

ANATOLIY NICOLAIEVICH KIRPITCHNIKOV

EARLY HARQUEBUSES AND PISTOLS FROM THE COLLECTIONS OF RUSSIAN MUSEUMS

Firearms appeared in Russia not later than in the 1370s (the first mention dates back to 1382). The material collected makes it possible for the researchers to define the technical characteristics of such relics from Russian museums.

I

It is known that the split of firearms into artillery and handguns took place over a long period of time. In the 14th and the 15th centuries heavy guns of different technical parameters existed side by side, devices of intermediate types included. The small forms of powder guns, the forerunners of later weapons, rifles and pistols spread, if one may say so, not later than in the second part of the 14th century. On the basis of Czech, German, Swiss and Italian examples¹, it may be said that those were, among others, 25-35(mm)-bore short-barrelled guns, usually 17-31 cm (occasionally up to 44 cm) long placed on wooden gun mounts. The total weight was about 4-5 kg. Most of the barrels had edges (were many-edged) and were occasionally thicker in their barrel and back parts. As a rule, the ignition opening was found in the upper part. The barrels were usually reinforced with 1 or 2 rings. Such weapons were used for defending and seizing towns. They were also used in wagon laagers and sometimes in the field, especially where fire could be opened from a stationary position. According to the terminology accepted in Bohemia, Poland and Russia, this kind of weapon is referred to as the „harquebus”². It was served by one or two men. In the latter case one of the men aimed the gun and the other ignited the powder by the use of a

¹ R. F o r r e r, *Meine gotischen Handfeuerrohre*, [in:] *Beitrage zur Geschichte der Handfeuerwaffen*, Dresden 1905, pp. 23-25, table 1; E. W a g n e r, Z. D r o b n á, J. D u r d i k, *Kroje, zbroja a zbraně doby předhusitk a husitské*, Prague 1956, part 7, tables 2-4; J. D u r d i k, M. M u d r a, M. Š á d a, *Alte Handfeuerwaffen*, Prague 1977, pp. 12-24.

² In the first two countries the term was used in written sources as early as in the first half of the 15th century. In Russia it appeared in the 1570-1580s (though it may have been used before). The term *hand pizschälen* was also used in Russia to denote a type of fire handgun (A. N. K i r p i t c h n i k o v, *Voyennoye delo na Rusi XIII-XV vv (Warfare in Russia in the 13th-15th Centuries)*, Leningrad 1976, pp. 89-90).

smouldering fuse. Some harquebuses had hooks (*haki*), hence the Polish term *hakownica*. This might lead to the conclusion that they were supported on rests, partitions, the sides of battleships or disks in order to reduce the recoil and improve the aiming. To facilitate the process of moving and carrying the weapons, harquebuses without hooks were also used.

Harquebuses were used between 1375 and 1450. At the end of the 15th century they were replaced by long-barrelled weapons 18 or more calibres long (the barrels of harquebuses were 5-12 calibres in length). East-European, or better to say Russian, weapons are in the typological respect analogous to those from Central and Western Europe. Their appearance moves the range of this all-European weapon far to the east. It is characteristic that although those contrivances were the products of the 14th and the 15th centuries they remained in widespread use in later periods, in the time of the reign of rifles and their varieties – heavy, fortress, stationary *pizschälen* – harquebuses with hooks. Those guns, partly published, are enumerated below.

1. 31(mm)-bore iron barrel, 23 cm long (the barrel is 7.4 calibres long), [*the term calibre may be used in two senses: the modern term – the diameter of the bullet and the historical term – the proportion of the barrel length to its diameter (the editor's note)*] fixed on a 130 cm long undoubtedly primary gun mount, made of wooden poles with two staples [hoops](Fig. 1). The back part of the barrel is forged into six edges, the barrel itself is cylindrical in shape. The ignition opening is placed in the upper edge, 2.5 cm from the back. The weapon is kept in the Lanscape Museum in Ivanov and may be assumed to come from a town or monastery in Central Russia.

2. 22(mm)-bore cylindrical iron barrel, 24 cm long (11 calibres in length), 4.1 kg in weight (Fig. 2). In the back part there is a groove for a fastening staple. The gun mount has not been preserved. The barrel and the staple were found in the Luch River near the town of Luch in the Ivanovsk Region. The weapon might have been lost in the river during the Russian-Tartar fights held in the 1420s-1440s³.

³ A. N. K i r p i t c h n i k o v, *Voyennoye delo...*, p. 88.

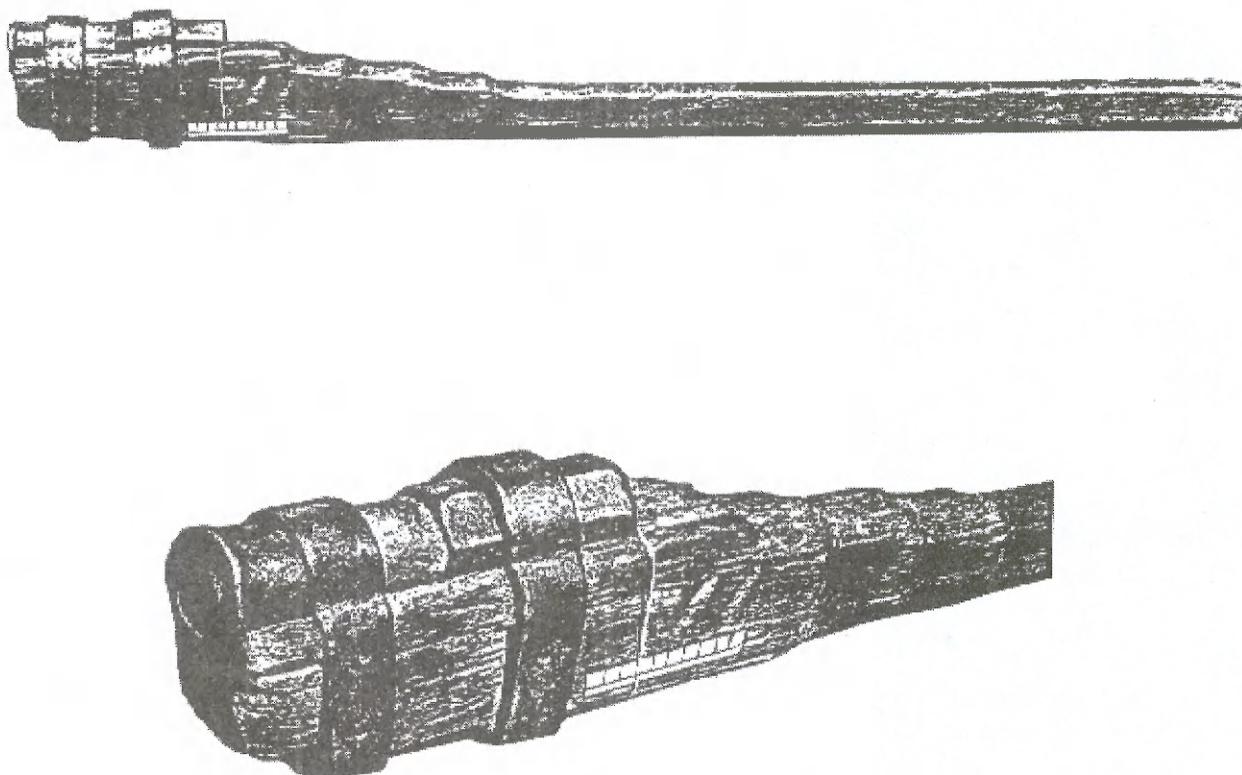


Fig. 1. Harquebus (The National Museum of Ivanov); photo by the author.

3. 43(mm)-bore many-edged iron barrel, 28 cm long (6.5 calibres in length), fixed in a wooden log 37 cm in diameter and 137 cm in preserved length (the log has been broken) with two clamps (Fig. 3). In the back part of the barrel there is a projection for the fastening clamp. The signs of numerous alterations may be detected on the weapon. The present wooden gun mount cannot be the original one. One of the tape clamps has got openings which cannot be used for fastening and are evidence of its earlier use. The hoop around the log of the gun mount as well as the transverse board fastened to the lower part of the log also come from a later period. The Oblastnoye [Regional] Landscape Museum in Perm, where the object is kept (No. 7453), has no information about its origin.

4. 36(mm)-bore cylindrical iron barrel 46 cm long (18 calibres in length) fixed in a wooden log 40 cm in diameter and 104 cm in preserved length with three clamps (Fig. 4). In the back part of the object there are a staple and a hoop girding the log. The staple and the hoop probably date back to different periods. It is possible that this weapon was also subject to alterations and the wooden gun mount is not primary. The weapon, just like relic number 3, is kept in the Oblastnoye [Regional] Landscape Museum in Perm (No. 7454). Its origin and the circumstances of its discovery also remain unknown.

Both the Perm guns are alike in appearance and have gun mounts made of wooden logs. On the basis of the state of preservation one may say that they were

neither in water nor underground. They were probably kept in the arsenal of a stronghold or monastery in the Perm territory. At some time they were moved from the primary gun mounts on the logs. Such massive guns could be fired only from stationary positions on walls or a tower. The barrels described above should be dated at the 14th-15th centuries. The weapons may have belonged to the local Aborigines: the Vogols, the Ostiaks or the Komi-Zirians. However, they must have been brought by Russian troops, who had constantly been running all over the Perm territory from the second part of the 14th century onwards. The possibility that the guns were brought by the pirates who came from Novogrod and organized a series of expeditions to the region of the Volga River and the Kama basin in the years 1360-1375 cannot be excluded⁴. The weapons may have been used for defending craftsmen's towns or the residences of the Bishop of Perm, who settled in the Perm region at the end of the 14th century (the town of Ust-Wimskiy). On the basis of some information dating from the second half of the 16th century and the beginning of the 17th century, it may be assumed that in the arsenals of those outposts there were „guns characterized by the fast rate of shooting, small bombards and wall *pizschälen* (har-

⁴ *Otcherki russkoy kulturi XIII-XV vv.*, vol. 1, Moscow 1969, pp. 371-372; I would like to thank L. K. Makovska and V. A. Tiulenievov for their help with obtaining the material from Perm.

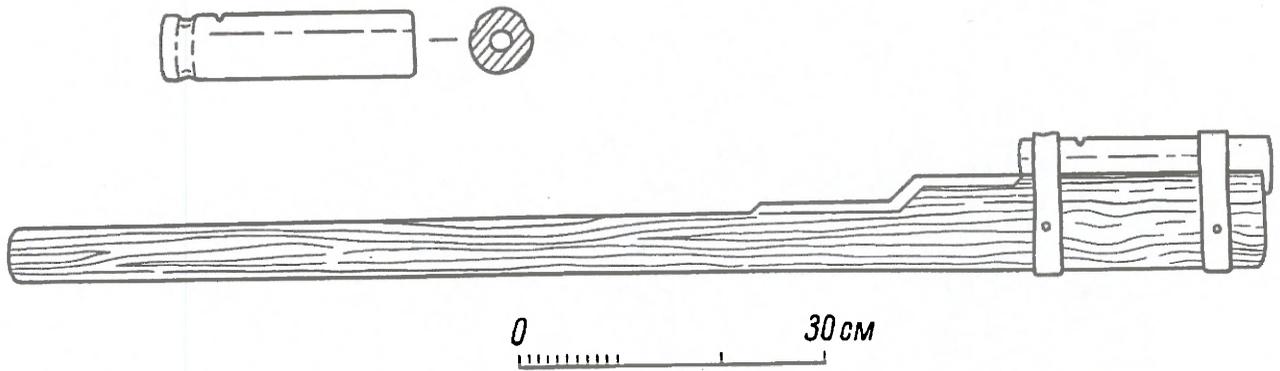


Fig. 2. Harquebus found in the Luch River. The barrel with the reconstructed gun mount; drawing by the author.

quebuses with hooks – A. K.) and harquebuses⁵. The objects discussed above may be part of this set. They may be considered the relics of technology from the time of the Russian conquest of the territories on the Kama and the Vologda, no matter from which stronghold they come. The above mentioned alterations lead to the conclusion that they had remained battle weapons for a remarkably long period of time.

II

In 1934 V. V. Arendt first published a 12,5(mm)-bore iron barrel 19 cm in length and 640 g in weight possibly dated at the beginning of the 15th century or slightly older (Fig. 5, 1)⁶. The barrel has three strengthening rings, welded on it with copper. A transverse path 5 mm long, which leads to the ignition opening, had been cut in one of the rings. The barrel may have been fixed to its gun mount, which has not been preserved, with staples. The place of the discovery of this object remains unknown. However, it may have been found during excavations in Moscow or in one of the nearby towns. The find seems to be important as it is evidence of the appearance of devices which could be used both by footsoldiers and soldiers on horseback about 1400. At first sight it might appear that the object discussed above is an example of the oldest relic of the smallest and lightest handgun – the pistol or rather its antecedent. This term may now be supplemented.

In 1937 the above-discussed barrel was sold to the Museum of the History of the Artillery in Leningrad (at present the Museum of the Artillery, the Engineering Corps and the Corps of Signals

– VIMAIIV) by the State Historical Museum in Moscow (further cited as GIM). However, an unpublished twin-specimen remained in GIM. Unfortunately, the origin of this object is also unknown. The latter has already been published⁷. It is a 13 (mm)-bore barrel 19.5 cm long 575 g in weight (Fig. 6). This barrel was also girded by three strengthening rings welded on it with copper. The author who published the barrel thinks that both the specimens are pistols made in the same workshop possibly by the same master. However, another solution may also be accepted. Both the barrels might have belonged to the same weapon and might have been fixed transversely on one gun mount side by side. Small channels cut in the back parts of the barrels, which lead to the ignition openings, seem to support this hypothesis⁸. The fuse was placed in the channels in order to ignite the powder simultaneously in both the barrels. German pictures dating from the end of the 15th century⁹ represent remarkably similar many-barrelled objects. There also exist some earlier representations. The representations of organ-type stationary [fortress] multi-barrelled contrivances¹⁰, for instance, have been dated at the end of the 14th or the beginning of the 15th centuries. Moreover, specific three- or four-barrelled 14-16(mm)-bore pistols, which date back to the same or a slightly later period, have been preserved in nature¹¹. The barrels placed tightly side by side entered the gun mount, made of poles, in one common metal mortise. The ignition of such barrels did not come from a common fuse but was separate for each of

⁷ Ju. V. S h o k a r e v, *Stvol drevneyshego pistoleta iz kolekcji GIM*, „Trudi Gosudarstviennovo Istoritcheskovo Muzeia”, vol. 51, Moscow 1980, pp. 152-156, Figs. 1-2.

⁸ The interesting thing is that similar channels cannot be found in the surface of any other firearm known from museum collections.

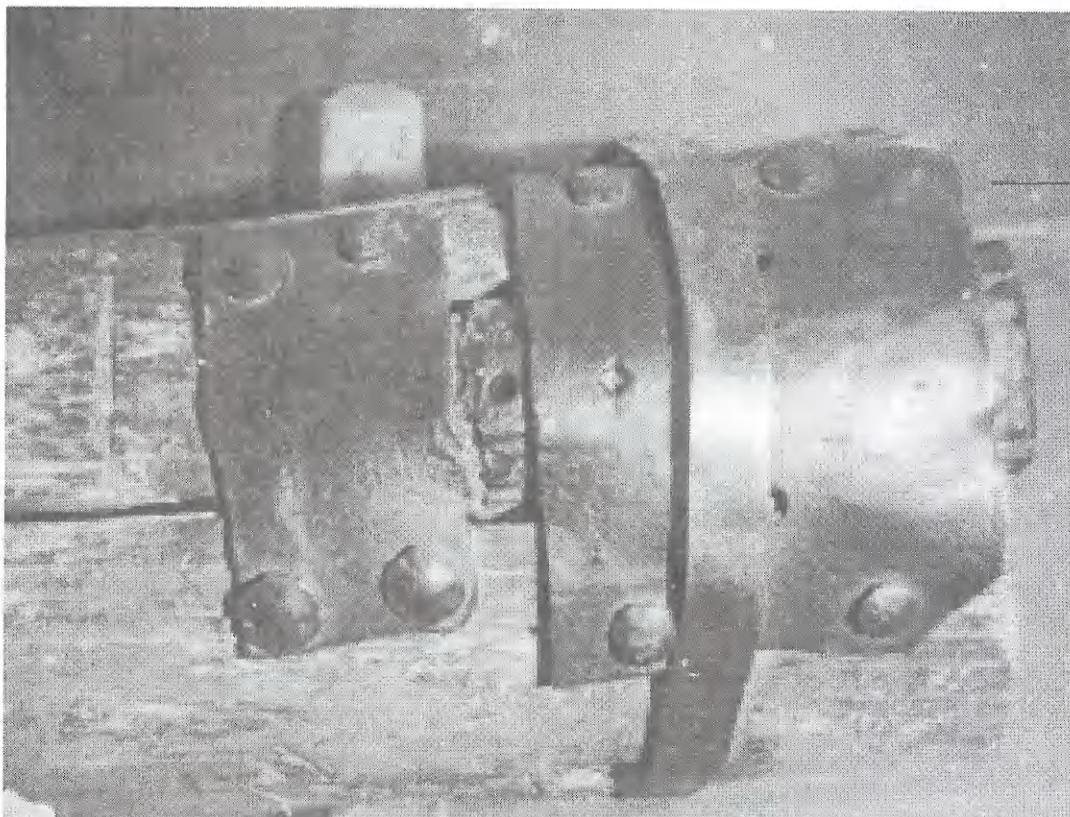
⁹ R. F o r r e r, *Die ersten mehrläufigen Hand- und Hakenbüchsen*, [in:] *Beiträge zur Geschichte der Handfeuerwaffen*, Dresden 1905, table 5, Figs. 1A-C.

¹⁰ A. E s s e n w e i n, *Quellen zur Geschichte der Handfeuerwaffen*, vol. 1, Leipzig 1872, table A, Figs. XIII-XIX.

¹¹ R. F o r r e r, *Die ersten mehrläufigen...*, table 5, Figs. 3-4.

⁵ V. S h i s h o n k o, *Latopis permski. Okres pierwszy od 1263 do 1613 (The Perm Chronicle. The First Period from 1263 to 1613)*, Perm 1881, pp. 41, 48, 53-54; M. N. T i c h o m i r o v, *Rosja w XVI wieku (Russia in the 16th Century)*, Moscow 1962, pp. 260 and 460.

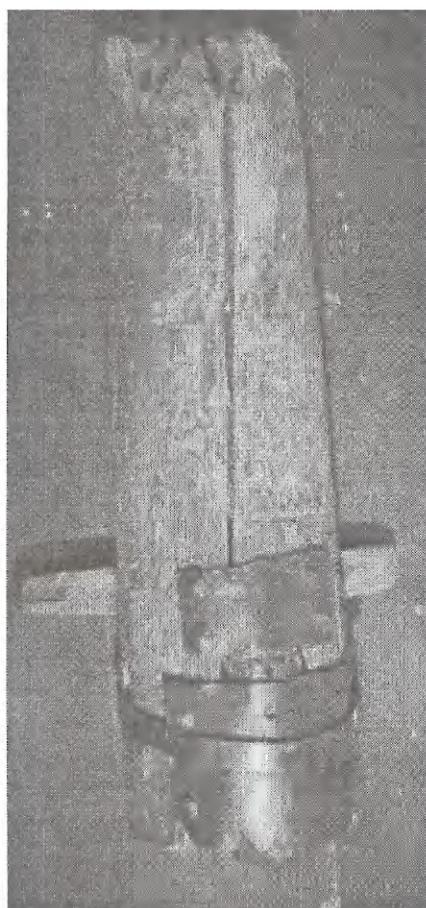
⁶ W. A r e n d t, *Zwei Escopettes des Historischen Museums in Moskau*, „Zeitschrift für Historische Waffenkunde”, vol. 4 (13), 1934, fasc. 10, Fig. 1.



a

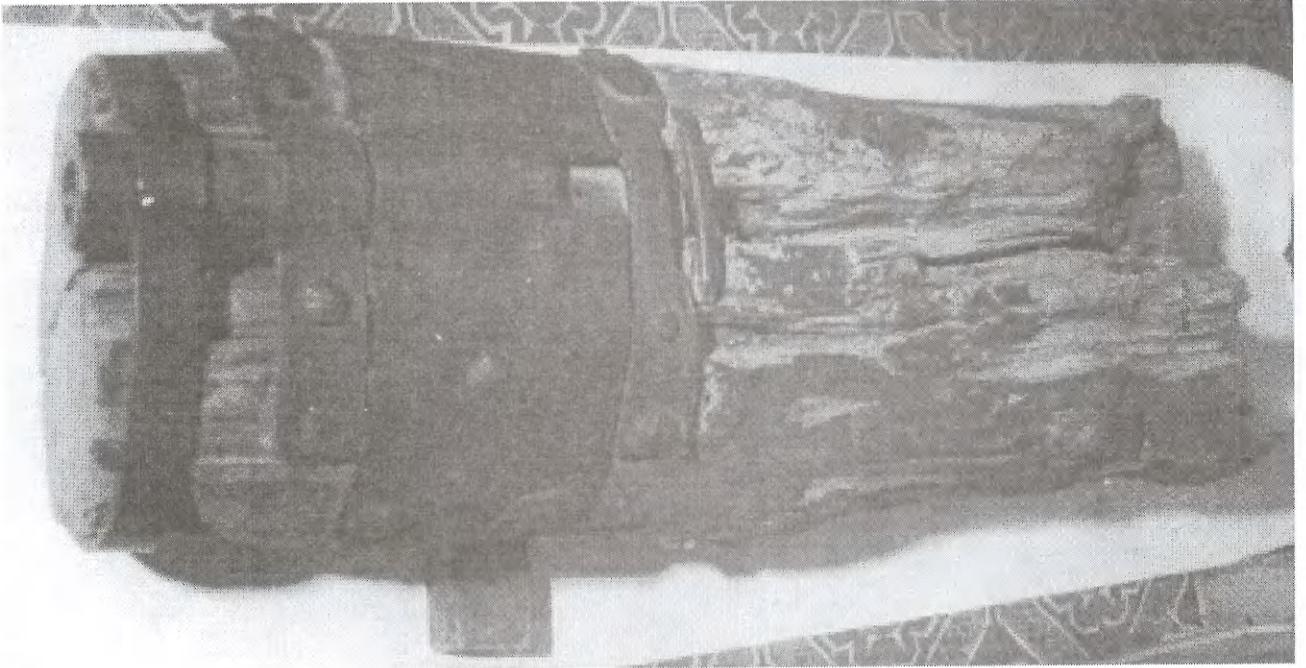


b



c

Fig. 3. Harquebus, top and side views (the Oblastnoye [Regional] Landscape Museum of Perm, No. 7453); photo from the Museum of Perm.



a



b

Fig. 4. Harquebus, top and side views (the Oblastnoye [Regional] Landscape Museum of Perm, No. 7454); photo from the Museum of Perm.

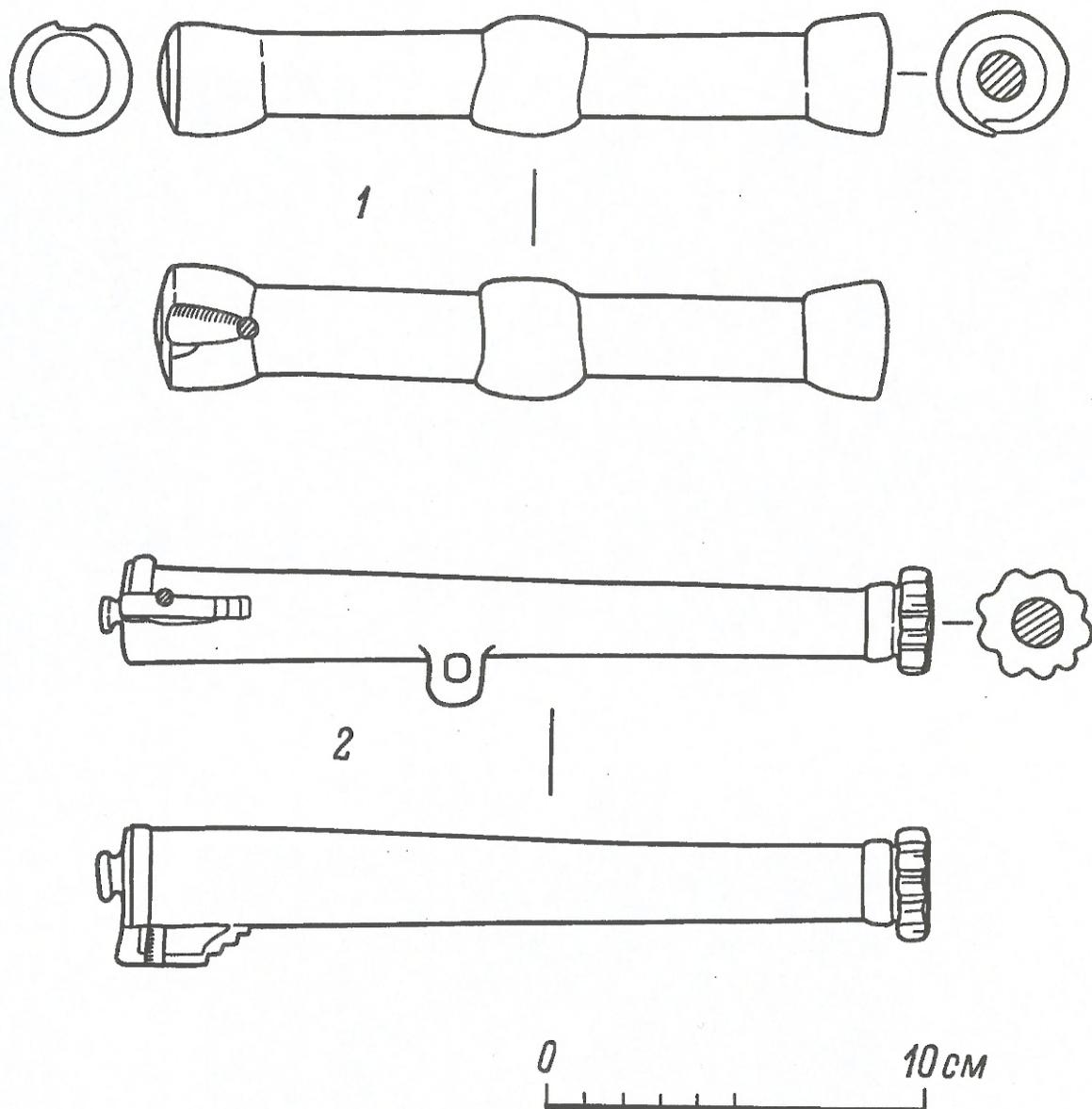


Fig. 5. Pistol barrels: 1 - iron barrel; 2 - red bronze barrel (the VIMAIIV collection).

them¹². The above-described barrels from the collections of Russian museums, in contrast to the analogue objects mentioned above, do not have a back connection. Nonetheless a two-bullet pistol with one common ignition fixed in one base can easily be imagined. If we agree with this hypothesis, that will mean that multibullet barrel weapons existed as early as in c. 1400 not only in the minds of military engineers but also in reality. It should be borne in mind that there exist also other speculations regarding this problem.

¹² According to R. Forrer, a smouldering fuse was originally placed in the ignition opening. In the time necessary for burning the fuse and blasting the charge in the barrel, the horseman approached his target. He held the gun in one hand and controlled the horse with the other. The gun went off somehow automatically.

There exists another fact which changes the accepted order of evolution in the development of early pistols. It is a bronze barrel discovered by V. V. Arendt in one of the Moscow museums, which was later handed over to GIM and in 1937 further to the Historical Artillery Museum¹³. This 13(mm)-bore barrel is 21.5 cm long and weighs 465 g (fig. 5, 2). The back part of the object is thicker and thus strengthened. The cross-section of the back part has got a tail-like projection. The barrel is equipped with a small figural shelf, which might mean the use of the ignition with the fuse lock. The barrel was connected to an unpreserved gun mount with a loop placed in the middle part. The place of the discovery of the object is unknown, but it may have been found in Central Russia.

¹³ W. A r e n d t, loco citato.

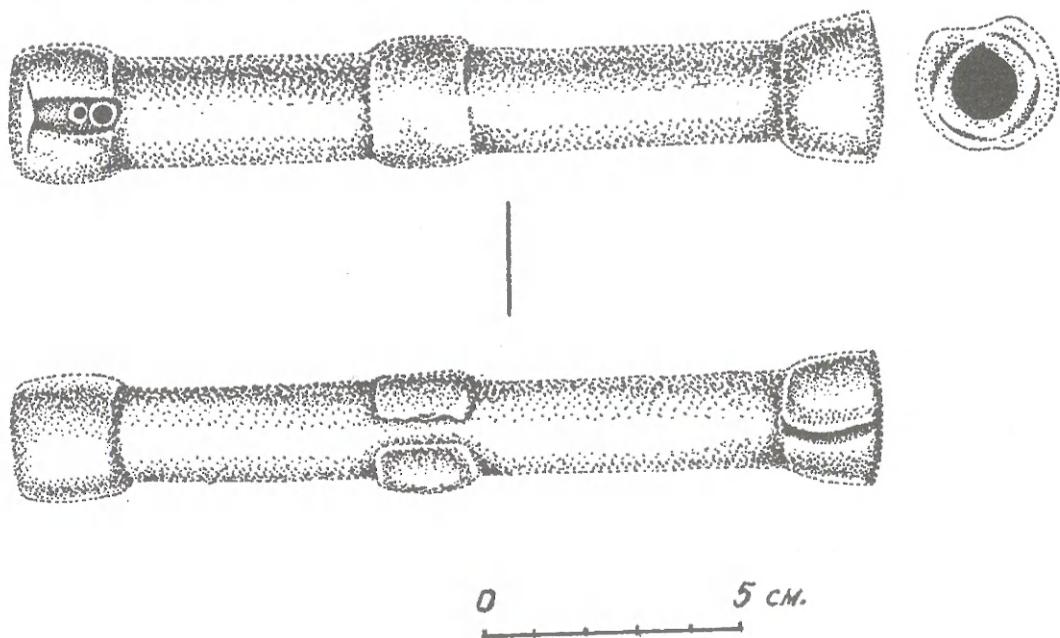


Fig. 6. Iron pistol barrel (the GIM collection); After Ju. V. Shokarev.

The barrel was plausibly dated by V. V. Arendt at the last quarter of the 15th century. Similar in form grooved thicker barrel part represented in a German picture dating from c. 1450 seems to support this hypothesis¹⁴, which is not invalidated by the existence of the above-mentioned fuse lock, which came into being at the beginning of the 15th century and, as it may be assumed on the basis of German pictures, fully developed in barrel weapons in the years 1450-1470¹⁵. The present relic resembles a miniature red bronze bombard with the characteristic thicker barrel part, a tang and a bead. The objects of this kind took the form of an elegant column, which was characteristic of the time of the Renaissance. The general appearance of the pistol leads to the conclusion that it was made by foreign founders, who started to work in Moscow in the last quarter of the 15th century. Aristotle Fioraventi, an Italian, who came to Russia in 1475, was the pioneer of red bronze foundries in Moscow. In the 1480s and 1490s successive groups of military engineers and bronze founders came to Russia from Italy, Greece and Germany¹⁶. They may have produced not only cannons but barrels for hand firearms.

In the light of the circumstances discussed above, the red bronze barrel from the WIMAIW collection may be considered one of the oldest pistols in Europe¹⁷, which means that pistols with the fuse lock appeared in Russia in the last three decades of the 15th century, i. e. undoubtedly at the same time at which they were introduced into the armaments of other European countries.

* * *

It has been assumed that pistols spread in Russia in the third quarter of the 16th century¹⁸. However, all the objects discussed above seem to refute this supposition. Occasional pistols and their antecedent forms started to appear in Russia about fifty years before they were mentioned in written sources, i. e. in the initial period of the use of firearms.

Translated by Zuzanna Poklewska-Parra

¹⁴ V. Schmidtchen, *Bombarden, Befestigungen, Büchsenmeister*, Düsseldorf 1977, Fig. 116.

¹⁵ A. Hoff, *Feuerwaffen II*, Braunschweig 1962, p. 166; Z. Żygulski Jr., *Broń w dawnej Polsce (Arms in Old Poland)*, Warsaw 1975, pp. 125, 166.

¹⁶ A. N. Kirpitchenkov, *Voyennoye delo srednevekovoy Rusi i poyavleniye ogniestrel'noy oruzhya (Warfare in Medieval Russia and the Appearance of Firearms)*, „Sovetskaya Archeologia”, vol. 3, 1957, p. 68.

¹⁷ A three-barrelled gun from *Palazzo Ducale* in Venice is considered to be the oldest. It dates from the turn of the 15th century or from a bit earlier period (A. Hoff, *Feuerwaffen II...*, p. 166).

¹⁸ Cf.: L. I. Tarasiuk, *Russkoye rutchnoye ogniestrel'noye oruzhye XVI-XVII v.* (the auto-lecture of the candidate thesis, Leningrad 1965, p. 10).

