

## SINGLE AND DOUBLE HANGING STAMPS FOUND AT THE PRODUCTION CENTERS NEAR PRES LAV

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**Keywords:** *single and double seals, Novosel, Zlatar, 10<sup>th</sup> century, Preslav, zoomorphic images.*

**Cuvinte-cheie:** *sigilii simple și duble, Novosel, Zlatar, secolul al X-lea, Preslav, imagini zoomorfe.*

**Abstract:** *The single and double seals, a work of the material culture of the early Bulgarian Middle Ages, are a topic that has aroused research interest since the last century. Although there is no specific monographic study on the subject, the numerous publications of finds originating from medieval settlements and fortresses, as well as the publication of accidental finds, are a good base for observations on some important issues related to this type of items. Some of them are related to the origin and place of production, the semantics of the pictorial motifs, their chronology and distribution. The finding of single and double seals, as indicated in the specialized literature and the time-imposed division by their appearance, of the two production centers for art metal in the vicinity of Preslav studied so far – at Novosel and Zlatar –, answered to a large extent one of the most important questions, namely about the place and time of their production and distribution. It cannot be categorically believed that such objects were produced only in the workshops of Preslav jewellery centers. It is more than certain that some of them were made in other workshops on the territory of the country, and some of the seals with inscriptions of a wishful nature or with the name of their owner were made in some workshop in neighboring Byzantium. Single and double seals are only a small part of the diverse group of objects used for imprinting, among which are signet rings, signet keys and many others, which became an indelible part of the daily life and lifestyle of medieval man. Apart from their purely utilitarian meaning, these objects also had a protective and protective function, in which their owner always believed. The attraction of the desired qualities was reinforced by the choice of images on the sealing sides of the seals and the belief in their power. Evidence of this is the rich variety of images and symbols in the ornamentation on them. Therefore, no matter how unified and popular the theme of the iconographic repertoire is, it never ceases to surprise us with its unique combination of real and fantastic images drawn from the endless mythological pantheon of ancient beliefs.*

**Rezumat:** *Sigiliile simple și duble, obiecte ale culturii materiale din Evul Mediu timpuriu bulgar, reprezintă un subiect care a stârnit interesul cercetătorilor încă din secolul trecut. Deși nu există un studiu monografic dedicat acestei teme, numeroasele publicații cu descoperiri provenite din așezările și fortificațiile medievale, precum și publicarea descoperirilor*

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*fortuite, constituie o bază solidă pentru observații privind câteva probleme importante referitoare la acest tip de obiecte. Unele dintre acestea sunt legate de originea și locul de producție, simbolistica motivelor picturale, de cronologia și distribuția lor. Descoperirea sigiliilor simple și duble, așa cum este indicată în literatura de specialitate și împărțirea impusă în timp prin aspectul lor, și a celor două centre de producție metalo-plastică din vecinătatea Preslavului investigate până acum – de la Novosel și Zlatar –, a răspuns în mare măsură uneia dintre cele mai importante întrebări, și anume despre locul și momentul producerii și distribuției lor. Nu se poate considera categoric că astfel de obiecte au fost produse doar în atelierele centrelor de bijuterii de lângă Preslav. Este mai mult ca sigur că unele dintre ele erau realizate în alte ateliere de pe teritoriul țării, iar unele dintre sigiliile cu inscripții de natură dorită sau cu numele proprietarului lor au fost realizate într-un atelier din Bizanț. Sigiliile simple și duble reprezintă doar o mică parte a grupului divers de obiecte utilizate pentru imprimare, printre care se numără înelele sigilare, cheile sigilare și multe altele, care au devenit o parte indelebilă a vieții cotidiene și a stilului de viață al omului medieval. Pe lângă sensul lor pur utilitar, aceste obiecte aveau și o funcție protectoare, în care proprietarul lor a crezut mereu. Atracția calităților dorite a fost întărită de alegerea imaginilor de pe fețele de imprimare ale sigiliilor și de credința în puterea lor. O dovadă în acest sens este varietatea de imagini și simboluri ale ornamentelor de pe ele. Prin urmare, oricât de unificată și populară ar fi tema repertoriului iconografic, acesta nu încetează să ne surprindă prin combinațiile sale unice de imagini reale și fantastice, extrase din panteonul mitologic nesfârșit al credințelor străvechi.*

The single and double seals, a work of the material culture of the early Bulgarian Middle Ages, are a topic that has aroused research interest since the last century<sup>1</sup>. Although there is no specific monographic study on the subject, the numerous publications of finds originating from medieval settlements and fortresses, as well as the publication of accidental finds, are a good base for observations on some important issues related to this type of items. Some of them are related to the origin and place of production, the semantics of the pictorial motifs, their chronology and distribution. The finding of single and double seals, as indicated in the specialized literature and the time-imposed division by their appearance, of the two production centers for art metal in the vicinity of Preslav studied so far – at Novosel and Zlatar –, answered to a large extent one of the most important questions, namely about the place and time of their production and distribution. Of course, it cannot be categorically believed that such objects were produced only in the workshops of Preslav jewellery centers. It is more than certain that some of them were made in other workshops on the territory of the country, and some of the seals with inscriptions of a wishful nature or with the name of their owner were made in some workshop in neighbouring Byzantium.

The popular zoomorphic and anthropomorphic items, which are found on most of them, are mainly known from the seals found on our lands. Among the repertoire there are also images that are less common, and some of them are attested only on individual finds. Single seals can be conical, pyramidal or multiwall. Double seals consist of two halves hinged together. The shape of the latter is teardrop drawn or rounded. The outer sides are smooth, but there are quite a few examples with relief walls and those resembling a clam shell. Seals with inlays of another metal (silver,

<sup>1</sup> DONCHEVA 2008, p. 401–411 and cited literature.

gold) on their outer sides are less common. Animals (deer, roe deer, and horses), birds (peacocks, pigeons, and eagles), anthropomorphic figures or an engraved inscription are depicted on the stamping surfaces of both types. For greater clarity, in the present study we divide the objects into several groups, relying on two criteria – form and way of making. Here, however, we retain the accepted and imposed conditional division into single and double seals and add some new subgroups.

### Single stamps of bronze

They are a diverse group that includes cone-shaped, pyramidal, multi-walled and blossom-bud-shaped specimens. However, a closer look shows that they differ not only in their external sides, but also in the size and type of the stamping surfaces.

A. One-piece stamps with dimensions: height 0.5–0.7 cm and diameter (side) of the base 0.8–0.9 cm. The images in them, regardless of what they look like, are incised directly on the base and are obtained together with the casting of the entire object (**Fig. 1/1–2; 2/1–2**).

B. One-piece stamps with dimensions: height 1.0–1.5 cm and diameter of the base 1.2–1.7 cm. This variety of stamps is distinguished from the previous group by its sealing surface, which continues in the form of truncated cone ending with a hanging eye (**Fig. 1/3–4; 2/3–5**).

C. Two-part stamps with dimensions: height 2.0–2.5 cm and diameter of the base 1.2–1.4 cm. They are mostly cone-shaped and with multi-walled sides and consist of two parts – the shaped body of the object and the sealing plate additionally attached to its base (**Fig. 1/5–14; 2/6–10**). It is noteworthy that regardless of whether the seal has smooth conical walls or they are faceted, the sealing surface, i.e. the tile is always rounded. While it is welded straight to the cone-shaped part, in the case of multi-wall stamps there is a cylindrical recess between the main body and the image plate itself, which is a transition back to a circular section of the base. It is no coincidence that until now only tiles with a circular section have been found (**Fig. 1/10–14; 2/14–26**).

D. Two-part seals with a “bird” and dimensions: height 2.7–3.5 cm, base 3/3–5/5 cm. These seals are close to the previous group, but here the holder is in the shape of a bird, openwork cast from bronze or other metal (**Fig. 1/15–19; 2/13**). The stamping plate is made separately and soldered additionally to the bird’s foot, which steps into the pre-formed nest on its reverse side. However, there are also those that are cast together with the sealing plate. Unlike the previous group, where the working part is cone-shaped, here it has a square section. Because of their more attractive appearance, these seals were worn as pendants after they lost their original purpose after the plate at the lower edge broke off. Examples of this are the numerous similar objects found singly or together with other ornaments.

E. Two-part “hollow” stamps with dimensions: height 1.4–1.9 cm, diameter of the base 1.2–1.4 cm. The stamps included here are also in two parts and consist of a conical or multi-walled body and additionally soldered a tile with the image or inscription. This group differs from the others mainly in that the body of the objects is not solidly cast, but hollowly formed from thin sheet metal bent in a solid pattern (**Fig. 2/11–12**). Very often on the walls there is a decoration of incised parallel or

broken lines, which were passed before it was made. The sealing surface as well as the hanging eye are further added to the hollow body of the object. It is noteworthy that the quantity of this type of stamps is not very large, which is due to their unstable shape, in contrast to the strong tightly cast stamps. Seals found in Corinth and Constantinople confirm that this type of seal was made primarily of precious metal (silver, gold).

### Technology of making single stamps

All stamps are cast in two-piece moulds. Proof of this is the "seam" along the longitudinal section of the objects, and especially of the unfinished blanks and rejected products (Fig. 1/5–9; 2/10). However, the stamp plates, which were additionally soldered to the main body of the stamp, were cast in one-sided moulds. The entire process begins with the preparation of an initial model of the stamp from well-purified and cooled-hardened wax. All the details were applied to the voluminous wax form, usually with bone styluses, where one end was sharpened in the form of a spatula and the other was sharp. The resulting wax model is poured with a thin clay solution of very well purified clay in a casting box. Since the objects are voluminous and three-dimensional, the clay mould is made in two parts. After one half is poured and set, its surface is smeared with grease and graphite or other fine powder and the second half is poured. Channels and vents are made in both halves. When the clay hardens, the moulds are placed in a kiln and fired. Due to the high temperature, the wax melts and flows, leaving the volumetric impression of the object in the clay mould. After additional retouching, the clay mould is ready for use.

The next stage is pouring the mould with molten lead through the pouring channels in the clay mould, as a result of which a lead model is obtained. It is also retouched if necessary and the desired number of castings are already cast on it in boxes with foundry clay and of the corresponding metal (bronze, precious metals). For this purpose, the crates are initially prepared with the tightly pressed foundry clay, which has a clayey character with quartz and mica admixture. The lead model is then placed on a smooth surface and sprinkled with toasted and sifted potting soil. One half of the crate is placed on it, which is filled with soil and well tamped with a hammer. The half thus filled is turned over and the other side of the model is again sprinkled with dry sifted clay, after which the other half is placed and also filled with clay. This was followed by opening the case, removing the model and forming the drainage channels and vents. This completes the preparation for pouring the pre-molten metal.

After receiving the finished product, the process was facilitated by using it as a model when printing it in the foundry box. However, an exact reproduction of the object was not always possible, since the negative, especially for more complex objects, was rougher and did not convey all the details of the image. The preference for the wax model technology is confirmed by the significant number of lead models found so far in the places where there is reliable information that small objects were produced, including seals with various images.

## Double seals of bronze

The group of double seals is no less numerous than that of the single ones. Although they look the same at first glance, they still differ in the way the individual parts are hinged and the suspension. The shape is drop-like drawn, in some cases it is more rounded, and in others it is oblong (**Fig. 2/27–30**). The outer sides are smooth, but there are quite a few examples where the outer walls are embossed and resemble a clam shell. Seals with inlays of another metal on their outer sides are less common. The two varieties we will focus on are the following.

A. Two-part stamps with dimensions: length 2.4–2.9 cm and width 0.9–1.2 cm. These stamps consist of two parts, on the inner sealing sides of which the preferred images are cut into the negative (Rev. 2, 31). One part is load-bearing and has a lug with two holes – one larger for hanging the whole seal to the support arm and a second – smaller for attaching the second half of the seal to the main part. Thus, in use, one half is supported, and the other, hinged to the first, is mobile. The number of these seals is significantly less than those with double-hinged suspension.

B. Three-part seals with dimensions: length 0.8–2.3 cm and width 1.1–1.4 cm. The preserved whole seals are composed of three parts – two drop-shaped plates with images incised on the inside and a carrier piece in the shape of a small single pyramidal stamp, terminating at the lower end in a flat B-shaped plate with two holes and a hanging eye at the upper end (**Fig. 2/32**). The supporting part is stationary, and the other two parts are movable and hinged to the first by means of thin bronze threads. In most cases, not the whole objects have reached us, but only one of the hinged parts with the engraved image in the negative (**Fig. 2/27–30**). In the latter, the noted two ways of interpretation of the image can be observed – volumetrically modelled in depth on the working surface already at the casting itself and initially hinted at only with its most characteristic features and additionally shaped with an incisor (**Fig. 2/29**).

## Technology of making the double seals

The individual parts of both groups of stamps were produced by casting in two-component moulds. The flow of the technological process is similar to that of single stamps. Here, too, a clay mould was made, in which the lead model was cast, based on a preformed, precise wax model. In confirmation of this, quite a few of these were found in various places in the country, especially around the production centres. The resulting lead model was refined, if necessary, and then used to make an impression on the soil rammed into the foundry boxes. The bronze products were made after the molten metal was poured through the previously formed casting channels. Due to the relatively small thickness of the sealing elements, the metal often went out of shape and formed holes (**Fig. 1/5–9; 2/10**). This has also happened in the casting of the lead models before. One such model was found at the early medieval fortress at Sredishte, Silistrensko, which was dated with materials from the 9<sup>th</sup>–10<sup>th</sup> centuries<sup>2</sup>. Some of them were mechanically removed, and where this was not possible, the object was scrapped and a new one was prepared. While the

<sup>2</sup> ATANASOV 1985, p. 129; JOTOV 1993, p. 290, fig. 1–5.

casting of the bearing part of the second type of seals was not a problem, the making of the main part of the first type of seals, where it was both bearing and working, probably required some precision, especially to make the thin and elongated ear, in which after these are the two holes formed. In many cases, this part shifted off its axis, which could not be corrected due to the rapid solidification of the mantle. This is also one of the reasons why the so-called three-component stamps.

One of the many questions that pose this type of objects and which is one of the few solved so far is that of their origin. All researchers agree that the idea for these monuments and the first samples were brought from Byzantium, which adopted them from the East – Syria, Achaemenid and Sassanid Iran. It is already indisputable that the majority of the monuments found in Bulgaria are products of local production, and this is confirmed by the significant number of lead models and blanks found at the production centres. The objects known to date, some of which were found during archaeological excavations, as well as analogies originating outside the territory of the country, testify to their production and wide distribution in the 10<sup>th</sup> century. Similar seals (single and double) defined in the broad limits from the 10<sup>th</sup> to the 12<sup>th</sup> century were found in Corinth, Constantinople, Serbia, and the western provinces of the empire<sup>3</sup>.

An interesting question is that of the semantics of motives. Images of birds of prey and waterfowl, cut in relief in bone, engraved in stone, metal objects or painted on ceramic tiles for wall cladding and white clay tableware, abound during this period (**Fig. 1/4, 10, 13–14; 2/1–2, 14–15, 22, 29, 31**). It is known that the preference for birds quantitatively prevailed over animal motifs in Byzantine art throughout the Middle Ages<sup>4</sup>. Images of birds are found on Byzantine silk fabrics, in miniatures, ceramics. From the repertoire of these motifs is the image of the single-headed eagle, which is preferred and often depicted on single and double seals. Usually, the figure of the eagle is in front with the head turned in profile, and the emphasis is placed on the presentation of the wings – they are widely rapped and emphasized with several lines (**Fig. 1/10; 2/1, 14–15, 22, 31**). An image of an eagle is also recreated by the holders of the seals of type I D (**Fig. 1/16–19; 2/13**). The composition is also found on seals of Byzantine dignitaries from the 9<sup>th</sup>–10<sup>th</sup> centuries<sup>5</sup>.

The interpretation of the image of the eagle is further developed in Christian art, where the mythological level is the basis of Christian imagery and encompasses all dimensions of medieval thinking. As the king of the birds, he is a symbol of the angels (Ezek. 1:10–12), and in the Revelation of John the Theologian (Rev. 4:7) "the fourth animal is like a flying eagle". In many of the works of art, the eagle is identified with Christ and expresses his ascension and kingship<sup>6</sup>.

A common motif is the image of a horseman (**Fig. 1/12; 2/17–21, 23–24**). The ritual role of the horse was imposed already in the 2<sup>nd</sup> millennium BC. in Central Asia and is a reflection of the solar cult related to the idea of the solar or celestial horse, which is imposed with several storylines – "horse and the tree of life", "horse

<sup>3</sup> DAVIDSON 1952, No. 2677, 2678, 2679, 2680, 2681, 2683, 2686, 2687; GOPPEL 2004, p. 345, Abb. 742, 733, 734, 737, 738, 739, 740, 741; p. 346, Abb. 746, 747, 748.

<sup>4</sup> DARKEVICH 1975, p. 202.

<sup>5</sup> TOČIK 1955, p. 498, fig. 236/1.

<sup>6</sup> BIDERMAN 2003, p. 316–317.

and solar chariots" and "horse with magic reins"<sup>7</sup>. In this connection, we can talk about the image of the epic hero associated with a horseman and a rider on him, which existed in the beliefs among the society. Last but not least, the horsemen are perceived as a symbol of God's messengers who declare his laws in human history (Zech. 6:2–6), Rev. 6:2–8). This is evident from the images of horsemen in art such as graffiti drawings, incised figures on small plastic objects (buckles, belt ends), including seals. A reflection of the important role of the horse and birds in the belief system is their protective and protective role, which is the basis of their proven preference and depiction on various metalwork monuments. The present stamps also present images of a rabbit (**Fig. 1/11**), a deer (doe), (**Fig. 2/28**), as well as an anthropomorphic image (**Fig. 2/30**). The rabbit has a well-established symbolism and most often represents the person who trusts only in God. Rabbits nibbling on grapes symbolize the souls accepted into heaven who have access to the fruits of eternal life. The deer also has important symbolic meaning in Old World cultures. Christian iconography is largely based on Psalm 41: "As the hind longs for streams of water, so my soul longs for You, O God"<sup>8</sup>.

The group of stamps is constantly growing, and with it the variety of motifs and subjects. One such example is the fully preserved double hanging seal found in the vicinity of Preslav and undoubtedly a product of one of the production centres here (**Fig. 2/32**). The seal belongs to the second group of seals, which are sometimes also referred to as three-part seals. Preserved whole seals, such as the present one, are rare, given the thin threads and plates on which the two parts are suspended (**Fig. 2/32**). They are usually composed of three parts – two teardrop-shaped plates with incised images on the inside and a supporting part with an eye for suspension at the upper end. The supporting part is stationary, and the other two parts are movable and hinged to the first. In most cases, not the whole objects have reached us, but only one of the hinged parts with the image engraved in the negative. The image can be applied before casting to the pattern of the article, resulting in a volumetrically modelled negative image on the work surface, or it can only be hinted at schematically and refined with a sharp tool after casting.

A griffin and a rhinoceros are depicted on the sealing inner surfaces (**Fig. 2/32**). Both images are executed in detail and realistically, the specific features of each of them are emphasized, and they are located on the central part of the inner stamping surfaces, facing each other, without a frame along the outline. The direction of movement of the two figures is towards the base of the hinge, which predetermines their position on the tiles.

The image of the rhinoceros on one stamping surface has specific symbolism. In Eastern cultures, the image of the rhinoceros is associated with luck and good character. The horn of the rhinoceros symbolizes joy and also strength and bravery as well as knowledge. Ancient recipes for elixirs of longevity are known, in which the main ingredient was part of a rhinoceros horn<sup>9</sup>. The horn was also believed to help detect poison in food or drink. In the emblem of the late Middle Ages, the

<sup>7</sup> NESTOROV 1990, p. 117–120.

<sup>8</sup> BIDERMAN 2003, p. 120, 129.

<sup>9</sup> SHEPHERD, SHEPHERD 2006, p. 180.

image of a rhinoceros served to affirm prowess, piety, and intelligence. A rhinoceros depicted with a horn embedded in a rock denotes wisdom, always ready to respond to the attack of an enemy, and images of rhinoceroses killing a bear are symbols of strategy and the art of war, along with bravery and strength<sup>10</sup>.

The second image of a griffin has a well-established semantics and is attested on quite a few monuments from the Bulgarian Middle Ages (**Fig. 2/32**). There is also an image of a griffin on another seal from those presented in the present work (**Fig. 2/27**). The so far known works of stone sculpture, monumental architecture and sculpture on wood, as well as metalwork show that the griffin is a frequently depicted motif (the graphic drawings from Pliska, the slab from Preslav, the limestone capital from Nova Zagora, the marble capital and the slate slab from Stara Zagora, the wooden chest from the cathedral in Terracina, bronze buckles and mounts)<sup>11</sup>. All the examples mentioned fall within the chronological limits of the 8<sup>th</sup> to 10<sup>th</sup> centuries, with depictions of griffins with lion heads being less common.

The mythological image of the griffin was already known and popular in Iran and in the art of the Achaemenids, from where it passed into Central Asian art, as a symbol of the deified ruler and a reflection of the cosmic struggle between Good and Evil. In Antiquity, the numerous monuments with griffins were the most frequently used apotropaic. Here the peculiar antique realism was so great that the image of the griffin, executed in such a convincing way, began to resemble a real<sup>12</sup>. The image of the griffin with a lion's head penetrated the art of Central Asia in the 5<sup>th</sup>–4<sup>th</sup> centuries BC, where it received an iconographic embodiment in some new pictorial variants. In Byzantine secular art, his image entered the royal emblems and began to personify military prowess and honor. Images of griffins became common on imperial clothing, often found in palace painting and luxury metal objects<sup>13</sup>. The griffin of medieval emblems borrows from the symbolism of the lion and the eagle, a bifurcation of its solar nature. He possesses both earthly and heavenly features and thus becomes a symbol of the two natures of Christ – the divine and the human. It is obvious that the two images on the sealing surfaces of the seal – that of the griffin and the rhinoceros have distinctly apotropaic and protective functions, both in relation to the holder of the object and in relation to the things sealed with it. If we delve deeper into the semantics of the two images, it can be assumed that the rhinoceros is in a duel with the griffin, and the plot as a whole denotes the victory of the forces of good, order and light over the forces of chaos, evil and darkness. This symbolic reading makes the item a powerful protective amulet, which is surely its primary purpose alongside the purely practical needs fulfilled by the double seal.

After losing their original purpose, a considerable part of the sealing plates was reused in the form of a medallion or amulet, depending on the engraved image on the inner plate. This raises the question of how to use this type of object. It is obvious that the practice of wearing such seals was dictated by purely utilitarian functions – the sealing of personal correspondence or property. Both signet rings, single and

<sup>10</sup> TUSKOVA 2003, p. 402–403.

<sup>11</sup> DONCHEVA-PETKOVA 1996, p. 28.

<sup>12</sup> PUGACHENKOV 1959, p. 70–84.

<sup>13</sup> DARKEVICH 1975, p. 242.

double seals were used in the private and public sectors of everyday life<sup>14</sup>. Single and double seals are only a small part of the diverse group of objects used for imprinting, among which are signet rings, signet keys and many others, which became an indelible part of the daily life and lifestyle of medieval man. Apart from their purely utilitarian meaning, these objects also had a protective and protective function, in which their owner always believed. The attraction of the desired qualities was reinforced by the choice of images on the sealing sides of the seals and the belief in their power. Evidence of this is the rich variety of images and symbols in the ornamentation on them. Therefore, no matter how unified and popular the theme of the iconographic repertoire is, it never ceases to surprise us with its unique combinations of real and fantastic images drawn from the endless mythological pantheon of ancient beliefs.

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<sup>14</sup> VIKAN 1980, p. 22–23.



Fig. 1. Hanging stamps found at the production center near Novosel, Shumen district.



Fig. 2. Hanging seals found at the production center at Zlatar, Preslav district (1-30) and the surrounding area (31-32).