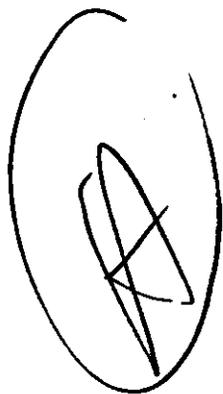


Good job -
Nice collection
of a few
point or
distribution
sets

GUNFLINTS



Ed Jordan
Archeology 377
Dr. McDaniel
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Gunflints

Flint is made of fine grain quartz or silica, as well as other various impurities. It is usually anywhere from a light shade of gray to a dark black. However, certain conditions can cause a discoloration. If there is any water within the make-up of the flint, it can cause the flint to appear a brownish color. Weather also affects the color. If flint is exposed to a great deal of weathering, it will turn a dull gray. Flint is usually nonporous and brittle, and when it splinters, it is sharp like glass. It is usually opaque and is harder than glass or steel.¹ Another characteristic of flint is that it is darker in the interior than on the surface.

Flint is usually found in limestone and rocks that contain calcium carbonate.² It "forms by the chemical precipitation of silica."³ "Chert and flint occur as individual nodules or layers of nodules in limestone or dolomite; they are common in rocks of all ages."⁴ Flint becomes evident in the soil as the rock around it slowly deteriorates away. It is one of the most lasting products of a sedimentary habitation. Most flint is usually formed by "replacement of the enclosing carbonate sediment after burial beneath the sea."⁵ The silica, which is the basic ingredient in flint, is produced from natural weathering processes. The largest known occurrences of flint are in the depths of the English Channel. This seems to date back to the Cretaceous Period, which ended approximately seventy million years ago.⁶

"The two basic techniques for producing a finished implement from flint are percussion and pressure."⁷ Percussion is the earliest method. When employing this method, you strike a flint

core in a certain place with a hard object. When done by a skilled person, a finished product can be produced in a very short time.⁸ "Greater control and a more intricate finish can be achieved by placing a small cylindrical object, usually of bone or metal, against a thinned edge and applying steady pressure."⁹ This is the pressure method, which removes thin flakes. This method can be performed equally well with the flint core in hand or on the thigh. There are variations to each of these methods. One is indirect percussion, where instead of directly hitting the flint core, you hit the object placed on the core specifically where you want it to split. The other variation is the chest pressure technique, with which you use a long hard-tipped wooden object to transmit your body weight into the core. The technique of shaping flint has developed through much strenuous effort.¹⁰

The snaphaunce lock is credited as being the direct ancestor to the flintlock. The first snaphaunces were made in the late sixteenth century in England, Germany, and France.¹¹ "Snaphaunce . . . meant any type of gun using a cock and steel relationship."¹² There is a cover over the flash pan, which keeps the powder from spilling out, which is moved back with the cock of the pistol. The miquelet locks are an improvement over the snaphaunces. They have the first pan cover which is actually a frizzen. The frizzen is the pan cover and the steel combined.¹³ The frizzen came into existence about 1670, which was the mark of the first flintlock. The French lock is the first true flintlock.¹⁴ First a latch was used to keep the gun from accidentally going off, then a notch was used, which allowed the weapon to be kept half-

cocked. The hammer consists of two sears. The first percussion weapons were put into use in the early eighteenth century.¹⁵

Gunflints are the most common remains of guns used during the occupation of Liberty Hall. "The true flint gunflint comes only from beds of chalk in England, predominantly from Suffolk around the villages of Brandon, Tualdenham, Lavenham, and Mildenhall."¹⁶ The number of cores found at a site help to determine whether or not flints were produced on that site. The identity of such cores can be established "on the basis of . . . the presence of negative scars resembling protogunflint flakes or wedge-shaped gunspalls."¹⁷ However, you may run into some trouble because you cannot always distinguish between wedge-shaped and English gunflint cores. "The classic definition of a true blade is that it is at least twice as long as it is wide, possesses roughly parallel sides and a triangular or prismatic cross-section and is struck from a prepared black core."¹⁸ Although this description seems fairly exact, it can cause problems. Flints are generally broken and do not show the two-to-one ratio. This is not too detrimental to identification however, because most flints have parallel sides and/or prismatic cross-sections.¹⁹ "Blade-like flakes differ from true flakes mainly in degree."²⁰ They are not perfectly formed as true blades are, and they are usually not as long. They can either be produced on purpose or by accident. Cleaning a core is done to remove the weathered portion from the outside of the core. The flakes that are produced by cleaning are cortex flakes, which can be identified because they have one weathered side. They are usually very thick. Many flint chips indicate mining and manufacture.²¹

The flint was attached to the cock of the rifle, which in snaphaunces struck a piece of steel separate from the pan, and in flintlocks was all one piece. "Flints were exerted into the cock grip with either the base or face upward, but neither without first being enfolded at the back with a strip of leather or lead."²² These strips were approximately one to one and a half inches long and they "helped to clamp them between the jaws of the cock."²³

"In firearms the flint is a vice on one end of an arm, known as the cock. The other end of the arm was pivoted on the lock plate so that the flint bearing end could be swung in an arc in the direction of the steel. The steel . . . was mounted on another pivoted arm and placed in a position opposing the cock. The flashpan was placed directly below the battery. When the trigger was pulled, the cock, impelled by a strong spring, struck the steel a glancing blow producing a shower of sparks that dropped into the priming powder in the pan. If all went well, the flash of priming powder penetrated to the powder in the bore and fired the weapon."²⁴

The sparks that ignite the powder "are actually minute particles of molten steel being scraped away from the hardened frizzen or pan cover."²⁵ When the flint hits the steel, the cover to the pan automatically opens because the steel and pan are all one part.

One way of dating gunflints is stratigraphy. If the soil is not disturbed, the flints should get progressively older as you go down deeper. However, if the ground has been disturbed, this method becomes totally ineffective. Another method is stylistically. There is certain information about flints according to what kind they are. French and wedge-shaped flints indicate the earliest European occupation. French flints can date back as far as

the seventeen fifties.²⁶

There are three different types of gunflints. They are the English, French, and wedge-shaped gunflints. Flints that have been retouched on both sides usually cannot be identified. English flints range anywhere in color from light gray to black, and could possibly have been made in the United States. They are generally not retouched. They have a broad end and triangular sides. The means of production of English gunflints is not very clear. They may have been produced by the micro-burin technique, which is a way to obtain a needed shape that the early English methods could not provide. The technique was probably used before the French blade technology.²⁷ The English flints come from long cores taken from nodules, which were cut into different lengths depending on the size of the weapon they were to be used in. The sides of the flint are cut across the width to shape them, and they are square at the back. English flints were sold by Americans and Britains during the first half of the nineteenth century. With an increase in the number of English flints found at a site, you also increase the chance that the site is fairly recent.²⁸ The French flints are light tan or honey-colored, and were definitely imported. They are rectangular, and have at least three sides retouched.²⁹ French gunflints are "a distinctive class both in method and manufacture."³⁰ The French gunflints are rounded at the back like spalls. This is done by extra flaking. They have a flat surface, and are completely superior to the English flints.³¹ The last variety of gunflints is the wedge shaped spalls. They range from brownish-gray to dark gray in color, and are made from secondary flakes. They tend to be "preshaped on a core and subsequently detached."³² All retouching is done on the core, and

the piece split off is the finished product. "A small, hard point . . . was held up against the core and a strong, sharp force exerted by either direct or indirect percussion to detach the gunspall from its present core."³³ Gunspalls are cut directly from flint lumps, and the split determines the shape, whereas mass produced flints are cut from chips.³⁴

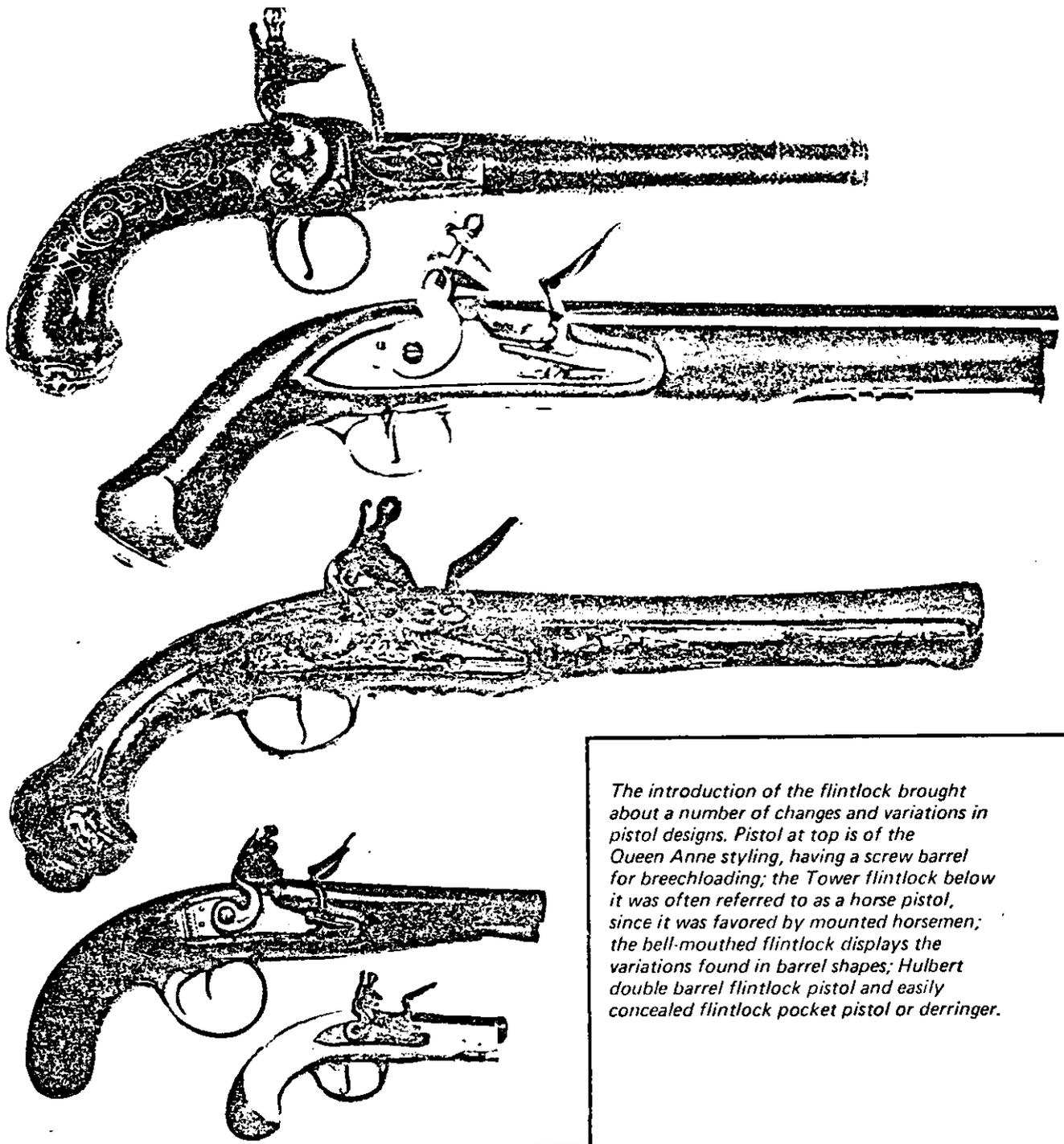
The gunflints found at Liberty Hall can tell us a great deal about some of the weapons used during the period. For one thing, the flints tell us that there were at least some weapons more advanced than the matchlock or wheel lock guns. As I have already mentioned, the first gun to use flint was the snaphaunce, which was invented in the late sixteenth century. It is very probable that flintlocks were the only guns used during the occupation of the Hall. This was not only because flintlocks are superior to matchlocks and wheel locks, but also the percussion cap weapons, which are superior to flintlocks, did not come into popularity until about 1840.³⁵ Since Liberty Hall only existed for the last half of the eighteenth century and the first few years of the nineteenth century, it falls into the years of flintlock popularity. Most firearms made before 1800 were not made in America. Therefore, the flintlock guns at Liberty Hall were probably imported. There is a good chance they came from Europe.³⁶ The flintlocks used at Liberty Hall were probably the notch type, since the latch type became unpopular in the 1670's. This meant that the men at the Hall could carry their guns half-cocked. This probably enabled them to hunt easier. The explanation of the different types of flint found might be due to their access. During the first half of the nineteenth century, Americans and British

were only selling English flints.³⁷ This meant that gunflints purchased around 1800 would probably be English, since they were most readily available. However, there are more French flints from Liberty Hall than English ones. Two things might possibly contribute to this. One is that French flints were generally superior to English flints, and the men at Liberty Hall might well have wanted the best implements. Another contributor might be that French gunflints date back to the seventeen fifties; therefore they were probably more readily accessible during the majority of the period in which the Hall was occupied. The majority of the French flints found at the Hall have the rectangular shape of a French gunflint, even though they are not the correct length. This allows us to identify them as such. It is also interesting to note that all of the gunflints except one were found at Liberty Hall. This indicates that the majority of weapons were concentrated at the Hall and not at structure one. This would make sense if structure one was the steward's house, because the weapons would not be needed there. This also indicates that there might have been hunting around the Hall, and that it might have provided refuge in case of attack. The only other gunflint was found at the farmhouse, and since it was English, it might very well have been one lost by an occupant after 1800. One last thing I feel we can learn from the gunflints found at Liberty Hall is that it is improbable that there was any manufacture of gunflints at Liberty Hall. This is evident because there are a definite lack of flint cores and flint chips, which are both signs of manufacture. This shows that there had to have been some contact with the outside world. They could not have been completely isolated.³⁸

On my honor, I have neither given nor received any unacknowledged aid in the preparation of this paper. P. J. ...

Distribution of Gunflints and Quartz at Liberty Hall

	French	English	Quartz
2602			1
2607	2		
2608	6	1	
2612		1	
2615		1	
3003		1	



The introduction of the flintlock brought about a number of changes and variations in pistol designs. Pistol at top is of the Queen Anne styling, having a screw barrel for breechloading; the Tower flintlock below it was often referred to as a horse pistol, since it was favored by mounted horsemen; the bell-mouthed flintlock displays the variations found in barrel shapes; Hulbert double barrel flintlock pistol and easily concealed flintlock pocket pistol or derringer.

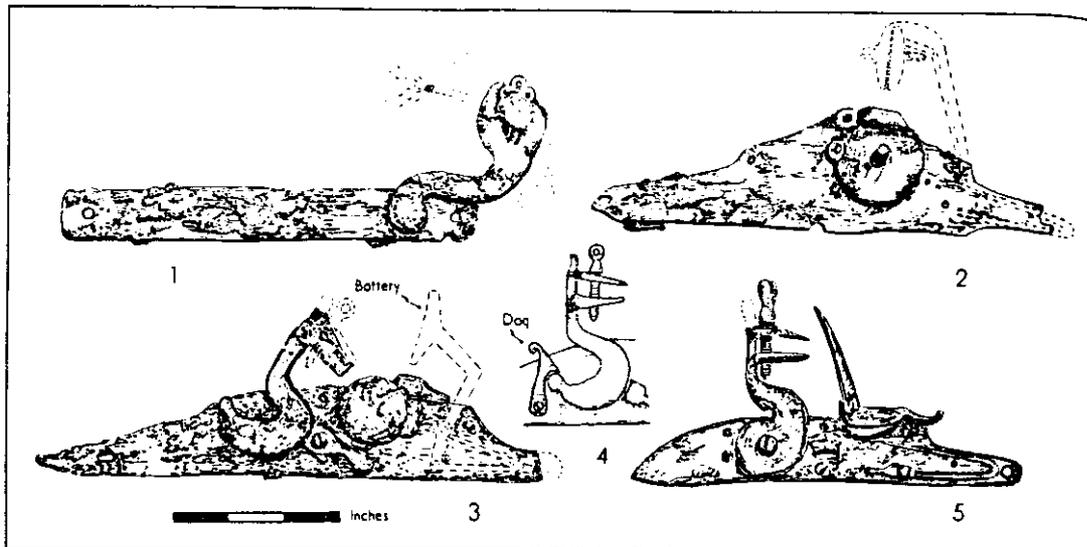


Fig. 69. Examples of excavated gunlocks. 1. Matchlock. 2. Wheel lock. 3. Snaphaunce. 4. Cock with "dog" catch. 5. British Brown Bess lock. Revolutionary period. Nos. 1-4 date from the early to mid-17th century.

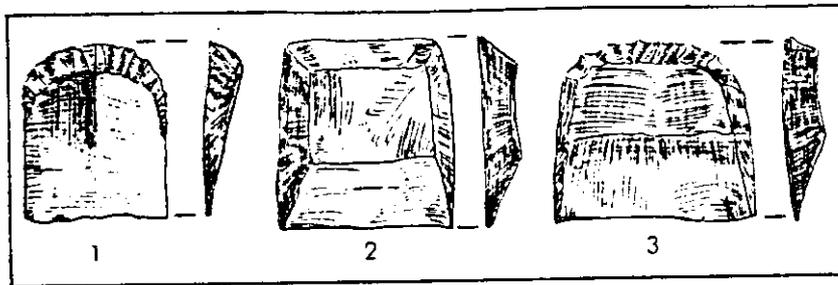


Fig. 71. Gunflints. 1. Gunspall. 2. English gunflint, gray prismatic type. 3. French gunflint, round-backed and pale-brown.

Ivor Noël Hume, *A Guide to Artifacts of Colonial America*
 Page 214 and 221,

Footnotes

- 1) R. L., "Chert and Flint," The Encyclopedia Americana, 1969, V, 453.
- 2) Marshall Kay, "Flint," The Encyclopedia Americana, 1973, XI, 405.
- 3) R. L., p. 453.
- 4) Ibid.
- 5) Ibid.
- 6) Kay, p. 405.
- 7) James Kellar, "Flint Implements," The Encyclopedia Americana, 1973, XI, 406.
- 8) Ibid.
- 9) Ibid.
- 10) Ibid.
- 11) Toby Bridges, Black Powder Gun Digest (Northfield, Illinois: Digest Books, Inc., 1972), p. 38.
- 12) Ivor Noël Hume, A Guide to Artifacts in Colonial America (New York: Alfred A. Knopf, 1970), p. 212.
- 13) Ibid., p. 213.
- 14) Bridges, p. 40.
- 15) Hume, A Guide to Artifacts of Colonial America, p. 212.
- 16) Hume, A Guide to Artifacts of Colonial America, p. 219.
- 17) Thomas Claude Funk, Excavation at Fort Chiswell: An Archeological Perspective of Virginia's Western Frontier (University of Virginia, 1976), p. 77.
- 18) Ibid., p. 78.
- 19) Ibid., p. 79.
- 20) Ibid.
- 21) Ibid., p. 80.
- 22) Ivor Noël Hume, Here Lies Virginia (New York, Alfred A. Knopf, 1963), p. 249.
- 23) Hume, A Guide to Artifacts of Colonial America, p. 221.

Footnotes (cont.)

24) R. L., V, p. 453.

25) Bridges, p. 38.

26) Funk, p. 77.

27) Ibid., pp. 82-83.

28) Hume, A Guide to Artifacts of Colonial America, p. 220.

29) Funk, p. 77.

30) Ibid., p. 82.

31) Hume, A Guide to Artifacts of Colonial America, p. 220.

32) Funk, p. 84.

33) Ibid., p. 85.

34) Hume, A Guide to Artifacts of Colonial America, p. 219.

35) Ibid., p. 215.

36) Bridges, p. 40.

37) Hume, A Guide to Artifacts of Colonial America, p. 220.

38) Funk, p. 85.

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