

Mikołaj Getka-Kenig

ANTONI ZWOLIŃSKI, A WARSAW-BASED MASTER FOUNDER FROM THE TURN OF THE 20TH CENTURY¹

The awareness of the history of the bellfounding art in Warsaw during the partitions of Poland has so far been very incomplete. Our knowledge about the individual workshops, the people who managed them as well as the objects that were the result of their work, i.e. mainly the bells, still calls for many factual additions.

Antoni Zwoliński (1846-1911?), (ill. 1) mentioned already in the first sketchy studies on the history of the bellfounding craft on Polish soil, deserves special attention among the Warsaw founders of the day². A direct heir of the tradition of the Petersilge family of founders active in Toruń and Warsaw, although not related by blood to them, he held the leading position in the industry not only in Warsaw, but in the entire Russian partition, throughout the over four decades of his activity. Without any serious competitors in the area, he was a unique example for the Kingdom of Poland of a master founder who went beyond the border of traditional craftsmanship, entering the path of regular (and relatively profitable) industrial production. To date, only Kazimierz Gierdziejewski in *Zarys dziejów odlewnict-*

1 The article is an outcome of the research carried out by the author as a participant in the grant of the National Program for the Development of Humanities titled *Materiały do historii ludwisarstwa w Polsce: inwentaryzacja dzwonów kościelnych pochodzących z ziem I Rzeczypospolitej ewakuowanych przez władze rosyjskie w latach 1914-1923* [Materials for the history of bellfounding in Poland: inventory of church bells from the lands of the 1st Republic of Poland evacuated by the Russian authorities in the years 1914-1923] [0039/NPRH2/H11/81/2012].

2 E.g.: *Biesiada Literacka* of 30 June 1911, no. 26, p. 512; *Przemysł i Rzemiosło*, 1921, vol. 1, no. 2, p. 52. The article is a translation of the Polish version of the text.

wa polskiego (1954) has attempted to provide a brief description of the history of Zwoliński's foundry ("the only larger Polish foundry workshop in the Russian partition")³. However, the factual information provided is very inaccurate and even erroneous. Gierdziejewski mentions Zwoliński himself in only one sentence, focusing his attention primarily on the Petersilge family. Moreover, he limits Zwoliński's activity to the years 1870-1888, which is contrary to historical records. Erroneous information is provided, too, by e.g. Michał Brensztejn in his *Zarys dziejów ludwisarstwa na ziemiach b. Wielkiego Księstwa Litewskiego* of 1924⁴. The aim of this article is, therefore, not only to present a detailed description of the career of this master founder, which is a key part of the history of Warsaw-based (and at the same time Polish) foundry industry in the 19th century, but also to rectify some information concerning him, which has appeared in the scientific discourse to date⁵.

Antoni Zwoliński's ancestry

Antoni, actually Michał Antoni Zwoliński (he used only his second name in his professional life) did not come from a family of founders, even though he had roots in the crafts on his paternal side. His great-grandfather Andrzej Zwoliński (ca. 1736–1814), a resident of Sieradz, was a master brewer by trade⁶. His business talent and entrepreneurship boosted his social advancement, crowned with his knighthood, received (upon a recommendation of Castellan of Busk Teofil Załuski) at the Grand Sejm in 1790⁷. Antoni's great-grandfather was at that time the wealthiest resident of Sieradz, an owner of a number of properties in town, and his principal line of business was trade⁸. His property status motivated him to engage in political activity at a time when the reform of royal towns and efforts to align the legal status of townspeople with the nobility was an important political issue⁹. His position in the province is borne out by the honorary distinction of the royal secretary (customarily awarded to representatives of the bourgeois elite)¹⁰. As a mayor (chairman of the municipal court) he took part in the

3 K. Gierdziejewski, *Zarys dziejów odlewnictwa polskiego*, Stalinogród 1954, p. 145–146. 19th-century bell foundry industry in Warsaw and in the entire Russian partition has not as yet been the subject of extensive research, including the participants of the *Bellfounding in Poland* conference (part of a series *Arts, Crafts and Design in Poland*), held in Toruń by the Toruń Chapter of the Union of Art Historians in 2002 – conference proceedings came out in print as: *Ludwisarstwo w Polsce*, ed. K. Kluczwajd, Toruń 2003.

4 He claims, e.g. that the "A. Zwoliński i S. Czerniewicz" company became the sole property of Stanisław Czerniewicz as early as 1909 and attributes to him the bells cast as of that year: M. Brensztejn, *Zarys dziejów ludwisarstwa na ziemiach b. Wielkiego Księstwa Litewskiego*, Wilno 1924, p. 132.

5 Gierdziejewski's data concerning Zwoliński and his factory were quoted e.g. in: *Tajemnice starych dzwonów Torunia i Chełma w 500-tną rocznicę ulania wielkiego Tuba Dei spisane*, ed. T. Jaworski, M. Nasieniewski, K. Przeglądka, Toruń 2014, p. 134.

6 Register of death certificates of the Roman Catholic parish in Sieradz, 1814, no. 230.

7 Archiwum Główne Akt Dawnych [Main Archive of Old Documents, hereinafter: AGAD], Archiwum Sejmu Wielkiego [Archive of the Grand Sejm], file no. 20, k. 12v.

8 J. Lukowski, *Liberty's Folly: The Polish-Lithuanian Commonwealth in the Eighteenth Century, 1697-1795*, London 1991, p. 63; Z. Anusik, "Mieszkańcy Sieradza w XVII i XVIII wieku – studium demograficzne", *Zeszyty Wiejskie*, 2016, vol. 22, p. 397–398.

9 See: M. Wiśniska, "Ruch mieszczański w Sieradzkim w okresie Sejmu Wielkiego", *Rocznik Łódzki*, 1978, vol. 23, p. 43–73.

10 AGAD, Księgi miejskie Sieradza [Sieradz City Books], no. 61, E, k. 1v i 4.

Black Procession in 1789 and was a signatory to the Union of Cities Act¹¹. He was supported in his activities by his son, grandfather of Antoni, Adam Zwoliński (ca. 1762–1846). Like his father, he was town mayor for a time and then president of the Sieradz Branch of the Appellate Court for 16 free towns, which court was set up in the wake of the reorganisation of the judiciary after the Grand Sejm¹². Adam Zwoliński was president of the Appellate Court in the period 1791–1792, until the moment power in the Republic was taken over by the Targowica Confederacy¹³. In 1792, along with his father he joined the group of benefactors contributing to equip the national army in the war with Russia to defend the Third of May Constitution¹⁴. The collapse of the Republic, taking place not long afterwards, putting a definitive end to his judicial career, was of key importance for the further history of the entire family. While Adam Zwoliński spent the first years after the third partition in Sieradz, at the time Polish statehood was “resurrected” by Napoleon in late 1806 and early 1807, he endeavoured to obtain a position matching his experience in the nascent Polish administration¹⁵. However, he was not employed, perhaps because of the lack of suitable connections in the new political configuration. In this situation, he decided to go to Warsaw, where he took up the job of a notary public¹⁶. His father was highly esteemed in Sieradz, as witnessed by his appointment as associate judge of the municipal assembly of the counties of Sieradz and Szadków, where local residents applied for accession to the General Confederacy of the Kingdom of Poland in 1812¹⁷. He died two years later and was thus unable to witness the spectacular development of the career of his son-in-law, Kajetan Dominik Kalinowski (1775–1828) who, of modest means yet an ambitious son of a blacksmith from suburban Warsaw, acquired high governmental positions in the Congress Kingdom as a member of the Council of State and director in the Government Commission of Treasury and Revenue. He was thus the closest collaborator and first deputy of Minister Franciszek Ksawery Drucki-Lubecki¹⁸.

The close ties between the Zwolińskis and Kalinowski no doubt paved the way for Andrzej's elder son Józef Zwoliński (1795–1847) to his employment in the said commission¹⁹. Józef was a would-be physician, as he quit medical studies

11 “Akt Zjednoczenia Miast”, in: *Materiały do dziejów Sejmu Czteroletniego*, ed. J. Woliński, J. Michalski, E. Rostworowski, vol. 2, Wrocław 1959, p. 308.

12 “Protokół zebrania wydziałowego i instrukcja dla plenipotenty miast wydziału sieradzkiego”, in: *Materiały do dziejów...*, vol. 5, p. 153–154; AGAD, Księgi miejskie Sieradza, no. 60, XV G, k. 167v.

13 AGAD, Komisja Rządząca, file no. II/97b, p. 63.

14 T. Korzon, *Wewnętrzne dzieje Polski za Stanisława Augusta (1764–1794): badania historyczne ze stanowiska ekonomicznego i administracyjnego*, vol. 3, Kraków 1897, p. 438.

15 AGAD, Komisja Rządząca, file no. II/97b, p. 62–63.

16 *Kurier Warszawski* of 28 October 1846, no. 287, p. 1361 (obituary).

17 *Dziennik Konfederacji Jeneralnej Królestwa Polskiego* of 16 VIII 1812, no. 20, p. 191.

18 J.A. Miączyński, “Kalinowski Kajetan Dominik (1775–1828)”, in: *Polski Słownik Biograficzny*, vol. 11, Wrocław 1964–65, p. 458–459.

19 Andrzej's second son, Alojzy Zwoliński (ca. 1800–1845) married the owner of a tenement house in Piwna Street in the Warsaw's Old Town and his revenues were most probably from tenants' rent. Register of marriage certificates of the Roman Catholic parish of St. John the Baptist, 1839, no. 44; Register of death certificates of the Roman Catholic parish of St. Andrew in Warsaw, 1845, no. 4.

at the University of Warsaw shortly after enrolling in the medical school²⁰. His professional career was not very successful since his final position was that of a cashier (*rendant*) in a stamp office²¹. He was the father of the master founder Antoni, born on 28 December 1846 in Warsaw at 587 Długa Street. His mother was Paulina Irena (or Irena Paulina) nee de Seifert (Seiffert, Zayfert), a daughter of a middle level clerk in the Government Commission of Internal Affairs and the Police. The Seiferts were a noble family from Pomerania, of Sartawski coat of arms, members of the Evangelical Church of the Augsburg confession. Paulina Irena's mother, nee Podbielska, was born into a merchant family who settled in the Warsaw district of Praga²². Antoni Zwoliński was born as at least the seventh child of his parents, at a time when his father was seriously ill – a year before his death²³. The premature loss of a parent significantly affected the life of the orphaned son, who was thus placed in the care of a family friend, a bell founder Michał Adolf Petersilge (ca. 1816–1896), whose mother, Zofia nee Heyn (ca. 1779–1852), was the godmother of Antoni (Michał was named not so much after her son, but most likely after his godfather, second lieutenant of Russian artillery Mikhail Savin).

The legacy of the Petersilge family

Michał Adolf Petersilge came from a family which had for at least three generations been bell master founders. His grandfather Mikołaj Petersilge (1717–1774) was connected to Toruń, one of the major centres of bell making on Polish soil²⁴. Mikołaj's son and father of Michał, Jan (who signed his name as Johann) Petersilge (1764 or 1765–1849) settled down in Warsaw, where ca. 1791 he was an apprentice in the foundry of Jan Ehrenfried Dietrich²⁵. Later on he opened his own workshop (his earliest bell on record was cast in 1795)²⁶, located most probably in New Warsaw. He must have been wealthy or at least well-connected among the Warsaw burghers since he married a daughter of Jakub Heyn, the treasurer and then mayor of New Warsaw, of the New Town (in 1793 he was the last in this of-

20 R. Gerber, *Studenci Uniwersytetu Warszawskiego 1808-1831: słownik biograficzny*, Wrocław 1977, p. 343.

21 *Kurier Warszawski* of 11 December 1847, no. 331, p. 1577 (obituary).

22 Register of baptismal certificates of the Roman Catholic parish of St. John the Baptist in Warsaw, 1847, no. 622; information on maternal ancestry of Michał Antoni Zwoliński obtained from the family.

23 Register of death certificates of the Roman Catholic parish of St. John the Baptist in Warsaw, 1847, no. 649. It seems that only two sisters lived until the age of maturity: Matylda (1844–1894) and Kamilla (1845–1915). The former never married, while the latter was the wife of the teacher Tomasz Żyliński. The Żyliński family lived in Mariampol.

24 J. Samek, *Polskie rzemiosło artystyczne: czasy nowożytne*, Warszawa 1984, p. 347; see also: J. Teodorowicz-Czerepińska, "Zasięg eksportu dzwonów z Gdańska w głąb Polski drogami wodnymi", in: *Sztuka pobrzeża Bałtyku*, ed. H. Fruba, Warszawa 1978, p. 410–411.

25 E. Szulc, "Materiały do historii warszawskiego złotnictwa, brązownictwa i konwiarstwa zaczerpnięte z aktów stanu cywilnego oraz spisów ludnościowych obu warszawskich parafii ewangelickich z lat 1790–1860", *Biuletyn Historii Sztuki*, vol. 43, 1981, no. 2, p. 53.

26 The bell for the Skrzyszew parish: I. Galicka, H. Sygietyńska, "Zabytki sztuki powiatu sokołowskiego", in: *Dzieje Sokołowa Podlaskiego i jego regionu*, ed. J. Kazimierski, Warszawa 1982, p. 329. According to Gierdziejewski, it was 1778. K. Gierdziejewski, *Zarys dziejów...*, p. 128, 133. According to press releases, however, most likely based on the information submitted by his son and successor, the Jan Petersilge foundry was set up in Warsaw in 1803. *Kurier Warszawski* of 4 April 1850, no. 90, p. 463.

fice), a tinker by trade²⁷. Petersilge's high position in the craftsmen's community is evidenced by his appointment as the elder of the Warsaw founders' guild²⁸. His factory cast the bell which was hung in 1827 in the Dominican Church²⁹.

Jan Petersilge's son (one of the five children), Michał Adolf took over his father's workshop in 1843 (according to Gierdziejewski this took place only in 1847³⁰), after a nine-year apprenticeship abroad, most likely in Vienna. That year "Petersilge, Syn" advertised in the Warsaw-based press as a newly settled producer of "pewter, lead and tin objects of all shapes and sizes, vats and flasks for dyers, and bells cast the Viennese way, beautiful, expertly cast and with an exquisite peal"³¹. The Petersilge family allegedly originated in Bohemia³², hence the Habsburg orientation of his education. At that time the factory was located at 271 Freta Street, in Jan Petersilge's house³³. A few years later *Kurier Warszawski* published information on the three years of operation (until 1850) of Michał Adolf's factory, said to have made at that time 471 bigger and smaller bells with an aggregate weight of 62,282 pounds, i.e. slightly more than 25,255 kilograms³⁴. Out of the total number, as many as 444 bells (actually 445, as there was a mistake in the calculation) were hung on Catholic churches in the Kingdom of Poland only. Their total weight was 41,052 pounds. The biggest of the bells to be hung on belfries weighed 4,000 pounds and the smallest a mere 150 pounds. The total output of Petersilge's factory at that time was 33 bells for belfries with an aggregate weight of 37,920 pounds. Besides, his portfolio included chime bells (23 bells, weight 1820 pounds), signal bells at sacristies (104 bells, weight 832 pounds) and small handbells for altar boys (285 items, weight 480 pounds)³⁵.

That very year another article dedicated to Petersilge's workshop came out in *Gazeta Rolnicza, Przemysłowa i Handlowa*³⁶. Extolling the extraordinary inventiveness of this master founder, the anonymous author noted his innovative habit of "repositioning the canons on which the clapper hangs" so that "more than only one side of the bell should be struck during its existence, which could cause changes in the peal". Besides, he was praised for making all kinds of "fully-cast brewery vats, cylinders, faucets, etc.", instead of piecing them out of "cold parts joined under a hammer", which made the foundry unique in the entire Kingdom of Poland. We learn from this article that Petersilge was also involved in the manufacture of fire engine and portable extinguishers, as well as irons, mortars

27 Register of death certificates of the Roman Catholic parish of St. John the Baptist in Warsaw, 1852, no. 482 (death certificate of Zofia Petersilge nee Heyn, daughter of Jakub and Małgorzata nee Szypowska); Z. Niedziałkowska, "Gospodarka finansowa Nowej Warszawy za Stanisława Augusta", in: *Warszawa XVIII wieku*, issue 3, ed. J. Kowceki, Warszawa 1975, p. 170.

28 *Twory Józefa Dyonizego Minasowicza*, vol. 3, Lipsk 1844, p. 258.

29 It weighed 4,757 pounds. *Gazeta Warszawska* of 10 November 1827, no. 303, p. 2999.

30 K. Gierdziejewski, *Zarys dziejów...*, p. 145.

31 *Kurier Warszawski* of 22 April 1843, no. 107, p. 506.

32 K. Gierdziejewski, *Zarys dziejów...*, p. 133.

33 On the owner of this house, see: *Kurier Warszawski* of 27 July 1845, no. 196, p. 947.

34 1 New Polish pound (between 1819 and 1849) was an equivalent of 0.405504 kg. I. Ihnatowicz, A. Biernat, *Vademecum do badań nad historią XIX i XX wieku*, Warszawa 2003, p. 58.

35 *Kurier Warszawski* of 4 April 1850, no. 90, p. 463.

36 *Gazeta Rolnicza, Przemysłowa i Handlowa* of 21 April 1850, no. 16, p. 4-5.

and candlesticks, whose manufacture was also marked by innovative solutions, mainly concerning the extension of the service life. In conclusion, the author of the article praised the master founder for his contribution to “the growth of industry” and “the common good” rather than being solely driven by profit (which was not conducive to employing innovative solutions).

Gazeta Rolnicza announced a recent transfer of a “factory warehouse” from Miodowa Street to 521 Podwale Street. There, in the Muszyński house, Petersilge ran his foundry in subsequent years, next door to Paulina Zwolińska’s “solicitation bureau” (a press advertisement located it “next to the bell foundry”); the solicitation in question was simply a governess agency³⁷. Petersilge and Zwolińska (the latter most likely with her children) lived actually in this very house, according to information from 1854³⁸. Interestingly, the aforementioned article from *Kurier Warszawski* from the same year as the text in *Gazeta Rolnicza* notified the readers that the factory was located in another spot – at lot no. 1923 Przyrynek Street at the intersection with Samborska Street, next door to the parish Church of the Annunciation of the Holy Virgin Mary in New Town (Petersilge’s own house).

According to Gierdziejewski, the acquisition of Petersilge’s factory by his pupil took place in 1870. However, Zwoliński as a bell founder from Podwale Street (not 521 but 518) was mentioned by *Przewodnik Warszawski na rok 1869*, which guidebook published updated information for the end of the preceding year. Zwoliński himself pointed to the year 1868 as the onset of his professional activity in the advertising brochures promoting his company during the 1909 industrial show in Częstochowa³⁹. Interestingly, *Kalendarz Ilustrowany na rok 1873* mentioned only Michał Petersilge among Warsaw-based bell founders⁴⁰. In the light of sources known to the author, the relationship between the former plant of one and the new plant of the other is not very clear.

The aforementioned note from *Kalendarz Ilustrowany* provides crucial information on the Petersilge factory in the early 1870s, offering an insight into the legacy that Zwoliński dealt with. The “bell factory” was composed of two workshops, most probably of those in Podwale and at the intersection of Przyrynek and Samborska. The factory’s annual turnover was 1,500 roubles. The two workers employed there earned a total of 360 roubles a year. The value of raw materials needed for production reached 800 roubles and the total value of the plant was 3,000 zlotys. All these figures ranked the factory among Warsaw’s “smaller” plants (the table there divided enterprises into smaller and larger ones).

Onset of independent activity

In 1874, Zwoliński advertised in the press his “factory of bells and metal casts” at the intersection of Samborska and Przyrynek Streets, i.e. in Petersilge’s

37 *Kurier Warszawski* of 24 May/5 June 1852, no. 147, insert, p. n.lb.

38 *Skorowidz mieszkańców miasta Warszawy z przedmieściami na rok 1854*, Warszawa 1854, p. 244, 390.

39 *Świat* of 18 September 1909, vol. 4, no. 38, p. 23.

40 *Jana Jaworskiego Kalendarz ilustrowany na rok 1873*, Warszawa [1872], p. 22.

earlier location. He then represented that he had a sizeable stock of ready bells ranging from 0.2 pound ("5 per pound") and one thousand pounds. He would also "recast old bells" and make "all kinds of casts of pewter, red brass [i.e. gunmetal] and white metal", "at the most affordable prices". His potential clients were not only residents of the Kingdom of Poland but also of the Russian Empire, and he stressed that the "interested parties" from there should "include the exact address" in their correspondence, "up to the very last post office"⁴¹. In the future, commissions from the Russian Empire were by no means rare among his transactions, and we know that Zwoliński made the first bells for churches in Lithuania as early as the first half of the 1870s⁴².

Importantly, in 1872 Zwoliński married Maria Michalina Rogalewiczówna (1847–1923). The wedding ceremony took place in the Church of St. Alexander in Warsaw⁴³. His wife's father was Antoni Rogalewicz (1822–1886), a scion of Lithuanian small nobility, a graduate of the University of Petersburg, a high school chemistry professor, a famous promoter of life sciences in Warsaw⁴⁴. Her mother was a descendant of a family of clerks and merchants, also of noble descent⁴⁵. Zwoliński's marriage was not motivated by financial considerations as there is no indication that Rogalewicz was especially wealthy⁴⁶ and was definitely lacking in familial and social connections that could benefit Zwoliński's business⁴⁷. Zwoliński's wife gave birth to the son Michał (who died in early childhood in 1875)⁴⁸ and daughter Matylda (1875–1961), (ill. 2), who played a significant (if rather passive) role in the company's history.

Until 1877, the bell and metal (or "metallic") casts of A. Zwoliński was located at no. 1923 in the New Town. That year it was relocated to a more industrial section of Warsaw, i.e. to Gęsia Street no. 2290d (police no. 55) to a house that

41 *Przegląd Katolicki* of 9 April 1874 (vol. 12), no. 15, p. 240.

42 P. Šverbas, *Telšių vyskupijos bažnyčių varpai*, Vilnius 2014, p. 138.

43 Register of marriage certificates of the Roman Catholic parish of St. Alexander in Warsaw, 1872, no. 109.

44 *Wszechświat* of 16 May 1886, vol. 5, no. 20; A. Massalski, *Słownik biograficzny: nauczyciele szkół średnich rządowych męskich w Królestwie Polskim 1833–1862*, Warszawa 2007, p. 354–355 (with erroneous information implying that Rogalewicz came from a peasant family). Antoni's father came from the village of Dubina in the Vilnius region; he was a lieutenant in the November Uprising and after being interned by the Prussians, he worked in Warsaw as a revisionist in the Consumption Office. S. Uruski, *Rodzina: Herbarz szlachty polskiej*, vol. 15, Warszawa 1931, p. 215; R. Bielecki, *Słownik biograficzny oficerów powstania listopadowego*, vol. 3, Warszawa 1998, p. 389. The daughter Maria Michalina was named after his sister, who died of exhaustion a year before having served time in the Warsaw Citadel, where she was sent for her involvement in clandestine activities. *Uczestnicy ruchów niepodległościowych w l. 1832–1855 (Królestwo Polskie): przewodnik biograficzny*, Wrocław 1990, p. 381; W. Śliwowska, "Rogalewiczówna Michalina (zm. 1846)", in: *Polski Słownik Biograficzny*, vol. 31, Wrocław 1988–1989, p. 398–399.

45 Her father owned property in Warsaw and was the forest inspector of the Wyszków Estate near Warsaw, her uncle was a wine merchant and her brother-in-law was a wealthy entrepreneur and landowner; her brother-in-law. Her natural brother took part in the November Uprising as a second lieutenant in the infantry. S. Uruski, *Rodzina: Herbarz szlachty polskiej*, vol. 13, Warszawa 1916, p. 34–35; R. Bielecki, *Słownik biograficzny oficerów powstania listopadowego*, vol. 3, Warszawa 1998, p. 241.

46 State teachers were relatively poorly paid. A. Massalski, *Szkoły średnie rządowe męskie na ziemi kielecko-radomskiej w latach 1833–1862*, Kielce 2001, p. 275.

47 As to his ties with the economic environment, Rogalewicz was merely a supervisory board member of Spółka Jedwabnicza (Silk Company, as a specialist on silken ware production). *Przegląd Tygodniowy* of 12/24 September 1870, no. 39, p. 318.

48 An obituary in *Kurier Warszawski* of 21 May 1875, no. 117, p. 3.

contained the master founder's "own lodgings"⁴⁹. Zwoliński's factory operated there at least till the end of the 19th c. and he himself and his family are known to have lived on the premises⁵⁰.

In the 1890s, Zwoliński joined venture with another Warsaw-based master founder, Fulgenty Englisz (Englisch) (ca. 1840–1908⁵¹), whose workshop was in the neighbourhood, also in Gęsia Street⁵². Both founders were close on the social level; Englisz was the best man at the wedding of Zwoliński's daughter with Stanisław Jan Kenig (1864–1926); the wedding ceremony took place in Warsaw in 1894⁵³. Moreover, Zwoliński's wife along with Englisz's wife Aleksandra nee Serwatowicz, in 1882 took part in a few weeks' collection in the Church of St. Alexander⁵⁴. According to Gierdziejewski, Englisz was allegedly to take over Zwoliński's foundry and established a company with the latter's son-in-law⁵⁵. However, there are no historical records to back up this hypothesis. Zwoliński does not seem to have established a single company with Englisz, although the two may have collaborated occasionally. Probable proof of this collaboration was e.g. the casting of six bells for the parishes in Ufa, Bolimów and Vladimir-on-Klyazma, which in 1899 were dedicated jointly in the Holy Cross Church by Bishop Kazimierz Ruszkiewicz. The first two were made by Englisz, the others by Zwoliński⁵⁶.

Joint venture with Kazimierz Butwiłowicz

Zwoliński's first documented joint venture was set up in 1900 with one Kazimierz Butwiłowicz (there is a lack of more detailed and reliable information about him; this may have been the Warsaw clerk Kazimierz Leopold Prus Butwiłowicz, who in 1891 married Helena nee Bogoria Maciejewicz;⁵⁷ interestingly, his father was a treasury official⁵⁸, like Zwoliński's father). The share

49 *Przegląd Katolicki* of 4 October 1877, no. 40, p. 640; *Przegląd Katolicki* of 11 October 1877, no. 41, p. 656.

50 Here in 1882 died Zwoliński's mother Paulina Irena. Register of death certificates of the Roman Catholic parish of the Nativity of the Holy Virgin Mary in Warsaw, 1882, no. 311; this address was also provided by Matylda Zwolińska (who lived with her parents) on the occasion of the wedding with Stanisław Kenigi in 1894. Register of marriage certificates of the Roman Catholic parish of the Nativity of the Holy Virgin Mary in Warsaw, 1894, no. 282. The following year their eldest son Marian Mieczysław Kenig (1895–1959) was born here. Register of baptismal certificates of the Roman Catholic parish of the Nativity of the Holy Virgin Mary in Warsaw, 1896, no. 346.

51 *Głos Warszawski* of 6 September 1908, no. 160, p. 4; *Sztuka Bronzownicza i Złotnicza*, year 1, September 1908, no. 9, p. 12.

52 Englisz was a member of the Union of Christian Workers and of the Warsaw chapter of the Tsarist Society of Correct Hunting (*Łowiec Polski* of 3 [15] February 1900, no. 4, p. 9).

53 Register of marriage certificates of the Roman Catholic parish of the Nativity of the Holy Virgin Mary in Warsaw, 1894, no. 282. The other best man was the Warsaw-based advocate Stanisław Próchnik.

54 *Gazeta Warszawska* of 25 March/6 April 1882, no. 76, p. 1.

55 K. Gierdziejewski, *Zarys dziejów...*, p. 146.

56 The bell for the church in Ufa weighed 800 pounds and was decorated with the image of the Crucified Jesus; the bell sent to Bolimów and christened Wincenty weighed one thousand pounds and featured Latin inscriptions. In turn, Zwoliński's bells for Vladimir-on-Klyazma were christened Edward, 800 pounds in weight, Józef Apolinary – 400 pounds, and two nameless ones, one of which weighed 200 pounds and there is no data on the weight of the other one. *Kurier Warszawski* of 17 November 1899, no. 318.

57 Register of marriage certificates of the Roman Catholic parish of St. Anthony in Warsaw, 1891, no. 4.

58 Information on the basis of the inscription on the tombstone of Hipolit Butwiłowicz in the Powązki Cemetery, precinct 62, row 4, lot 1.

capital of their business, to be called “A. Zwoliński i S-ka” factory, was 13,000 roubles⁵⁹. At that time Zwoliński cooperated moreover with “J. Szpetkowski & Spółka”, a manufacturer of church furnishings, whose main office was in Jerolimskie Alley. There also the clients may have “talked in person” on matters related to commissions for Zwoliński’s bells⁶⁰. The joint company of Zwoliński and Butwiłowicz was established for a period of five years and the agreement was not prolonged.

The foundry in the hands of Stanisław Kenig and Bronisław Leski

In 1906, press announcement implied that Zwoliński’s factory was taken over by his son-in-law. This was because Stanisław Kenig set up a company with Bronisław Leski (1863–before 1919), a chemical engineer, a graduate of Riga Technical University (who was earlier director of the chemical plant “J. Jasiński” in Moscow and then technical manager in the glue factory he co-owned, called “Leski, Starkmann i S-ka” in Łódź)⁶¹. A new foundry business was created as a result, “Leski i Kenig, dawniej A. Zwoliński”, which offered “the manufacture of new bells and recasting old ones at affordable prices”, advertising in the Kingdom of Poland as well as in Lithuania and Kiev area. In early 1906, Leski and Kenig published ads in Warsaw press offering to buy “scrap metal of all kinds apart from iron”, “paying relative to the metal content in the scraps”⁶². Most likely this is how they collected material for their own production, wishing to boost Zwoliński’s resources. Still in March 1906, their factory was located in Warsaw, but in August it operated at another address, i.e. Struga village north-east of Warsaw, behind Marki. In late 19th and early 20th century the region developed robustly as a Warsaw suburban industrial area⁶³. The growth was among others due to the narrow-gauge railway line, in the vicinity of which Leski and Kenig’s factory was situated⁶⁴. Zwoliński’s son-in-law’s factory operated only 1,5 years. The only known cast made there was a bell for the Church of the Care of the Holy Virgin Mary in Radom (delivered in 1908)⁶⁵. After a seemingly unsuccessful venture, Leski and Kenig jointly established a chemical factory (Leski was its managing director and Kenig probably made a financial contribution) specializing in the “waste tin refinery”, the

59 *Gazeta Handlowa* of 20 July 1900, no. 164, p. 4.

60 *Przegląd Katolicki* z 8 (21) VIII 1902, no. 34, p. n.lb. On Szpetkowski’s company see: A. S. Czyż, “Nie-zrealizowane wileńskie zamówienia warszawskiej firmy ‘J. Szpetkowski i spółka’: dokument z archiwum antokolskiego”, *Archiwa, Biblioteki i Muzea Kościelne*, 2014, vol. 101, p. 121–127.

61 An announcement of a new company: *Dziennik Kijowski* of 11/24 March 1906, no. 33, p. [4]; *Kurier Litewski* z 2/15 III 1906, no. 50, p. 4; *Kurier Litewski* of 18/31 March 1906, no. 63, p. 4. On Leski see: *Album academicum des Polytechnikums zu Riga 1862–1912*, Riga 1912, p. 142.

62 *Kurier Warszawski* of 20 January 1906, no. 20.

63 Dominant in this area was mainly the Briggs’ weaving factory, but there were also a number of brick factories and other industrial establishments in the vicinity. See: E. Wartalska, “Fabryka i osada fabryczna w Markach w latach 1883–1945”, *Kwartalnik Historii Kultury Materialnej*, vol. 35, 1987, no. 4, p. 647–672.

64 *Kurier Litewski* of 12/25 August 1906, no. 181, p. 4.

65 W. Silnicki, *Krótko historia budowy „nowego kościoła” pod wezwaniem „Opieki Najświętszej Maryi Panny” w Radomiu*, Radom 1910, p. 41.

production of tin oxide, tin salts, copper and nickel salts⁶⁶. It, too, was located in Struga.

A joint venture with Stanisław Czerniewicz

Interestingly, it was in that area, more precisely in the village of Pustelnik, closer to Marki (in what is now Lipowa Street, formerly Dzwonowa Street), that Zwoliński decided to reopen his foundry, this time in a joint venture with Stanisław Czerniewicz. The new factory was most probably launched in 1907 (some texts indicate also the year 1908, which seems a mistake since the in the preceding year the company under the name of “A. Zwoliński i S. Czerniewicz” in Pustelnik worked on and delivered commissions)⁶⁷. It had actually started operation much earlier, but initially in Warsaw: in 1906 advertisements of “the bell foundry of A. Zwoliński and S. Czerniewicz” came out in the press; the company had a store at 38 Chmielna Street, apartment no. 5 and its own telephone number). It was advertised as “without a competitor”, as the only one “run by a specialist”⁶⁸ (which incidentally was directly detrimental to the factory of his son-in-law and that latter’s friend, who were not specialists). In 1907 Czerniewicz received permission from the Warsaw Guberniya authorities for the construction (of stone!) of a two-storey factory in Pustelnik, designed by the constructor Antoni Lipski⁶⁹.

Zwoliński’s new venture proved an economic success. The bell foundry “A. Zwoliński i S. Czerniewicz” employed still in 1909 between eight and fourteen workers and its annual turnover was 40,000 roubles. It had one 5 horsepower kerosene engine⁷⁰. Only a year later (at the end of 1910) it doubled its workforce and the number of engines (having two 4 horsepower engines), and at 17,000 roubles of share capital, its annual revenues were 120,000 roubles, i.e. tripled. At that time the factory offered in its portfolio not only bells but also the casting of metal sculptures⁷¹, although this was probably only a marginal part of the overall production. It is worth noting that formally the new factory was owned by Czerniewicz and Zwoliński’s daughter, Matylda Kenigowa. Her father, however, retained the position of technical manager, while her partner dealt with commercial matters⁷².

66 *Przemysł fabryczny w Królestwie Polskim 1911*, no. 4048. The share capital of the factory was 15,000 roubles, with 25,000 roubles of yearly turnover. The factory employed from 5 to 10 workers and was equipped with one crude oil 5 horsepower engine.

67 *Przewodnik po wystawie przemysłu i rolnictwa w Częstochowie: sierpień-wrzesień 1909*, Częstochowa 1909, p. 97 (here the year 1907); *Świat* of 18 September 1909, vol. 4, no. 38 (here the year 1908). In 1907 the A. Zwoliński i S. Czerniewicz factory made three bells for the Warsaw Church of St. Augustine (delivered on July 30 and officially dedicated on August 2 of that year). W. Szota, *Historia dzwonów* [an article available on the website of the Roman Catholic parish of St. Augustine in Warsaw]: <http://swaugustyn.pl/index.php/parafia/historia-dzwonow/> [access: 19 XI 2018].

68 *Dzwonek częstochowski*, year 6, November 1906, vol. 5 (59), p. [115].

69 State Archive in Warsaw, Warsaw Guberniya Government, file no. 6337, k. 1-7v.

70 *Przewodnik po wystawie przemysłu...*, p. 97-98.

71 *Przemysł fabryczny...*, no. 1860.

72 *Ibidem*.

There are relatively few historical records concerning Stanisław Czerniewicz. He was no doubt a man of a high social status for an entrepreneur operating at the intersection of industry and crafts, which in the case of a company manufacturing bells, i.e. luxury and costly items, may have played a role. Although he himself probably did not own any landed property and lived permanently in Warsaw (according to family records he was to be “a professional bookkeeper by trade [...], although he tried to pass for a financier”⁷³), however he was connected not only to land owners but to aristocracy, on the side of his first wife (nee Countess Rostworowska) and his second wife (nee Fudakowska, the first wife’s cousin; Czerniewicz’s both wives were granddaughters of Senator Castellan Ludwik Łempicki)⁷⁴. His son-in-law Ludwik Wieniawa Bobbe (Bobbé) was a sales representative of the company in Dąbrowa Górnicza⁷⁵ and ca. 1908 was for a short spell the company’s partner⁷⁶.

In 1909, Zwoliński and Czerniewicz’s factory, which called itself “special” (a term which we also find in the case of other, highly specialized industrial plants, whose renown was based on various innovative solutions), took part at the exhibition of industry and agriculture in Częstochowa. It was qualified there in the category of “musical instruments”⁷⁷ and received the highest distinction, i.e. the grand gold medal. The jury awarded the factory “for the harmonious tune of the bells introduced by the company and unprecedented in our country; for the purity of the sound as well as exquisite ornaments and meticulous finish; and for the improvement of the fittings of the new system and for the use of the repositioning of bells to protect them from breakage”⁷⁸. As we can see, the arguments in favour of such a high award include not only innovative technical solutions (the press called the factory “progressive”⁷⁹), but also the acoustic and aesthetic qualities of the products. The main advantage, however, was the bells’ “harmonious tune”, which was also emphasized by the advertising of the company, which appeared in the press in the following year (ill. 3). In accordance with the marketing practice of the time, the ad included representations of the obverse and reverse of the medal obtained in Częstochowa and presented Zwoliński as “the only specialist in the country [...] known for casting large bells”. Also mentioned, however not in the context of the medal, were those “improved” fittings, whose task was to “protect from breakage”, “make ringing very easy” and “reduce the space for bells by 1/3,

73 S.J. Rostworowski, *Monografia rodziny Rostworowskich: lata 1386–2012*, vol. 2, Warszawa 2013, p. 1608.

74 Ibidem. The best man at Czerniewicz’s second wedding was Count Henryk Łubieński (cousin of both the bride and the groom’s first wife) and a lifelong member of the Austrian House of Lords and a wealthy financier Zdzisław Marchwicki (brother-in-law of the bride’s mother). Register of marriage certificated of the Roman Catholic parish of St. Alexander in Warsaw, 1906, no. 187.

75 *Przemysł fabryczny...* 1911, no. 1860.

76 *Przemysł fabryczny...* 1909, advertisement no. 514. The parish priest of the Roman Catholic parish in the Lithuanian city of Minsk, Fr. A. Majewski thanking Zwoliński for “the cast and the rich tone” of the three bells for the church, at that time under construction, referred to the “company of Zwoliński, Czerniewicz and L. Bobbé in Pustelnik”. *Głos Warszawski* of 17 November 1908, no. 232, p. 3.

77 *Przewodnik po wystawie przemysłu...*, p. 96–97.

78 *Świat* of 18 September 1909, vol. 4, no. 38, p. 23.

79 Ibidem.

preventing belfry vibrations". The advertisement did not fail to mention the "many thanks" that the "special factory" received both in the Kingdom and in the Empire, probably bearing in mind also Zwoliński's earlier achievements⁸⁰.

On the occasion of the show in Częstochowa, the press mentioned the commissions with which "A. Zwoliński i S. Czerniewicz" made the name for itself (including Zwoliński's earlier accomplishments). These included bells from the parish church of St. Augustine in Warsaw (1907), two in the Lublin Cathedral (1873), one in the Kalisz (1880) and Kielce Cathedrals, and one in the church of St. Sigismund in Częstochowa and an unidentified one in Łódź. Outside the Kingdom's territory, the press mentioned the Church of St. St. Peter and Paul in Antokol in Vilnius (three bells from 1909), St. Nicholas Church in Kiev, as well as bells sent to the distant city of Tbilisi, and even in Tomsk. The press mentioned moreover the bell in the Putilov Factory in Petersburg, which may have had a special effect due to the factory's fame of the largest in Russia (and one of the largest in Europe) metallurgical and machinery company, proving the premium level of the foundry in the Polish market, i.e. that limited to Polish clientele in various parts of the Russian Empire and in the Russian market⁸¹. It is worth mentioning here the exhibition pavilion of the company Zwoliński and Czerniewicz, whose photograph was published in the press⁸². It had innovative decorations by an unknown designer, motivated by marketing considerations. The pavilion was a wooden gazebo with several bells hung on the yoke inside, with the largest bell in the middle. The balustrade featured apertures that were cut out in the shape of a bell. The top of the pavilion was in the form of a monopteros with a bell inside, which covered a large helmet (probably wooden), also in the shape of a bell.

In early 1911, the "A. Zwoliński i S. Czerniewicz" company was renamed "S. Czerniewicz, dawniej A. Zwoliński i S. Czerniewicz"⁸³ (ill. 4). There are no reliable data on the reasons and circumstances of this change. Probably Zwoliński died in late 1910 or early 1911 (in December 1910 he turned 64), as there is no information about him after that period. At the same time, however, the author has not managed to find his death certificate or locate the grave (and there is no inscription dedicated to him on the grave of his mother, in which one of his sisters and father-in-law were also interred⁸⁴). It is also unknown whether Matylda Kenigowa was still a co-owner of the factory. Drawing on the achievements and recognition of Zwoliński, Czerniewicz continued the production with success. He was helped by his son from his first marriage, Wiktor Józef, who was to complete a six-year apprenticeship in Belgian foundries⁸⁵. Accord-

80 *Kalendarz Ilustrowany Kuriera Litewskiego na rok 1910*, Wilno 1910, p. XVI.

81 *Świat* of 18 September 1909, vol. 4, no. 38, p. 23.

82 *Ibidem*.

83 *Dwutygodnik dyecezalny wileński* of 26 January (8 February) 1911, year 2, no. 2, p. I [29].

84 A grave at the Powązki Cemetery in Warsaw, erected by Michał Antoni's mother's brother, for Helena de Seifert, nee Gnatowska, who died a premature death (and their two children), precinct 12, row 5, lots 22 and 23. *Cmentarz Powązkowski: materiały inwentaryzacyjne*, vol. 1, kw. 1-14, ed. A. and B. Biernatowie, Warszawa 1980, p. 312.

85 *Rozwój: dziennik polityczny, przemysłowy, społeczny i literacki, ilustrowany* of 14 July 1912, no. 185, p. 4.

ing to the press, he was responsible for the harmonious tones (for which the factory received the grand gold medal in 1909), as well as other innovative solutions, such as the already mentioned fittings and repositioning of bells. With “conscientious execution of orders” they were to “win over so many new customers for the factory that the area of the old factory turned out to be too narrow for the timely execution of all orders, which forced the owners to build a new, much expanded factory and use new auxiliary machinery to process the bells”⁸⁶. However, it is doubtful whether this extension concerned the situation after Zwoliński’s surname was removed from the factory’s name. Rather, it took place in the period 1909-1910, when there was such a significant increase in income and a doubling in the number of workers.

In 1912, Czerniewicz’s factory took part in a show of crafts and industry in Łódź and was once again awarded with the grand gold medal. It showed there the completed Paul the Hermit bell weighing 14,000 pounds (together with the clapper), commissioned by the Jasna Góra Monastery. The press observed that while it was smaller than the Sigmund Bell in Wawel Hill, famous all over the country, it was still heavier than that”⁸⁷. At that time Czerniewicz was working on the second bell for the Jasna Góra Shrine, slightly heavier, of 16,000 pounds and on a bell for the Church of the Holy Family in Częstochowa. The last bell, of 30,000 pounds, was to be “one of the largest and most powerful bells in the entire world”⁸⁸, even if this is no doubt an exaggerated opinion. Praising the factory of “S. Czerniewicz” formerly “Zwoliński i Czerniewicz”, the press stressed its premium expertise and indicated that it was “recognisable [...] domestically and abroad for reliable and timely craftsmanship, standing up to the competition with world-renowned companies”, and which moreover had recently “become truly European”⁸⁹.

For the year 1913 Czerniewicz, summing up the production of “S. Czerniewicz” and “A. Zwoliński i S. Czerniewicz”, presented in *Dwutygodnik dyecezalny wileński* biweekly an extensive list of “commissions” (concerning most probably only belfry bells), which “the company had recently made in Lithuania”. Apart from the 14 bells for the Vilnius churches (including the aforementioned Church of St. St. Peter and Paul and Antokol, and a former missionary Church of St. Stephen, former Bernardine Church of St. Michael and the House of the Sacred Heart of Jesus), the list included 94 other instruments for 37 parishes in three gubernyas: Vilnius, Grodno and Kaunas⁹⁰. Given that the bells for the Empire were a but a fraction of the company’s portfolio as compared to its output for the Kingdom of Poland, the list gives a rough insight into the sizeable and highly profitable bell production. The sales network was continuously expanded. Apart from Warsaw, Dąbrowa

86 Ibidem, p. 4.

87 Ibidem, p. 3. This is not true, since the Zygmunt Bell on Wawel Hill weighs ca. 25,000 pounds.

88 Ibidem, p. 3.

89 Ibidem, p. 4.

90 *Dwutygodnik dyecezalny wileński* of 30 January (12 February) 1913, year 4, no. 2, p. II [30].

Górnica and Częstochowa, where sales representatives worked already at the time of “Zwoliński i Czerniewicz”, the factory had a representative in Vilnius (C. Osiński, who also represented there “J. Szpetkowski i s-ka”, with which Zwoliński used to cooperate⁹¹), and since 1914 also in Kaunas, which proved that the company wished to expand its operation on the Lithuanian market⁹².

World War One put an end to the operation of “S. Czerniewicz, dawniej A. Zwoliński i S. Czerniewicz” in Pustelnik. At that time, no written records mention the factory any longer and the reasons seem obvious. In view of the army’s huge demand for metal for the production of weapons, which resulted, among other things, in mass requisitions of bells, this type of plant could no longer operate. It seems that Wiktor Czerniewicz was no longer involved in any foundry business. After a few years in the army, having been promoted to the rank of cavalry captain and awarded with the cross of the *Virtuti Militari* Order of the 5th class (for the Polish-Bolshevik War of 1920), he continued to operate as an entrepreneur and between the world wars was e.g. a co-owner of a factory involved in “tarring” streets⁹³. The “Factory of bells and metal casts” in Pustelnik was reborn after World War I, yet with new owners: Franciszek Loth and Michał Dziarski (initially also Antoni Matysek)⁹⁴. Established ca. 1921,⁹⁵ it never regained its former status and glory and ceased operation most probably in the 1930s.

To conclude, it should be noted that our knowledge about Zwoliński and his factory is incomplete because of the absence of historical texts other than press releases and advertisements (although very numerous). Still, this knowledge is much more complete than that about his bells. So far, the author has managed to collect more or less extensive information only about 145 bells that came from the factories associated with Zwoliński in the years 1868-1914, which is probably only a fraction of the total number. Dominant in this confirmed group are bells commissioned by clients in the Kingdom of Poland, followed by those in Lithuania. There are also a few bells made for other areas of the Russian Empire. Except the aforementioned Putilov Iron Works in Petersburg, these are all church bells, mainly commissions from Roman Catholic churches. Very few bells were commissioned by Evangelical and Orthodox

91 *Dwutygodnik dyecezalny wileński* of 10 (23) August 1911, year 2, no. 15, p. I-II [209–210] (advertisements of both companies with information about their agent Osiński, who had in his office both a “bell specimen” by Czerniewicz and “figures specimens” by Szpetkowski).

92 *Dwutygodnik dyecezalny wileński* of 25 July (7 August) 1914, year 5, no. 14, p. 224.

93 S.J. Rostworowski, *Monografia rodziny...*, p. 1608. Wiktor Czerniewicz and his wife Maria Zawadzka had a daughter Maria (b. 1925), who in 1945 married Jerzy Andrzej de Virion. *Ziemia polscy XX wieku*, vol. 7, Warszawa 2004, p. 174.

94 *Tygodnik Handlowy* of 15 March 1923, no. 6, p. 226.

95 The earliest famous bells from this factory (Iwanowice n. Miechów) came from that period: *Straty wojenne: zabytkowe dzwony utracone w latach 1939–1945 w granicach Polski po 1945*, vol. 1, *Woj. krakowski i rzeszowski*, ed. J. Gołos, A. Kasprzak-Miler, Poznań 2000, p. 131.

churches, which is hardly surprising given the small number of believers and thus the limited demand. Two cases of commissioning bells from outside the Russian partition were established: one was shipped to Galicia (to Brześciany n. Sambor⁹⁶), and the other as far as Transvaal in South Africa (where it was to be used in the mission colony called "Polonia", established by the Polish Evangelicals⁹⁷). Some of these bells were made not by casting, but by re-casting much older objects, sometimes retaining their former shape, inscriptions and decorations, but enriched with the signature of Zwoliński (as in the case of the bell for the Lublin Cathedral). There were also cases of casting one bell from pieces of a few earlier ones (e.g. the bell for the Church of St. Bridget Sisters in Grodno⁹⁸). As to the weight, the upper limit is set by the aforementioned bells for the Jasna Góra Shrine and the parish of the Holy Family in Częstochowa, of 20,000 and 30,000 pounds, respectively, cast after Zwoliński's (probable) death. It is worth noting at this point that there were orders in Zwoliński's long career which turned out to be his professional failures. A case in point was the history of the bell for the Kalisz Cathedral, made in 1880, i.e. at the initial stage of his career. After the first unsuccessful casting, Zwoliński was forced to repeat the action twice to improve the sound quality. The result of the last attempt, however, was not to the liking of the commissioners, either, even though the bell remained operational⁹⁹. Over three decades later, another re-cast of the Kalisz instrument was performed by "S. Czerniewicz, dawniej A. Zwoliński i S. Czerniewicz". There are also known cases of transactions that failed already at the stage of contract negotiations, as in the case of an order placed by a sponsorship committee for a new bell for a new Łódź parish of St. Stanislaus Kostka; ultimately the 5,000-pounds bell was cast in the J. John Foundry and Machinery Factory¹⁰⁰.

Summing up the history of Antoni Zwoliński's activity in the field of bell production, it should be emphasized that his career exemplifies an evolutionary transformation in the understanding and functioning of bellfounding from a craft to an industry. In this respect Zwoliński was a direct link between the multigenerational tradition of the Petersilge family factory (a workshop really) and an innovative production and marketing system represented by "A. Zwoliński i S. Czerniewicz" followed by "S. Czerniewicz, dawniej A. Zwoliński i S. Czerniewicz". At the same time, however, even in this final period, the reputation of the company was based on the personal expertise and

96 *Materiały do dziejów sztuki sakralnej na ziemiach wschodnich dawnej Rzeczypospolitej*, part 1, *Kościół i klasztory rzymskokatolickie dawnego województwa ruskiego*, vol. 5, ed. J.K. Ostrowski, A. Betlej, Kraków 1997, p. 29.

97 *Głosy kościelne w sprawie Kościoła Ewangelicko-Augsburskiego* of 16 (28) February 1886, year 3, no. 4, p. 31-32.

98 *Materiały do dziejów sztuki sakralnej na ziemiach wschodnich dawnej Rzeczypospolitej*, part 4, *Kościół i klasztory rzymskokatolickie dawnego województwa trockiego*, vol. 1, ed. M. Kałamajska-Saeed, D. Piramidowicz, Kraków 2012, p. 118.

99 *Wiek* of 26 May (7 June) 1880, no. 123, p. 3.

100 See: P. Machlański, "Serce Łodzi – historia łódzkiego dzwonu katedralnego", in: *Serce Łodzi: historia i współczesność*, ed. P. Machlański, Łódź 2013, p. 84, 86.

knowhow of the owner (or co-owner), which was required by the highly specialised nature of this type of enterprise. Czerniewicz, who was responsible for commercial matters and who clearly had long-term hopes for this industry, educated his son in the right direction, understood it well.

Future research into the history of Warsaw bellfounding should continue to expand our knowledge about Zwoliński's products. We are talking about a more complete inventory (depending on the availability of objects on the one hand, and sources on the other), which in turn could provide a basis for a synthetic analysis of the visual form (shape and ornamentation), as well as the acoustic properties of the bells. New studies will moreover contribute to establishing various links in the history of the company's development, such as, for example, the connection with the more and more intense construction of sacred buildings at the turn of the 20th century, which at the present state of research is purely conjectural.

Antoni Zwoliński, a Warsaw-based Master Founder from the Turn of the 20th Century – summary

The history of bellfounding art in Warsaw during the partitions has so far been very incomplete. We still have little detailed knowledge about individual studios, the people who managed them, as well as the objects that were the result of their work, mainly bells. Antoni Zwoliński (1846-1911?) deserves special attention in the circles of Warsaw bell founders at that time, who was already mentioned in the first sketchy studies on the history of this craft in Poland. Antoni Zwoliński, mentioned already in the first sketchy studies on the history of the bellfounding craft on Polish soil, deserves special attention among the Warsaw founders of the day. A direct heir of the tradition of the Petersilge family of founders active in Toruń and Warsaw, although not related by blood to them, he held the leading position in the industry not only in Warsaw, but in the entire Russian partition, throughout the over four decades of his activity. Without any serious competitors in the area, he was a unique example for the Kingdom of Poland of a master founder who went beyond the border of traditional craftsmanship, entering the path of regular (and relatively profitable) industrial production. Zwoliński was a direct link between the multigenerational tradition of the Petersilge family factory (a workshop really) and an innovative production and marketing system represented by "A. Zwoliński i S. Czerniewicz" followed by "S. Czerniewicz, dawniej A. Zwoliński i S. Czerniewicz".

Keywords: bell, bellfounding, industry, craft, church