

Víctor Pérez Álvarez

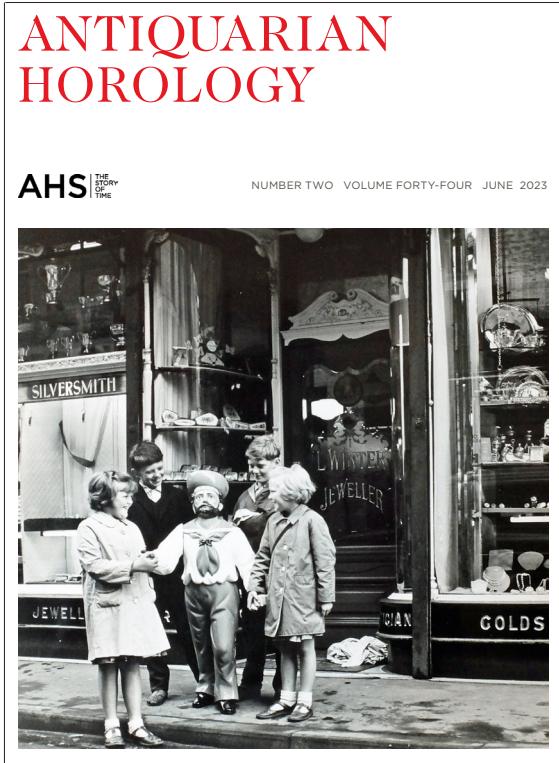
The ring-watch of Emperor Charles V

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The ring-watch of Emperor Charles V

Víctor Pérez Álvarez*

The miniaturization process in horology began in the fifteenth century and reached its zenith in the first half of the sixteenth century, when the earliest known ring-watches with striking mechanism were made. The first watches of this type were very rare objects of prestige and often presented as diplomatic gifts. Charles V, the Dukes of Urbino, the Pope, and Suleiman the Magnificent were probably the first owners of ring-watches. In this article we publish four letters dated 1538 about Charles V's ring-watch which shed further light on the history of these objects.

Introduction

The miniaturisation process is a remarkable phenomenon in the history of horology which pushed the makers' skills to their limits, encouraged ingenuity and technical innovation. The mainspring was a pivotal invention in this process which changed how domestic clocks were conceived. Weight-driven chamber clocks were usually installed high on the wall in order to get maximum falling clearance for the weights to obtain the longest possible running period. In contrast, spring-driven clocks could easily be placed at eye level or placed on tables for example, allowing them to be looked at more closely. That stimulated the artistic side of clockmaking and the development of fine casing. The fifteenth-century Burgundy clocks of the British Museum,¹ the Germanisches

Nationalmuseum,² and the salt clock of Isabella of Castile³ are paradigmatic examples of early domestic clocks. Other types of clocks from various countries dating from the fourteenth and fifteenth centuries are known from written sources.⁴

The mainspring also opened the path to the development of the portable watch. Peter Henlein, active in Nuremberg at the beginning of the sixteenth, is the most famous watchmaker involved in the miniaturization process in horology. A contemporary wrote

... he makes watches with many wheels, which ... go without a weight for forty hours and strike [or 'tick'], even when they are in a pouch in the folds of the clothing.⁵

Since the eighteenth century the invention of

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1. British Museum, Victoria & Albert Museum loan, M11-1940. D. Thompson, *Clocks* (London, The British Museum Press, 2004), p. 18. D. Matthes, *Zeit haben. Tragbare Uhren vor 1550* (Dover, Carpe Diem Publishing, 2018), pp. 9 and 14.
2. Germanisches Nationalmuseum, Nuremberg, HG 9771, K. Maurice, *Die Deutsche Räderuhr. Band I* (München, 1976), pp. 85–86. D. Matthes, *Zeit haben*, pp. 6, 9, 12, 13.
3. V. Pérez Álvarez, 'From Burgundy to Castile. Retracing and reconstructing a fifteenth-century golden clock', *Antiquarian Horology*, 36/2 (June 2015), 248–254. A more detailed CAD reconstruction is due to appear in D. Matthes, *Spring-Driven Horology before 1510* (Dover, 2022), pp. 256–269, forthcoming.
4. G. Dohrn van Rossum, *History of the hour. Clocks and modern temporal orders* (Chicago, The University of Chicago Press), 1996, p. 118.
5. J. Cochläus, *Cosmographia Pomponij Mele...*, translation supplied by Anthony Turner at the symposium on Juanelo Torriani, Cremona, 3–4 Dec. 2016.



Fig. 1. Gold sundial and compass ring, possibly German, c. 1570. Bonhams, New Bond Street, London, Fine Jewellery sale 28 September 2006, # 17. Photo courtesy of Bonhams.

the pocket watch has been attributed to him. In the late nineteenth century Germany was still a young country, immersed in a process of building up its own national identity, and the glorified figure of Peter Henlein served well that purpose.⁶ Henlein was mythicised as a result, but the development of the portable watch happened in various places and no individual can be credited with the invention of the pocket watch.⁷ Nuremberg was an early production centre of portable watches, but

it was not the only one. Early mentions of portable timepieces designed to be worn while ticking come from the north of Italy as well and date back to the end of the fifteenth century. Around 1490 Ludovico Sforza commissioned three costumes with three watches, two of them with striking mechanisms.⁸ From the beginning of the sixteenth century the Italian references to small portable watches become more frequent. An example is an eyeglass with a tiny watch in its handle belonging to Pope Leo X (1513–21).⁹ Small portable timepieces are also mentioned in other European countries, such as France, where King Francis I purchased watches fitted in daggers in 1518.¹⁰ But it is difficult to establish whether some of the portable timepieces mentioned in early sources were mechanical watches, sundials or perhaps other sorts of time telling instruments. This is the case for some timepieces listed in the 1505 post-mortem goods inventory of Isabella of Castile.¹¹

Ring-watches

When the most skilled makers can make watches small enough to fit in finger rings, the miniaturisation process in watchmaking is reaching its own limits. The idea of fitting a time-telling instrument in a finger-ring existed earlier. For example, in 1453–54 King Joan II of Castile had a golden ring shaped as a lion head with two emeralds and a ruby with a *relox* inside of it.¹² The Castilian word *relox*

6. T. Eser, 'The Henlein exhibition at the Germanisches Nationalmuseum. A look back, a look forward and new discoveries', *Antiquarian Horology*, 37/2 (June 2016), 199–212 (pp. 205–206). See also T. Eser, *Die älteste Taschenuhr der Welt? Der Henlein-Uhrenstreit* (Nuremberg: Verlag des Germanischen Nationalmuseums, 2014), pp. 115–125.

7. G. Oestmann, A. Turner, G. Gregato, 'The Origins and Diffusion of Watches in the Renaissance: Germany, France, and Italy', in C. Zanetti (ed.), *Janello Torriani: a Renaissance Genius* (Cremona, Fantigrafica, 2016), pp. 141–152 (pp. 142–143).

8. C. Zanetti, *Janello Torriani and the Spanish Empire: A Vitruvian Artisan at the Dawn of the Scientific Revolution* (Leiden, Boston, Brill, 2017), p. 8; Oestmann, Turner, Gregato, 'The Origins and Diffusion'. See also G. Oestmann, 'Early watches. The argument over priority in Italy and Germany', *Antiquarian Horology* 39/1 (March 2018), 92–97.

9. J. H. Leopold, 'An extravagant jewel: The George Watch', *Metropolitan Museum Journal of Art*, 35, 2000, p. 137; G. Brusa, 'Early mechanical horology in Italy', *Antiquarian Horology* 18 (Spring 1990), 485–513 (p. 510).

10. G. H. Baillie, *Clocks and watches, an historical bibliography. Volume 1* (London, 1978), p. 6.

11. The terms *relojes pequeños* and *relojicos* mean 'small time-telling devices'. AGS, CMC, 1^a época, leg. 81, fol. 33v^o, 1504, noviembre, 22; transcribed in A. de La Torre y del Cerro, *Testamentaría de Isabel La Católica* (Barcelona, 1974), p. 261.

12. AGS, CMC, 1^a época, leg. 84, s/f. F. de P. Cañas Gálvez, 'La cámara de Juan II: Vida privada, ceremonia y lujo en la Corte de Castilla a mediados del siglo XV', in A. Gambre Gutiérrez, F. Labrador Arroyo, (eds.), *Evolución y estructura de la casa real de Castilla* (Madrid, 2012), p. 167.



Fig. 2. Design for a ring-watch, Plate 32 from Pierre Woeiriot de Bouzey I, *Livre d'Anneaux d'Orfèvrerie* (1561). Metropolitan Museum of Art, New York. Public domain.

derives from *horologium* which in that period normally means any instrument for telling time, including sundials. This date seems too early for this *relox* to be a mechanical watch, hence would probably be a sundial.

Finger rings with sundials were still used in the sixteenth and seventeenth centuries, some specimens are kept in private and public collections (Fig. 1). These objects were rare and for that reason, contemporary sources about them are very scarce, the earliest known being one from the 1530s. Mentions are normally found in diaries, letters, chronicles and other literary sources but sometimes also in administrative records. Contemporary depictions of ring-watches are even rarer, the earliest one known being an engraving in a book about rings printed in 1561 (Fig. 2).¹³ We don't know any sixteenth-century portrait of someone wearing a ring-watch but there could be unnoticed examples waiting to be discovered. Some ring-watches

had a lid covering the dial, which would make it more difficult to identify them in paintings.

Early ring-watches are also rare in public and private collections. There are at least two survivors from the sixteenth century in the Indianapolis Museum of Art (Fig. 3) and in the treasury of the Munich Residence (Fig. 4). At least one of those has a pyr punched in the movement, which is the emblem of the city of Augsburg, and both bear the initials IW, which have been identified with Jacob Weiss.¹⁴ In the seventeenth century small watches became more common and more survivors can be found from that period but they are still rare, including one from the Vienna Kunstkammer which is thought to have belonged to Emperor Ferdinand III (Fig. 5). Another interesting product of the miniaturization process is a stackfreed watch of about 10mm in diameter kept in the Musée International d'Horlogerie in Le Chaux-de-Fonds. Although it is cased as a pocket watch, given its tiny size it could be fitted in a finger ring. The museum catalogue attributes it to Johan Ulrich Schmidt from Augsburg and dates it to c. 1648.¹⁵

German cities like Augsburg or Nuremberg led the European clockmaking industry during the sixteenth and the first part of the seventeenth centuries, being prominent production centres of small portable watches. Earlier mentions of portable timepieces can be found in Italy, dating back at least to the 1480s. By the first half of the sixteenth century, the best Italian mechanicians had already embraced the idea of making tiny scaled machines, apart from watches. Janello Torriani for example made a working grain mill which was small enough to be hidden in one's shirt sleeve. He also built a planetary clock for Emperor Charles V which was not small, but had many miniaturised wheels. Cutting the diminutive teeth required new making techniques and tools that Torriani designed himself, including dividing and cutting machines for that specific purpose.¹⁶

13. P. Woeiriot, *Livre d'anneaux d'orfèvrerie* (Lyon, 1561).

14. J. H. Leopold, 'An extravagant jewel', p. 144; K. Maurice, *Die Deutsche Räderuhr. 2, Katalog und Tafeln* (Munich, C.H. Beck, 1976), p. 62, n. 448.

15. Inv. N. 1218; *Collections du Musée International d'Horlogerie, La Chaux-de-Fonds Suisse* (La Chaux-de-Fonds, Le Musée, 1974), p. 22. David S. Landes states that it could be earlier without providing any evidence but his intuition, see D. S. Landes, *Revolution in time. Clocks and the Making of the Modern World* (Cambridge, Massachusetts, London, Harvard University Press), 1983, p. 412.



Fig. 3. Ring-watch, about 1585 made by Jacob Weiss. Indianapolis Museum of Art, Inv. n73.70.93A. Photo courtesy of the Indianapolis Museum of Art at Newfields.

Giorgio Capobianco

Literary sources from the seventeenth century onwards attribute to Torriani a ring-watch

that he supposedly presented to the Emperor when they first met.¹⁷ That story has been questioned but ring-watches were certainly

16. A. Turner, 'Dividing plates and wheel-cutting machines: some seventeenth-century evidence', *Antiquarian Horology* 40/4 (December 2019), 514–524 (pp. 517–518).

17. C. Zanetti, *Ianello Torriani and the Spanish Empire*, pp. 299–301. Zanetti's monograph on Torriani is essential for any study related to Italian Renaissance watchmaking. It includes the best up-to-date study on ring-watches in the context of the miniaturization process in horology.



Fig. 4. Ring-watch. Munich, Schatzkammer der Residenz, Inv. N 649. Punched IW for Jacob Weiss and the Augsburg pyr. c. 1585.. Photo Munich, Schatzkammer der Residenz.

made in Italy from the 1530s onwards by Giorgio Capobianco, a celebrated clockmaker and mechanician contemporary with Torriani. Various literary sources from the sixteenth to the nineteenth centuries mention Capobianco for his small watches and unique automata.

He was born around 1500 in Schio, near Vicenza, learned goldsmithing from his father and became also a skilled mechanician. He spent part of his life in Venice where he was jailed after killing a man in Rialto, but he was set free at Emperor Charles V's intercession.¹⁸

18. G. Marzari, *La historia di Vicenza* (Vicenza, 1604), p. 189, quoted in Zanetti, *Ianello Torriani and the Spanish Empire*, p. 302, note 6.



Fig. 5. Ring watch by Johannes Butz, Augsburg, first half of the seventeenth century. It was probably owned by Emperor Ferdinand III. Kunsthistorisches Museum Vienna. Inv. N KK 2179. Photo Kunsthistorisches Museum Vienna.

This episode in Capobianco's life is related in various sources but its date and the circumstances remain unclear. According to some sources it happened in around 1550 and he was set free at the intercession of the Duke of Urbino.¹⁹ However, the letters we publish in this article show that the homicide could not have happened later than 1538 and that it was the Emperor who interceded to set him free. Capobianco had links with the court of the Duke of Urbino, which makes it likely that the Duke played a role in his liberation along with the Emperor.

Capobianco's activity is often documented in Venice, for example in 1550, when the public clock of San Marco needed attention and the Venetian Senate commissioned reports about its condition to various clockmakers, including Capobianco.²⁰ By then he was an experienced mechanician. Earlier,

in the 1530s, he had built an automaton dancer and a self-moving war-ship,²¹ but according to some writers from the sixteenth century onwards, he became famous for his ring-watches. Aretino and Sanuto, both from the 1530s, offer the earliest and most reliable references. In a letter dated 1537, Aretino states that Capobianco had made two automatons and a ring-watch owned by Suleiman 'the Magnificent'.²² In an entry of his Diary for the year 1531, Sanuto writes:

I have seen this morning [...] a golden ring with a beautiful watch on its top that runs, shows and strikes the hours. It will be sent to Constantinople to be sold there.²³

There is no doubt that it was not a sundial, but a mechanical watch, probably the same as the one mentioned by Aretino six years later. For Giuseppe Brusa, Sanuto's diary entry is the most reliable document showing the existence of a ring-watch because the author was contemporary with it and saw the actual object with his own eyes.²⁴

Charles V's ring-watch

Suleiman the Magnificent was not the only ruler owning a ring-watch by Capobianco in the 1530s. According to various literary sources dating from the sixteenth to the nineteenth centuries, the Holy Roman Emperor Charles V also owned one. However, these sources provide at times conflicting information, and none attributes the watch to Capobianco. Silvestro Pietrasanta for example, in his book of emblems, states that the Emperor had a ring with a tiny watch with a dial that showed him the time of the day and the night with no error (Fig. 6).²⁵

19. L. Puppi, *Dizionario biografico degli italiani*, Vol. 18 (Roma, Istituto della Enciclopedia italiana, 1975), p. 569.

20. N. Erizzo, *Relazione storico-critica della Torre dell'Orologio di San Marco in Venezia* (Venice, 1860), pp. 79 and 163–165.

21. G. Brusa, 'Early mechanical horology in Italy', p. 511. See also P. Aretino, *Del primo libro de le lettere di M. Pietro Aretino* (Paris, 1609), fol. 248v^o.

22. Aretino, see previous note.

23. M. Sanuto, *I Diarii di Marino Sanuto*, vol. LV (Venice, 1900), p. 14. The entry is dated Venice, Monday 2 October 1531.

24. G. Brusa, 'Early mechanical horology in Italy', p. 511.

25. S. Pietrasanta, *De Symbolis heroicis libri IX* (Antwerp, 1634), p. 96; Zanetti, *Ianello Torriani and the Spanish Empire*, p. 301, note 4.



Fig. 6. A ring with compass and sundial, an affordable alternative to the expensive ring watch of the Emperor. See note 25.

Fortunius Licetus, in his treatise on rings, cites Pietrasanta and adds that the watch struck the hours on a very small bell inside of it.²⁶

However, literary sources are not always accurate or reliable, particularly when they are not contemporary with the historical fact they narrate, and ideally their information should be corroborated by other, different pieces of evidence. In his monumental book on the Dukes of Urbino, Dennistoun tells us that Francesco Maria I della Rovere presented to Charles V a ring-watch in Naples in 1535.²⁷ In that year, after his military campaign in Tunis against Barbarossa, the Emperor visited various places in the south of Italy where he was received like a hero by his allies, who built ephemeral triumphal arches and presented him with expensive gifts.²⁸ Unfortunately, Dennistoun does not provide a

reference to the source from where he took this information.

The new evidence

The existence of the watch is confirmed by four letters dated 1538, recently discovered in the Archivo General de Simancas.²⁹ A full transcription and translation are provided at the end of this article. In 1538 the watch had stopped running and no watchmaker in the Imperial Court had the knowledge and skills to fix it. For that reason Charles V decided to send it to its original maker using his diplomatic network. The Emperor wrote to don Lope de Soria, his ambassador in Venice, to inform him that he would receive the ring-watch for being serviced and asked him to send it back in good working order. In addition, the watchmaker should write down instructions on how to repair it if it were to break again.³⁰ The watch was sent to Venice on 25th April (Letter, n I) and two weeks later, on 10th May, don Lope de Soria acknowledged receipt of the letter and the ring (Letter, n II). In letters II and III Soria reported to the Emperor that the watchmaker was then in prison because he had killed his wife and then a man in Rialto, in Venice, but he asked the Doge to set him free in order to service the watch. In letter III Soria told the Emperor that the Doge had ordered the release of the watchmaker to serve him and that he would take him from the prison to the ambassador's home and then he would repair the watch. According to letter IV, the last one we found, the watch is fixed and running again and Soria sent it back to Charles V.

The watchmaker's name is not mentioned in the letters, but very few craftsmen were able to make such small watches and the crime at Rialto removes any shade of doubt. Capobianco then used his exclusive technical

26. F. Licetus, *De annulis antiquis librum singularem* (Vdine, 1645), p. 35 and 222; Zanetti, *Ianello Torriani and the Spanish Empire*, p. 301, note 4.

27. J. Dennistoun, *Memoirs of the Dukes of Urbino, Illustrating the Arms, Arts, and Literature of Italy, from 1440 to 1630* (Vol. 1) (London: John Lane Company, 1909), p. 383

28. G. Parker, *Emperor. A new life of Charles V* (New Haven and London: Yale University Press), 2019, pp. 245–246.

29. One of them was already discovered and published in the 1950s (see appendix, II), but it went unnoticed until now.

30. Unfortunately, we haven't found this letter, but its content can be deduced from the letter dated 25 April 1538.

knowledge to his own advantage. Even though he was asked to write the instructions on how to repair the watch, he only wrote how to keep and to wind it, and persuaded don Lope de Soria that he was the only one capable of fixing it. The ambassador knew that Capobianco was taking advantage of his skills and wrote '*en buen hora [el reloj] se gasto para el*' (The watch broke down at the right moment for him), but aware of Capobianco's skills he suggested that the Emperor bring him to his Court.

These four letters are the only known documents on the ring-watch of the Emperor, apart from literary sources. Borrowing the words from Cristiano Zanetti, 'administrative sources can help us to corroborate the previous literary records'.³¹ They are the definitive proof of its existence, but they do not answer all questions about it and raise new ones. According to letter III, the ring-watch repaired in 1538 belonged to the Empress, that is Isabella of Portugal, Charles V's wife. The fact that she died the following year and it does not appear in her post-mortem goods inventory adds more mystery.³² Did she give it to her husband or to someone else while she was still alive? Neither is it registered in Charles's post-mortem goods inventory,³³ so he may have given it to someone else before his death in 1558, if it still existed by then. This could be his brother, the Holy

Roman Emperor Ferdinand I, in whose goods inventory we find 'a watch in a golden ring'.³⁴ The German word '*Uhr*' used in the original document has a much broader meaning than 'watch', so it may also have been a sundial. Philip II of Spain had another ring-watch whose description by Emiliano Zapata matches the one owned by Charles V.³⁵ However, we think that Philip II's ring was not his father's, but another one presented to him in 1562–63.³⁶ Philip II's ring-watch does not appear in his post mortem goods inventory.³⁷

Conclusion

Suleiman 'the Magnificent', Sultan of the Ottoman Empire, had another ring-watch made by Capobianco, which Sanuto saw in Venice in 1531. It was then purchased by Francesco Zen, from a distinguished Venetian family very close to Suleiman's court, and then sold to the Sultan.³⁸ The acquisition of the ring-watch must be studied in connection with other objects commissioned or acquired by Suleiman from Venetian artisans during the early 1530s, including an expensive golden helmet-crown ornamented with pearls, a throne and other parade accessories. These objects in turn can only be understood when studied within their political context. The Ottoman and the Habsburg empires were expanding and clashing in eastern Europe since the 1520s. The Ottomans tried

31. A goods inventory of a Gonzaga family member includes a ring watch named '*del Sultano*', which is probably the same as the one mentioned by Pietro Aretino as '*del Gran Turco*', who attributes it to Capobianco; Zanetti, *Ianello Torriani and the Spanish Empire*, p. 303.

32. F. Checa Cremades, *Los inventarios de Carlos V y la familia imperial* [The inventories of Charles V and the imperial family], Vol. 2, *Isabel de Portugal* (Madrid, 2010).

33. The most similar items are: 1) *a golden ring to watch the sun*, and 2) *a copper [brass?] ring to know what time it is and to know* [the height of] *the sun*; both are sundials. See D. M. Mármol Marín, 'Inventario de los Bienes Muebles que quedaron de Carlos V en Yuste', *Cuadernos de Arte e Iconografía* (10), 2001, pp. 13 and 35.

34. *Ain ur im ainem gulden ring*, Checa Cremades, *Los inventarios ... Vol. 3, Margarita de Austria, Leonor de Austria, Isabel de Austria, Fernando I, María de Hungría, Catalina de Austria* (Madrid, 2010), p. 2777.

35. ... '*y el rey nuestro señor tiene un reloj en un anillo que señala las horas por de dentro picando levemente en el dedo*'; Biblioteca Nacional de España, MSS/2790, fol. 316v^o; L. Zapata, P. Gayangos (eds.), *Memorial histórico español: Colección de documentos, opúsculos y antigüedades que publica la Real Academia de la Historia, Tomo XI: Miscelánea de Zapata* (Madrid, 1859), p. 354.

36. Zanetti, *Ianello Torriani and the Spanish Empire*, p. 302.

37. F. J. Sánchez Cantón, *Inventarios reales: Bienes muebles que pertenecieron a Felipe II*, Vol. II (Madrid, 1959), 486 pages.

38. F. Georgeon, F. Hitzel, *Les Ottomans et le temps* (Leiden, Boston: Brill, 2012), pp. 21–22; O. Kurz, *European clocks and watches in the near east* (London: Warburg Institute, 1975), p. 22.

to take Vienna in 1529 and 1532, causing a great shock across Europe despite of their lack of success. With these objects, external to the Ottoman culture, the Sultan was communicating his political supremacy to the Habsburgs.³⁹ Necipoğlu includes the ring-watch in the category of the 'playful curiosities and automata', which had nothing to do with the helmet-crown, a golden throne and the other parade objects purchased by the Sultan. However, we don't think these mechanical marvels were meaningless.⁴⁰ They were uncommon objects which very few craftsmen were able to make and were strongly sought-after by the European nobility and the wealthiest. How could the Sultan *not* own them if he wanted to show his supremacy?

Apart from Charles V and Suleiman, we know that in the 1530s a few others owned a ring-watch, including the Pope,⁴¹ and the Duke of Urbino, Francesco Maria della Rovere,⁴² which were possibly all made by Capobianco or his circle. The republic of Venetia played a pivotal role in the spread of these earliest ring-watches. The Venetian connection of Suleiman's is explained in the previous paragraph. Francesco Maria della Rovere, a career soldier, was offered the position of captain general of the Venetian army as soon as Andrea Gritti was elected Doge in 1523.⁴³ The Dukes of Urbino, including Francesco Maria, had a close connection with Venice and were strongly interested in Venetian art and culture.⁴⁴

In the following decades more ring-watches are mentioned in other European countries and probably made on the other side of the Alps by non-Italian makers. But at the start of the seventeenth century, when bigger

clocks were produced in large numbers in the workshops of southern Germany, ring-watches were still rare and probably made in much smaller numbers. The watchmaker Georg Hipp sent a cast lead model of a ring-watch to Leopold V, Duke of Austria in 1619 which would cost between 100 and 150 gulden.⁴⁵ This suggests that it was probably a special commission by the Duke.

Acknowledgments

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Appendix: the four letters discovered in the Archivo General de Simancas, Spain

I: Charles V to don Lope de Soria

El relox que con la passada se dixo que se os enbiava yra con esta, tornar lareis a enviar muy bien concertado a Niça tal como se os proveyo.

39. G. Necipoğlu, 'Süleyman the Magnificent and the Representation of Power in the Context of Ottoman-Hapsburg-Papal Rivalry', *The Art Bulletin*, 71/3 (September 1989), 71, 401–427.

40. G. Necipoğlu, *Süleyman the Magnificent*, p. 407.

41. J. Dennistoun, *Memoirs of the Dukes of Urbino*, p. 383.

42. J. Dennistoun, *Memoirs of the Dukes of Urbino*, p. 383; see also G. Cardano, *De subtilitate rerum* (Nuremberg, 1550) lib. XVII, p. 319; J. M. Forrester (ed), *The De Subtilitate of Girolamo Cardano* (Tempe, Arizona: Arizona Center for Medieval and Renaissance Studies, 2013), p. 840; Zanetti, *Ianello Torriani and the Spanish Empire*, p. 302, note 6.

43. I. Versteegen, 'Francesco Maria and the Duchy of Urbino. between Rome and Venice', in *Patronage and Dynasty: The Rise of the della Rovere in Renaissance Italy* (Truman State University Press, 2007), p. 147.

44. Versteegen, 'Francesco Maria and the Duchy of Urbino', pp. 150–156.

45. Matthes, *Zeit haben*, pp. 187–8.

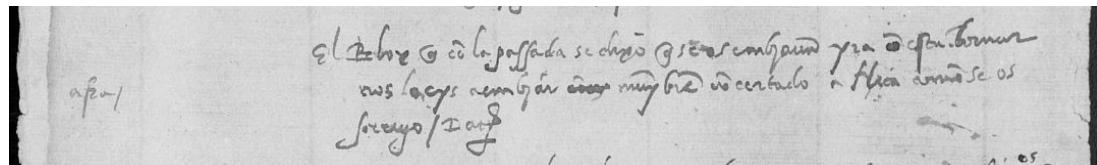


Fig 7. Passage from letter I. Archivo General de Simancas, Spain.

AGS, EST, leg. 1314, nº 210. 25 April 1538
 It has been said that the watch would be sent to you in the last galley, but it will be sent actually now in this one, you should send it back to Nice very well repaired as you have been ordered.

II: Don Lope de Soria to Charles V

E recibido la sortija del relox y el maestro que lo hizo esta aqui preso por que mato hun hombre. He dicho a esta Señoria quanto desea Su Magestad que se concierte el dicho relox y pienso que por servir a Aquella daran libertad al dicho maestro de manera que en buena ora se gasto para el y como lo habra concertado le henviare a Niça con la recepta de como se tiene de concertar quando se gaste.

AGS, EST, leg. 1315, nº 51-52. 10 May 1538.

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I have received the ring-watch, but the master that made it is in prison because he killed a man. I have informed his Highness [The Doge of Venice] that His Majesty [The Emperor] is very eager to get the ring-watch repaired, so I think that he will release the watchmaker to serve to you, so happily for him the watch broke down. When he repairs it I will send it back to you to Nice with the instructions on how it should be repaired if it were to break down again.

III: Don Lope de Soria to Charles V

El maestro que hizo la sortija con el reloj de

La Merced de la emperatriz estaua preso por que mato a su mujer y después hun hombre. Acaso pensado y porque sirva a Vuestra Merced en tornar a concertar el dicho relox, lo han librado y mañana piensso sacarlo de la careel y ge les he agradescido de parte de Vuestra Merced y luego metera mano en concertarlo y lo enbiare con la recepta de como se tiene de conservar y concertar.

AGS, EST, leg. 1315, nº 36-38. 22 May 1538.

The watchmaker who made the ring-watch of The Empress [Isabella of Portugal] was in prison because he killed his wife and then also a man. To serve you he has been set free, and tomorrow I will pick him up from prison. I have expressed [to the Doge] my gratitude for that. He will repair it very soon and then I will send it back to you with the instructions on how it should be kept and repaired.

IV: Don Lope de Soria to Charles V

Canamillas lieva la sortija del relox bien concertado y la memoria de como se tiene de conservar y cargar pero si se gasta no ay memoria que baste para ser concertado sino el mismo maestro que lo hizo, el qual tengo en mi posada y sabe labrar otras gentilezas de que pienso holgaria Vuestra Magestat por que tiene buen yngénio u no estaria mal en su Imperial Corte.

AGS, EST, leg. 1315, nº 25-26. 16 June 1538.

Canamillas brings the ring-watch well repaired and the instructions on how to wind and how to keep it, but if it fails there are no valid instructions how to repair it except for the master watchmaker who built it. He is in my lodge and knows how to make other wonders which I think His Majesty would like and he wouldn't be bad in His Imperial Court because he is very ingenious.