

A Note on Flint-locks, and the Flintlock

By S. James Gooding*

In this publication, “flintlock” or “French lock” will be used to identify the flint mechanism with a joined hammer and pan cover (frizzen), an internal mainspring, and a vertical acting sear working on a notched tumbler. This is based upon Urquhardt’s translation from the Swedish of Torsten Lenk’s *Flintlaset*. All other flint-using locks will be recognized as flintlocks, with a modifier if more precise identification is required.

In the study of firearms history, early arms terminology has been accurately adopted by some historians, but just as frequently it has been changed by some writers to suit the occasion. When starting to pull this ‘talk’ together I dug out some previously unpublished notes dated as early as 1982 on the same theme with the title “A Snaphance by any other name would still be a Flint Lock.” One of them had a subtitle based on an old expression often used by my mother “Fools rush in, where angels fear to tread.” Perhaps it *is* a fool’s errand to attempt to make changes to more than 300 years of language evolution but I believe it is worth a try.

Early gun locks can readily be placed in the order of evolution based upon the four major sources for ignition;

1. Match,
2. Pyrites,
3. Flint,
4. Fulminate

The matchlock with its smoldering match, the wheel-lock with its pyrites and wheel, and the many forms of percussion, are readily identified by their obvious features.

But the flint locks which appeared shortly after the invention of the wheel-lock and are found in many forms developed over more than 300 years, are another matter. They have been grouped and roughly identified by historians as:

Snaphance Flint-lock Miquelet

Mechanically, each of these have been identified as “snaplocks” based on the snapping action of the cock. Technically, each group are also flintlocks.

The notes which follow have been extracted from Chapter 4 (Snaphance) and Chapter 6 (Flintlock) of the writer’s “*An Aide Mémoire to Firearm Ignition Identification, 1400-1900*,” a work in progress. They are presented in this form in an attempt to clarify some of the vocabulary in use by arms historians because it is not a subject that can be expressed verbally: how else would it be possible to orally

N.B. Spelling in this article is based on that found in *The Oxford English Dictionary*.

*This article was prepared by Jim for the Society just before his untimely death. I am sure he wanted it to be shared with the Society.—Editor



express the differences between ‘flint lock,’ ‘flint-lock’ and ‘flintlock’?

This paper will look at the English language and how it has adapted some foreign vocabulary to put names to the flint-using ignitions. It will deal only with the flint locks that evolved in England and Eastern Europe to be replaced by the French lock in the 17th century and the perfected flintlocks of the late 18th and early 19th century.

It will save for a later day, the study of the miquelets of Spain (*patilla*) and Italy (*alla romano*) which, with only slight modifications, influenced some lock development in northern Europe and the Islamic world; the Madrid or *Madrileña* lock of Spain which externally looks so much like the French locks created at Paris, but which are not flintlocks; some of the almost unique designs created by Portuguese gun-makers; and all of the non-conforming, innovative, or experimental locks made for military or sporting customers. They too are flintlocks, but each fall into a class of their own.

THE SNAPHANCE

This study begins in the first half of the 16th century with the introduction of a gun lock using a stone striking a bar of steel to produce a spark that would ignite the priming in the pan of a firearm. It is considered that this mechanism likely originated in northern Europe, perhaps as early as the first quarter of that century but solid evidence is not available

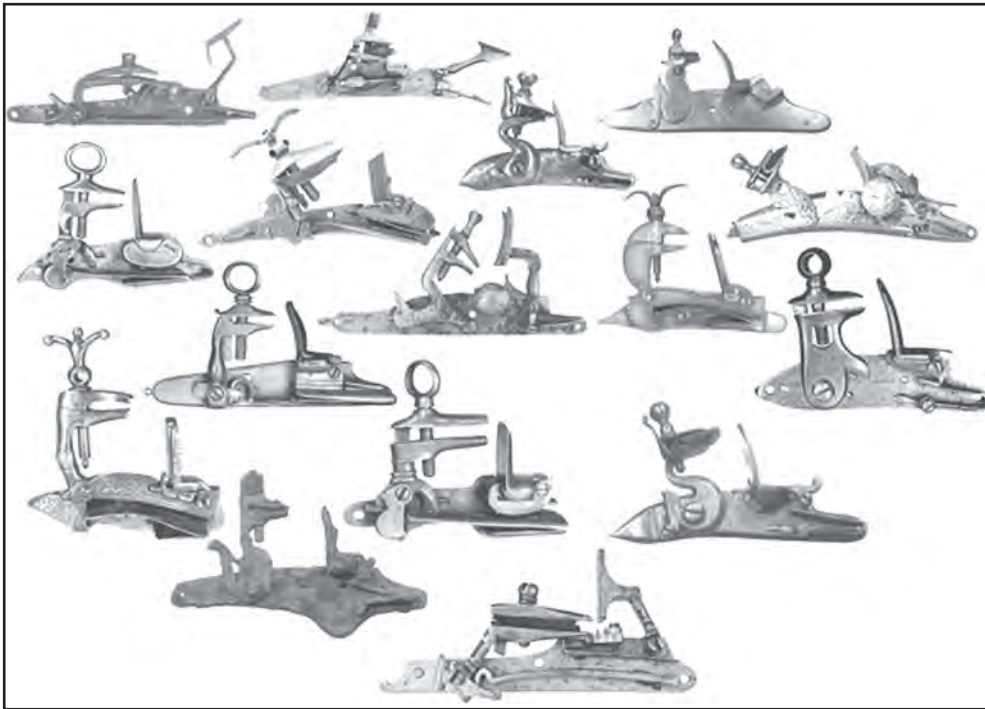


Figure 1. Sixteen flint locks but only two flintlocks, and both are flintlocks with a dog catch.

until the late 1540s when such a gun is mentioned in Sweden where it is identified as a snaplock (*snaplås*).

Although the first flint muskets were probably being produced in England by at least 1550, no solid evidence had been found until Dr. John Cooper, in his research on the English lock, located a document dated February, 1570. It is not quite as clear as one would like but it makes reference to 18 flint-lock “calivers” of the type we now call “snaphance” and four wheel-lock pistols, which required repairs. He found:

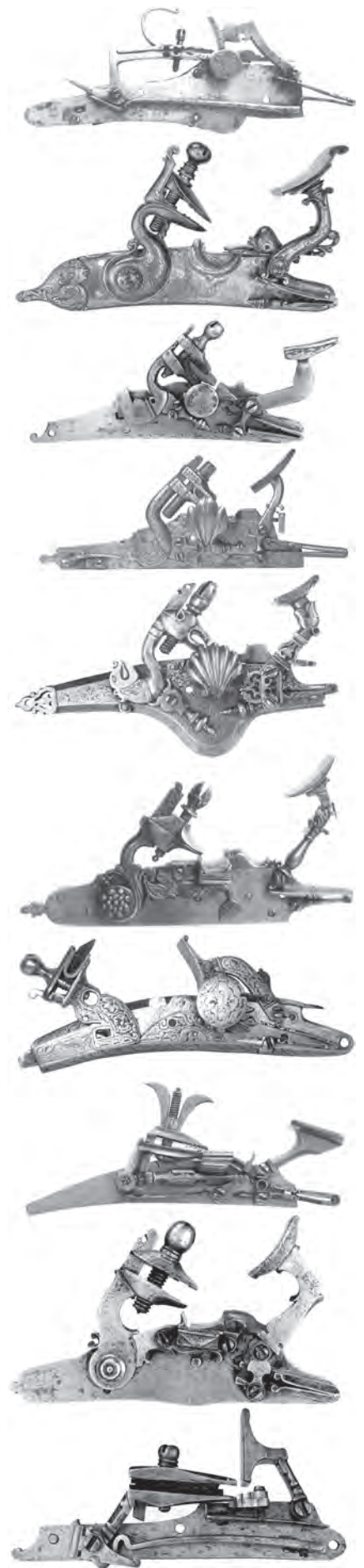
A brief noate of the most necessarie munitions to be provided at this present in the office of the Ordinance videlicet. ... Calivers complete whereof 4 lacking stanes [stones or cocks] 2 lacking pannes [pans] their scrapers [pans lacking their steels?] 2 having their stockes broken and 7 without stocks whereof 3 broken. Daggess [wheel-locks] furnished with keyes and moulds whereof 4 wanting purfs[?] [purses?] and charges [cartridges]¹

No contemporary English name for the new ignition system has been found before 1580 when a document preserved in the archives of St. Paul’s Cathedral, London, records that the Dean and Chapter equipped nine horsemen for service in Ireland, with “9 cases of snaphaunces (sic) at 40s the peece” although four years earlier, in 1575, Henry Killigrew, Queen Elizabeth’s agent in Scotland, described “dagges, otherwise called snaphaunces”²

THE ETYMOLOGY OF SNAPHANCE

Before identifying the snaphance it would be useful to look at how the word has been used over the years. During more than a half century, the late Dr. Arne Hoff, (1906-1997) Director of the Tøjhusmuseet in Copenhagen, researched and frequently wrote on the ignition system which he would spell “Snaphaunce.”³ He records that it

Figure 2 (top to bottom): Snaphance locks by country of origin: Sweden, Sweden, Italy, England, Russia, Italy, Scotland, France; Italy, Russia. All are classed as snaphance but this illustration indicates the great variation of snaphance design. The only feature common to all is the steel fastened perpendicular to the arched steel arm and they are identified by other features; some common, some unique.



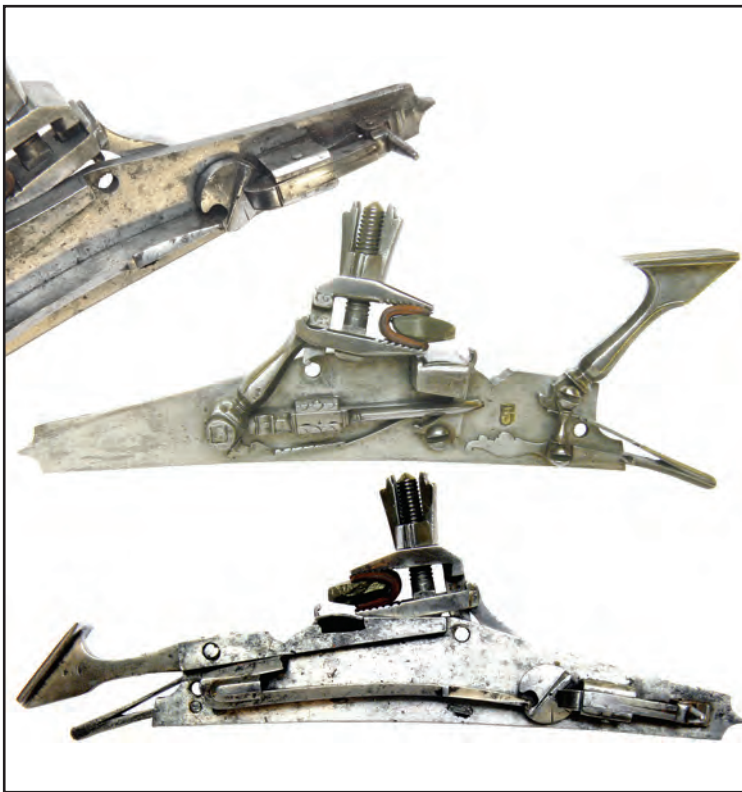


Figure 3. This snaphance is one of those made by Simon or Jacques Robert for the Duke of Savoy about 1590. It was formerly in the Samuel Rush Meyrick collection and it was this musket on which he based his identification of the English snaphance. *Pitt Rivers Museum, Oxford.*



Figure 4. The earliest known dated English snaphance lock is on a petronel bearing the lock mark "RA under a fleur-de-lis." Included in the decoration is the date 1584. *Tøjhusmuseet, Copenhagen, No. 19824.*

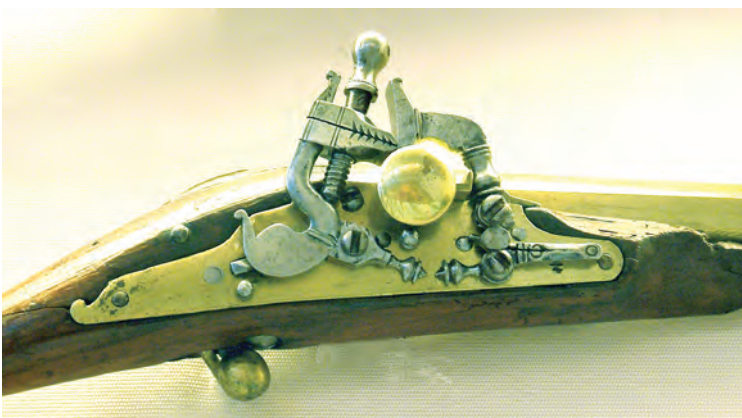


Figure 5. A small English snaphance pistol, c.1615. The barrel, lockplate, and pan are brass. The tail of the lockplate has the typically English 'monster head' design. *Palazzo Ducale collection, Venice.*

had first been found in a document in New High German dated 1494 as '*snaphaan*.' In central Europe at that time it was used to describe a "highwayman, or a brigand on horseback." Apparently, sometime in the next half century, the meaning of snaphance was expanded to include the flint-lock firearms used in that line of business. It was also found with a related form or meaning in the literature of Germany, Sweden, Denmark, France, Scotland, and it is first recorded in England in 1538. In each instance, one meaning for the word referred to robbers and those of like vocation.

There are many who have written that the word had its origin because it was the weapon of choice by chicken thieves; and by others comparing the resemblance of the action of the cock to a chicken snapping to pick up food. Variations of the story have been appearing in print over the centuries but none with any evidence. The most logical explanation is that in German, Dutch, Swedish, and Danish, *baan, habn, or bane*, etc., is the word for a cock or rooster, and the snapping action of the mechanism, when joined, produces snaphance when adopted into English.

One other obvious choice, based on the snapping action of the lock, combined the snapping action with "lock" to produce 'snaplock,' which in Swedish is *snappelås*. The first time *snappelås* has been found for the 'new' flint-using firearm is in a 1547 Swedish royal document.

Nils Drejholt, Head Curator (emeritus) at Livrustkamarren in Stockholm, has re-catalogued all of the firearms in the Swedish Royal collection. The first two volumes have been published and the last is in production. He reports that the usual contemporary catalogue description was *bössa med snapplåhs* (gun with snaplock). The word 'snaphaunce' (sic) does not appear in any official Swedish records until well into the 18th century. Mr Drejholt wrote:

I have tried to look into Swedish sources to see when and how *Snappbane* was used. The Word Book of the Swedish Academy (the word list of Swedish language as the *OED*) uses *snapplås* as the main word - saying that *snappanelås* seems to be a romantic fairly late use, actually more referring to the guns as used by the *Snapphanar* [a person with criminal intent] than an actual name of the lock type. This is also consistent with our own inventory texts. During the 17th Century, in the inventories of 1654, 1663, 1671, 1683, 1696 and 1708 the term used is *snapplås* or *snappelås*, and this terminology is then copied in later inventories, only to be replaced during the 19th Century with *snappanelås*. The first time the term appears in our inventories is in 1730 for items coming into the armoury at the beginning of the 18th Century.⁴

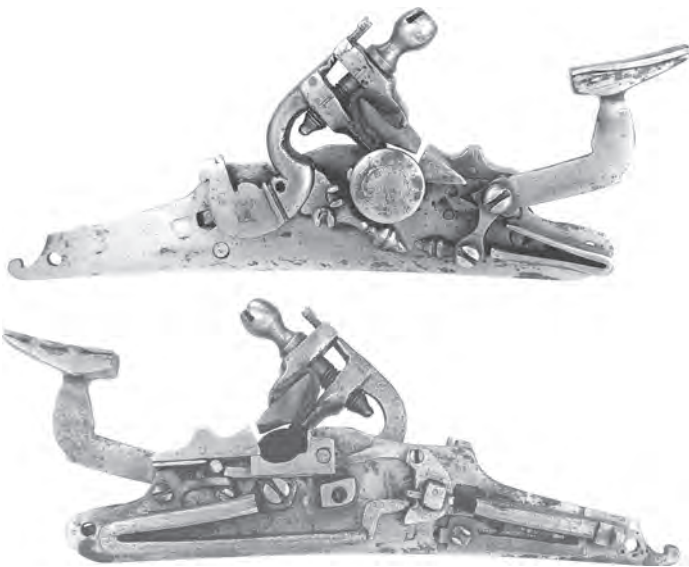


Figure 6. A classic English snaphance, c.1620. What is described as the monster head design on the tail of the lockplate appeared about 1590 and disappeared c.1630, about the time the Type 1 English lock evolved.

In Europe, where it is considered the ‘snaphance’ originated, the German word of choice, seems to have been abandoned (if it was ever common) and *steinschnappschloss* or *schnappschloss* adopted. But, in the 17th century inventory of Wrangel’s Armoury at Skokoster (1645-1653), where German was the primary language, flint arms are usually listed recorded as *flindtschloss* or *flintenschlösse*.⁵

RECOGNITION OF THE SNAPHANCE

In the 17th century, everyone who needed to know, knew exactly what was meant when a snaphance was mentioned in either speech or text. But 150 years later, when early collectors and historians encountered the word, it had lost its meaning and a precise definition was now required. It was not until 1824 when Samuel Rush Meyrick, later Sir Samuel, read “*A Critical Inquiry into Antient Armour*,” a significant paper on the subject, before the members of England’s Society of Antiquaries.

Meyrick was not the first gun collector but he was one of the first arms historians to publish on the evolution of firearms based upon his research in the early literature; he has been described as “the father of the study of early arms and armour.” In 1826 he was asked to assist in the revision of the exhibits in the national collection of arms and armour at the Tower of London and in 1828 he was requested by King George IV, an active gun collector in his own right, to rearrange the armour at Windsor Castle. In 1832 he was created a Knight of the Hanoverian Guelphic Order and a Knight Bachelor. He was also the first to provide a description of the snaphance: it was brief. In 1824, he wrote:

I imagine that I have discovered both snaphances and tricker-locks in my son’s collection. The first is where a moveable hammer is placed beyond the pan in imitation of the cock to a wheel-lock, and brought down upon it in the same manner. The cock being placed according to the present mode, strikes against it on pulling the trigger; and it is curious to remark that this hammer is furrowed in imitation of the wheel in a wheel-lock.⁶

and again on page 101:

The snaphaunce differed from the modern firelock, in the hammer not forming the cover of the pan.

His identification was probably based in large part on John Cruso’s *Militarie Instructions for the Cavall’rie* published in 1632, in which Cruso described the loading and firing of a snaphance pistol that led Meyrick to the identification of the English snaphance and to put it into the vocabulary of arms collectors and historians. Meyrick’s ‘discovery’ was expanded by Thomas Fosbroke, his good friend and neighbour, who lived on the opposite bank of the River Wye. In his *Encyclopaedia of Antiquities* published in 1825, Fosbroke wrote:

In the reign of Charles I [1625-1649] the *snaphaunce* was introduced. It had a moveable hammer placed upon the pan in imitation of the cock to a wheel-lock, and brought down upon it in the same manner. The cock being placed according to the present mode, strikes against it on pulling the trigger, and it is curious to remark, that this hammer is furrowed in imitation of the wheel in the wheel-lock. The *snaphaunce* differs from the modern firelock, in the hammer not forming the covering of the pan.⁷

Meyrick slightly expanded on these features in another paper read before the Society of Antiquaries on February 7, 1827 and included them in the compilation of engravings produced by Joseph Skelton in 1830, where he described them:

A snaphaunce musket, a Dutch invention, which derived its name from the troops who made use of it. These were at first a set of marauders termed Snaphaan or Poultry stealers,” and their weapon was an improvement on the match-lock musket with some contrivances suggested by the wheel-lock.⁸

He probably thought he was describing the 16th century English snaphance when he wrote that he had discovered a snaphance in his son’s collection, but the lock on which he based his thesis has been identified as one of the guns made by Simon, or his son, Jacques Robert, for the Duke of Savoy in southern France. It is now in the Pitt Rivers museum collection at Oxford.⁹

The identification of that particular lock as Meyrick’s model is confirmed by Fosbroke who described the “furrowed” steel, and the lock illustrated by Skelton in *Engraved*

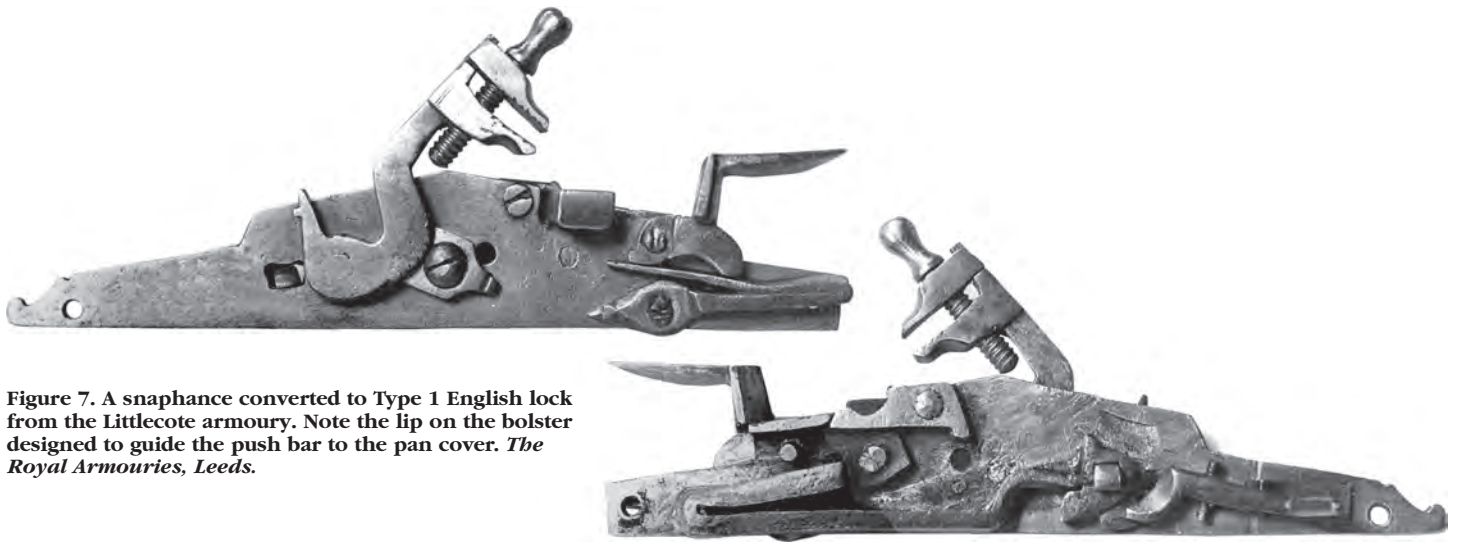


Figure 7. A snaphance converted to Type 1 English lock from the Littlecote armoury. Note the lip on the bolster designed to guide the push bar to the pan cover. *The Royal Armouries, Leeds.*



Figure 8. A classic Type 1 English lock c.1620, with a dog or back-catch for safety and buffer to arrest the forward movement of the cock. *James D. Forman collection.*

Illustrations of Antient Armour from the Collection of Goodrich Court, Herefordshire where those features are present.

Meyrick's identification of the snaphance was quite correct as far as it went. In his 1827 paper he suggested a date sometime during the reign of Queen Elizabeth (1558-1603) and he did identify it as the version of the flint lock introduced in England in the 16th century. He apparently did not realize there were other forms of lock which historically also went by the name snaphance and created the problem that most English speaking arms collectors since then have considered that the snaphance had a much longer service-life than it did.

It is the characteristics provided by Meyrick which arms historians now most often use to identify most snaphance locks. On all of the English examples, and many

(but not all) others, there is an internal mainspring and a lateral acting sear with a full cock stop passing through the lock plate, to engage with a tail on the cock. The fall of the cock is stopped by a buffer. The frizzen (the contemporary terms were 'steel,' 'battery,' or 'hammer'), is perpendicular to an arching arm attached by a screw to the lock plate with resistance provided by a smaller spring. The pan cover is a separate piece (a feature adopted from the wheel-lock as noted by Meyrick), which slides back as the cock falls to expose the priming. On many there is a safety lever behind the cock to prevent accidental discharge.

THE ENGLISH LOCK

Early in the second quarter of the 17th century, an unknown but innovative English gunmaker added a one-piece steel and pan cover, modified the tumbler and horizontal sear of the snaphance to provide a half-cock position, still with the sear nose passing through the lockplate to engage an extension or tail on the cock. This created what 17th century cataloguers of gun collections in Europe may have identified as 'the English lock,' although they could have been referring to something else. In any event, that name has since been accepted by arms collectors to identify the form, although it was not a name used in England.

It is not known when the English lock appeared. John Cruso, in his *Militarie Instructions*, which illustrated the arms drill with the wheel-lock pistol and snaphance carbine, was published in 1632 indicating that these were still in use at that date. But there is no way to know when he prepared the sketches for his engravings which would have provided a more significant date. It may have taken, from beginning to end, a year or two or even more to complete the 12 full page and the 24 vignette engravings of the manual of arms, and the type setting. This would suggest a date of 1632 or possibly

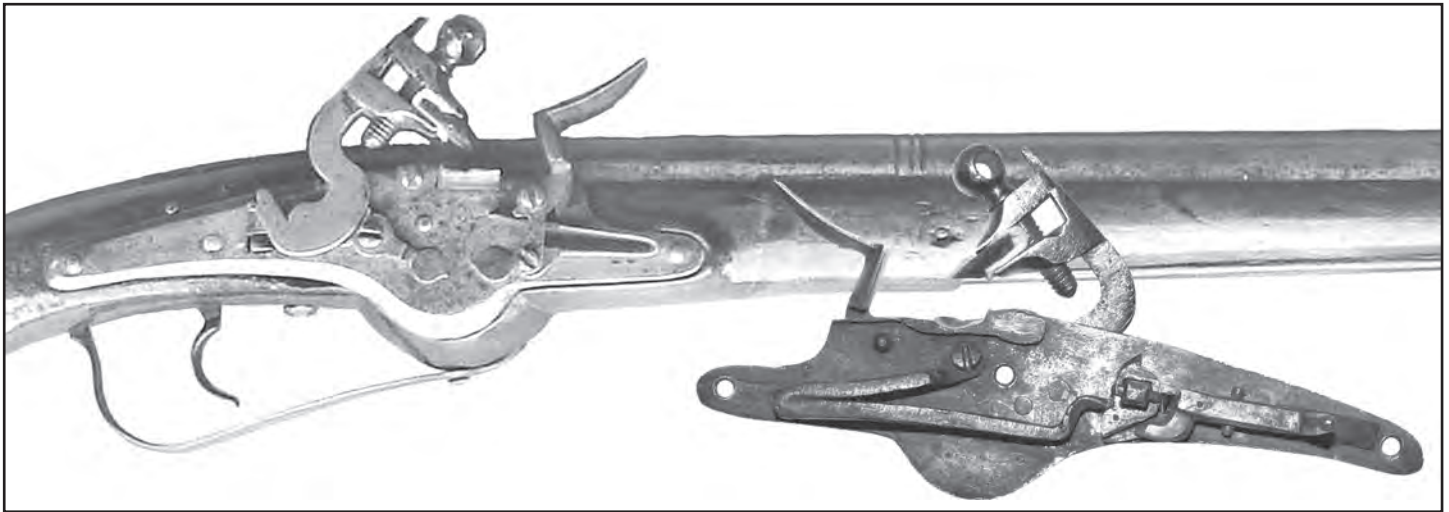


Figure 9. The Type 1 English lock of wheel profile was a form of pistol lock popular during the Civil Wars (1642-1651). Gunmakers have not been identified but they were undoubtedly produced by London gunmakers for the Parliamentary army. *Private collection, Great Britain.*

a year or two earlier before the appearance of an alternative to the snaphance.

In 2003, Messrs Godwin, Cooper and Spencer published a comprehensive study of the literature and a photo record of survivors of the early English flint locks in *The Park Lane Arms Fair* catalogue No. 20.¹⁰ Their research identified two mechanical variations which they placed in chronological order and called Type 1 and Type 2 English locks, indicating the availability of the English lock at least as early as 1639.

A date for the introduction of the English lock has not yet been found but they illustrated the first documentation located to indicate that an alternative to the snaphance did exist. A "Council of War" purchase order dated the 9th day of January 1640, provided a list of "The prices to be demanded" [by the gunmakers] for "Halfbent pistols" and "Half bent snaphans Carabines."¹¹ These could only have been fitted with Type 1 or Type 2 English locks.

TYPE 1 ENGLISH LOCK

The shape of the snaphance lockplate with its flat profile and hump-back was retained but significant changes were incorporated into the internal mechanism.

The most obvious characteristic to be changed with the introduction of the English lock was the joining of the steel and pan cover to become the frizzen, but the most significant change was the incorporation of a safety device in the tumbler and sear mechanism. This in effect gave the sear two noses - one acting on the tumbler at half cock or half bent as it was known and the other acting on the tail of the cock at full bent.

The nose of the horizontal acting sear passed through the lockplate to act as a stop on an extension or tail of the cock to provide the full-cock position. Safety at full cock was almost always provided by a dog or "back catch" acting on the tail of the cock as described by Cruso on the snaphance,

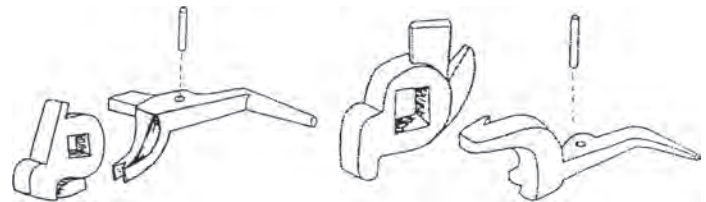


Figure 10. (Left) Type 1 English lock sear mechanism. Variations of the sear nose will be encountered: (Right) Type 2 English lock mechanism with the half-cock lug at the top of the tumbler and the full-cock position on the rear. *Illustrations courtesy Brian C. Godwin.*

and a buffer was attached to the lockplate to arrest the fall of the cock. On a very few survivors, perhaps less than 2%, this action was accomplished by a shoulder on the back of the cock to be arrested by the bolster on the lockplate.¹²

TYPE 2 ENGLISH LOCK

The significant change that created the Type 2 English lock, which probably emerged less than a decade after the Type 1, was mechanical: the tumbler was altered to provide both a half cock and a full cock position, with all of the mechanism inside the lockplate. It was forged with a rectangular lug on the top edge, which was slightly undercut on the front side, and a ledge and tapered ramp was located on the rear in the lower quarter. The sear and trigger bar were combined as a single bar with a step-like shape. The end of the top step was shaped to wrap around the lug in the half-cock position while the other, the horizontal step, was flat and served as the rest for the sear when at full cock. When the trigger was pulled, the sear moved off the step, sliding up the ramp and the half cock hook being clear of the block, allowed the cock to fall.

Although it is only in recent years that these mechanisms have been identified by arms historians as 'The English lock,' In England at the time, they simply transferred the name 'snaphance' to the new pattern lock and it was retained



Figure 11. A form of Type 2 English lock with the internal frizzen spring popular on French flintlocks between about 1630 and 1650. Ralph Venn (c.1626-d.1663), a charter member of the Gunmakers' Company, is known to have produced this variation for the Parliamentary Army. *Royal Ontario Museum, Toronto.*

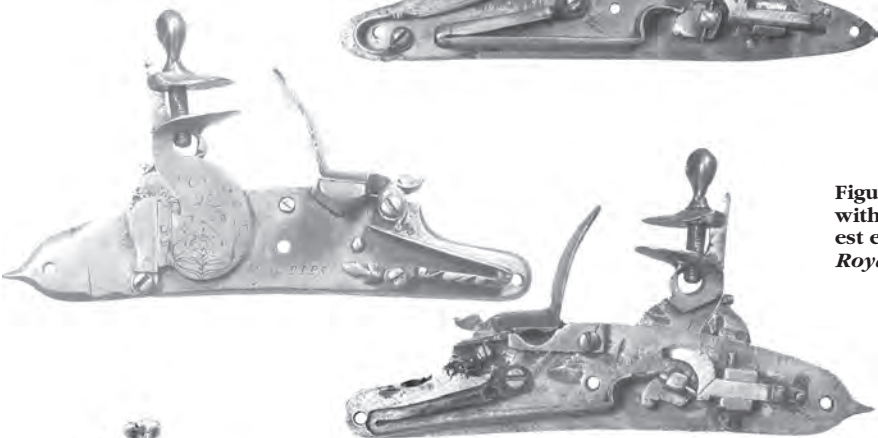


Figure 12. A later Type 2 English lock engraved "H. Cripps" with unidentified arms on the cock. This is one of the latest examples of this form, two of which are dated 1679. *Royal Ontario Museum, Toronto.*

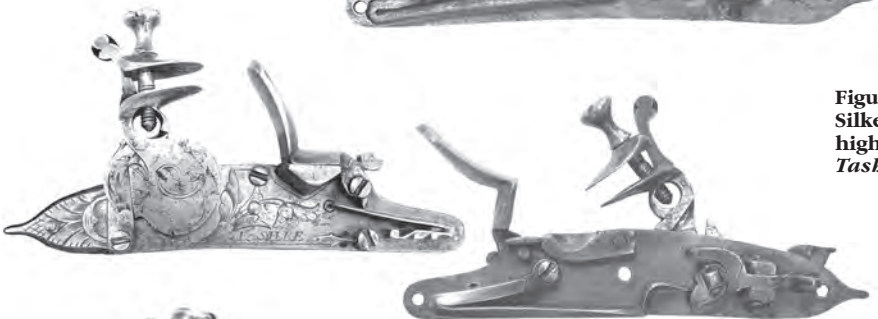


Figure 13. A Type 2 English lock from a pistol by Robert Silke who became free of the Gunmakers' in 1666 and held high offices in the Company. He died 1701. *Michael Tashman collection.*



Figure 14. A Type 2 English flint-lock by William Upton of Oxford, c.1660-1670, with a lockplate in the Parisian style, a horizontal acting sear, and a dog-catch on the bottom of the cock. *Craig F. Ross collection.*

by the Ordnance, at least until 1683, and probably for as long as the lock remained in service, or in arsenals.

The English Military Discipline published in 1686 indicate that all firearms described in the manual of arms were identified as either "muskets" (i.e. matchlocks) or "firelocks" (i.e. flint locks) which probably included both English locks and flintlocks. Two English lock examples, one musket and one detached lock, both by Henry Crips who became free of the Gunmakers' Company in 1676, both dated 1679, are known, and the documentation that the type could still be found in Ordnance Stores in 1683, provide what must be close to a terminal date for the English lock. It has not been discovered

when these "snaphance" arms were taken out of stores but it was probably at the same time the matchlocks were withdrawn from service during the rein of Queen Anne (1702-1714). Actually, the term 'snaphance' continued to be used by the Ordnance until well into the 18th century but by that time 'firelock' was part of the vocabulary of the sporting public.

Changes to the lock appearance were introduced about the same time as the internal mechanism was improved to create the Type 2. The hump was removed from the earlier plates to give a flat, lighter and narrow appearance with a pointed tail, the tail of the cock was removed and the back catch, unnecessary, but often retained, was designed as part

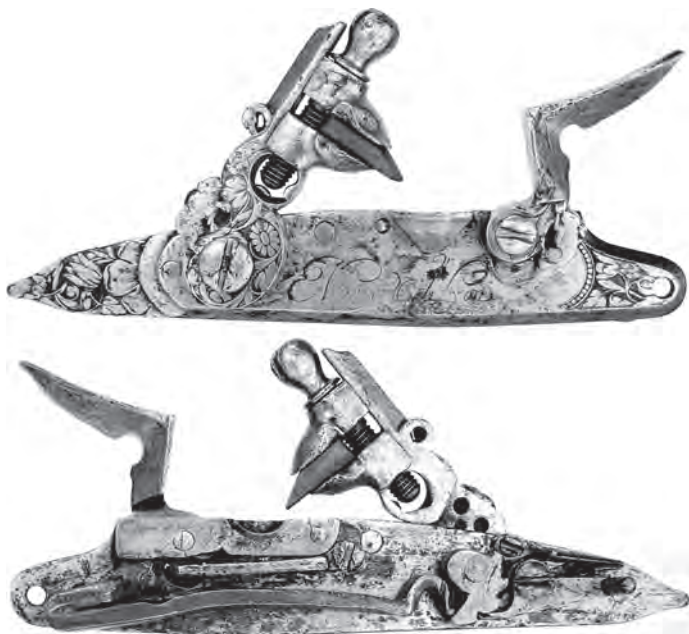


Figure 15. A French flintlock c.1640, signed *Mayer à Lyon*, a maker who was active c.1640-1660. The lockplate and cock are engraved with floral decoration, and there is a standing dog(?) chiseled on the rear of the cock.

of the overall appearance and it is estimated that over 80% of Type 2 examples have a dog catch.

The stepped tail and throat-hole cock were introduced and for a time, the frizzen spring was moved to the inside of the lock. In the 1640s, barrel marks and lock signatures begin to appear. The shoulder on the back of the cock to stop the forward movement was introduced and the buffer, being unnecessary, was removed. By 1650, the flat lockplate became wider and the cock and back catch were designed together. This feature continued to be used on military arms in the 18th century and on a flintlock arms made for the African trade where they were called ‘Dog Locks.’

THE FRENCH LOCK (A.K.A. THE FLINTLOCK)

In the second decade of the 17th century, a decade or so before the English lock was being perfected in England, the ignition system that became known (except in France) as the French lock, had its origin at Lisieux in Normandy. It had a one-piece steel and pancover and an internal mainspring. But most significantly, it had a vertically acting sear and a tumbler with full and half-cock notches. This lock quickly became known as “the French lock” (in Germany as *französische schloss* or in Sweden as *franzoische flinte*).¹³ It was by this name that it was known for more than 200 years throughout much of Europe. The Board of Ordnance in England, gave an order to William Evetts, a London gunmaker, for “Carbynes extraord[inary] with French locks at 23s/-.” The order was probably issued in 1661 as payment was made to his widow in March, 1662.¹⁴ This is the first time the name, “French lock”

has been found in English but it was probably in common use at the time and it continued to be applied by many gun users to the flintlock until well into the 19th century.¹⁵

It was also the first time there were two flint-lock patterns in service which had to be identified: the English lock, known at the time as ‘snaphance’ and the ‘French lock.’ Evidence of the distinction is found in a quotation provided by the London Gunmakers Company dated 1683 (Fig. 16) which provided the charges for different types of repairs to muskets that at the time were identified by their lock mechanism as “Matchlocks Musquetts, Snaphance Musquetts, Snaphance Musquetts Extraordn, Carabines wth French Locks and Wallnut Stocks, Carbiness Extrd with Round Locks, Musquettoons, Blunderbusses Stockt wth Beach, Pistolls.”

The 1686 “Exercise of the Granadiers on Foot” described in that chapter of the *English Military Discipline* mentioned above would have been carried out with either the English lock or the French lock, perhaps even mixed in the ranks, and their arms are described only as ‘firelocks.’

THE FLINTLOCK (A.K.A. FIRE-LOCK)

By the beginning of the 18th century, the French lock was the ignition of choice in England and throughout most of Europe. It did not need to be described in Ordnance records, sporting publications, or private correspondence because there was no alternative, but if there was reason to be more precise, the words would have been descriptive of purpose: musket or firelock, fowling piece, double gun, pistol, or perhaps a name affectionately assigned because of the master gunmaker who made the piece.

Modern dictionaries do not help. Webster’s *New World Dictionary* called them ‘flintlock’ while the Random House *Universal American College Dictionary* called them ‘flint-lock.’ This follows the form laid down by the University of Chicago’s *Manual of Style* for academic writers and publishers which was first printed in 1906.

The *Oxford English Dictionary*, arbiter of spelling in the English language, recorded the first use of the combination of words “flint-lock,” as appearing in *Palus Armata* by Sir James Turner published in 1683. He wrote:

It is impossible to hide burning matches so well in the nighttime, especially if there is any wind, (although there be covers made of white Iron, like extinguishers purposely for that end), but that some of them will be seen by a vigilant enemy, and thereby many secret enterprises are lost. It were therefore good, that for the half of the Muskets (if not for them all) flint-locks were made and kept carefully by the Captain of Arms of each Company, that upon any such occasion or party, the half or more of the other locks might be immediately taken

Repairing Small Arms according to Agreement made with the Gunmakers in March 1683/4

	Match Locks	Musquettes	Snaphance	Musquettes	Snaphance	Musquettes	Snaphance	Locks and Stocks	Carbines	Musquettes	Blunderbusses	Pistols
Repaired	0. 8	0. 6	0. 3	0. 8	0. 9	0. 10	1. 6	0. 9	0. 9	0. 9	0. 9	0. 9
Repaired and repaired	0. 9	1. 0	1. 2	1. 3	2. 6	1. 0	1. 0	1. 6				
Repaired repaired and Lockit		2. 0	2. 0	2. 9	2. 9	2. 0	2. 6	3. 0				
Repaired repaired and Lockit	1. 6											
Repaired repaired and Stockit	4. 0	4. 2	6. 0	6. 3	10. 6	6. 0	4. 6	5. 9				
Repaired repaired Stockit and Lockit		5. 2	7. 6	7. 0	12. 0	7. 0	5. 6	7. 10				
Repaired repaired Stockit and Lockit	4. 10	7. 2	9. 6	10. 0	19. 0	9. 6	7. 6	11. 6				
Repaired repaired Stockit Lockit and workit	5. 6											
Repaired repaired Stockit taken Proved Stockit and Lockit										12. 0		
Repaired repaired Stockit taken Proved Stockit and Lockit											10. 0	
Repaired repaired Stockit taken Proved Stockit												9. 0
Repaired repaired Stockit taken Proved Stockit												
Repaired repaired Stockit Lockit and workit	2. 0											
Strapping Musq ^{ts} and Carbines	3. 0											

Figure 16. A record of the prices to be allowed for "Repairing Small Arms According to Agreement made with the Gunmakers in March 1683/4 listing snaphance musquettes, French locks, and Round locks. The latter would also have been flintlocks in the Parisian manner as seen in Figure 17. Royal Artillery Institution, Woolwich.

off, and the flint-ones Clapt on by the gunsmiths of the Company and then there would be no danger of seeing burning Matches, the sight wherof hath ruin'd many good designs.¹⁶

Some writers have considered this to be the earliest use of "flintlock," as an early alternative in English for the French lock, but there is no evidence of that to be the case. At the time, there were two forms of flint-lock in the vocabulary of the sportsman and the Ordnance—the snaphance, which we now know was the English lock, and the French lock which is now known as the flintlock. Turner states on the title page of *Palas Armata* that his book was written in the years 1670 and 1671 and he probably made very few, if any, editorial changes in the 12 years it took to get it published. It is highly unlikely that Turner meant anything other than selecting either one of the then available flint locks.

The situation changed in 1807 when Alexander Forsyth obtained his patent for ignition by percussion. The Ordnance continued to describe their flint and percussion muskets as 'firelocks' until the introduction of the rifled muzzle-loader in the 19th century, but almost all sporting writers began to use 'flint-lock' whenever it was necessary to distinguish between the two:

Hawker, Peter. 1825, "For quick firing in a damp atmosphere the best of all the flint locks (sic) I have yet tried is one of Mr. D. Egg's, on the hammer of which he puts an oval of platina, and, into that, dovetails a sharp edge of the pan." ... Six years later he wrote about "Trials of Flint Locks against

Detonators" and in his table of contents he uses "Flint-Guns." It appears that the French Lock was not a part of his vocabulary.¹⁷

Blaine, D.P. 1858 *An Encyclopedia of Rural Sports*, Illustration of a flintlock with the caption, "Flint-lock." p. 751.¹⁸

Blanch, H.J. 1909 *A Century of Guns*, 1909, "The Flint Lock period."¹⁹

Duane, William. 1810. *A Military Dictionary*, Firelock, so called from their producing fire of themselves, by the action of the flint and steel; ... The fire of the infantry is by a regular discharge of their fire-locks.²⁰

Baker, Ezekiel : 1823, *Remarks on Rifle Guns*, "In loading I give preference to the common flint locks..."²¹

Lardner, Rev. Dionysius. A Treatise... 1833. "I must not omit here to remark, that many call the firelock the French lock, and ascribe the invention to these people: ... In the history of the Brunswick regiments, it is stated that the soldiers of that duchy first obtained, in 1687, flint-locks instead of match-locks."²²

Stonehenge, 1871, *British Rural Sports*, pp. 22-23. Flint-guns as opposed to detonators, but used without a hyphen in the index.²³

To return to flintlock and the role played by Dr. Lenk in its identification. *Flintlåset* was published in 1939 with a French summary prepared by Harald Bohr and reviewed by O. de Prat, neither of whom have been otherwise identified. The

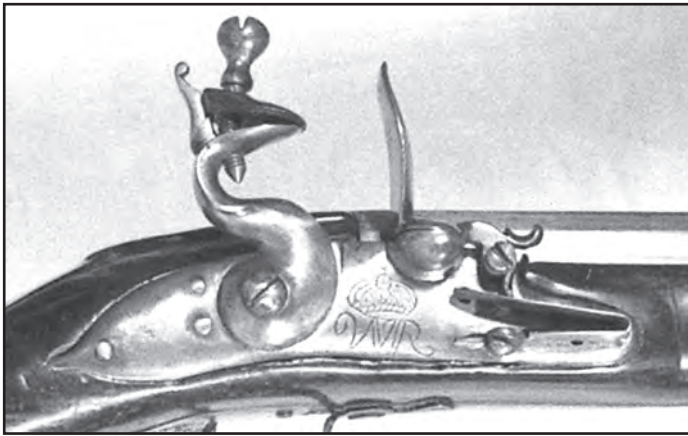


Figure 17. British military flintlock carbine with round, banana shaped lock, and the cipher of William III (1689-1702). George A. Tweedie collection.

foreword is dated May 1, suggesting that pre-war sales would have been limited and overseas distribution even more so. Nevertheless, because Sweden was a neutral country, copies would have been received by some in England and America during the next six years. Arne Hoff, Dr. Lenk's contemporary counterpart in Copenhagen, wrote: "I can tell you that Lenk was always very eager to have clear and fixed definitions for the different words used in discussing firearms locks."²⁴

In 1965, an English translation of *Flintlåset* by G. A. Urquhart, was published by the Holland Press. Mr. Urquhart is described as "a Scot living in Sweden who had done work for Livrustkammaren." It was edited by John F. Hayward who, although very proficient in German, did not claim to be a student of the Swedish language. Dr. Lenk wrote an introduction for the new edition but since he died in 1957, he could not have approved the translation.

For more than 40 years that edition has been used, quoting Lenk as the authority. But, looking closely at the translator's nomenclature presents many problems and demonstrate that the translation is considerably changed from what Lenk wrote in 1939. In a recent letter, Mr. Drejholt wrote:

I have compared the Swedish and English versions and agree that the English one uses snaplock, snaphance lock and snaphance randomly. On page 18 - starting "It is commonly asserted" ... the Swedish version uses *snapplås* - snaphance in English and later on Spanish snaplock but Netherlands snaphance lock - *snapplås* for both in Swedish. On p. 21 they use snaphance - Scottish snaphances for *snapplåsvapen* i.e. Scottish snaplock weapons. In the next sentence - "manufacture of snaphances at Norwich" the Swedish text is [Skotska?] *snapplås* — Scottish snaplocks etc.²⁵

In the decade following World War Two, an enormous increase in the number of American collectors of European antique firearms produced a small cadre of serious English speaking arms historians: Howard Blackmore, Claude Blair,

Ian Eaves, G. Charter Harrison, John Hayward, Arne Hoff, and Harold Peterson, to name a few who joined the small group of existing American students: Steven Grancsay, Thomas T. Hoopes, Wm. G. Renwick, and a few others, who studied of early firearms history.

They all studied the evolution of early firearms, with emphasis on the French lock, producing published works in an attempt to rationalize inconsistencies between the vocabulary of the day, the research as they found it, and Lenk's definition which created a number of problems. The usual process was to include a paragraph accepting Lenk's description as "the true flintlock," whatever that means, (a examination of *Flintlåset* did not find Lenk's use of the term) and record that all other types would be called 'snaplock,' or 'snaphance' locks to add more confusion to the story. For example:

Blair, 1983 — The [Lenk] definition has some historical justification in that this construction had virtually supplanted all other forms of snaphance at the time when the word 'flintlock' came into use and I have therefore adopted it here. All other forms of flint snaplock mechanism will be classified as snaphances irrespective of the construction of the pan-over and steel. In addition, the modern term 'snaplock' will be used as a general one to cover both types of lock.²⁶

Eaves, 1970 — The "fucili" to which Petrini referred was probably the snaphance. ... unless Petrini considered it to be identical to the Italian snaplock. However, the snaplock and the so-called "romanlock" were not, it seems produced in "large quantities" in Italy at that time. (Antonio Petrini, *L'arte fabrile ovvero armeria universale*, 1643).²⁷

Hayward, 1962 — The term 'snaphaunce' here applies to those locks on which the steel and the pan-cover are separated, while the term snap-lock is confined to those in which the steel and pan-cover are combined. The term 'flint-lock' is used only to describe what the late Director of the Swedish Royal Armoury, Dr. Lenk, has defined as the true flintlock, that is the French type with vertically operating sear.²⁸

Hoff, 1978 — The term snaphaunce (sic) in this book designates a lock in which the cock when released by a horizontal sear will snap forward allowing the flint to strike a steel which is separate from the pancover. This action produces the ignition. Locks in which the steel and pancover are united in an L-shaped battery, but which also have a horizontal sear, are called snaplocks.²⁹

So much new material has been recorded in the last four or five decades that it is now possible to provide a meaningful name and description for every ignition system. Dating might be difficult but that is the next stage for



Figure 18. A Spanish *madrilña*, or Madrid lock, by Joseph Deop, Ripoll, c.1790. A flint-lock that looks like a flintlock.

researchers who will, at least, be working with the same descriptive data.

ACKNOWLEDGMENTS

I am grateful to the large number of arms historians who have assisted with this project, but especially Brian C. Godwin who opened his photo archives to me and read the manuscript, and Jeff D. Paine who read the various drafts required to reach this point;

NOTES

1. National Archives (P.R.O. Kew). SP12/66 No. 51. I am grateful to Brian Godwin for bringing this reference to my attention.

2. Recorded by Claude Blair, (1983) p. 43, n. 24 from *9th Report of the Historic Mss. Commission*, London, 1883, p. 44; *Scottish Firearms* Bloomfield: Museum Restoration Service, 1994, p. 8. See also his "Scottish Firearms," *The American Society of Arms Collectors Bulletin* No. 31, (1975), pp. 61-101.

3. Arne Hoff, "The Term Snaphaunce," *Aspects of Dutch Gunmaking*, (H.L. Visser, D.W. Bailey, Ed.) Zwolle: Waanders Pub. 1997. p. 137-144; Hoff, Arne. — "What do we Really Know About the Snaphaunce." *The American*



Figure 19. An unsigned Portuguese flintlock, probably late 18th century. A flintlock that does not look like a typical flintlock.

Society of Arms Collectors Bulletin, No. 22, (1970) pp. 11-18; "Snaphaunce," is more in keeping with the spelling and pronunciation of the word in the Low Countries where it was also popular and is still a spelling for this ignition, but 'snaphance' was, and is, most common in English.

4. Drejholt/Gooding, Personal correspondence, December 15, 2009.

5. Meyerson, Åke and Lena Rangström. *Wrangel's Armoury*. Stockholm: Royal Armoury Press. 1984.

6. Meyrick, Samuel Rush. *A Critical Inquiry into Ancient Armour, as it existed in Europe, but particularly in England, from the Norman Conquest to the Reign of King Charles II*, Vol. III, p. 101.

7. Fosbroke, Thomas Dudley. *Encyclopaedia of Antiquities and Elements of Archaeology, Classical and Mediaeval*. 2 vols., London, 1825. This incorrect date was introduced by Fosbroke; Meyrick did not suggest a date until 1827 when he read his paper at the February 22nd meeting of the Society of Antiquaries. For a detailed description of this gun see: "Arquebusiers extraordinaire - the remarkable Snaphance of the Roberts" by Brian C. Godwin, *Classic Arms and Militaria*. [scheduled for April/May, 2011].

8. Meyrick, Samuel Rush/Joseph Skelton. *Engraved Illustrations of Antient Armour from the Collection of Goodrich Court, Herefordshire*. London, G. Schulze for J. Skelton, Oxford 1830. Reprinted by Henry C. Bohn-London, in 1854. This is usually recorded with Skelton as the author, but the text was prepared by Meyrick.

The Vocabulary Flint, and Pre-Flint Ignitions

When putting the outline for this book together, it was planned, as far as possible, to incorporate foreign language terminology into the appropriate chapters. But when you get into the early arms and although the words look and sound similar, they did not mean the same and in many cases were not time-related in meaning. But that did not stop many modern writers from using them as if they were interchangeable. Although the spelling which follows is consistent with the Oxford English Dictionary, many writers have elected to remove hyphens and join the modifying and root noun.

Matchlock: Any firearm fired by a match of fibre or other material.

Snap-matchlock: A matchlock with a snapping action of the serpentine.

Wheel-lock: Any firearm ignited by a stone scraping against a wheel is a "wheel-lock," the spelling used in article published between 1953 and 1994 in the *Journal of the Arms & Armour Society*. Beginning about 1994 the spelling became "wheellock." The former (wheel-lock) is the preferred *OED* spelling.

Fire-lock: the term which formerly had been used to distinguish the wheel-lock from the matchlock and snaphance. Later used in England to refer to the flintlock musket

Flint-lock (with hyphen): Any of the family of ignitions fired by a stone striking against a steel, frizzen, or other 'hammer.' For clarity, it must have an expanded description unless referring to the entire flint family when "flint lock" is usually preferred.

French Lock: From at least the mid 17th century, this term was used to identify (except in France), the lock which is now identified

as "flintlock." It is still a recognized and acceptable term.

Flintlock: The term flintlock is used in this work to mean a mechanism for igniting firearms by striking a steel or battery with a flint. The steel and pan-cover are made in one piece, with a sear moving vertically. The tooth of the sear engages in notches cut in the tumbler to set the weapon at half and full cock. (Dr. Torsten Lenk's description).

Snaphance: A flint-lock with a steel (frizzen) on the end of an arching steel-arm and a separate pan-cover turned off manually or made to slide forward mechanically. Usually (but not always) with a horizontal sear

Snaplock: A historic word in many countries originating from the snapping action of the serpentine or cock. A recent term used indiscriminately in English to refer to any flint-using ignition but also used as "snap-matchlock" to identify one of the family of early snap-match locks.

English lock: A group of distinctive 17th century flint-locks, normally restricted to En-

gland, fired by flint, with a horizontal acting sear, and a one-piece frizzen and pancover. Known by contemporary users as 'snaphance.' Since other locks may have similar characteristics, it must look like an English lock

Miquelet: A group of distinctive locks originating mainly in the Mediterranean and Islamic regions, distinguished by an external mainspring, a horizontal sear passing through the lockplate acting on the cock, and a one-piece frizzen and pancover. Other locks, originating mainly in northern Europe with similar characteristics but different appearance are flint-locks and must be identified with a descriptive or modifying noun(s). Since other locks may have similar characteristics, it must look like a miquelet Lock

Dog lock: Any of the forms of flint-lock or percussion locks having a catch or hook usually, but not always, behind the cock, acting on the cock as a primary or secondary safety. Normally requiring an expanded description of the ignition.

9. Blair, Claude. "Simon and Jacques Robert and some early snaphance locks," *Armi Antiche 1998-1989*, Accademia di S. Marignano, 1990, pp. 33-88.

10. Godwin, Brian C., John S. Cooper and Michael G. Spencer. "The English Flintlock; its Origins and Development." *Park Lane Arms Fair Catalogue* No. 20, 2003, pp. 49-90. The 1640 document is illustrated p. 67.

11. National Archives, SP/16 No. 441, Entry 75/76.

12. Dating the introduction of this feature has not yet been possible because of the paucity of dateable examples. It is found on a very primitive looking Type 1 lock in the writer's collection [M020] but only two other examples have been recorded by Mr. Godwin.

13. The French lock (a.k.a. the flintlock): *platine à pierre (French)*, *das französische schloß (German)*, *acciarino alla francese (Italian)*, *fechos a franceza (Portuguese)*, *zamek fransuski (Polish)*, *llave a la francesa (Spanish)*, *flintlås, vanlinag a flintlåset, franska låset, (Swedish)*.

14. Blackmore, Howard L. *British Military Firearms*, p. 29.

15. Dionysius Lardner, The Rev., LLD, FRS, L&E, MRJA, FRAS, FLS, FZS, HON. FCPS, &c. &c. *A Treatise on the*

progressive improvement and present state of the Manufactures in Metal (Vol. II, Iron & Steel) London: Longman, Rees, Orme, Brown, Green, & Longman, and John Taylor. 1833. p. 89.

16. Turner, Sir James, Knight. *Palas Armata, Military Essays of the Ancient Grecian, Roman, and Modern Art of War, Written in the years 1670 and 1671*. London, Printed by M.W. for Richard Chiswell at the Rose and Crown in St. Paul's Church Yard. 1683. p. 176.

17. Hawker, Hawker, P., *Instructions for Young Sportsmen (4th)*: 1825.

18. Blaine, D. P., *An Encyclopedia of Rural Sports*, p. 740, 751.

19. Blanch, Blanch, H.J., *Century of Guns*, p. 1.

20. Duane, William, *A Military Dictionary*, p. 158.

21. Baker, Ezekiel, *Remarks on Rifle Guns*, p. 149.

22. Larder, *supera*, note 14.

23. Stonehenge, *British Rural Sports*, pp. 22-23.

24. Hoff/Gooding, Personal correspondence, 12 December, 1996.

25. Drejholt/Gooding, Personal correspondence, 25 February, 2008.

26. Blair, Claude, *Pollard's History of Firearms* 1983 p. 42, n. 18, 19.

27. Eaves, Eaves, Ian, *Some Notes on the Pistol in Early 17th Century England*. JAAS, Vol. 6, No. 11, (Sept. 1970), p. 336.

28. Hayward, J.E., *The Art of the Gunmaker, 1500-1660*: Barrie & Rockliff, 1962, p. 16.

29. Hoff, Arne and Stryker, Walter A., *Dutch Firearms*, Sotheby Park Bernet. 1978, p. 63.

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