## **Original Study**

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# Polish, Silesian and Local Cloth Seals from Excavations in Gdańsk, Poland

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**Abstract:** This article presents a collection of early modern cloth seals revealed during an excavation in Gdańsk (Poland). Our aim is to present a collection of an often-neglected category of artefacts. These are cloth seals from towns and villages located along the Polish-Lithuanian Commonwealth and Habsburg Monarchy border. Tracking the import of cloth to Gdańsk (the most important commercial centre on the Baltic Sea at that time) based on the analysis of the origin of textile seals is crucial as it allows us, in some sense, to reconstruct the cloth market of mid-seventeenth century Gdańsk.

Keywords: Cloth seal, early modern, Polish-Lithuanian Commonwealth, Silesia, Gdańsk

# 1 Introduction

Lead seals have always been seen as important material evidence of trade relations. Even though they have been recorded from many archaeological sites in large quantities, cloth seals are a category of archaeological evidence that is still insufficiently studied. Scholars rarely take advantage of the valuable information which the seals provide. Naturally the most crucial studies of the early modern economies of the Polish-Lithuanian Commonwealth (the Polish Crown) and Duchies of Silesia (part of Habsburg Monarchy) have been written without paying attention to the cloth seals (Rusiński, 1949; Mączak, 1955; Rybarski, 1958), mainly because they were quite unknown as artefacts during this time. This also seems true for studies dealing with the Hungarian economy of the early modern period (see Mordovin, 2017).

In fact, in recent Polish studies, it seems that there is also little interest in cloth seals, except perhaps some general catalogues of finds (Bobowski, 2009; Kocińska, 2018; Kocińska & Maik, 2004, Maćkowski, 2016a; Wołyńska, 2016) and the latest fundamental work of Tomasz Maćkowski about the beginnings of textile sealing in Gdańsk, as seen in a political and economic historical context (Maćkowski, 2016b). To make matters worse, one of those few publications by Bogdan Bobowski (2009) is full of factual errors. Almost half of the seals are incorrectly identified (see published reviews by Maćkowski (2012a) and Krzywdziński (2013)).

West European cloth seals have been far better described and they have much greater presence in the literature than the Central European ones. The seals that have been considered to come from towns and cities of the historical Polish-Lithuanian Commonwealth and Habsburg Monarchy, by contrast, continue to be underestimated. Recent publications on cloth seals from Britain, Germany and the Netherlands have presented this category of data regarding guild organisation of production, fiscal institutions and trade relations (Egan, 2010; Elton, 2017; Hittinger, 2007; Hittinger, 2008; van Oostveen, 2013).

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When the production capacity became larger than the local demands for goods, most towns had to seek new markets to sell their surpluses, pointing at the export-oriented production. Textile manufactures, from Silesian workshops in particular, reached different regions of the Polish Crown, Bohemia and Hungary, as evidenced by the cloth seals from towns of Silesia and New Marchia which are quite widely distributed throughout the mentioned areas. There are known examples of seals from such textile production centres as: Głogów (former *Glogau*) (Kocińska, 2018), Gorzów Wielkopolski (former *Landsberg an der Warthe*) (Majewski et al., 2017), Sulechów (former *Züllichau*) (Hittinger, 2009), Sulecin (former *Zielenzig*), Lubań (former *Lauban*), Złotoryja (former *Goldberg*), Kożuchów (former *Freystadt in Schlesien*) (Schäfer, 2016), Strzelin (former *Strehlen*) (Kocińska & Maik, 2004), Dzierżoniów (former *Reichenbach im Eulengebirge*), Żagań (former *Sagan*) (Bobowski, 2009; Majewski, 2014), Czernina (former *Tschirnau*) (Bosłunowski, 1895), Lwówek Śląski (former *Löwenberg in Schlesien*), Gubin (former *Guben*) (Mackowski, 2016a), Cieszyn (former *Teschen*), Pszczyna (former *Pleß*), Chojnów (former *Haynau*), Nowa Ruda (former *Neurode*), Lubin (former *Lübben*) (Mordovin, 2016), Wrocław (former Breslau) (Konczewska & Konczewski, 2004) (see Fig. 1). We have added to this list seals coming from Nysa which will be discussed further below. Silesian seals have been relatively well discussed in the literature (see Mordovin, 2016; Schäfer, 2016; Kocińska & Maik, 2004).

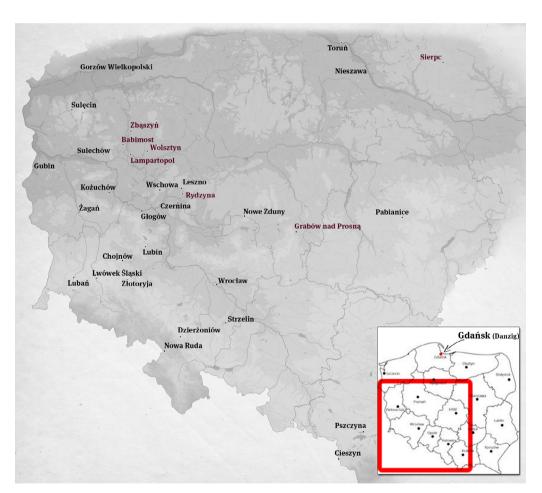


Figure 1. Map showing places of origin of all cloth seals known from Poland.

In contrast, textiles from towns located within the borders of the Kingdom of Poland, except those from Wschowa (Mordovin, 2014), were delivered to the foreign markets only occasionally, as demonstrated by the low rate of Polish cloth seals found outside the Polish-Lithuanian Commonwealth. Only a small number of seals from this area has been studied. Among the most important are these from Gdańsk, Toruń, Nowe Zduny, Nieszawa, Pabianice, Leszno and aforesaid Wschowa (Bobowski, 2009; Kocińska & Maik, 2004;

Mordovin, 2014; Urbański, 2013; Maćkowski, 2016a; Karwowska & Niziołek, 2016) (see Fig. 1). Again, we have extended this list including seals from Greater Poland, and the Mazovia region (one case) found during the excavation of site No. 255 in Gdańsk. These are the following towns: Lampartopol, Zbaszyń, Babimost, Wolsztyn, Rydzyna, Grabów and Sierpc (marked red on Fig. 1). All these localities have long been known as renowned centres of cloth production (Maczak, 1955). Cloth seals are, in most cases, the only evidence of these remote trade relations. Gdańsk is located approximately 200 to 250 km away from the production centres mentioned above (see Fig. 1).

All cloth seals discussed in the paper have been found on the site No. 255 in Gdańsk, at 40 Wałowa Street, just outside the walls of the Old Town. The total number of seals discovered comprises 367 pieces. Discussing such a vast collection is impossible within the framework of this article. That is why we only present here the seals of Polish and Silesian origin, which are not too numerous in the literature. The analysis of the remaining seals and the accompanying fabric fragments will be the subject of a separate publication.

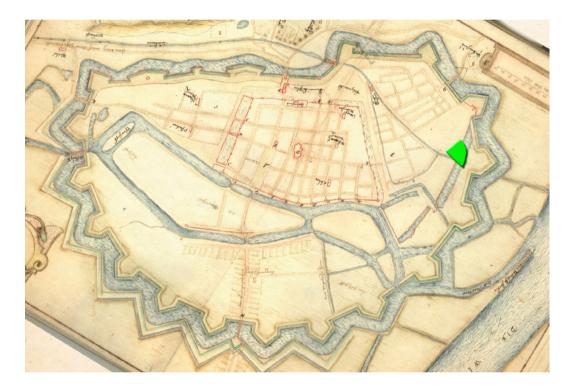


Figure 2. Map of the Gdańsk Fortress around 1635 with the indication of the site No. 255. (http://gdansk.fotopolska. eu/696979, foto. html)

#### 1.1 Historical Outline of the Site

The history of the area where excavations were conducted can be traced back as far as the fourteenth century. In the late 14th century, the Old and Main Towns of Gdańsk were separated by a rampart. In 1402, the inhabitants started digging a moat called New Ditch, building defensive ramparts and a bridge. In the years 1447-1480, the construction of defensive walls began for the Old Town which, by the great privilege granted by the king Casimir IV Jagiellon, has been incorporated into Gdańsk. The fortifications consisted of 1,4 km long walls, equipped with three gates and eighteen towers. The overall look of the Old Town changed significantly with the construction of a new section of the city's fortifications known as the northern front. Its building continued through the first half of the 17th century with the intensification of works in the 1620-30s in reaction to the military threat from the Sweden (Fig. 2). The northern part of the city, in this way, was given the appearance which remained almost unaltered until the end of the 19th century.

The excavations were conducted in place of the afore-mentioned moat, right next to the bridge replaced over time with a dyke. At some point in the 17<sup>th</sup> century this area was transformed into gardens. The excavations have not revealed the existence of brick buildings in the area until the 19<sup>th</sup> century.

The archaeological deposit was nearly 7 m thick (from the bottom of the ditch to the present level of ground). Most of the archaeological objects were deposited in a relatively short time during approximately 20 years lasting successive filling up of the moat in '30s and '40s of 17th century. Deposition of archaeological material happened shortly after the new belt of bastions was finished and the old moat was not needed anymore. The structure of the fill and an exceptionally large number of small finds, all suggests that municipal waste was probably used for levelling. Only a small number of artefacts were deposited later, in 18th and 19th century, including a few cloth seals.

The excavation of moat layers has provided many artefacts, including hundreds of metal objects such as coins, cloth seals, ornaments, implements, weapons, thousands of pieces of pottery, stove tiles and pipes, as well as many leather articles: shoes, gloves and hats. Artefacts of wood have also been found. All categories of finds are currently being analysed.

#### 1.2 Use of Lead Cloth Seals

The primary use of lead cloth seals was mostly to seal textiles, confirming the authenticity of the cloths sealed and ensuring recipients of the best quality of sold fabrics. Sealing textiles with seals was a practice already known in antiquity, but in medieval Hanseatic Europe, seals did not appear until the late thirteenth and early fourteenth century. They were used mostly between the sixteenth and late eighteenth century (Egan, 1987).

In Poland, the first known privilege of sealing textile products was granted in 1472 to the guild of clothiers from Kościan (Kocińska & Maik, 2004). Until the end of the fifteenth century sealing was only reserved for high-quality cloths, but since the sixteenth century, textiles of inferior quality have also been sealed. This was probably due to an increasing number of new textile manufacturers and the expansion into new markets. As production increased and quality control measurements were introduced, most manufacturers started to seal their products with seals bearing Privy marks, and with time the sealing with a seal that had a Privy mark was done on each stage of cloth production (Bogucka, 1956).

In addition to the manufacturers' seals, seals associated with the city's system of quality control are also known. Gdańsk as an important manufacturing centre had a highly developed quality control system of goods regulated by municipal statutes. Controls were executed by overseers (checkers) appointed by city officials. Under the statutes of 1615 and 1649, two overseers (*die Besichtigere*) were appointed every year to carry out the supervision over finishing of the so-called "broad cloths" – a finisher and a clothier. They were responsible for controlling all the newly woven pieces of fabric before dyeing. In guilds bringing together producers of the so-called narrow cloths, similar functions were exercised by elders of the guild (Bogucka, 1956).

Broadcloth, known also as "new cloth" (*nouvelle draperie*), was sorted into the first, second or third genre depending on the fabric density and diligence in fulling. The first genre of fabric was marked as a rule with a great seal fixed to it by overseers. A great seal (*staellood*) specified the quality of plait and the number of dyes. There were also smaller seals in use which gave the information written in numbers or a letter-number system about the type of fabric, as well as its length and width (Hittinger, 2009; Maćkowski, 2012b).

Lead seals for sealing goods were casted by craftsmen called 'plumbarii' (from the Latin). A two-part cloth seal with a rivet is the most frequent type found at archaeological sites in Gdańsk. Seals of this type consist of two discs (rivet and rove discs) fixed together with a connecting strip. A rivet disc (obverse) has a rivet, while a rove disc (reverse) has an opening through which the rivet passes once the seal is attached to the cloth (Fig. 2). There are various types of rivets: single, double, flat or forked. Rivet type seals with more than one disc are found less often. Nearly all seals are round or oval, but there can be also polygonal and other types (Bobowski, 2009).

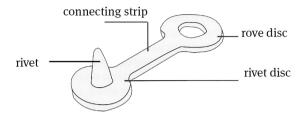


Figure 3. Seal components (Egan, 1987, fig. 2A).

### 2 Provenance of Seals

#### 2.1 Seals from Towns of the Polish Crown<sup>1</sup>

LESZNO (LISSA)



Figure 4. The former arms of Leszno and House of Leszczyński<sup>2</sup>.

Cloth seals from Leszno (former *Lissa* or *Lessna*) have not been discussed in any of the few known studies dedicated to this subject (Bobowski, 2009; Kocińska & Maik, 2004, Maćkowski, 2016a). In total, 20 artefacts have been identified as cloth seals from Leszno. These can be divided into two main types. Those of the first type are 36–41 mm in diameter, the others are considerably smaller. Both types are common two-lobed seals with a forked rivet (Fig. 25.1).

The image of all rivet discs shows shears, four staples used by finishing cloths and five small stars. In the legend around the following words that are set out (that are unfortunately nowhere legible in full, but are possible to be reconstructed), it says: \*SIEGEL DER BREITEN TUCH IN DER GRÆFL. STAD LISSA\*. Similar iconography which relates to the finishing stage of fabrics may be found on the seal matrix dated to 1630 that belonged to the shearer's guild from Wschowa (Ratajewska, 2013).

The rove disc bears the Wieniawa family coat of arms (bull's head) surrounded by an ornamental cartouche. The partly legible inscription around reads: \*1635\*RAPHÆL COM. DE L(ISSA) (or LESZNO)\*. The seal should therefore be attributed to Rafał (VII) Leszczyński (1579–1636), the voivode of Bełz who was the then owner of Leszno, addressing himself '*Comes de* (or) *in Leszno*' (Karwowski, 1916). Like most members of the Leszczyński family, Rafał was a Protestant of the evangelical church. He provided support and shelter

 $<sup>{\</sup>bf 1} \ \ {\bf See \ also \ online \ supplementary \ material.}$ 

<sup>2</sup> The crests of cities that have the same coat of arms as in the discussed period come from Wikipedia. The other coats of arms were reconstructed on the basis of literature (mainly Gumowski (1932)).

for his many fellow Protestants not only in his estates but also in the entire Polish Kingdom. Because of that he was called 'the pope of Calvinists in Poland'. He fostered the development of cultural life, was the founder of many schools, printing-houses and Protestant churches.

An interesting point regarding iconography is that on the town seal of Leszno, that is dated back just three years earlier than the cloth seal discussed, a half of the Wieniawa and a half of the Topór family coat of arms can be seen, and not just the coat of arms of the Leszczyński house (Gumowski, 1932). Perhaps Rafał as the count of Leszno would 'personally' assure the recipients of the good quality of local products. The name of the town is also differently spelled on the town seal – LESNO, the name LISSA is present on the town seal from 1680 (Gumowski, 1932).

The other type of seal from Leszno (Fig. 25.2) is smaller (16–17 mm) than the one just described above. One of the discs shows the inscription LISSAW within a floral motif. The other disc is illegible in most parts, but it probably shows, as in the case of the larger type, the Wieniawa coat of arms (bull's head) within an ornamental cartouche. One of the seals of this type has survived attached to a piece of good felted wool fabric.

Similar seals ware found during excavations in Tykocin (Karwowska & Niziołek, 2016) and at the castle of Vilnius (Kvizikevičius, 1999), but the Lithuanian one was wrongly identified as originating from Nysa (*Neisse*). This seal confirms, however, that local cloths must have enjoyed wide distribution in domestic markets of the Polish-Lithuanian Commonwealth.

It is currently unknown why there were two categories of seals: a large and a small one. The large seal showing tools associated with finishing of cloths may indicate that it probably was used at the final stage of cloth production. The small seal, in contrast, does not have any elements that might indicate its use in any stage of production or different quality of fabric.

Leszno was among the most important and rapidly growing centres of cloth production in Greater Poland. The town was founded in the year 1547 by Rafał (IV) Leszczyński on the land belonging to his family and from the beginning it provided shelter for persecuted people from Bohemia, in 1628 for a large group of Bohemian Brethren, and in 1633 for Lutherans who fled from war-torn Silesia. Among the latter were many clothiers. In 1635, 150 clothiers were active (Mączak, 1955), and from 1640, a dye workshop operated in the town. The immigrants from Silesia made the cloths from Leszno's good quality fabrics that were easy distinguishable from others like those, for example, from Little Poland.

The only cloth seal that can be dated with some degree of certainty is one directly showing the year 1635. Although other seals show similar details, they make it impossible to decipher the dates because some parts of them are worn or missing. We assume, however, that those should be assigned to the years around 1635, but they can definitely be dated to the first half of the 17<sup>th</sup> century.

The chronology of the smaller type is less certain, but judging from the fact that they were found together with other seals from the early 17<sup>th</sup> century and that during this time there was a rapid growing of the cloth industry in Leszno, we can accept this period as most probable for these seals.

#### WSCHOWA (FRAUSTADT)



Figure 5. The former arms of Wschowa.

Wschowa (former Fraustadt) is the next cloth production centre of Greater Poland, in terms of quantity of cloth seals found during excavations in Gdańsk, In total, seven cloth seals were recorded as originating from this town and all fall into the same type (Fig. 25.3). These are large, two-disc seals of 43-47 mm in diameter. One of the discs shows the eagle - the Polish royal coat of arms. Wschowa was granted the rights to seal its fabrics with a seal bearing the royal eagle in 1493 (Maczak, 1955). The initial 'S' appears on the eagle's breast. A similar initial appears on the town seal dated to the 16th century and probably refers to King Sigismund the Old (reign 1507-1548) (Gumowski, 1932) who with his edict of 30 September 1524 conferred many privileges to the town council (Ratajewska, 2013).

On the obverse (rivet discs) of three seals, there is another, smaller imprint with a privy mark showing the initials ADM. Other discs, mostly reverses, bear the inscription (FRAU?)STADT • TER(...). The Wschowa arms are a double cross (Jagiellonian cross) with two rings on both its sides. Though the common motif of the town seals until the eighteenth century was Madonna holding in Her arms the Child and a double cross (Gumowski, 1932; Ratajewska, 2013), all known goods seals from Wschowa depict merely a cross (Kocińska & Maik, 2004; Mordovin, 2016; Karwowska & Niziołek, 2016).

However, these features are not distinctive enough to allow chronological assessments. The large size of the seal and the inscription depicted in a majuscule may even suggest its Medieval date. Given the context of the find, this date seems to be too early. It is acceptable, however, to date this seal very broadly from the sixteenth to the late seventeenth and early eighteenth centuries.

Wschowa is, in fact, the only town in Greater Poland with its cloth production traditions going back to the Medieval Period. The first privilege of marking cloth products with cloth seals attached was granted to clothiers of Wschowa as early as 1493, and from 1520 on, Wschowa had a guild of clothiers. The town had strong relations with Silesia through the border running not far away. It continued to grow throughout the seventeenth century. In 1625, a dye manufacture was established by an Italian merchant and clothier Nicolo Bacaralli, the first workshop of that kind in the Polish Crown (Maczak, 1955).

In Wschowa, as with Leszno, a sizable group of protestant craftsmen from Silesia and Bohemia found refuge during the Thirty Years' War. They mostly settled down in the New Town, in a part of Wschowa that was founded by the starost Hieronim Radomicki. The population census from 1634 states that 230 clothiers worked in Wschowa at that time (Maczak, 1955). The town, or rather, towns were destroyed and their population decimated during the Second Northern War in 1655. The cloth production was revived and in the early nineteenth century Wschowa was still an important centre of cloth production ceasing due to Russian customs policies since the 1820s.

#### LAMPARTOPOL-KOPANICA

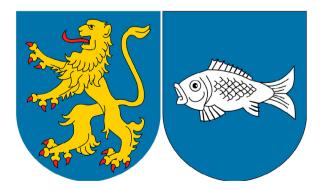


Figure 6. The arms of Lampartopol and Kopanica.

Surprisingly, Lampartopol, a town that no longer exists, is another place from which cloth seals were found on the discussed site.

Three cloth seals (Fig. 25.4) all of the same common type: two-lobed cloth seals with a forked rivet. The diameter varies from 33 mm to 36 mm. One of the discs bears in the field a fish – the arms of Kopanica, the 'mother' town of Lampartopol (Wittyng, 1905). The same disc shows a partially legible inscription LAMPOR•TOPOL+ (...). Designs presented on other discs are hardly readable in full, but it appears that in the field they show a heraldic leopard, since the arms of the town should have a leopard with the right paw raised according to the act of foundation (Adamczewski, 2000).

The town was founded in 1629 by Lampart Sierakowski, the starost of Kopanica, and the borough rights were granted to the Lampartopol community in 1641. It became a shelter for many cloth makers, emigrants from Bohemia and Silesia. Some important privileges were granted to them in the period between 1645 and 1650. During the Second Northern War (1655–1660), both towns Lampartopol and nearby Kopanica were devastated. Lampartopol never regained the short wealth of the mid-seventeenth century. In 1800 Lampartopol was incorporated into the town of Kopanica which was deprived of the town status in 1934 (Kantor-Pietraga, Krzysztofik, & Spórna, 2015).

Therefore, the seals in question can be dated between 1629 and 1655, the time of Lampartopols growth before it was destroyed by Swedish troops.

#### **NOWE ZDUNY**



Figure 7. The former arms of Nowe Zduny.

Three seals found on the site are considered to originate from Nowe Zduny. All seals represent the same common type (Kocińska & Maik, 2004). These are two-disc seals with the rivet. They are approximately 14 mm to 17 mm in diameter (Fig. 25.5). All seals bear on the rivet disc a depiction of the Saint John's head that is also figured on the Nowe Zduny arms (Gumowski, 1932). On the rove disc, there is a square frame with the inscription CIVIT ZDUNY IN POL, all surrounded by floral motifs.

Zduny is actually composed of three separate parts. The proper Zduny was granted town law as early as 1267, but it was a small provincial centre until the sixteenth century when it began to enjoy great prosperity through the immigration from Silesia, in this case mostly from Dzierżoniów (*Reichenbach im Eulengebirge*). Consequently, two separate towns were established – Nowe Zduny, known also as German Zduny (Deutsch Zduny), which was granted the town law in 1637, and Sieniutowo founded in 1646. All three towns were united into one in 1772 (Gumowski, 1932). Zduny avoided any serious destruction during the Swedish wars (1655–1660), so that it could continue to develop into a strong cloth production centre. In the 18th century the town was six times as big as in the 16th century. The importance of Zduny as a major cloth production centre can be measured by the fact that in the town with four thousand people by the end of 18th century, there were 113 clothiers, 49 linen drapers and 464 weavers (Mączak, 1955). It's difficult to determine the exact dating of Zduny's seals. We can specify only a very wide range of XVI–XVII century.

#### GRABÓW AT THE PROSNA RIVER



Figure 8. The arms of Grabów at the Prosna River.

Two cloth seals are likely to be imports from Grabów. Both are two-part seals with a rivet and represent the same type of quite large size (42–43 mm in diameter) (Fig. 26.2). On one of them the inscription in six lines reads SIGIL DER TUCHMA(CHE)R IN (...)A (1)643. One of the seals bears in the middle a secondary imprint of a Privy mark with a modified capital letter 'P'. The other disc shows the arms of Grabów – a pelican feeding three nestlings with its own blood (Gumowski, 1932) accompanied by a steel square and a Maltese cross. The presence of these symbols along with the arms of the town is hard to explain as they are linked neither to the symbols of the town, nor of the Zaremba family, the then proprietors of the town, nor to the Franciscan order. The date that is legible on one of these two probably identical seals may date both to the middle of the 17<sup>th</sup> century.

Grabów is located in the easternmost part of the Greater Poland cloth production district, the seals of which are discussed in this paper. In Grabów, there was a castle which, like the town, was destroyed by Swedes in 1655. As the royal town situated on the main trading routes and being the seat of a starost, it developed into a renowned production centre of cloth making and brewing in particular. In 1589, the clothiers from Grabów were probably granted the resumption of guild statute which also mentions a dyeing manufacture (Karwowski, 1890).

#### **BABIMOST**



Figure 9. The former arms of Babimost.

One cloth seal from Babimost is a standard, quite large two-disc seal of 35 mm diameter (Fig. 26.3). On the obverse disc, there is the inscription STADT • B(A)BIMOST (1)637, and in the field two crossed keys – the arms of Babimost (Adamczewski, 2000), two stars and two points. The reverse disc shows in the field a wing pierced with an arrow. We have not succeeded in determining both the origin and semantic of that motif. A similar pattern appears occasionally in the crest of coats of arms of noblemen. However, this element occurs neither in the crest of the Jastrzębiec coat of arms, nor in it itself, the same that was used by the starost of

Babimost Krzysztof Żegocki who invited to the town a considerable number of emigrants, clothiers from Bohemia and Silesia. In 1638, the act restoring the guild of clothiers in Babimost was issued (Maczak, 1955). That is one year after the cloth seal stamp was cut.

#### RYDZYNA (REISEN)

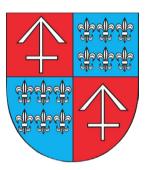


Figure 10. The former arms of Rydzyna.

There is only one seal from Rydzyna (former *Reisen*). Though the reverse disc is missing, the obverse indicates that this was a standard two-lobed round seal (Fig. 26.4). The seal's diameter is 33 mm. The inscription in five lines reads CIVITA •S• RIDSIN• BN (.)28(.). The imprint on the reverse is only partly visible on the rivet showing the arms of Rydzyna.

Rydzyna, a small town with the palace of Leszczyński family from the late 17th century, is situated a few kilometres south of Leszno, near the Silesian border. After the Thirty Years' War, a small group of clothiers from Silesia lived in the town. According to the census from 1634, four clothiers resided there (Maczak, 1955).

#### WOLSZTYN (WOLLSTEIN)



Figure 11. The arms of Wolsztyn.

Only one seal is considered as originating from Wolsztyn (former Wollstein). It is a standard type two-disc seal with approximately 37 mm in diameter (Fig. 26.5). On the obverse disc we can see a rather clumsy inscription WOLSTEIN, and on the reverse bearing: in the field - oblique cross composed of points and two imprints: one is round with an 'X' inscribed in, the other is eight-sided in shape and contains the number **'24'**.

The seal does not have the arms of Wolsztyn that represents 'Madonna standing on the crescent', the common motif in stamping confirmed as early as the 16th century (Adamczewski, 2000). Given the clumsiness of the inscription showing very low engraving skills, it can be assumed that engraving the town name was much easier to do than carving the complex arms of the town. The name of the town as Wolstein has been recorded since the fifteenth century and it refers to the unit of weight of wool, a so called 'stone of wool'.

Wolsztyn was first a refuge for many German clothiers and fullers escaping the German Peasants' War (1524–1526) (Poniedziałek, 2010) and then for refugees from war-affected areas during the Thirty Years' War.

It is known that in the sixteenth century, cloth of a lower quality Polish production than the imported one was used by the royal household for other purposes than clothing. The Wolsztyn fabrics were used as horse blankets (Mączak, 1955).

#### ZBĄSZYŃ



Figure 12. The former arms of Zbąszyń.

There is only one cloth seal from Zbąszyń, an opened standard, two-part seal, of 38 mm in diameter (Fig. 27.1). The reverse disc is missing, the obverse bears the inscription (ZBO)NSCHIN. In the field it has a depiction of shears and a number which can be hardly deciphered, probably the year (1)6(.)8. The imprint that was once on the reverse disc is only partly visible on the flattened rivet. It probably represents a Privy mark. The arms of the town on the seal- the swan, or the Nałęcz coat of arms used by Zbąszyński family, the owners of Zbąszyń, was probably extinguished by a merchant's countermark. Shears could be a sign of a local guild. The name *Zbonschin* that occurs on the seal is probably one of many variants used (Gumowski, 1932).

Historical records about cloth production in Zbąszyń are scarce. Most likely, as in other cases, a group of clothiers came to the town escaping from war-torn Bohemia and Silesia during the Thirty Years' War. Zbąszyń like many other towns just described, suffered seriously from military activities during the Second Northern War (1655–1660) (Mączak, 1995).

#### **SIERPC**



Figure 13. The former arms of Sierpc.

Sierpc is the only town, except Gdańsk, that is located outside Greater Poland and Silesia, the regions covered in this paper. There is an alleged seal from Sierpc in the collection, but due to the lack of comparative material its origin cannot be determined with certainty. It is a small, typical, round, two-disc seal, 24 mm in diameter (Fig. 26.1). The obverse disc shows an imprint of the capital letter 'S', while on the reverse, the arms of Sierpc – the front of a parish church, are probably depicted.

Cloth production in Sierpc has a longer tradition than every other town discussed. The first guild of clothiers was established there as early as the late 15<sup>th</sup> and the early 16<sup>th</sup> century.

Right from its foundation in 1322, the town signed all documents issued with a seal showing a lion. Similar representations can be found on the Prawdzic coat of arms which was used by Sierpski family, the proprietors of the town. The lion is also depicted on the privilege act granted to the town's cloth manufacturers in 1509. With this symbol Sierpc received the rights granted by the king to mark its cloths. Above the lion there is the letter 'S', and the whole composition is closed with an open crown. This symbol remained in the arms of the town presumably until 1534 when the town was shared between its heirs and after then the Old Town had in its seal the image of a gate or a church. However, the seal of the town from 1565 has three towers topped with three sharp-edged helmets, and in the central, much more prominent tower there is a gate or a portal. The other part of the town may have used the seal with the image of the virgin Mary standing on the crescent (Smulski, 1974; http://www.sierpc.com.pl/historia.php?strona=herb. html).

During the Second Northern War, the town was almost completely destroyed, its inhabitants were murdered and buildings burnt, so that in 1676 Sierpc was inhabited by less than 300 people. It was not until some hundred years later that the town was reconstructed.

#### GDAŃSK (DANZIG)



Figure 14. The arms of Gdańsk.

From Gdańsk (former *Danzig*, or *latin Gedanum* or *Dantiscum*) there are 32 cloth seals in the collection and all but two have the same common construction: two-part seals with a forked rivet, but their size and imprints on them vary.

One of the most common is the type of nine round seals, between 23 and 25 mm in diameter. One of the discs depicts a hand holding scales and a weight on the right next to scales, the other shows the arms of Gdańsk with two palm leaves above (Fig. 27.3).

The iconography – the arms of the city, the scales and weight, sufficiently indicate that the seals in question were not associated with the cloth production, but rather with the system of quality control of the city. That would also explain the large representation of them among the data (as many as sixteen pieces discussed in the monograph of M. Kocińska and J. Maik, 2004). Every piece of fabric had to pass through quality control, regardless of manufacturer, and hence this large number of the same seals. However, it is hard to obtain more details. It might be that the seals come from the hall opened in 1647 where the revision of the non-dyed fabrics which left the manufacturers took place. These were fabrics of *sai* and *bombasine* (non-prime quality fabrics made of semi-wool with addition of cotton and flax) (Bogucka, 1956).

The seals can be dated to the second half of the seventeenth century (Kocińska & Maik, 2004). This date corresponds well with other seals of the collection discussed.

Another group of nine cloth seals is very similar to the previous one with regard to the shape (two-part seals with rivets) and the size (the diameter ranges between 23 mm and 25 mm) (Fig. 27.4). Only four of them are complete, the other is preserved partially. There are, however, some slight differences between both groups in the representations. One disc of all seals depicts the arms of Gdańsk supported by two lions, below the ribbon and two teasel frames used to card cloth, the other disc bears several types of inscriptions in the field, depending on the seal, but none of the inscriptions can be read completely due to the bad conditions and poor stamping. The inscription in Latin testifies that the cloth which the cloth seal was attached to was made in Gdańsk manufactures, and that the city council ensures the good quality of products (see Kocińska & Maik, 2004).

This category of cloth seals can be dated to the second half of the sixteenth century (Kocińska & Maik, 2004).

The next category is a standard two-part cloth seal, 24–26 mm in diameter. There are two seals of this type in the collection (Fig. 27.2). This category, just like the one previously described, has been widely discussed in the literature (see Kocińska & Maik, 2004).

The obverse discs of both seals bear representations composed of a crowned eagle (royal coat of arms) and the year 1678. This is the year when king John III Sobieski resided in Gdańsk for more than six months. A decree was issued in the same year under which, among others, the elders of guilds were given more powers in the city's policy (Bogucka, 1956). However, it did not apply to the cloth production in the city, so the year on the seals and the year of issue of decree seem to be unrelated. The reverse discs show the arms of Gdańsk with two palm leaves on the top.

The date for both cloth seals is the last decades of the seventeenth century (after 1678).

Two seals making up another category are standard two-lobed seals (Fig. 29.2). Both are complete, though imprints are less legible. They are slightly oval, but it seems that it is because of sloppy sealing.

The obverse part of them shows the arms of Gdańsk in the field, on either side of the arms there is the year 16(.)7(.). The reverse represents a shield with the palm branch on the top, and in the shield of the one seal the numbers 55, and in the case of the other 57, are visible.

In contrast to the above discussed seals that occur commonly in local contexts, this category is also found externally, in Stralsund, among others (Ansorge, 2013).

The year that is displayed on one of the cloth seals may indicate that both can be dated back to the second half of the seventeenth century.

Two seals belong to the largest category (52–53 mm in diameter) in the discussed collection (Fig. 28.3). These are two-part seals with two rivets. One disc bears the inscription: ANDERTHALB • STAEL • DER • KONIGLICHEN STAD • DANTZIGK. The other disc is complete in the case of only one artefact. In the field, the arms of Gdańsk are visible.

Two further seals also have two-part construction and two rivets. Their diameter is 43–44 mm (Fig. 28.2).

The obverse discs show the inscription: ENKEL STAEL DER KONIGLICHEN STAD DANTZIGK, while the reverses the inscription that is, however, almost illegible (...) DANTZICK (...) WAP • S(...), and in the field, the arms of Gdańsk supported by two lions can be seen.

These seals, because of the similarities to the previously described category, can be dated to the beginning of the seventeenth century (Kujawska, 2013).

These two last categories belong to the so-called *staellood* seals. This kind of cloth seal was seen, at this time, as a real one, since it was stamped by city officials – overseers. The seals specified the quality of the weave and the number of engrainings. There were three grades of evaluation (from the lowest to the highest: ENCKEL, ANDERHALB, DVBELT (Maćkowski, 2009; Hittinger, 2009). Obviously, the higher the grade, the larger is the seal: lower quality dyeing (*Enckel*) – 44 mm, higher quality dyeing (*Anderhalb*) – 53 mm, and the highest quality of dyeing (*Dubelt*).

There are some single seals in the collection from Gdańsk. The first is complete, standard, two-part seal (21 mm) (Fig. 28.1). The obverse bears in the field the arms of Gdańsk and the year 1649 surrounded

by an octagonal corded motif. Although this is the year when a new guild statute entered into force for finishers and shearers specifically (Bogucka, 1956), it cannot be ruled out, as it was in all other cases, that this is just a coincidence of dates, and that the date on the seal indicates only the year of stamping. There is an octagonal corded motif on the reverse as well, except that in the field the number 56 can be seen. The number most likely indicates the length of a bale of cloth expressed in ells. A similar seal is recorded from the excavation at 73/74 Chmielna Street in Gdańsk (Maćkowski, 2016a). As the imprinted date on the obverse suggests, this seal can be dated to the middle of the seventeenth century.

The next seal has only partly survived (Fig. 27.5). The complete reverse disc suggests that it was a typical, two-lobed, cloth seal, about 50 mm in diameter. There is an inscription written in minuscule TESTATIO (CIVI)TATIS (GEDA)NEN, and above the arms of Gdańsk and the date 1631. Some close affinities are known from previous research (Bobowski & Ossowski, 2013). On the obverse there was a representation of sailing ship, a medium-sized galleon depicted with minute details.

In 1631, the ordinance for clothiers producing *sai* and *bombasine* entered into force, but it seems unlikely that these low-quality cloths may have been sealed with such impressive seals. Similar examples bear the date 1636 (Bobowski & Ossowski, 2013). It should, therefore, be assumed that the date on the seal is actually the date when the seal was stamped.

The other cloth seal is large (52 mm) and only the reverse disc has survived (Fig. 29.1). The imprint is largely illegible: a fragment of the floral design, and in the field there is an inscription of which some letters are legible: (...)CEP(...): ARAN(...) DAN(...). Despite the poor preservation, it is thought to originate from Gdańsk.

Another cloth seal is smaller than the previously discussed seal and a large part of it is missing, preventing us from the measurement of its diameter. In its natural size, this was a common, two-part seal with a rivet (Fig. 29.4). The obverse part bears the arms of Gdańsk, and the reverse is damaged, but it appears that it probably depicts two crossed shuttles with a crown above. There is an analogy to this seal which apart from the arms of Gdańsk also shows the date 1699 (Połczyński, 2017). By analogy, we can estimate the date to the late seventeenth and early eighteenth centuries.

The last cloth seal from Gdańsk described is a standard seal measuring 38 mm. The reverse disc is complete, while the obverse is missing (Fig. 29.3). The partially legible inscription reads: OPVS(...) NIEV(...) VIT(...) (GE)DANEN(...). There are no direct features indicating that it may come from Gdańsk, but the overall similarity to other examples where the exact place of origin is known suggests that it comes from Gdańsk.

# 2.2 Seals from Silesia (Part of Habsburg Monarchy)<sup>3</sup>

STRZELIN (STREHLEN)



Figure 15. The former arms of Strzelin.

<sup>3</sup> See also online supplementary material.

There are five seals from Strzelin (former Strehlen) in the collection and all are of the same category that has already been discussed widely in the literature (Kocińska & Maik, 2004). They are standard, small (13–15 mm in diameter), round seals (Fig. 30.3). The obverse of all five seals bears the figure of Saint Michael the Archangel armed with a sword – the arms of Strzelin. The inscription STAD STRELEN appears on the reverse.

The beginnings of the town date back to the Medieval period, but the highest growth was from the second half of the fifteenth and during the whole sixteenth century. For the townspeople, textile production, among others, became the primary source of wealth. Strzelin suffered serious damage during the Thirty Years' War (1618–1648), as well as the Seven Years' War (1756–1763).

#### CZERNINA (TSCHIRNAU)



Figure 16. The arms of Czernina.

One seal, or rather an obverse of a standard, two-part seal from Czernina (former Tschirnau) has been found. The seal originally measured approximately 31 mm (Fig. 30.6). The main design is composed of the Czernina arms at the centre and the inscription around • SIG(IL)LV(M) • CIVITATI(S) • TSCHIRNEN 1(6)33. The design that was originally on the reverse disc has partly preserved as imprint in the form of some hardly legible lettering around (...)TSC(...). The seal can be dated to the 1633, or later.

Czernina was founded in 1584 by Balthazar (II) von Dohn where a Medieval village once sat. The establishment of separate guilds for weavers and cloth makers demonstrates that the development of the town was very rapid. The town suffered almost the same fate as most of Silesian towns during the Thirty Years' War. In 1634 it was plundered by the Swedish army. The date on the seal is an indication that even during the war, Silesian cloth workshops still operated producing textiles for the local and external markets.

Similar seals have not been recorded so far from Gdańsk, but one seal of the same type was found in the late 1800s near Drohiczyn and published along with some early Medieval seals of type Drohiczyn by Karol Bosłunowski (Bosłunowski, 1895). These two examples show that textiles from Czernina reached markets throughout the entire of Poland.

#### NYSA (NEISSE)



Figure 17. The former arms of Nysa.

One complete, two-part seal with a diameter of 43 mm originates from this town. The discs were imprinted with poorly impressed designs (Fig. 30.4). On the obverse there is a barely legible inscription (NIS)SA and below the arms of Nysa – a spread-winged eagle, accompanied by lilies in the lower field. This is the version of the arms that can be seen on the town's panorama from 1738 (http://fotopolska.eu/114987,foto.html?o=b12892). A small imprint which is visible on the reverse – a Privy mark with initials FW, has probably been pressed secondarily.

Since the Middle Ages, Nysa (former Neisse, or latin Nissa) has been known as a significant centre of trade and textile production, mainly flax weaving. The town had brick cloth halls as early as the first decades of the fourteenth century and the guild of dyers, which is evidence for the great development of textile production (Rusiński, 1949).

#### KOŻUCHÓW (FREYSTADT IN SCHLESIEN)



Figure 18. The former arms of Kożuchów.

There is only one seal from Kożuchów (former Freystadt in Schlesien) which is incomplete (the reverse disc is missing). It was originally a standard, two-lobed seal, 22 mm in diameter (Fig. 30.5).

The obverse disc depicts a checkerboard shield. The design that was originally impressed on the reverse disc is still partly visible on the flattened rivet – an incomplete letter 'M' written in majuscule. A few of examples of this type are known (Majewski, 2014; Maćkowski, 2016a; Schäfer, 2016; Karwowska & Niziołek, 2016). At present the Kożuchów arms shows a wall with a gate and three towers, but in the town's panorama from the mid-eighteenth century the arms show a letter 'M' (http://fotopolska.eu/130149,foto. html?galeria\_zdjec&zakres=1&wykonane\_od\_rok=&wykonane\_do\_rok=184).

Kożuchów has already been recognised as an important textile production centre since the Medieval period. The destruction of the town during the Thirty Years' War led to the migration of large groups of cloth makers to Poznań (Posen) (Mączak, 1955) with consequences for textile production which dropped significantly. It is highly likely, then, that the seal was made before these events occurred.

#### ŻAGAŃ (SAGAN)



Figure 19. The former arms of Zagań.

The discussed collection also includes one seal from Zagań (former Sagan) that is incomplete (Fig. 30.2). The complete obverse disc represents the gate of a town with two towers, and in the gate the letter 'S'. This was the former coat of arms of Żagań. The reverse disc is missing but the original design is still imprinted on the flattened rivet showing a partial inscription: (SA)GA(N).

Cloth seals from Żagań are quite a common find in Pomerania. Several items comes from Stargard (Majewski, 2014; Majewski & Stań, 2015; Majewski, Stań & Szeremeta, 2016; Majewski, Śnieżko, & Wojciechowski, 2017).

The seal can be only broadly dated to the sixteenth-seventeenth century (Mackowski, 2016a), but if one takes into account the almost complete destruction of the town during the Thirty Years' War and the resulting migration, we can narrow down the dating of this seal with caution to the period before the 1630s.

LWÓWEK ŚLĄSKI (LÖWENBERG IN SCHLESIEN)



Figure 20. The former arms of Lwówek Śląski.

The example from Lwówek Śląski (former Löwenberg in Schlesien) belongs perhaps to the most common category of seals in Europe, Similar seals were recorded in Gdańsk (Maćkowski, 2016a), Vilnius (Kvizikevičius, 1999), as well as Hungary (Mordovin, 2016) (Fig. 30.1). The obverse disc from Lwówek shows the inscription LEW(EN)BERG, while the reverse depicts the coat of arms showing a lion. The seal can be dated to the long period between the sixteenth and seventeenth centuries (Maćkowski, 2009).

Lwówek Śląski and cloth production in the town enjoyed the highest growth in the sixteenth century and the turn of the seventeenth century with 450 cloth workshops working in the town. The textiles from Lwówek were sent at that time, via Wrocław, to the markets and recipients in the Kingdom of Poland or Hungary. The town was completely destroyed during the Thirty Years' War. In 1654, out of 450 workshops, only 14 continued to operate (Mordovin, 2016).

# 3 Privy Marks

Twelve of the discussed seals besides imprints enabling the identification of their origin had additional imprints of privy marks. Some of them are only partially preserved (Fig. 30.1) from Gdańsk (Fig. 31.5) from Lampartopol, (Fig. 31.7) from Nysa, or (Fig. 10.10) from Zbaszyń. On two identical seals from the Grabów, there are two different imprints of privy marks in the centres (Fig. 31.3 and 31.4). On the seals from Wschowa, additional imprints of privy marks are found on three of the seven seals from this city. There are three prints on one of them. What is particularly interesting is that all are identical (Fig. 31.9). The current state of research makes it impossible to identify people who are stamped with a given sign (cf. Hittinger, 2008). In addition, what makes it difficult is that we cannot even determine the city where privy mark was stamped. Was it at the place of manufacture? in Gdańsk? or maybe during transport?

Because we cannot determine whether it is a sign of the manufacturer, controller or perhaps the buyer, we considered the most appropriate use of the term privy mark (instead of e.g. house mark).

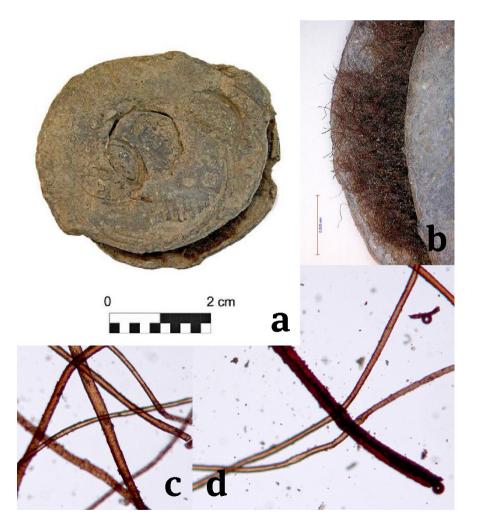
# 4 Examination of Textiles

It occasionally happens that some remnants of textiles are found between discs of a seal. Some pieces of textiles have been detected in 16 out of a total of 367 analysed seals. Most of the seals with textile fragments attached bore only Privy marks, so it was not possible to determine the place where these fabrics were produced. Among the fabrics with known origin, there were woollen Amsterdam damask and English cloths made of felted fabrics.

Remnants of textiles have been detected on two of the seals from the area of the Polish-Lithuanian Commonwealth and Silesia discussed in this paper.

A remnant of textile remained in the seal from Wschowa. The observations showed that it was a felted fabric (broadcloth, woollen cloth). Broadcloth is a type of dense, smooth woollen fabric, closed on the surface during the felting process, worsted and sheared that can have plain or twill weave. The quality of cloth depends on the quality and thickness of the yarn and the weaving and finishing processes applied in its production. The type of cloth was usually named after the town or country it came from, for example, Leszno cloths or Dutch cloths (Michałowska, 1995). Felting or fulling involves scouring of the wet fabric and milling to make it denser.

The analysis has shown that the fabric was made of high-quality wool fibres (there was only one non-wool fibre in the analysed sample) mostly between 14 and 30  $\mu$ m thick.



**Figure 21.** Textile remnants attached to the seal from Wschowa: a – seal, b – the fabric shown in x150 magnification (microscope Zeiss SteREO); c and d – the fibres shown in x500 magnification (microscope Zeiss Axio Scope A1).

Remnants of textiles have also been detected on the seal from Leszno. The fabric was made of quite homogenous yarn, mostly of fibres with the thickness of 16–30 µm, although there were also single fibres with a thickness of 11 and 43 µm. The fabric is well-felted, dense and has a uniform dark surface. The examined fragment measured 3.5x3 cm.

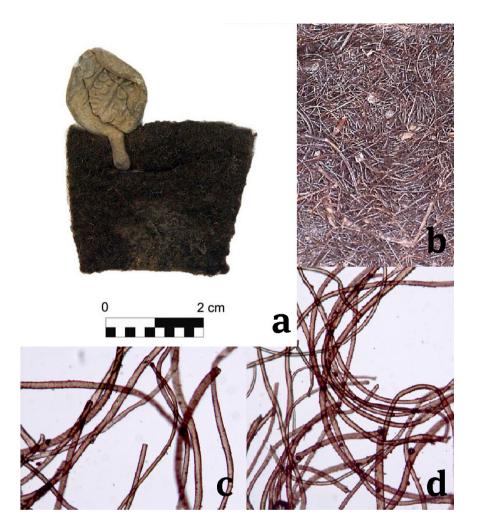


Figure 22. Remnants of fabric of the seal from Leszno: a - seal; b - the fabric shown in x150 magnification (microscope Zeiss SteREO); c and d - the fibres shown in x500 magnification (microscope Zeiss Axio Scope A1).

# 5 Conclusion

The archaeological excavation of the site has provided 367 cloth seals in total. The place of origin for 136 of them has been identified. They originate from 30 towns in six countries. Most of them came from Poland (Polish-Lithuanian Commonwealth) – 69 seals, of which 32 are local, originating from Gdańsk. The next in terms of number was England (Kingdom of England, Commonwealth of England [1649-60] and the Kingdom of Great Britain [1707–1800] - 28 seals, and the third were German towns (Augsburg, Meiningen, Hamburg and Franzburg) with 16 seals. There were a surprisingly low number of seals from the Netherlands (The United Provinces) (Leiden, Amsterdam, Haarlem) with a total of 14 seals. Only nine seals in the collection have been identified as coming from the Silesian towns of the Habsburg Monarchy, and 3 seals come from Republic of Venice (see Fig. 23).

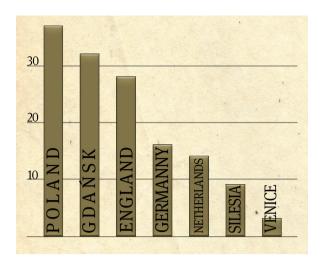


Figure 23. Chart of origin of lead seals from the discussed excavations.

The indication of the place of origin for the seals is crucial as it allows us, in some respect, to reconstruct the cloth market of the mid-seventeenth century Gdańsk. Obviously, the situation in the market was heavily influenced by global events. For Europe, the seventeenth century was a really difficult time. The population of Europe was constantly decimated by wars, hit by plagues and crises of various kinds. These adverse events also had negative effects on the economy, which is naturally reflected in the material culture that has been discussed in this paper. A truly surprising discovery at the site was a large number of cloth seals from Greater Poland towns and a low rate of Dutch and English seals, compared to other sites in Gdańsk with a similar chronology (Bobowski, 2009; Kocińska & Maik, 2004; Maćkowski, 2016a).

The seals from the area of the Polish–Lithuanian Commonwealth should actually be discussed as two specific topics: local Gdańsk seals and Greater Polish ones.

Cloth seals from Polish towns have been surprisingly rarely discussed in the literature. From the outside of Gdańsk the seals have only been known from Toruń, Wschowa, Zduny, Nieszawa, Leszno and possibly also from Pabianice (Bobowski, 2009; Kocińska & Maik, 2004; Urbański, 2013; Maćkowski, 2016a; Karwowska & Niziołek, 2016). Seals from the site at 40 Wałowa Street come from Leszno (17), Wschowa (7), Lampartopol-Kopanica (3), Nowe Zduny (3), Grabów (2), Babimost (1), Rydzyna (1), Wolsztyn (1), Zbąszyń (1) and Sierpc (1). This accumulation of seals at one site seems somewhat unusual and it is worth taking a closer look at their provenance.

Cloth making in the Polish-Lithuanian Commonwealth had a non-continuous and uneven development in its individual regions, in Greater Poland in particular. In the sixteenth century, the towns of eastern Greater Poland (Sieradz and Łęczyca provinces) enjoyed a leading position in cloth production. Other thriving towns were Wschowa and, in the Mazovian region, Sierpc. These workshops produced the so-called 'Polish cloth', a low-quality wool fabric which was directed exclusively to the rural markets (Mączak, 1955; Rybarski, 1958).

In the first half of the 17<sup>th</sup> century, the cloth industry experienced a significant qualitative and quantitative leap forward. This is thought to be related to the unmatched migrations triggered by the extraordinary persecution of religious dissenters and the enormous destruction of Bohemia and Silesia during the Thirty Years' War. Among large numbers of refugees, predominantly made up of the urban population, were many cloth makers, weavers, finishers, and dyers who arrived into a tolerant Poland and found shelter in it. The Bohemian and Silesian cloths were entirely different in quality than the Polish ones. The broadcloth, known also as *nouvelle draperie*, was a type of new, good-quality textile manufactured in West Europe as early as the end of the sixteenth century (Mączak, 1955). The origin of cloth makers is reflected in inscriptions which on all Greater Polish seals discussed in this paper are executed in German. This concerns Leszno, Wschowa, Grabów, Babimost, Wolsztyn and Zbąszyń) except those from Nowe Zduny and Rydzyna that were written in Latin. New immigrants settled close to the Silesian border establishing

along it thriving centres of cloth production. Most of the manufactured cloths were directed to internal Polish Crown markets (see Fig. 24). The seals from Leszno workshops have been found in Lithuania and in Ukraine (Kvizikevičius, 1999; Gaydukov, Stepanov, & Troyanovskiy, 2007). Textiles from Wschowa, in turn, were exported to Habsburgian Hungary (Mordovin, 2014).

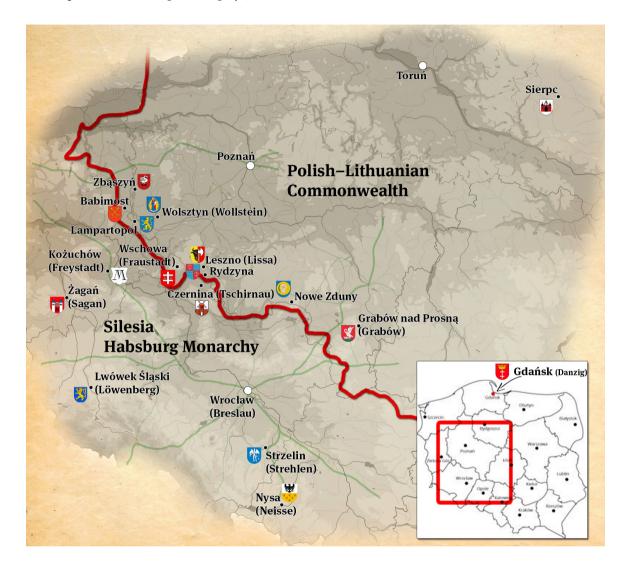


Figure 24. Map showing places of origin of cloth seals from the discussed excavations.

Cloth production in many small towns of Greater Poland only lasted for twenty years from 1630s up to 1650s ending abruptly with the tremendous destruction of the area by the Swedish army during the Second Northern War (1655–1660).

Seals from Gdańsk, as the most numerous in the collection, can be found in every publication concerning cloth production in the Kingdom of Poland. Gdańsk textile production thrived dynamically because of the expanding markets. Manufacturers arriving in the city, e.g. from Flanders, brought with them new technologies and production means. Since the sixteenth century, Gdańsk has been the largest producer of textiles in Poland. Keeping the quality of products on a high level required the city officials to introduce a highly developed system of quality control that we have already discussed briefly in the introduction (see also Bogucka, 1956).

The increase in the number of Gdansk seals was not only because Gdansk was the largest cloth producer in the Kingdom of Poland. This increase was also stimulated by a law issued by the parliament of the PolishLithuanian Commonwealth of 1628, according to which Gdansk should be the only recipient of all English trade in cloth, and the city was obliged to stamp the English products with its own seal (Volumina Legum). Thus, in the seventeenth century Gdańsk seals were attached to local products as well as to the English ones. Both product types entered the local markets in large quantities (Krysztopa-Czupryńska, 2006).

Nine seals have been identified as coming from Silesia. This quantity would appear to be very small, but if one considers that Silesian cloths, though similar in quality to the Dutch and English textiles, were very expensive due to the inland (Związek, 2017) or river transport along the Vistula which adversely affected the prices (Bogucka & Samsonowicz, 1986). The Silesian textiles were brought into Poland since the Medieval period. In the second half of the 16<sup>th</sup> century the local manufacturers began to produce imitations of English and Dutch cloths which were of better quality – so called *nouvelle draperie*. Cloth from many Silesian towns was, at the turn of the sixteenth and seventeenth century, thought to be as good in quality as the English ones (Maczak, 1952).

The cloth market collapsed, as in the case of Augsburg, due to the consequences of the Thirty Years' War (1618–1648). Recurrent military operations led to enormous destruction in Silesia forcing the surviving population to escape. During this war, 36 towns and over 1000 villages virtually vanished from the maps. The population dropped to one-third (Ludwig, 2016). Among emigrants there was a large group of cloth makers. These events and the expensive transport costs may explain the small number of Silesian seals in the discussed collection.

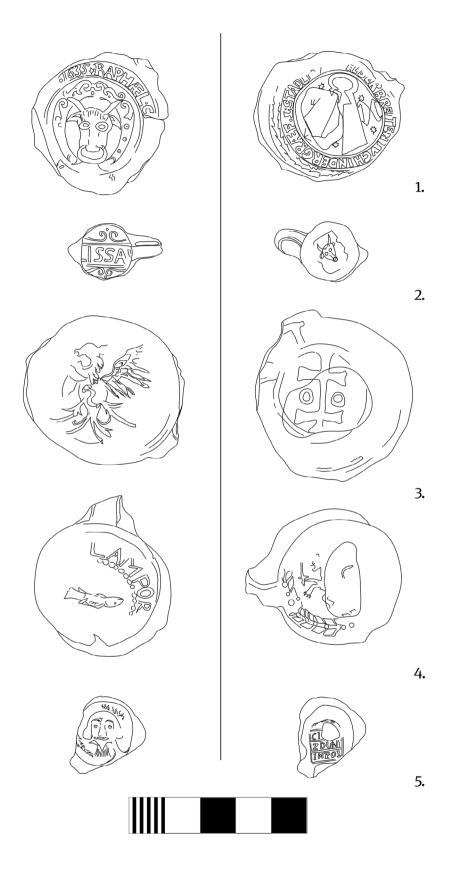


Figure 25. Lead seals originated from Leszno (1, 2), Wschowa (3), Lampartopol (4), Nowe Zduny (5).

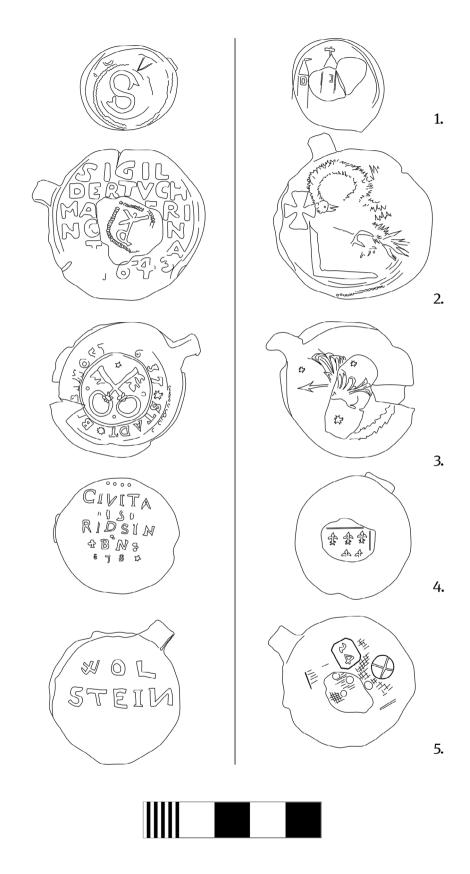


Figure 26. Lead seals originated from Sierpc (1), Grabów (2), Babimost (3), Rydzyna (4), Wolsztyn (5).

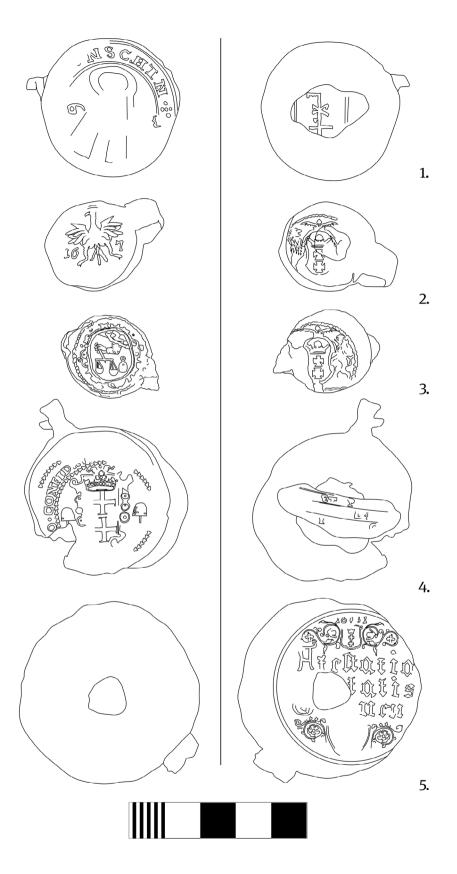


Figure 27. Lead seals originated from Zbąszyń (1), Gdańsk (2–5).

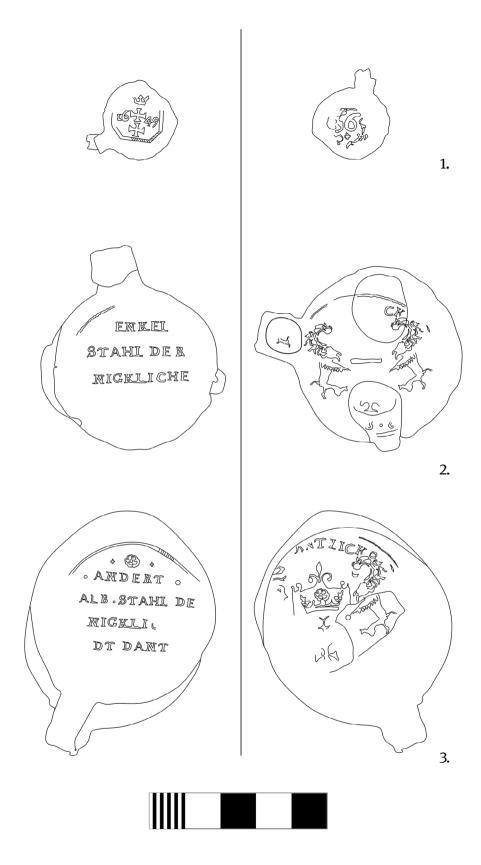


Figure 28. Lead seals originated from Gdańsk (1–3).

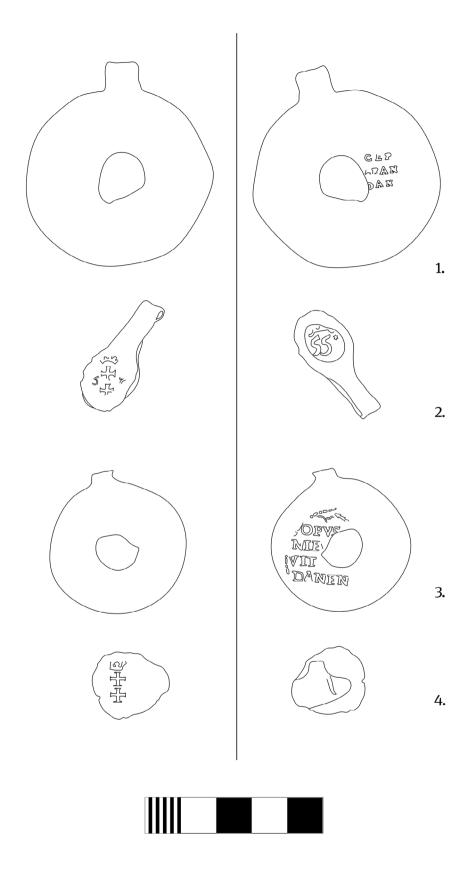


Figure 29. Lead seals originated from Gdańsk (1-4).

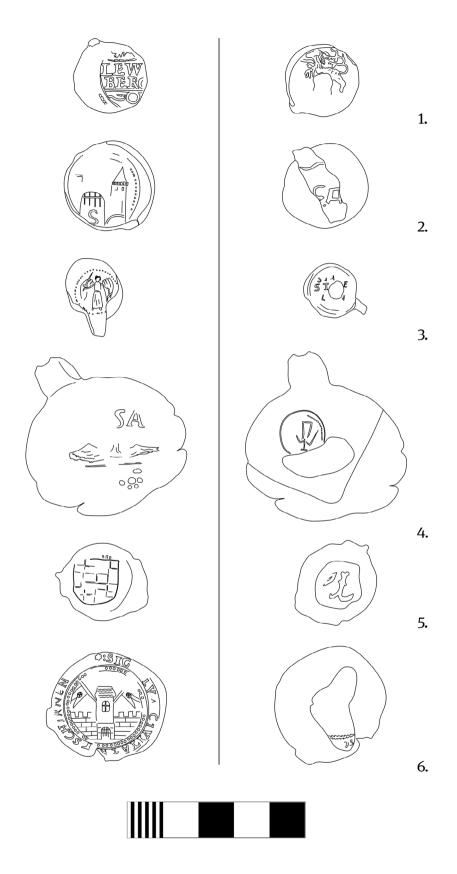


Figure 30. Lead seals originated from Lwówek Śląski (1), Żagań (2), Strzelin (3), Nysa (4), Kożuchów (5), Czernina (6).

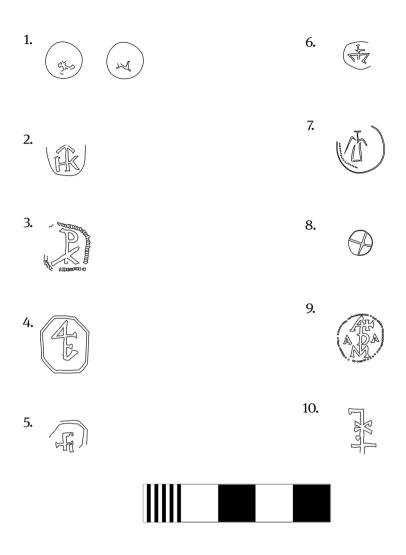


Figure 31. Privy marks from lead seals originated from: Gdańsk (1, 2), Grabów (3, 4), Lampartopol (5), Leszno (6), Nysa (7), Wolsztyn (8), Wschowa (9) and Zbąszyń (10).

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