THE TAP ACTION POCKET PISTOL:
A BRIEF OVERVIEW

By Marc Gorelick

Tap Action Pocket Pistol by Thomas Perrins. Photo – Tim Prince, College Hill Arsenal

INTRODUCTION

From the time that firearms were first introduced, gunsmiths had experimented with various ways to turn single shot weapons into multi shot weapons. One of the easiest and most successful methods, prior to true "repeating" firearms, was to use multiple barrels, each with their own load and charge. At about the same time gunsmiths were looking for ways to make guns smaller and easier to carry, without sacrificing too much firepower. This eventually resulted in what came to be called "pocket pistols." One of the last stages in the evolution of the flintlock pocket pistol in England was the Tap Action system.

Tap action, .41 caliber, 2-barrel pistol by Dunderdale, Mabson and Lebron of Birmingham (1807-1821). Typical over/under barrel configuration. Like many earlier tap action pistols it has a trigger guard and decoration at the muzzles. Photo – Ivonne Pabon-Marrero

POCKET PISTOL EVOLUTION TO THE TAP ACTION

The Tap Action pocket pistol is the result of a number firearms developments. One thing to remember when discussing firearm evolution is that one style or type did not replace the previous type immediately as soon as it was invented or developed. There was often a great deal of overlap between styles and types. For instance, European armies were still using matchlocks long after wheellocks were in use. And flintlocks were still used after the development of the percussion cap. Two developments that characterize tap action pistols are the boxlock action and turn off (screw off) barrels.

Top – Boxlock pistol with .46 caliber turn-off barrel by Hugh Verncombe of Bristol, circa 1746-1785. Bottom – Verncombe pistol with the barrel unscrewed. Note the cavity in the front of the chamber breech where the ball is seated. Photos – Tim Prince, College Hill Arsenal

Pocket pistols, which were seen as primarily personal defense weapons, were developed around the 3rd quarter of the 16th century but did not achieve their greatest popularity until much later. In fact, even by the 2nd half of the 17th century they were still something of a novelty. It further evolved, largely in England, until it reached its pinnacle as the Tap Action in the last part of the 18th century. The pocket pistol was initially a scaled down version of a regular horse pistol that could fit in a pocket. The pockets at this time were much larger than today's pockets and were mostly found in coats and waistcoats, and not pants. Widespread manufacture and use of pocket pistols was not really feasible until the advent of the flintlock. Wheellocks were too delicate and difficult to produce in miniature guns and the snaphaunce did not last long until the flintlock replaced it in general use. While pocket pistols on the European continent were mostly miniature muzzle loading horse pistols with side mounted locks and ramrods, the evolution of pocket pistols in England took a different path. English holster pistols included those that were turn-off, breech loading pistols and English pocket pistols tended to follow that design. Queen Anne type pistols often had turn-off barrels and were characterized by the fact that the breech and the trigger plate are forged in one piece with the lock plate.

The turn-off breech loading system allowed greater velocity and striking power with a minimum of powder. Ramrods, powder measures, patching or wadding were not needed to load it and keep the ball seated. The only accessory needed was a small spanner which fitted over a stud on the single barrel in order to remove and tighten the barrel. Rifling was not needed in such small pistols intended for short-range work.

The boxlock was already being made by the 1650's/1660's. It combined the metal of the breech piece with the lock plate and trigger plate. The first boxlocks still mounted the pan, steel and cock on the right side of the frame. The metalwork and turn-off barrels also did away with the need for fully stocked pistols and the resulting design, with cannon barrels, is called "Queen Anne" pistols. In the 1750's the pan, steel and cock were moved to the center top of the breech section and a number of other mechanical refinements, including safeties were introduced. By the 1770's the new style had largely supplanted the earlier Queen Anne sidelock boxlock although sidelock versions continued to be made into the 1800's. As these pistols were often owned by wealthy clients, many were highly decorated.

One of a pair of highly decorated .44 caliber boxlock pocket pistols by William Grice, a Birmingham based gunmaker who worked circa 1760-1790. Dated to 1779, it has a stepped 2" long cannon turn-off barrel. Approximately 7" long, with gently curved, rounded walnut grips decorated with inlaid silver wire and with sterling silver grotesque mask butt caps. Photo – Tim Prince, College Hill Arsenal

In Great Britain, some boxlock pocket pistols were produced with two to four barrels and sometimes even more. The downside to most of these early multi-barrel designs was that all of the barrels typically discharged simultaneously. This resulted in heavy recoil, low accuracy and no quick way to get off a second shot (or volley) if needed. Another downside is that the more barrels, the heavier and more cumbersome the gun is. The tap action system, which was the final stage in the evolution of the flintlock pocket pistol, solved these problems.

Arms that had two or more barrels could fire individual shots. This could be achieved in many ways. For instance, having multiple barrels that could be brought under fixed lock was one method. Having separate locks for each barrel is one of the most obvious ways, and is still being used today in double barreled shotguns. The divided priming pan and the valve, or tap action, were two other methods that were very popular for multi-barrel pocket pistols during the flintlock era. In fact, sometimes both mechanisms were used in the same multi-barrel pistol, especially in four barrel pistols.

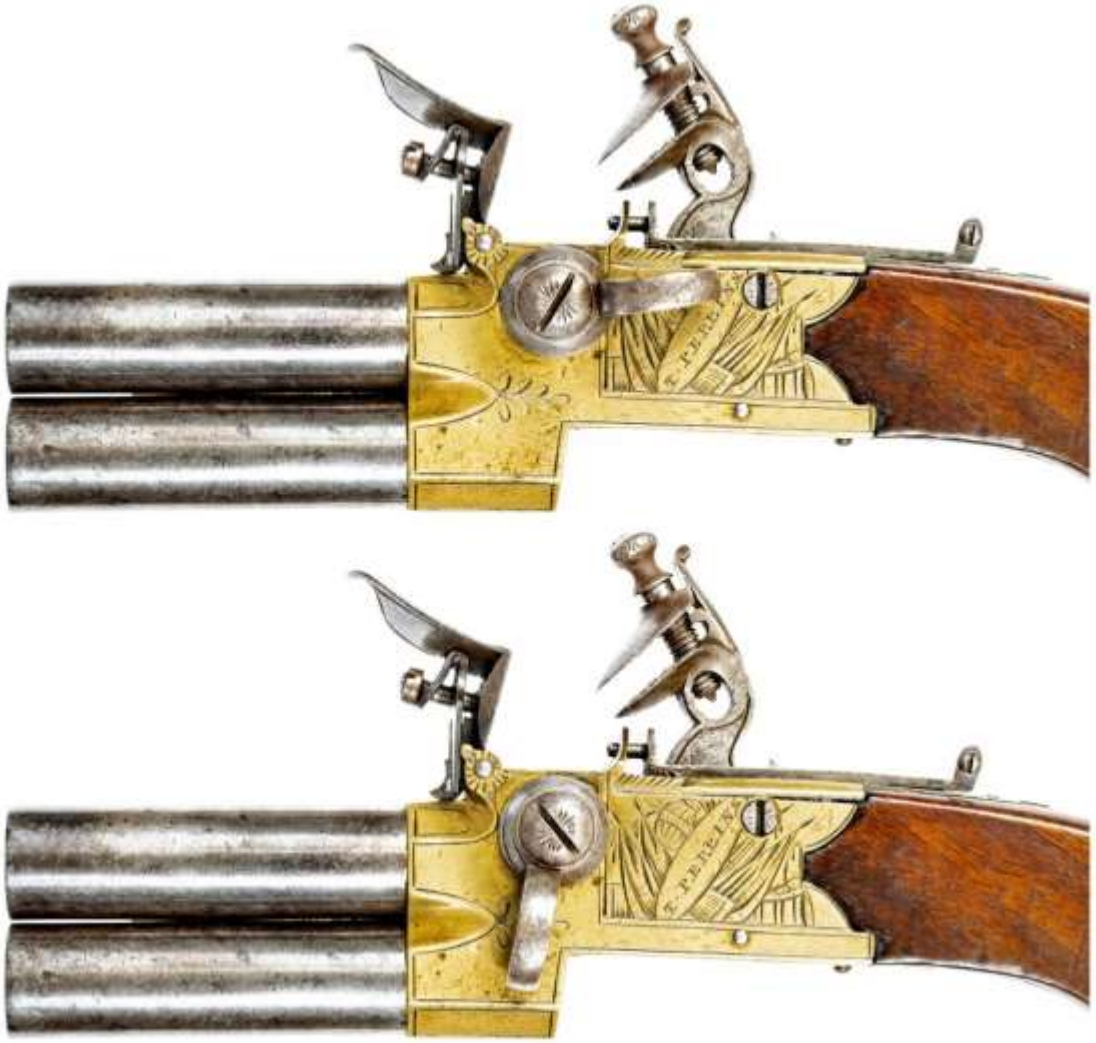
THE TAP ACTION SYSTEM AND DESIGN

The flintlock tap action design typically incorporated two barrels, normally located one above the other, although side by side versions are also known. There were also three barreled and four barreled tap action pistols, although the double barreled over-under design is the most common. A single cock, frizzen and flash pan served for both barrels. In the typical double-barreled design a manually rotated flash chamber in the frame allowed the shooter to fire each barrel individually or to fire them both simultaneously. The operation of a small lever, or tap, on the side of the frame turned a cylindrical drum on the bottom of the pan which has a differently directed touch hole which directed the flash to the appropriate barrel.

Above and Below - Tap action pistol by Thomas Perrins of Windsor, England. Brass frame, about .44 caliber, made after 1813. This is typical of a late model tap action, two-barrel boxlock pistol with a disappearing trigger, flat sided walnut butt, sliding safety behind the cock and tap action lever on the left side. It is 7 3/8" long with 2 3/16" long barrels. Photos Tim Prince, College Hill Arsenal.

With the "tap" in the "up" position, only the flash hole to the upper barrel was exposed to the spark generated by the powder in the pan. With the "tap" in the down position, the flash channel

is connected to the chamber of the bottom barrel. The lower tap was dished to contain powder, so that after the upper barrel was fired, all you had to do was flip the side lever to reorient the tap, re-cock the pistol and fire the lower barrel. If you wanted to fire both barrels at the same time, you could start with the tap in the down position and the flash would reach both chambers. This system also gave you the ability to fire the upper barrel quickly if it failed to detonate on the first try. This clever system was relatively simple and elegant, easy to use and was quite popular on higher end pocket pistols during the late 18th and first half of the 19th centuries.



Thomas Perrins tap action pistol. Top – Tap action lever is up to fire the upper barrel. Bottom – Tap action lever is down to fire the bottom or both barrels. The pistol has a hidden, or disappearing, trigger that is lowered when the gun is cocked. Photo Tim Prince, College Hill Arsenal.

The following is a description of a typical mechanism for a two barreled tap action pistol. The tap, or valve, consists of the handle and a retaining screw that are on the left side of the frame, and a cylinder that forms the bottom of the flash pan. One side of the cylinder is hollowed out and has a drilled hole in the center. This hollowed section forms a deep flash pan when the handle is in the vertical position and the drilled hole leads to the lower barrel. The hollowed section of the cylinder is turned away from the pan when the handle is in the horizontal position so that the solid cylinder wall forms the base of the pan and exposes a touch hole that leads to the upper barrel. With a little bit of practice this mechanism facilitated getting off two fairly rapid shots.

On multi-barrel turn-off pistols it was not possible to use the same sort of spanner and stud to unscrew the barrels for loading as was used in single barrel pistols because the barrels were so

close together. Since the tap action pistols used turn-off barrels the solution was to cut notches, which resembled rifling grooves, into the muzzle of each barrel. The square or polygonal key or wrench was then fitted into the barrel and used to turn-off (unscrew or take off), or tighten, each barrel. The notches, often cut in a star pattern, were cut only a short distance into the barrels, which were typically smoothbore. These notches are sometimes called false rifling and had no effect on the ballistics. Loading the gun was by the same process as the earlier turn-off pistols. The barrels were turned off, or unscrewed with the key, which fit into the muzzle. The chambers were simply filled with powder and the balls rested on top of the powder in a semi-circular countersink. The balls, which were a little bigger than the bore of the barrels were held in position when the barrels were screwed home and tightened with the wrench or key. The wrenches were made as either separate tools or as an extension of one of the handles of the bullet mold.

Since these guns were intended for short range work rifling was not deemed necessary. Also they were not fitted with sights so rifling the barrels would be pointless. The small size, smoothbore barrels and short range of these pistols was partially offset by the turn-barrel breech loading system which gave greater velocity, penetration and lethality.

By the 1780's the cannon barrels were being replaced by plain round barrels. On early examples, the safety catch continued to operate via the triggerguard bow (pushing it forward) but the great majority of tap action pistols have the safety catch on the top of the frame to the rear of the cock. The frames were usually of square or rectangular cross section although a few examples exist with a rounded frame. The wooden butts are usually flat sided, although some high quality examples have rounded butts.

Photo Left. Muzzles of Thomas Perrins tap action pistol showing the eight-pointed star shaped notches that the key would fit into to remove the barrels for loading. The notches are not rifling and go only a little way into the smoothbore barrels. Note that these barrels are smooth and plain without decoration. Photo – Tim Prince, College Hill Arsenal

One of the final developments was the concealed or spring trigger. It came into vogue in the 1790's and eliminated the need for a trigger guard. The trigger normally lies flush with the underside of the frame. When the cock is pulled from half cock to full cock the trigger is lowered into the firing position. This can be seen in the Thomas Perrins pistol illustrated here.

Thomas Perrins pistol. Top – Note the sliding safety catch which not only locks the cock in the half-cock position but also locks the flash pan closed. Bottom – Note the trigger in the closed or concealed position. Photos Tim Prince, College Hill Arsenal.

Perrins was an English gunmaker who worked in Windsor, Berkshire. Windsor, which is located about 20 miles west of Charring Cross, central London, is best known as the location of Windsor Castle. This tap action pistol is typical of the later designs. Made in the 2nd quarter of the 19th century, it is a .44 caliber 2 3/16 inch long, iron turn off barrels have smooth bores. The barrel muzzles have multi-pointed cuts that allow the barrels to be removed with a key or wrench. The brass frame of the pistol is engraved "*T. PERRINS"* in a panel surrounded with a panoply of arms on the left side and with another stand of arms on right side. The bottom of the frame is marked with post-1813 Birmingham proof marks and the right side of the frame has the chambers numbered 1 and 2 with matching numbers on the barrels. There is a sliding safety on the top of the frame.

Thomas Perrins tap action pistol. The barrels are engraved with the numbers "1" and "2" which match the same number2 engraved on the frame. This is to ensure that the correct barrel is mated with the correct chamber when the barrels are screwed on to the frame. Photo Tim Prince, College Hill Arsenal.

A few tap action pistols, as well as single barrel pocket pistols, were fitted with spring bayonets. They were normally hinged on the bottom or top but side-hinged examples are known. They became more common from the mid-1700s.

According to H. Lee Munson, tap action pistols had two design/construction problems to overcome that were not present with a normal boxlock pistol with a single turn off barrel. First the valve or cylinder had to be made to extremely close tolerances. If the tolerances were loose, sparks or hot gasses could get around the valve and ignite the powder in the other barrel. This was not a mass produced pistol made on a CAD/CAM assembly line with interchangeable parts. It was a hand finished pistol and hand finishing to such accuracy and tight tolerances took a great deal of patience, skill and talent. The second problem was how to make two male threaded chambers (which extend beyond the frame) that were extremely close together and could accommodate two or more turn off barrels. The outside of the chambers are usually only about 1/8" apart and when the barrels are screwed on they almost touch. With the technology of the time it would be impossible to cut the threads of the chambers with a die if they were part of the action frame. The answer was to make threaded bushings which could be threaded into the frame or driven in. After these bushings were in place a precisely fitted pin inserted through the frame into the bushing held them in place. This also required close tolerances.

Two barrel, tap action pistol by Henry Nock. 1 ¾" long, 120-bore barrels are turned off. Note the close proximity of the male threaded bushings that form the chambers and that the barrels are screwed on to. Photo - private collection.

Tap action pocket pistols were sold by many different retailers. The vast majority of tap-action pistols were made in Birmingham and then finished by a retailer in London or some other city or town. The retailer or finisher would mark them with his name and location so they could be marketed there. Referring to the gunsmiths or retailers as their makers is usually a mistake. This is especially true for any "maker" outside of London or Birmingham. The boxlock and tap action mechanisms were complicated to manufacture and even well-known gunmakers usually preferred to buy them from a specialist gunmaker and then put their name on them. For example, the collection of the Royal Armouries includes a rather ornate two-barrel tap action pistol by Durs Egg of London, dated to about 1815. Although the right hand side is stamped *D. EGG, LONDON* the pistol has Birmingham proof mark stamps under the body. The pistol also features a disappearing trigger. Another example is the Perrins pistol illustrated above with its post-1813 Birmingham proof marks. Many box-lock tap action turn-off pistols are seen today with the ovals for the "maker's" name and address left empty so they could be added later by an engraver at the point of sale. There were exceptions to this practice, such as the Mortimers, who made their own, but they were unusual in this. There were also exceptions in the most elaborate and luxurious cases.

The list of gunsmiths or retailers who made or sold them includes many well-known names in English gunmaking during the latter half of the 18th century and beginning of the 19th century. Makers/sellers of two-barrel boxlock tap action pistols include Thomas Perrins, Brasher of London, Gill of Birmingham, Welch of Banbury, J.Probin of London, Lacy of London, Holmes of Liverpool, Simmons, Williamson of Hull, Dunderdale Mabson & Lebron of Birmingham, Henshaw of Cambridge, John Twigg, Nicholson of London, Ketland & Co., Joseph Thwaits of Bath, Durs Egg, the Mortimers of London, and Henry Nock of volley gun fame.

Tap action pistols were often produced in pairs. Usually one pistol would have barrels numbered 1 and 2, while the other pistol's barrels would be numbered 3 and 4, with the chambers numbered to the barrels. Remember that the guns were largely hand-made and hand fitted and finished, so that it was important to screw the right barrel to the correct chamber. The brace of large pistols by Henry Holmes of Liverpool is an example of a pair of fine tap action pistols by a provincial gunmaker. The pistols were either made from parts produced in Birmingham or made entirely in Birmingham and shipped to Holmes for finishing. There were two Liverpool gunmakers named Holmes – father and son. Liverpool was one of the main ports for exporting products (including firearms) and a number of gunmakers resided there.

Pair of large .54 caliber tap action pistols by Holmes of Liverpool, 10" overall length with 4" long, fire blued barrels. Engraved iron triggerguard bows. Fine figured Circassian walnut grips with diamond section checkering wrapping around spines. Left side of frame is engraved with the name HOLMES and the right side has LIVERPOOL. Photo courtesy of Morphy Auctions.

When pistols were decorated with silver mountings or furniture such as inlaid wire decoration or grotesque butt masks, the work was usually done by silversmiths who acted as contractors to the gunmakers. These silversmiths were artists in the own right, and many, such as Thomas Barnett or Charles Freeth of Birmingham, worked extensively for the arms trade. Freeth was an accomplished silversmith working from the end of the third quarter of the 18th century until the beginning of the 19th. He is best known for the exquisite silver mounts he produced for the most high profile London and Birmingham gunmakers.

Left above - .50 caliber tap action pistol signed KETLAND & Co on the left side of the boxlock in a ribbon. The butt has a grotesque silver mask with proofmarks including CF for silversmith Charles Freeth. Photo above courtesy of Morphy Auctions.
Photo on right is a Freeth grotesque mask on the butt of a pistol.

Tap action side by side pistol by John Henshaw of Cambridge. Douglas Lampe Collection. Photo – Ivonne Pabon-Marrero.

Although two-barrel tap action pistols typically had their barrels in an over/under configuration, there are several examples where the barrels are side by side. John Henshaw of Cambridge is known to have "made"/sold the one described below. Henshaw worked in Cambridge from 1783 to 1792 (or 1797 depending on which directory you read). Although not a true tap action with a rotating tap, the action uses a sliding pan cover which is sometimes seen in tap action pistols with four or more barrels. As such it is not a true tap action. The side by side pistol pictured here is fairly typical of the two-barrel side by side type. It is .44 caliber with two 3.94 inch long, stepped, round, twist-off canon barrels with baluster turned rings at the transitions. It has a bright finish (now turned to a smoky gray patina), iron mounts, and walnut grip. The box lock action's cock has a reinforced swan neck cock and wide frizzen. There are double flash pans with a sliding cover on the left pan which is operated by a sliding lever on the left side of the frame. The right side of the frame is engraved *Henshaw / Cambridge*, with decorative border lines around frame and simple foliate motifs on triggerguard. There are proof marks on the bottom of the chambers, numbered "1" and "2" which correspond to the numbers on the barrels. The pistol has an oval shaped sterling silver escutcheon on the wrist with a grotesque mask on the butt that is hallmarked for 1788. The silver grotesque mask or lion's head butt cap was a holdover from the earlier Queen Anne pistols and usually found only on some of the higher quality end tap action pistols.

Tap action side by side pistol by John Henshaw of Cambridge. Tap is closed exposing the touchhole to right barrel. Photo – Ivonne Pabon-Marrero.

Tap action side by side pistol by John Henshaw of Cambridge. Tap is open exposing touchhole to left or both barrels. Photo – Ivonne Pabon-Marrero.

Tap action side by side pistol by John Henshaw of Cambridge. Left - Silver grotesque mask on the butt. Right - side by side cannon barrels. Photos – Ivonne Pabon-Marrero.

French 2-barrel tap action pistol. .31 caliber with screw-off 1 ½" long cannon barrels, floral engravings on the sides of the frame and checkered and carved grips. Photo courtesy of Morphy Auctions.

England was not the only country where tap action pistols were produced and sold. These pocket pistols were also made and sold on the Continent. For example, both France and Belgium made both two and four-barrel tap action pistols. Just as many English tap action pistols were made in Birmingham and sent to finishers in London or other cities, it was not unheard of for tap action pistols that were made in Liege to be sent to France for finishing by retailers who would engrave their name and address/city on the gun. For instance, a Belgian made tap action pistol, with Belgian proofmarks was sold at a June 2013 Bonhams auction in San Francisco. The gun had the name LEPAGE inlaid in silver on the right side and the word PARIS on the left side.

THREE AND FOUR BARREL TAP ACTION PISTOLS

It was quite natural that gunmakers were would want to increase the number of barrels in their search for increasing firepower. Multi-barrel flintlock guns were not a new invention as they had been made during the matchlock, wheellock and snaphaunce eras. Thus we find tap action pistols with three, four or more barrels in which the gunmakers' imagination and ingenuity was put to the test. Some of the English gunmakers/retailers who sold multi-barrel guns are Robert Wheeler of London, John Twigg, L. Samuel of Liverpool, Ketland & Co., Wallis of Hull, William Perry of Birmingham, John Collis of Oxford, William Jover of London, Durs Egg and John Prosser of London, and J. Durst of London.

Three barrel tap action pistols usually had their barrels in a triangular configuration with two barrels side by side above and one below, although there are examples of three barrel pistols by Durs Egg of London, and John Prosser of Charing Cross, London that have the three barrels aligned vertically.

The three barrel pistol by Robert Wheeler examined here is fairly typical if the triangular configuration type. There were actually two Robert Wheelers, father and son, which causes some confusion. The first Robert Wheeler went into business in Birmingham circa 1766-67 and remained in the gun trade through 1799 when he died. The second Robert Wheeler was in business from 1799 to 1813 and marked his guns "London." He made various types of pistols, blunderbusses and was one of the 16 contractors hired by the British Board of Ordnance during the War of 1812 to produce trade guns for Native American allies. He was also a contractor for the Hudson's Bay Company. This Wheeler tap action pistol is .40 caliber, with 3 inch long barrels. It was one of a pair; the barrels and chambers are stamped **3, 4, and 5**. It has a brass frame and barrels, a flat-sided walnut stock and a push safety on the top behind the cock.

Left side of tap action 3-barrel pistol by Robert Wheeler of London. Photos – Ivonne Pabon-Marrero

Tap action 3-barrel pistol by Robert Wheeler of London.
Photos – Ivonne Pabon-Marrero

Tap action 3-barrel pistol by Robert Wheeler of London. Note that the touchhole for the lower barrel is exposed. The hole in the frizzen is for the stud on the end of the safety which locks the steel closed when the hammer is at half-cock. Photo – Ivonne Pabon-Marrero

Durs Egg, was a well-known British gunmaker. Son of a Swiss gunmaker, he was born in Basel, Switzerland in 1748, and apprenticed in Solothurn, Switzerland and Paris, France before moving to London in 1768 and establishing his own business in 1772. He was noted for his fine pistols (including tap action flintlock pistols), sporting long guns, and military weapons, including his production of the Ferguson rifle. He is recorded as Contractor to the Ordnance from 1784-1820 and gunmaker to King George IV and the Duke of York. He and his nephew, Joseph Egg (1775–1837), separately established reputations as two of the most talented and innovative gunmakers in London. Durs Egg died in 1831 at age 83 years.

Three-barrel tap action pistol by Durs Egg. Note that the three barrels are arranged vertically, one above the other. Photo - Private collection.

Tap action pistols of four or more barrels were a bit more complex and here gunmakers showed quite a bit of ingenuity. Possibly the simplest design had the gun firing two barrels at a time. Other multi-barrel tap action designs fired each barrel separately. In these designs a tap alone was insufficient to control the ignition in the barrels. In order to fire the barrels in succession these pistols often used a combination of the sliding pan cover or cut-off, and revolving tap. The sliding cover is often moved by means of a thumb catch on the side of the lock. While four or more barrels provides increased firepower, the more barrels the more complicated the actions needed to manipulate the sliding cover and tap action lever to fire the barrels in proper order. If a shooter fumbles his movements while attacked it could have bad results. So it is not surprising that there are four barreled tap action pocket pistols that eschew the sliding pan cover and where the tap action is arranged to fire two barrels at a time.

Tap action 4-barrel pistol by William Perry of Birmingham. Photo – Ivonne Pabon-Marrero

The 4-barrel tap action pistol illustrated here is by William Perry who was active from 1776 to 1788 in Birmingham. Perry is known for making brass barreled pistols and blunderbusses.

Manufactured around 1780 this Perry pistol uses a combination of the revolving tap and sliding pan cover. The lever to rotate the tap action is on the left side of the frame and the slide control for the sliding pan cover on the right side. It is .36 caliber, with 3-inch long brass barrels, and an engraved brass frame with a sliding safety on the top. The frame is engraved *Perry* in a banner on the left side of the frame, and *London* on the right side. Although Perry was in Birmingham his weapons were marked London.

Tap action 4-barrel pistol by William Perry of Birmingham. The brass barrels and chambers are marked 5, 6, 7, 8, indicating that this was the second of a pair of pistols. Note the eight pointed star pattern of the muzzles that the key fits into in order to turn-off (unscrew) the barrels for loading the gun.
Photo – Ivonne Pabon-Marrero

According to the eminent firearms expert, J.N. George, the motions for firing such a four-barrel tap action pistol would be as follows:

1. Close both cut-offs. Fire top right hand barrel.
2. Open sliding cut-off. Fire top left hand barrel. Close cut-off.
3. Open revolving tap. Fire bottom right hand barrel.
4. Open sliding cut-off. Fire bottom left hand barrel.

The frizzen, or pan cover, would also have to be closed and the pistol cocked after each shot before the next barrel could be fired.

With such a complicated pistol, the shooter would have keep a cool head to be able to manipulate the action correctly when attacked by two or more assailants.

Photos above and below. Perry 4-barrel tap action pistol from above showing the pans and touchholes with the tap and sliding actions in different configuration to fire different barrels. Note the rotating tap action lever on the left side of the frame and the sliding lever on the right side.
Photos – Ivonne Pabon-Marrero

A distinctive Belgian 4-barrel tap action pistol did away with the sliding pan cover. Instead the pistol is, in effect two double barrel pistols in one, with two flintlock actions, (two cocks and two frizzens) two triggers and two valves, each set of which connects to two superposed turn off barrels. One lever controls both tap valves. The .45 caliber smoothbore turn-off barrels are 3" long and are numbered 1, 2, and 3. The fourth barrel isn't numbered and may be a period replacement. The locks have safety notches in the back and pans have a small safety notch in the base. There are also holes in the frizzens to accept a pin that would keep them closed so that powder doesn't fall out of the pans. The left and right sides of the action are engraved with a flaming torch, rams horns, and border decoration. The trigger guard is engraved with a small floral design with eight points coming off it. The grip has a slightly raised section near the lock that is carved with florals and skip line checkering. The grip is reinforced with a large pin towards the top. The backstrap is studded, with scallops carved on each side of the studs. The pistol has a flared octagonal butt, with further studs and the butt cap has a carved floral design.

There is no maker's name but the gun has the Liege proof mark of the letters E L G over a star in an oval (introduced in 1810).

Belgian 4-barrel double flintlock tap action pistol. Photo courtesy of Morphy Auctions.

Belgian 4-barrel double flintlock tap action pistol. Note the checkering and pinheads on the carved grip and butt. Photo courtesy of Morphy Auctions.

Belgian 4-barrel double flintlock tap action pistol. Note the holes for pins in the two frizzens. Photo courtesy of Morphy Auctions.

Belgian proof mark on the Belgian 4-barrel double flintlock tap action pistol. This proof mark was introduced in 1810. Photo courtesy of Morphy Auctions.

THE DEMISE OF THE TAP ACTION

With the introduction of the percussion cap in the early 1800's the need for a flintlock tap action system largely disappeared. The percussion cap made lock construction much simpler and started a new wave of repeating firearms. Pocket pistols, however, continued to be popular, and many English gun makers continued to make single and double barreled pocket pistols, but in percussion. Often the double barreled pistols had a separate hammer and nipples for each barrel but some over/under guns had one hammer but revolving barrels, each with its own nipple. Other two and three-barrel pistols had turn-over or hand rotated strikers on one centrally located hammer in a boxlock action. Many facially resembled the earlier tap action pistol. As the percussion ignition gained in popularity, it became easier and cheaper to produce pocket pistols in large numbers and Birmingham, England and Liege, Belgium became European centers of production for these inexpensive defensive arms. In the United States, one of the most famous pocket pistols was manufactured by Henry Deringer of Philadelphia. Deringer's pistols were so popular that they gave their name to a whole class of small defense pistol, the "derringer," which continued well into the era of metallic cartridges. The "derringer" type of pocket pistol also became very popular in Europe.

The advent of the percussion multi-barrel pepperbox and later the percussion revolver drove the final nails in the coffin of the tap action pocket pistols and their direct percussion descendants. The pepperbox was the first simple percussion revolver. There was one hammer and a number of barrels (often five or six) which were attached to a block of metal and arranged concentrically around an axis. Each barrel had its own percussion nipple and was capped and loaded separately. There were manually operated pepperboxes but most were rotated by pulling the trigger which rotated and lined up the next unfired barrel. And then the pepperbox gave way to the revolver.

PARTIAL BIBLIOGRAPHY AND SOURCES

Bailey, De Witt, *Guns & Gun Collecting*, Octopus Books, London, UK 1972

Bailey, De Witt & Nie, Douglas A., *English Gunmakers – The Birmingham and Provincial Gun Trade in the 18th and 19th Centuries*, Arco Publishing Co., NY 1978

Blackmore, Howard L., *Gunmakers of London 1350 – 1850*, George Shumway, York, PA 1986

Blair, Claud, *Pollard's History of Firearms*, Macmillan Publishing Company, NY 1983

George, J.N., *English Pistols and Revolvers – An Historical Outline of the Development and Design of English Hand Firearms from the Seventeenth Century to the Present Day*, Small-Arms Technical Publishing Company, NC 1938

Jackson, Herbert J., *European Hand Firearms of the 16th, 17th, & 18th Centuries*, Bramhall House, NY 1923

Lampe, Douglas, Multiple Interviews

Miller, Martin, *The Collector's Illustrated Guide to Firearms*, Mayflower Books, NY 1978

Mowbray, Stuart, E-mail correspondence, July 12, 2021

Munson, H. Lee, *The Tap Action Pistol*, The American Rifleman, October 1991

Munson, H. Lee, *The Mortimer Gunmakers - 1753-1923*, Andrew Mowbray Publishers, Lincoln, RI 1992

Peterson, H. L., *Early Repeating Firearms, Pollard's History of Firearms*, Macmillan Publishing Company, NY 1983

Prince, Tim, *18th Century Twist-Off Flintlock Pistol, by Verncombe*, College Hill Arsenal, Nashville, TN

Prince, Tim, *Pair of Silver Mounted Pocket Pistols by Grice c1779*, College Hill Arsenal, Nashville, TN

Prince, Tim, *Tap Action Pistol by Thomas Perrins of Windsor, UK*, College Hill Arsenal, Nashville, TN

Weaver, David S., *English Gunmakers in the 18th Century: Gunmakers or Screwers Together*, American Society of Arms Collectors Bulletin 110, Sept. 2014, https://americansocietyofarmscollectors.org/wp-content/uploads/2022/06/2014-B110-English-Gunmakers-18th-Century.pdf

Wieland, Terry, *The Trials of Clan Mortimer*, Gray's Sporting Journal, June 2, 2022, https://www.grayssportingjournal.com/the-trials-of-clan-mortimer/

Winant, Lewis, *Early Percussion Firearms*, William Morrow & Co., NY 1959

Various Websites