

Henry Nock, Innovator

1741–1804

Peter S. Wainwright

Of the comparatively little known about Henry Nock, much has come from the research and writings of Howard L. Blackmore. In 1955 and 1956, he submitted articles to the “Journal of the Arms and Armour Society.” The first was entitled *The Seven Barreled Guns of Henry Nock* and the second, *The Experimental Arms of Henry Nock*. These two monographs later formed the backbone of Chapter V of his seminal work, “British Military Firearms 1650-1850” first published in 1961. Chapter V was the only one of twelve devoted to a single gunmaker.

The 1956 article started out with the statement:

“Arms historians have dealt shamefully with that great London gunmaker, Henry Nock. Credit for the invention of a gun has been given him when he was no more than the maker, and conversely, the lock which he worked so hard to perfect has been denied him.”¹

The “gun” in question illustrated in Figure 1 is, of course, the seven barrel volley gun “invented” by one James Wilson who was paid for his idea, though it was improved upon and made in quantity by Nock. The “lock,” Figures 2 and 16, often attributed to a George Bolton who patented a somewhat similar item, was developed and perfected independently by Nock over a period of time and made in quantity by him. The Bolton myth persists to this day as evidenced in a recent arms auction catalogue where one who should have known better mislabeled a Nock screwless lock mounted on a volley gun as a “Bolton Lock.”

A surprising though likely reason that Nock was less touted by arms writers of the period than were some of his peers, was his much wider range of talents. Most fine gunsmiths, with few exceptions (Durrs Egg is one) catered almost exclusively to the elite by crafting relatively few costly, custom, graceful and artistic sporting guns, thus making the “society,” sporting and even technical pages. Often very little net money accrued to such craftsmen for their labor intensive creations. Besides, some of the elite had a larger appetite than budget for such amenities and were slow to pay; they may have considered their endorsement-by-patronage as adequate compensation.

Henry, while he did craft some very fine showy pieces, was far more versatile. He, unlike most of his peers, was also



an engineer and tool and gauge maker as well as an experimenter, innovator, inventor, successful businessman and as we shall see later a remarkably enlightened employer.

Born in 1741, he became a gun locksmith at a time when the Crown for the most part bought locks, stocks and barrels separately from numerous artisans and subsequently assembled military arms in The Tower as needed. In 1775, he took out Patent No. 1095 (Appendix A) with several unique claims as to eliminating the flash and “smoak” of ignition and ease of disassembly and cleaning. Because he was not as yet accepted into the Gunmakers Company, and would not be so recognized for some years, this was done in partnership with a Master (of the Gunmakers Company) William Jover and a “gentleman” named Green. A few guns marked “Nock, Jover & Co.,” survive² and his later trade card pictures one of them.

But note the year, 1775. England was slipping into war with her thirteen North American colonies, thus offering boundless opportunities for an enterprising, up-and-coming arms maker. Blackmore owned a Ferguson type rifle (probably not patentable because the principal had been adopted from an earlier French design) with an improved lock by Nock dated 1776. In that year the Ordinance Department advanced him £200, thus enabling our locksmith to fabricate bayonets. In addition, during ‘77 and ‘78 he put in long hours at his regular trade of locksmithing.

In 1779, Board of Ordinance records show that “James Wilson, Esq. presented a new Invented Gun with seven bar-



Figure 1. 1st. Mod. Royal Navy 7 Bar. Volley Gun Patt. 1779, by H. Nock, Collection of P.S. Wainwright.

rels to fire at one time.”³ The concept was not new, having been around for over 300 years so he did not patent it. Wilson’s updated ideas and Nock’s execution of them produced a workable piece. The Royal Army was not interested,

but the Royal Navy could envision its use from high in a ship’s fighting tops.

Wilson received an order for two more guns, and locksmith Nock, by now also a budding gunsmith, was given the assignment. They were rifled, and with the charge of special powder specified, kicked worse than any Missouri mule, not a desirable characteristic when firing from a precarious perch high in the swaying rigging during the heat of battle. Changing to smoothbores and reduced charges of common powder helped somewhat. Mr. Wilson was paid £400 for his ideas. Following sea trials with twenty more such Nock-made volley guns, Henry underbid others to win a contract for 500 guns, one of which is shown in Figure 1.

The guns were still brutes to shoot, and concerns about the possibility of starting a fire in the rigging with their considerable muzzle blast limited their use, though “. . . they were issued to Howe’s fleet when it sailed for the relief of Gibraltar in 1782, (and) . . . they formed part of the armament of HMS Pandora when searching for the mutineers of HMS Bounty in the South Seas in 1791.”⁴

The peace that followed our Revolution brought slow times to the gunmakers trade. Though Nock placed only six more of the 1st Model Volley Gun with the Royal Navy, his fine reputation as a lockmaker kept him in good stead, as the Navy ordered “. . . heavy brass locks for 3-, 6-, 9-, and 12-pounder guns at 14s each.”⁵

With limited demand for military arms, Nock and others made some smooth bore and rifled volley guns for the sporting trade. The gun shown in Figure 3 was part of the collection of our late member Clay P. Bedford, and it will not take a back seat in quality to the guns of other better known and connected makers. I have seen one Forsyth with “scent-



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3, 56. Cavalry pistol of 1796 for the 2nd Dragoon Guards, with the screwless, closed flintlock invented by Henry Nock, the London gunmaker, in 1766. The flint, small moving parts and springs of any flintlock were liable to break. While a sportsman could mend his lock at leisure, the soldier in the field was dependent on the services of an armorer with special tools, and these were not always available. Nock’s lock could be dismantled easily without tools. The new lock was adopted by the British Army and led to a new form of musket. A smaller version was made for pistols which were designed for the purpose with the minimum of fittings, the rammer being fitted separate from the pistol. Nock’s lock, which can be seen dismantled (56), reformed well but proved too expensive and difficult to make and was soon replaced by a conventional pattern. II.1754: XII.349761

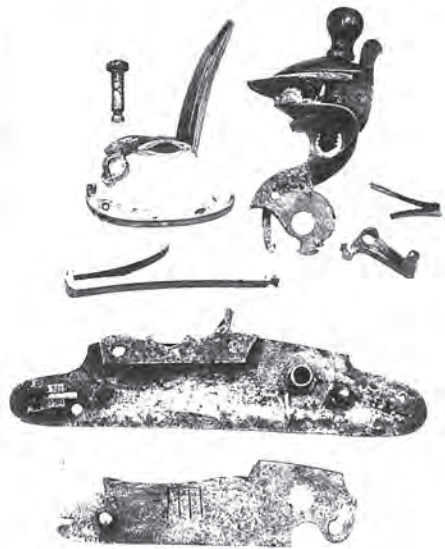


Figure 2. Patt. 1796 Cavalry Pistol of 2nd Dragoon Guards/dismantled Screwless Lock by H. Nock. Royal Armouries Collection/H. L. Blackmore, *English Pistols, Arms & Armour Press, Lond. 1985.*

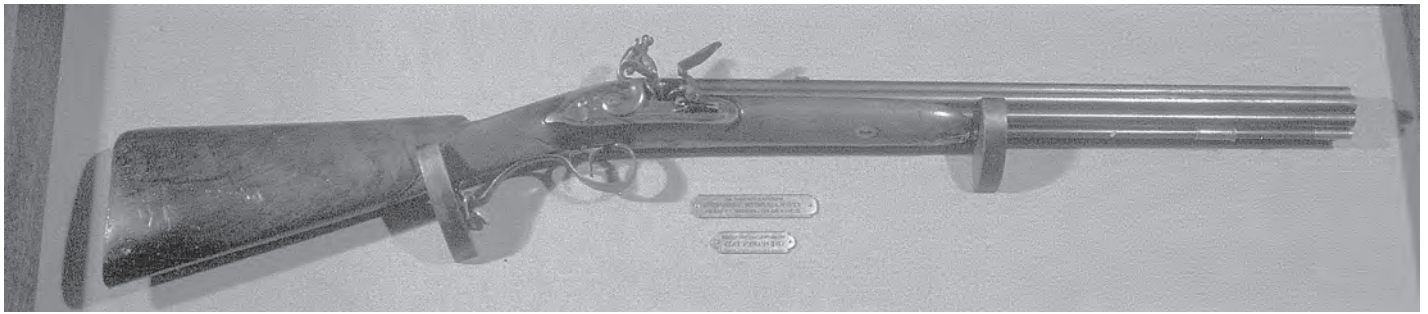


Figure 3. Sporting Model 7 Bar. Volley Gun by H. Nock, Collection of P. S. Wainwright/Ex. C. P. Bedford.

bottle” ignition and Clay had others, but any civilian volley guns were and remain rare.

Nock had leg up on the competition because of his manufacturing experience for the Royal Navy, plus he was commissioned to make an exquisite set of a volley gun and a volley pistol for the Royal Household which remain today in the Queen’s collection. He also experimented with means of rotating the 7-barrel cluster and firing them one at a time, thus anticipating the “pepperbox” by some 30 or 40 years.

In a period when shotgun barrels were not choked and muzzle loaded charges lacked the present day plastic cup/wads, which contain and control the shot column while in the barrel, one can surmise that seven barrels skillfully united in near perfect parallel would pattern seven 32 bore balls (.505 cal.) far more uniformly and with greater velocity. As warships grappled, a single such discharge from aloft

could wreck havoc among a covey of “brass”, the command and control, centered on an enemy’s quarterdeck. A charge fired in the direction of a sniper in the other’s rigging was more likely to score than a single musket ball or even “buck and ball”. A heavier and less graceful weapon, to be sure, but at the relatively short ranges involved when opposing ships were secured together with grappling hooks and lines, the volley gun was capable of inflicting greater harm than conventional shoulder arms.

An order for another one hundred Naval Volley Guns was received by Nock in 1787 and completed in April of ‘88 Figure 4. Whether these were at the same or a higher price per unit is in dispute, but the ever innovating Nock made what he felt were improvements. A glance at the frizzen spring alone is enough to show that he was always searching for a better design. This Second Model was one of Clay



Figure 4. 2nd. Mod. Royal Navy 7 Bar. Volley Gun Patt. 1788, by H. Nock, Collection of P. S. Wainwright/Ex C. P. Bedford.

"Admiral Nelsons Guns – The Seven Barrel Volley Guns – Fact Or Fancy?"

BY CLAY BEDFORD

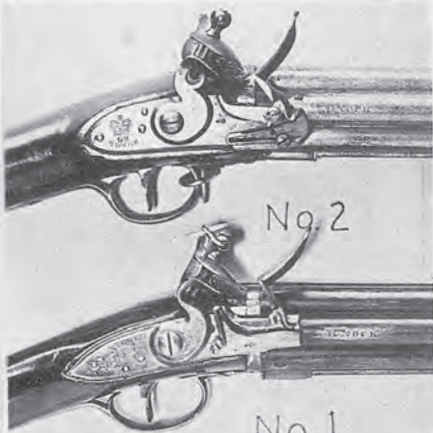


HARRY MANN

Since beginning these "Gun of the Month" articles in the GUN REPORT, it has been my plan to occasionally invite guest writers to assist with the column in an effort to cover an even broader group of interesting arms. This month, I planned to feature a British Admiralty to coach the fighting tops of enemy ships - after Admiral Horatio Nelson was killed at the Battle of Trafalgar by a sharpshooter in the

(well known as a student and collector of fine European Arms), for further information on it. I particularly wanted his opinion on the controversy as to whether or not these interesting weapons had been designed originally by the British Admiralty to coach the fighting tops of enemy ships - after Admiral Horatio Nelson was killed at the Battle of Trafalgar by a sharpshooter in the

rankings of a stricken enemy vessel. Not only did Clay knock this tale into the proverbial "cocked hat," but he started me on and with the disclosure that there are SIX different models and variations of this rare gun, all to be found in his extensive collection. It is then, with great pleasure that I turn this issue over to Clay P. Bedford for a discussion of these volley guns.



These lock plate photos of the first and rare second model military Volley Guns show difference in the frizzen springs. The first model has the type of the early Queen Ann Period while the second model has the improved "H" shape, reversed to cut down the length of the lock. Both locks are the same length with rounded portion added to the second model. Both barrel groups are proofed the same, have the same "H Nock" appearing on right side of barrel group; "Tower" markings were changed. (Clay P. Bedford collection)

Fancy has it that the seven barrel volley gun was developed by Henry Nock at the request of His Majesty's War Department, after the death of Admiral Nelson at the Battle of Trafalgar, October 21, 1805.

The facts, as exhaustively developed by Howard Blackmore and reported in the Journal of The Arms and Armour Society in June 1938, are contradictory but no less interesting. Firearms of seven barrels were known as early as 1433, when one was shown as the inventory of the Bastille.

However, the series of firearms known as "volley guns," made by Henry Nock, actually originated during the American Revolutionary War. The Board of Ordnance, recognizing the vulnerability of the British Redcoat to the marksmanship of the colonials with their squirrel rifles, was willing to give any new weapon a trial. Among these was Patrick Ferguson's famous rifle. On July 28, 1779, James Wilson presented a gun with seven barrels to fire at one time. In the minutes of the Board for July 31st is the following: "The seven barreled gun offered by James Wilson Esq. having been tried in presence of the Board at Woolwich on 29th instant, it appeared to answer the purpose as a rifle gun. But the Board do not think it applicable to the Land Service, though it may be useful aboard ships to fire from the round tops, of which the Lords of the Admiralty were the best judges".

Henry Nock, the gunmaker, was given an order "To provide two of these seven barreled rifle guns as may be fit for the common use in the service".

On August 14, the Lords Commissioners of the Admiralty notified the Board of Ordnance that they appreciated the utility of a rifled barrel gun invented by Mr. Wilson, which discharges seven balls at one time; and that they may be used with great advantage in the tops of ships.

In the meantime, "without explaining why, the Ordnance officers came to the conclusion that smooth bore would be better, and the Admiralty approved the change. The Board of Ordnance ignored Wilson from this time on, with the exception of making a payment of 400 Pounds on the 29th of May 1780 "For inventing a 7-barreled gun".

In October 1779, Nock received an order for, and made, 20 guns. During 1780 the Board issued warrants for 500 guns at a price of 18 Pounds each. The order was finished within the required period and, with the completion of the first contract, the manufacturing of the guns temporarily ceased. The use of 2 drams of rifle powder had proved to be too strong a charge for a man to handle, changing to 1 1/2 drams of common service powder solved this problem.

The end of hostilities arrived, and Henry Nock returned to his former occupation of locksmith. In 1784 he sold 6 seven-barreled guns to Ordnance; whether newly made or left over is not known.

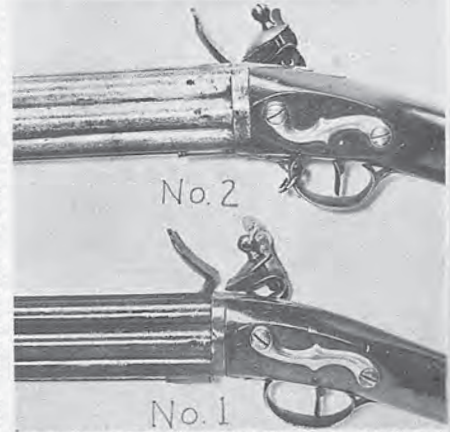
On October 12, 1787 the master furniture, Ambrose Pardoe, received an order to send 100 volley guns to the naval depot at Chatham. As he had only 5 in stores, he ordered 100 more. This order was completed in April 1788. A year later Nock and Jonathan Hennem offered to make volley guns at 10 pounds each, but the Board decided to make no more.

The guns were described as "Pieces with seven barrels each, with steel runners, brass furniture and double bridle locks, without". The entire gun weighs about 12 lbs. and is 3 feet long. Once the lock is removed, the barrel assembly can be unscrewed from a center spike at the breech which contains a bell chamber that is connected to the touch hole. From the chamber, six radial channels lead to the outer ring of barrels. These channels have had to be drilled with the barrels in position, and so each barrel has an its exterior surface, a drilling hole that has been plugged. It also has a screw-in breech plug, with a square indentation to take a suitable wrench. There are two main types of locks: The first and most common has the Queen Anne type steel spring under the pan. However, inside the lock, the mallopping is behind the cock, like the later back action locks. This meant that the front part of the lock plate was clear of any protrusion and could be fitted flush against the barrels to produce a semi-water-tight joint.

The second type lock is very rare. Blackmore could locate only two examples in England, both in the Tower of London. I have the only example that I have seen in America (No. 2 in the group photograph). On these, a more conventional design was adopted, the main



Enlarged photo of first model lock plate providing a better study of the odd Queen Anne Period frizzen spring, the moisture - proof fitting of forward portion of lock plate to barrel group. The Tower Markings are uniform for this model, of which 500 were contracted for and delivered. A total of 635 first and second models were made by Henry Nock between the years of 1779 and 1788. Note the minute and uniform pitting on the barrel group of this particular gun, which can be considered to have been used at sea with this effect from salt air. (From the Harry H. Mann collection)



Left view of the breech of first and second models. The most notable difference is the thicker and stronger breech plate on the second model. The brass screw plates are of different design. Both models weigh about 12 lbs. each, and are 3 feet in length. (Clay P. Bedford collection)

Figures 5 & 6. Gun Report, Oct 1967, C. P. Bedford Article on Admiral Nelson's Volley Guns.

Bedford's favorite pieces and one of only three known survivors of the 100 produced. The other two reside in the Royal Armoury collection.

Homely as they were, Clay was most fond of his little seven tube monsters, and included his with many beautiful civilian flint weapons in a memorable Metropolitan Museum of Art exhibit recorded in their publication, *Early Firearms of Great Britain, & Ireland* entirely devoted to selections from his vast collection. He also wrote an excellent article for the October 1967 *Gun Report*, Figures 5 & 6 with photos and descriptions of both Naval Volley Guns and his civilian version along with three others, one of "pepperbox" design. It is with gratitude for Bill LaRue's memory that I was able to obtain copies of that issue.

Much of our discussion to this point has centered on Nock's more spectacular volley guns, but three important though separate events were to transpire that would further enhance his career. First, by 1783, an imaginative and energetic Duke of Richmond had become Master General of Ordnance and taken note of Nock's talent. Second, in 1784, Nock was recognized as a Freeman of the Gunmakers Company, and third the Napoleonic Wars engulfed Europe, greatly increasing Britain's requirements for firearms.

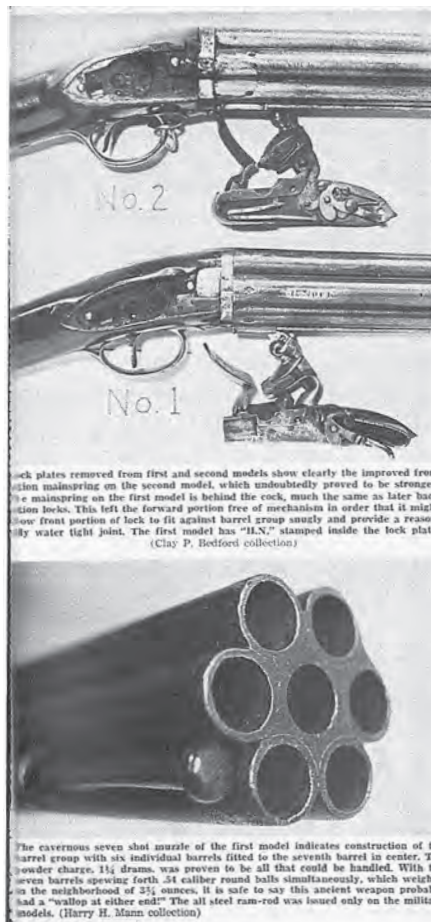
The Duke, was impressed with Nock's innovations. His screwless lock, Figure 2 trumped, those of the competition, Jonathan Hennem and Walter Dick. We note that Sir George Bolton and his patented lock were not in the picture even though his lock had the desirable feature of having an adjustable cock angle for better to alignment flint and frizzen. Sir George was tutor to children of the rich and famous, not an entrepreneur or a locksmith and apparently did not use or abuse his connections or title to promote his invention.

By the summer of 1786 Nock billed and was paid by the Government for:

"... making and compleating 39 Pattern Muskets of sorts, and including £100 for his time, Trouble & Ingenuity for bringing the new invented Lock to so much Perfection . . ." and in January of 1787 another bill for experimental work was submitted and allowed.

Now comes an interesting twist from my point of view. In October of '87, Nock billed Ordnance for "Two new Constructed Pattern Muskets made and finished complete at 4, 4s each." In this matter Blackmore's findings were the following:

"It is just possible that these (2) muskets are those illustrated on Pl. XX, B & C as they are the only two examples



Lock plates removed from first and second models show clearly the improved front action mainpring on the second model, which undoubtedly proved to be stronger. The mainpring on the first model is behind the cock, much the same as later back action locks. This left the forward portion free of mechanism in order that it might blow front portion of lock to fit against barrel group snugly and provide a reasonably water tight joint. The first model has "H.N.C." stamped inside the lock plate. (Clay P. Bedford collection)

The cavernous seven shot muzzle of the first model indicates construction of the barrel group with six individual barrels fitted to the seventh barrel in center. The powder charge, 1 1/4 drams, was proven to be all that could be handled. With the seven barrels opening forth .54 caliber round balls simultaneously, which weighed in the neighborhood of 3 1/2 ounces, it is safe to say this ancient weapon probably had a "wallop at either end!" The all steel ram-rod was issued only on the military models. (Harry H. Stamm collection)

VOLLEY GUNS

(Continued From Page 5)

spring being placed in front of the cock, connected to the tumbler by a link; an unusual refinement for a military fire-arm. The frizzen spring is the usual "U" shape, reversed to cut down the length of the lock. Even so, the lock protrudes so far forward as the first model, and a rounded guard has been added. The second model is probably that made by Nock for the 1787 order. No doubt the second model was devised to provide a stronger spring.

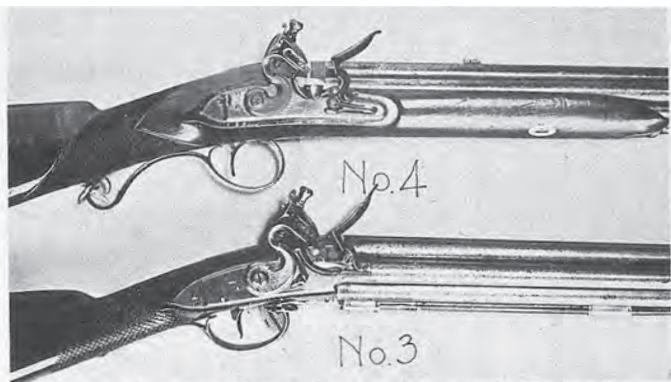
Very little mention is made in British Admiralty records of the Volley Gun after the reported order for 100 guns from Nock in 1787. It is known that Lord Howe's fleet were issued volley guns prior to their departure for Gibraltar in the fall of 1782. Howard Blackstone could find no other mention of the use of volley guns by either Lord Howe's fleet at Gibraltar, or Lord Nelson's at Trafalgar. He reports that Lord Nelson did not permit firing from the tops because of the danger of fire. Lord Nelson had seen the explosion of the *Aleide* in 1793 and of the *Orient* in the Battle of the Nile in 1798. He considered fire to be the greatest hazard in a naval action. Although the British won the Battle of Trafalgar, using Nelson's strategy, it was no consolation to them to read in the reports of the battle that snipers on board one of the French ships had set their own ship on fire as Nelson had predicted; Nelson died from the very sniping that he had refused to permit from his own ships.

This precipitated an intense search for a countermeasure to the sniping. Two developments ensued: the rifle, and a small amount of success in the carriage that could fire a conical of grapeshot into the enemy's rigging. A silver medal was awarded Captain T. M. Baginold of the Royal Marines in 1813 for the invention of such a gun, firing 144 musket balls in one shot.

While Wilson's seven barreled volley gun, made by Nock, fell into disuse when replaced by a superior weapon, sporting guns continued to be made and used. The barrels were once more rifled and used on large game. No patent had been obtained by Wilson, and there are many examples of volley guns made by Bate, Baker, Egg, and Mortimer. There is also a seven barreled pistol by Nock in Windsor Castle, with the silver hallmark date letter for 1790.

Not all civilian examples were seven barrels or volley guns. Note the silver mounted carbine with six revolving barrels around the center spindle, No. 5 in the group photograph, and the five barreled Volley Gun by Bate, No. 6.

The most famous user of the volley gun was Colonel Thomas Thornton, who used the volley gun on sporting trips to Scotland and France. He even had a DOUBLE volley gun of 14 barrels made, which he illustrates and describes in his second book as follows: "Pearson's barreled gun, of very superior workmanship and very light. This piece is more worthy of notice as a curiosity than for its service in sporting. Nock



The fine workmanship of these civilian model volley guns (Nos. 3 & 4) is in evidence in these photos. While No. 3 could be classified as an "Officer's Model," with refined features such as fancy stock with checkering at the wrist and a wood ram-rod, it carries over many of the first model features, including the Queen Anne period frizzen spring. No. 4 is a very rare RIFLED model with adjustable sights and latest lock refinements of roller frizzen, gold lined touch hole, and rain gutters on the pan. (Clay P. Bedford collection)

(please turn page)

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Figures 5 & 6. Continued.

of a lock of this type which I have been able to trace. Although these locks do not bear Nock's name on the outside, which are blank except for the GR and Crown on the pan shield, the initials HN are stamped inside . . . "8

The upper gun in Figure 7 is almost surely his example 'C', above; a Duke of Richmond "rammer-to-the-butt" experimental musket with one interesting change from his illustration. Upon acquiring it, there was no apparent difference. Disassembly, however, revealed that the forearm was no doubt an afterthought . . . a much afterthought. Not only did it detach readily and its brass nose cap fit back perfectly onto the stock of different and more used wood, but that part of the barrel covered by the forearm extension had obviously been exposed to the elements during a period of use and not overly cleaned by a later owner as was the rest of the gun after its installation. Someone had attempted to make it more nearly conform to the later contract "rammer-to-the-butt" muskets, ignoring its uniqueness as a trials piece. Its companion also in Figure 7 is a standard contract rammer-to-the-muzzle Duke of Richmond musket, its lock bearing the name H-NOCK plus conventional military markings lacking on the other.

In June of 1790, it was reported that . . . "HRH the Duke of York and the Duke of Richmond with several

General Officers were in Hyde Park trying and proving several new patterns of Soldiers Muskets." That was on a par with the episode 70 years later when President Abraham Lincoln tested a Spencer Repeating Rifle on the lawn of the White House.

First deliveries commenced in 1792 but ceased after a few years under wartime pressures due to the length of time it took to manufacture the more complicated and expensive though durable lock, and the fact the musket's caliber was less than standard.

That did not stop the enterprising Nock. Local Militia and Volunteer units were raised and commanded by prominent and wealthy "Colonels," and under the looming threat of a Napoleonic invasion, many of these were called to the colors. With the much enlarged British Army on the Continent, the arms such units could count upon were second or third rate hand-me-downs. Thus, many such Colonels purchased Nock's sturdy, up-to-date rifles, carbines and pistols with their own funds hoping for reimbursement from the Crown. Figures 8 & 9. These had 4 3/4" locks rather than the 5 1/2" found on the Duke of Richmond Muskets.

A like practice was fairly common during our own Civil War with Colonels of Volunteer units acquiring Henry or Colt Root rifles, etc. outside the Ordinance system, with



Figure 7. 1787 Prototype Duke of Richmond's Rammer-the-Butt Musket/Ex. H. L. Blackmore and Patt. 1792 Rammer-to-the-Muzzle Musket, both by H. Nock, Collection of P. S. Wainwright.



Figure 8. c/a. 1796 Volunteer Rifled Carbine, Patt. 1796 Volunteer Short Rifle, Patt. 1796 Yeomanry Carbine, all by H. Nock. Collection of P. S. Wainwright.

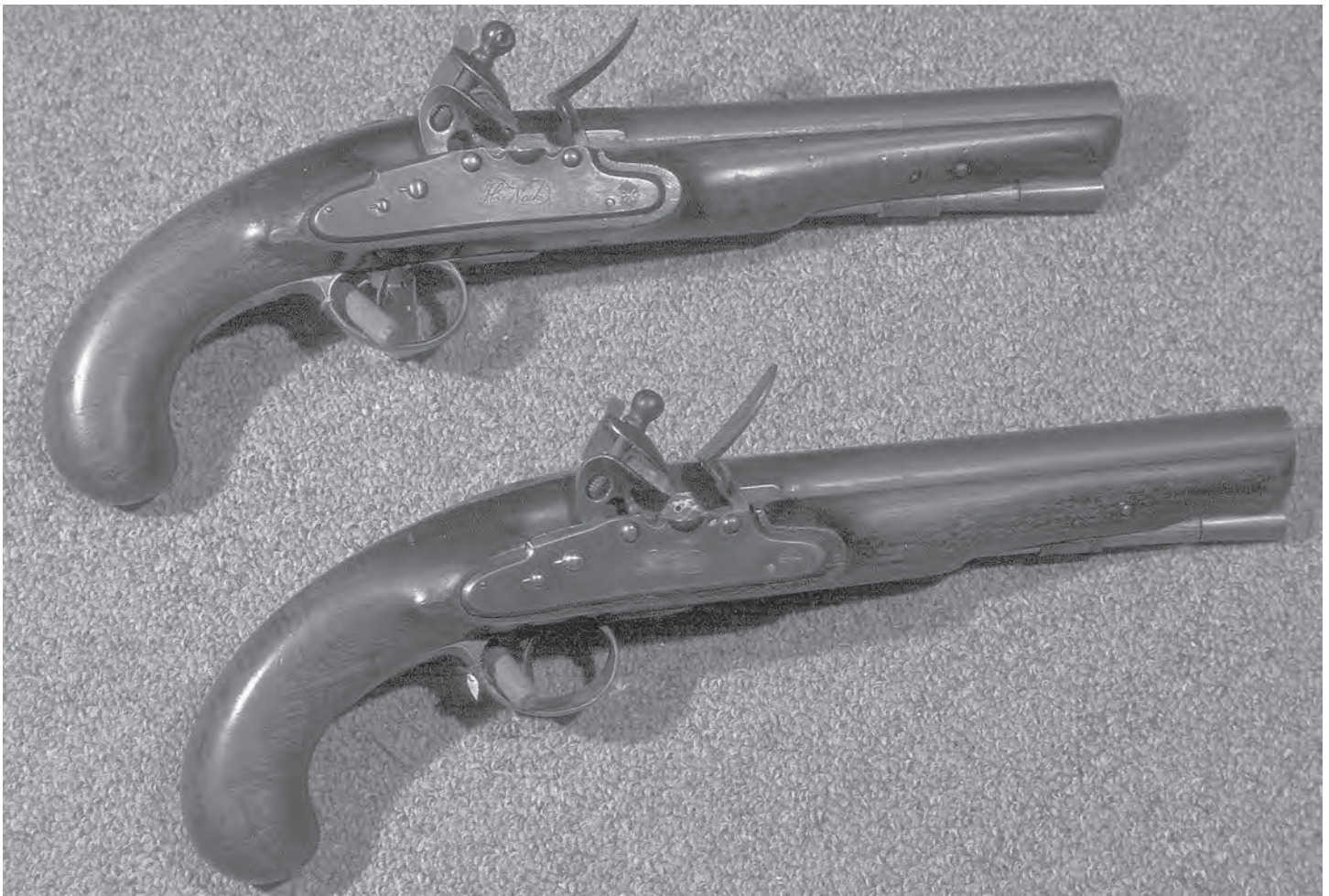


Figure 9. Patt. 1796 Brace of H. Nock Screwless Lock Pistols. Collection of P. S. Wainwright.

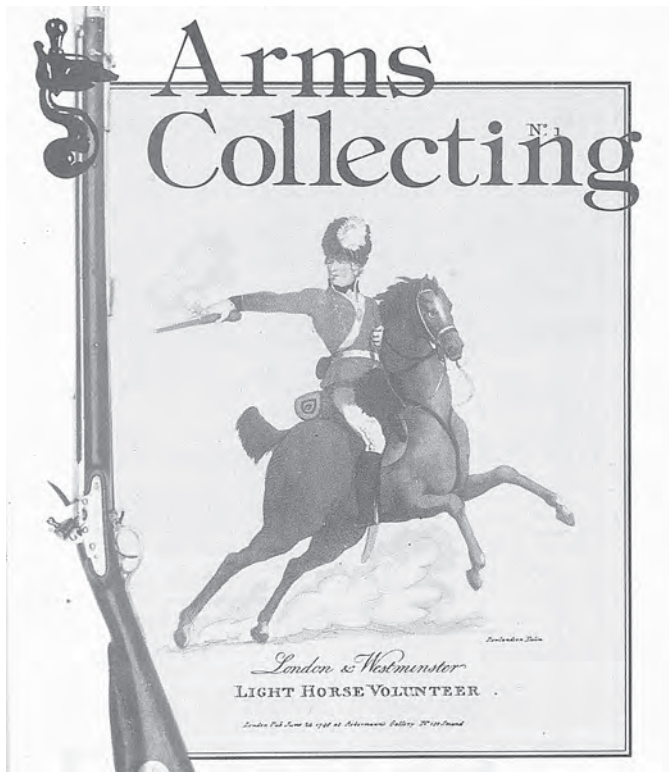


Figure 10. Arms Collecting, Vol. 34, No. 4 Cover re article by Jeff Paine, *The Light Horse Volunteers' Rifled Carbine*.

the Government supplying the multitudinous varieties of ammunition.

Of my two militia rifled cavalry carbines and one short rifle in Figure 8, two have Nock locks and one a "plain" lock. All have front and rear sights. The upper was made for cavalry use and is most handsome with its brass patch box and grip and tiger stripe wood. It is somewhat similar in appearance to the later Baker Rifle, but does not accommodate a saber bayonet as did the Baker or the "Light Horse Volunteer's Rifled Carbine" featured on the cover of *Arms Collecting*, Vol. 34,



Figure 11. Prototype Brass Barreled Pistol with Screwless Lock, by H. Nock. Collection of P. S. Wainwright/once H. Blackmore's.



Figure 12. c/a 1795 Royal Navy, Black Sea Service, Smoothbore Musketoon, by H. Nock Collection of P. S. Wainwright.

No. 4. Figure 10. At first glance down the barrels, of the other two in Figure 8 they appear to have smoothbores, but upon closer inspection rifling commences some 3 3/4" in from the muzzle, a Nock feature to ease and speed loading.

Blackmore notes in his book that "The use of the (4 3/4") Nock lock on the (Pat. 1796) pistol increased the price to 30s" (from 19s 6p)¹⁰, a reason for its eventual discontinuance. Figure 9.

In this vein, and jumping ahead a bit, there was a bitersweet ending to the career of this great innovator. The sweet part concerned his attainment in 1802 at age 61 of becoming Master of the Gunmakers Company, or "Top Gun" among London's finest. The bitter came with a contract received just prior to his death in 1804 " . . . to alter the Muskets of the Duke of Richmond's Pattern (Figure 7) at 14/- each . . . "¹¹ There were too many different types of shoulder arms in use and, despite the superiority of Nock's locks, his were in the minority due to greater expense and the time it took to produce them. The 5 1/2" lock, Figure 11, and a similar one which appeared on a table at our Flagstaff meeting were likely from among those so removed as they are both in fine serviceable condition.

The Crown purchased smoothbore musketoon Figure 12 has a Royal Cypher embossed flash guard and an "anchor/B" on the left flat of the stock plus a coating of tar thinned with turpentine to resist the effects of salt air and water. Thus it was clearly for Royal Navy use.

With respect to the once Blackmore owned 9" brass barreled "musquet" bored pistol, Figure 11, having a 4 3/4" screwless lock and no provision for a ramrod, he states that he " . . . can only think it is a prototype pistol or a naval model."¹² I am inclined to believe that both possibilities are correct and that the sentence should read " . . . prototype pistol *for* a naval model" as brass barrels frequently were made for sea service long after they had last seen army use. For that reason and because of Nock's earlier sales to the Royal Navy and consequent contacts there, it is logical that our entrepreneurial subject would produce such a "prototype" or salesman's sample.

The "coach" blunderbuss with fly bayonet, Figure 13, is, as are many of its contemporaries, brass barreled. Neither a sea service pistol nor a coach blunderbuss or pistol required heavy loads of gunpowder because they were designed for close-in combat. Weapons using larger charges of powder to reach out greater distances required the stronger iron barrels of volley guns or muskets, sea air and salt water notwithstanding.

The "plain" pistols with conventional locks, Figure 14, appear little different from those made by the competition, though it was stated to me by an Englishman in the business of repairing antique arms and armor that "The marvelous thing about Henry Nock, is that he absolutely never made an inferior gun, civilian or military!"¹³ The one small conventional lock marked NOCK at the bottom Figure 15, might be an



Figure 13. Coaching Blunderbuss with Brass Barrel and Fly Bayonet by N. Nock. Collection of P. S. Wainwright.

exception, or a forgery or made by one of his lesser known relatives in the trade, named Joseph, Richard, or William. An unlikely suspect would have been his nephew, Samuel, who apprenticed under Henry, became a “Master” in his own right in 1836 and was appointed Gunmaker-in-Ordinary to four Monarchs from George III in 1805 through Victoria in 1837¹⁴ (Appendix B—Samuel Nock’s Patent No. 4054XX.)

MacDonald Hastings in his book, *English Sporting Guns*, pages 8 and 9, supports the enthusiasm of both Blackmore and the above cited craftsman, stating:

“HENRY NOCK of London, with his patent (No. 1598) of April 25, 1787, achieved a breakthrough. Prior to his patent, the plug was a solid lump of metal. When the flint sparked the powder in the pan, the flame spurting into the touch hole ignited only a corner of the charge . . . In NOCK’s gun, . . . the priming powder fired in the middle of the charge. Guns shot harder and quicker . . . it was from NOCK’s patent that gun invention leapt forward.”¹⁵

The above noted improvement is pictured on page 112 of the previously cited issue of *Arms Collecting*, lower left in



Figure 14. Two Different “Plain Lock” Officers Pistols by H. Nock. Collection of P. S. Wainwright.

Figure 16, and is known as the NOCKFORM BREECH (or KNOXFORM), a feature equally applicable to, and was used as well in the later percussion arms.

While as mentioned earlier, Henry may be presumed to have been saddened in his final days by the contract to replace some of his screwless locks, many of which continued in long years of service with few problems, he remained innovative to the end. An example is the breech loader pictured in an article by Staff Editor Dick Salzer in the September 2003, *Gun Report*. Figure 17. Further, Blackmore points out that in 1803 he billed Ordinance for a “New Pattern Moveable forge for Regimental Armourers” and “8 setts of Heads and Shoes for Land Service Pikes of the new Pattern to serve as Patterns.”¹⁶

For a gunmaker who died at the peak of his career at age 63, Nock was infinitely better off than most of his peers. As an example, Joseph Manton, among the finest of the breed, served three stints in King’s Bench Prison for debtors, and the talented Egg family who picked up what was left of Manton’s business finally faded out of the picture. Meanwhile, Nock was in a position to leave bequests to many family members, and £100 each, then a princely sum, to a number of those who worked for him, most notably James Wilkinson, his fore-



Figure 15. Nock Marked Pistols and Locks. Collection of P. S. Wainwright.

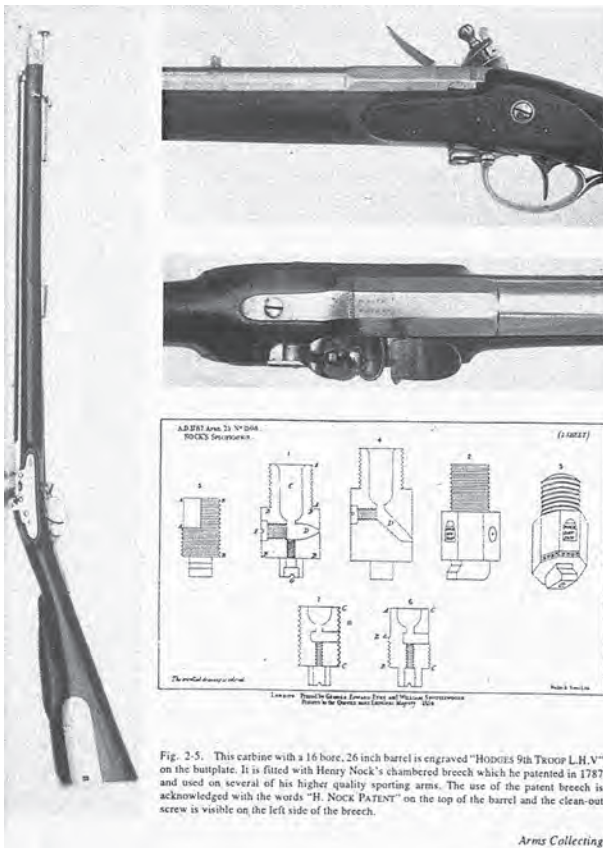


Fig. 2-5. This carbine with a 16 bore, 26 inch barrel is engraved "HODGINS 5th TROOP L.H.V." on the buttplate. It is fitted with Henry Nock's chambered breech which he patented in 1787 and used on several of his higher quality sporting arms. The use of the patent breech is acknowledged with the words "H. NOCK PATENT" on the top of the barrel and the clean-out screw is visible on the left side of the breech.

Arms Collecting

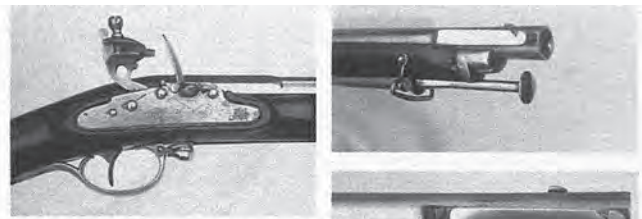


Fig. 6-8. The carbine uses the small commercial version of the screwless lock which is marked N. Nock in script in addition to a sunburst pattern over the front retaining hook. The underside of the barrel is stamped with the commercial London proof marks, the numeral 50, and a Roman numeral "I" which is an assembly mark that is present on all other major components. The .65 caliber barrel is rifled with 7 grooves making one-half a turn in the length of the barrel. The muzzle is fitted with a short bayonet bar for a sword bayonet, no examples of which have been located. The figures also show the heavy swelled ramrod characteristic of the Nock carbines.

dance at drill sessions. Composed as they were of gentlemen and property owners, the Volunteer Associations elected their own officers and provided their own horses, while the government was responsible only for the provision of arms and accoutrements in addition to a modest clothing allowance.

Depending on the means available, the opportunity existed for the volunteer associations to arm and clothe themselves as they saw fit and from the descriptions of the uniforms in Ackermann, it is clear that many of the regiments took great pride in the resplendence of their attire and the quality of their equipment. Ackermann records the uniform as follows:

- *Scarlet Hussar Jacket*, black Cape and Cuff with silver Loopings, and silver chain Epaulette; white leather *Breeches* and *Gloves*; military *Boots*.
- *Helmet*: the turban of mole-skin, forming a black ground to the words LIGHT HORSE VOLUNTEERS, in front; and on the right side a *Crown* above the Garter, with G.R. in the centre; Motto, FORWARD, all in silver; the whole topped by black bear-skin, and a white Feather on the left side.
- *The Badge* is an oval silver Plate, with a Lion rampant, bearing up a shield having G.R. in the centre; Motto, "FORWARD."
- *Pouch*, of plain black leather.
- *Substratach*, worn on the right side, mounted with black Bear-skin; and L.H.V. under a Crown of silver.
- *The Officers* are distinguished by a Sash, a red top to the Feather of the *Helmet*, and Leopard-skin furniture for the mounted.

The L.H.V. originally consisted of six mounted troops, but in 1798 three additional unmounted troops were

Vol. 34, No. 4 (Nov. 1996)

Figure 16. Arms Collecting, Vol. 34 No. 4 Jeff Paine Article, The Light Horse Volunteers' Rifled Carbine, p. 112 illust. NOCKFORM Breech.

Henry Nock's Breechloading Flintlock

by Dick Salzer, Staff Editor

Henry Nock was an engineer and an artist. He was capable of turning out some of the finest presentation pieces and could equally organize production at his works to mass produce military and commercial quality firearms. He was born in 1741 but his first appearance in Ordnance record was in 1770 when he submitted a new pattern musket for approval. He later became known for the seven-barrel volley gun. One of Nock's more interesting and ingenious arms is a breechloading flintlock musket. An example of this musket exists at the Tower of London. That gun is probably the "production

version" if a run of only a few pieces could be categorized as production. Given his period of activity, this design probably dates to near the turn of the 19th century.

The version illustrated herein is perhaps the prototype since some of its features seem a bit less sophisticated than the Tower piece. Blackmores "British Military Firearms" which depicts the Tower gun, describes its action as follows:

"Another of Nock's experimental muskets in the Tower (plate 28) has an unusual breechloading mechanism in which a reloadable cartridge takes the charge. The breech is opened by pulling

up the ring seen in the closeup. The ring, which also acts as a back-sight, lifts up a spike which runs right through the barrel, cartridge and stock forming a secure lock. When the spike is fully withdrawn, a backward pull on the ring removes the cartridge from the breech. The removal of the locking spike also sets the gun's safety device. This is a flat spring next to the trigger guard which prevents the trigger from being accidentally fired while reloading is in progress."

The accompanying photographs (Figure 1 through 6) illustrate the prototype version. On the prototype, the chamber is not removable.

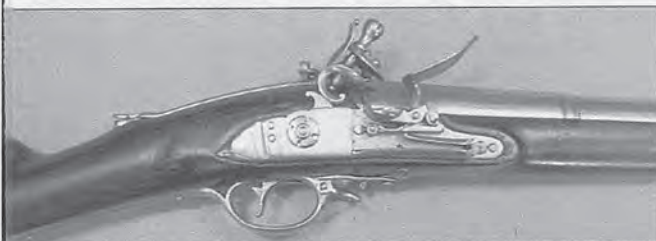


Figure 1 - The side view of the Nock musket showing the semi box-lock design. This is the Tower piece (see text) that gun was a full box-lock configuration.

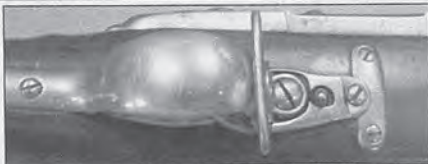


Figure 2-An oblique view of the breech pin. This pin serves three functions—first as a rear sight, second as a locking device for the breech and third as an activator for the safety (see Figure 6).



Figure 3- This view shows the sliding cover for the breech piece. Once the pin has been withdrawn, the breech cover slides backward.



Figure 4- Here the breech cover has been slid to its rearward position.



Figure 5-Further movement of the breech cover causes the chamber piece to pop up vertically for loading.



Figure 6- This view of the trigger guard shows where the pin penetrates the (just in front of the large-headed screw) It has an eccentric end which enables the flat spring safety to move laterally when the pin is twisted.

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Figure 17. Gun Report, September 2003, Dick Salzer Article re Henry Nock Breech Loading Rifle.

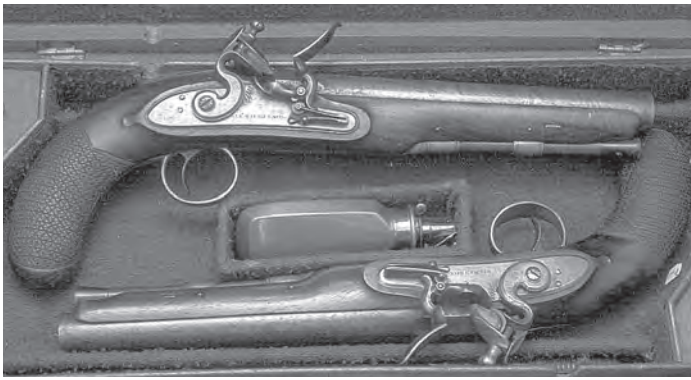


Figure 18. Cased Pair of Officers Pistols by Jas. Wilkinson. Collection of P. S. Wainwright.

man.¹⁷ "In a codicil to the will he made the kindly direction that his business was to be continued for 6 months for the benefit of his workpeople."¹⁸ Both provisions stand as enlightened examples for employers even unto this day.

Foreman Wilkinson, married to Henry's daughter, received an appointment in 1805 as Gunmaker-in-Ordinary to King George and became a contractor to the East India Co. He successfully carried on the business making pistols Figure 18. Note the two notches subsequently cut into the raised rim and opposing edge of the lid of the case which

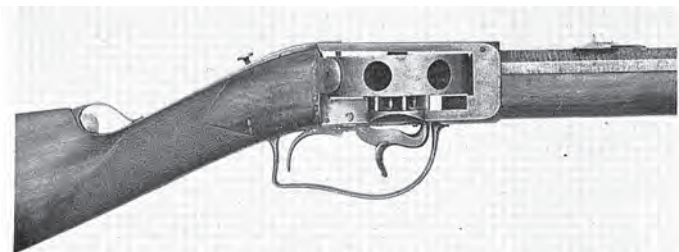


Figure 19. Cochran-type turret or wheel rifle by James Wilkinson & Son, London. Serial No. 4 Patent 5124. Made for the Marquis of Breadalbane, 1839.



Figure 20. Cased Wilkinson wheel pistol. Serial No. 5 Patent 5125. Made in 1839 for Lord Francis Egerton and described in his book *Mediterranean Sketches*.

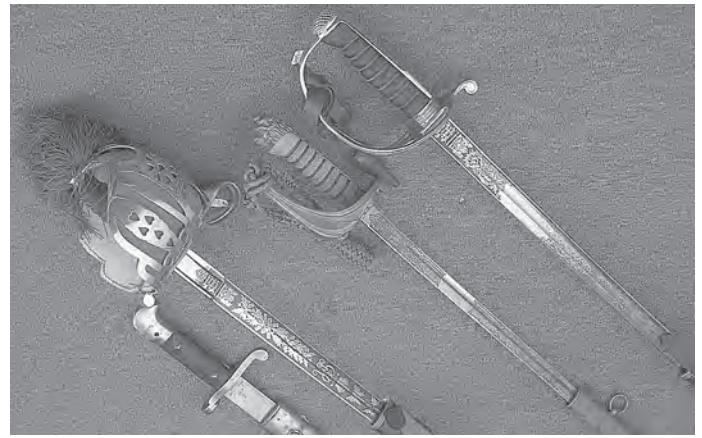


Figure 21. Swords and Bayonet Products of Wilkinson Sword. Collection of P. S. Wainwright.

accommodate the cocks when fully cocked. The owner must have trusted the reliability of James Wilkinson's sears!

In about 1818, James' son, Henry, joined the business which became James Wilkinson & Son. Two of their fine products of about 1839 are shown in Figure 19. Henry W. had the innovative talents of forebear Henry N. Some of his inventions were "... 'elliptical' breeches; 'elastic' concave wadding; improved spring gun; vegetable gun-oil (awarded Gold Medal, Royal Society of Arts); (and a) sword-blade testing machine".¹⁸ Peter Hawker, a sportsman and writer on such matters, in 1844 described him in part as "... unquestionably the cleverest and most scientific master in the trade."¹⁹

Henry, the younger son, died in 1861, but his successors continued to make firearms until the early 20th century. By 1904, when restrictions began to be imposed on private ownership of handguns, they were phased out by the company in favor of blades for swords, bayonets, kitchen knives, and razors, Figs. 20 and 21, which continue to be made by the company now known as Wilkinson Sword.

In summary, Henry Nock did just fine by himself, his family, descendants and employees and even the British Empire in spite of the:



Figure 22. Jas. Wilkinson pistols c/a 1810 with Wilkinson Sword razor blades and shaving soap c/a 1985.

"Arms historians (who) have dealt shamefully with that great London gunmaker, Henry Nock."²⁰

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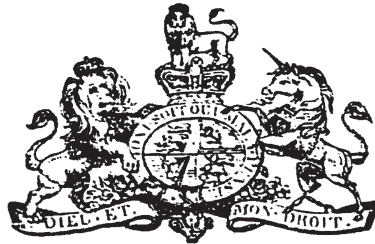
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A.D. 1775 N° 1095.

Concealed Lock for Fire-arms.

NOCK, JOVER, AND GREEN'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, HENRY
Nock, of the Parish of Saint Andrew, Holborn, in the County of Middlesex, Gun Lock Smith, **WILLIAM JOVER**, of Long Acre, in the Parish of Saint Martin-in-the-Fields, in the County of Middlesex aforesaid,
5 Gunmaker, and **JOHN GREEN**, of the City of London, Gentleman, send greeting.

WHEREAS His present Majesty King George the Third, by His Letters Patent under the Great Seal of Great Britain, bearing date at Westminster, the Eighth day of April, in the fifteenth year of His reign,
10 hath, for Himself, His heirs and successors, given and granted unto the said Henry Nock, William Jover, and John Green, their executors, administrators, and assigns, His especial license, full power, sole privilege, and authority to make, use, exercise, and vend, within that part of Great Britain called England, Dominion of Wales, and Town of Berwick upon
15 Tweed, and also in all His Majesty's Colonies and Plantations abroad, their "**NEW INVENTED FIRELOCK, MORE PORTABLE AND SAFE THAN ANY EVER**

Nock, Jover, & Green's Improvements in the Locks of Fire-arms.

BEFORE MADE, THE LOCK OF WHICH IS SO CONCEALED THAT THERE IS NOT THE LEAST APPEARANCE OF IT ON THE OUTSIDE, NOR ANY SPARK OF FIRE OR SMOKE ARISES FROM THE SAME WHICH WILL IN ANY RESPECT AFFECT OR OBSTRUCT THE SIGHT OF THE OBJECT WHEN IN EXECUTION, THE SMOAK BEING CONVEYED THROUGH A TUBE MADE FOR THAT PURPOSE: THAT THE GUN OR OTHER FIRE- 5 ARMS ON THIS CONSTRUCTION WILL DO THE SAME SERVICE IN EXTREME RAINY, HAZY, SNOWY, OR WINDY WEATHER, AS ANY OTHER GUN OR OTHER FIRE-ARMS NOW USED WILL IN FINE CALM WEATHER: THAT THE PRIME IS SO SECURED THAT THE PIECE MAY BE LAID (WITHOUT ANY COVER) IN THE OPEN RAIN FOR A WHOLE DAY OR MORE, WITHOUT BEING, BY REASON OF SUCH RAIN. 10 IN THE LEAST OBSTRUCTED OR IMPEDED IN THE FIRING OFF OR DISCHARGING THE SAME; THAT THE SAID INVENTION IS SO SIMPLY CONTRIVED, THAT THE PERSON WHO USES THE SAID GUN (OR ANY OTHER FIRE-ARMS ON THIS CONSTRUCTION) MAY IN ANY OPEN FIELD TAKE THE BARRELL FROM THE LOCK WITH GREAT EASE, WHICH RENDERS THE BARRELL EXCEEDINGLY EASY TO BE 15 CLEANED, AND THERE IS NO OBSTRUCTION OF A BREECH PIN, AS IN OTHER GUNS OR FIRE-ARMS; AND LIKEWISE THEIR NEW INVENTED LEAVER THAT SETS THE LOCK IN MOTION, WHICH INSTANTLY CAN BE TAKEN AWAY, AND THEREBY DISENGAGES THE ACTION OF THE GUN (OR ANY FIRE-ARMS ON THE SAME CONSTRUCTION), AND IS QUITE SAFE FROM GOING OFF WITHOUT THE 20 APPLICATION OF THE LEAVER, WHICH MAY BE APPLIED IN A MOMENT, AND WHICH SAID FIRELOCK MAY BE USED EITHER TO A GUN, PISTOL, CANNON, OR ANY OTHER INSTRUMENT OF FIRE-ARMS WHATEVER, WHICH HATH EITHER ONE, TWO, THREE, OR MORE BARRELS;" together with the whole profit, benefit, commodity, and advantage from time to time coming, grow- 25 ing, accruing, and arising by reason of the said Invention, for and during the term of fourteen years, according to the form of the statute in that case made and provided; in which said Letters Patent, amongst other things, it is provided, that if the said Henry Nock, William Jover, and John Green shall not particularly describe and ascertain the nature 30 of their said Invention, and in what manner the same is to be performed, by an instrument in writing under their hands and seals, and cause the same to be inrolled in the High Court of Chancery within four calendar months next and immediately after the date of the same Letters Patent, that then the said Letters Patent, and all liberties and advantages what- 35

Nock, Jover, & Green's Improvements in the Locks of Fire-arms.

soever thereby granted, should utterly cease, determine, and become void. anything therein-before contained to the contrary thereof in any-wise notwithstanding.

NOW KNOW YE, that they, the said Henry Nock, William Jover, 5 and John Green. in pursuance of the intention of the said Letters Patent, and in compliance with the provisoe therein contained, do hereby declare that the nature of their said Invention of a new firelock and leaver, as above set forth, and in what manner the same is to be performed, is as follows (that is to say) :

15 A gun with a barrell, stock, and lock, as follow :—The barrel of any length and size at pleasure ; the stock the same ; and the whole made of any metal, as other guns are made. The lock consists of a main plate, a steel pan cover or hammer, a cock concealed, a main spring, two small swivels, a main center pin, a leaver, a leaver spring, a hammer spring, 25 a pan cover center pin, a trigger, a trigger spring, a guard, a lock cover, a bolt, a lock cover spring, a tube, a lever to cock the gun. The main plate of the lock answers the purpose of the pan touch hole and breech pin. The pan is covered by the hammer or steel cover, and moves in a joint with the assistance of two small springs acting upon the semi- 30 circular ends of the joint pin, or may be with one spring, a cock which acts in the centre of the main plate (in a joint through which is a center pin) which receives its force by a double main spring fixed on the main plate, or may be with a single one. The cock is connected with the main spring by two small swivels. The hammer is carried over the 35 flint as the gun is fired by a small leaver thrown up with a spring which is disengaged at half-cocking the gun. The trigger acts in the center of the main plate, and answers the purpose of both sear and trigger, and may be applied to either side upon the center pin. The action of the trigger is caused by a small spring covered with a guard. The lock cover has a joint, shuts fast by a double bolt or locking spring, and opens by the pressure of the finger or thumb on the bolt leaver assisted by a small spring, a leaver which fixes on the end of the main center pin to cock the gun. The fire and smoke occasioned by the prime in the pan being fired are conveyed through a tube, which represents a part 35 of the gun stock, and is about sixteen inches long, or may be continued

Nock, Jover, & Green's Improvements in the Locks of Fire-arms.

to the muzzle of the gun. This covered lock may be applied to either side of the breech of the barrel.

In witness whereof they, the said Henry Nock, William Jover, and John Green have hereunto set their hands and seals, the Fifth day of August, in the fifteenth year of the reign of our 5
Sovereign Lord George the Third, by the grace of God of Great Britain, France, and Ireland King, Defender of the Faith, and so forth, and in the year of our Lord One thousand seven hundred and seventy-five.

HENRY NOCK. (L.S.) 10
W^m JOVER. (L.S.)
JOHN GREEN. (L.S.)

Signed, sealed, and delivered by the above-mentioned Henry Nock, William Jover, and John Green, in presence of

15

W^m YOUNG KNIGHT.
JOS. LOVE.

AND BE IT REMEMBERED, that on the same Fifth day of August, in the year abovesaid, the aforesaid Henry Nock, William Jover, and John Green came before our said Lord the King, in His Chancery, and 20
severally acknowledged their Specification of their Invention aforesaid, and all and every thing therein contained and specified, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made in the sixth year of the reign of the late King and Queen William and Mary of England, and so forth. 25

Inrolled the aforesaid Fifth day of August, in the year abovesaid.

LONDON:
Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1854.

Fig. 2. A View of the improved pan presenting its appearance when the Lock is screwed or fastened to the Barrel showing the outward or closed end of the Tube or Chamber stopped up by means of a moveable Screw Plug or Slide marked F. C. Is the interior or open end of the Tube placed opposite to or in a line with the Touch Hole of the Barrel.

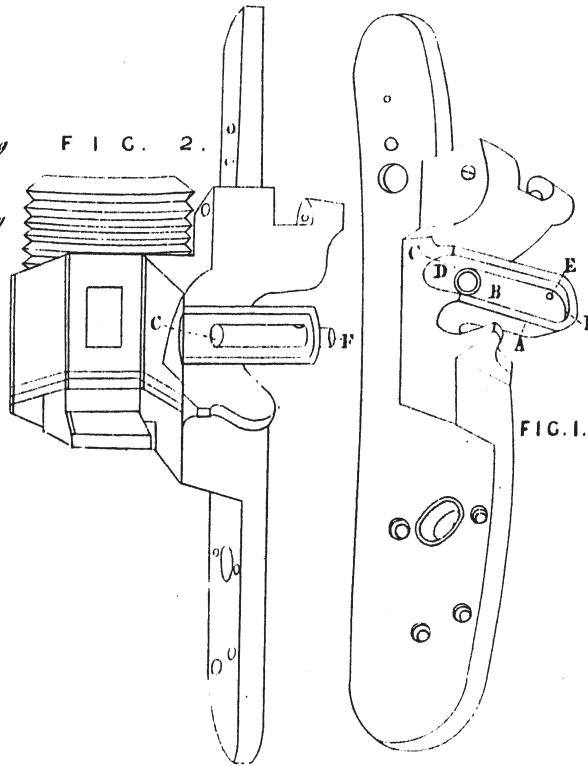
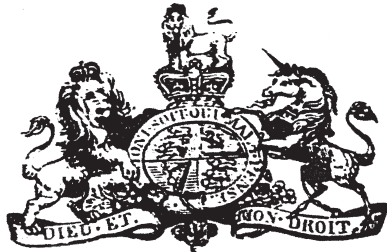


Fig. 1. Is a view of the Lock Plate with the improved pan applied to it
 A The Pan
 B The Tube or Chamber in the Pan in a line with the Touch Hole of the Barrel
 C The Interior, or open End of the Tube
 D The fire or open Space between the inner End of the Tube and the Touch Hole of the Gun
 E The Hole resembling a Touch Hole on the surface of and into the Tube near its outward or closed End.
 F The outward or closed End.

The enrolled drawing is colored

Malby & Sons Lith

LONDON: Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE
 Printers to the Queen's most Excellent Majesty. 1854



A.D. 1816 N° 4054.

Pan for Locks of Fire-arms.

NOCK'S SPECIFICATION.

TO ALL TO WHOM THESE PRÉSENTS SHALL COME, I, SAMUEL NOCK, of Number One hundred and eighty, Fleet Street, in the City of London, Gun Maker, send greeting.

WHEREAS His Royal Highness the Prince Regent, in the name
 5 and on behalf of His Majesty, did, by Letters Patent under the
 Great Seal of Great Britain, bearing date at Westminster, the Twelfth
 day of August, in the fifty-sixth year of the reign of His Majesty King
 George the Third, give and grant unto me, the said Samuel Nock, his
 especial licence, that I, the said Samuel Nock, during the term of years
 10 therein mentioned, should and lawfully might exclusively use, exercise,
 and vend, within England, Wales, and the Town of Berwick-upon-
 Tweed, my Invention or "IMPROVEMENT IN THE PAN OF THE LOCKS OF
 GUNS AND FIRE-ARMS;" in which said Letters Patent there is contained
 a proviso, obliging me, the said Samuel Nock, by an instrument in
 15 writing under my Land and seal, to cause a particular description of
 the nature of my said Invention, and in what manner the same is to
 be performed, to be inrolled in His Majesty's High Court of Chancery
 within two calendar months after the date of the said recited Letters
 Patent.

Nock's Improvement in the Pan of the Locks of Fire-arms.

NOW KNOW YE, that in compliance with the said proviso I, the said Samuel Nock, do hereby declare that my said Invention is described in the Drawing hereunto annexed, and the description hereunder written. In witness whereof, I, the said Samuel Nock, have hereunto set my hand and seal, the Eleventh day of October, in the fifty-sixth 5 year of the reign of His Majesty King George the Third, and in the year of our Lord One thousand eight hundred and sixteen.

The following is a Specification of my Patent for an Improvement in the Pan of Locks of Guns and Fire-arms:—The improvement consists in a hollow tube or chamber in the pan of the lock opposite to the touch-hole of the barrel, and lying in such a direction as that a straight line passing through the centre of such tube or chamber from one end to the other would enter the touch-hole of the barrel. This tube or chamber in its length occupies about three fourth parts of the length of the pan, leaving the remaining part of the pan between it and the touch-hole of the gun a free space, or it may occupy in its length the whole or any part of the length of the pan. That end of the tube or chamber nearest the touch-hole of the barrel is open, the other or exterior end is closed or stopped up, either by being left or made solid, or by a screw plug or slide applied to such exterior end, and which screw plug or slide, if capable of being removed or taken out, will facilitate the cleaning out of the tube or chamber when foul. The tube or chamber can be made of such proportionate size to the pan as to be wholly or partly covered with the gunpowder, and to leave either the whole or part of the surface of the pan to be covered with gunpowder. 25 A small hole or vent resembling a touch-hole is made in the tube or chamber near to its exterior end, whereby a more ready communication between the gunpowder on the surface of the tube or chamber and the gunpowder within it is obtained, though such hole or vent is not absolutely necessary. This tube or chamber may be shortly described 30 as resembling a small cannon fixed in the hollow of the pan, opposite to and firing straight into the touch-hole of the barrel. This improvement may be applied to all sorts of guns and fire-arms, but it is more peculiarly adapted to such as prime themselves from the loading or charge put into the barrel. For the more minute particulars the 35

Nock's Improvement in the Pan of the Locks of Fire-arms.

details in the annexed Drawing may be referred to. Figure 1, is a view of the lock plate with the improved pan applied to it. A, is the pan; B, the tube or chamber in the pan, in a line with the touch-hole of the barrel; C, the interior or open end of the tube; D, the
 5 free or open space between the interior end of the tube and the touch-hole of the gun; E, the hole resembling a touch-hole on the surface of and into the tube near its outward or closed end; F, the outward or closed end. Figure 2, is a view of the improved pan, presenting its appearance when the lock is screwed or fastened to the barrel, shewing
 10 the outward or closed end of the tube or chamber stopped up by means of a moveable screw plug or slide marked F. C, is the interior or open end of the tube or chamber placed opposite to or in a line with the touch-hole of the barrel.

SAM^l NOCK. (L.S.)

15 Signed, sealed, and delivered by the within-named Samuel Nock, in the presence of

JAS B. BOSTOCK,
Tokenhouse Yard.

AND BE IT REMEMBERED, that on the Eleventh day of October,
 20 in the fifty-sixth year of the reign of His Majesty King George the Third, the said Samuel Nock came before our said Lord the King, in His Chancery, and acknowledged the instrument aforesaid, and all and every thing therein contained and specified, in form above written. And also the instrument aforesaid was stamped according to the tenor
 25 of the Statute made in the fifty-fifth year of His said Majesty's reign.

JERVI^L.

Inrolled the Eleventh day of October, One thousand eight hundred and sixteen.

LONDON :

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
 Printers to the Queen's most Excellent Majesty. 1854.