MARIAN GŁOSEK, KRZYSZTOF WALENTA

THE HELM OF THE KETTLE-HAT TYPE DISCOVERED AT THE MOTTE IN LEŚNO, BRUSY COMMUNE, BYDGOSZCZ PROVINCE

During the archaeological works at the motte in Leśno, Brusy commune, an iron helm of the Kettle-hat type was found (Fig. 1). The helm was discovered in a tower built from large boulders joined together by clay. The outside irregularities and gaps between the stones were filled with fragments of brick. The tower was erected at a stronghold, dating from the second part of the thirteenth century. It was, however, built as an integral part of the fortress later on[1]. The helmet was found within the strata formed by the material which had slid down into the tower. Besides the helm only some pottery was found in these layers. The stratigraphy of the inside of the building was disturbed by a number modern excavations. The pottery discovered on the site does not allow the researcher to say precisely when the tower was filled up. According to the author of the excavation works, the incident took place in the fourteenth or fifteenth century[2].
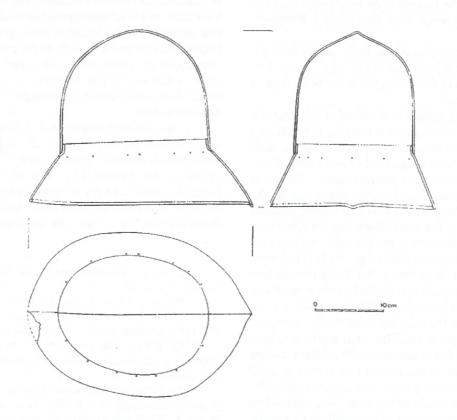

Fig. 1 Helm of the Kettle-hat type from Leśno, Brusy commune, Bydgoszcz province. Drawing by E. Wtorkiewicz-Marosik.

[1] The findings of the examination will be the topic of a separate publication. For the studies published hitherto see: K. W a l e n t a, A. W ó j c i k, *Archeologiczne badania weryfikacyjne kopca w miejscowości Leśno, gm. Brusy (An Archaeological Verification Examination of the Mound in the Village of Leśno, Brusy Commune)*, „Acta Universitatis Lodziensis. Folia Archeologica", No. 10, 1989, pp. 57-71; K. W a l e n t a, *Wstępne wyniki badań kopca w miejscowości Leśno, gm. Brusy, woj. Bydgoszcz (The Introductory Findings of an Examination of the Mound in the Village of Leśno, Brusy Commune, Bydgoszcz Province)*, „Łódzkie Sprawozdania Archeologiczne", volume 1, 1994, pp. 149-154.

[2] K. W a l e n t a, *op. cit.*, p. 153.

Fig. 2. Fragment of the Triptych of the Holy Trinity from Wawel Cathedral in Cracow, c. 1467. Drawing by J. Wieczorek.

The measurements of the helm are as follows: the skull is 17.5 cm high, the lower edge of the skull is 17.8 x 22.2 cm in diameter, the brim[3] is 25.0 cm x 34.0 cm in diameter.

Although the helmet is corroded, it has not been damaged. Only a small piece is missing at the brim's edge. The helm consists of two parts. Both the skull and the brim had been forged out of one billet of metal. The two elements were joined together. the lower part of the skull was placed on the upper part of the brim, suitably moulded. Lack of any visible remains of welding leads to the conclusion that they were joined together by hammering the heated metal. the splice of the two elements is about 2 cm wide. The upper edge of the brim is a bit wavy. An X-ray reveals two small V-shaped gaps. They might have appeared as a result of excessive hammering. The X-ray shows that in the brim, below the joint between the brim and the skull, there are sixteen uniform, oval marks arranged in a line, each 0.3 cm in diameter. All of them, except at least one, might be the remains of some corroded openings. The remaining mark, a small protrusion clearly visible on the inside of the helm, was probably a rivet. Along the longer axis of the skull, in its middle part, there is a crest, which changes into the brim both at the front and back of the helmet. In the front part of the helm, the place where the crest and the brim

meet is spike-shaped and slightly bent towards the inside. Similarly, the whole outside edge of the brim is also bent towards the inside, while the front and back parts of the brim join the skull at different angles.

In the later Middle Ages, helms of the Kettle-hat type (Latin ferrus pilleus, French chapel-de-fer, German Eisenhut) were among the most popular battle head coverings. They were known as early as in antiquity and their form did not change until the eleventh century[4]. From the close of the twelfth century onwards helm of this type had spread all over Europe[5]. They survived until the first half of the sixteenth century. Kettle-hats were mainly used by the infantry on the battlefield and the crews of castles. The popularity of this type of helm resulted, among other things, from the fact that they were easy to make and cheap. The account by Jean de Joinville[6] seems to confirm that such helmets were also worn by kings. Describing Saint Louis, king of France's expedition to the Holy Land in 1252, the chronicler mentions that the ruler was using a Kettle-hat because it ensured more fresh air[7].

Later medieval Kettle-hats varied considerably in construction and appearance. No detailed studies have been made of this type of helm. Some information on them can be found in more general works on historical arms and armour[8]. At the end of the twelfth century, in the thirteenth century and in the first quarter of the fourteenth century, the construction of the skull of some Kettle-hats resembled the so-called Spangenhelme[9].

A specimen characterized by homogenous construction and a sharp bend in the upper part of the skull, which changes into the crown, is another Kettle-hat of that period. The skull of a contemporary Kettle-hat was not very deep and met the brim at an angle of about 120 degrees (so it was some distance from the warrior's face). In the thirteenth century,

---

[3] A. N o w a k o w s k i, *Uzbrojenie ochronne. Kapaliny (Defensive Arms. The Kettle-hats.)* [in:] *Uzbrojenie w Polsce średniowiecznej 1350-1450 (Arms and Armour in Medieval Poland 1350-1450),* ed. A. N a d o l s k i, Łódź 1990, pp. 53-56. The term „brim" is used throughout the study.

[4] C. B l a i r, *European Armour circa 1066 to circa 1700,* London 1958, p. 32.

[5] Ibidem, p. 32; A. N o w a k o w s k i, *op. cit.,* p. 53.

[6] J. J o i n v i l l e, *Histoire de Saint Louis,* ed. N. d e W a i l l y, Chartres 1868; C. B l a i r, *op. cit.,* p. 32.

[7] C. B l a i r, *op. cit.,* p. 32; H. N i c k e l, *Ullstein Waffenbuch. Ein Markenverzeichnis,* Ullstein-Berlin-Frankfurt/ M.-Vienna 1974, p. 117.

[8] For further literature see W. B o e h e i m, *Handbuch der Waffenkunde,* Leipzig 1890; C. B l a i r, *op. cit.;* H. N i c k e l, *op. cit.,* A. B r u h n H o f f m e y e r, *Arms and Armour in Spain. A Short Survey,* „Gladius", special volume 1981, Jarandilla 1982; A. N o w a k o w s k i, *op. cit.,* pp. 53-56. by the same author, *Uzbrojenie wojsk krzyżackich w Prusach w XIV w. i na początku XV w. (The Arms and Armour of Teutonic Troops in Prussia in the 14th Century and at the Beginning of the 15th Century),* Acta Archaeologica Lodziensia, No. 29, Łódź 1980, pp. 67-69.

[9] C. B l a i r, *op. cit.,* pp. 32, 52; Z. Ż y g u l s k i, *Broń w dawnej Polsce na tle uzbrojenia Europy i Bliskiego Wschodu (Arms in Old Poland against a Background of the Arms and Armour of Europe and the Near East),* Warsaw 1975, p. 102, Fig. 47, a.

14

there were also Kettle-hats with very small brims (for example: The Illustrated Maciejowski Bible)[10].

The shape of Kettle-hats changed considerably in the later part of the fourteenth and in the fifteenth centuries. They had deeper skulls without sharp edges now. At the close of the fifteenth century, there appeared Kettle-hats with fluted skulls. The brim was closer to the head, which ensured better protection. Because of poor visibility, there was a sight in the front part[11]. This tendency resulted in the appearance of a new type of helm – the sallet – as early as in the first half of the fifteenth century. The main difference was the sallet had a brim extended in the back part[12]. Besides, the front part of the sallet's brim became mobile and the helm was equipped with a mobile bevor, protecting the lower part of the warrior's face[13]. Kettle-hats were also fitted with separate bevors[14] (the information can be found in some written sources concerning Poland, dating from the year 1475: „capalyn cum barth)[15]. All the above forms of helm existed side by side throughout the Middle Ages. In the sixteenth century, a new helm, called a morion, which developed from the Kettle-hat, appeared[16]. According to the literature on arms and armour, Kettle-hats were no longer used in the first half of the sixteenth century, though similar (hat-shaped) helms were still worn in some countries such as France and England in the seventeenth century.

The Kettle-hat found in Leśno is not the only specimen of this type discovered in Poland. Two other Kettle-hats were unearhted during the excavation works at the conical motte in Plemięta, Toruń province[17].

Fig. 3. Fragment of a wall painting from the Bridgets' Church in Lublin, mid 15th century. Drawing by J. Wieczorek.

The specimens from Plemięta were dated at the beginning of the fifteenth century. They were in a bad state of preservation and had to be carefully reconstructed. The specimens from Plemięta differ from the find discovered in Leśno in respect of shape. They have a much smaller skull and a longer brim, which is an extension of the skull line. They are equipped with hooks and rivets for attaching the lining to the inside of the helm or fastening a special chin-strap

[10] S. C. Cocekerell, M. R. James, Ch. Foulkes, *A Book of Old Testament Illustrations of the Middle of the Thirteenth Century*, Cambridge 1927; C. Blair, *op. cit.*, p. 22, Fig. 5 (below).

[11] In the literature on the subjectthere is no uniformity of terminology. In some cases, this type of helm is already called the sallet - G. C. Stone, *A Glossary of the Construction, Decoration and Use of Arms and Armor in All Countries in All Times*, New York 1961, p. 537, Fig. 687, (1, 3, 6).

[12] C. Blair, *op. cit.*, pp. 200-201 (111-112).

[13] Ibidem, pp. 198-199 (92).

[14] Z. Żygulski, *op. cit.*, p. 102, Fig. 46, e; Fig. 47, b - in the first case, the author calls this type of helm the basnet, but in his next publication, the helmet is rightly termed the sallet – A. Nadolski, J. Teodorczyk, Z. Żygulski, *Broń ochronna (Defensive Arms), Glossarium Armorum*. Polish edition, Graz 1981, p. 18, table 40 (3).

[15] J. Szymczk, *Organizacja produkcji i ceny uzbrojenia (The Organization of the Production and Prices of Arms and Armour)* [in:] *Uzbrojenie w Polsce średniowiecznej 1350-1450 (Arms and Armour in Medieval Poland 1350-1450)*, ed. A. Nadolski, Łódź 1990, p. 233.

[16] C. Blair, *op. cit.*, pp. 198-199 (97-99); Z. Żygulski, *op. cit.*, p. 150, Fig. 71.

[17] A. Nadolski, E. Grabarczykowa, *Militaria z grodziska w Plemiętach. Uzbrojenie ochronne (Military Accesories from the Motte in Plemięta. The Defensive Arms)* [in:] *Plemięta. Średniowieczny gródek w ziemi chełmińskiej (Plemięta. A Little Medieval Stronghold in Chełmno District)*, ed. A. Nadolski, Warsaw-Poznań-Toruń 1985, pp. 85-98.

Fig. 4. Fragment of the so-called Augustian Polyptych from Cracow, c. 1468. Drawing by J. Wieczorek.

Fig. 5. Fragment of the triptych from St Mary's Church in Gdańsk, c. 1375. Drawing by J. Wieczorek.

Fig. 6. Helm of the Kettle-hat type from Leśno, Brusy commune, Bydgoszcz province. Photo by K. Karpińska.

used for holding the helmet in place. The openings in the brim below the joint between the brim and the skull visible in the X-ray are probably a structural element fastening the lining to the inside of the helm. The lining protected the warrior's head against the enemy's blows and changes in temperature (the helm could get very hot or cold depending on the temperature), deadened the noise of a blow and helped position the helmet firmly on the head. Such a lining was most frequently made of leather or cotton wool. The rivet, found in the same row as the openings, in the side part of the brim, can be interpreted as the remains of a catch for fastening the leather chin-strap. There was probably another rivet in the brim on the other side of the helmet, but it has not been preserved. The strap was used for fastening the helm to the head. According to us, the helm did not have a coif attached to it.

An analysis of 39 charters dating from the years 1350-1450, where 21 Kettle-hats are listed[18], leads to the conclusion that such a helm was a very popular head defence in contemporary Poland. Kettle-hats were also kept in municipal armouries. According to a mention of 1394 of the arms and armour gathered by the bakers of Cracow, in the armoury there were
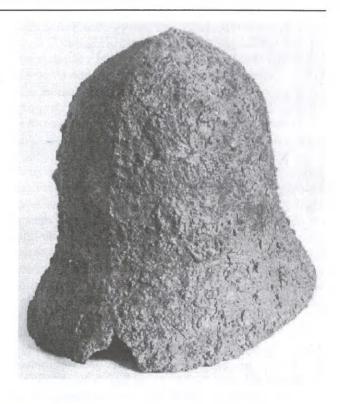
15 Kettle-hats and only 3 other helms[19]. An inventory of 1427 lists 169 helms, including 145 Kettle-hats[20]. This type of helm was also in widespread use in the Teutonic State. In 1404, in the Grand Commander's armoury, which was the arsenal of the capital Malbork castle and the main armoury of the Teutonic State, nearly half the helms, that is 250 pieces of armour, were Kettle-hats[21]. Moreover, at the beginning of the fifteenth century, helmets of this type were to be found in all Teutonic castles[22].

Iconographic sources provide some information on the Kettle-hats used by the Polish knights. The Triptych of the Holy Trinity in the Holy Cross Chapel at Wawel Cathedral, dated at c. 1467, (Fig. 2), a wall painting at the Bridgets' Church in Lublin, dated at the mid fifteenth century, (Fig. 3), and the Nicholas

---

[18] A. N a d o l s k i, J. D a n k o w a, *Uwagi o składzie i uzbrojeniu polskiej jazdy rycerskiej w latach 1350-1450 (Remarks on the Composition and Armaments of the Polish Knight Cavalry in the Years 1350-1450)*, „Studia i Materiały do Historii Wojskowości", 1983, volume 26, pp. 98-104.

[19] *Najstarsze księgi i rachunki miasta Krakowa od r. 1300 do 1400 (The Oldest Books and Receipts of the City of Cracow from the Year 1300 to 1400)*, parts 1-2, ed. F. P i e k o s i ń s k i and J. S z u j s k i, *Monumenta medii aevii historica res gestas Poloniae illustrantia*, volume 4, Cracow 1878, p. 107.

[20] *Kodeks dyplomatyczny miasta Krakowa, 1257-1506 (The Diplomatic Code of the City of Cracow, 1257-1506)* ed. F. P i e k o s i ń s k i, vol. 2-4, *Monumenta medii aevii historica res gestas Poloniae illustrantia*, volume 7, Cracow 1882, No. 305, pp. 409-411.

[21] *Das Marienburger Àmterbuch*, ed. W. Z i e s e m e r, Gdańsk 1916, p. 2; A. N o w a k o w s k i, *Uzbrojenie wojsk krzyżackich... (The Arms and Armour of Teutonic Troops...)*, p. 68.

[22] A. N o w a k o w s k i, *Uzbrojenie wojsk krzyżackich... (The Arms and Armour of Teutonic Troops....)*, pp. 68-69.

Haberschrack Polyptych, also called the Augustian Polyptych, in Cracow, dating from c. 1468, (Fig. 4) all show helmets similar is shape. Iconographic sources depicting Kettle-hats are also present in the territory of the Teutonic Order. Representations of such helms can be found in the Triptych of All Saints' Chapel in St Mary's Church in Gdansk, dating from 1375, (Fig. 5), in the triptych coming from the Grudziądz altar, dating back to the years 1380-1390[23], and in the triptych from the Jerusalem Chapel at St Mary's Church in Gdansk, dated at the years 1495-1500[24]. The form of all the Kettle-hats depicted in the iconographic sources does not fully correspond to the appearance of the Kettle-hat from Leono (except, perhaps, for the Triptych of the Holy Trinity). Thus, the chronology of the find cannot be entirely based on iconographic sources.

The Kettle-hat from Leśno has a very deep skull and a brim inclined towards the head. As I have already mentioned, such specimens were frequently equipped with sights placed in the brim. The Kettle-hats of various construction depicted in the above-mentioned Triptych of the Holy Trinity (Fig. 2) seem to confirm this supposition. The chronology of the find from Leono is similar (the helm has been dated at the mid fifteenth century and it might have been used in the Hundred Years War). The destruction of the building where the Kettle-hat was found might also be connected with the war turmoil. This is a period when deep Kettle-hats without sights exist side by side with Kettle-hats with sight.

The place where the Kettle-hat was found defines the cultural circle to which it belonged – the Teutonic State. In the mid fifteenth century, however, there was no difference between Polish and Teutonic arms and armour. The answer might be signatures sometimes put by armourers on their products. Unfortunately, there were no such signs on our Kettle-hat. As far as weapon prices are concerned, they were also comparable in both the countries.

In Poland, in the fourteenth and fifteenth centuries[25] a Kettle-hat (also called a „klobuchek" in Polish medieval written sources[26]) cost about 30 grossi and a coif attached to it was worth about 24 grossi, depending on the size of the rings. It may only be added that cheaper specimens were rather rare, while

other helmets, sometimes twice as expensive, were much commoner[27]. The cheapest model of another type of helm, without a coif, called the basnet, which was very popular at that time, cost 66 grossi[28]. In the Teutonic State, such a helm cost about 24 grossi. Master James, who worked at the castle in Malbork at the beginning of the fifteenth century, made both steel and iron Kettle-hats[29]. The helms were inexpensive, because they were not equipped with any additional decorative elements nor other accessories which would have made the price go up.

Translated by Zuzanna Poklewska-Parra

[23] A. N o w a k o w s k i, *Uzbrojenie wojsk krzyżackich... (The Arms and Armour of Teutonic Troops...)*, Figs. 21, 22, 24, 25; T. D o b r z e n i e c k i, *Malarstwo tablicowe (Panel Painting)*, Warsaw 1972, Figs. 32 B4, 32 C1.

[24] A. S. L a b u d a, *Malarstwo Tablicowe w Gdańsku w 2 pol. XV w. (Panel Painting in Gdańsk in the Later Part of the 15th Century)*, Warsaw 1979, Fig. 89.

[25] J. S z y m c z a k, *Produkcja i koszty uzbrojenia rycerskiego w Polsce XIII-XV w. (The Production and Cost of Knight Arms and Armour in Poland the 13th-15th Centuries)*, „Acta Universitatis Lodziensis", Łódź 1989, pp. 125-126.

[26] J. S z y m c z a k, *Organizacja produkcj... (The Organization of the Production...)*, p. 232.

[27] J. S z y m c z a k, *Produkcja i koszty... (The Production and Cost...)*, pp. 125-127.

[28] Ibid., pp. 128-129.

29 *Das Marienburger Tresslerbuch*, ed. E. J o a c h i m, Königsberg 1896, pp. 101, 147, 148, 231; A. N o w a k o w s k i, *Uzbrojenie wojsk krzyżackich... (The Arms and Armour of Teutonic Troops...)*, p. 68.