


# flintlock

## Dictionary



flint-lock (flint'lək) 

*n.*

1. An obsolete gunlock in which a flint fixed in the hammer produces a spark that ignites the charge.
2. A firearm having this type of gunlock. Also called *firelock*.

## Military History Companion



flintlock

Historically, writers made no distinction between this term and [snaphaunce](#), the former being first recorded in 1683. Not until 1939, in Dr Torsten Lenk's *Flintläset*, was a definition of 'flintlock' proposed which firearms scholars have accepted. In Lenk's definition, a true flintlock firing mechanism is one in which the cock, in the screwed jaws of which is held the flint, can be set to both half and full cock by means of an internal vertical sear and the steel, against which the flint strikes when the cock is released from full cock by pulling the trigger, is integral with the pan cover, which covers the pan in which priming [gunpowder](#) is placed. Striking the flint against the steel forces it back and directs a shower of sparks into the forced-open pan, which ignites the priming powder, which sends a flash through the touch-hole connecting the pan to the barrel's breech, where the main charge is ignited to fire the weapon.

The earliest flintlocks were developed from snaphaunces in the first quarter of the 17th century, by the le Bourgeois family in Lisieux, Normandy, and the new system spread only slowly outside France. By the end of the 17th century flintlock systems were widely used in Europe and had moved from the civilian sphere to the military one. Officers were carrying flintlock [pistols](#) by the middle of the century and flintlock military muskets were in use by the same time, albeit in limited quantities and generally only by elite or specialist troops, such as [fusiliers](#). The flintlock reigned supreme as a system throughout the 18th century and flintlock muskets, also referred to as 'firelocks', were the infantry's principal weapons in most European nations. The flintlock ignition system, despite the inevitable delay between the pulling of the trigger and the firing of the musket, proved far more effective militarily than the [matchlock](#) and was much less expensive and complicated than the [wheel lock](#). Matched with a rifled barrel and carefully handled, it produced a military weapon of great reliability and power. Until the early 19th century, flintlock-ignited weapons systems, ranging from tiny pocket pistols to heavy naval cannon, were adopted for both civilian and military use and it was with the flintlock system that experiments were made most extensively with the earliest breech-loaders.

### Bibliography

- Blackmore, Howard L., *British Military Firearms* (London, 1961).
- Blair, Claude (ed.), *Pollard's History of Firearms* (London, 1983)

– Stephen Wood

## Britannica Concise Encyclopedia



flintlock

Ignition system for firearms developed in the early 16th century. It superseded the [matchlock](#) and the [wheel lock](#) and remained in use until the mid-19th century. The most successful version, the true flintlock, was invented in France in the 17th century. When the trigger was pulled, a spring action caused the frizzen (striker) to strike the flint, showering sparks onto the [gunpowder](#) in the priming pan; the ignited powder, in turn, fired the main charge in the bore, propelling the ball.

For more information on [flintlock](#), visit [Britannica.com](#).

## Wikipedia



flintlock



Flintlock of an 18th Century hunting rifle, with piece of flint missing.



A flintlock musket being fired

*This article is about the firearm. For the US military exercise, see [Joint Combined Exchange Training](#).*

Flintlock is the general term for any [firearm](#) based on the flintlock mechanism. Introduced about [1630](#), the flintlock rapidly replaced earlier firearm-ignition technologies, such as the [matchlock](#) and [wheellock](#) mechanisms. It continued to be in common use for over two centuries, replaced by [percussion cap](#) and, later, [cartridge-based](#) systems in the early-to-mid [19th century](#). The Model 1840 U.S. musket was the last flintlock firearm produced for the U.S. military although there is some evidence that obsolete flintlocks were still seeing action in the earliest days of the [American Civil War](#). While technologically obsolete, flintlock firearms have enjoyed a renaissance among [black powder](#) shooting enthusiasts and many fine flintlock rifles and pistols are still being made today.

The flintlock mechanism produces sparks when a piece of flint, held in the jaws of a spring-loaded hammer or "cock" (left in photo) strikes the hardened steel face of the "[frizzen](#)", (right in photo) knocking the frizzen forward to uncover a small pan of gunpowder beneath the frizzen. The resulting spark ignites the powder in the pan and this flame is transferred through a small hole to ignite the main powder charge inside the barrel. Under damp or rainy conditions, the gunpowder in the pan could get wet and the gun would be unable to fire.

## Subtypes

Flintlocks may be any type of [small arm](#): [long gun](#) or pistol, [smoothbore](#) or [rifle](#), [muzzleloader](#) or [breechloader](#). Because of the time needed to reload (the fastest experts could reload a smooth-bore muzzle-loading musket in about fifteen seconds), these weapons were sometimes produced with two, three, four or more barrels; however, multiple-barreled weapons were never very popular. The designs tended to be expensive to make and failure-prone. It was frequently cost-effective and more reliable to simply carry multiple single-shot weapons instead.



Flintlock mechanism

Flintlock [muskets](#) were the mainstay of [European armies](#) between 1660 and 1840. A musket was a muzzle-loading smoothbore long gun that was loaded with a round lead ball, but it could also be loaded with [shot](#) for [hunting](#). For military purposes, the weapon was loaded with ball, or a mixture of ball with several large shot, and had an effective range between 40 and 100 yards. Smoothbore weapons that were designed for hunting birds were called "fowlers". They tended to be of large caliber. They usually had no [choke](#), so they could also be used to fire a ball.

Some flintlock hunting arms had rifled barrels. [Rifling](#) is the process of cutting spiral grooves into the inside of the barrel. A tight-fitting projectile will tend to spin, which stabilizes its flight by the [gyroscopic](#) principle. Rifles are more accurate and have longer effective ranges than muskets but they take more time to load than a smooth-bore musket. The first rifled arms were introduced about [1500](#). Versions made in [Germany](#) for hunting large game such as boar had barrels about 20-30 inches long. When German immigrants settled in America, particularly in [Pennsylvania](#), they adapted their technology to the type of game available and the demands of the [Indian trade](#), and built the [long rifle](#), an improvement on the small game rifles used in Europe. This [weapon](#) has a barrel 36 to 45 inches long, and carefully loaded and shot, will be accurate up to 300 yards.

Flintlock pistols were used as self-defense weapons and for duelling, and as a cavalry arm. Their effective range was very short, and they were frequently used as an adjunct to the [sword](#) or [cutlass](#). Pistols were usually smoothbore although rifled pistols were produced.

## History

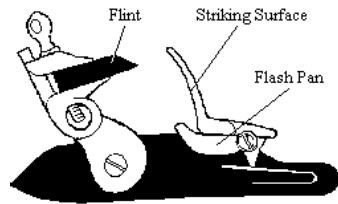


Scottish Flintlock pistol: David McKenzie, a [Dundee](#) gunsmith made this pistol. The heart shaped [butt](#) is commonly found on pistols made in [Scotland](#). The gun is steel with silver inlay showing [Celtic](#) designs.

French courtier Marin le Bourgeois made the first [firearm](#) incorporating a true flintlock mechanism for King [Louis XIII](#) shortly after his accession to the throne in [1610](#)<sup>[*citation needed*]</sup>. The development of firearm lock mechanisms had proceeded from [matchlock](#) to [wheellock](#) to [snaplock](#) to [snaphance](#) and [miquelet](#) in the previous two centuries, and each type had been an improvement, contributing some design features which were useful. le Bourgeois fit these various features together to create the flintlock mechanism. The new system quickly became popular, and was known and used in various forms throughout Europe by [1630](#).


Various breech-loading flintlocks were developed starting around 1650. The most popular action has a barrel which was unscrewed from the rest

of the gun. Obviously this is more practical on pistols because of the shorter barrel length. This type is known as a [Queen Anne](#) pistol because it was during her reign that it became popular (although it was actually introduced in the reign of King [William III](#)). Another type has a removable screw plug set into the side or top or bottom of the barrel. A large number of sporting rifles were made with this system, as it allowed easier loading compared with muzzle loading with a tight fitting bullet and patch. One of the more successful was the system built by Issac de la Chaumette starting in [1704](#). The plug passed completely through the barrel and could be opened by 3 revolutions of the triggerguard, to which it was attached. The plug stayed attached to the barrel and the ball and powder were loaded from the top. This system was improved in the 1770's by Colonel [Patrick Ferguson](#) and 100 experimental rifles used in the [American Revolutionary War](#). The only two flintlock breechloaders to be produced in quantity were the Hall and the Crespi. The first was invented by [John Hall](#) for the US Army in [1810](#). The Hall rifles and carbines were loaded using a combustible paper [cartridge](#) inserted into the upward tilting breechblock. Hall rifles leaked gas from the often poorly fitted action. The same problem affected the muskets produced by Giuseppe Crespi and adopted by the Austrian Army in 1771. Nonetheless, the Crespi System was experimented with by the British during the [Napoleonic Wars](#), and percussion Halls guns saw service in the [American Civil War](#).



Mechanism of flintlock (from [\[1\]](#)). 



The flint for flintlock - 17th century 

## Method of operation

- The operator loads the gun, usually from the muzzle end, with [black powder](#) followed by [shot](#) or a round lead ball, usually wrapped in a paper or cloth patch, all rammed down with a special rod (the [ramrod](#)), usually stored on the underside of the barrel;
- A cock or striker tightly holding a shaped bit of flint is rotated to half-cock;
- The flash pan is primed with a small amount of very finely ground powder, and the flashpan lid or "frizzen" is closed;

The gun is now in "primed and ready" state, and this is how it would be carried [hunting](#) or [going into battle](#). A safety notch at half-cock prevents the hammer from falling by pulling the trigger. To fire:

- The cock or striker is moved from half-cock to full-cock;
- The gun is aimed and the trigger pulled, releasing the cock or striker holding the flint;
- The flint strikes the frizzen, a piece of steel on the priming pan lid, opening it and exposing the priming powder;
- The contact between flint and frizzen produces a spark that is directed into the flashpan;
- The powder ignites, and the flame passes through a small hole in the barrel (called a vent, or touchhole) that leads to the combustion chamber, igniting the main powder charge there; and
- The gun discharges.

The British army used paper cartridges to load their weapons. The powder charge and ball were instantly available to the soldier inside this small paper envelope. When commanded, he:

- Moved the cock to the half-cock position;
- Tore the cartridge open with his teeth;
- Poured a small amount of powder into the flashpan;
- Closed the frizzen to keep the priming charge in the pan;
- Poured the rest of the powder in the cartridge down the muzzle and stuffed the cartridge in after it;
- Took out his ramrod and rammed the ball (still in the cartridge) all the way to the breech;
- Returned his ramrod and shouldered his weapon. Now he is ready to place the weapon on full cock and fire when commanded.

## Cultural impact

Unlike most weapons systems and configurations, which last a few decades, the flintlock mechanism was center stage for both military and civilian use for over 200 years. Not until the Reverend Alexander John Forsyth, a Scottish minister, invented the rudimentary percussion system in [1807](#) did the flintlock system begin to slide into oblivion. Because there is a moments hesitation between the sound of the flint striking the frizzen and the main charge igniting, Forsythe was often frustrated when hunting waterfowl, which bolted at the first sound. Also, the humid marsh conditions he hunted in often caused a failure of the pan gunpowder to ignite. Reading scientific pamphlets informed him of chemically made crystals that made sparks when crushed. This led him to conceive the idea of a small copper cup filled with these crystals that were sealed against moisture. Flintlock rifles were easily modified to allow the cap to be placed over the existing priming hole. The slide from flintlock to percussion cap was a slow one, even at that, since the percussion system was not widely used until around [1830](#), and the flintlock continued in common use until the time of the [American Civil War](#).

As a result of the flintlock's long active life, it has left lasting marks on the language and on drill and [parade](#). Terms such as: "[lock, stock and barrel](#)", "[going off half-cocked](#)" and "[flash in the pan](#)" remain current in the [English language](#). In addition, the weapon positions and [drill commands](#) that were originally devised to standardize carrying, loading and firing a flintlock weapon remain the standard for drill and display. (see [Manual of arms](#)).

## See also

- [Boyer Rifle](#)
- [Wheellock](#)
- [Caplock](#)
- [Snaplock](#)
- [Snaphance](#)
- [Miquelet](#)
- [Musketoon](#)
- [Brown Bess](#)
- [Charville musket](#)

## External links

- [How Flintlock Guns Work](#)
- [Flintlocks in Wet Weather](#)
- [Tuning the Flintlock](#)
- [Flintlock FAQ](#)
- [How to fire a flintlock musket on YouTube.](#)
- [Loading and firing a flintlock wall gun on YouTube](#) It sucks

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### Translations



Translations for: Flintlock

Dansk (Danish)

n. - flintelås, flintebøsse

Nederlands (Dutch)

(vergrendeling van) pistool met vuursteenaanslag

Français (French)

n. - pistolet à pierre

Deutsch (German)

n. - Steinschloß(gewehr)

Ελληνική (Greek)

n. - (ιστ.) καριοφίλι, μουσκέτο

Italiano (Italian)

fucile a pietra focaia

Português (Portuguese)

n. - arma (f) de fogo antiga

Русский (Russian)

кремневое ружье

Español (Spanish)

n. - llave de chispa, fusil de chispa

Svenska (Swedish)

n. - flintlås

中文 ( 简体 ) (Chinese (Simplified))

燧石发火装置, 燧发枪

中文 ( 繁體 ) (Chinese (Traditional))

n. - 燧石發火裝置, 燧發槍

한국어 (Korean)

n. - 부싯돌식 발화 장치

日本語 (Japanese)

n. - 火打ち石式発火装置, 燧発銃, 火打ち石銃

العربية (Arabic)

(الاسم) بندقية قديمة يستعمل فيها الصوان

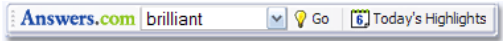
עברית (Hebrew)

n. - רובה-חלמיש, פלינטלוק, בריח רובה-החלמיש

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