

# Towers with Golden Orbs. Motif of Cupolaed Spires with Spherical Supports\*

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**ABSTRACT** The article is devoted to the hitherto overlooked architectural motif of spherical supports in tower spires, observed in northern Europe since the early 17<sup>th</sup> century. Probably derived from the obelisk ball-based motif popular in iconography. It first appeared within the spire of the Westerkerk tower designed by Hendrik de Keyser, and later in the realizations of his students in Denmark. Graphic representations of the towers also played a role in popularizing the motif. The article investigates the potential routes of the motif's spread and explores possible connections between the different objects. Due to the various forms and contexts in which the motif was used, it is difficult to determine any additional ideological content beyond the prestigious functions associated with dominant tower structures.

**KEYWORDS** tower, Welsche Haube, cupolaed spire, Hendrik de Keyser, Baltic Sea region, Danish Renaissance

**ABSTRAKT** *Wieże ze złotymi kulami. Motyw kopulastych hełmów o sferycznych podporach.* Artykuł został poświęcony pomijanemu dotąd motywowi architektonicznemu, jakim są kuliste podpory w hełmach wież, obserwowane w północnej Europie od pocz. XVII w. Podpory te, wywiedzione zapewne z popularnego w ikonografii motywu obelisku opartego na kulach, po raz pierwszy w obrębie hełmu pojawiły się w zaprojektowanej przez Hendrika de Keysera wieży Westerkerk, a następnie w realizacjach jego uczniów w Danii. Pewną rolę w upowszechnieniu tego rozwiązania odegrały także przedstawienia graficzne wież. W tekście prześledzono możliwe drogi rozprzestrzeniania się nowego motywu oraz możliwe powiązania między różnorodnymi obiektami. Zróżnicowane formy i konteksty użycia omawianych podpór nie pozwoliły na wskazanie ich dodatkowych treści ideowych, innych niż te, związane z ich funkcjami prestiżowymi, naturalnie wpisanymi w wieżowe dominanty.

**SŁOWA-KLUCZE** wieża, hełm, hełm kopulasty, Hendrik de Keyser, region Morza Bałtyckiego, duński renesans

DURING the early modern period, the regions of the Netherlands, northern Germany, and the Baltic coasts witnessed the construction of numerous cupolaed tower spires<sup>1</sup> with extravagant and imaginative forms.<sup>2</sup> Among the various motifs that appeared among them, a hitherto unexplored one that deserves special attention is the motif of spheres as supports for spires, used in place of pillars or columns. Prominent examples of this motif can be found in Denmark's Frederiksborg Castle, several towers in Copenhagen, as well as buildings in Hamburg, Dresden, Vilnius and Tallinn (Fig. 1). From a tectonic point of view, the use of spheres – one is almost tempted to say: balls – as supports for towers subject to wind pressure seems paradoxical and inappropriate. This makes it even more surprising that this motif has not received wider scholarly interest, and its origins, prevalence and significance remain unidentified and undescribed. Therefore, the goal of this article is to uncover the reasons behind the adoption of spherical supports by the designers of those spires and the carpenters who constructed them. Additionally, it aims to determine the geographical and chronological range of their occurrence and explore whether this form carries any additional symbolic or conceptual meaning.

## AN OVERVIEW OF IDENTIFIED STRUCTURES – 17<sup>th</sup> CENTURY

The study of the motif of spherical supports in spires faces the same limitations as the study of spires themselves, but to an even greater extent. These limitations include the fragmentary state of preservation of once numerous objects, imprecise iconography, sparse written sources, and the incomplete existing research on the topic. While even a preliminary assessment of the preservation of these spires in European architecture would require extensive and in-depth regional studies, an analysis focused on the Silesian region suggests that approximately 10% of the original number of these structures may still exist.<sup>3</sup> The iconography often lacks the necessary level of detail and fidelity to accurately depict the architectural finial details. The available written records are also sparse in their descriptions. Nonetheless, the research has identified over thirty examples of this type of spire, both completed and only designed, primarily concentrated in the region encompassing the southern Baltic coast, the Danish straits, and the borderlands of Silesia and Lusatia.

The earliest of the cupolaed spires identified so far was erected on the *kirketårnet* (chapel tower) of Frederiksborg Castle in Hillerød, about 30 km from Copenhagen (Fig. 2). This royal residence, commissioned by Christian IV and built between 1602 and 1624, was reconstructed based on a design prepared between 1596 and 1600.<sup>4</sup> The spire, which held a bell and was covered

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1. This article is dedicated to an architectural motif that has very few studies in English. As a result, terms such as the German “Haube” or Polish “hełm” cannot be precisely translated and lack an appropriate counterpart. Consequently, the words “cupolaed spire”, “spire”, and even “tower” as *totum pro parte* all refer in this text to the summits of masonry tower shafts in the form of multi-story wooden constructions covered with sheet metal.

2. Monographic study of Dutch tower finials: Tomas von der Dunk, *Toren versus traditie. De worsteling van classicistische architecten met een middeleeuws fenomeen* (Leiden: Primavera, 2015). The tower spires of the other areas have not yet undergone any study.

3. See Zygmunt Łuniewicz, “Turris cupro tecta. Wczesnonowoczesne hełmy wieżowe na Śląsku i ich pochodzenie na tle retrospektywnych tendencji w kulturze europejskiej około roku 1500” (PhD dissertation, Department of Architecture, Wrocław University of Technology, 2019).

4. Joakim Skovgaard, *A King's Architecture. Christian IV and his buildings* (London: H. Evelyn, 1973), 45.

with copper and lead, was erected sometime before 1615.<sup>5</sup> Although the original structure was destroyed by a fire in 1859,<sup>6</sup> it was faithfully rebuilt according to precise measurements,<sup>7</sup> maintaining its original form. The tower consists of a square shaft with five ascending tiers of octagonal cross-section. Gilt spheres were placed between the first and second levels and also at the base of the four obelisks flanking the lowest of the spire floors. With its proportions and detail, it resembles the finials of towers from the Dutch area<sup>8</sup> and Hendrik de Keyser's designs.<sup>9</sup> Distinctive Dutch features include the presence of obelisks, an ambulatory with baluster-like supports (often protruding in analogous designs), and lucarnes on the facets of the cupolaed domes. The creator of this spire was likely Laurens van Steenwinckel, the son of Hans van Steenwinckel the Elder, who had been apprenticed in de Keyser's workshop between 1602 and 1610.<sup>10</sup> Through his apprenticeship, Laurens would have been exposed to both earlier and contemporary Dutch spires, incorporating motifs from them into his own designs. At the same time, spherical supports are not observed in known Dutch buildings, nor were they present in the impressive spires erected by Hans van Steenwinckel the Elder on the tower of the royal castle (Blåtårn) and the church of the Holy Spirit in Copenhagen. Therefore, it can be assumed that it was only in Frederiksborg that this solution was used for the first time.

Two other spires that were also created by Christian IV can be mentioned as well, although with some hesitation. In 1629, four of the five tower spires were



1 Tallinn, St. Mary's Cathedral. Tower with a spire dated to 1778–9. Photo: Ivo Falk, commons.wikimedia.org, CC BY-SA 4.0

*Visible spherical supports at the base of the crowning dome and spire.*

destroyed in a fire at Kronborg Castle in Helsingør on the Sund Strait. The stone finial of Kalkelborg, the tower of the southeast corner, has survived.<sup>11</sup> The preserved

5. Jan Steenberg, *Christian IV's Frederiksborg. Arkitektur, interiører, situationer* (Hillerød: Frederiksborg amts historiske samfund, 1950), 42; Skovgaard, *A King's Architecture*, 51.

6. Patrick Kragelund, *A Stage for the King. The Travels of Christian IV of Denmark and the Building of Frederiksborg Castle* (Copenhagen: Museum Tusculanum Press, 2021), 76.

7. Lauritz de Thurah, *Den Danske Vitruvius*, vol. 2 (København: Ernst Henrich Berling 1749), pl. 9, 11.

8. Steenberg, *Christian IV's Frederiksborg*, 42; Dunk, *Toren versus traditie*, 143.

9. Skovgaard, *A King's Architecture*, 51.

10. Ibid., 132. Hugo Johannsen describes the van Steenwinckel brothers' study of de Keyser as plausible, in the absence of clear source records: Hugo Johannsen, "The Steenwinckels: The Success Story of a Netherlandish Immigrant Family in Denmark", in *The Low Countries at the Crossroads. Netherlandish Architecture as an Export Product in Early Modern Europe (1480–1680)*, ed. Konrad Ottenheim, Krista de Jonge (Turnhout: Brepols, 2013), 134. On de Keyser's influence on Danish art: Ottenheim Konrad, "Hendrick de Keyser and Denmark", in *Reframing the Danish Renaissance. Problems and Prospects in a European Perspective*, ed. Michael Andersen, Birgitte Bøggild Johannsen, Hugo Johannsen (Copenhagen–Odense: University Press of Southern Denmark, 2011), 313–324.

11. Kalkelborg Tower was built around 1577–78 by Herman Griis. Skovgaard, *A King's Architecture*, 73.



2 Laurens van Steenwinckel (?), *kirketårnet* of Frederiksborg Castle in Hillerød, spire before 1615. Photo: Ajepbah, commons.wikimedia.org, CC BY-SA 40



3 Hans van Steenwinckel the Younger, tower of Kronborg Castle in Helsingør, spire, 1629–39. Photo: Richard Mortel

spire allows to negatively verify the supposition that the rebuilt spires resemble their earlier counterparts.<sup>12</sup> In the course of the decade-long restoration, Hans van Steenwinckel the Younger, Laurens' brother and also a pupil of de Keyser, erected a two-tier openwork spire of the north-west tower. The first tier of this spire gives the illusion of being supported by gilt spheres (Fig. 3). In reality, however, the spheres were positioned slightly in front of the tambour facets and crowned with obelisks. A similar solution was also employed in the spire of the Barbican in Frederiksborg, which was built

by Hans van Steenwinckel the Younger between 1621 and 1623.<sup>13</sup> However, in the case of the Barbican, the illusion of the spheres being the support for the upper stories was not applied. Furthermore, both the spires of the Barbican and the Kronborg towers, despite bearing some similarity to the tower, stand out for their use of star-shaped tambours.

It is possible that Hans van Steenwinckel the Younger was also responsible for the design of the new spire for the collapsed tower of the church of St. Nicholas in Copenhagen in 1628 (Fig. 4). The extensive damage

12. Ibid., 18, 75.

13. Steenberg, *Christian IV's Frederiksborg*, 42.

caused by the falling spire resulted in a lengthy reconstruction process.<sup>14</sup> After this event, the architect directed the renovation work, leading to the construction of a new presbytery, roofs and vaults. However, with van Steenwinckel's death in 1639 (incidentally, he was buried in this very church<sup>15</sup>), the progress of the project slowed down considerably. It was not until 1664 that the replacement of the previous provisional pyramidal roof with a new spire began, a task completed a year later. The design, created by the architect Albertus Matthiesen, was executed by the master carpenter Lauge Thommesen.<sup>16</sup> It is challenging to determine the extent of Matthiesen's influence on the tower's shape. However, a comparison with the Amalienborg Palace, which Matthiesen built between 1667 and 1673 for Queen-in-law Sofia Amalia, suggests that his interference was minimal. Unlike the picturesque complexity of the works by the van Steenwinckel family, Amalienborg lacks tambours above its compact body and instead features simple semicircular domes.<sup>17</sup> The tower of the church of St. Nicholas, in turn, represents a different type of architecture. Above the quadrilateral shaft of the tower, there was a spire consisting of five tapering tiers, canopies, an ambulatory, obelisks, an openwork tier and openwork buttresses. It was

distinguished from earlier spires by its prominently bulging domes, albeit also pierced with lucarnes. Its depictions in prints show spherical supports in the middle tier. Placed above the cupolaed dome and covered by a concave-sloped canopy, the tier with spheres was a more independent element compared to earlier examples. However, this solution, based on the collected examples, is relatively rare. More commonly, the tier with spherical supports was placed directly above or below the openwork tier with columns.

The new motif quickly found imitations beyond the narrow circle of Danish constructions, as it can be observed in the tower of Bremervörde Castle before the middle of the century (Fig. 5).<sup>18</sup> Although the structure no longer exists, it is featured in several illustrations, including a hand-drawn sketch by Erik Jönsson Dahlbergh,<sup>19</sup> as well as engravings in Martin Zeiler's and Matthaeus Merian's *Topographia Saxoniae*<sup>20</sup> and Samuel von Pufendorf's work.<sup>21</sup> The square tower, located in a corner of the castle, likely had four floors topped with a terrace and a balustrade. Above, there was a two-tier, quadrangular superstructure with a pitched roof, on which rested an octagonal tambour with an openwork tier. The entire structure was crowned with a bulbous dome, supported by eight spherical pillars.

14. Jan Steenberg, "Sankt Nicolai Kirke", in *Danmarks Kirker*, ed. Victor Hermansen, Aage Roussell, Jan Steenberg, Nationalmuseet (Denmark), part 1: *København*, vol. 1 (København: G.E.C. Gad, 1945–1958), 494.

15. *Ibid.*, 495.

16. *Ibid.*, 504.

17. [Anonymous], *Amalienborg Slot*, 1669, Det Kongelige Bibliotek in Copenhagen, ref. DT 003625.

18. The author would like to sincerely thank Mr. Christian Kamman for kindly lending me materials on the history of the Bremervörde Castle, gathered during his work on the monograph of this structure, which is being prepared: Christian Kamman, *Schloss Bremervörde. Die Bau und Sozialgeschichte des Residenzschlosses der Fürsterzbischöfe von Bremen* (manuscript in the author's possession), and another unpublished work, *id.*, *Hofkultur im weltlichen Hochstift. Kultur am Hof des Herzogs Johann Friedrich von Schleswig Holstein Gottorf, Fürsterzbischof von Bremen (1596–1634) und Fürstbischof von Lübeck (1607–1634)* (manuscript in the author's possession).

19. [Erik Jönsson Dahlbergh], *Tyskland. Bremervörde. Brehmer Vöhrde*, collection: *Utländska stads- och fästningsplaner*, pen drawing, Riksarkivet Stockholm, sign. SE/KrA/0406/25/026/003.

20. Martin Zeiller, Matthaeus Merian, *Topographia Saxoniae Inferioris Das ist Beschreibung der Vornehmsten Stätte vnnd Plätz in dem hochl. Netherlands-Sachsß: Crayß* (Frankfurt am Main: Meriansche Erben, 1653), unnumbered table, after p. 323. It is worth noting that this engraving appears in five variants, some of which can be considered illustrations of unrealised projects of the castle's expansion. Critical discussion of iconography, see Christian Kamman, *Renaissancegärten in Bremen-Verden* (Stade: Landschaftsverband Stade 2012), 37–39.

21. Samuel Pufendorf, *De rebus a Carolo Gustavo Sveciae rege gestis commentariorum libri septem, elegantissimis tabulis aeneis exornati, cum triplici indice* (Norimbergae: Christoph Riegel, 1696), book IV, after p. 332. However, this figure should be considered unreliable in detail, so it will be omitted from this discussion.





4 Albertus Matthiesen (architect), Lauge Thommesen (carpenter), spire of St. Nicholas Tower in Copenhagen, 1664–5, possibly according to an earlier design by Hans van Steenwinckel the Younger. In Lauritz de Thurah, *Hafnia Hodierna, Eller Udførlig Beskrivelse om den Kongelige Residentz- og Hoved-Stad Kiøbenhavn* (Kiøbenhavn 1748), plate LXXXVIII

5 Bremervörde Castle, a detail of the chapel tower including the spire from 1650–2, built by Peter Marquard. In Martin Zeiller, Matthaeus Merian, *Topographia Saxoniae Inferioris Das ist Beschreibung der Vornehmsten Stätte vnnnd Plätz in dem hochl. Nider-Sachß: Crayß* (Frankfurt am Main 1653), unnumbered plate, after p. 323

The construction of the tower's cupolaed spire was associated with the takeover of the castle, which had previously served as a rural residence for the bishops of Bremen,<sup>22</sup> by the Swedish field marshal Carl Gustaf Wrangel. The main part of the residence was built in 1604, after the fire of 1603. The northern residential wing, with a brick tower, was also built at that time,

but its original finial is unknown. Between 1626 and 1646, Bremervörde changed hands multiple times, but Wrangel, after assuming the fiefdom in 1646, initiated a comprehensive reconstruction plan.<sup>23</sup> According to the construction records provided by Gerhard Eimer, work began in 1648, although the castle tower cupolaed spire was not built until 1650–52.<sup>24</sup> Construction

22. About earlier history of the castle: *Kunstdenkmale und Alterthümer im Hannoverschen*, vol. 5: *Herzogthümer Bremen und Verden mit dem Lande Hadeln, Grafschaften Hoya und Diepholz*, ed. Hector Wilhelm, Heinrich Mithoff (Hannover: Helwing, 1878), 27; Rudolf Holbach, *Bremervörde*, in *Höfe und Residenzen im spätmittelalterlichen Reich. Ein dynastisch-topographisches Handbuch*, vol. 2: *Residenzen*, ed. Werner Paravicini (Ostfildern: Jan Thorbecke Verlag, 2003), 75–76.

23. Gerhard Eimer, *Carl Gustaf Wrangel som byggherre i Pommern och Sverige. Ett bidrag till stormaktstidens konsthistoria* (Stockholm: Almqvist & Wiksell, 1961), 71 et seq. archival documents there; Kammann, *Renaissancegärten in Bremen-Verden*, 182–184.

24. Eimer, *Carl Gustaf Wrangel som byggherre i Pommern och Sverige*, 78.

materials included sturdy timber pillars, lead and iron for the balustrades, and copper for the spire's covering. In addition, the steeple balls were gilt. In Wrangel's letters, there are mentions of the initial plan to erect four "towers" (German: "Thurm," "Thurmbaw"), but this idea was abandoned due to the costs incurred during the foundation works of the first tower.<sup>25</sup> The information about the plan to build four towers was interpreted as an intention to build in Bremervörde a regular quadrangle on the model of Johannisburg Castle in Aschaffenburg.<sup>26</sup> This supposition, however, seems exaggerated. The term "tower" is used in the context of small flanking turrets, as well as the large tower with a spire, such as *Lusthaus*, a garden pavilion. A more plausible explanation is that there was a plan to encircle the castle with a defensive ring consisting of four bastions, as shown in another variation of Merian's engraving.<sup>27</sup> The construction records also mention one Master Peter, who was responsible for the construction of the tower spire. The same master was then asked to come to Skokloster, but he refused due to his work on the construction of church towers in Hamburg. This allows him to be identified with the famous Hamburg architect Peter Marquard from Plauen.<sup>28</sup> His works before arriving in Bremervörde are unknown, but after his arrival in Hamburg, he not only designed the finial for St. Nicholas Tower, which employs the same motif of spherical supports, but also, at a later time, built spires above the churches of St. Catherine (with his brother Joachim, between 1657–58) and St. Michael (1667–69).<sup>29</sup> Back to the topic of Bremervörde, the near-total destruction of the structure and the scarce remnants of stonework make it difficult to determine the architectural style of alterations of the structure

arranged by Wrangel. However, the motif of spherical supports suggests that Danish castles built under the reign of Christian IV could be considered as equal or even more important sources of inspiration than the previously mentioned German structures. Although Wrangel ordered construction to be done "in the proper German manner" ("på det rätta tyska maniret"),<sup>30</sup> it is challenging to argue that the architecture of the castle clearly aligns with this directive.

The Wrangel-founded Bremervörde Castle existed for a relatively short period, as already in 1657 it was damaged and looted by Danish troops and the demolition of the buildings began in 1682, lasting until the end of the century.<sup>31</sup> However, it can be assumed that almost immediately after its completion in 1652, it became the inspiration for another residential building on the border between Denmark and the German countries. After the old Lauenburg Castle was damaged by Swedish troops in 1656, Prince Julius Heinrich von Sachsen-Lauenburg planned to erect a new residence. It is difficult to determine to what extent the grandiose project was implemented, while the complex itself was largely destroyed, printed designs of the palace along with the garden have survived.<sup>32</sup> Among the planned structures was a recreational garden pavilion – the *Lusthaus* – attributed to Dionys Bredekow<sup>33</sup> (Fig. 6). The pavilion was designed as an octagon with a recessed floor and a dome covering. Surrounding the octagon were four low quadrilateral annexes along the main axes, as well as four hexagonal turrets with domes on the other sides. The central dome was pierced at the base with eight oval lucarnes and topped with a lantern, with eight spheres acting as supports. Although the complex profile of the lantern's finial and the elaborate figurative pennant are

25. Ibid., 74.

26. Ibid., 74; Kammann, *Renaissancegärten in Bremen-Verden*, 183.

27. Ibid., 38.

28. About the identification of Master Peter as Peter Marquard: Eimer, *Carl Gustaf Wrangel som byggherre i Pommern och Sverige*; Kammann, *Schloss Bremervörde*. See also: Volker Plagemann, *Kunstgeschichte der Stadt Hamburg* (Hamburg: Junius Verlag, 1995), 145.

29. *Hamburg Lexikon*, ed. Franklin Kopitzsch, Daniel Tilgner (Hamburg: Zeiseverlag, 2010), 454.

30. Eimer, *Carl Gustaf Wrangel som byggherre i Pommern och Sverige*, 72.

31. Kammann, *Renaissancegärten in Bremen-Verden*, 184.

32. Hans Martin Winterstein after the drawing by Dionysius Bredekow, *Schloss Lauenburg mit Anlage auf dem Freudenberg*, 1657, copperplate, Niedersächsisches Landesarchiv, Abt. Oldenburg, ref. NLA OL K-ZE Best. 298 With no. 1914/1-2.

33. Hans Martin Winterstein after the drawing by Dionysius Bredekow, *Eigentlicher Abriss Des ... Fürsten ... July Henriches Herzogen zue ... westphalen: erbawten Lusthauses zue Lawenburg auff dem Freudenberg*, copperplate, 1656, Kunstbibliothek Berlin, Ornamentstichsammlung, ref. OS 58.166.

reminiscent of the spires discussed earlier, the *Lusthaus* finial has a small number of elements of unmistakably Dutch origin, such as obelisks, buttresses detached from the walls, or overhanging ambulatories with balustrades. It is difficult to determine whether the pavilion is a creative transformation of the Bremervörde spire or is perhaps just a variant of some unknown Danish buildings.<sup>34</sup> Bredekow's authorship also deserves a separate analysis, because the term *Inventor*, which was used in description, may also mean making a drawing for an engraving, and not the design itself. Apart from the design for the palace, Bredekow is primarily known as a military engineer involved in constructing the Carlstadt fortifications and serving in several locations, such as Bremen, Verden, Wismar and Hvalliskens.<sup>35</sup> His other works in civilian architecture have yet to be discovered.

Unlike the finials of the poorly known buildings from Bremervörde and Lauenburg, the chronologically next among the identified spires was built in a major centre and survived long enough to be recorded in numerous iconographic sources and imitations. In 1644, the existing tower spire of the church of St. Nicholas in Hamburg (erected in 1591–93) partially collapsed<sup>36</sup> (Fig. 7). The new one was erected in 1657 by the already mentioned Peter Marquard.<sup>37</sup> Two of his four known tower spires, namely those at the Bremervörde Castle and the church of St. Nicholas, have spherical supports, while all spires differ strongly from each other,<sup>38</sup> being

implementations of different formal ideas. The church tower was erected above the terrace of the quadrilateral shaft and the octagonal superstructure. The lowest of the cupolaed dome was shaped as a torus, above which a windowless tambour and another cupolaed dome were placed, this time carrying a narrower openwork tier. On top, eight gilt spheres supported a dome with a tall, cone-shaped spike surrounded by a wreath of triangular peaks with steeple balls and flags. Marquard's work displayed certain characteristics that were different from Danish spires, and its formal structure did not match the intended layout. Contrary to current suggestions in the literature,<sup>39</sup> the spire does not show features of Dutch architecture and is not similar to the finial on the tower of the church of St. Nicholas in Greifswald dating from 1652–53.<sup>40</sup> It is more likely that the original way of shaping the spire was carried over by Peter Marquard from his native Saxony or was his original invention. Indeed, the spire of the church of St. Mary in Zwickau, built in 1671–72 by his brother, Joachim Marquard, has a similarly shaped dome.<sup>41</sup>

An interesting clue in interpreting the perception of the motif of a spherical support is provided by another of the observed objects: the *Hausmannsturm* of the Dresden Castle (Fig. 8). In 1674–78, the existing tower was raised and covered with a new spire designed by Wolf Caspar von Klengel.<sup>42</sup> Design drawings and variant sketches of the finial have survived.<sup>43</sup> The completed

34. Such a suspicion brings to mind the similarity between the floor plans of the *Lusthaus* at Lauenburg and the later Sophie Amalienborg Palace in Copenhagen. This building was erected in 1672, with a central pavilion on an octagonal plan with four pentagonal turrets on diagonal axes. See: Lauritz de Thurah, *Den Danske Vitruvius*, vol. 1 (København: Ernst Henrich Berling 1746), table XLV.

35. Mentions of Bredekow can be found repeatedly in Ludwig Wilhelmson Munthe, *Kongl. fortifikationens historia*, vol. 1–6 (Stockholm: P.A. Norstedt & Söner, 1902–1919), passim. See also: Henning Eichberg, "Schwedensfestung und Idealstadt Carlsburg an der Unterweser. Zur Frühgeschichte des neuzeitlichen Ingenieurs", *Deutsches Schifffahrtsarchiv*, no 1 (1975): 31 ff.

36. Gerhard Hirschfeld, *Geschichte des Mahnmals und der Kirchenbauten von St. Nikolai in Hamburg* (Hamburg: Web-Site-Verlag, 2010), 102.

37. Volker Plagemann, *Kunstgeschichte der Stadt Hamburg* (Hamburg: Junius Verlag, 1995), 145.

38. Detailed engravings of the projected spires were made in 1567 by Hans Martin Winterstein. See the collection of SUB Hamburg, ref. AH A, 167; AH A, 168; AH A, 169.

39. Hirschfeld, *Geschichte des Mahnmals und der Kirchenbauten von St. Nikolai in Hamburg*, 103.

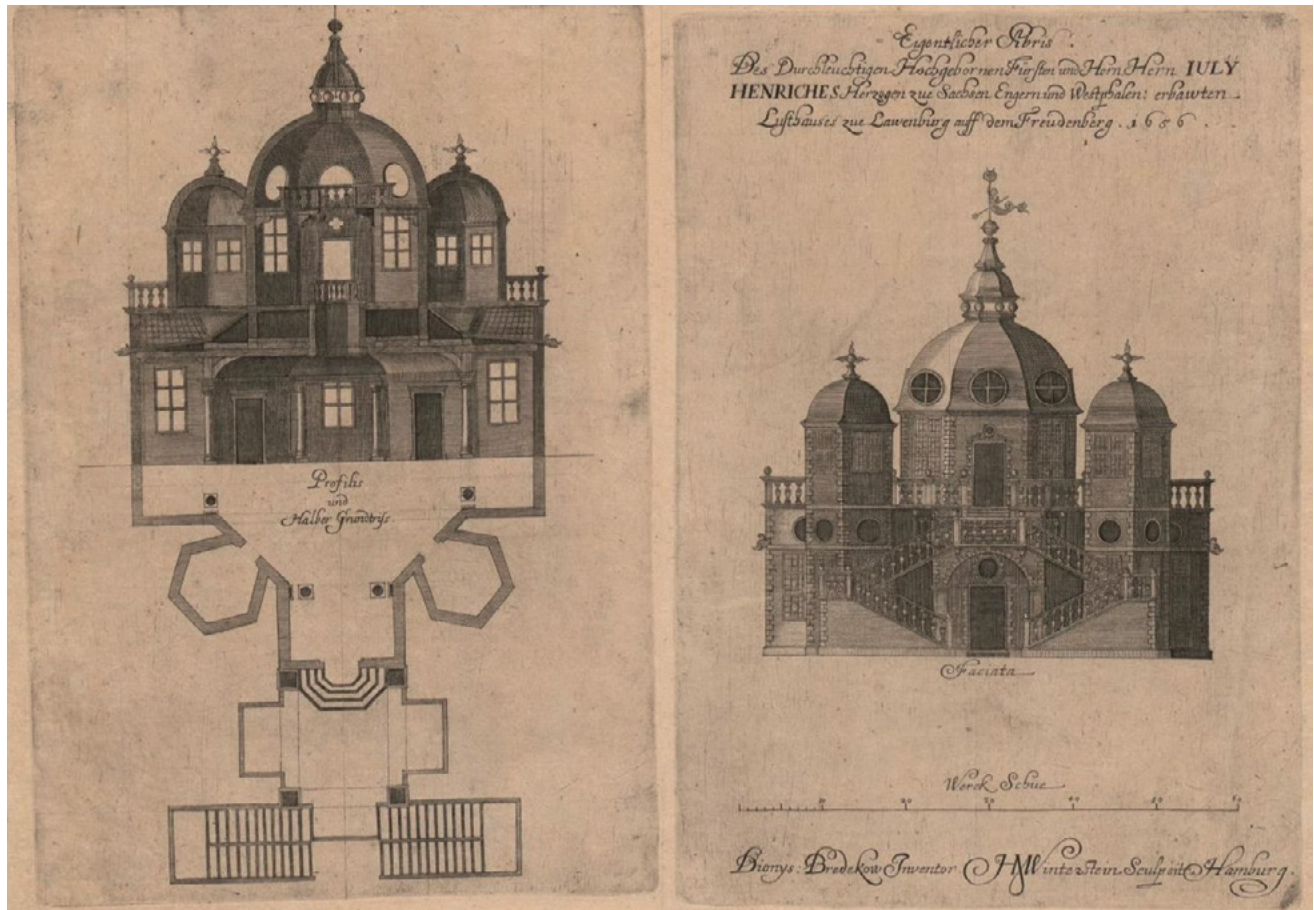
40. Theodor Pyl, *Geschichte der Greifswalder Kirchen und Klöster, sowie ihrer Denkmäler, nebst einer Einleitung vom Ursprunge der Stadt Greifswald*, part 1 (Greifswald: Vereinsschrift der Rügisch-Pommerschen Abtheilung der Gesellschaft für Pommersche Geschichte und Alterthumskunde, 1885), 295–296.

41. [Anonymous] *Festschrift zur Einweihung der erneuerten Marienkirche zu Zwickau* (Zwickau: Zückler, 1891), 71.

42. Günter Passavant, *Wolf Caspar von Klengel, Dresden 1630–1691. Reisen – Skizzen – Baukünstlerische Tätigkeiten* (München–Berlin: Deutscher Kunstverlag, 2001), 192–193.

43. *Ibid.*, fig. 193, 194.





6 Dionys Bredekow, an unrealized *Lusthaus* project for the palace of Julius Heinrich von Sachsen-Lauenburg in Lauenburg on the Elbe, 1656. Copperplate *Eigentlicher Abriss Des ... Fürsten ... July Henriches Herzogen zue ... westphalen: erbawten Lusthauses zue Lawenburg auff dem Freudenberg* by Hans Martin Winterstein, 1656. Kunstbibliothek Berlin, Ornamentstichsammlung, ref. OS 58.166

version features a bell-shaped dome with shell-framed lucarnes above the cornice, above which rests a low octagonal tambour, an openwork tier and a tier of gilt spheres. The whole is finished by a spire with a concave profile, an almost spherical dome with lucarnes, and a slender spire. Von Klengel also drew a variant without spherical supports, and different spire profiles. Therefore, it can be assumed that the form used was not obligatory in Dresden, but was rather an addition, a kind of architectural variant. Still, once again, von Klengel's work was described as a mixture of Dutch and Italian motifs.<sup>44</sup> The architectural articulation, proportions and profiles are indeed found in contemporary

Dutch spires;<sup>45</sup> however, these parallels do not seem to go beyond the general architectural trends of the era. The suggested resemblance to the finials of Italian towers, in turn, is not confirmed in the objects known to me. It is noteworthy that, at least from the design of the *Lusthaus* at Lauenburg, the new motif was becoming independent of the set of forms developed in the artistically Dutch-oriented Scandinavia and was penetrating into new areas that already had their own distinct architectural tradition of spires. The new impulse resulted in experimentation, diversification of shapes, and the creation of objects that broke with the prevailing patterns.

44. "Hausmannsturm", *Dresdner Residenzschloss*, ed. Markus Wacker, Sander Münster, Kristina Friedrichs, Danilo Schneider, <http://schloss-dd.mz.test.tu-dresden.de/menue-3/hausmannsturm>, accessed May 25, 2024.

45. E.g., the Zijlpoort spire in Leiden from 1667, the Oosterker signature in Amsterdam from 1669–71.





7 Peter Marquard, spire of the Tower of the Church of St. Nicholas in Hamburg, 1657. Engraving by Hans Martin Winterstein, *Eigentlicher Abriss des Kirchthurns zu S. Nicolaj in Hamburg*, SUB Hamburg collection, ref. AH A, 168

8 Wolf Caspar von Klengel, Dresden Castle's *Hausmannsturm* finial, 1674–8. Photo: Michael Kranewitter, commons.wikimedia.org, CC BY-SA 40

It can be assumed that the spire of the town hall in Głogów (German: Glogau) in Silesia also had such an experimental character (Fig. 9). After the 1678 fire, the tower remained without a finial, and it was not until 1688 that the carpenter Kaspar Mucker of Bolesławiec (German: Bunzlau) erected a new spire.<sup>46</sup> Although

described in the literature as having three openwork storeys, it clearly had four of them, the lowest being a kind of gallery encircling an octagonal shaft. From the masonry part of the tower to the steeple ball, the spire measured 96 Breslau ells – more than 55 metres – which, coupled with its unusual slenderness, and

46. Friedrich Zimmermann, *Beyträge zur Beschreibung von Schlesien*, vol. 10 (Brieg: Johann Ernst Tramp, 1791), 233; Ferdinand Minsberg, *Geschichte der Stadt und Festung Gross-Glogau*, vol. 2 (Glogau: Julius Gottschalk, 1853), 115

probably structural flaws as well, quickly led to a loss of stability. As early as 1720, the wobbly finial was dismantled, but a wooden model of former tower was made, which survived in the collections of the museum in the town hall until 1945.<sup>47</sup>

The spherical supports of the Głogów spire were placed – unlike the other examples – at the bases of the openwork tiers, rather than above them. It is not known from where the carpenter took this form, as no other works apart from the spire in question have been attributed to him. In terms of proportions, dome profiles or articulation details, such a model of the finial certainly remains an isolated work in Silesia. Already the lower gallery broke with the local tradition of an open ambulatory, although this form had precedents in the form of the finials of the town halls in Sulechów (German: Züllichau; 1665) and Zielona Góra (German: Grünberg in Schlesien; 1669) and a church in Przemków (German: Primkenau; shortly before 1687?). The bulging domes, on the other hand, distinguished themselves from the popular sigmoid profiles of the domes that dominated locally since the beginning of the 16<sup>th</sup> century. Thus, it is most likely that the Głogów spire was an artistic import, or it may have been created as a local implementation of the graphic patterns of the Hamburg spires by Peter Marquard. It also remained – with the exception of the tower of the Bautzen city hall – without any clear imitations, while in the Silesian area the motif of the spheres itself was to appear only twice more.

It is difficult to assess how many small finials had spherical supports. Typically, iconography remains too inaccurate for small details to be accurately reproduced. Still, such structures were certainly erected. When the parish church of St. Peter and St. Paul in Görlitz burnt

down in 1691, the roof truss was rebuilt, along with the ridge turret, the very next year, being finished on 25 June 1692.<sup>48</sup> The two-tier structure is conspicuous for its multiplied tambour cornices under the openwork section.<sup>49</sup> The spheres appear under the crowning cornice, carrying the crowning spire with a concave profile. At the Lusatian-Silesian border, a detail of small spheres appeared on the spire of the church in Krzystkowice (German: Christianstadt), currently a left-bank district of Nowogród Bobrzański (German: Naumburg am Bober). The tower was erected between 1697 and 1700 and had a spire with a single openwork tier, mounted on a square base, transitioning to an octagonal cross-section higher up.<sup>50</sup> A little later, a similar solution can also be found in the finial of the Głogów collegiate church from 1705, built by the master carpenter Hans Müller of Szprotawa (German: Sprotttau).<sup>51</sup>

Before the end of the 17<sup>th</sup> century, one more spire was built, which, with some caution, can be considered the first of a whole series of imitations of the Hamburg work by Peter Marquard or of the Danish prototypes directly. It concerns the covering of the tower of the church of St. Barbara in Löbenicht, the historic district of Königsberg (now Kaliningrad),<sup>52</sup> created after the tower was struck by lightning in 1695. In the course of reconstruction, by 1702, a dome-shaped spire was built, carrying a one-openwork tier with eight spheres at its base.<sup>53</sup> The four small turrets at the base of the dome were unusual among the finials discussed so far. Such forms are found in 16<sup>th</sup>- and 17<sup>th</sup>-century Danzig spires, but outside that city, the only example found is the one at Löbenicht.

It can be assumed that the construction of the Löbenicht spire marked the beginning of interest in

47. Julius Blaschke, *Geschichte der Stadt Glogau Und des Glogauer Landes* (Glogau: Verlag der Buchhandlung Hellmann, 1913), 336.

48. Leopold Haupt, *Geschichte der Evangelischen Haupt- und Pfarrkirche zu St. Peter und Paul in Görlitz* (Görlitz: Heyn, 1857), 20.

49. A similar motif is found, for example, in the spire of the church of St. Peter. The design is based on St. Peter Cathedral in Bautzen dating from 1664–66; Cornelius Gurlitt, *Bautzen (Stadt). Beschreibende Darstellung der älteren Bau- und Kunstdenkmäler des Königreichs Sachsen* (Dresden: Meinhold, 1909), 14.

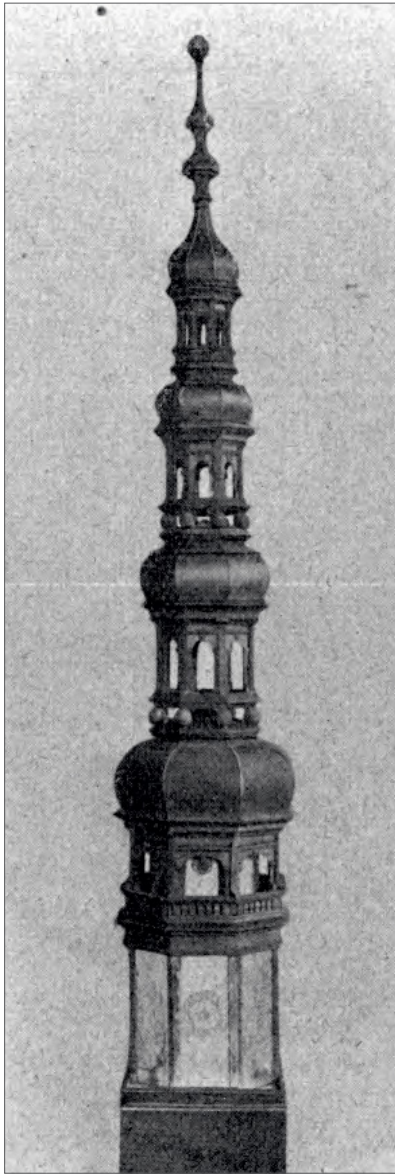
50. *Die Kunstdenkmäler der Provinz Brandenburg*, vol. 5, part 6: *Kreis Sorau und Stadt Forst*, ed. Joachim Seeger, Hans Erich Kubach (Berlin: Deutscher Kunstverlag, 1939), 60–61.

51. Antoni Bok, “The History of the Collegiate Church and its Architecture”, in *Kolegiata w Głogowie. Historia, odbudowa, zabytek*, ed. Antoni Bok (Głogów: Towarzystwo Ziemi Głogowskiej, 2020), 59.

52. Adolf Bötticher, *Die Bau- und Kunstdenkmäler der Provinz Ostpreußen*, part 7: *Königsberg* (Königsberg: Bernh Teichert, 1897), 109.

53. The source message with the description of the spheres quotes: Waldemar Thalmann, *Bau- und Kulturgeschichte Tilsit*, vol. 1: *Renaissance und Barock* (Tilsit: Verlag d. Verf., 1926), 286.





9 Kaspar Mückler, spire of the tower of Głogów town hall, 1688. Photograph of an unpreserved model from 1720, produced during the demolition of the tower. Source: Julius Blaschke, *Geschichte der Stadt Glogau und des Glogauer Landes* (Glogau 1913), p. 336  
 10 Tilsit (now Sovetsk, Kaliningrad Oblast), spire of the former German Church, 1695–9, pre-1945 condition. Archive photo: Ireck Andreas Litzbarski

the motif of spherical supports in Ducal Prussia. After a fire in 1695, reconstruction of the German Church in Tilsit (now Sovetsk) was undertaken (Fig. 10). The spire was completed around 1 July 1699, and its maker is unknown.<sup>54</sup> The structure, which existed until 1945, with two openwork tiers, bore similarities to the spires of the churches of St. Catherine in Hamburg or the Virgin

Mary in Zwickau, only the overhanging ambulatory with a balustrade around the lower openwork section seems to derive from the Dutch tradition. Waldemar Thalmann's conjecture that the spires at Tilsit and Löbenicht were erected by the same carpenters seems problematic, although the participation of Königsberg masters in the construction of both structures seems

54. Adolf Bötticher, *Die Bau- und Kunstdenkmäler der Provinz Ostpreußen*, part 5: *Die Bau- und Kunstdenkmäler in Litauen* (Königsberg: Bernh. Teichert, 1895), 136–137; Thalmann, *Bau- und Kulturgeschichte Tilsit*, 286.

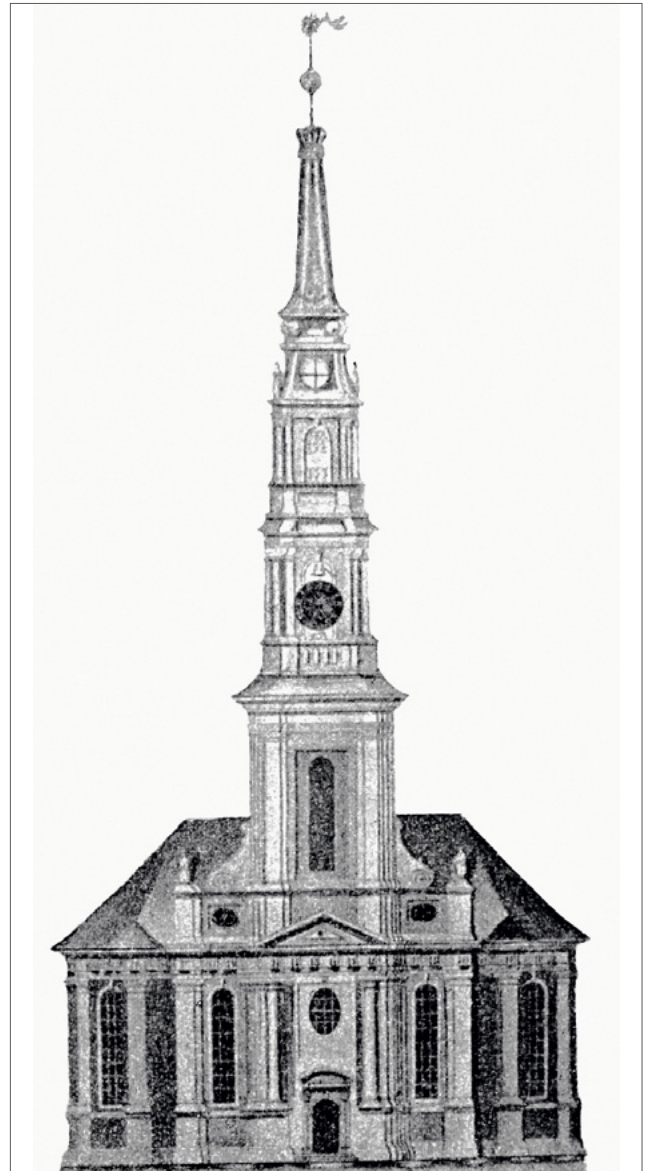
likely. Indeed, both objects were created at the same time and operate on the same motif, however, the way it is used and the forms of the spires are decidedly different. The corner turrets and spheres under the openwork structure in Löbenicht and the two-tier openwork structure and overhanging balcony with balustrade in Tilsit clearly distinguish the two finials from each other. Thus, the two spires can be seen as two of the many possible variants of applying the same idea.

The never completed tower of the Castle Church (German: *Burgkirche*) in Königsberg can be seen as a third possible variant.<sup>55</sup> The design of the church, by Johann Arnold Nering (Fig. 1), modelled on The Hague's Nieuwe Kerk, received a slender tower on the axis of the main façade.<sup>56</sup> However, only three of the five planned floors were built, and the unfinished tower was covered with a makeshift roof. The unrealised parts included two tiers with corner columns, and a slender spike in the form of an obelisk resting on four spheres. This structure also has been compared to the towers of de Keyser's design, but especially to the tower of Amsterdam's Westerkerk, realised in a modified form. The similarities are obvious: the articulation and tier plans of the tower, although in Amsterdam the whole structure is topped with a royal crown on volutes, while in Königsberg, with an obelisk on spheres. However, the role of the Westerkerk – and especially the never implemented design of its tower – in shaping the motif in question deserves a wider discussion, so a further section of the text is devoted to it.

#### SPIRES IN THE 18<sup>th</sup> CENTURY

The first half of the 18<sup>th</sup> century was the apogee of the popularity of the motif of spherical supports for the spires of towers. The main areas where new spires were made are Lusatia, Silesia and Saxony, as well as the Lithuanian-Prussian borderland, presumably related to the influence of spires in Dresden, Głogów and Ducal Prussia.

In the first of the areas indicated, in addition to the already mentioned tower finials from Görlitz and Głogów, there was also the town hall spire in Bautzen (Fig. 12). The earlier building burnt down in 1704, but



11 Johann Arnold Nering, Castle Church (*Burgkirche*) in Königsberg, design drawing, c. 1690. Source: Adolf Bötticher, *Die Bau- und Kunstdenkmäler der Provinz Ostpreußen*, issue 7: *Königsberg* (Königsberg 1897), p. 109

it was rebuilt in the same year.<sup>57</sup> The spire was erected on a slender octagonal tower, which remained only temporarily roofed for a long time before the fire. The columnar gallery around the shaft stands out as a new solution. Earlier, from 1582, the tower had an ambulatory on the offset of the shaft and a spire with two

55. Bötticher, *Königsberg*, 109.

56. Georg Fritsch, *Die Burgkirche zu Königsberg i. Pr. und ihre Beziehungen zu Holland* (Königsberg i. Pr.: R. Leupold, 1930), 32–34, 54–56.

57. Interior reconstruction was completed a year later, in 1705. The date “1704” appears on the flag; Gurlitt, *Bautzen (Stadt)*, 207.





12 Bautzen, town hall spire, 1704. Photo: Przykuta, commons.wikimedia.org, CC BY-SA 40

13 Vilnius, the spire of the bell tower of St. Michael's Church, c. 1720. Archive photo, early 20<sup>th</sup> century. National Museum in Cracow, ref. MNK XX-f-4936

openwork tiers.<sup>58</sup> The forms of the subsequent finial, which existed in the years 1644–60, are not known, but it can be assumed that it was only during the 1704 reconstruction that a covered ambulatory was erected. The spire, with its slender proportions, a gallery with basket arches and a balustrade at the base, gives the impression of a miniature version of the Głogów city hall. Only the conical spike with a concave profile, placed above a low octagonal tambour, is not found in

Silesia, but appears earlier in finials from the Brandenburg area.<sup>59</sup>

In contrast to those described earlier, in the case of the later spires the form criteria are much more difficult to relate to one other and only occasionally show similarities. It is more common to find structures designed with the use of a motif that was gaining popularity rather than designed as imitations of a specific structure. Thus, despite its topographical proximity,

58. Ibid., 206.

59. For example, the spire of the church of St. Catherine in Brandenburg from 1592, the tower of the castle in Doberlug from 1657, and in Bautzen itself, in the church of St. Mary and St. Martha, a turret erected after a fire in 1686.

the spire of Pirna city hall's turret, created in 1718,<sup>60</sup> is distinct from the finial of Dresden's Hausmannsturm. The proportions, details and dome profiles of the two spires are all different.

Similarly, as it may be assumed, in an area that can be associated with the influence of the spire of the church in Tilsit, three other structures were built shortly after, although their mutual similarity beyond the motif of the spherical supports is not clear. Probably the earliest of these was the spire on the Benedictine Sisters' church of St. Michael in Vilnius (Fig. 13). The person of the founder and the relative time of construction are known; it was the fourth term in office of Prioress Felicjanna Chłusowiczówna,<sup>61</sup> falling, as can be inferred from the relative chronology, in the 1720s. The spire has clumsy proportions, noticeable in the significant difference between the diameter of the bulbous dome and the spacing of the densely crowded, excessively wide openwork tier bars. As mentioned in the sources, it was originally covered with sheet metal,<sup>62</sup> removed at a later date. The lower dome is pierced on the main axes by small lucarnes with triangular finials. This detail reveals the northern inspiration of the spire's author, since, despite numerous precedents in the Vasa era, it did not permanently enter the repertoire of forms used in the Commonwealth of Poland and Lithuania.<sup>63</sup>

A pair of spires of the pilgrimage church in Święta Lipka was also created slightly later (Fig. 14). The timber for the structure was cut in February 1727 and by June of the same year unknown carpenters from Königsberg had completed the structure, which had been covered with copper sheeting by 1730.<sup>64</sup> Significantly, in the existing literature of the church, there was an assumption that the design of the towers originated in Königsberg, and that the Dutch motif of spherical elements of the spire itself was transferred to Prussia through Denmark.<sup>65</sup> Compared to the subsequent spires, the finials on the towers of the Święta Lipka church are also the closest to the buildings of Tilsit: they are based on square bases, and pyramidal canopies carry spherical domes. Horizontal lines of balustrades appear in the openwork sections, while the whole is crowned by spindly spikes with concave profiles.

The twin spires of the Dominican church of Our Lady of the Rosary in Grodno (Belarusian: Гродна; Polish: Grodno) were erected soon after. The church was consecrated in 1673, but initially its two towers were covered with provisional canopies that were quite low. It was not until 1739 that tall, cupolaed spires were erected, and a year later, in 1740, they were covered with sheet metal.<sup>66</sup> They stood out among the finials in question due to the rich form of their domes, with complex, folded profiles, and – as can

60. Richard Steche, *Beschreibende Darstellung der älteren Bau- und Kunstdenkmäler des Königreichs Sachsen*, part 1: *Amtshauptmannschaft Pirna* (Dresden: Meinhold, 1882), 74.

61. The chronicle's records are not dated in parts, only references to the prioress' terms in office. The fifth term of Felicjanna Chłusowiczówna was said to have taken place around 1724, while a year earlier, the second term of Teofila Chłusowiczówna. An additional clue is the mention of a brocade donated by Maria Katarzyna Sapieżyńska (†1721) in "the same years" as the construction of the spire, the date of her death thus marking the *terminus ante quem* of its creation. See: Maria Kałamajska-Saeed, "Kronika bernardynek świętomichalskich w Wilnie", *Nasza Przyszłość* 101 (2004): 391–392.

62. *Ibid.*, 391.

63. Lucarnes placed on the domes can be observed, among others, on the spire of the tower of the castle in Nesvizh (c. 1600), known only from an engraving, on the tower of Sigismund III at the Wawel Hill (c. 1600), on the tower of Ladislaus IV (until 1603) and on the clock tower (1619) at the Royal Castle in Warsaw.

64. Jerzy Paszenda SJ, *Święta Lipka. Monografia* (Cracow: WAM, 2008), 61.

65. Anton Ulbrich, "Die Wallfahrtskirche in Heiligelinde. Ein Beitrag zur Kunstgeschichte des XVII. und XVIII. Jahrhunderts in Ostpreussen", *Studien zur Deutschen Kunstgeschichte* 29 (Strassburg: Heitz & Mündel, 1901), 80.

66. Maria Kałamajska-Saeed, "Kościół p.w. Matki Boskiej Różańcowej i klasztor dominikanów", in *Materiały do dziejów sztuki sakralnej na ziemiach wschodnich dawnej Rzeczypospolitej*, ed. Jan K. Ostrowski, part 4: *Kościół i klasztor rzymskokatolickie dawnego województwa trockiego*, ed. Maria Kałamajska-Saeed, vol. 3: *Kościół Grodna* (3), ed. Maria Kałamajska-Saeed (Cracow: Międzynarodowe Centrum Kultury w Krakowie, 2016), 80–81.



14 Święta Lipka, the spire of the tower of the pilgrimage church, 1727–30, the work of an unknown carpenter from Königsberg. Photo: Waław Górski, Kuyavia-Pomerania Digital Library, ref. 309/170/6/34/1

15 Vienna, University Church, second decade of the 18<sup>th</sup> century. Photo: Veduten2011, commons.wikimedia.org, CC BY-SA 4.0

be inferred from the iconography<sup>67</sup> – decoration in the type of prismatic blocks on the walls of the blank tambour between the openwork tier and the low tier with spheres.

The ridge turret of the church in Adelsk (Belarusian: Адэльск; Polish: Odelsk) was also erected relatively close to Grodno in terms of topography. The detailed circumstances of the construction of this building,

67. The poor technical condition of the spires was found during the 1838 cassation; however, they were not demolished until 1856, see: *ibid.*, 86. Inventory drawing of the spire before demolition: Maria Kałamajska-Saeed, *Rosyjskie pomiary klasztorów skasowanych w roku 1832*, vol. 1 (Warsaw: Narodowy Instytut Polskiego Dziedzictwa Kulturowego za Granicą "Polonika", 2021), fig. 314, 381. However, on the reproduction the silhouette of the spire is obscured by an insert with a variant of the reconstruction in a new form, the view of the spire from under the insert is reproduced on the title page.

which dates to the early 18<sup>th</sup> century, are not known.<sup>68</sup> Its finial resembles the Vilnius spire in shape and the sequence of blocks, but it does not include the lucarne of the lower dome. Another example from the area of the Grand Duchy of Lithuania is the turret of the Jesuit college in Nesvizh (Belarusian: Нясвіж; Polish: Nieśwież).<sup>69</sup> The date of its construction is not known. The college building was erected in 1586–99,<sup>70</sup> but its crowning spire with spheres was probably built later. The construction of the turret itself was described as early as 1679, due to its unusual method of foundation, as it was said to rise from a flat wall with no clear, outwardly visible supports.<sup>71</sup> The building recorded in the iconography, however, is probably later. The college burnt down in 1693, and even if the turret survived, it was probably re-erected in 1744, when the entire western wall of the building was re-bricked.

The most recent spires that can be considered to be inspired by buildings from Hamburg and Tilsit are the finials of the former Cistercian church of St. Michael (now the Transfiguration Cathedral) and the Cathedral, both in Tallinn (Fig. 1). The first was erected (“on the model of an earlier tower finial”) in 1776.<sup>72</sup> The unusually slender structure is covered with a turret of small dimensions, also repeating a rare hexagonal projection. The slopes of the lower dome feature oval lucarnes with typical 18<sup>th</sup>-century forms, but the overall composition differs little from the spires of a century earlier. Likewise, the spire of the newly built tower of Tallinn Cathedral fits into a long-used formal language. The design was

made in 1778 by the local master builder C. L. Geist,<sup>73</sup> and its implementation followed in the subsequent year. According to information provided by Sten Karling, the motif of spherical supports was a recurring one in master building drawings, not only by C. L. Geist, but also by his brother Johann Heinrich and by Johann Christian Göritz.<sup>74</sup>

In addition to those mentioned above, other spires were built during the 18<sup>th</sup> century, but for the most part it has so far not been possible to link them – in terms of either their forms or creators – to the previously described structures. A pair of new spires crowning the towers of the Jesuit church in Vienna (Fig. 15) was erected, possibly in the second decade of the 18<sup>th</sup> century,<sup>75</sup> to replace the earlier non-openwork onion domes. Unfortunately, both the exact date of their construction and the creator remain unknown for lack of sources.<sup>76</sup> The shape of the Vienna spires finds no analogy not only among spires with spheres, but also in finials erected in the Austrian archduchy at the time, for these spires have bases in the shape of octagonal tambours, decorated with diamond-shaped bossage on each facet. A unitary variant of the sphere’s motif can be seen on the tower of the Red Star crusader church in Ziębice (German: Münsterberg). Rebuilt between 1726 and 1730,<sup>77</sup> the church received a single tower with eight spheres blended into a strip of frieze above the openwork openings. Like the church of the Viennese Jesuits, the tower of the Ziębice Crusaders also finds no analogy in the forms of other buildings of the order.

68. *Zbor pomnikaw historyi i kul'tury Byelarusi*, vol. 2: *Hrodzyenskaya voblasts'*, ed. Stanisław Martselyew (Minsk: Byelaruskaya savyetskaya entsyklopyedyya 1986), 149.

69. Maria Kałamajska-Saeed, *Rosyjskie pomiary klasztorów skasowanych w roku 1832*, vol. 2 (Warsaw: Narodowy Instytut Polskiego Dziedzictwa Kulturowego za Granicą “Polonika”, 2022), fig. 640.

70. Jerzy Paszenda SJ, *Budowle Jezuickie w Polsce*, vol. 1 (Cracow: WAM, 1999), 284.

71. The tower’s construction was probably not a half-timbered one, although such, due to its skeletal structure, could have been erected without extended corbels, but the phrase “Turris supra portam in altum assurexit ex solido muro” present in period descriptions contradicts this assumption, see: Paszenda, *Budowle jezuickie w Polsce*, 285, 288.

72. Gotthard von Hansen, *Die Kirchen und ehemaligen Klöster Revals* (Reval: Lindfors’ Erben, 1885), 62. However, a lack of iconographic sources prevents us from assessing the reliability of Hansen’s account of the similarity between the earlier and the current spire.

73. Sten Karling, “Zur Baugeschichte der Domkirche zu Tallinn”, *Verhandlungen der Gelehrten Estnischen Gesellschaft* 30 (1938): 246–47.

74. *Ibid.*, 247.

75. Spires in the shape described here appear only on the 1720 panorama: Johann Adam Delsenbach, *Prospect der Stadt Wien vor dem Kärntner-Thor*, copperplate, Vienna 1720.

76. Bruno Grimschitz, *Die Universitätskirche zu Wien I. Maria Himmelfahrt* (München–Zürich: Schnell & Steiner, 1956), 15.

77. Mieczysław Zlat, *Ziębice* (Wrocław–Warszawa–Kraków: Ossolineum, 1967), 120.



In addition to those mentioned above, several more topographically and temporally scattered sites deserve attention. In the 1753 bell tower of the church in Dargun, Mecklenburg,<sup>78</sup> the geometry of the dome and the shape of the spike resemble the spire of the town hall in Bautzen, although the similarity does not apply to the proportions and the entire composition. The ridge turret of the 1766 church of St. Gregorius im Elend in Cologne, built through the efforts of members of the van Groote family, which originated from Flanders, has an unusual location and shape.<sup>79</sup> A strongly bulging dome with a hexagonal cross-section was placed directly on the ridge of the roof, without a base in the form of a blind tambour. Finally, the spire of the church in Lübben in Lower Lusatia had unusual, clumsy proportions, caused by a very large difference between the diameters of the shaft and the lower of the openwork sections, and then very small difference between the two tiers. This shape resulted in a tight crowding of the spherical supports under the spike, to the point that the clearance between them was obscured. The spire was constructed between 1774 and 1775.<sup>80</sup>

The motif of spheres did not disappear completely in Denmark either, where it was taken up again after a nearly century-long break lasting from 1665. As late as 1732, during the reconstruction of the church of St. Peter in Copenhagen, which had been destroyed by a fire in 1728, a simple, cupolaed spire, quadrilateral in plan, with an openwork section was erected.<sup>81</sup> This humble finial was built against the wishes of the parishioners, who submitted to the king designs for a much more impressive spire, which were rejected for financial reasons. These designs were probably used two decades later, when the tower's finial was changed again. The immediate cause

was the rivalry with the parish of the Virgin Mary, since the church of the Blessed Virgin had received a new, extremely impressive tower finial in 1745.<sup>82</sup> Beginning in 1750, a number of designs was created, by Jacob Iversen, Johan Boye Junge and Nicolai Eigtved, some of which included spherical supports. The new spire was completed in 1757, designed by Boye Junge.<sup>83</sup> Later, two more finials were built, both in the Danish Revivalist style: in 1914–16 on the tower of the church of St. Nicholas, an almost exact copy of the 1665 spire,<sup>84</sup> and on the tower of Christiansborg Castle, erected by 1928.

#### THE CONCEPT BY DE VRIES AND DE KEYSER

A statement repeatedly encountered in the literature to date is that the motif under analysis had originated in the Netherlands, from where it was first transferred to Denmark and later took root in Saxony and on the Baltic coast. There is no doubt that the earliest examples have a Dutch character and that they were also erected by architects who came from the Netherlands. Simultaneously, however, this motif does not appear even once among the extant spires and their known iconography.

The solution to this contradiction is brought by an original print by Hendrik de Keyser (Fig. 16, 21) depicting the tower of Amsterdam's Westerkerk.<sup>85</sup> The construction of the church began in 1620, but the designer did not live to see its completion. After de Keyser's death, the forms of the building were partially changed, especially within the tower that was completed in 1634. The original idea was to crown the quadrilateral shaft with three tiers: a quadrilateral tier with corner columns and two tiers with octagonal cross-sections. The whole was finished with a canopy with concave slopes and an imperial crown

78. *Die Bau- und Kunstdenkmale in der DDR – Bezirk Neubrandenburg*, ed. Gerd Baier, Horst Ende, Brigitte Oltmanns, Wolfgang Rechlin (Berlin: Henschelverlag Kunst und Gesellschaft, 1986), 125–126.

79. Rupert Schreiber, "St. Gregor. Kirche auf dem Elendsfriedhof, von Groote'sche Familienkirche", in *Kölner Kirchen und ihre Ausstattung in Renaissance und Barock*, part 2, ed. Margrit Jüsten-Hedtrich, Christoph Bellot (Köln: Greven Verlag, 2004), 105–131.

80. Rolf Friedrich, "Der Kirchturm der Stadt Lübben", *Lübbener Heimatkalender* (1998), 48–56; Rolf Friedrich, "Der Knauf des Lübbener Kirchenturms und sein Inhalt", *Lübbener Heimatkalender* (2005), 68–79.

81. Jan Steenberg, "Sankt Petri Kirke", in *Danmarks Kirker*, ed. Victor Hermansen, Aage Roussell, Jan Steenberg, Nationalmuseet (Denmark), part 1: *København*, vol. 1 (København: G.E.C. Gad, 1945–1958), 300–302.

82. *Ibid.*, 306.

83. *Ibid.*, 310–11.

84. *Ibid.*, 465.

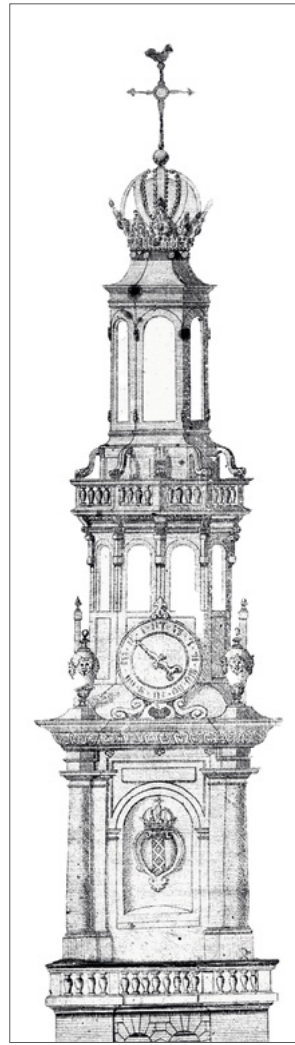
85. Hendrik de Keyser, *Architectura moderna, ofte, Bouwinge van onsen tit [...]* (Amsterdam: Cornelis Dankertsz van Seevenhovē, 1631), plate XI.



with a cross and cockerel (Fig. 21). In the implemented version, the crown rests on volutes; originally, according to the print, it was to be eight small spheres.

The example of the discussion on the reconstruction of the tower in Hulst (more widely described in the further section of this text) illustrates that the abandonment of the original concept did not necessarily negatively affect the impact of de Keyser's concept, widely available in printed copies of *Architectura Moderna*. However, this was not the only direction. Both Laurens and Hans van Steenwinckel the Younger, who used the spherical support motif in the early 17<sup>th</sup> century, practised in Hendrik de Keyser's workshop. By comparing the dates of the oldest spires, it can be seen that they had used the idea even before the prints with the design of the Amsterdam tower were issued. Presumably, then, the Danish spires are an implementation of de Keyser's concept, which the van Steenwinckels learnt while still in his studio in the Netherlands. Such a supposition is associated with the attribution of the authorship of the concept to de Keyser. This is not, however, the only explanation of the phenomenon under discussion here, which has a far more complex origin.

A careful examination of Hans Vredeman de Vries' prints and paintings reveals that the bases of many of the massive obelisks rested on four spheres. This detail is clearly conveyed in prints from the study on perspective<sup>86</sup> (Fig. 17), architectural fantasies<sup>87</sup> (Fig. 18) or in paintings<sup>88</sup> (Fig. 19) and drawings.<sup>89</sup> Where the small scale makes the drawing less clear, the spheres are accentuated with a flash of polished gold surface. Before it was reproduced in a permanent material, the motif appeared in temporary objects, such as the monument prepared to celebrate William of Orange's entry into



16 Hendrik de Keyser, Westerkerk Tower, c. 1620. In Hendrik de Keyser, *Architectura moderna, ofte, Bouwinge van onsen tit* (Amsterdam 1631), plate XI, excerpt

Antwerp in 1578,<sup>90</sup> in which a columnar canopy was topped by five tall obelisks. The corner pinnacles of the *kirketårnet* from Frederiksborg have the same forms as the obelisks in de Vries' paintings (Fig. 20). The relationship of the spires to the sphere-based obelisks seems all the clearer if one considers the group of finials in

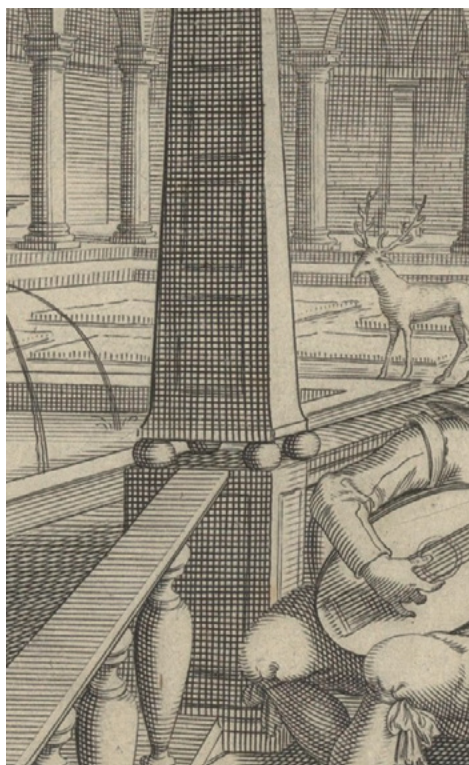
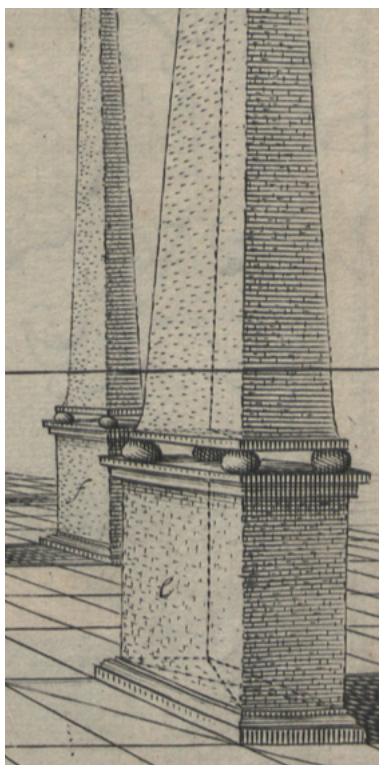
86. Hans Vredeman de Vries, *Perspective, id est, Celeberrima ars inspicientis aut transpicientis oculorum aciei* [...] (Lygdvni Batavorum: Hendrik Hondius, 1605), part 2, plate 1, 5, 9, 11, 12, 22.

87. Hans Vredeman de Vries, *Artis perspectivae plurium generum elegantissimae formulae* [...] (Antuerpae: Gerardus de Iode, Neomagensis, 1568), 8; idem, *L'architecture, contenant la toscane, dorique, ionique, corinthiaque, et compose* (Amsterdam: Chez Ian Iansson, 1628), plate 2, 3, 4.

88. Hans Vredeman de Vries, *Beggar Lazarus at Gates of Rich Man's Palace*, oil, Rijksmuseum, Amsterdam, inv. no. 2390; Gillist Mostaert, *The Massacres of the Triumvirate*, oil, Musée Massey, inv. no. 456; *David Entrusting Uriah with the Letter to Joab*, private collection; Hans Vredeman de Vries, Dirk de Quade van Revensteyn, *Palace architecture with elegant figures and a fountain*, 1596, oil, Kunsthistorisches Museum, Vienna, inv. no. 2334; Hans Vredeman de Vries, *Annunciation*, 1598, oil, Kunsthistorisches Museum, Vienna, inv. no. 6436.

89. Hans Vredeman de Vries, *Solomon receiving the Queen of Sheba*, 1596, pen drawing, Kunsthalle, Bremen, inv. no. 34/262.

90. Hans Vredeman de Vries, *Een Piramide, vol loflijker memorien/Stellen Wij V.O. Oranige Prinche excellent/Ter Welcomste* [...], lavalier pen drawing, Paris, Bibliothèque Nationale de France, Rés. vol. 368.



17 Hans Vredeman de Vries, *Perspective, id est, Celeberrima ars insipientis aut transpicientis oculorum aciei [...]* (Lygdvni Batavorum 1605), part 2, plate 1

18 Hans Vredeman de Vries, *L'architecture, contenant la toscane, dorique, ionique, corinthiaque, et compose* (Amsterdam 1628), plate F

19 Hans Vredeman de Vries, Dirk de Quade van Revensteyn, *Palace architecture with elegant figures and a fountain*, fragment with obelisk, oil. Kunsthistorisches Museum, Vienna, inv. no. 2334

which the obelisks appear as spikes. This group includes those probably erected in the 1620s two towers of Eskilstuna Castle (Fig. 22), each topped with domes topped by obelisks. The same motif also appeared in the tower of the Burgkirche in Königsberg<sup>91</sup> (Fig. 11), designed circa 1690, and the still extant small church in Bojadła (German: Boyadel; Zielona Góra district) from the 1730s<sup>92</sup> (Fig. 23). The twin towers of the Jesuit church in Babruysk (Belarusian: Бабруйск; Polish: Bobrujsk; Mogilev region) were also built probably in 1732–47;<sup>93</sup> there, each of the obelisks crowning the spires was probably based on eight spheres (in the frontal view on the survey drawing, three appear under each).

The uniqueness of the motif – both as supports of obelisks and tiers or spire domes – is immediately noticeable, as can be anecdotally confirmed by the account that the spherical supports of the former spire of the church in Tilsit aroused such admiration in Napoleon that he planned to dismantle the structure and move it to France, with hardly any regard for the fact that for the locals it was a symbol of their hometown.<sup>94</sup> The surprise effect, enhanced by the spatial depth of the clearance and the gilding of the sheet metal, is, to a large extent, still felt today. It is worth noting that – like other elements of the spire: the arches between the pillars or the cupolaed domes – the spherical supports

91. Bötticher, *Königsberg*, 109.

92. Previous literature has dated the church to 1757–58, however, the structure is already visible in an engraving printed in 1751, so the question of its dating requires in-depth research, see: Friedrich Bernhard Werner, *Perspectivische Vorstellung derer von Sr. Königl. Maytt. In Preussen dem Land Schlesien allergnädigst concedirten Bethäuser*, vol. 4: Fürstentum Glogau, Sagan, Schwiebusser Kreis ([Breslau], 1751), plate 2.

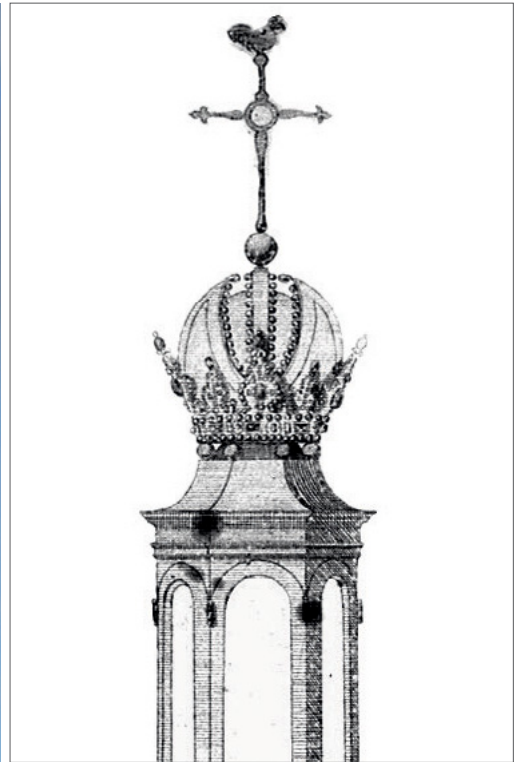
93. Kałamajska-Saeed, *Rosyjskie pomiary klasztorów skasowanych w roku 1832*, vol. 1, 95.

94. Thalmann, *Bau- und Kulturgeschichte Tilsit*, 285.



20 Laurens van Steenwinckel (?), *kirketårnet* (church tower) of Frederiksborg Castle in Hillerød, spire before 1615. Photo: Ajepbah, commons.wikimedia.org, CC BY-SA 40

21 Hendrik de Keyser, Westerkerk Tower, c. 1620. In Hendrik de Keyser, *Architectura moderna, ofte, Bouwinge van onsen tit* (Amsterdam 1631), plate XI, excerpt



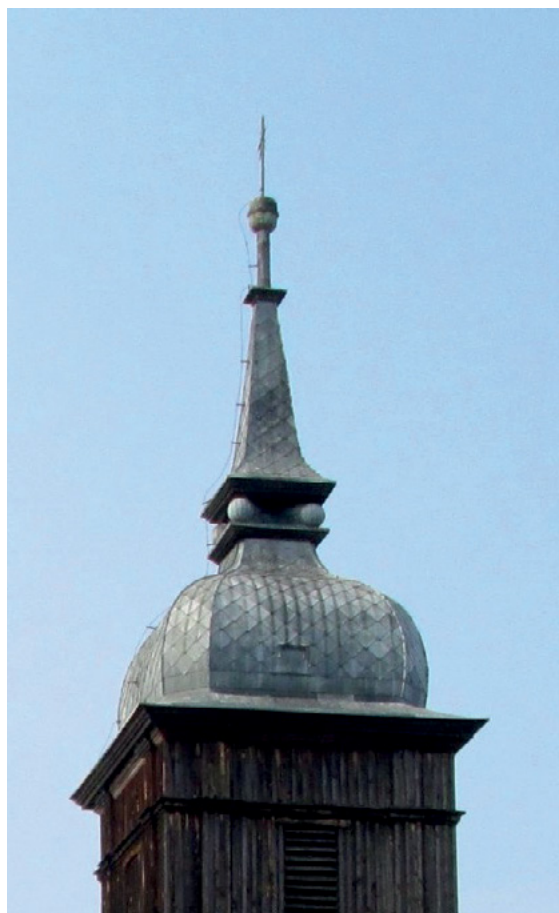
were modelled from wooden discs covered with sheet metal, and the real role of the load-carrying structure was performed by the wooden pillars hidden inside. Thus, it can be concluded that this form was from the outset not dictated by technical considerations, but was a kind of architectural illusion, standing against the logic of the craft of carpentry. Spherical supports were used at different heights of spires, and the way the finials were composed does not permit us to determine a regularity in this regard. The spheres appeared both under the openwork sections and above them, as well as instead of the actual bars. Large or small in relation to the mass of the spires, they carried both full tiers and small spikes. Their diameter was not related to the size of the columns hidden inside, and often the spheres were heavily enlarged, well beyond the minimum size necessary to mask the structure of the construction.

At the same time, it has not been possible to ascertain that the use of such a sophisticated form was related to some specific ideological stance and that the motif in question served as a carrier of non-artistic content. Spherical supports appeared on both princely and mag-nate residences, on main towers and finials of garden

pavilions, on church towers and municipal buildings. Nor were they limited by the religion of the building's founder, appearing in structures erected by both Protestants and Catholics. Thus, they can be considered a kind of virtuoso display, an architectural whim that added extra splendour and uniqueness to the building they decorated.

From a structural point of view, moving the support points of the obelisk towards the top of the base increases the stability of the foundation,<sup>95</sup> but shaping the support in the form of a sphere is already an aesthetic procedure, clearly contrary to its function. This contradiction imparts – even on a fine scale – a sense of instability, an unstable balance, and non-classical tectonics, and thus contributes to a feeling of curiosity and anxiety. Finally, the colour contrast of the copper covering of the spires and the gilt spheres determines the decorative aspect of the motif, for which an additional ideological meaning has not been found. The phenomena of form transformation occurring within the finials of towers remain largely independent of the trends observed in masonry architecture. Concepts and style categories – already widely debated and contested – are minimally

95. Among others, the Obelisk of Theodosius in Constantinople and formerly the Vatican Obelisk were set up in this way, and obelisks in Serlio's projects were similarly propped up: Sebastiano Serlio, *Di Architettura*, book IV: *Regole generali di architettura* (Venetia: Francesco Marcolini da Forlì, 1537), 58 verso, plate LVIII.



22 Eric Dahlbergh, *Eskilstuna Castle from the gardens*, 1660–80, drawing, Kungliga biblioteket, Stockholm, ref. 18036540

23 Bojadła, church, 1730s, the pinnacle of the tower. Photo Krzysztof Łuniewicz

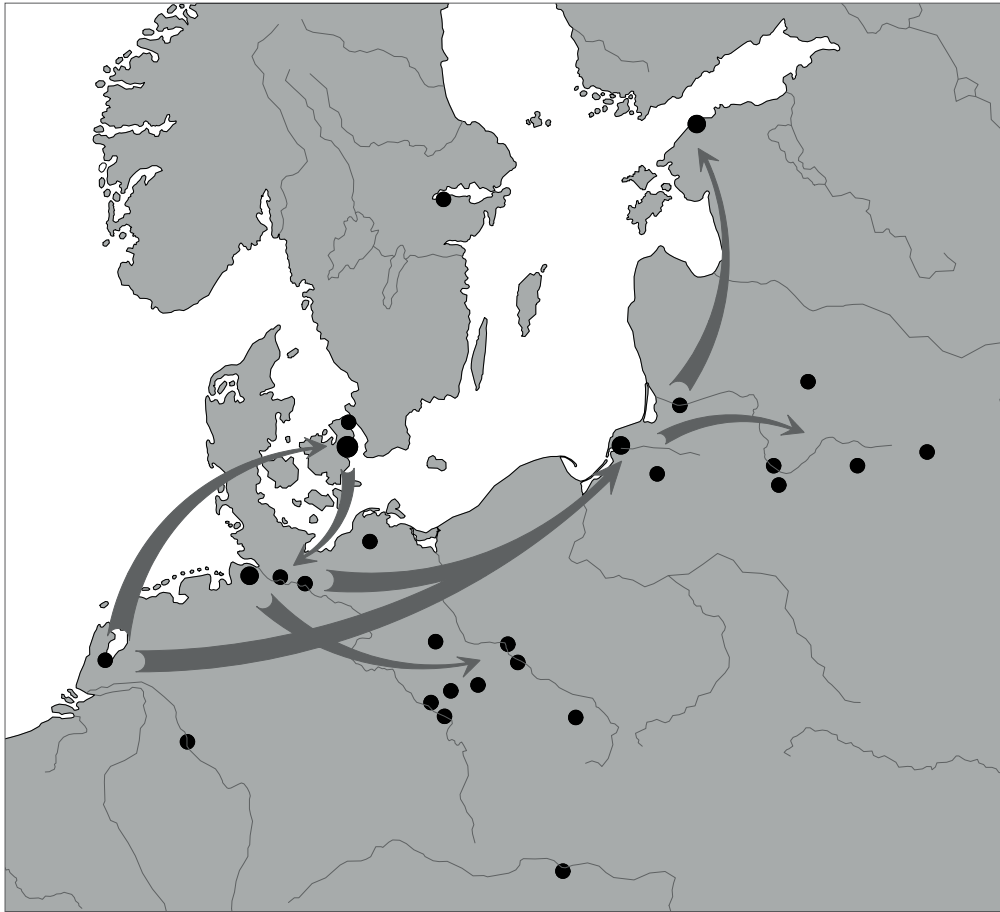
applicable to spires, especially in the 16<sup>th</sup> and 17<sup>th</sup> century. Nevertheless, the motif in question, due to its being rooted in the distinctive set of forms popularised by Hans Vredeman de Vries and its tectonic qualities, can be linked to attitudes characteristic of Dutch art of the second half of the 16<sup>th</sup> century. To this day, the forms of the spires still create the impression of breaking the laws of statics, so one can only surmise how strongly influential these powerful towers, wobbling on golden spheres, were in the past.

#### THE TOPOGRAPHY AND CHRONOLOGY OF STRUCTURES

A look at the map (Fig. 24) with the distribution of more than 30 identified examples shows that although the idea of the (illusory) support of the tower's weight on spherical supports had originated in the Netherlands, the first implemented examples appeared in spires built in Denmark, and then, around the middle of the 17<sup>th</sup> century, the motif spread to the area of Holstein and Lower Saxony. The next wave of its expansion

occurred in the second half of the 17<sup>th</sup> century and the beginning of the 18<sup>th</sup> century, when many buildings were constructed in two regions: first, Saxony, Lusatia and north-western Silesia, and second, Prussia, including the border of the Grand Duchy of Lithuania. The last direction was Tallinn, where spires with spheres were built in the latter half of the 18<sup>th</sup> century. In addition to the above, several topographically isolated implementations can be found (Cologne, Vienna).

The paths of penetration of spire forms coincide with analogous phenomena from other fields of fine arts, as well as the directions of trade, and are shaped with the complicity of the political and social effects of the Thirty Years' War. Heavily dominated by Dutch influence, Denmark arguably became a secondary model imitated in northern Germany during the post-war reconstruction. Undoubtedly, the three decades of war led to the dispersal of the hitherto extremely conservative community of master carpenters in Silesia and Lusatia, with the result that the second half of the 17<sup>th</sup> century was a period of increasing diversity in the



24 Presumed directions of the spread of the motif of spherical supports in tower spires.  
Author's own elaboration

finial forms observable in the area, in sharp contrast to the previously observed tendency to repeat only a few types of spires.

The way in which the motif of spherical spire supports spread is well illustrated by the efforts to rebuild the tower of the church of St. Wilibrord in Hulst. In 1663, the tower above the intersection, constructed after a fire in 1562, was struck by lightning and burnt down.<sup>96</sup> Later that year, the bell-founder and clock-maker François Hemony proposed the construction of the carillon to the city council, also providing representations of the towers: two design sketches by architect Philip Vingboons and three towers, two of which belonged to the Hamburg churches of St. Michael and St. Catherine already discussed here, while

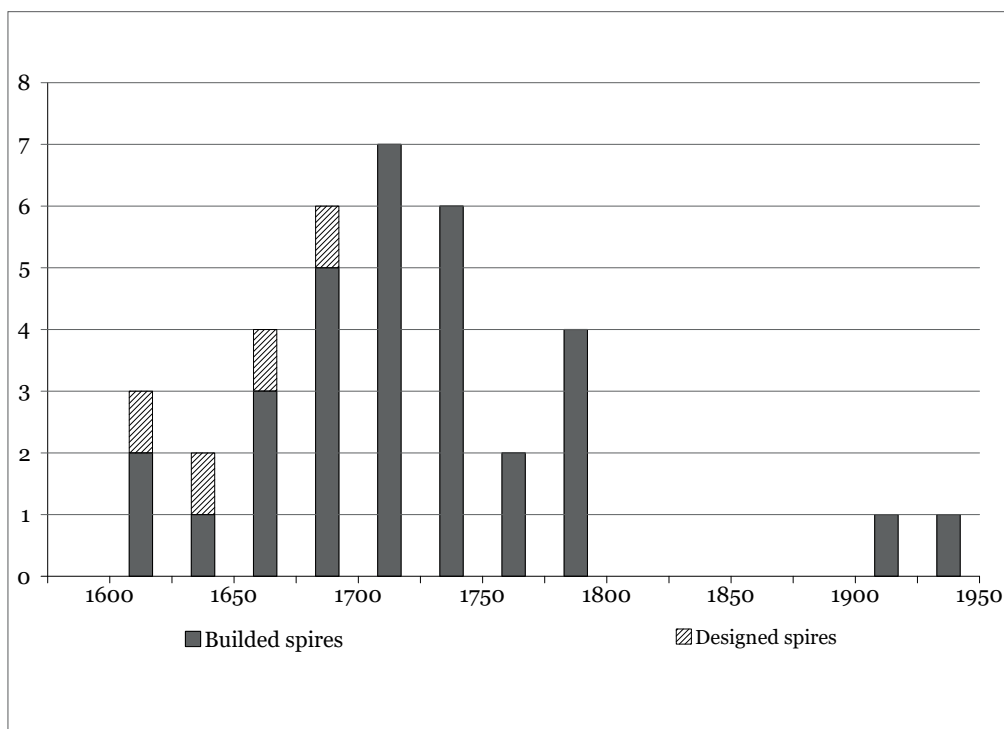
the last was taken from *Architektura Moderna*.<sup>97</sup> The use of graphic representations and models was noted in the sources in relation to the designed towers on many occasions, but a situation when we have knowledge of both the participants in the subject of the discussion and its outcome, as well as the surviving materials, is – from the perspective of the researcher – extremely rare, although undoubtedly typical in the context of the era.

When arranged chronologically (cf. table 1), these spires make it possible to note that the motif, sparse in the first decades of the 17<sup>th</sup> century, became popular at its turn and in the first years of the 18<sup>th</sup> century, to disappear completely from the repertoire of forms used after 1800 until the late examples of in the Revivalist style in

96. Simon Groenveld, “Een onbekend ontwerp van Pieter Aaronsz. Noorwits: De toren van de Willibrorduskerk in Hulst (1663–1667)”, *Bulletin KNOB* 110, no. 1 (2011): 19.

97. Vingboons' drawings have not survived; the prints are held in the collection of Gemeentearchief Hulst, ref. 441 E 1; Groenveld, “Een onbekend ontwerp van Pieter Aaronsz. Noorwits: De toren van de Willibrorduskerk in Hulst (1663–1667)”, 23.





25 Chronology of the creation of designs and construction of spires with the motif of spherical supports. Arranged by the author

the early 20<sup>th</sup> century. Undoubtedly, the collected material is far from complete, but it is difficult to estimate how many spires – mainly in the form of unpublished iconography and design drawings, and, to a lesser extent, archival records – could not be collected during the conducted search. Nevertheless, the scale and prominence of the buildings described above – residences, city churches and town halls – lead us to believe that

it has been possible to identify those with the greatest artistic significance, prestige and structural momentum. Indeed, although the size of a work does not determine its importance in the art world, the need for pomp and grandiosity prompted their founders to build finials that reached the limits of structural possibilities of the era, and their fanciful forms were emphasised by gilding the ornamental spheres.

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