# ON THE ROAD TO COLONEL COLT: A MULTI-SHOT FLINTLOCK PISTOL ON THE LORENZONI PRINCIPLE BY H. W. MORTIMER

by John Burgoyne



Central to the study of early firearms is the history of the gunmaker's search for reliable multi-shot firepower. Mechanisms and devices invented over the years saw many false steps and faded hopes until the first appearance of Colt's revolver after 1835. Although he owed a debt to early inventors, it was Samuel Colt who finally delivered an efficient and widely popular multi-shot weapon. It is with one of these early pioneers that this study is concerned, and the development of a magazine pistol that enjoyed a surprisingly long life.

Michele Lorenzoni, a late 17th century Florentine gunmaker, is credited with inventing an 8 shot pistol that saw some popularity through the beginning of the 19th century. The unusual mechanism and the efficacy of the Lorenzoni design will be discussed along with its history. The illustrated pistol has an interesting history of its own and is a fine example of the final type of this weapon developed by a leading London gunmaker H. W. Mortimer. Like the flintlock revolvers of Twigg, Nock and Collier,<sup>1</sup> Mortimer's pistol became obsolete within a couple of decades of manufacture.

# The origin of the design, what is a magazine pistol?

The mid-17th century witnessed a number of designs for multishot weapons employing magazines to hold powder and shot. Three main types may be identified but a detailed discussion of these is not necessary here. There are a several sources for further information by various scholars: Claude Blair (former keeper of the metalwork department at the Victoria and Albert Museum in London)<sup>2</sup>, Howard Blackmore (of the Royal Armouries)<sup>3</sup> and the American scholar H.L. Petersen.<sup>4</sup> For a good summary, see also John Hayward (Blair's predecessor at the V&A).<sup>5</sup> The Lorenzoni design was, as noted, one of the three principal systems and became the most enduring. It employed two channels within the butt of the weapon to store a reservoir of powder and balls; and was mostly employed on pistols although long arms were also made. Although attributed to Michele Lorenzoni it seems unlikely that he was the actual inventor. His working life spanned the closing and opening decades at the turn of the century (1684 to 1733) whilst there are examples of similar guns by a Bolognese maker Giacomo Berselli (who worked ca.1660 to 1700) and Bartholomeo Cotel of Genoa (ca.1670-1700).<sup>6</sup> There are however few examples of the work of these other makers whilst several guns and pistols signed by Lorenzoni have been identified.<sup>7</sup>

The Italians were not alone, at least two Austrian makers<sup>8</sup> produced examples and an English maker John Cookson is famous for a particularly magnificent magazine gun made at the end of the 17th century. That gun is now in the Royal Armouries collection in Leeds, England, and was purchased by the State at auction in 1993.<sup>9</sup> There are two other such guns by Cookson,<sup>10</sup> but little is known about the man himself. He had a son of the same name who is assumed to have immigrated to the States and worked as a gunsmith in Boston, and who also produced breech loading magazine guns.<sup>11</sup>

There is a famous reference by Samuel Pepys in his diary, dated Jul 3rd, 1662, wherein he mentions "*a gun to be discharged seven times, the best of all devices I ever saw, and very serviceable, and not a bauble; for it is much approved of, and many made thereof*".<sup>12</sup>

Given the date Pepys is obviously not referring to a Lorenzoni gun and it is possible that his interest was sparked by one of the



Figure 1. The action cocked and ready to fire (left). The spring loaded cover to the priming magazine (between the cock and the pan) is closed. The pan is open with the channel in the rotating floor exposed; this scoops priming powder from the adjacent magazine when the lever on the reverse turns the breech block for loading (right).

earlier magazine designs. A German, Peter Kalthoff, who worked in the Netherlands and Denmark, is recorded to have invented a magazine system in 1640.<sup>13</sup> The system operated by the rotation of the trigger guard through 180 degrees, to extract powder from a reservoir in the butt and a ball from a tubular magazine under the barrel. Subsequently Lorenzoni may have had a hand in developing a pistol that employed two tubular magazines attached to the barrel delivering powder and ball to the breech. The earliest known example is signed *T. Lefer a Velenza del Po 1668*,<sup>14</sup> but it was the magazine in the butt system, commonly known as the Lorenzoni system, that found greater popularity and a description of how it operated follows.

After what would seem like a minor flurry of activity in the late 17th century to early 18th century, magazine pistols fell from favour. This is not surprising given the complexity of the mechanism and the challenge of manufacturing a safe and workable weapon. It does not take much imagination to appreciate the danger in having a handful of explosive powder in one's hand with the risk of ignition from escaping gases. There are surviving examples with their butts destroyed attesting to this risk. What is interesting is that there appears to have been a modest resurgence of interest in the mid-18th century and we do find examples by prominent makers. Surviving examples are not surprisingly very few. They were for the most part pistols and tended to follow the form of the popular turn-off or "Queen Anne" pistols of the day, having cannon shaped barrels and round bulbous butts, inlaid with silver wire and sporting a grotesque face mask butt cap.

At the end of the century H. W. Mortimer applied his talents to pistols manufactured on the Lorenzoni principle and produced several of them, the most famous being a pistol for Admiral Lord Nelson (his crest is found on the escutcheon) and presently found in the Metropolitan Museum of Art collection in New York. About 14 or 15 repeating magazine pistols by Mortimer are known. The pistol illustrated and discussed here is one of them and came to light in an Italian auction about five years ago. It has some interesting and unusual characteristics.

#### How does it work?

If a picture is worth a thousand words, here we have three.<sup>15</sup> Various authors have described the mechanism and the following,

it is hoped, will achieve clarity where others have created some confusion.

All magazine pistols operate with the requirement that there be two separate receptacles for powder and balls. Although in fact there are really three, the third for priming powder. On this pistol there is a small trap door on the face of the action, to the left of the pan, for priming powder (Figure 1). This sits under the bottom of the pan that rotates when the pistol is cocked loading itself in the process. On the reverse side is another trap door giving access to two channels that reach back and down into the butt containing powder in the lower and balls in the top (Figure 2).



Figure 2. The magazine trap door is open exposing the reservoirs for balls (top) and powder (bottom), channels contained within the butt.

A vertically mounted revolving cylindrical breech block is attached to a lever on the left side of the pistol. The pistol is gravity fed and to load it the muzzle is pointed down and the lever pulled forward, clockwise (when viewed from the left side), through 180 degrees (Figure 3). This rotation allows the breech to collect a ball in a recess in the block and powder into the powder chamber (this chamber is fitted with a cross bar to stop the ball from going into it). The lever is taken through another 45 degrees and by means of a couple of internal cams the pan is closed and the cock pulled back ready for firing. The lever is then turned back through 225 degrees (to align with the profile of the butt). This movement delivers the ball to the breech of the barrel with the powder chamber sitting behind it lined up with the touch hole.



Figure 3. **A**) The barrel faces down and the lever is turned clockwise, through 225 degrees, allowing the rotating breech to accept powder and ball from the magazines. **B**) The lever is pulled back anticlockwise 180 degrees allowing the ball to be deposited from the rotating breech into the barrel. **C**) The lever is fully returned to its resting position (a further 45 degrees) allowing the powder charge in the breech to line up behind the ball. The weapon is ready to be discharged. Note: a. Rotating breech block; b. Ball chamber in breech block; c. Powder chamber in breech block; d. Lever.<sup>15</sup>

It is readily apparent that the machining required could not allow many mistakes and when one considers the available technology it is remarkable that these pistols could be made to work efficiently. Fouling would presumably have been a problem, but the critical requirement that everything sit tight would be of paramount importance. Various writers have speculated that the paucity of surviving examples attests to their rate of self destruction. More likely, there are few examples surviving because these pistols required the skills of vary capable gunsmiths and would have been expensive to manufacture. It needed Samuel Colt to solve that problem. Furthermore, some pistols show signs of considerable use. One example referenced by the Mortimer biographer Lee Munson has a very worn frizzen face on an altogether loose pistol; evidence of considerable usage but with an intact weapon.<sup>16</sup> By contrast another he illustrates from the Smithsonian collection shows its butt to have exploded.<sup>17</sup> There can be little doubt that these were dangerous weapons but perhaps not to the degree popular folklore would have us believe.

# Who was Harvey Walklate Mortimer?

H. W. Mortimer was the principal of one of London's preeminent gun making firms at the end of the 18th century, a business continued by his son and for some time in partnership with his brother. Harvey operated out of premises at 89 Fleet Street at the time this pistol was made and was responsible for the production of a wide variety of fine guns, pistols and blunderbusses. He had a contract with the East India Company (1796 to 1806) and was commissioned to make lavishly decorated presentation arms for eastern potentates. He was appointed gunmaker to George III in 1783.<sup>18</sup>

No discussion on the Mortimer dynasty would be complete without acknowledgement to Lee Munson's book *Mortimer Gunmakers*. *1753-1923*.<sup>19</sup> This excellent study provides a wealth of information collected by Lee over a lifetime of collecting. He sadly passed away a couple of years ago and had been working on a sequel, adding much new information. Tragically, the manuscript has not been found.

As noted, Mortimer made all manner of firearms and is famous for his dueling pistols that are sometimes distinguished by the shape of their stocks (with a pronounced curling in the butt like a walking stick and distinctive carving on the bottom – the latter feature being found on the subject pistol in Figure 4). Space does not permit an examination of the many fine examples of Mortimer's work, but it is interesting to realize that at the close of the era, when the flintlock had reached its apogee, a London gunmaker would seek to reintroduce a magazine pistol on the early Lorenzoni design.

Mortimer's magazine pistols were for the most part lighter, of smaller bore and longer than the present example. In his book Munson identifies 12 examples; two are found in the Metropolitan Museum of Art, two in the Smithsonian with the rest in private collections and the finest, not surprisingly, formerly owned by Clay Bedford and Keith Neal.<sup>20</sup>

#### The subject pistol and the Nelson connection

This pistol is massive and not so easily held, it requires a large hand and a firm grip (Figure 4). It weighs 4 lbs. 1  $\frac{1}{4}$  ozs and has an overall length of 15  $\frac{1}{2}$ " with the barrel at 7" and .55 calibre (28 bore). The barrel turns off for cleaning (it would have employed an octagonal key over the barrel for this purpose) and is very heavily constructed with walls of  $\frac{3}{16}$ ". Except for its weight it resembles a dueling barrel with its beautifully patterned steel and octagonal form. There is a hinged foresight at the muzzle.



Figure 4. From top to bottom, side view of pistol with the lever in resting position (here the pistol is cocked and ready to fire). Detail of lock plate showing the engraved lion, palm tree and pyramid with Mortimer's name and address. Top view of pistol with the lever in the resting position (here the pistol is not loaded and cocked). The top vent is visible, this allows surplus explosive gasses to escape harmlessly away from the powder magazine. The "Nelson" style shield escutcheon. The underside of the pistol with the lever forward for loading. The characteristic Mortimer carving on the butt is well illustrated. The underside again, this time with the priming magazine shown open.

The action is robust and suggestive of a fowling piece rather than a pistol. The frizzen spring is neatly hidden under the pan which, as noted above, has a priming chamber with a spring-loaded door attached to it (Figure 5). The frizzen spring has a friction wheel built into it. The top of the breech has a vent for escaping gases and is engraved with a starburst which seems to have been a common decoration for this part of all of Mortimer's Lorenzoni pistols (Figure 4). However, the rest of the decoration departs from typical Mortimer pistols and closely resembles that made for Nelson.

Nelson's pistol is decorated on its lock plate with a tiger, a palm tree and a pyramid. Munson makes the association between these Egyptian motifs and Nelson's victory over the French fleet at the battle of the Nile (August 1-2nd, 1798). The Tiger references his earlier successes in India. The pistol is marked *H.W. Mortimer, Gunmaker to his Majesty*, as is the subject pistol. In June 1799

Mortimer's son, of the same name finished his apprenticeship and the firm became H.W. Mortimer & Co.

In the circumstances it is logical to conclude that the Nelson pistol was made at some time during the latter portion of the ten months period bridging these two events. The subject pistol is similarly decorated with a palm tree and a pyramid on the lock plate it also has a large cat that could be either a lion or a tiger. No other example is known with the pyramid and palm tree decoration.

There are other similarities. Most of these pistols had a wagon wheel escutcheon (a central oval with spokes joining an outer wheel). However, both of these pistols have simple shield escutcheons, the Nelson pistol being engraved with his coat of arms, whilst the subject pistol is left vacant (Figure 4). Both have large 28 bores and short barrels (the Nelson being a <sup>1</sup>/<sub>2</sub>" shorter). It does not require a large leap of faith to imagine that the pistols were made at the same time although who the owner of the present example might have been is a mystery. A complex stand of arms engraved on the top of the breech contains a small crescent on a shield;<sup>21</sup> suggestive perhaps of an eastern connection but that does not help that much as the overall decoration is subtle and very English. The best that can probably be said is that there is good reason to believe that the two pistols sat on Mortimer's bench together, with Nelson as the intended recipient of one of them. Perhaps someone in his circle received the other.



Figure 5. A close up of the underside of the action. The bottom of the roller wheel on the frizzen spring is visible and the spring itself which is elegantly contained within the casing for the rotating pan.

It is interesting to contemplate how Nelson came to own such a piece. Munson hypothesizes, and it seems reasonable, that the pistol might have afforded the Admiral a particularly efficient weapon given that he only had one arm (he lost his right arm in the battle of Santa Cruz in 1797).<sup>22</sup> Loading would have been easier without the need to ram home a bullet and wad with multiple shots reducing the need for frequent reloading, furthermore the end of the breech lever could be fixed to a notch in a belt allowing recharging with one hand. It is an interesting theory although the lever is on the wrong side for a left-handed shooter. Any holster holding such a pistol would be a large and cumbersome accessory, and Nelson was not a large man; but that would have been an issue for any user. A bulky four pounds appendage vs a pair of pistols stuck in a belt, neither seems that attractive. The pistol was donated to the

Met in 1935 by Charles Noe Daly. It has an Irish registration mark on it (EC-1273 for county Cork East Riding). This was stamped on pursuant to legislation in 1843; such marks are found occasionally on English made guns meaning that the item was in Ireland at that time although in this instance whether it was still used might be questionable.

#### Some comments on restoration

A ticklish subject invites some discussion here. When purchased the barrel on this pistol showed signs of having been crudely filed to remove some pitting. It was then polished. The result was a wavy barrel, with brightly shining file marks! The decision to refinish was not difficult, and fortunately a very competent gunsmith and engraver were available. The barrel had sufficient thickness that there was no problem dressing it down to a uniform smoothness. However, this involved removing some of the name and address engraved on the barrel flat, so in advance macro pictures were taken and wax rubbings made. Macro images of engraving and further rubbings from other guns and pistols by Mortimer were obtained. From the latter the new engraver was able to identify which of two or three engravers had done the original work and then determine the sequencing of cuts and the engraver's style. With an outline remaining on the barrel the engraving was redone with similar hand tools employed over 200 years earlier. The result looks the same as it probably did when it left Mortimer's shop.

Re-engraving (or "refreshening" as it is sometimes called) is almost always a bad idea. This task was approached with considerable trepidation; but considering the barrel as it was, it was deemed a risk worth taking. It was in fact a huge success. There is some minor pitting on the action but over all the new barrel better mirrors the condition of the pistol generally.

In an unrelated discussion with a member,<sup>23</sup> the author was provided with a quote from the Greek philosopher and Poet, Plutarch. The same is reproduced below as a fitting note to end this topic and conclude this brief article:

The ship wherein Theseus and the youth of Athens returned had thirty oars, and was preserved by the Athenians...for they took away the old planks as they decayed, putting in new and stronger timbers in their place, insomuch that this ship became a standing example among the philosophers, for the logical question of things that grow; one side holding that the ship remained the same, and the other contending that it was not the same.

-Plutarch, Vita Thesel

# Endnotes

- 1 A useful introduction to these early revolvers can be found in George, J. N., *English Pistols and Revolvers*, Small-Arms Technical Publishing Co., Onslow County, N. Carolina 1938, p.150. See also Nicholson, Ben. "Elisha Collier's Amazing Revolvers", *Arms Heritage Magazine*, Vol.7 No. 3 (June 2017); and Nicholson, B. and Williams, D., "A Fresh Look at the Collier Revolver", *Man at Arms* (April and August 2020).
- 2 Blair, Claude *Pistols of the World*, B.T. Batsford Ltd, London 1968, pp. 54-55.
- 3 Blackmore, H.L. *Guns and Rifles of the World*, Viking Press, New York 1965, pp. 85 - 87
- 4 Petersen, H.L. *Pollards History of Firearms*, Macmillan, New York 1983, pp. 206 209
- 5 Hayward, J.F. *The Art of the Gunmaker*, Barrie and Rockliff, London 1963, Vol. II, pp. 57 59.
- 6 Blair, Op. Cit. p.55.
- 7 Blackmore, *Op. Cit.* plates 656 658: examples from the Royal Armoury Turin (M.64) and Tojhusmuseet, Copenhagen (B 1006); note also Hoopes, T.T. "The function of the Perfected Lorenzoni Repeating Flintlock System", *Arms and Armour Annual* Vol I, Ed. Robert Held, Follett Publishing, Chicago, 1973, p. 217.
- 8 Blair, Op. Cit. P.55.
- 9 Sold at Christie's, London, *The Wilfred Ward Collection*, Lot 40, for 47,700 pounds (Oct. 27th. 1993).
- 10 Blackmore, Op. Cit. Plates 659 663.
- 11 Ibid. p 74.
- 12 Latham, Robert and Matthews, William, *The Diary of Samuel Pepys*, Vol 3:1662, University of California Press, 2000. See also www.pepysdiary.com/diary/1662/07/03

- 13 Blair *Op.Cit.* p. 54. A member of the Kalthoff family is also recorded in London (See Blackmore, ibid p. 85).
- 14 Gusler, W. B. and Lavin, J.D. Decorated Firearms 1540 -1870 from the Collection of Clay P. Bedford, The Colonial Williamsburg Foundation, Virginia 1977 P. 184.
- 15 Gratis Claude Blair Op. Cit. p. 176.
- 16 Munson, H Lee, *The Mortimer Gunmakers 1753-1923*, Andrew Mowbray, Rhode Island 1992. Ch.13.
- 17 Ibid. pp.234/5.
- 18 Blackmore, H.L., *Gunmakers of London 1350 -1850*, George Shumway, York, Penn., 1986. P.146.
- 19 Munson, Op. Cit.
- 20 Clay Bedford is generally considered to have been the foremost American collector of English firearms and is famous for the exhibition of *Early firearms of Great Britain and Ireland*, at the Met in 1971. The catalogue incidentally shows three Lorenzoni style pistols at Plates # 127, 129 and 130 (the latter referenced by Munson above). Keith Neal amassed what was undoubtedly the largest collection of early British and European guns and pistols ever assembled and published extensively on his collection through the Great British Gunmakers series produced by Historical Firearms and Sotherby's in the UK.
- 21 Referenced by Dr. John Byck (member and Assistant curator , Arms and Armor, Metropolitan Museum of Art) as a possible clue without comment.
- 22 Munson, Op.Cit. p.226
- 23 Matthew Schneiderman (consultant on aesthetics, philosophy and classical literature.....!).

