



The English Snaphance Lock and Two In Particular

by Brian Godwin

Introduction

The English snaphance is not only one of the most innovative "flint-locks" but is probably one of the rarest gun mechanisms to have survived. Recent research has found that only about 80 English snaphance muskets, pistols and detached locks have survived worldwide, although this does not include excavated, converted or incomplete locks. Modern tests by the author have proved it to be a fast and reliable mechanism and it must have been a serious challenger to the matchlock and wheellock in the 16th century. This article looks at the history of the lock and examines two examples.

The English Snaphance - its characteristics

The snaphance lock evolved in England during the second half of the 16th century and it remained popular here until the mid-17th century. A mass of documentary evidence exists detailing the production and use of the lock in England during the period 1580-1630, but despite this relatively few English snaphance firearms have survived. The author's research has revealed that the term *snaphance* or *snaphaunce* can be interpreted in various ways and that this has caused confusion between contemporary students of arms. One modern understanding of the term *snaphance* is based on the work of two 19th century scholars, T.D.Fosbroke and Sir Samuel Meyrick, who concluded that the snaphance was constructed with the steel and pan-cover as two separate elements: this is the interpretation that will be used in this article.



The English form of the snaphance lock is also defined by the following characteristics;

- The lockplate is usually of trapezoid form.
- It always uses a horizontally acting two-piece sear; the L-shaped tip of the primary sear passes through a hole in the lockplate to secure the tail of the cock and a secondary sear, which is actuated by the trigger, locks the primary sear in position.
- It has a sliding pan-cover, which is linked to the tumbler by a rod and is opened automatically by the fall of the cock.
- It has a buffer on the outer surface of the lockplate to stop the fall of the cock; and frequently has a safety-catch to secure the lock when cocked.



- The buffer and steel-spring frequently have very decorative finials, sometimes of vase or shield-shaped form.
- It has a large circular flash-shield, or “fence”, on the pan.
- Generally, the jaws of the cock can usually be completely closed together.
- It has an internal mainspring working on a tumbler.

These characteristics clearly define the English snaphance lock from the other forms of snaphance lock that were being used in Europe during the same period. The Dutch snaphance is very similar in its form to the English version, although it has its own special characteristics. Some modern writers have claimed that the snaphance was introduced into England from Holland, but there does not seem to be any record of the word “snaphance” in Dutch documents before 1619, and as yet no Dutch snaphance firearms dating before the early 1620s have been identified. Unfortunately, claims that the snaphance is of Dutch origin can be found on many websites and in modern publications, without any evidence to back that theory up.

The Origins of the Snaphance Lock

The earliest records of the snaphance date to Italian and Swedish documents of 1547, but it was probably developed in Germany sometime before this: perhaps during the 1530s although just where it originated remains uncertain. The lock was introduced, possibly by German merchants, into the Baltic area (principally Sweden) and among the earliest surviving snaphance firearms is a musket, now in the Royal Armouries, Stockholm, which is probably one of 35 Nuremberg-made guns supplied to King Gustav Vasa in 1556. By the 1590s, the snaphance lock, in various forms, was known in many areas of Northern Europe, including Germany, France, Scotland and England.



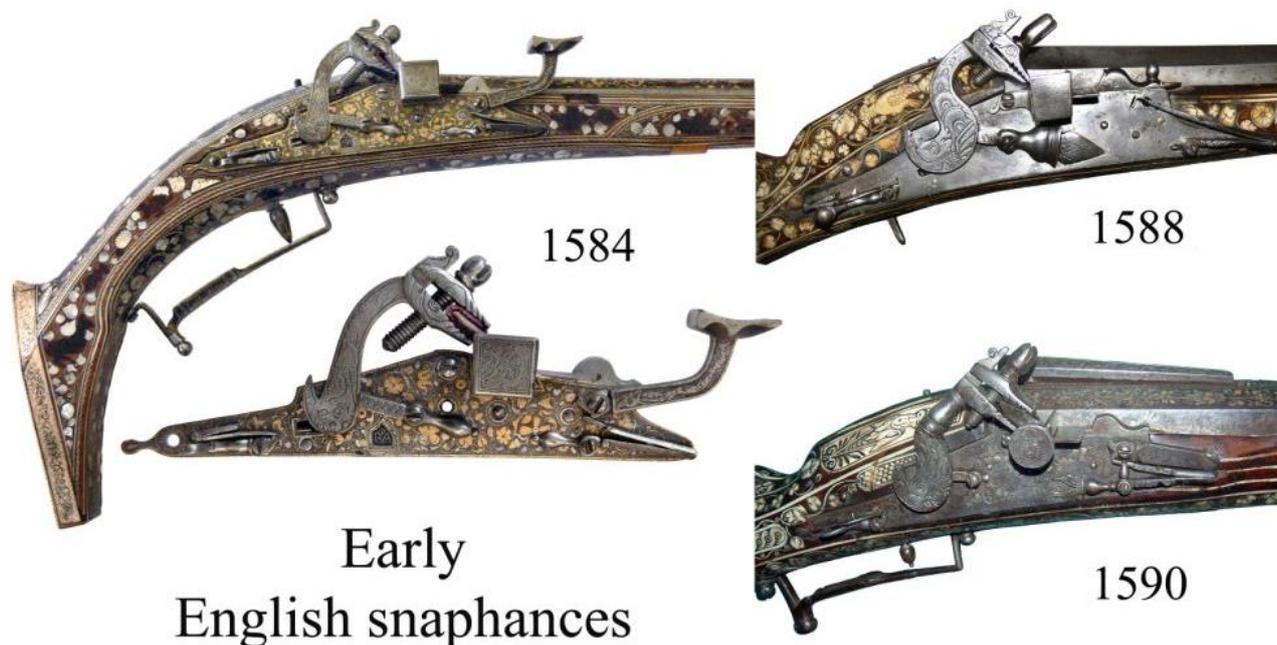
Snaphance gun, c1550 (Livrustkammaren, Stockholm - LRK16308)



Just how and when the snaphance lock arrived in England remains unknown. New research suggests that the lock may have been introduced into England from Scotland (Blair: *Scottish Firearms*, 1995). This evidence shows that an active snaphance industry was established in Scotland by 1568 and that the lock was being produced there in some quantity by 1575. It therefore seems reasonable to suggest that the mechanism was also known and being produced in England by this time. Alternatively it may have been brought to this country by one of the many immigrant gunmakers from Northern Europe who came to London during the mid-16th century, as there was considerable trade in all types of goods, including arms, between Britain, Scandinavia and the ports of Northern Europe during this period.

One of the earliest known records of the lock in England, is a document dated 1580, that is now in the archives of St Paul's Cathedral, London, which details the dispatch of "9 cases of snaphaunces at 40s the peece", as part of the equipment for light horsemen sent to Ireland. The earliest known surviving English snaphance gun is dated 1584 and is in the National Museum, Copenhagen (Inv.No.10428).

Other dated English snaphance guns from the 16th century also survive; one, a snaphance musket dated 1588 is displayed in the Victoria & Albert Museum (M948-1983) and comes from the same workshop as the Copenhagen gun. The stock and lockplate have the same makers marks, RA under a fleur-de-lis and are thought to be the mark of the London gunmaker, Richard Assomes. Another early snaphance musket, dated 1590, can be seen in the Royal Armouries collection, Leeds (Inv. No.XII.1785) - all shown below.



The first of the two English snaphance locks featured in this article is a detached lock from the renowned W. Keith Neal collection and is illustrated in his book *Great British Gunmakers 1540 – 1740*. Neal states that the lock came from Bridwell House in Devon. This lock is quite large, being 9¼ inches (23.5cm) in length and was probably made for a long gun.



It is likely that it dates to the first decade of the 17th century, which is earlier than Neal placed it, but it could also be earlier than that. Although corroded it has many of the typical features and characteristics of the English snaphance mentioned earlier, including a trapezoid shaped lockplate with a prominent spring activated safety catch at the rear. It also has a buffer secured by two screws to the outside of the plate which stops the fall of the cock. The buffer and the steel spring both have decorative vase-shaped finials and there is a large disc-shaped fence on the pan, which has traces of an inscribed decoration. The steel is quite small, a typical early feature and there is no bridle between the steel arm and the steel spring. Some restoration work to the top jaw and screw and to the safety catch has been undertaken, but otherwise the lock is complete. An English snaphance carbine, circa 1600, also from Bridwell House, is also illustrated in Neal's book and this has some similarities in style to the subject lock.





Internally the lock has a two-piece sear, activated by a V-shaped spring, similar to that found on a wheellock. A large mainspring that acts on a tumbler is used. A long steel push-rod is linked to the top of the tumbler and moves forward when the cock snaps down, pushing the pivoting pancover open so that sparks reach the priming powder. There is no half cock position, but this did not matter as the English snaphance could be made safe by a special feature which allowed the pan-cover to be closed with the cock in the forward or "fired" position and the steel pushed forward out of the way of the flint.



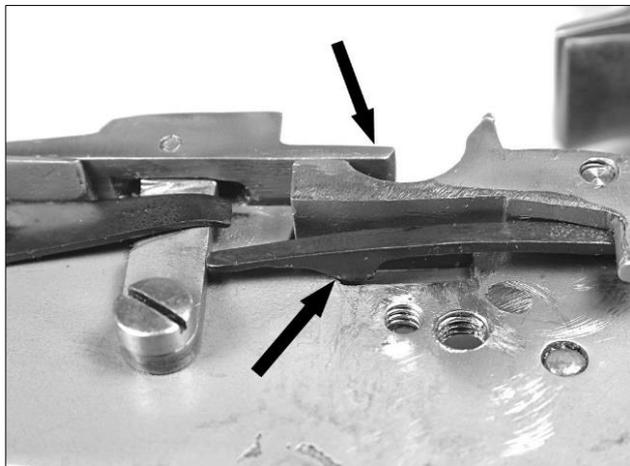
This unique feature of the English snaphance was only rediscovered in 1992 by Professor James Lavin when he examined two English snaphance locks that are in almost mint condition and come from sporting guns given to King Phillip III of Spain by James I, in 1604.



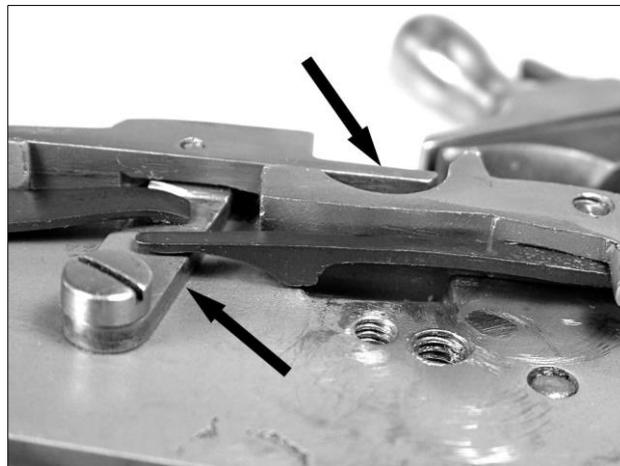
*Right:
One of two plain sporting snaphance guns
given to King Phillip III of Spain
by James I of England, in 1604.*



The long steel push-rod incorporates a wedge or ramp shaping on its inner side that projects into a recess cut in the top edge of the lockplate. At a certain position in its forward movement the wedge engages the edge of the recess and forces the push-rod outward and away from the pancover arm, allowing the arm (and pancover) to be returned to the closed position - shown below on a modern replica.



Pan open



Pan closed

This design feature enables the pancover to be closed when the cock is in the fired position and it has been found on every English snaphance that the author has examined. Importantly, the gun could be loaded and the lock primed and the pancover closed. With the steel and cock forward in the "fired" position there was no risk of accidentally discharging the gun. To fire the gun it was only necessary to cock it and pull the steel into position over the pan.

An additional safety catch is often provided, mounted externally on the rear of the lockplate. When the lock is cocked the lever can be moved into the "safe" position, thereby blocking any movement of the sear by the trigger. Very occasionally a sliding-type safety catch can be found but these are rare and seem only to have been used on the highest quality locks.



A pair of English snaphance pistols dated 1601 from Levens Hall, Cumbria



By 1600, stylistic changes to the English snaphance lock had evolved and by about 1610 the external features of the lock took on the “classic characteristic” form that is now associated with the English snaphance - shown below on a snaphance lock from a long barrelled English holster pistol (Kremlin OR-2955).



The rather flat features found on the cock and steel arm of the previous decades gave way to a more substantial form of cock and steel arm, with the top portion rounded and the lower portion of flat section; the two separated by a raised belt. The trapezoid shape lockplate took on a pronounced hump to its upper edge and the rear section of the plate was often shaped with a “monster-head” finial, the rear sidenail forming the eye of the creature. The surface of the disc-shaped fence to the pan now became convex giving it a “button-like” appearance and the finials of the buffer and steel-spring became similar in size and were decoratively shaped, the most common styles being either of “vase” or “teardrop” form. Among the earliest firearms to show these changes are those that formed part of a gift from James I to King Philip III of Spain in 1604.



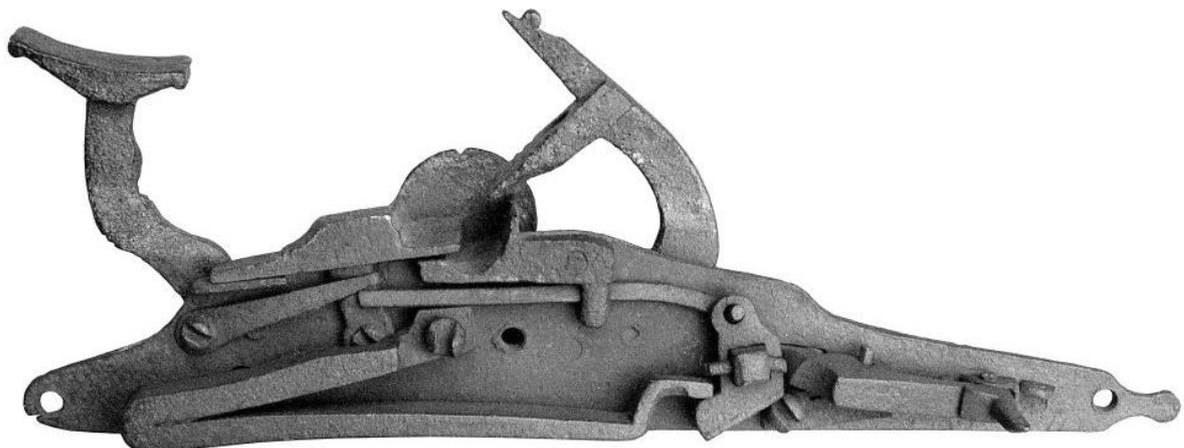
The guns had London-made snaphance locks, and one surviving fragment from these gifts, a detached lock with chiselled and gilt ornamentation (see above), is attributed to John Cradocke of London (active c1593-1610). These snaphance firearms not only demonstrated the fine artistic quality that London gunmakers could produce but more importantly the technological superiority of the snaphance lock over other ignition systems. The above lock and the remaining weapons of the 1604 gift can be seen in the Real Armería, Madrid.



The second English snaphance lock featured in this article comes from a “fish-tail” butt musket, circa 1620, from the National Trust property of Hardwick Hall in Derbyshire.

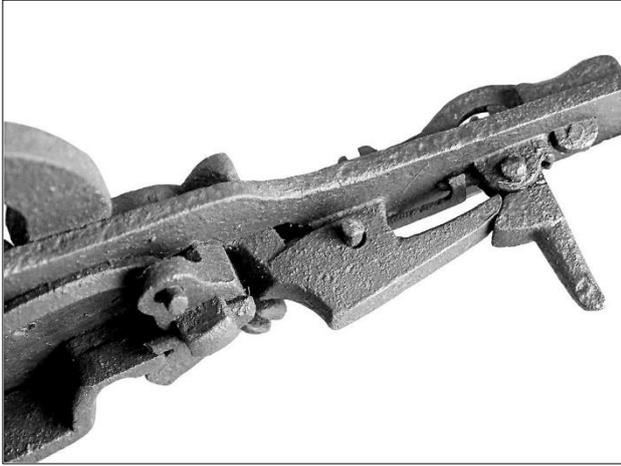


The lock is a good example of the “classic” or later form of the English snaphance described above. The lockplate, now slightly narrower than its previous form, has a pronounced hump on the top edge and a pivoting safety catch mounted at the rear. The cock and steel arm are formed in two distinct sections partly flat at the bottom and rounded at the top and separated by a raised belt or moulding. The pan has a convex button shaped fence and the buffer and steel spring finials are tear-drop or blob shaped.





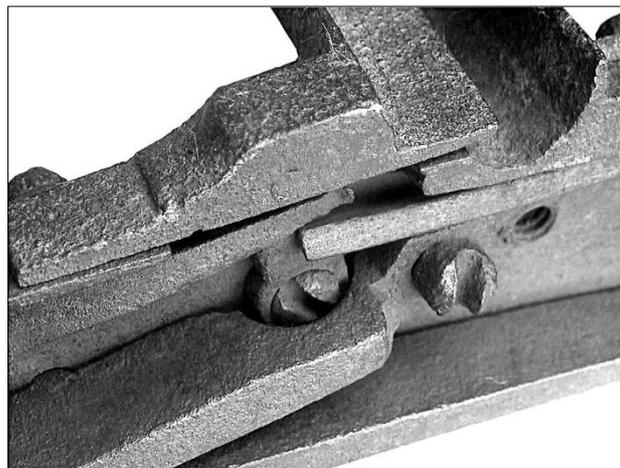
Internally there are almost no major differences between this lock and those of the earlier period, previously described, the 2-piece sear remaining a dominant feature.



The typical 2-piece horizontally acting sear



The "push-rod" attached to the tumbler opens the pan-cover as the cock moves forward



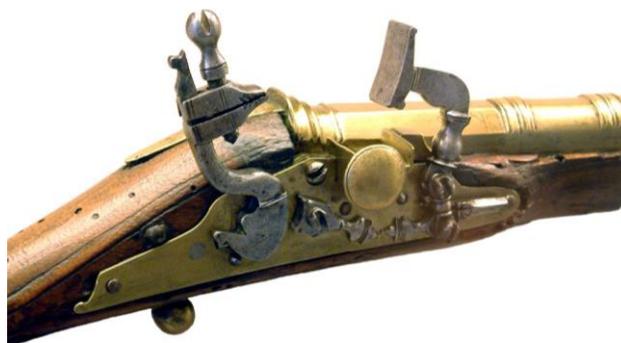
Sometimes the pancover arm is recessed into the top leaf of the mainspring, as seen above, but this is not always the case.

The London gunmakers were soon able to make very small versions of the snaphance lock, allowing quite small pistols to be produced. These proved to be extremely popular being easy to carry about the person or in a separately carried "pocket" and were ideal protection against robbers in the unlit streets of London. An example of one of these little guns can be seen at the Royal Armouries, Leeds (XII.1823) - shown below.



Unfortunately weapons of this type were also favoured by footpads and assassins as they could be easily concealed within the clothing. This was considered to be such a threat that several Royal Proclamations were issued in an attempt to have them banned. James I's "*Proclamation against the use of Pocket-Dags*" in 1612 came only eighteen years after similar decree by Queen Elizabeth I.

More English snaphances from the period 1600 to 1620 seem to have survived compared to other times. Among the arms and armour in the Palazzo Ducale at Venice, are nine English snaphance pistols dating to c1615-20.



These are military pistols with plain brass barrels and plain stocks. Five are large pistols with straight stocks and lemon-shaped pommels, while the remaining four are quite small pistols with "fish-tail" form butts. The plain snaphance locks with brass plates are of the "classic" form mentioned above. They were all perhaps intended for sea service but a record of their purchase has unfortunately not survived. Whatever their intended use they appear to be the only known examples with these features.

In the Armoury Chamber of the Moscow Kremlin are some 30 English snaphance firearms including two pairs of pistols that can be dated with reasonable certainty to the first decade of the 17th century. Their form and decoration is similar to the firearms that were part of the gifts of James I to Spain in 1604 and 1614 and it is likely that these pistols date to this period.



The magnificent pistols shown above have slender stocks inlaid with engraved mother-of-pearl and barrels and locks damascened in gold, and might have been among the gifts presented by Sir Thomas Smith, who was James I's new ambassador to Moscow in 1604. Another pair of English snaphance pistols from this collection have flattened "fish-tail" shaped butts and long belt-hooks. Like the pistols above, they also have snaphance locks of the "classic" form. One pistol is dated 1617, confirming that, stylistically, there had been no further changes to the lock by this date. Among the other English snaphance pistols at the Kremlin are ten plain military pistols, not unlike those in Venice.

It is clear that the English snaphance was produced both as a military and a luxury weapon throughout the period 1600 to 1625. A short English hunting gun, its lock dated 1622 (M.005227), that once formed part of the collection of Louis XIII is now displayed in the Musée de l'Armée in Paris - shown below. It seems that the snaphance was not only at the forefront of English small-arms technology as a reliable and functional gunlock, but was also considered to be a highly prized item fit for a gift from one sovereign to another.





Production of the snaphance continued throughout the 1630s. In 1631, a special commission from the Board of Ordnance tried to regulate the price of arms for official purposes. A list of prices, "*The Gunn Makers Rates*", was issued, which included:

*For a pair of Horsemans Pistols, furnished with snaphances, Mouldes,
Worms, Scower, Flaskes, a Charger and Cases ----- £2-0-0*

At £1 cheaper than the price quoted for a pair of wheellock pistols, this was a considerable difference and probably explains the preference (and popularity) of the snaphance.

In 1638, the Ordnance ordered 4000 snaphance muskets from London gunmakers. In the following year a further 1,000 snaphance carbines were ordered and by 1640 over 27,000 snaphance muskets had been supplied to the Government. It is unclear whether all of them were produced in England, although the London gunmakers had certainly been encouraged to produce more arms. However, despite the huge number of snaphances produced during this period, very few of them seem to have survived.

By about 1640, a new type of flintlock, a simplified version of the snaphance, known today as the English Lock, had evolved and was beginning to replace the now ageing snaphance. The new lock which had fewer components and a simpler action was easier and cheaper to produce. The English Civil Wars of 1642-1651 almost certainly helped to wear out and exhaust existing stocks of old snaphance guns and encourage the production of the English Lock.

By 1650, the "French lock" with its vertical sear, was known in England and soon production of it began here. The mechanical efficiency of this new form of flintlock quickly helped to oust the older wheellock and the snaphance, and ultimately the "French lock" won the day.

After this period (1650) the "snaphance lock" as defined and described here, ceased to be made but the term snaphance remained. The word or term then began to be applied indiscriminately to any flint-using gunlock in England and its use continued throughout the rest of the 17th century and into the first decade of the 18th century. Unfortunately it is this use of the term in contemporary documents that still seems to confuse many students of early firearms and has led to incorrect interpretations and the assumption that the English snaphance, as defined in this article, was made until the end of the 17th century.



The firing of a modern reconstruction of a "classic" English snaphance

The English snaphance lock is one of the great technological innovations of the late 16th century and its use and popularity in England is unprecedented. An illustrated in-depth study entitled *The English Snaphance Lock*, detailing its origins, development (including the ambiguous nature of the word snaphance), and all the sources used here, was published by the author in the 20th London Park Lane Arms Fair catalogue in 2004.



Further reading

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- Website: <http://briangodwin.co.uk>