A HIGH QUALITY GERMAN WHEEL-LOCK SPORTING RIFLE

By Lee Bull, Jr

Figure 1. A full-length left side view of the Pappenheim wheel-lock in near original condition as made in 1666.

The swamped, sighted, octagonal barrel of this fine German rifle is cut with eight grooves, dated 1666, and signed by Hieronymus Jeger, a gunsmith known to have worked during the last half of the 17th century in Regensburg, a city in south-east Germany near the modern Czech border (Figures 1 and 2).

The rear of the lock plate (Figure 3) is engraved with a scrolling floral pattern above a scene of hunting dogs chasing a stag against a blackened recessed ground; the wheel cover of pierced ironwork is cut into a floral pattern which repeats the pattern engraved on the rear of the plate, as do the pieces of pierced iron which cover the inner end of the cock spring and the lower portion of the cock (The term cock is a translation of the German word Hahn, or "rooster," so-called because it looked like the head of a rooster to the 16th and 17th marksmen who used these weapons). The top of the cock is cut into the shape of a two-headed eagle, the symbol of the Holy Roman Empire, led at that time by the Austrian House of Habsburg. The jaws projecting to the rear at the top of the cock hold the piece of pyrite required for ignition of the priming powder in the pan. Protruding from the center of the wheel cover is the outside end of the axle upon which the wheel revolves; this end of the axle is filed square in order to accept a wrench, or spanner, in order to turn the wheel about three-quarters of a turn, until the lock is cocked. Note that the cover is open in Figure 2, exposing the wheel and the ridges cut into it to help facilitate the soft pyrites to spark.

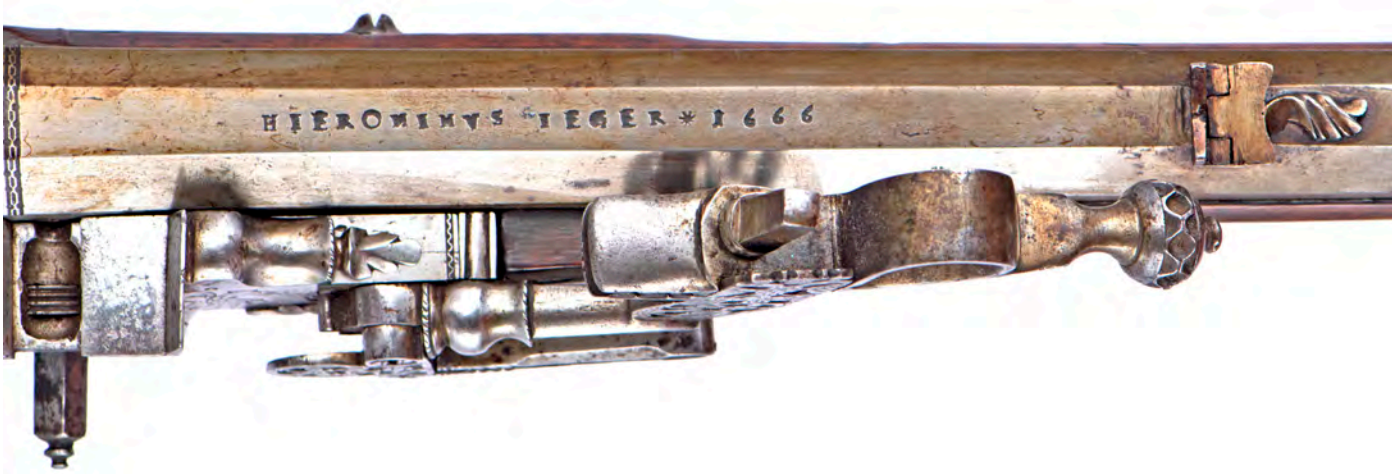

Figure 2. Viewed from the top, the mark of the barrel maker, Hieronimys Jeger[1]. This view also reveals some of intricate detail such as the scrollwork at the rear sight and the ornate ball on the cock.

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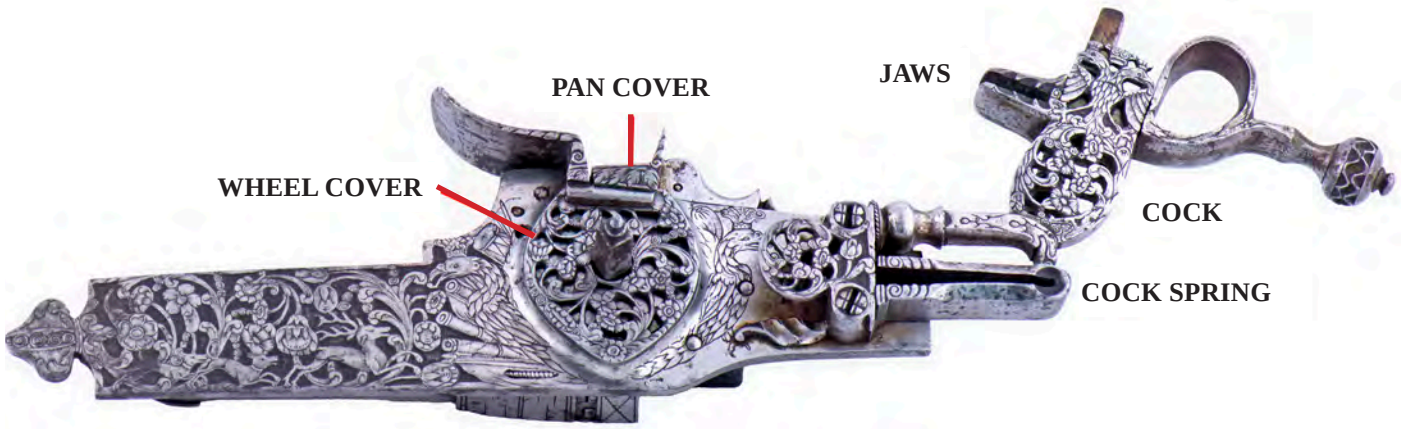

Figure 3. The cock is detailed with two hounds pursuing a stag. Hiding within the flower at the stag's fore feet is a child's face. The crowned eagles to front and rear of the wheel cover represent the Holy Roman Empire and the Austrian Eagle is reproduced again on top of the cock.

Every muzzle-loading firearm prior to the invention of percussion ignition required use of priming powder in a pan external to the barrel; in order to carry a firearm primed and ready to fire, whether match lock, wheel lock, or flint lock, the pan had to be covered until the shooter was ready to fire in order to prevent the loss of his priming powder. With a match lock musket, the pan cover was manually rotated horizontally by the shooter, as he readied to fire, out of the way of the falling match. The frizzen of a flintlock combined a surface from which the flint would scrape burning pieces of metal, as well as a cover for the pan, which was forced open as the hammer fell. The pan cover on a wheel lock was forced forward out of the way of the pan when the wheel began to rotate at the pull of the trigger by a lug filed into the axle on the interior side of the lock plate, enabling the cock, with the pyrites in its jaws, having previously been rotated rearward by the shooter to rest on the pan cover, to be forced downward onto the rotating wheel by the cock spring.

The interior of the lock is shown in Figure 4. The rear half of the lock is dominated by the massive main spring, the upper arm of which is strongly secured to the lock plate, and the central portion by a heavy iron bridle which secures the inner end of the axle on which the wheel revolves, the tip of which is visible as what appears to be the end of a screw protruding into the bridle's upper right corner. This bridle also encloses the tip of the lower branch of the main spring and protects a very short chain connecting the spring with the axle, which allows the spring to drawn up tightly to achieve maximum possible compression. Nearly hidden in figure 4 behind the bridle is the top of a part which is connected to the pan cover and transfers the energy of the main spring to force the cover forward when the trigger is pulled; the bottom of this part referred to as the pan cover pivoting extension link is also visible, just below the bridle, held to the plate by a screw on which it pivots. The pan cover is caught in the forward, or open, position by the sear on the long bar spring which is attached by a screw just to the rear and slightly above the tip of the spring which engages the wheel when the lock is cocked. The pan remains open following discharge. When the shooter had reloaded and primed the rifle, he would have pushed downward on the forward tip of the long flat bar spring into which the sear to hold the pan open was cut, releasing the pan cover. Propelled by the spring at the bottom left of the inside of the lock plate, the cover mover attached to the cover is propelled to the rear, as does the cover itself, positioning it over the pan once again. The cover can be manually opened by pushing it forward with one's thumb until it engages the sear which holds it open. Admittedly, the mechanics of a wheel lock are complex; but they display the high level of engineering and artistic skills 16th and 17th century locksmiths. Unfortunately, this wonderful piece of craftsmanship is not signed; the maker remains unknown.

The maker of the finely finished full-length walnut stock with fluted fore end, is, however, known, at least by his monogram, "AS," accompanied by the Regensburg city mark, situated on the stock just to the rear of breech of the barrel. The initials, in con-

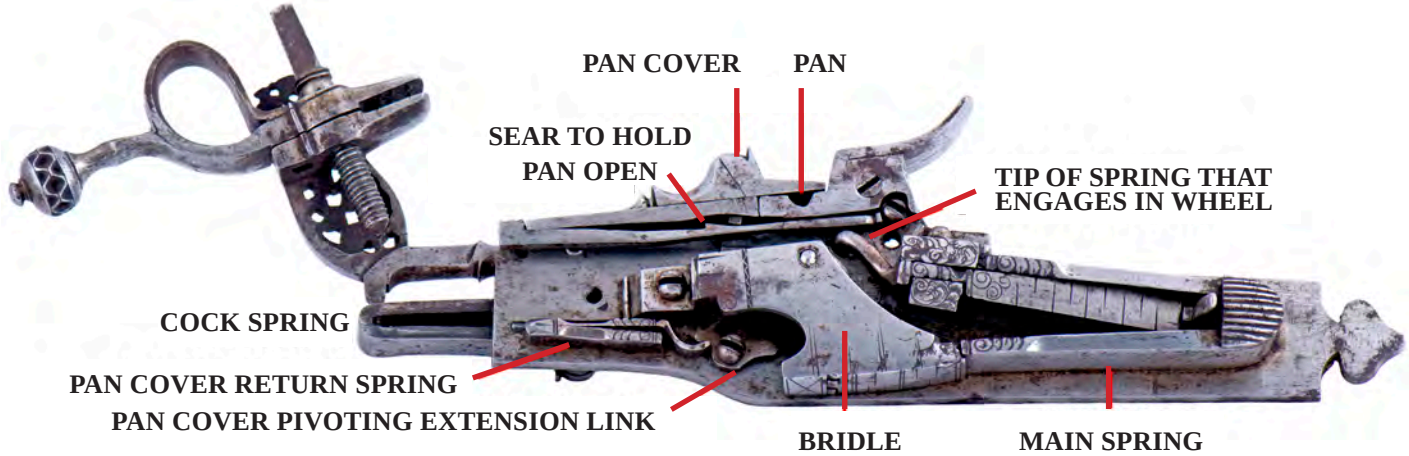

Figure 4. The interior view reveals the workings. At left end of this photo is the heavy main- spring that powers the cock. The pan is at the top– look for the black hole under the pan cover.

Figure 5. Left - The cheek piece inlaid in bone with the intricate von Pappenheim coat of arms. Forward of the large coat of arms is the impressed seal in red of a later owner–the von Stauffenberg family. Right - You may not be able to make out the stock maker's initials "AS" on the wood just to the rear of the breech; quite possibly they identify the maker as Andreas Schmidt, of Regensburg, a stock maker who died in 1670[2]. The retriever has a mouth full of duck.

Figure 6. The hounds have brought the boar to bay and the hunter is armed with a spear in this panel of horn on the patch box cover.

Figure 7. The underside of the stock warrants only bone inlays surrounding an intricate floral pattern wood carving. Even where it is not treated with bone inlays, the walnut of the stock has been finely engraved with lines and patterns. Note that the metalwork forward of the screw has a scroll or flourish that mimics the one at the front sight. The seven-hole bone plate on the bottom of the stock covers a hole to drain any water which might enter the lock mortise during a rainstorm, an unusual feature.

junction with the Regensburg provenance, lead to the tentative conclusion that "AS" was Andreas Schmidt, a stock maker who is recorded to have been working in Regensburg in 1631, and who died there in 1670.

The form of the stock is unusual to modern eyes; this rifle is a "cheek gun," that is, one which has a short butt stock and is to be supported only by the arms, which also assume the recoil, and to be held against the right cheek for sighting. It is NOT placed against the shoulder.

The most outstanding feature of the stock is the bone inlay of the coat of arms of the owner into the cheek piece (Figure 5, left); the arms are those of the von Pappenheim family, created Hereditary Marshals of the Holy Roman Empire by Emperor Ferdinand II in 1628 in thanks for the distinguished service of Graf Gottfried Heinrich von Pappenheim as a leading general of the Imperial Army in the Thirty Years War, which raged in central Europe, primarily in Germany, from 1618-1648. Also seen in Figure 5 is the red wax seal of the von Stauffenberg family, to which this rifle was given at some point in its history, as well as the iron ball attached to the butt, known as the grounding ball, to protect the horn butt cap from damage.

The stock exhibits delicate wood carvings on much of its surface. In addition, on the left flat of the stock at the breech there are engraved bone inlays, including of a hunting dog, and inlaid bone tendrils, stars and little bone pellets (Figure 5, right), while on the rear of the right side of the stock, there is a second bone inlay of a hunting dog with further bone tendrils, stars and pellets, just above the patch box cover, on which is a veneer of horn, engraved with a boar hunting scene similar to those also found on powder horns of the period (Figure 6). On the underside of the rifle there is a small oval wood carving of flowers surrounded by an inlaid bone border, to the rear of which there is a seven-aperture water drain beneath the lock, a most unusual feature (Figure 7). Additionally, the gun has its original engraved bone ramrod bridge and fore end cap, original wood ramrod with engraved bone tip, and set trigger.

This rifle was not built for a king, with no precious metals or ivory inlays, but it is of the highest quality workmanship for a ranking noble, and also is in nearly new condition. The rifle has not been shot in centuries, for the barrel has been preserved by pouring molten beeswax down the bore. It was truly good fortune when I was afforded the opportunity by a good friend to acquire it in 2014; I am very proud to have the opportunity to possess this beautiful work of the gun maker's craft for a few years, before it is passed on to its next steward.

Although complex, the wheel lock provided more certain ignition than the flint lock, which was developed in the early 17th century. However, the flint lock had largely superseded the wheel lock by 1700 in most of Europe due to due its simplicity, lower cost, and relative ease of manufacture.

A prior version of this article appeared in Washington Arms Collectors' magazine, GunNews, in 2020, the arm having won Best of Show at the 2019 Annual WAC display show. The author wishes to thank Frank Martin for his excellent photography, which made this article possible.

Endnotes

1. *Der Neue Støckel*, Vol 1, p 590.
2. *Der Neue Støckel*, Vol 2, p 1129. Støekel notes that the connection of Andreas Schmidt to the stock maker's initials AS has not been established with certainty.