1793. The Birmingham suppliers responded and turned themselves into a manufacturing powerhouse.

Birmingham and Black Country guns

Birmingham had been supplying arms since before the English Civil War, though until the 1690s these were primarily edged weapons. During the creation of the standing army in the reign of William III, the Warwickshire MP Sir Richard Newdigate of Arbury Hall had noticed that there was an opportunity for his local craftsmen to supply the new flintlock muskets. The first contractors were led by Thomas Hadley of Halesowen. During the eighteenth century the country was more often at war than at peace,



During the Napoleonic Wars the India Pattern Brown Bess musket was the weapon of choice for the British infantry. This Birmingham-made gun was supplied by Ketland and Allport, one of the largest suppliers of India Patterns.

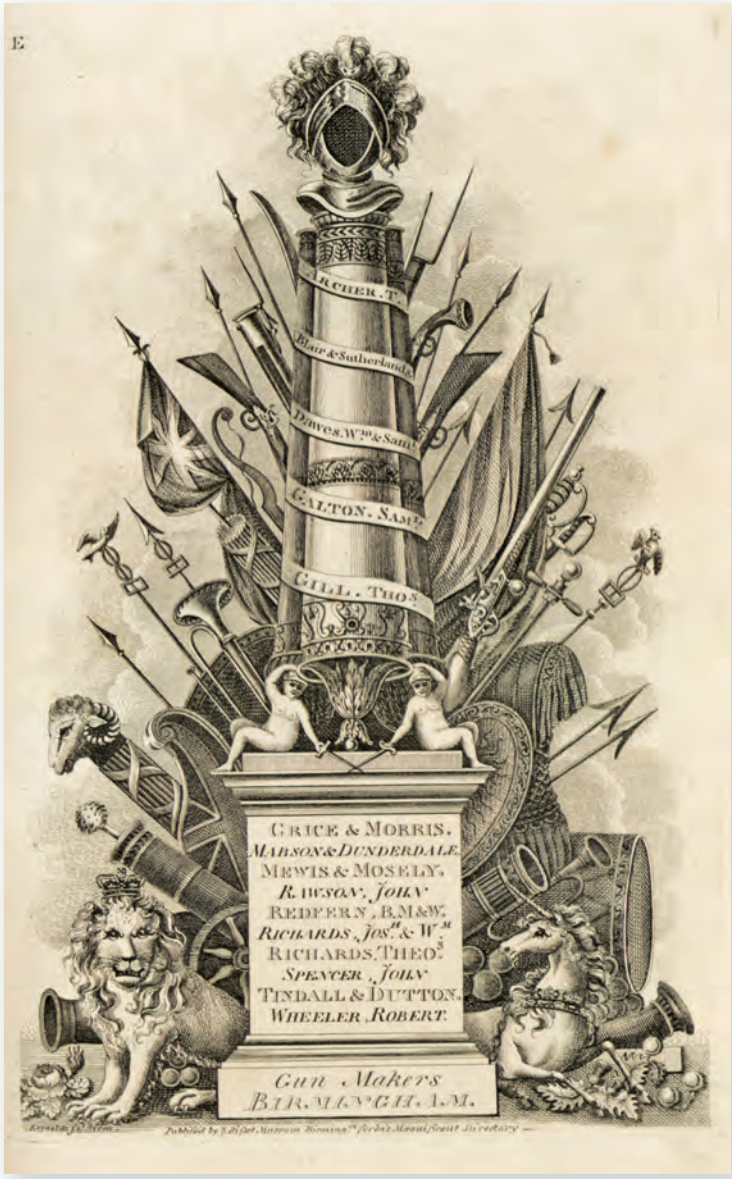
especially with Bourbon France and then post-revolutionary France, and this recurrent state of conflict exercised a dominant influence on economic development.

Fed by wartime demands, gunmaking grew as a technically advanced industry in Birmingham and the Black Country during the eighteenth century. Many of the barrels and locks manufactured during this period came from the Black Country, where the abundance of coal was a significant advantage in an industry dominated by metal working and forging. The American Wars from 1776 first engaged the trade in the supply of military rifles. The Midlands trade began to overtake that of London and the Low Countries, thus establishing the region as one of the global centres of the industry. West Midlands manufacturers supplied guns to the new colonies, especially the Americas, and the slave trade. The demand for weapons in the military, civilian and slave markets helped the regional gunmaking industry to grow prosperous and accumulate capital in much the same way as earlier Dutch munitions suppliers had done in the seventeenth century.

Key protagonists

Military locks were externally marked with the names of the maker until 1764, a fact which helps us to build a picture of the important manufacturers in this burgeoning industry. It is clear that many of the families became gunmaking dynasties, for example, the Quaker Farmer and Galton families who seem to have dominated much of the eighteenth-century trade.

A key figure in the local gunmaking business in the eighteenth and early nineteenth century was Thomas Ketland,



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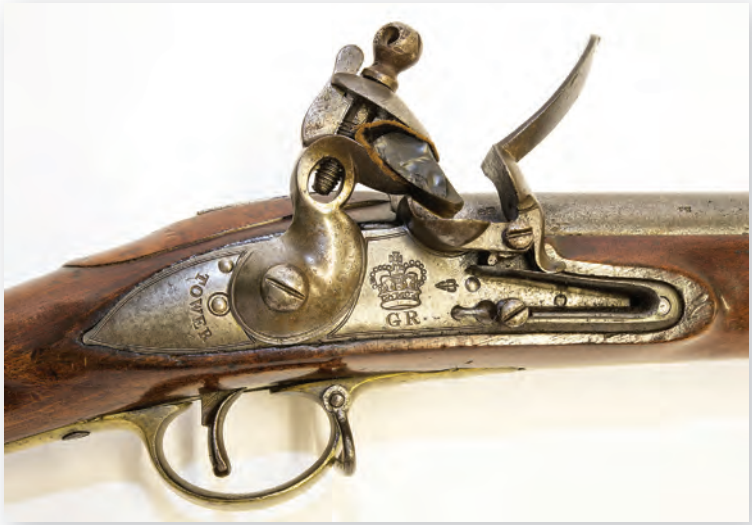
A classical monument celebrates some fifteen Birmingham gunmakers, including, Samuel Galton. The image presents a patriotic view of the industry. Bisset's *Magnificent Guide or Grand Copperplate Directory for the Town of Birmingham*, 1808.

who was born in 1737. Both the Galtons and the Ketlands had large-scale works and contributed to the subsequent growth of Birmingham in manufacturing, commerce and banking. Other prominent names in the industry during this period were the Willits, and the Edges. Benjamin Willits is notable for building a windmill, called 'Willits Folly' by the Wednesbury locals, to try to overcome the practical difficulty of a lack of water power. The trade concentrated in particular areas of Birmingham,



'For the service of His Majesty's Ordnance'. The flintlock of this 1809 Brown Bess Musket displays the Royal Cypher of George III.

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building near the new estate that became known as Old Square, where Joseph Farmer had his first forge in Bull Street in 1702. Gunmakers also set up premises in the new developments around the church of St Mary's, built in 1774. The church itself has long since disappeared, but the name by which this area is still commonly known – the Gun Quarter – serves as a lasting reminder of the trade that once flourished in this part of Birmingham.

Gunmaking methods

Importantly, the Birmingham trade was not constrained by the guild system, unlike London's, and so its approach was characterised by specialisation and the division of labour. Consequently, Birmingham's early industrial district grew up around small gunmaking workshops, rather than the large-scale factories to which the Industrial Revolution had given birth elsewhere.

Manufacturing processes were simple but specialised in exploiting the division of labour and used innovative hand tools. Some processes needed mechanical power, for example, barrel grinding, and they were driven initially by water and latterly by steam. Most workshops were small, but the trade was organised and operated by factors who were sophisticated managers and entrepreneurs. Quality control was variable and some customers, for example, the Ordnance, were more demanding than others. There were particular problems for barrel proof, the testing of a barrel with a higher-than-usual proof gunpowder charge to check that it was safe. Lower-quality barrels were usually diverted for use in guns for the slave trade. Quality-control concerns ultimately led to the foundation of the Birmingham Proof House in 1813 in order to ensure that Birmingham products were demonstrably safe.

The methods used in Birmingham were primarily craft-based. There was little experimentation in Britain making interchangeable parts for firearms other than some work carried out by the Tipton-born London gunmaker Henry Nock in 1796. Interchangeable manufacturing – making everything exactly the same – was promoted in eighteenth-century France as it allowed damaged weapons to be repaired in the field by using components of one to repair another. Interchangeability required the development of sophisticated powered machines and gauging systems and ultimately a simpler ignition method – the percussion cap rather than the flintlock.

Mechanisation and the interchangeable system did arrive in Birmingham but not until the 1860s with the founding of the Birmingham Small Arms Company. It is perhaps fortunate that the Birmingham trade did not take this approach until it

did. If this had happened during the Napoleonic Wars Britain may not have been able to make the guns it needed for the war effort. Birmingham's approach was essentially mass manufacture without machines, using many workers and diverse skills.

A war of numbers

It has been estimated that between 1804 and 1815 the Birmingham and Black Country trade made 1.75 million military weapons, 3 million military barrels and 2.9 million gunlocks, together with an estimated million guns for the East India Company and half a million sporting guns. The success of the delivery of 1.6 million military India Pattern Brown Besses, the workhorse weapon for Britain and some of its allies, was achieved by a carefully organised contract made in 1804 by the Ordnance with 11 gunmakers, 18 barrel makers, 20 lock makers, 7 bayonet makers and 11 rammer makers at a price of £1 14s 1d for each musket and bayonet. The peak year of production was 1813 with almost 280,000 being made – the high point of the industry at this time. Ketland and Allport were the second-largest contractor for India Patterns, the largest being another Ketland partnership, Ketland and Walker. Muskets were inspected at Government View rooms built in Birmingham in 1797 and shipped by canal to the new Royal Military Depot at Weedon Bec in Northamptonshire, which had been founded by Act of Parliament in 1803 'for the service of His Majesty's Ordnance', and thence to where they were needed.

After the Napoleonic Wars were over there was a reduced demand for military supplies and the West Midlands economy slipped into recession.

However, it is clear that the gun trade was one of Birmingham's most important industries during this period, and that it had a global impact – on military conflicts, civilian life, the slave trade, and the subsequent growth of the British Empire.

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Further reading:

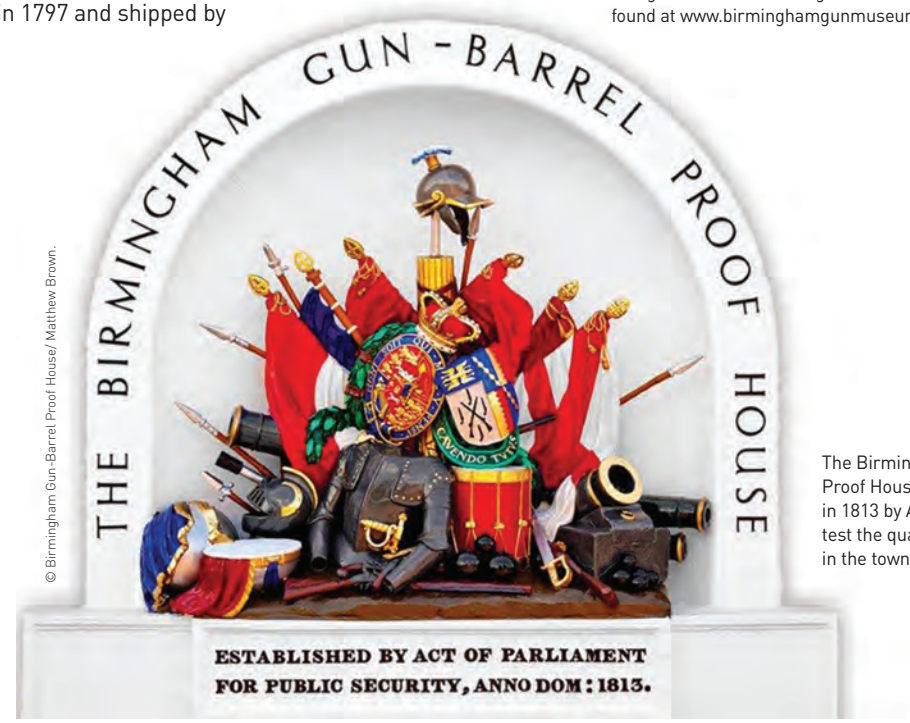
Richard Holmes, *Redcoat. The British Soldier in the Age of Horse and Musket* (Harper Collins, 2001).

David Williams, 'James Farmer and Samuel Galton, The Reality of Gun Making for the Board of Ordnance in the Mid-18th Century', *Arms and Armour*, 7: 2, 2010, pp. 119-41.

David Williams, *The Birmingham Gun Trade* (History Press, 2009).

Visit the Birmingham Gun-Barrel Proof House at www.gunproof.com for more about its 200 years of history.

Further background on the Birmingham Gun Trade can be found at www.birminghamgunmuseum.com.



The Birmingham Gun-Barrel Proof House was established in 1813 by Act of Parliament to test the quality of guns made in the town.