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“MUSKETS AND HANDGONNES INLAID WITH BONE” –  
ORNAMENTS OF HAND-HELD FIREARMS  
IN THE 16<sup>TH</sup>–17<sup>TH</sup> CENTURIES

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**Słowa kluczowe:** zdobnictwo, Europa Środkowa, broń palna, zamek lontowy, sztuka renesansowa

**T**echnological developments and more and more advanced differences between particular kinds of firearms led already in the 15<sup>th</sup> century to the origin of workshops of gunsmiths, who specialised in the manufacture of hand-held firearms. This new craft developed intensively in the next century. Gunsmith masters were initially associated in guilds together with cutlers, blacksmiths or clockmakers. However, they soon became independent and divided into further specialised branches, such as barrel, gunstock or lock makers (Kobielski 1975, p. 59; Szymczak 2004, pp. 87–88; Nowakowski 2011, p. 150).

The earliest types of hand-held firearms were not only rather prone to damage, but also quite uncomfortable and relatively expensive in use. Firing the new weapon was particularly troublesome, and it could be done in two ways. In the case of smaller, which naturally meant lighter, specimens, the gunman could hold the weapon under his right armpit and elbow and fire the charge with his left hand. In the case of barrels, which were heavier and of larger calibre, and could therefore not be held under the armpit, another person was needed. When the gunman held the weapon ready to fire, his assistant touched the priming powder with a glowing rod or slow match. In both cases it was a difficult task, as one needed to touch a point with a diameter of a few millimetres (Durdík 1979, p. 4). These complications, less significant in a battlefield or during a siege, rendered the use of firearms impossible for sport or hunting aims, when one had to fire at moving targets.

A certain improvement can be seen as late as the 2<sup>nd</sup> half of the 15<sup>th</sup> century, when barrels started to be provided with primitive matchlocks. It was an S-shaped bar, a so-called “serpentine”, where the slow match was placed into one of its ends, and the other end acted as a trigger. This partially re-

lieved the shooter's attention, and he was more able to concentrate on aiming (Kobielski 1975, p. 39). Shooting at moving targets also became possible, as it can be said based on a record from the archive of the town of Cheb from 1459. Local shooters were provided with funds for shooting by the town council, and in the said year expenses were recorded "für einen siberen ryngk, hett man den puchschuzcen, darumb zu schiessen auffgewurffen" (Durdík 1965, pp. 542–543; 1979, p. 5).

Further progress in the development of hand-held firearms was marked by the invention of weapons provided with wheellocks and their introduction into popular use<sup>1</sup>. This kind of weapon was on the one hand more complicated with regard to its construction, but it was permanently ready to fire and it relieved the shooter of a burdensome need to take care of a glowing slow match or a kettle full of charcoal (Szymczak 2004, pp. 50–51; Strzyż 2008, pp. 132, 136).

In the 16<sup>th</sup> century, the development of hand-held firearms went in two separate directions. The first one was production for the needs of the military. The increase in importance of professional mercenary troops necessitated weapons, which were cheap to manufacture, easy to use and capable of being supplied in large quantities. The arquebus or the musket provided with a matchlock met these requirements, and these weapons were used in battlefields as late as the Thirty Years War (1618–1648) (Kobielski 1975, p. 59; Żygulski 1975, p. 160; Biernacki 2006, pp. 36–39).

Weapons manufactured for the needs of an individual customer were a completely different matter. Such weapons were supposed to be not only infallible, but they were also to distinguish their owners from the crowd of similar men. Therefore, in this case there was no room for standardisation, but rather for artistry and lavishness of ornamentation. Such weapons were, as already mentioned, manufactured by gunsmiths, but also by gunstock makers and wood-carvers, gunstock makers-engravers and goldsmiths. The latter were supposed to ornament the weapon with "gilding, engraving, all kind of stamping, coating in brown, encrusting, polishing, dying, with bone, various paints, and encrusting with mother-of-pearl" (Kobielski 1975, p. 59). In the mid-16<sup>th</sup> century, mentions of expensive specimens of parade firearms start to appear in the inventories of nobility's testaments. Although in Poland it was the edged weapons that were still considered the most important, e.g., carabellas or so-called Hungarian sabres, proportions of firearms among possessed weapons were growing. It was the result of both the appreciation of the importance of these

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<sup>1</sup> For more data on its construction see Szymczak 2004, pp. 50–51; Strzyż 2011a, pp. 660–662, fig. 3; 2011b, pp. 345–346, fig. 1, with information on previous scholarship.

new weapons in possible battlefields and the artistic qualities these weapons could be provided with.

In the ornamentation of hand-held firearms from the 16<sup>th</sup> century onwards, techniques hitherto used for ornamenting of swords, crossbows or staff-weapons started to be applied. Metal elements of weapons, that is, first of all, the lock plate, but also the barrel, were especially convenient places to apply various kinds of ornamentation. On the other hand, the gunstock, which was usually made of wood, was inlaid with organic materials, such as horn, bone and mother-of-pearl, but also with precious metals (Żygulski 1975, pp. 167, 286–287).

The earliest records of privately owned specimens of hand-held firearms can be found in the inventories of burghers of Kraków as early as the 2<sup>nd</sup> half of the 15<sup>th</sup> century (Wilk-Woś 2001, p. 75). It is, however, first in the sources concerning personal weapons of the nobility from the 16<sup>th</sup>–17<sup>th</sup> centuries that we can notice their very frequent occurrence. For instance, in posthumous records of Greater Poland's nobility from the 17<sup>th</sup> century, firearms appear in 2/3 of all the documents. Quite often in one nobility's residence even a dozen or so or a few dozens of specimens were recorded (Pośpiech 1992, p. 111; 1999, p. 191). In the inventory recorded in Kiekrz after the death of Chrystian Kierski Castellane of Rogoźno, the following firearms were mentioned: "five pairs of pistols and three «flint» rifles, two muskets and six «wheellock» bandolier guns as well as two «**mountaineer-style 'tschinkes' with powder horns ornamented with silver**»" (Pośpiech 1992, pp. 76, 79, 83).

A considerable popularity of hand-held firearms can be also seen in burgher houses. E.g., after the death of a Poznań furrier Andrzej Rozman in 1627, the following weapons remained: "one pair of short small handgonnes, a pair of small half-hakes, a pair of tschinke bird rifles, one pistol, a long bird rifle and a powder flask with a key". What was recorded after the death of a municipal scribe Wojciech Rochowicz in 1635, was "**a large musket, inlaid with bone**, a long smaller musket, a bird-rifle, 2 long half-hakes (...), a long **handgonne, inlaid with bone**, a carbine with a belt, a bird rifle with a belt, some smaller carbines, a musket, three equal half-hakes with belts, two identical pistols, four various handgonnes, an ornamented pistol, one bird rifle, two carbines, **a pistol with a red holster**, a small wooden shield, seven various cartridge pouches, four duelling powder flasks" (*Inwentarze...* 1981, pp. 419, 500–501)<sup>2</sup>.

<sup>2</sup> For the sake of comparison, an Elbląg brewer Hans Noge in 1667 left two muskets, three pairs of pistols, three handgonnes (including two bird rifles, a carbine, a bandolier gun and a leather pouch for ammunition, a leather bag for shots, a bone powder flask as well as

In other territories of the Commonwealth of Both Nations the situation was similar. Documentary evidence from Halych from 1696 can serve as an example. At the end of April, brothers Bazyli and Jan Hołyński Bakajewicz brought an action at the local castle court against their sister-in-law Teresa Giedyminówna, Krzysztof's widow. They charged her with appropriation of movable property left by the deceased, which was due to them. Both documents vary a great deal with regard to their contents, but, concerning the issue of interest in this paper, both brothers said that the deceased had left 21 items of firearms (the widow mentioned 12 only) and a "**beautiful small ivory powder flask with embroidery**" (according to the widow "a small ivory powder flask" only) (Pośpiech 1992, p. 23).

At present, hand-held firearms which are dated to the 16<sup>th</sup>-17<sup>th</sup> centuries are kept in quite large quantities in museums. These firearms, however, are often anonymous, as it is quite seldom that any data on their user (or users) are known. Furthermore, the chronology of such firearms is determined in a very general way only. The largest stores of weapons were obviously kept at magnates' residences, but petty nobility did not stay behind and their arsenals are often mentioned in testaments and inheritance records. Wealthier representatives of urban patriciate, e.g., in Lviv, Kraków, Gdańsk and Elbląg, also possessed a few items of firearms, both short and long ones. These weapons were often lavishly ornamented (Kobielski 1975, pp. 62-64; Klonder 2000, pp. 57, 77, 104-105).

Modern period firearms consist of three main elements, that is, the barrel, the lock and the stock. Many researchers who deal with firearms tend to discuss these parts and their development separately, as they were usually manufactured by different craftsmen. This is no question true, but what was the most important was the final product and a harmonious performance of its all components (Żygulski 1975, p. 160).

The main way of ornamentation of the barrel was fluting and faceting; barrels were also sometimes inlaid with precious metals, such as gold or silver. What was most frequently ornamented, was the muzzle and the bottom part (Müller 1979, p. 66, fig. 41). However, specimens with the entire surface being ornamented with geometrical or floral motifs, sometimes with relief figural symbolism, were no exception. Barrels made of Damascus steel were especially highly valued. What mattered, was not only their higher utilitarian value, but also their appearance, as unique ornaments could be made on their surfaces. Such weapons were first of all manufactured in specialist Spanish workshops, and they are found relatively rarely

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three bullet moulds and an iron spoon for casting bullets. 13 items of firearms altogether, cf. Klonder 2000, p. 57).

in Central Europe. Their excellent reputation also led to attempted forgeries of Iberian products. Another way to possess a rifle with a damascened barrel was to re-mount captured Turkish specimens, which were relatively easily available in the territory of present-day Slovakia or Hungary (Kulašik 1978, p. 26).

High competence of craftsmanship of those days is particularly noticeable in the case of the locks of firearms. These were first of all ornamented with engraving and incising, or plating with another metal (bronze, brass, silver or gold). Nevertheless, ornaments incised on the plate of the lock dominated. The plate of the wheellock was particularly convenient for ornamenting due to its considerable surface. Individual elements of the wheellock, such as the wheel and its cover or the cock, were also ornamented. On the other hand, most part of “tschinke” rifles, whose mechanism is open, are covered with brass sheets, additionally ornamented with floral motifs. Deep or shallow relief was used, with hunting, military or mythological motifs (see below). Craftsmen often depicted battlefield scenes, e.g., related to anti-Turkish wars (Slovakia, Hungary, Austria). In the 17<sup>th</sup>–18<sup>th</sup> centuries, during the Baroque period, developed acanthus motifs, sprigs, fantastic animals and hunting scenes are more common (Kulašik 1978, pp. 26–27).

The last part, that is the stock, was not forgotten either. It was possibly caused by the fact that this part was the least durable, as wood deteriorated quickly, especially in unfavourable weather conditions. Due to this, inlaying of the stock with precious organic raw materials, such as bone, horn, mother-of-pearl, apart from obvious visual values, was also supposed to protect the stock against premature destruction. Ornamentation with horn and bone referred directly to ornamentation of Gothic and Renaissance crossbow stocks, which were also inlaid with these materials, often on the entire available wooden surface (see, e.g., Müller 1979, p. 91, figs. 64–66; Durdík, Dolínek, Šáda 1986, No. 60). Mounted elements were covered with figural ornaments – most commonly with hunting and military scenes. Against this background, ornamented “tschinke” hunting rifles stand out, with their entire stocks being covered with bone or horn lining, with engraved scenes, which were additionally dyed with appropriate colours (Kulašik 1978, pp. 28, 123; Malečková 2002, p. 63, No. 4; 2005a, pp. 24–25, No. 9; 2005b, p. 6).

Apart from horn and bone, geometrical patterns were also created. These were made by hammering thin iron or silver wires into wood. These wires were additionally provided with colourful bone, horn or pearl. Yet another way of ornamentation was to carve heads of such animals as lions or dragons in wood (Dolínek 2004, pp. 105, 107, figs. 120, 123).

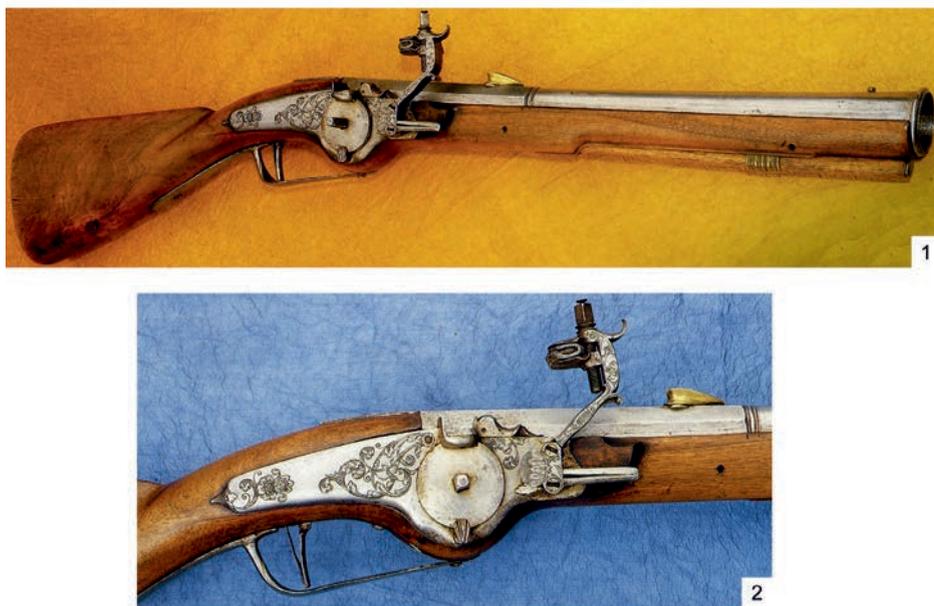
Proper raw materials were necessary to manufacture a valuable stock. As in the case of crossbows, deciduous wood dominated. Apart from popular species, such as maple, elm or beech, fruit woods were first of all used: cherry wood and pear wood. From the 17<sup>th</sup> century onwards, walnut also started to be used. The most estimated subspecies were the North Italian and the Caucasian ones. These were very expensive, which is why local species were often used as well (Kobielski 1975, p. 61; Kulašik 1978, p. 28). Sporadically, other materials than wood, such as ivory, were also used to manufacture the stock (Temesváry 1982, Nos. 42–44; 1989, p. 80, No. 276, Pl. 97; Lugosi, Temesváry 1989, No. 30; Dolínek 2004, p. 89, fig. 100). Stocks could also be manufactured entirely of iron (Durdík, Dolínek, Šáda 1986, Nos. 71–73; Dolínek 2004, pp. 35–36, figs. 27–28).

To conclude the discussion on ornaments of individual components of weapons, it must be added that additional rivets, a loop-shaped trigger guard, bands attaching the butt plate to the stock, as well as the stock of the barrel, were vital components of such weapons. Also these parts were subject to analogous ornamental procedures as in the case of the aforementioned components, so that the entire weapon constituted a coherently composed set.

While discussing the decorative arts, we can identify several ways of ornamenting the weapons in question. First of all, only the plate of the lock and its external components (such as the wheel cover or the cock) could be ornamented. In more expensive and more luxurious specimens, also the stock and the barrel were ornamented. To sum up the discussion on ornaments of individual components, we can identify several ways, from the most modest to the most representative specimens:

1. ornamented plate and components of the lock, finesse of forms;
2. ornamentation of the lock and the stock;
3. ornamentation of the plate, the stock and the barrel;
4. ornamentation of the stock and possibly of the barrel, with the lock being unornamented;
5. the stock being made entirely of other materials (e.g., bone or horn).

Utilitarian or purely battlefield specimens were the most common. Such firearms were either completely unornamented or with some moderate ornament only, which did not overshadow the nature of the weapon. An example is a cavalry half-hake from the 17<sup>th</sup> century, where only the stock and the butt are modestly ornamented with inconspicuous silver wire, which forms a floral ornament (Žygulski 1982, p. 198, fig. 207:c). The plate and the cock of a blunderbuss from the collection of the Military Museum in Prague (ca. 1660) are ornamented with an engraved floral motif, but also with ter-



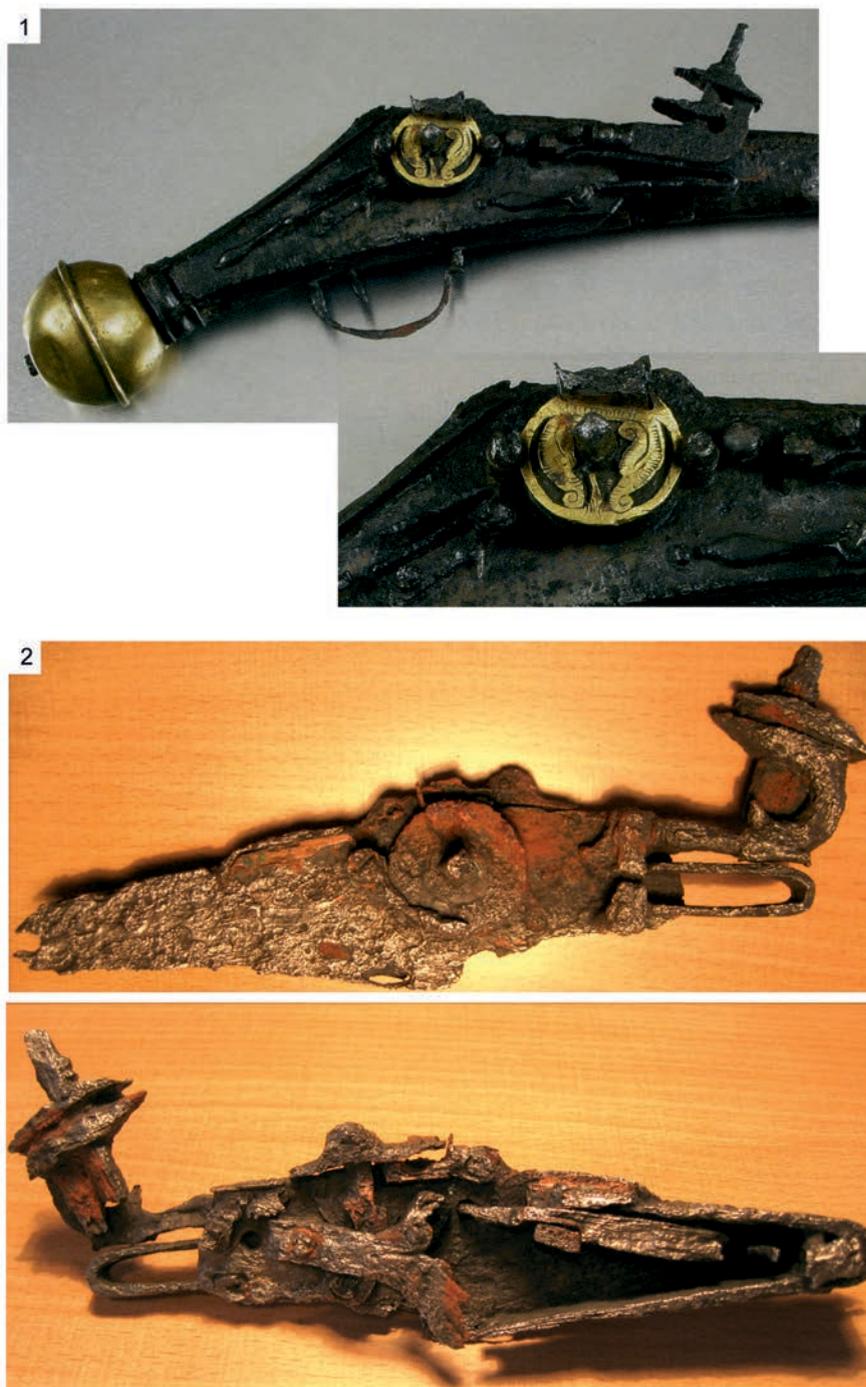
**Fig. 1.** 1–2 – blunderbuss, ca. 1660 (after Dolínek 2004, figs. 101–102)

minals in the shape of dragon heads (figs. 1:1–2). A floral motif can also be seen on the locks of a pair of pistols from 1660 (Durdík, Dolínek, Šáda 1986, No. 89; Dolínek 2004, pp. 88, 90–91, Nos. 99, 101–102).

One of a few finds acquired in the course of systematic archaeological works is also worth mentioning. It is a fragment of a hand-held firearm, provided with a wheellock, from the castle in Inowłódz (fig. 2:2)<sup>3</sup>. The plate of the lock, the wheel cover and the priming pan cover are covered with a brass sheet. This was supposed both to protect the components of the weapon against destructive influence of products of gunpowder combustion and to decorate the weapon. The cock of the lock is also quite unique. It is slender and bent in the shape of an S letter, thus being similar to cocks of “tshinke” hunting rifles. Finds of weaponry were discovered in Room V in the south-western wing of the castle, which was abandoned after the fire in 1561–1563 (Augustyniak 1992, p. 110; 1996, pp. 212–213; Strzyż 2011b, p. 363).

A similar scheme of ornamentation can be seen on a wheellock pistol, made in a German workshop and stored in the collection of the castle in Bojnice in Slovakia. The entire lock is deprived of ornaments, and it was only

<sup>3</sup> For more data on this weapon see Strzyż 2011, pp. 357, 359, fig. 5.



**Fig. 2.** 1 – wheellock pistol, about second half of the 16<sup>th</sup> century (after Malečkova 2005a, No. 17);  
2 – wheellock, Inowłódz castle, about second half of the 16<sup>th</sup> century (after Strzyż 2011, fig. 5)

the wheel cover that was inlaid with a brass sheet. The sheet was trimmed into a decorative floral motif. The butt was also made of a brass sheet. The specimen is dated to the 2<sup>nd</sup> half of the 16<sup>th</sup> century (fig. 2:1) (Malečkova 2005a, pp. 40–41, No. 17).

Next, the ingenuity of manufacturers focused on improving the appearance of the lock, especially the plate, the cock or the wheel cover. Sometimes it was sufficient to subtly underline the lightness of the form, which was achieved by adding various kinds of wings or by curling the edges, etc. These practices are particularly visible in the case of hunting rifles, the so-called *tshinkes*, but also in the case of 16<sup>th</sup> century arquebuses. Fanciful forms were first of all given to the vice jaws of the cock – the end part of the upper (movable) one was shaped into a squiggle (Żygulski 1982, pp. 196–197, figs. 205, 206:a, b). It was also attempted at providing the trigger guard with lightness (figs. 3, 5) by means of forming it into a complicated profiled shape (Kobielski 1975, p. 61; Żygulski 1982, pp. 72–75, Nos. 63–65; Czerwiński 1989, p. 44; Malečkova 2002, p. 63, fig. 4; 2005a, pp. 24–25, No. 9).

The next stage of providing the weapon with individual features was related to processing its stock. In simpler specimens, only a few tiny elements were mounted, which were made of metal (e.g., rosettes), or bone plates (a cavalry pistol, Germany, 16<sup>th</sup>/17<sup>th</sup> centuries, Żygulski 1982, p. 191, fig. 198:a). Alternatively, motifs could be studded with ornamental wire. This procedure could be developed, and thus even the entire stock could be covered with ornamented bone or horn plates, or a metal sheet (a hunting arquebus, Germany, late 16<sup>th</sup>–1<sup>st</sup> half of the 17<sup>th</sup> centuries; Żygulski 1982, p. 197, fig. 206). Two possible ways were available here. The entire ornament or the scene of representation could be made directly, e.g., of horn, and then mounted in properly shaped hollows of the stock (figs. 4–5). This method seems to be more labour-consuming, but it perhaps results in a better visual effect. On the other hand, the entire plate could be mounted on the stock (e.g., the butt is a very convenient location), and then a genre scene or a geometrical ornament could be made on the surface of the plate. In the course of processing, engraved edges could be shaded or even dyed, in order to provide the image with additional depth (Tarassuk 1972, No. 9; Żygulski 1982, p. 197, fig. 206:b; *Russian Arms...* 1982, Nos. 58–59). In extreme cases of the most luxurious examples, it is difficult to find a slightest portion of the surface which is unornamented – a true *horror vacui* (Durdík, Mudra, Šáda 1977, Pl. VI:a–b; Tarassuk 1989, figs. 11–16; Temesváry 1989, pp. 90–91, Pls. 62–63, cat. No. 351; Dolínek 2004, pp. 37, 60–61, figs. 29–30, 64–66). The stock could also be entirely covered with a sheet of metal (copper, silver or gold),



**Fig. 3.** 1 – flintlock rifle, second half of the 17<sup>th</sup> century (after Miller 1982, fig. 54:b); 2 – snap matchlock arquebus, about 1575-1585 (after Tarassuk 1972, No. 32); 3 – wheellock hunting arquebus, 1581 (after Tarassuk 1972, No. 33)

and the ornament could be placed on it using a burin, or by hammering, thus providing the depiction with convexity (Tarassuk 1972, Nos. 24–25).

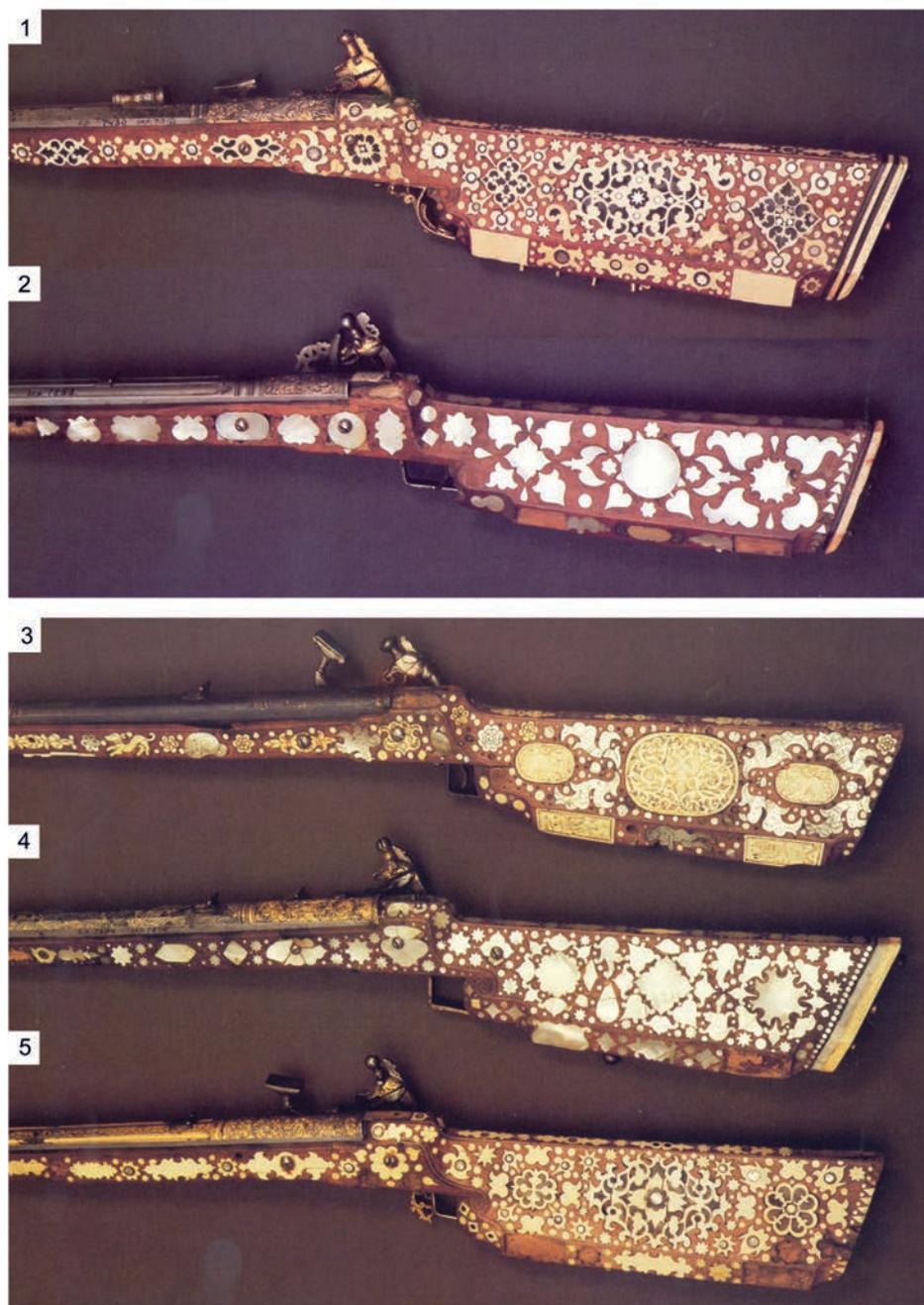
For the sake of additional effect, the barrel itself also underwent decorative practices. Most commonly, any ornament was made using tools or

acid. It was then polished to high gloss, and, in order to provide it with more expressive contrast, unornamented portions of the barrel were painted or blackened.

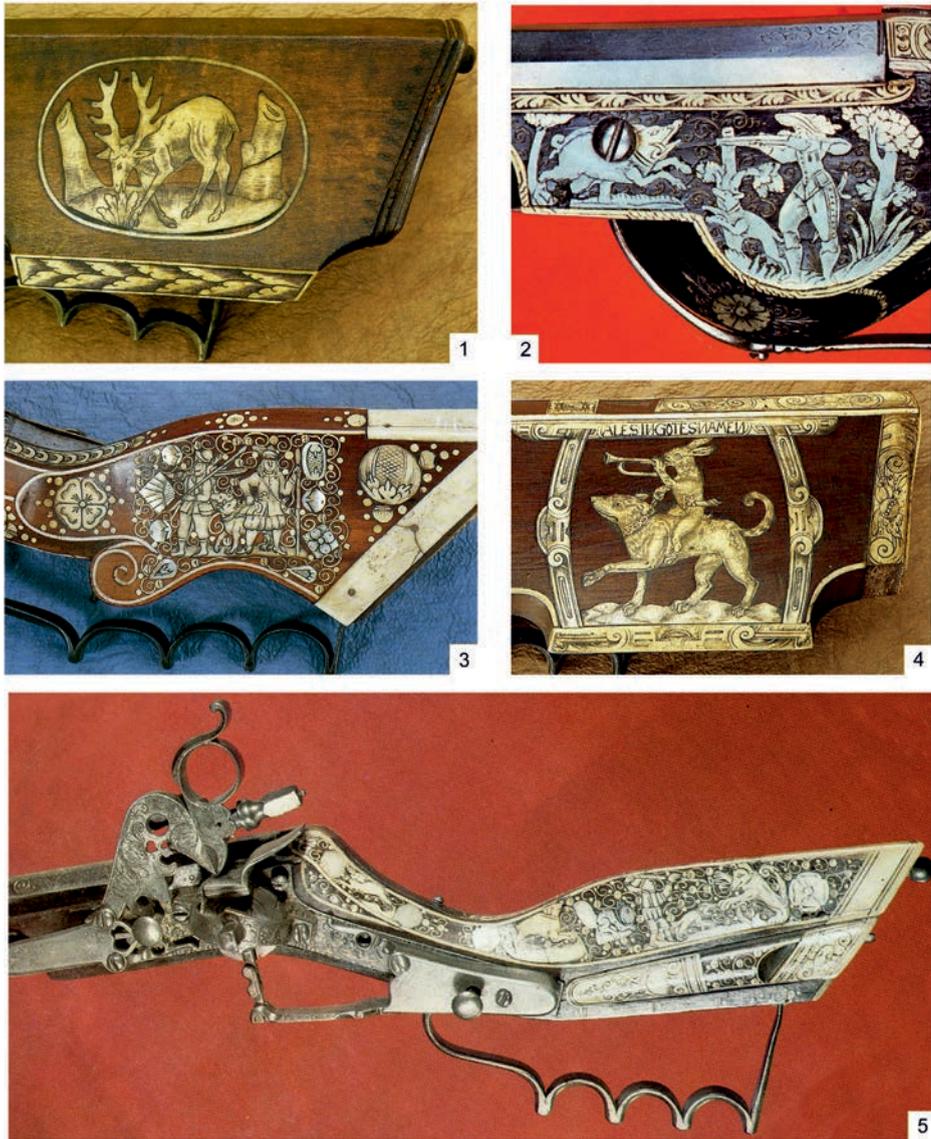
Another crucial stage of our discussion is the analysis of ornamental motifs on particular components of weapons. Their variety is enormous, and a discussion of all the cases could be a subject of a separate broad study. This is why in this paper we will describe them in a brief manner only, with a division into the most characteristic and popular groups.

The simplest ones were plain compositions made of geometrically shaped plates or metal spangles. Such elements usually constituted the ornament of the stock. Therefore, they were usually bone, horn or mother-of-pearl plates of various shapes, which could be additionally dyed with any colour (figs. 3:1; 4:1–5). Other compositions could be made of such elements – checkerboards of various colours, flowers, stars and the like (e.g., Kalmar 1971, fig. 138; *Russian Arms...* 1982, Nos. 50, 52, 54, 63–64; Malečková 2005a, pp. 24–25, No. 9). Individual floral motifs were another option – twining flower sprigs, sometimes depicted in relation to zoomorphic elements, as in the case of the afore-mentioned blunderbuss from the 2<sup>nd</sup> half of the 17<sup>th</sup> century (Durdík, Dolínek, Šáda 1986, No. 89; Dolínek 2004, fig. 102) (fig. 1:1–2), Russian arquebuses from the 2<sup>nd</sup> half of the 17<sup>th</sup> century (*Russian Arms...* 1982, Nos. 52–54), or pistols from the National Museum in Budapest from the 16<sup>th</sup> century (Lugosi, Temesváry 1989, fig. 16).

This modest pattern of ornamentation can be seen relatively rarely, as genre scenes are more common. It seems that in the first place one is to mention depictions which can be generally referred to as hunting scenes. Images of the game as such, which are directly related to the motif of hunting, are to be included into this group. There are many splendid specimens of weapons, which are ornamented in this way, that can be related to the application of this kind of symbolism in weapons, which were meant for hunting, especially in the case of “tschinke” rifles. Among the depictions, there is are individual games, such as, e.g., deers (a wheellock rifle from 1661, Dolínek 2004, pp. 84–85, figs. 94–95; Temesváry 1989, Pl. 98, No. 205) (fig. 5:1), foxes (a wheellock rifle from 1663, Dolínek 2004, p. 94, fig. 102) or hares (Temesváry 1989, Pl. 64) (fig. 5:4). Hunting dogs were also popular (a “tschinke”, mid-17<sup>th</sup> century; Durdík, Dolínek, Šáda 1986, No. 91; Dolínek 2004, pp. 75–76, figs. 84–85) (fig. 5:4), as well as entire scenes with the hunt for big game (e.g., wild boar or bear), with depictions of the said game, hunting dogs, battue, and hunters themselves (sometimes mounted), armed with staff weapons (spears) and firearms (fig. 5:1–2,5) (a “tschinke”, the Polish Army Museum, 17<sup>th</sup> century; Czerwiński 1989,

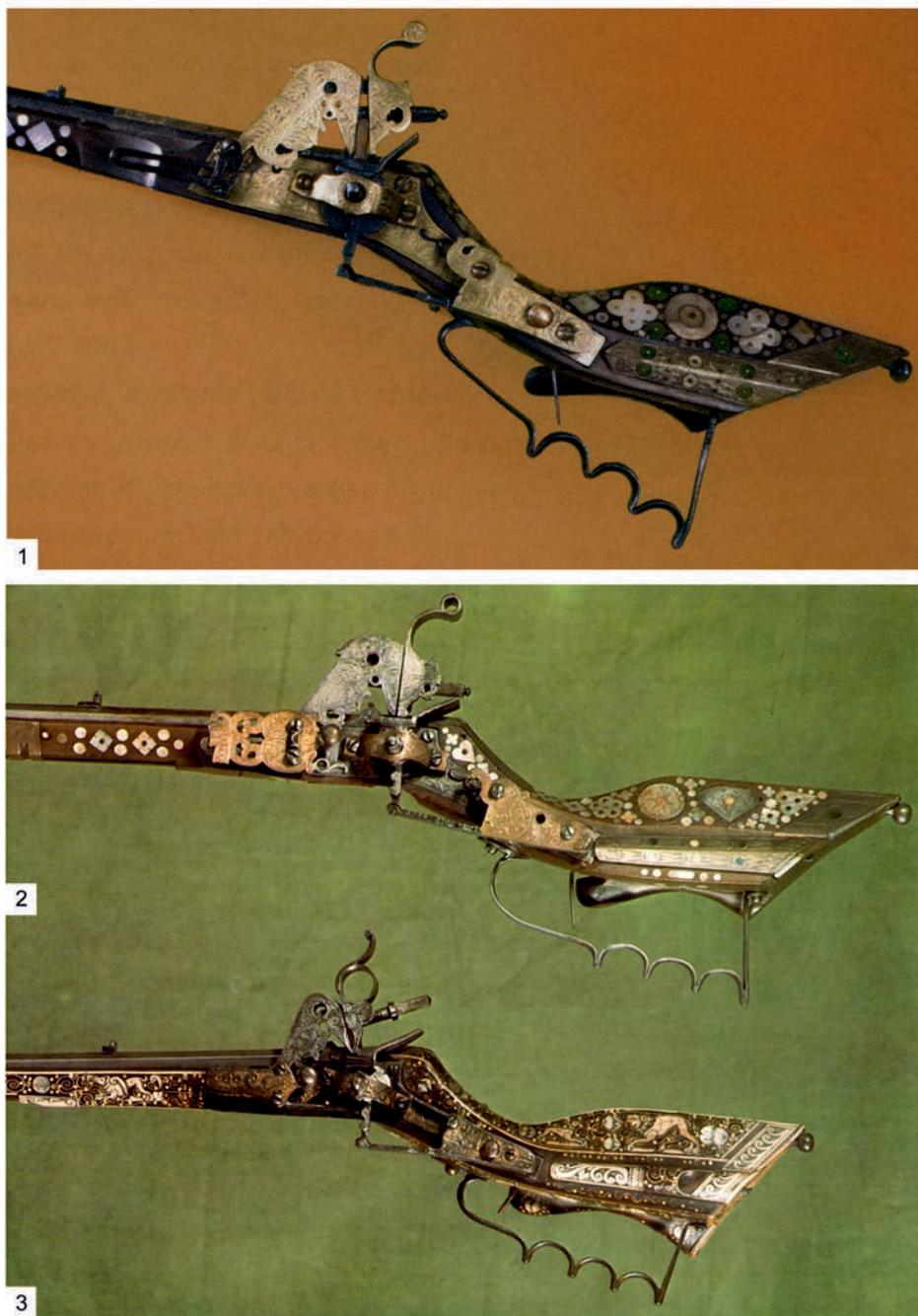


**Fig. 4.** 1 – flintlock gun, second half of the 17th century (after Miller 1982, fig. 52:a); 2 – Flintlock rifle, second half of the 17<sup>th</sup> century (after Miller 1982, fig. 52:c); 3 – flintlock rifle, mid-17<sup>th</sup> century (after Miller 1982, fig. 53:a); 4 – flintlock rifle, second half of the 17<sup>th</sup> century (after Miller 1982, fig. 53:b); 5 – flintlock rifle, second half of the 17<sup>th</sup> century (after Miller 1982, fig. 53:c)



**Fig. 5.** 1 - wheellock rifle, 1651 (after Dolínek 2004, fig. 95); 2 - wheellock pistol, ca. 1620–1630 (after Tarassuk 1972, No. 97); 3 - “tschinke” rifle with wheellock, about 1650 (after Dolínek 2004, fig. 85); 4 - wheellock rifle, 1591 (after Dolínek 2004, fig. 43); 5 - “tschinke” rifle with wheellock, 17<sup>th</sup> century (after Czerwiński 1989, p. 44)

p. 44; a wheellock rifle, mid 17<sup>th</sup> century; Dolínek 2004, pp. 74–75, figs. 82–83; Tarassuk 1972, No. 70; cf. also Hoff 1969, fig. 100). In the case of hunting scenes, it was attempted at making use of the entire available surface of the weapon. Therefore, the part of the stock, which directly adjoined the



**Fig. 6.** 1 – “tschinke” rifle with wheellock, mid-17<sup>th</sup> century (after Malečkova 2005a, No. 9); 2 – “tschinke” rifle with wheellock, 17<sup>th</sup> century (after Żygulski 1982, No. 63:a); 3 – “tschinke” rifle with wheellock, 17<sup>th</sup> century (after Żygulski 1982, No. 63:b)

barrel, was ornamented with depictions of the small game (foxes, hares) in a scenery of the floral sprigs, and often with bands of the battue (Kalmár 1971, fig. 139; Lewerken 1988, fig. 21; Temesváry 1989, Pl. 64). On its part, the butt of the weapon, which was significantly wider, offered more room for the craftsman to demonstrate his skill and to prepare more complex depictions. Figures of hunters with firearms were the most commonly portrayed topic (Tarassuk 1972, No. 97; *Russian Arms...* 1982, Nos. 95–97), followed by staff weapons (Dolínek 2004, pp. 75–76, Nos. 84–85) or swords (Blackmore 1964, p. 52; Lugosi, Temesváry 1989, No. 15), they could've been accompanied by dogs too (Tarassuk 1972, No. 97; Pfaffenbichler 1988, fig. 10; Dolínek 2004, pp. 75–76, Nos. 84–85), the canines often fighting a “ferocious beast” – a wild boar, a deer or even an exotic lion (Tarassuk 1972, Nos. 70, 97, 215; Lugosi, Temesváry 1989, No. 15; Temesváry 1989, Pls. 88, 91, 94).

The so-called “tschinke” was an especially popular weapon, exclusively meant for hunting purposes. This is a type of a light hunting rifle, equipped with a wheellock of special construction. The wheellock was installed on the external side of the stock, not inside it. This weapon was remarkable for a lavish ornamentation of its barrel, stock and lock. The latter was characterised by its decorative form, with particular reference to the cock and brass components. The stock in the shape of a so-called deer's hoof was manufactured using precious species of wood and inlaid with bone, horn or mother-of-pearl (fig. 6:1–3). Hunting scenes depicted on lateral surfaces of the stock are often schematic in their nature, thus referring to traditional Silesian folk art (fig. 5:3,5). The name of these rifles comes from the main centre of manufacture in Cieszyn (German: *Teschen*) (Gradowski, Żygulski 1988, p. 94; Kwaśniewicz 2004, pp. 63–66; Dolínek 2004, pp. 75–76).

Battle scenes depicted on the stocks are also of a dynamic nature. These are sometimes march-pasts of troops or muster parades, or a battle of two armies. Depictions of castles and sieges can also be found. Such an unusually complex scene can be seen on the stock of a Hungarian arquebus from 1626 (fig. 7:1–2). Around a masonry fortress, from whose walls cannon barrels protrude, there is a camp of besieging troops, also equipped with firearms. Tents are put up, and in the background there are marching detachments of musketeers and pikemen (Temesváry 1989, p. 90, Pls. 62–63). Other examples are perhaps less spectacular, but they are still noteworthy for their artistry. A scene of cavalry combat can be seen on the stock of an arquebus from ca. 1680 (Dolínek 2004, pp. 100–101, Nos. 114–115). On a hunting arquebus with a combined matchlock and wheellock there is a scene of *Landsknechts* fighting with pikes and swords, engraved in a bone plate (Tarassuk 1989,



**Fig. 7.** 1-2 - flintlock gun, 1621 (after Temesváry 1989, Pls. 62-62); 3 - wheellock rifle, about 1590 (after Dolínek 2004, fig. 40)

p. 155, No. 4). A wheellock rifle made by Peter Danner in Nürnberg at the end of the 16<sup>th</sup> century is of a similar nature. This craftsman depicted left-hand dagger combat exercises of men-at-arms on a dyed bone plate (Dolínek 2004, pp. 44–45, Nos. 39–40) (fig. 6:3).

Religious scenes are somehow related to battle scenes. The former, however, are actually limited to depictions of St. George fighting the dragon. Such a scene can be seen, e.g., on the wheellock rifle from the 1<sup>st</sup> half of the 17<sup>th</sup> century, stored in the collection of the Hermitage in St. Petersburg (*Russian Arms...* 1982, fig. 58:b) (fig. 8:1). Other motifs related to Christian mythology are also widespread, e.g., Noah and his Ark during the Great Flood on a hunting rifle from the late 17<sup>th</sup> century from the collection of the National Museum in Bratislava (Haban 1990), or figures of Adam and Eve on wheellock pistols from the mid-16<sup>th</sup> century (Tarassuk 1972, No. 16, figs. 13, 16; Müller 1979, p. 67, figs. 45–47).

Depictions of fantastic animals and figures are also a very common motif. In the case of the “fauna”, mythical beasts occur, such as, e.g., a griffin on the butt of a wheellock rifle. The wheellock was made by Johann Waligura in the late 17<sup>th</sup> century (Durdík, Dolínek, Šáda 1986, No. 90; Dolínek 2004, pp. 110–111, Nos. 127–128) (fig. 8:5). The dragon was another popular beast. In this case, there are two variants of its occurrence. The first one could be an element of figural art, engraved on the plate of the lock or the lining of the butt (fig. 8:4), as it is the case of a pistol combined with an axe from the 1<sup>st</sup> half of the 17<sup>th</sup> century (Lewerken 1988, No. 12, figs. 14, 17). Another variant was the end part of the butt carved in a shape of a dragon’s head (a castle hackbut from the late 17<sup>th</sup> century; Dolínek 2004, p. 107, figs. 122–123) (fig. 8:2), or near the muzzle (a wheellock rifle from the mid-16<sup>th</sup> century; Dolínek 2004, pp. 32–33, Nos. 21–23; a wheellock musket from the mid-17<sup>th</sup> century, Kobielski 1975, fig. 34) (fig. 8:3). Mysterious faces of bearded men can also be often found (Müller 1979, fig. 46; Lewerken 1988, fig. 14; Malečkova 2005a, pp. 20–21, No. 7).

The last group of motifs is related to the art of the Renaissance deriving from the Antiquity. Due to this, there are many depictions of antique figures. Naked feasting figures in characteristic semi-recumbent positions (Tarassuk 1972, No. 30). Mars (fig. 8:6), Venus, Diana and Leda were also preferred characters, which were taken from the Mediterranean mythology. Quite often, not only the figures themselves, but also the entire scenes were depicted (Kobielski 1975, p. 72; Blackmore 1964, p. 39). A spending example is Mars, the god of war, rushing in full armour in a battle chariot, depicted on the lock of a 17<sup>th</sup> century pistol from the National Museum in Budapest (Lugosi, Temesváry 1989, No. 21; cf. also Tarassuk 1972, No. 72).



**Fig. 8.** 1 – flintlock rifle, second half of the 17<sup>th</sup> century (after Miller 1982, fig. 58:b); 2 – hackbut with flintlock, about 1680 (after Dolínek 2004, fig. 123); 3 – wheellock rifle, about 1550 (after Dolínek 2004, fig. 23); 4 – axe combined with flintlock pistol, first half of the 17<sup>th</sup> century (after Leverken 1989, fig. 17); 5 – wheellock rifle, about 1690 (after Dolínek 2004, fig. 128); 6 – wheellock rifle, about 1630 (after Dolínek 2004, fig. 63)

This necessarily abbreviated overview of ornamental motifs of Renaissance and Baroque firearms must be completed – no question – with a remark that in most cases several motifs were applied on one weapon specimen. This was both a combination of geometrical and figural motifs, which is often seen in the case of “tschinke” rifles (e.g., Malečkova 2002, p. 63, fig. 4; 2005a, pp. 24–25, No. 9; 2005b, p. 6; Dolínek 2004, pp. 75–76, figs. 84–

85) (fig. 5:5). Individual motifs of figural stylistics were put together equally eagerly, e.g., battle and hunting scenes (e.g., Temesváry 1989, Pls. 62–64), or Antiquity and hunting motifs (e.g., Tarassuk 1972, No. 72). There was a complete freedom regarding this, and the only limits were the skills of the manufacturer. On this occasion, it is obvious that such weapons as the specimens discussed above could not be manufactured by an ordinary gunsmith or gunstock maker. The best draughtsmen participated in their manufacture, and these specialists were responsible for a general project and drawings of individual elements<sup>4</sup>. Afterwards, the gunsmiths manufactured the metal elements based on prepared patterns, and these elements were passed for further processing to engravers, chisellers, etchers and goldsmiths, and it was them who undertook the proper work related to ornamentation of metal parts. At the same time, gunstock makers manufactured the stock, in which fields for plates were also trimmed. These plates were made of bone, horn, mother-of-pearl or possibly other, more precious species of wood (Kobielski 1975, p. 72).

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To sum up our discussion, it can be said that a decision to purchase lavishly ornamented specimens of hand-held firearms was first of all aimed at underlining the social status achieved by an individual, and thus at standing out from the numerous crowd of alike people. Due to a high price of such luxurious specimens, the purchase was also a sort of capital investment. This can be said based on the testament legacies, mentioned at the beginning of this paper. In such testaments, every specimen was usually described in detail. It should be also remarked that ornamentation practices also improved the battlefield value of the weapon. Thanks to the presence of bone lining on wooden elements, the weapon was more resistant to the impact of humidity, dust or sun. Inlays on the components of the lock protected them against destructive, caustic products of gunpowder combustion. The latter remarks do not concern the most luxurious specimens, which were used rather spo-

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<sup>4</sup> Extant works of painting were often used for creation of patterns which were to be depicted on the weapons. The gunsmith Hans Schmid may serve as an example here. He was active in the 2<sup>nd</sup> half of the 17<sup>th</sup> century, and he made use of the works of the Italian painter and graphic artist Antonio Tempesta (1555–1630). Tempesta's works were very popular among craftsmen for a considerable period of time. Drawings with exotic animals, such as elephants or ostriches, were used with particular eagerness, cf. Pffaffenbichler 1988, pp. 73–74.

radically and were especially cared for. The surviving specimens also testify for a sublime taste of our ancestors, who wanted to underline their noble origin. Truly, was it a real matter for a wealthy owner to spend a handful of gold coins, if in exchange he received a weapon, or actually a work of art, which distinguished him from a crowd of mob?

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## STRESZCZENIE

### „MUSZKIETY I RUSZNICE KOŚCIĄ SADZONE”, CZYLI RZECZ O ZDOBNICTWIE RĘCZNEJ BRONI PALNEJ W XVI–XVII WIEKU

Rozwój ręcznej broni palnej w XVI w. przebiegał w dwóch odrębnych kierunkach. Pierwszy to produkcja na potrzeby armii, drugi to broń wykonywana na potrzeby odbiorcy indywidualnego – szlachcica czy bogatego mieszczanina. Tutaj egzemplarze nie tylko powinny być niezawodne, ale przede wszystkim wyróżniać właściciela z tłumu jemu podobnych. W tym przypadku nie było więc miejsca na standaryzację, a raczej na kunszt i przepych zdobnictwa. Ich produkcją zajmowali się rusznikarze, sztyftarze ze snycerzami, sztyftarze-rytownicy oraz złotnicy.

Wysoki kunszt ówczesnego rzemiosła widoczny jest szczególnie w przypadku zamków broni. Było to przede wszystkim rycie i wycinanie w żelazie, platerowanie innym metalem (brąz, mosiądz, srebro, złoto). Do ozdobienia nadawała się

szczególnie blacha zamka kołowego, ale upiększano też poszczególne elementy składowe zamka, jak koło iskrowe czy kurek. Łoże broni też nie pozostało w zapomnieniu – wykładano je szlachetnymi odmianami surowców organicznych, jak kość, róg, masa perłowa. Obok rogu i kości tworzone także geometryczne wzory, wykonywane w wbijanych w drewno cienkich, żelaznych lub srebrnych drucikach, w których umieszczano kolorowe elementy kościane, rogowe czy perłowe. Do wykonania wartościowego łoża konieczny był odpowiedni materiał. Dominuje tu drewno liściaste, takie jak jawor, wiąz czy buk, oraz drzewa owocowe: czereśnia i gruszka, a od XVII w. także orzech.

Do najprostszych motywów zdobniczych obecnych na elementach składowych broni zaliczyć można kompozycje ułożone z geometrycznie uformowanych płytek czy blaszek (różnego kształtu z rogu, kości lub z masy perłowej – niekiedy barwione na dowolny kolor). Najczęściej ozdabiano w ten sposób łoża. Z takich elementów układano dalsze kompozycje – różnokolorowe szachownice, kwiaty, gwiazdy itp.

Częściej mamy do czynienia ze scenami rodzajowymi. Wydaje się, że na pierwszym miejscu należy wymienić scenki, które określiliśmy ogólnym mianem myśliwskich. Dynamiczny charakter posiadają też sceny batalistyczne przedstawiane na łożach. Czasami są to przemarsze wojsk lub pokaz musztry, niekiedy walka dwóch armii. Nie brak też wyobrażeń zamków i oblężeń. W pewnym związku z batalistyką pozostają sceny religijne, ograniczające się jednak właściwie do przedstawień Św. Jerzego walczącego ze smokiem. Bardzo popularnym motywem są także wyobrażenia fantastycznych zwierząt i postaci. „Faunę” reprezentują mityczne stwory, takie jak np. gryfy czy smoki. Ostatnia grupa tematyczna ma związek ze sztuką renesansu czerpiącej inspirację w starożytności. Z tego względu wiele jest wyobrażeń postaci antycznych.

Decydując się na zakup bogato zdobionych okazów ręcznej broni palnej, przede wszystkim starano się podkreślić osiągnięty status społeczny i wyróżnić się z licznego tłumu sobie podobnych obywateli. Z uwagi na wysoką cenę takich ekskluzywnych egzemplarzy, niejako przy okazji korzystnie lokowano kapitał. Zauważyć też należy, iż przeprowadzone zabiegi upiększające wzmacniały także walory bojowe broni, np. dzięki dodaniu okładzin łoża było bardziej odporne na działanie wilgoci, kurzu czy słońca, a wykładanie elementów składowych zamka zabezpieczało go z kolei przed żrącymi produktami spalania się prochu.