

Piotr Strzyż

University of Lodz



ORCID ID: 0000-0001-6846-159X

FACES OF WAR

VOL. 6 • CITY AND WAR • ŁÓDŹ 2022

ISBN 978-83-8331-012-1 • pp. 37-58

<https://doi.org/10.18778/8331-012-1.04>

HOW MATTHIAS CORVINUS' BOMBARDS CAPTURED GŁOGÓW IN 1488

Summary. Sieges in the Middle Ages were always a difficult logistical undertaking. The most serious problems were faced during sieges of such places as fortified towns or especially large castles. In such cases, a basic difficulty was posed by a need to organise a tight blockade of the selected place, in order to cut it off from any communication with the external world. Among many known sieges in the 15th century, the siege of Głogów in 1488 stands out, carried out by Hungarian troops. The hostilities lasted from 19th May to November 1488, which was almost a half of the year. The Hungarian troops were equipped with numerous pieces of artillery, including three large bombards from Wrocław, Świdnica and Legnica. These cannons inflicted considerable damage in the town during the siege. However, two of these burst. The town surrendered only after the stores of food had run out, and not due to bombardment. The course of event at Głogów demonstrates that during sieges of large centres with the use of the heaviest artillery in the 15th century it was difficult to achieve measurable success.

Keywords: Głogów, Silesia, Matthias Corvin, Middle Ages, siege, artillery, town walls

The siege of Głogów in 1488 was an outcome of the so-called war of the Głogów succession, which was fought in the years 1476–1482. The subject of the conflict after Duke Henry XI, who died childless, was the Duchy of Głogów, and the rivals in the fight for the inheritance were Albrecht Achilles, Elector of Brandenburg and Jan II, Duke of Żagań. In the course of the fight, the Brandenburg units had managed to take control of the greater part of the Duchy of Głogów already in 1476 but, thanks to military and financial assistance from King Matthias Corvinus, Jan II removed the opponents from the disputed territory (except for Krosno Odrzańskie) in several intense military campaigns. Under the peace treaty signed in Kamieniec Ząbkowicki in 1482, Jan II obtained the

Duchy of Głogów as a lifehold, but without Krosno Odrzańskie, Lubsk and Sulechów (which remained with Brandenburg).¹

The compromise was broken already in 1485, when Matthias Corvinus presented his plans to take the Duchy of Głogów away from Jan II. He intended to offer it as dowry to his son John for the planned wedding with Bianca Sforza. In response, in 1487 Jan II led to setting up in Wrocław an anti-Corvinus arrangement, which included sons of George of Podebrady, Dukes Jan and Nicholas of Opole, Jan the White, Duke of Oleśnica, and with time also Vladislaus, King of Bohemia. At the beginning of 1488, Jan II made his daughters marry the sons of Henry of Podebrady – George and Charles. As dowry, he allegedly gave them his rights to the Duchy of Głogów. Then, he ordered the representatives of the Duchy's town councils to acknowledge the donation and, when faced with resistance, he imprisoned the opponents and appointed a new council. Due to this situation, the representative of Matthias Corvinus ordered his allies to begin preparations for war at a convention summoned in Wrocław.²

The siege of Głogów was conducted by the Hungarian army under command of Wilhelm von Tettau, who acted upon orders from King Matthias Corvinus. Around 19th May 1488, four thousand armed soldiers began works, which were to last nearly half a year. However, Głogów was quite well prepared for defence. Its strength lied mostly in well-developed town fortifications, as well as the arsenal of weaponry, including firearms. Thanks to this, Głogów was considered as the second best fortified urban centre in Silesia, after Wrocław (Fig. 1). Before the siege units arrived, Jan II had managed to bring inside the town walls Bohemian mercenary units in the force of at least 1000 armed soldiers.³

They started to build the brick defensive walls in Głogów at the end of the 13th century, replacing the earlier fortifications of wood and earth, which had been damaged after a town fire in 1291. Part of the fortifications on the Odra river and the castle were burned down then.

¹ For more information on this topic *vide*: A. KALOUS, *Matyáš Korvín (1443–1490). Uberský a Český král*, České Budějovice 2009, pp. 190–191; H. SZCZEGÓŁA, *Głogowska wojna sukcesyjna*, [in:] *Głogovia Maior, Wielki Głogów między blaskiem dziejów i cieniem ruin*, eds. B. CZECHOWICZ, M. KONOPNICKA, Głogów–Zielona Góra 2010, pp. 99–109; B. TECHMAŃSKA, *Jan II Żagański. Niespokojny książę sojusznik króla husyty (16 VI 1435 – 22 IX 1504)*, Kraków 2014, pp. 64–77.

² B. TECHMAŃSKA, *op. cit.*, pp. 82–86.

³ J. BLASCHKE, *Geschichte der Stadt Glogau und des Glogauer Landes*, Glogau 1913, pp. 141–142; B. TECHMAŃSKA, *op. cit.*, p. 86.

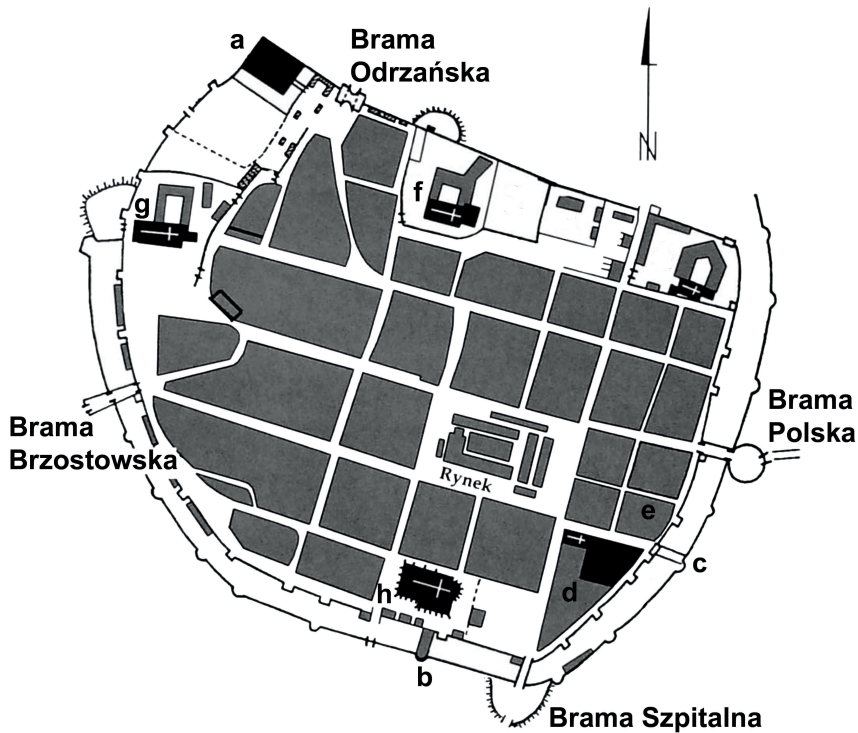


Fig. 1. Głogów, town map with the most important defence elements: a – castle, b – Vighaus roundel, c – Corpus Christi wicket, d – the other castle of dukes, e – probable location of the town arsenal, f – St George's Church; g – Dominican Monastery, h – Church of St Nicholas (Source: D. Adamska, *op. cit.*, Fig. 2, elaborated by P. Strzyż)

After the town's division into two parts, the older castle was extended and the Piast dukes built a new complex, located near the Hospital Gate, in the south-eastern part of town (Fig. 1). Throughout the 14th and 15th centuries, the walls were renovated and completed with new elements. The fortifications consisted principally of four gates (Fig. 1). The Odra Gate was located in the north-western part of town, between the old castle and the Franciscan Monastery. Its main function was to protect the crossing of the Odra river towards Ostrów Tumski. From the west, the walls were guarded by the Brzostów Gate. In the southern corner of the fortifications, the Hospital Gate was located, and from the east, the security of the citizens was guarded by the Polish Gate. Additional towers were often located near the gates. Besides, the defensive perimeter was equipped with a number of towers which could be used for firing at the enemy. Altogether there were

17 towers open to the inside and 9 full towers. Some of them have been preserved until today, testifying to the town's former power (Fig. 2). An important element of the town fortifications was also the castle, the construction of which started around the middle of the 13th century in the north-western corner of the town. With a massive cylindrical tower, the castle provided an important reinforcement of the protection of the Odra Gate. The town fortifications were expanded in the first half of the 15th century, when the town was enclosed in a second ring of walls. The *Zwinger* was first mentioned in 1439, and in the second half of the 15th century the sources also reference earth entrenchments. These defences were also equipped with 14 semi-circular roundels, which could be used for shooting from crossbows and handheld firearms. The most distinguished roundel among them was named *Vighaus*. It was located near the parish church of St George and the Hospital Gate (Fig. 3). In the second half of the 15th century, the town gates were also additionally fortified, by equipping them with additional gate necks or barbicans (Fig. 4). The responsibility for defending the walls during peacetime lied mainly with guild organisations, and each of them had its own allocated section, defined in instruction from 1399. The Hospital Gate was guarded by butchers, while bakers were supposed to keep watch at the Polish Gate, shoemakers and tanners – at the Mill Wicket, blacksmiths – at *Vighaus*, tailors guarded the wall section near the Corpus Christi Church, weavers, the most numerous guild, were responsible for the northern side of the fortifications near the monastery, and furriers along with innkeepers – for the fortifications near the Bishop's palace and the Franciscan monastery. With time, the responsibilities were replaced with services from armed soldiers who were paid from the guild fund.⁴ Of course, in the event of threat, the town's garrison could have been reinforced with mercenary units, which indeed took place in 1488.

⁴ T. KOZACZEWSKI, *Głogów – miasto średniowieczne*, "Kwartalnik Architektury i Urbanistyki" 1973, vol. 18/1, p. 5; L. KAJZER, S. KOŁODZIEJSKI, J. SALM, *Leksykon zamków w Polsce*, Warszawa 2001, pp. 177–179; J. DYMITYRSZYN, *Brama Odrzańska w Głogowie*, [in:] *Głogów w czasach Jagiellonów*, ed. L. LENARCZYK, Głogów 2012, pp. 67–68; G. KOCHMAN, *Zabudowa Głogowa na przełomie XV i XVI wieku*, [in:] *Głogów w czasach Jagiellonów*, ed. L. LENARCZYK, Głogów 2012, pp. 91–94; D. ADAMSKA, "...dla użytku i potrzeby ziemi naszej". *Rozwój przestrzenny lewobrzeźnego Głogowa od połowy XIII do początku XVI wieku w świetle źródeł pisanych*, [in:] *Głogów. Średniowieczne miasto nad Odrą*, ed. K. CZAPŁA, Głogów 2018, pp. 76–79, Fig. 2; D. NOWAKOWSKI, *Elementy obronne średniowiecznego miasta i broń w mieście na przykładzie Głogowa w świetle źródeł archeologicznych i pisanych*, [in:] *Głogów. Średniowieczne miasto nad Odrą*, ed. K. CZAPŁA, Głogów 2018, pp. 96–99, 102.



Fig. 2. Głogów – towers of the town fortifications and arrow slits in the town wall, photography by the author



Fig. 3. Głogów – the Vighaus roundel (Source: J. BŁASCHKE, *op. cit.*, p. 266)

During the discussed period, Głogów was well-equipped with firearms, both in the town arsenal and owned by the inhabitants. The earliest information about this dates back to the middle of the 15th century. At the time, the town was divided into two parts which belonged to two different branches of the Silesian Piasts. Unfortunately, the preserved information only concerns the Głogów-Żagań line, thus failing to offer a full picture of the town's firepower. The oldest record is divided into two parts. The first part lists 20 cannons altogether, of which 5 were terrace-guns (*tarresbochse, tarris bochse*), 8 light field cannons (*hawffenicze*), four large cannons and two more without more detailed specifications and a small iron cannon. The majority of them, 18 cannons were positioned near the Polish Gate and on the walls around it. Two more cannons were placed near the Corpus Christi Wicket and an indefinite residential tower. In the second record, 13 cannons were listed, of which 5 shot with stone balls (*steyn bochssen*), 2 large cannons placed at the Polish Gate, as well as 5 terrace-guns (*tarris bochssen*) and one unspecified cannon. The second mention is probably a little younger and perhaps it specifies only some of the cannons listed in the first record. Another register is dated to 24th June 1475. It lists 18 large cannons, a number of older *steynbuchszzen*, 14 cannons which may have been hackbuts, and a large hackbut (*hocken buchze*). The last of the registers made before the siege is dated to 21st March 1479. It revealed the possession of 25 hackbuts (including 10 copper ones) and 19 large cannons, including a new bronze cannon and a number of older *steynbuchszzen*. Additionally, the town arsenal stored defensive and offensive weaponry which could be used for equipping several tens of soldiers. The possibility of at least partial equipment of town with locally produced firearms is confirmed with documents related to the work of a bell founder named Andrzej, who may have been responsible for casting the above-mentioned copper/bronze hackbuts.⁵ It was, as stated before, only a part

⁵ H. GROTEFEND, *Aus dem Zinsbuche der Stadt Gross-Glogau*, "Zeitschrift des Vereins für Geschichte und Alterthum Schlesiens" 1874, vol. 12/1, pp. 209–211; M. GOLIŃSKI, *Uzbrojenie mieszczańskie na Śląsku od poł. XIV do końca XV w.*, "Studia i Materiały do Historii Wojskowości" 1990, vol. 33, pp. 45–47; IDEM, *Działania wojenne a modernizacja systemów obronnych na Śląsku w drugiej połowie XV wieku*, "Kwartalnik Architektury i Urbanistyki" 1995, vol. 40/1, p. 55; IDEM, *Firearms in 15th-century Silesian Military Art*, "Quaestiones Medii Aevi Nova" 2006, vol. 2, p. 209; J. SZYMCZAK, *Początki broni palnej w Polsce (1383–1533)*, Łódź 2004, p. 337; D. NOWAKOWSKI, *op. cit.*, p. 105.

of the town's arsenal – after joining the two parts of the town by Duke Jan II in 1480,⁶ its firepower could have doubled.



Fig. 4. A panorama of Głogów from the middle of the 18th century, according to an atlas by Friedrich Bernhard Werner (Source: University Library in Wrocław, Cartography Department, WERNER F.B., *Topographia Silesiae*, vol. 5)

Expecting an already inevitable attack from the Hungarian forces

the Duke, on Wednesday after the Jubilate Sunday [30 April], burned down all the houses, all the barns, all the walls and fences, and ordered to cut down all the trees

⁶ *Kaspar Borgen Rocznik głogowski do roku 1493 (Annales Glogovienses bis z. J. 1493)*, transl. W. MROZOWICZ, Głogów 2013, pp. 118–119; *Annales Glogovienses bis z. j. 1493. Nebst urkundlichen Beilagen*, [in:] *Scriptores Rerum Silesiacarum*, vol. 10, ed. H. MARKGRAF, Breslau 1877, p. 40; D. NOWAKOWSKI, *Siedziby książęce i rycerskie księstwa głogowskiego w średniowieczu*, Wrocław 2008, p. 335; B. TECHMAŃSKA, *op. cit.*, pp. 79–82.

in front of the Brzostów Gate, so that nothing was left”.⁷ Whereas, already during the siege “close to Whit Sunday [25 May 1488] a town gate was bricked up, namely the Hospital Gate, and near St Rufus’ Day [27 August 1488], the Brzostów Gate was bricked up until the end of the dispute.”⁸

Initially, the Hungarian military action focused on closing the siege line from the side of the Odra river, which the citizens were trying to prevent by shooting firearms at the attackers from the island of Ostrów Tumski and the bridge roundel of St George. Głogów Annal informs about this:

Then, on Wednesday night, it was on St Barnabas the Apostle’s day within the octave of Corpus Christi [11 June], the royal army laid siege to Ostrów Tumski at night. Then, mercenaries [of Duke Jan] were shooting very intensely from the church and school. In the morning, they built a fortification, commonly called a tower (...). Meanwhile, Duke Jan ordered to shut the town down and, having gathered a great number of burgesses and mercenaries, he left the town in the evening (...). They attacked the royal army and killed and captured several people. They took away from them two good cannons and brought them to the town, one from Wrocław and the other from Bautzen.⁹

This information is interesting insofar as it confirms not so much the elimination (jamming) of barrels as capturing the listed cannons and taking them inside the town walls. At the same time, describing them as good (*bonas*), and connecting them with the specific urban centres which provided them suggests that they were cannons of larger calibre, probably of the bombard variety. They must have been set on gun carriages, probably wheeled, which allowed the attackers to hijack them (Fig. 5).

⁷ *Kaspar Borgenii...*, p. 130; *Annales Glogovienses...*, p. 52: “Item feria quarta post Jubilate dux Joannes cremavit omnes domus, omnia horrea, omnes parietes, omnes sepes et arbores fecit abscidi ante volvam Brostenicensem, ita quod nihil remansit”.

⁸ *Kaspar Borgenii...*, p. 133; *Annales Glogovienses...*, p. 54: “Item circa Penthecostes obstructa fuit porta, scilicet das spittelthor, et circa festum Ruffi obstructum fuit das Brestinense thor usque ad finem litis”.

⁹ *Kaspar Borgenii...*, p. 131; *Annales Glogovienses...*, pp. 52–53: “Item feria quarta in nocte, hoc fuit in die s. Barnabae apostoli, infra octavas Corporis Christi, exercitus regis nocte obsedit summum. Tunc stipendarii de ecclesia et de scolastica maxime sagittabant, ipsi vero mane aedificarunt propugnaculum, proprie eine postey (...). Sed dux Joannes immediate misit claudere civitatem et congregata multitudine civium et stipendiariorum hora vesperarum ivit de civite (...). Et irruerunt super exercitum regis et paucos occiderunt et captivaverunt et duas pixides bonas eis coeperunt et at civitatem duxerunt, una de Wratislavia, alia de Budissen”.

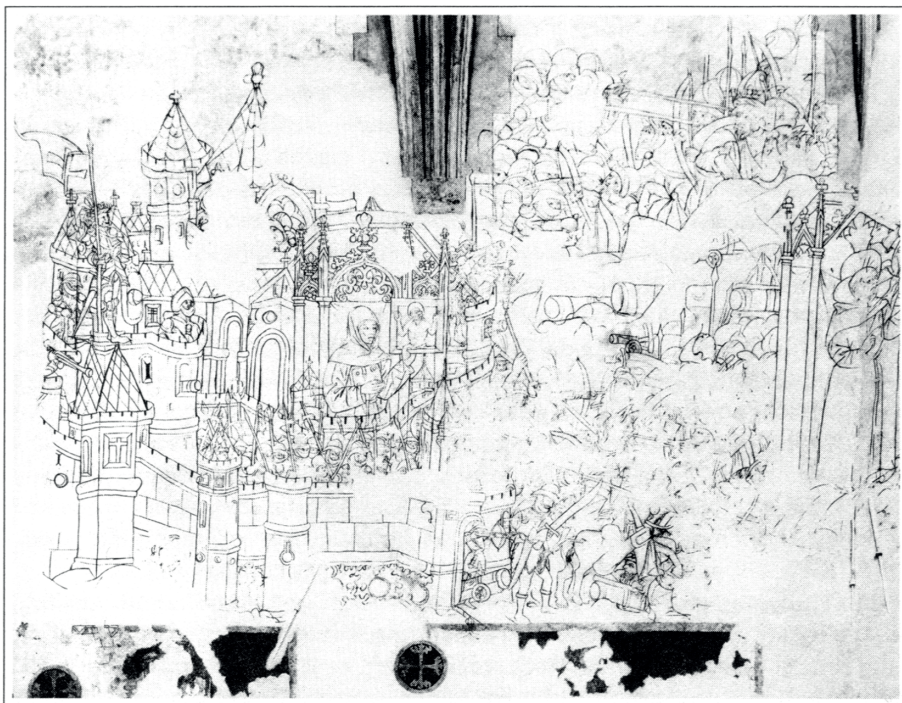


Fig. 5. Siege artillery (bombards) on wheeled carriages. Wall painting presenting the siege of Belgrade by Turks in 1456. Church of Immaculate Conception of the Blessed Virgin Mary in Olomouc, ca. 1468 (Source: A. KALOUS, *op. cit.*, p. 38)

Perhaps a few days later “on another night, the king’s army fired at the town arrows with burning fabric, commonly named burning arrows and burning stakes, but they failed to set anything on fire”.¹⁰ Unfortunately, this interesting description is not completely clear. It is not known whether the arrows were shot from handheld weapons – bows or crossbows, or maybe rather some hurling machines were used, which seems to be confirmed with the burning stakes they launched. The possibility of using various kinds of machines for launching e.g. incendiary projectiles, stones, architectural details or even carrion is confirmed in both written sources and iconography from the period.¹¹

¹⁰ *Kaspar Borgen...*, pp. 132–133; *Annales Glogovienses...*, p. 54: “In nocte sequenti exercitus regis telas ignitas, proprie fewer pfeil und fewer staul, sagittabant ad civitatem, sed nihil incenderunt”.

¹¹ E.g. during the siege of the castle in Kuyavian Brest by the army of Teutonic Knights in 1332, apart from stone projectiles, also pots with tar and burning torches were hurled behind the embankments, in order to set fire to the buildings, *vide*: J. SZYMCAK, *Sposoby zdobywania i obrony grodów*

Jan II too had personal experience with using such machines, as in 1480, during the siege of Głogów, he launched 219 projectiles at the castle, including containers “in which there were dogs, cats, cut up and rotting horses, faeces”.¹²

The prolonging military action and loss of two large cannons forced Matthias Corvinus to send out letters asking for reinforcements. The letters concerned mainly siege artillery. The king particularly cared for large bombards from Wrocław and Świdnica. The first letter to the city council of Wrocław was sent on 16 June 1488. The king asked “the people of Wrocław to lend him a cannon with powder and stone balls that they had promised before. Additionally, they were supposed to make available another cannon, the largest one they had and equip it with stone cannonballs”.¹³ Matthias Corvinus also wrote about the necessity of sending cannons in his letter of 27 July of the same year: “Finally he admonishes them to support Tettauer in the siege of Głogów with their cannons, two of them in particular. Any damage inflicted to these cannons will be compensated”.¹⁴ In the case of the cannon from Świdnica, the letter was sent on 13 July, and included the most important requirements:

And send them [i.e. cannons] ready to Świdnica, for the [troops fighting there] to have a prepared large cannon with equipment, protective covers and stone balls, carpenters and whatever belongs to it, because Sir Wilhelm wants it to be sent within a week, the same for Wrocław and other places. Also, kind sirs, 25 stone balls which they had promised, were used in one day, which is why I need you to think about preparing stone balls without delay.¹⁵

w Polsce w okresie rozbitcia dzielnicowego, “Studia i Materiały do Historii Wojskowości” 1979, vol. 22, p. 52. For more information on this topic *vide*: P. STRZYŻ, *Throwing Engines Versus Gunpowder Artillery in Siege Activities in the Middle Ages – an Example of the Kingdoms of Poland and Bohemia*, “Fasciculi Archaeologiae Historicae” 2020, fasc. 33, pp. 105–108, Fig. 6: 1–2.

¹² *Kaspar Borgen*..., p. 109; *Annales Glogovienses*..., p. 40.

¹³ *Politische Correspondenz Breslaus im Zeitalter des Königs Matthias Corvinus*, zweite Abtheilung: 1479–1490, *Scriptores Rerum Silesiacarum*, vol. 14, eds. B. KRONTHAL, H. WENDT, Breslau 1894, p. 145, No. 491: “möchte ihm die Breslauer die Büchse mit Pulver und Steinen, welche sie früher zugesagt hätten, leihen. Ausserdem möchten sie aber noch eine Büchse, die grösste, die sie hätten, stellen und mit Steinenn versehen”. I would like to thank prof. dr hab. Grzegorz Żabiński from the Institute of History of the Jan Długosz University of History and Natural Sciences in Częstochowa for his help with translating texts from Old German language.

¹⁴ *Politische Correspondenz*..., p. 157, No. 508: “Schliesslich ermahnt er sie, den Tettauer bei der Belagerung Glogau’s mit ihrem Geschütz, besonders mit zwei Büchsen, zu unterstützen. Jeder an der Geschützen entstehende Schaden werde ersetzt werden”; M. GOLIŃSKI, *Działania wojenne*..., p. 56.

¹⁵ *Politische Correspondenz*..., p. 152, No. 500: “Och schicket zuhant keyn der Sweydnitz, das sy dy grosse bochse fertig haben mit allir zugehorunge, schermen wnd mit steynen, pulvir zymmir-

It was only when the sieging units were strengthened with armed reinforcements,¹⁶ that made it possible to close the ring of siege, which consisted of two rows of palisades and two moats and seven earth roundels. For tightening the siege “on St Rufus’ day [27 August] the royal troops built an enclosure with a ditch around the entire town, with several watchtowers, from one side of the Odra river to the other. They worked only at nights and finished the whole thing in just eight days”.¹⁷

However, they had to wait much longer for what they needed so much – the artillery reinforcements. The cannon from Wrocław arrived first. “On St Augustin’s day [28 August], in the evening, three mounted units came to the royal troops with 18 well-loaded carts. One cart carried the cannon from Wrocław. This cart was drawn by 24 horses”.¹⁸ Less than two weeks later, unhurriedly, “on Mary’s day of birth [8 September], many a man came to the royal troops, and with them the cannon from Świdnica, on a cart drawn by 32 horses”.¹⁹

The large cannons began bombarding the town walls on 15 September and continued for two weeks. Several sources inform about it. In the Annal of the City Council of Görlitz we can read that “the said royal commander of the large cannons from Wrocław, Świdnica and Legnica, at the order from his royal highness, demanded and ordered that they be sent near Głogów,

lewthen wnd was derczu gehorth, wen her Wilhelm, das man ym yn der wochen dy schicken sol, desgleichen von Braslaw wun obiral. Och, I. h, dy XXV bochsensyteyne, dy sy zugesagt haben, weren ag eynen tag; doromme gedenkith, das man fur und fur bochsensyteyne berethet, das man domethe nicht gesewmpt sey”; *vide*: J. SZYM CZAK, *Początki...*, p. 122.

¹⁶ At the end of July, reinforcements in the form of Hungarian units under Hans von Haugwitz and Jan Trnka reached Głogów. On their way to Głogów, near Tomaszów Górny, they defeated a back-up unit of Bohemian mercenaries, organised by Jan II, *cf.* *Kaspar Borgen...*, p. 133; B. TECHMAŃSKA, *op. cit.*, p. 88.

¹⁷ *Kaspar Borgen...*, p. 134; *Annales Glogovienses...*, p. 54: “Item in die Ruffi nocte exercitus regis fecit sepem cum uno fussato per totam civitatem cum aliquibus stubis ab una parte Oderae usqua ad aliam partem Oderae, et nocte semper faciebant et perfecerunt illum sepem in brevi, ita quod canis non potuit evenire, et vix in octo noctibus totum construxerunt”. In the translation of this text from Latin, W. Mrozowicz interprets the expression “sagittabant” as firing with the use of bows. However, this verb has broader meaning and it should be assumed that the firing could have been conducted with the use of crossbows and/or handheld firearms.

¹⁸ *Kaspar Borgen...*, p. 134; *Annales Glogovienses...*, p. 54: “Item in die s. Augustini hora vespereum tres turmae magnae equestres venerunt ad exercitum regis cum 18 curribus bene oneratis, super uno curru erat una pixis Wratislaviensis, in quo curru erant 24 equi, qui eam traxerunt ad exercitum regis”.

¹⁹ *Kaspar Borgen...*, p. 135; *Annales Glogovienses...*, p. 55: “Item in die Nativitatis Mariae venit ad exercitum regis multus populus, cum eo venit pixis Sweidenicensium, in curru fuerunt 32 equi”.

and the cannons fired so many shots that the Brzostów Gate along with the tower and two houses with scales [probably the scales at the town gate] as well as the defensive wall between them were totally destroyed and knocked down”.²⁰

The Głogów Annal states that:

later, on the Monday after the feast of [the Elevation] of the Holy Cross [15 September], the royal soldiers brought many large cannons, namely from Świdnica and Legnica, and started to destroy the town walls. They bombarded them incessantly until the feast of St Michael [29 September]. One day some mercenary soldiers from the town secretly crossed the moat and forced their way between the baskets and cannons. They did great damage there, but the royal units chased them back to the town, capturing some of them and injuring many.²¹

In fear of loss or destruction of the heaviest cannons, which had been obtained with so much effort, they were withdrawn from their previous positions and moved to Ostrów Tumski: “Then, around the feast day of Saints Crispin and Crispinian [25 October 1488] the royal soldiers pulled down the pre-wall and covers and moved the great cannons to Ostrów Tumski, one of which was placed behind the castle, opposite St George’s church. They used them to shoot towards the church and there they killed several mercenaries, injuring many”.²² Thus, it was possible to resume fire from the new location only after more than three weeks, directing it at St George’s chapel, which had been turned by the citizens of Głogów into a firing point, used for covering the nearby Odra Gate along with the castle. According to a witness of these events:

²⁰ *Goerlitzter Rathssannalen*, part I, ed. J.L. HAUPT, *Scriptores Rerum Lusaticarum*, Neue Folge, vol. 2, Goerlitz 1841, p. 58: “Es hat auch der gemelte konigliche houbtmann der Bressler, Sweydnitzer, vnd Lignitzer grosse Buchssen, nach schaffunge komtat gefordert vnnnd vor Glogaw furen lassen, dorawss denn vil schosse geschehn seint, also das das Brostische thor mitsampt dem thorme doselbst vnnnd tzwee weigheuser auch dy Stadmawer dortzwischen gar sint zuschossen vnnnd nydergeleget”; M. GOLIŃSKI, *Działania wojenne...*, p. 56.

²¹ *Kaspar Borgen...*, p. 136; *Annales Glogovienses...*, p. 55: “Item feria secunda post Crucis adduxerunt plures magnas pixides, scilicet Sweidenicensem et Legnicensem et ceperunt destruere murum civitatis et continuo sagittabant et non cessaverunt usque ad festum s. Michaelis. Uno die contigit quod stipendarii de civitate secreto per fossatum transierunt et irruerunt intra sportas et pixides. Ibi magna damna fecerunt, sed exercitus regis eos ad civitatem fugaverunt, aliquos captivaverunt et multos vulneraverunt”.

²² *Kaspar Borgen...*, p. 137; *Annales Glogovienses...*, p. 56: “Item festum Crispini et Crispiniani exercitus regis destruxit sepes und die schrimen et duxerunt magnas pixides ad summum et unum retro castrum ex opposito s. Georgii, cum quibus sagittabant ad s. Georgium et ibi stipendarios aliquos interfecerunt et multos vulneraverunt”.

when the Hungarians began their storming, many shots were fired from the cannons, namely a hundred and twenty from the large cannon, excluding all the small cannons such as light field cannons and hand-held cannons. On one day the cannon from Świdnica fired seventeen shots, and the cannon which belonged to Duke Frederick of Liegnitz fired fourteen shots and burst on the same day.²³

We can read in the Annal of the Council of the Town of Görlitz that:

In front of the church of St George, which was surrounded with a ditch and turned into a roundel by Duke Jan, on the tower, the great cannon from Legnica, equal to no other in Silesia, as well as one of the medium cannons from Wrocław exploded, and the roundel could not be taken by storm.²⁴

This event was also described in the Annal of Głogów:

On Friday before St Simon and Jude [24 October], they kept shooting all day long and until the evening of the following day. Then the cannon from Legnica was torn apart and the royal soldiers attacked St George's church, went strongly towards the tower but were repulsed so that they had to retreat and did not achieve anything.²⁵

Thus, despite inflicting some damage around St George's church, the fire from the largest cannons did not bring the expected effects. Additionally, as a result of explosions, they lost the largest bombard, sent by Duke Frederick and the medium cannon from Wrocław. It should not be surprising then, that in fear of loss of more cannons, they did not decide to continue saturation firing, restricting their action to harassing the opponent and blocking the access to town.

²³ MARCUS KYNTSCH VON ZOBTEN, *Herzog Hans der Grausame von Sagan im Jahre 1488*, ed. G.A. STENZEL, *Scriptores Rerum Silesiacarum*, vol. 4, Breslau 1850, p. 16: "Da die Hungern hin stürmen giengen, geschah es, dass diesen Tag aus den Büchsen geschahen viel mancherley Schüssen, als zwanzig und hundert Schoss aus dem grossen, ohn alle kleine Büchsen, als Haufenetzigen und Handbüchsen aus der Schweidnitschen einen Tag XVII. Schoss, aus Hertzog Friedrich von Liegnitz vierzehn Schoss, diese zusprang denselben Tag". *Vide*: M. GOLIŃSKI, *Firearms...*, p. 207.

²⁴ *Goerlizter Rathsannalen...*, p. 58: "Vor sand Jorgenkirchen vffm thum dy hertzoze hans vorgraben vnnd zu einer pastey gemacht hat, sint zusprenget wurden, dy lignitsche grosse buchsse, dergleiche jn der Slezie nicht gewest ist, vnnd der Bresler mittelbuchssen eine, jdach hat man dieselbige pastey mit storme nicht gewynnen mugen".

²⁵ *Kaspar Borgenii, Rocznik głogowski...*, p. 137; *Annales Glogovienses...*, p. 56: "Et feria sexta ante Simonis et Judae per totam diem sagittabant et die sequenti usque ad vespas. Tunc pixis Legnicenses fracta est, tunc circa vespas exercitus regis impetum fecit ad ecclesiam s. Georgii: sie giengen zu sturme zu der pastey mit macht, sonder sy worden abgeschlagen, dass sy musten abziehen und richten nicht aus. Et ex utraque parte multi interfecti sunt et multi vulnerati et lesi".

At present we do not have precise information about the heaviest bombards used near Głogów in 1488. Most of what was preserved concerns the cannon from Świdnica. It was called *Świnia* [Pig], *Macióra* or *Locha* (*Sau*) [Sow]. It weighed 6,5 or 8 tonnes and was supposedly cast in Nuremberg in 1467. The balls it used allegedly weighed 3 quintals and 20 pounds, that is approximately 160 kg. It was first used near Bolków in 1468 and the latest information on its existence comes from 1635, when a projectile fired from it travelled a distance of 2667 steps (about 2 km). It was rarely used in combat, which resulted from its weight and the related problems with transport.²⁶ Perhaps the remains of these events are four cannonballs²⁷ kept in the courtyard of the castle and Archaeological-Historical Museum in Głogów.²⁸ One of them was found on Ostrów Tumski in Głogów, near the old riverbed of the Odra in 2003.²⁹ The three other ones were removed in 2010 from the wall which surrounded the former military unit in Władysława Sikorskiego Street.³⁰ The balls had the following diameters: 48,4 cm, 45,4 cm, 45,2 and 44 cm. Two of them were carved of Strzegom granite and the other two of sandstone. Owing to their size, their weight was calculated on the basis of the mean specific weight of the rock they were made of. The granite cannonballs (inventory no. MG/H/652 and MG/H/1128) weigh about 155 and 117 kg, whereas the sandstone ones – about 110 kg (inv. no. MG/H/1127 and MG/H/1129) (Fig. 6). Of course, we do not know which of the cannons they could possibly have been shot from. With the calibre of the balls within the range of 44–48 cm and their varied weight, it may be assumed that they were rather the ammunition for two different cannons. The first one would have been about 50 cm in calibre, while the other – smaller one – about 46 cm, since it is known that for smoothbore artillery, the ball had

²⁶ Formerly the time of its origin was estimated to years before 1431, *vide*: M. GOLIŃSKI, *Broń palna na Śląsku do lat 30-tych XV w. oraz jej zastosowanie przy obronie i zdobywaniu twierdz*, “Studia i Materiały do Historii Wojskowości” 1989, vol. 31, pp. 14–15; IDEM, *Działania wojenne...*, p. 54; P. STRZYŻ, *Broń palna w Europie Środkowej w XIV–XV w.*, Łódź 2014, p. 107.

²⁷ Two more cannonballs were set in the northern wall of the castle (from the side of the Odra). However, only about 1/3rd of them is visible, which makes it impossible to determine their original diameter. But certainly, their calibre predestined them for use for bombards.

²⁸ I wish to thank Mr Waldemar Has, Director of the Archaeological-Historical Museum in Głogów, and Ms Renata Matysiak and Mr Jerzy Dymytryszyn, who carried out their photographic documentation and measurements.

²⁹ Ball inv. No. MG/H/652.

³⁰ Inv. No. of balls: MG/H/1127; MG/H/1128, MG/H/1129.

to have appropriate clearance in the barrel, and the correct pressure of powder gases was obtained by using a wooden tenon.³¹



Fig. 6. Stone cannonballs from the castle courtyard – collection of the Archaeological-Historical Museum in Głogów. 1 – inv. No. MG/H/652; 2 – inv. no. MG/H/1127; 3 – inv. No. MG/H/1128; 4 – inv. No. MG/H/1129 (photo by J. DYMTRYSYN)

³¹ J. SZYMCAK, *Początki...*, pp. 73, 75; P. STRZYŻ, *Artyleria Władysława Jagielly w wojnie z Władysławem Opolczykiem (1391–1401)*, “Acta Militaria Mediaevalia” 2007, vol. 3, pp. 89, 92.

Apart from the balls from Głogów, we should also mention two similar projectiles, which are now found near the church of the Holy Cross in Świdnica. According to measurements, their calibre is 46 and 47 cm.³² They were made of local varieties of sandstone. The sandstone, depending on its kind, was acquired from quarries located near Nowa Ruda, Kłodzko district (red sandstones), as well as the vicinity of Złotoryja and Lwówek Śląski, where light-grey Cretaceous sandstone was mined. The Strzegom granite, which was used for making two of the balls from Głogów, was mined mainly in the area of Strzeblów and Chwałków.³³

A comparison of the size of balls from Głogów and Świdnica allows for an observation of a close similarity in this respect. Therefore, it may be assumed that the artefacts from Głogów may have had some connection with the military action from 1488, without a more precise assignment of the balls to specific cannons which took part in the siege though. Meanwhile, the projectiles preserved in Świdnica may be interpreted as remains of the stock for the *Świnia* cannon mentioned in the sources.

General data concerning the size of cannons used for the siege of Głogów are also provided by source mentions on their transport. The amount of tractive force used for transporting the cannons indicates that the cannon from Świdnica was larger than the one from Wrocław by ¼th, but still the largest one was the Legnica bombard from Duke Frederick, “which was unrivalled by any other in Silesia”.

Some detailed information on the use of *Świnia* from Świdnica was provided by Ephraim Ignatius Naso, a citizen of Świdnica who included the specifications and history of the cannon in his chronicle, published in Wrocław in 1667.³⁴ It also contains an account of the events from 1488: “When the town of Głogów was besieged in 1488, the cannon from Świdnica was transported with the use of 43 horses on 9 September”. He also gives some other facts which are worth

³² S. NOWOTNY, W. ROŚKOWICZ, A. DOBKIEWICZ, “Locha” – największe na Śląsku!, http://historia-swidnica.pl/locha-najwieksze-na-slasku/?fbclid=IwAR0bI6z18xTvAXcPtQ2kKR_2aEp2A0MojLusAwX51isaHV6eDE6MV_ulSBU (access: 13 I 2021).

³³ P. STRZYŻ, P. CZUBLA, J. WRZOSEK, *Arsenal we Wrocławiu jako miejsce przechowywania dział i kamiennej amunicji artyleryjskiej, w świetle spisu z 1547 r.*, “Acta Universitatis Lodziensis, Folia Historica” 2018, vol. 66, pp. 43–46.

³⁴ EPHRAIM IGNATIUS NASO, *Phoenix redivivus, ducatum Svidnicencis [et] Javroviensis: Der wieder – lebendige Phoenix Der Beyden Fürstenthümer Schwednitz und Jauer*, Breslau 1667.

taking note of: “In 1567, on 11 November, this large cannon was rolled on thick and strong beams beyond the Witoszów Gate. On the following day, it made such horrible rumble that houses in the town trembled and moved, which would not happen for the following 70 seventy years. The ball weighed 3 quintals and 20 pounds”. Then:

In 1653, on 2 July, the day of Visitation of the Holy Virgin Mary, the large cannon from Świdnica was moved to the Strzegom Gate, some half a quarter of mile out of town towards Strzegom. It was fired when the making of peace between his imperial and royal majesty and the Saxon Elector Duke was announced. The ball weighed more than 3 quintals and was ejected to a distance of 2667 steps after loading the cannon with a quintal of powder.³⁵

Unfortunately, this exquisite specimen of medieval artillery was recast in 1647 in order to recover materials (including silver from the alloy), which were taken away to Prague.

Some form of illustration of what *Świnia*, as well as the other cannons used near Głogów, may have looked like is provided by iconographic representations of Matthias Corvinus' large Hungarian bombard, called *Stoń* (*stark Helfandt, der helfannt*) [*the Elephant*]. It surely participated in his expeditions to Vienna. After capturing the city, it remained in its arsenal and in the early 16th century it was described during stock-taking of Maximilian I's arsenal.³⁶ Both the image of the cannon during transport was preserved (Fig. 7) and its look already in the Vienna arsenal (Fig. 8). The two representations differ quite considerably from each other. The cannon on a cart has a significantly narrower powder chamber and broader muzzle, whereas the cannon from the arsenal has a broader (reinforced?) central part of the barrel, while the bottom and muzzle are clearly narrower. Unfortunately, now it is difficult to decide which of the representations is closer to the original. However, it is important that it is not particularly different than other heaviest cannons from that time.

³⁵ Quoted after S. NOWOTNY, W. ROŚKOWICZ, A. DOBKIEWICZ, *op. cit.*

³⁶ W. BOEHEIM, *Die Zeugbücher des Kaisers Maximilian I*, “Jahrbuch der Kunsthistorischen Sammlungen des Allerhöchsten Kaiserhauses” 1894, vol. 15, p. 308; T. PÁLOSFALVI, *King Matthias' Army*, [in:] *Matthias Corvinus, the King. Tradition and Renewal in the Hungarian Royal Court 1458–1490. Exhibition catalogue*, eds. P. FARBAKY, E. SPENKER, K. SZENDE, A. VÉGH, Budapest 2008, p. 296; A. VÉGH, 8.2. *Depiction of Matthias Corvinus' so-called “Elephant” Cannon in Emperor Maximilian's book of weapon*, [in:] *Matthias Corvinus, the King...*, pp. 301–302; A. KALOUS, *op. cit.*, p. 110.

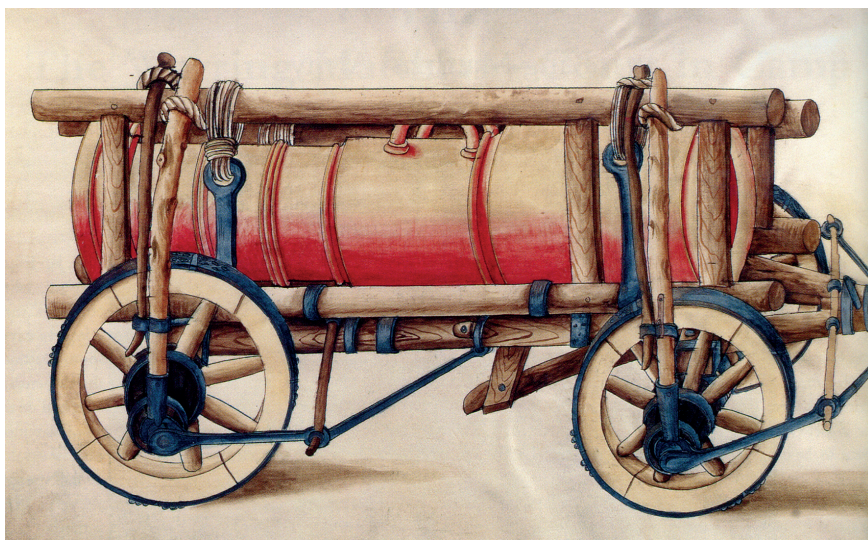


Fig. 7. Matthias Corvinus' cannon, *Der Helfant (Stor)* during transport, JÖRG KÖLDERER, *Zeugbuch der österreichischenn Lnde*, ca. 1512–1517, fol. 7 (Source: T. PÁLÓSFALVI, *King Matthias'...*, p. 296)

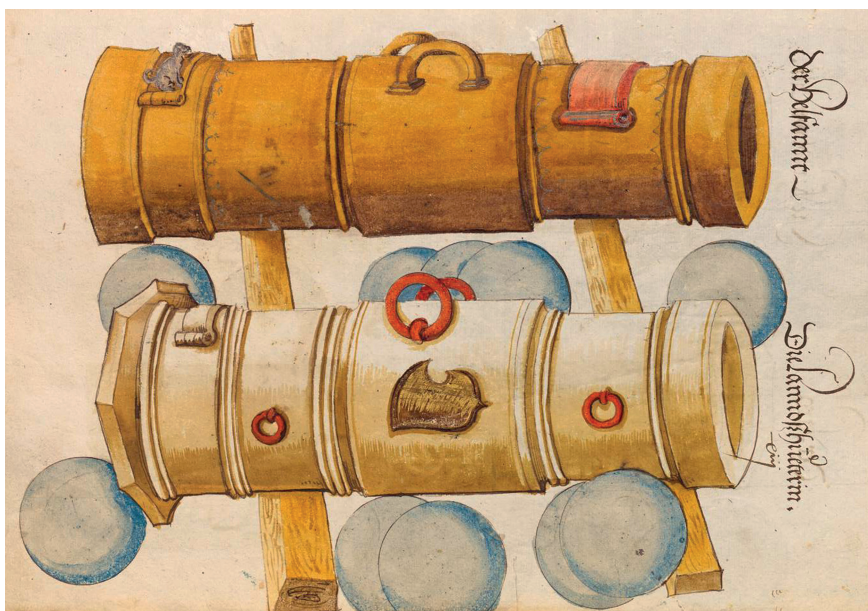


Fig. 8. Matthias Corvinus' cannon *Der Helfant (Stor)* in the Vienna arsenal (Source: *Zeugbuch Kaiser Maximilian I*, Bayerische Staatsbibliothek, Cod. icon. 222, fol. 86, ca. 1505)

Although both the heaviest cannons and more numerous smaller calibre artillery (such as light field cannons) were used in the siege of Głogów, the achieved results were modest at most. Neither any significant damage could be inflicted to the fortifications nor the defenders' forces could be broken by storming or artillery firing, yet two cannons were lost in one of the raids and another two as a result of explosions. However, in view of the lack of any chances of external help, the prolonged siege induced the Town Council on 16 November to make a decision to surrender, which was received by Wilhelm von Tettau two days later. But before that, Jerzy Podiebradowic, Duke Jan II's son-in-law, had managed to leave the town of Głogów. This fact indicates that the ring of siege was not too tight. After the fall of Głogów, the remaining centres such as Szprotawa, Koźuchów, Zielona Góra and Świebodzin were taken over, not without fierce fights, by the middle of January 1489. Matthias Corvinus imposed upon Jan II a peace treaty which deprived the duke of all the dominions he had had so far in the Głogów duchy, offering only some compensation in return.³⁷

The course of military action near Głogów shows that when besieging well-fortified urban centres, even with the use of the heaviest artillery, at the end of the 15th century it was still difficult to achieve measurable success. In this case, despite destroying part of the fortifications (near the Szprotawa Gate), no assault could be conducted that would bring success to the besiegers. The decision to surrender the town was influenced mainly by such factors as fatigue of the garrison, hunger and lack of chances of relief, rather than the actual destruction of fortifications. Similar examples can be quoted for Wrocław, which the Polish army tried to besiege in 1474, or the earlier siege of Malbork by the Polish-Lithuanian forces in 1410.³⁸ They indicate that although in the late 15th century it was possible for artillery to incur considerable local damage, it was often incapable of destroying the walls to such a degree that would allow infantry to take over the towns. In this respect, a clear breakthrough came only in the 16th century (a little earlier in Western Europe – along with the Italian wars of Charles VIII), when new types of cannons with long barrels, adapted for shooting iron balls, enabled better concentration of fire and more effective destruction of fortifications.

³⁷ *Kaspar Borgen*..., pp. 141–143; M. GOLIŃSKI, *Działania wojenne...*, pp. 56–57; B. TECHMAŃSKA, *op. cit.*, pp. 89–91.

³⁸ E.g. J. SZYMCZAK, *Początki...*, pp. 236–240, 264–265; P. STRZYŻ, *Broń...*, pp. 201–206, 208 – further literature there.

BIBLIOGRAPHY

Printed primary sources

- Annales Glogovienses bis z. j. 1493. Nebst urkundlichen Beilagen*, *Scriptores Rerum Silesiacarum*, vol. 10, ed. H. MARKGRAF, Breslau 1877.
- EPHRAIM IGNATIUS NASO, *Phoenix redivivus, ducatum Svidnicensis [et] Javroviensis: Der wieder – lebendige Phoenix Der Beyden Fürstenthümer Schwednitz und Jauer*, Breslau 1667.
- Goerlizter Rathsannalen*, part I, ed. J.L. HAUPT, *Scriptores Rerum Lusaticarum. Neue Folge*, vol. 2, Goerlitz 1841.
- Kaspar Borgenii Rocznik glogowski do roku 1493 (Annales Glogovienses bis z. J. 1493)*, transl. W. MROZOWICZ, Głogów 2013.
- MARCUS KYNTSCH VON ZOBTEN, *Herzog Hans der Grausame von Sagan im Jahre 1488*, ed. G.A. STENZEL, *Scriptores Rerum Silesiacarum*, vol. 4, Breslau 1850.
- Politische Correspondenz Breslaus im Zeitalter des Königs Matthias Corvinus, zweite Abtheilung: 1479–1490*, *Scriptores Rerum Silesiacarum*, vol. 14, eds. B. KRONTHAL, H. WENDT, Breslau 1894.
- Zeugbuch Kaiser Maximilian I*, Bayerische Staatsbibliothek, Cod. icon. 222, ca. 1505.

Secondary sources

- ADAMSKA D., „...dla użytku i potrzeby ziemi naszej”. *Rozwój przestrzenny lewobrzeżnego Głogowa od połowy XIII do początku XVI wieku w świetle źródeł pisanych*, [in:] *Głogów. Średniowieczne miasto nad Odrą*, ed. K. CZAPLA, Głogów 2018, pp. 65–93.
- BLASCHKE J., *Geschichte der Stadt Glogau und des Glogauer Landes*, Glogau 1913.
- BOEHEIM W., *Die Zeugbücher des Kaisers Maximilian I*, „Jahrbuch der Kunsthistorischen Sammlungen des Allerhöchsten Kaiserhauses” 1894, vol. 15, pp. 295–392.
- DYMYTRYSZYN J., *Brama Odrzańska w Głogowie*, [in:] *Głogów w czasach Jagiellonów*, ed. L. LENARCZYK, Głogów 2012, pp. 67–78.
- GOLIŃSKI M., *Broń palna na Śląsku do lat 30-tych XV w. oraz jej zastosowanie przy obronie i zdobywaniu twierdz*, „Studia i Materiały do Historii Wojskowości” 1989, vol. 31, pp. 3–26.
- GOLIŃSKI M., *Działania wojenne a modernizacja systemów obronnych na Śląsku w drugiej połowie XV wieku*, „Kwartalnik Architektury i Urbanistyki” 1995, vol. 40/1, pp. 51–58.
- GOLIŃSKI M., *Firearms in 15th – century Silesian Military Art*, „Quaestiones Medii Aevi Novae” 2006, vol. 2, pp. 193–211.

- GOLIŃSKI M., *Uzbrojenie mieszczańskie na Śląsku od poł. XIV do końca XV w.*, "Studia i Materiały do Historii Wojskowości" 1990, vol. 33, pp. 3–65.
- GROTEFEND H., *Aus dem Zinsbuche der Stadt Gross-Glogau*, "Zeitschrift des Vereins für Geschichte und Alterthum Schlesiens" 1874, vol. 12/1, pp. 207–211.
- KAJZER L., KOŁODZIEJSKI S., SALM J., *Leksykon zamków w Polsce*, Warszawa 2001.
- KALOUS A., *Matyáš Korvín (1443–1490). Uberský a Český král*, České Budějovice 2009.
- KOCHMAN G., *Zabudowa Głogowa na przelomie XV i XVI wieku*, [in:] *Głogów w czasach Jagiellonów*, ed. L. LENARCZYK, Głogów 2012, pp. 91–105.
- KOZACZEWSKI T., *Głogów – miasto średniowieczne*, "Kwartalnik Architektury i Urbanistyki" 1973, vol. 18/1, pp. 3–34.
- NOWAKOWSKI D., *Elementy obronne średniowiecznego miasta i broń w mieście na przykładzie Głogowa w świetle źródeł archeologicznych i pisanych*, [in:] *Głogów. Średniowieczne miasto nad Odrą*, ed. K. CZAPLA, Głogów 2018, pp. 95–112.
- NOWAKOWSKI D., *Siedziby książęce i rycerskie księstwa głogowskiego w średniowieczu*, Wrocław 2008.
- PÁLÓSFALVI T., *King Matthias' Army*, [in:] *Matthias Corvinus, the King. Tradition and Renewal in the Hungarian Royal Court 1458–1490. Exhibition catalogue*, eds. P. FARBAKY, E. SPENKER, K. SZENDE, A. VÉGH, Budapest 2008, pp. 295–297.
- STRZYŻ P., *Artyleria Władysława Jagiełły w wojnie z Władysławem Opolczykiem (1391–1401)*, "Acta Militaria Mediaevalia" 2007, vol. 3, pp. 85–97.
- STRZYŻ P., *Broń palna w Europie Środkowej w XIV–XV w.*, Łódź 2014.
- STRZYŻ P., *Throwing Engines Versus Gunpowder Artillery in Siege Activities in the Middle Ages – an Example of the Kingdoms of Poland and Bohemia*, "Fasciculi Archaeologiae Historicae" 2020, fasc. 33, s. 103–123.
- STRZYŻ P., CZUBLA P., WRZOSEK J., *Arsenał we Wrocławiu jako miejsce przechowywania dział i kamiennej amunicji artyleryjskiej, w świetle spisu z 1547 r.*, "Acta Universitatis Lodzianensis, Folia Historica" 2018, vol. 66, pp. 33–49.
- SZCZEGÓŁA H., *Głogowska wojna sukcesyjna*, [in:] *Glogovia Maior, Wielki Głogów między blaskiem dziejów i cieniem ruin*, eds. B. CZECHOWICZ, M. KONOPNICKA, Głogów–Zielona Góra 2010, pp. 99–109.
- SZYMCZAK J., *Początki broni palnej w Polsce (1383–1533)*, Łódź 2004.
- SZYMCZAK J., *Sposoby zdobywania i obrony grodów w Polsce w okresie rozbitcia dzielnicowego*, "Studia i Materiały do Historii Wojskowości" 1979, vol. 22, pp. 3–63.
- TECHMAŃSKA B., *Jan II Żagański. Niespokojny książę, sojusznik króla husyty (16 VI 1435 – 22 IX 1504)*, Kraków 2014.
- VÉGH A., 8.2. *Depiction of Matthias Corvinus' so-called "Elephant" Cannon in Emperor Maximilian's book of weapon*, [in:] *Matthias Corvinus, the King. Tradition and Renewal in the Hungarian Royal Court 1458–1490*, Exhibition catalogue, eds. P. FARBAKY, E. SPENKER, K. SZENDE, A. VÉGH, Budapest, 2008, pp. 301–302.

Netography

NOWOTNY S., ROŚKOWICZ W., DOBKIEWICZ A., *“Locha” – największe na Śląsku!*,
http://historia-swidnica.pl/locha-najwieksze-na-slasku/?fbclid=IwAR0bI6z18xTvAXcPtQ2kKR_2aEp2A0MojLusAwX51isaHV6eDE6MV_ulSBU (access: 13 I 2021).