



Volume 18, Issue 1 (2026)

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Recommended Citation:

C. Richard Johnson Jr., Andrew C. Weislogel, "Assisting Creation Dating of Rembrandt Prints using Exact Watermark Matches Between the Prints and Seventeenth-Century Dutch Documents," *Journal of Historians of Netherlandish Art* 18:1 (2026) DOI: [10.5092/jhna.2026.18.1.3](https://doi.org/10.5092/jhna.2026.18.1.3)

Published by Historians of Netherlandish Art: <https://hnanews.org/>

Republication Guidelines: <https://jhna.org/republication-guidelines/>

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ISSN: 1949-9833

Assisting Creation Dating of Rembrandt Prints using Exact Watermark Matches Between the Prints and Seventeenth-Century Dutch Documents

C. Richard Johnson Jr., Andrew C. Weislogel

This article encourages the use of watermark matches between dated seventeenth-century Dutch documents and prints as an aid in dating print impressions, especially from states of the plate other than the one in which the date is originally inscribed. Foolscape watermarks in Rembrandt Harmenszoon van Rijn's (1606–1669) prints and in documents in the Zeeland Archives provide the image set examined. The analysis is facilitated by means of image-searchable watermark libraries for the discovery of potentially matching pairs and digital tools for the creation of overlays for precise watermark comparisons. Matches confirm the dates of some Rembrandt impressions, narrow the estimated printing dates of others, help assert lifetime or posthumous printings, and suggest dating for plate changes.

Introduction and Background

1. In the centuries following Rembrandt van Rijn's death in 1669, rivers of ink have flowed in dedication to the line-by-line study of the more than three hundred etchings the artist created across his four decades of print production. Only much more recently, however, have researchers focused something approaching that level of scrutiny on the crucial evidence already present in the handmade European papers Rembrandt used: the coats of arms, animals, shapes, and letters of watermarks imparted to sheets of paper by the paper mold during manufacture. Through the pioneering efforts of Nancy Ash and Shelley Fletcher and the comprehensive research of Erik Hinterding, a clearer picture has emerged of Rembrandt's printing practice, his peaks and valleys in production, and the nature of impressions made from his plates without his involvement—findings driven by paper data in concert with connoisseurship and primary-source research. In order to expand and refine this emerging picture, and informed by the lessons of innovative watermark scholarship as applied to other artistic and cultural questions, this article mines newly discovered and digitally confirmed matches between watermarks found on Rembrandt's prints and those appearing on handwritten and dated documents from Dutch archives of the period. It thus adds one more tool for dating impressions from Rembrandt's plates—and, ultimately, those of other artists. The early results show both a confirmation of some assumptions and a refinement of others, especially in cases where previously collected data are less conclusive as to precise paper use dates.

2. Papermaking began in China approximately two thousand years ago; during the intervening centuries, this technology spread to West Asia and then to North Africa. From there, papermaking became established in the Muslim-ruled territories of Iberia in the mid-twelfth century,¹ and reached the Italian peninsula slightly later via trade with Syria and Egypt.² By the mid-thirteenth century, the type of paper mold we associate with European laid papers had been perfected in Europe.³ Much like those early molds, those of Rembrandt's time consisted of a rectangular wooden frame with a rigid wire grid mold cover, over which a second wooden frame, or deckle, was placed to confine the paper pulp to a consistent sheet size as the mold was dipped into the vat ([fig. 1](#)). The wire mold cover itself was composed of a grid of closely spaced, parallel laid wires running horizontally, bound by vertical rows of more broadly spaced chain wires ([fig. 2](#)).
3. As early as the late thirteenth century, European papermakers began to affix designs or letters made of bent wire to wire paper mold covers ([see fig. 2](#)).⁴ Each sheet made from such a mold bears its exact pattern where the paper pulp settles more thinly over the wire profile. The laid and chain wires leave corresponding horizontal laid and vertical chain lines on the sheet, and the wire watermark design yields a distinctive watermark image. This handmade, regional, artisanal moldmaking process encodes in laid paper the unique characteristics—visible in the numerous radiographic images of historic papers in this article—necessary for determining matches and assigning paper dates.
4. As such, for well over a century, watermarks have been the primary physical feature used by bibliographers and historians to date culturally significant images or information drawn, printed, or written on sheets of laid paper. In 1907, Charles-Moïse Briquet (1839–1918), the most prominent early proponent of the study of watermarks, published the watermark catalogue *Les Filigranes*—still among the most commonly referenced sources for the discovery of matching watermarks in European laid paper made before 1600.⁵ Briquet stated that an exact match between a watermark appearing on a sheet of interest and one observed on a dated sheet could validate assigning the latter's date to the former.⁶ He also noted that the wires of a watermark only remained undamaged on its mold for a period of two years or so for popular paper sizes.⁷ This implies that the maximum gap in the dating of the manufacture of two sheets with identical watermarks is approximately two years. Briquet also pointed out that because two molds were used in rotation during the papermaking process, each paper batch would feature a pair of nearly identical watermarks—nearly, but not quite identical, because they were fashioned by hand.⁸ Such pairs are conventionally known as twinmarks. Briquet's approach did have its shortcomings; his catalogue includes only hand tracings of watermarks, a process that compounds the inherent variability of watermarks and renders those tracings insufficiently accurate for visually assessing an exact match. Also, Briquet's interest lay in the creation date of the paper itself, not the creation date of the information borne by it, which has been the central concern in various paper-related research endeavors during the twentieth century and is ours as well.
5. Six decades after Briquet's publication, Allan Stevenson used watermark matches to help determine the printing date of an incunable, the *Missale Speciale*, under consideration as the first printed book.⁹ The principal difficulty Stevenson faced was that the watermarks found in the *Missale Speciale* exhibited what appeared to be modestly damaged variations of the

same watermark. In addition to needing to find dated sheets with the same watermarks, Stevenson had to work with transmitted-light images of the sheets from the *Missale Speciale*, whose densely printed text often obscured watermark details (a sample of the watermarks from the leaves of the *Missale Speciale* appears in [figure 3](#)). Stevenson summarized his methodology as follows:

We have examined the four known copies of the Missale special. . . . During the long search we have discovered eleven other books, all of the 1470s, which contain paper made on the very moulds that supplied paper for the Missal. Through observing the variant states of their watermarks, as these deteriorate and slip leftwards between the chains, we have found it possible to arrange these states, and thus the books that contain them, in a rough time sequence. This paper order, correlated with evidence from colophon and rubrication dates, red printing and type states, and sometimes bindings has provided a series of dates varying from the approximate to the precise for the eleven books, and, with the further aid of liturgical clues, a good approximate date, and some would say a surprisingly precise date, for the Missal.

It is of course the approximate date that is of fundamental importance. For the abiding purpose has been to establish for certain whether the Missal is “early” or “late,” that is whether it was printed around 1450 or after 1470.¹⁰

6. Stevenson deduced that the Missal was produced after 1470 after all, confirming the historical primacy of the famed Gutenberg Bible of 1455/56.
7. In the 1980s, British musicologist Alan Tyson used watermarks for a different aim: to address the date of creation for Mozart’s autograph musical scores, many of which at the time presented significant dating questions that obscured further research into Mozart’s developmental arc as a composer.¹¹ Tyson’s task was complicated by the fact that, in many cases, the original composition on a score remained initially incomplete and was finished at a later date on paper with different watermarks. However, a fortunate circumstance arose: almost all of the papers used by Mozart included a watermark of three crescent moons.¹² The pair of molds used to make this particular batch, rather than presenting the same watermark placement on each screen, were instead designed as mirror images to one another. Tyson irreverently termed his practice of measuring the relationship among these three crescents “Selenometry” after Selene, the ancient Greek goddess of the moon.
8. This mold characteristic thus serves as a quantitative identifier, as well as, from our computational viewpoint, the most intriguing aspect of Tyson’s methodology. Tyson discovered that he could often identify the paper type from just the selenometry value corresponding to different configurations of the three moons in these similar watermarks, and consequently he was quite successful in dating the creation of separate sheets in Mozart’s autograph scores. A review of his study praises it as:

a mighty leap forward in the art of interpreting later eighteenth-century musical sources. What is important here is not merely the “hard facts”: the description of watermarks and their incidence in Mozart’s autographs. Rather it is the interpretation of these sources—the way in which they interact with other musical documents, letters, sketch studies and biography to generate an entirely new picture of Mozart and his music.¹³

9. In a similar fashion, we hope both to extend the real-world applicability of watermark research and to assert the ongoing necessity of allying it to a range of other watermark sources and investigations.
10. We now turn to the specific area of watermark research with which this article is concerned. During the 1990s and 2000s, Erik Hinterding identified groups of impressions of Rembrandt’s prints on laid paper with the same watermark to help construct a chronology of Rembrandt’s production as a printer (and, as we will see, re-printer) of copperplate etchings. Hinterding’s findings first appeared (in English) in 2006.¹⁴ He modeled his taxonomy of watermark types and nomenclature largely on the framework introduced by paper conservators Nancy Ash and Shelley Fletcher in 1998.¹⁵ Ash, Fletcher, and Hinterding all emphasized the need for an overlay comparison of two watermarks to assess the exactness of their match wire-by-wire.
11. Hinterding’s findings sprang from the labor-intensive collection of a representative sampling, via radiographic imaging, of the distinct watermarks found on the European laid-paper supports of Rembrandt’s prints.¹⁶ He then divided this dataset into groups of impressions all printed on paper with the exact same watermark. In the nomenclature Hinterding adapted from Ash and Fletcher for his broader Rembrandt watermark taxonomy, groups of typologically similar watermarks within a given category (Arms of Amsterdam, Basel Crosier, Foolscap, etc.) are labeled as belonging to the same variant; these receive a capital letter designation—A, B, C, and so on. Within these variants, nearly identical watermarks that suggest they belonged to the paired molds used in rotation in the papermaking process, receive a subvariant designation, lower-case a, b, c, etc. Each of the pair of so-called twinmarks within that subvariant batch is differentiated by a third lowercase letter. So, for example, the K variant of the Foolscap with Five-Pointed Collar watermark, comprised of papers K.a.a. and K.a.b., stands as a discrete paper batch made up of its two twinmarks. This twinmark status is further supported by the common appearance of both watermarks on multiple impressions of prints from the same plates, in the same state and printing condition, indicating membership of these impressions in an edition printed from the same paper batch.¹⁷ This taxonomy will be used comprehensively throughout the article, including for the labeling of watermark examples found outside Hinterding’s original dataset.
12. Hinterding’s method for dating sheets within this study corpus was predicated on the high degree of confidence that the date inscribed in the printing plate is the correct date for early impressions of the state in which that inscribed date first appears. Necessarily, this leaves open the possibility that the inscribed date is less accurate as a creation date for subsequent

states. For example, if state iii of a given plate is an early impression dated with the inscribed plate date (e.g. 1642), then states i and ii could have been created in 1642 or earlier, but not later. Correspondingly, states iv and beyond could have been created in 1642 or later, but not earlier. Given this variability, further information is needed, beyond the list sorting prints into groups with the same watermark, to offer data-driven implications of the printing dates for impressions of states before and after the state in which the plate date is first inscribed.

Early Impressions, Later Reprints: Rembrandt's Paper Use

13. Rembrandt often modified his plates over time, and he typically printed multiple impressions of a new state once he was satisfied with it. Further changes to a plate could follow closely—for example, within the same or the following year—or further apart. Moreover, when printing impressions from a batch of new or revised plates, Rembrandt often additionally printed some older plates that remained unchanged, resulting in impressions termed “reprints.” This means that a group of prints with the same watermark could include impressions both from earlier plates and from plates of the same date as the watermark. The most recently dated impressions in the group are printed from newly executed plates, a fact confirmed by the freshness of the printings, the occasional presence of trial proofs, and other factors indicative of the early impressions of a particular state. The state of the plate that receives the date inscription will normally be recognized as having impressions created in that year, because the inscribed plate date represents a moment when paper with the watermark of interest was demonstrably in Rembrandt's studio. For first impressions of the plate with the most recent inscribed date, that date is also their creation date. For reprint impressions of older, unchanged plates on paper bearing the same watermark, that date is their reprint date. It also bears pointing out that, therefore, Rembrandt's prints often appear on multiple paper batches, as identified by different watermarks, across the life of the plate, even though of course all the while the date originally etched into the plate by Rembrandt remains the same.
14. This dating method advanced by Hinterding revealed substantial insights into Rembrandt's practice of print production. Hinterding observed that Rembrandt usually purchased common (i.e., smaller) paper sizes in small batches. There is no evidence to suggest that Rembrandt stored quantities of these sheets over long periods, implying his consistent, periodic purchase of modest amounts of paper. The repeated use of small paper batches also increases the likelihood that each distinct watermark found on the prints produced would derive from just one purchase (or a few such purchases spread over a short period of time).¹⁸ Tallying the approximate number of watermarks in Rembrandt impressions from his print-producing years (1626–1665) reveals that Rembrandt was likely purchasing, on average, one batch of paper every two months.¹⁹ Additionally, the pattern of Rembrandt's paper buying (with respect to both paper size and purchase frequency) revealed by Hinterding's research indicates that, instead of always seeking out papers made specifically for printing, Rembrandt often made his prints on papers also commonly used for written documents. As Frans Laurentius observed, “Rembrandt, who bought only small amounts from the vast stock of paper imported to Amsterdam, will not have had very specific

demands. The similarities between drawings and prints with watermarks points to his use of a certain format or dimension of paper (in his case the most common size, 30 x 40 cm).²⁰

15. A valuable element of Hinterding's catalogue—indeed, to us among the most valuable—is his Appendix 3, the “Chronological List of Rembrandt's Papers,” which presents the 107 paper batches, identified by watermark type, to which Hinterding was able to most confidently assign a date for Rembrandt's use of the paper.²¹ The key to dating the creation of a particular watermark match group is based on the date inscribed in those impressions showing a minimal degree of plate wear due to previous use. This allows the inscribed plate date of these newest impressions to be assigned as the creation date of all impressions with the exact same watermark. Thus, the creation dates of reprints from older plates with the same watermark can also be logically designated. A glance through Appendix 3 reveals impressions from plates of the same state that have appeared earlier in the chronological list with different watermarks, thereby confirming them as reprints.

Methodology

16. The methodology proposed in this article to estimate printing dates of Rembrandt impressions builds on elements of the approaches highlighted thus far but aims to augment the level of precision and confidence around matches in three ways. First, the potential gap in the use dates of sheets with exactly matching watermarks supporting works by two different authors or artists includes the accepted window of two years during which the watermark remained undamaged from repeated cleanings of the paper mold. Further, the time between the paper's manufacture and its different uses, due to periods of storage and distribution, was also typically limited. For this reason, we also add a period (e.g. of four years) to account for possible time elapsed between manufacture and use due to varying time windows of shipping and storage for the two sheets.²² Second, an overlay is used to determine an exact watermark match. In contrast to previous, more cumbersome overlay methods, we rely on a digital procedure for overlay creation that accommodates watermark scans of differing physical sizes, images digitized at different resolutions, and watermarks appearing in different locations and axial rotations within their respective images. This digital computational procedure involves the rotation, scaling, and exact lining up of the two watermarks toward assessing a match.²³ This process constitutes an elaboration of the calculation of ratios between the distances separating different pairs of end points utilized by Alan Tyson.
17. In order to learn more about the corpus of prints from Rembrandt's etching plates, this article models the use of exact matches between a given watermark in a dated document and the same watermark in a print impression. We believe that this approach can then be applied to lessons learned from enlarging the pool of watermarks studied to include archived seventeenth-century Dutch documents featuring both watermarks and inscribed document creation dates. For this proof-of-concept discussion, the target is narrowed to Foolscap watermarks in Rembrandt's prints and in contemporaneous Dutch documents.²⁴ The latter come from the trove of radiographs painstakingly captured by Theo and Frans Laurentius in the Zeeland archives in Middelburg; the original documents in question include correspondence and other reports sent to that city from within the Dutch Republic

(chiefly The Hague) but also from abroad—including, occasionally, from Dutch ships at sea—which were collected and archived annually.²⁵ The benefit of such print-document watermark matches is the likely proximity of the creation year of the print impression to the year inscribed on the archival document, taken to be the paper use date. Carefully applied, this forensic approach could influence the estimate of the impression creation dates for prints pulled after the date inscribed on the plate itself—because, logically, the date of the archival document should confirm the approximate creation date of the print impression bearing the same watermark. Especially in the case of impressions from states other than the one that first received the inscribed date, bringing the matching document's date to the analysis could influence the estimate of those other states' creation dates.

18. For this study, the authors focused specifically on six papers bearing impressions of Rembrandt prints showing six different variants of Foolschap watermarks (H.b., N.a., AA.c., A.c., O.a., and K.a.) that in most cases exactly match watermarks from dated archival documents.²⁶ Only one of these six variants is found on an impression that is in a state associated with Rembrandt's inscribed plate date and has a watermark dated in Hinterding's "Chronological List of Rembrandt's Papers."²⁷ This assures that the plate date is the creation date of the state of that particular impression, but the majority of the studied group of Foolschap variants raises questions as to the actual printing date of the impressions themselves. The six plates implicated by these papers and thus studied here (B17, B55, B186, B188, B192, and B276) do all appear on at least one paper securely dated in Hinterding's "Chronological List of Rembrandt's Papers."²⁸ This provides confident creation dates for other impressions at some point in their printing history. To foreground these print/document watermark matches and their dating implications for Rembrandt impressions, we have chosen to illustrate print images only of those Rembrandt impressions that offer visual evidence of aspects (such as impression quality and plate wear) that directly support assertions about dating raised by the watermark matches. And as we will see, when seeking to date impressions of Rembrandt's prints, it is important to recall that Rembrandt often reprinted unaltered plates years after their original completion and that many of Rembrandt's plates survived him and were reprinted after his death in 1669. This article demonstrates that watermark matches between prints and dated archival documents can shed new light on various issues in the art-historical analysis of Rembrandt's prints on European antique laid paper.

Watermark Overlay Exact Match Confirmation

19. Purpose-built digital tools for watermark matching add greatly to even the experienced paper researcher's arsenal of approaches to quantifying similarities and discrepancies between watermarks. One visual procedure for discovering such watermark pairs is the decision tree approach utilized by the WIRE (Watermark Identification in Rembrandt's Etchings) Project at Cornell University.²⁹ Originally developed to greatly reduce the time needed to hunt through the hundreds of Rembrandt watermarks in Hinterding's catalogue in search of a match for a watermark of interest in a Rembrandt print not recorded by Hinterding,³⁰ the decision tree can also be used to check any watermark, including those in dated documents from the seventeenth century, for a potential match with a Rembrandt print.³¹ More recently developed digital tools are used in this article to construct an image-

searchable watermark library that provides rapid match candidate identification and to then create watermark overlays that can allow scholars to confirm an exact match with confidence.

20. The WIRE decision tree process can ensure a feature-by-feature match between a specific watermark from the documents in the Zeeland Archives and a specific watermark catalogued by Hinterding. But close looking is required to confirm that all of the laid and chain lines in the two watermark images match exactly. The traditional litmus test for this confirmation is the construction of an overlay of the two watermark images being compared, which reveals whether all the lines left by wires line up completely. For a physical overlay, this requires access to two exact-size reproductions of the two watermarks. As in this article, when the two watermarks to be compared are derived from printed catalogue images or online catalogue digital entries, the available images are likely to require some scaling, as well as possible rotation and translation within the provided watermark image, to offer suitability for overlay comparison.
21. This preparation can be provided by digital manipulation of two digitized images using point-and-click marking of corresponding points in both images, followed by modest digital image processing. As the alignment of two digital images can be a tedious task with general-purpose image processing software such as Photoshop, open-source software was written especially for this purpose.³² To simplify the computing requirements, the user marks the same specific points on both watermark images (**figure 4**, for instance, illustrates the eleven points chosen for the Foolscap with Five-Pointed Collar for a watermark from the Zeeland Archive.).³³ Marking the points in the same sequence at the same locations in the digital image of the Foolscap with Five-Pointed Collar variant labeled H.b.a. in Hinterding's catalogue, and collecting their coordinates in pixels, is again accomplished by simple point-and-click operations. The files containing this data are then employed in the execution of the watermark overlay creation software, which produces the overlay video (GIF) like the one seen in **figure 5**. Any small differences in locating the points in the two watermark images via manual computer-assisted marking are mitigated by the optimization algorithm used in the software, which repositions, as a group, the pixels in one image to best match the other.³⁴ The result is an overlay GIF that slowly fades back and forth between the two watermarks under comparison, allowing the researcher to assess whether there is any difference or deviation between them. All of the overlay GIFs for true matches between print and archival watermarks exhibit complete uniformity between the two watermarks.
22. To illustrate an example of two watermarks that are nearly identical but not a match, we have crafted an overlay GIF (**fig. 6**) for the twinmarks of the Five-Pointed Collar H.b. paper addressed in **figure 4**. Although the differences are subtle, the shifts between the red marked points between Five-Pointed Collar H.b.a. and its twinmark H.b.b. clearly indicate a non-match. This is visible especially at the tip of the hindmost collar point and at the upper left and right, where the peaks of the cap worn by the fool cross vertical chain lines.

Image Searchable Foolscape Watermark Library

23. A further benefit of this point-marking and repositioning software is that it applies a numerical value to the degree of error in fit between the two aligned sets of marked points in the watermark pair. This fit metric can be used to compare the closeness of the match of one watermark against a whole library of similarly marked watermarks of the same type.³⁵ The smaller the number of this fit metric, the closer the match between compared watermarks. A suitably small value provides quantifiable evidence for a visibly exact fit, the appearance of which must be tested with an overlay.
24. To find matches between watermarks in seventeenth-century Dutch documents and Rembrandt's prints, the following approach was taken. Two marked libraries (one for Foolscape with Five-Pointed Collar and the other for Foolscape with Seven-Pointed Collar) of all the complete (i.e. not partial or fragmentary) Foolscape in Hinterding's catalogue and the two Laurentius catalogues were assembled. This allowed checking any watermark in a library against all other watermarks in the same library using the library searching software. The results of testing one watermark against all the others were recorded as a bar graph in which the length of each bar corresponds to the mismatch metric, with a longer bar indicating a worse fit. For the watermark in **figure 4**, the resulting bar graph appears in **figure 7**. The shortest nonzero bar corresponds to the match confirmed in figure 4. Because the library includes the watermark for which we are seeking a match, the match with itself will yield no error, as shown by the zero-length bar visible at the upper right of figure 7.

A Further Word about Date Ranges in Watermark Matching

25. We have already alluded to the need for prudence in assigning watermark date ranges based on the life of the paper mold and the time involved in transporting and storing paper stocks. However, in watermark studies of this type, the question is sometimes raised about whether batches or even single sheets of paper could also have been put into use at much later times, thus jeopardizing conclusions derived from watermark matches. On this score, Theo and Frans Laurentius are worth quoting at length, in response to a similar question often posed to English watermarks pioneer Edward Heawood:

This question was: say a pile of paper at some point falls behind a shelf and is only found again fifty years later. If that pile were subsequently used, would the dating surely not be wrong? He had to admit that the idea was correct in theory. He knew from experience, however, that such a situation rarely occurred in practice. Paper was an expensive and scarce product. Demand was always higher than supply. The general public generally purchase small amounts while other users, such as printers and government institutions, used one ream after the other. Paper did not get the chance to grow old there.³⁶

26. The Laurentiuses' research on correspondence sent out from The Hague—which, as the seat of government, used large quantities of paper—further reveals that reams (around five hundred sheets) of writing paper of the common size for letters were used up quickly, one after the other.³⁷ On the Rembrandt side of the discussion, we will recall that Erik Hinterding's study of Rembrandt's printing papers (also mostly of the same standard sizes used for the documents held in the Zeeland archive) revealed that on average Rembrandt purchased a new batch of paper approximately six times a year.

Watermark Matches and Implications: Foolscaps with Five-Pointed Collar

27. The marked library of Foolscaps with Five-Pointed Collar used in this section to set up the search for matches includes ninety-nine usable entries from the Laurentius catalogues and forty-three usable entries from Hinterding's catalogue. The relevant matches follow.

Variant H.b.

28. The Foolscaps with Five-Pointed Collar watermark variations labeled as H.b.a. and H.b.b. appear in impressions of the fourth state of Rembrandt's print *The Flute Player* (B188 iv). The plate was signed and dated 1642 in the plate in state ii.³⁸ For visual reference, an example printed on paper with the H.b.a. twinmark from this batch is held by the British Museum ([fig. 8](#)).
29. The H.b.a. watermark in the Hinterding catalogue, the type noted in the preceding section, is identical to entry 483 in the earlier Laurentius catalogue. It appears on document inv. no. 948-78 in the Zeeland Archive, dated 1642, which has a location of use in The Hague.³⁹ The H.b.b. watermark in Hinterding's catalogue is identical to entry 545 in the same Laurentius catalogue. It appears in document inv. no. 948-82 in the Zeeland Archive, dated 1642, also with a use location of The Hague.⁴⁰ The inscribed date of 1642 in both documents matches the plate date inscribed in state ii of iv of *The Flute Player*. The overlay videos confirm the match of H.b.a. with entry 483 and H.b.b. with entry 545 ([see fig. 5 and fig. 9](#)).
30. The entries in Hinterding's "Concordance by Bartsch Number" note that states i to iii of *The Flute Player* all show Basel Crosier variant B'a. watermarks—a watermark in the form of a shield surmounted by a crown, bearing the curling bishop's staff of the Swiss Canton of Basel.⁴¹ This supports the claim that the impressions of these three states were made in the tight window of 1641–1642 assigned to Basel Crosier B'a. in entry 54 in Hinterding's "Chronological List of Rembrandt's Papers."⁴² The fact that the list of impressions of state iv, which is the final state, does not include any impressions on the Basel Crosier variant B'a. paper raises the possibility that these might have been reprinted later.⁴³ The matches with the watermarks in Laurentius's 2007 catalogue of Foolscaps with Five-Pointed Collar variant H.b. watermarks support 1642 as their printing date. This is also corroborated by the 1643 dating of another impression of *The Flute Player* iv on paper watermarked with the Foolscap with Five-Pointed Collar variant A.a.⁴⁴

Variant N.a.

31. The Foolscap with Five-Pointed Collar identified as variant N.a.b. appears in an impression of the first state of Rembrandt's print *Jan Lutma, Goldsmith (1584–1669)* (B276 i).⁴⁵ An impression of the second state of B276 has a watermark Hinterding describes as “nearly identical” and is therefore assigned to the same variant, N.a. Since the two watermarks are nearly but not completely identical, this watermark in a state ii impression is designated as a Foolscap with Five-Pointed Collar N.a.a, the twinmark of N.a.b., because impressions of B276 appear on both papers.⁴⁶ No other print catalogued in Hinterding's catalogue has either of these watermarks.
32. Since the watermarks are designated to be the same variant, they are dated the same as the plate date, 1656, inscribed in state ii, and Hinterding has included this N.a. paper in his “Chronological List of Rembrandt's Papers” (those he feels confident dating to a particular year) as entry 94.⁴⁷ The two watermarks display a number of readily visible differences, including noticeably more uneven heights of the cap peaks in N.a.b. than N.a.a. and different locations of the ball at the end of the braid relative to the nearest chain line. Further, the ball at the end of the fourth collar point from the left is on the right of the chain line in N.a.a. and on the left of it in N.a.b., and the roundels at the bottom of the watermark touch the chain lines to either side in N.a.a. and only on the right in N.a.b.⁴⁸
33. The Foolscap with Five-Pointed Collar N.a.b. watermark matches the watermark from document inv. no. 961–135 in the Zeeland Archive, dated 1655, with a use location of The Hague.⁴⁹ Confirmation of their match is provided by the overlay GIF in **figure 10**. The document date therefore precedes by one year the plate-inscribed date of 1656 on the portrait of Jan Lutma—in this case, reinforcing the plate date as the correct impression creation year for both states i and ii.

Watermark Matches and Implications: Foolscaps with Seven-Pointed Collar

34. The marked library of Foolscaps with Seven-Pointed Collar used in this section to discover matches includes 190 usable entries from the 2008 Laurentius catalogue and thirty-seven usable entries from Hinterding's catalogue. There are no Foolscaps with Seven-Pointed Collar watermarks in the 2007 Laurentius catalogue, which includes watermarks in documents dated from 1600 to 1650. A sample of a marked Foolscap with Seven-Pointed Collar and the thirteen points used in building a marked watermark library of the 227 images from the Hinterding and Laurentius catalogues appears in **figure 11**.

Variant AA.c.

35. The Foolscap with Seven-Pointed Collar labeled as AA.c.a. appears in impressions from three different Rembrandt plates: the second (and presumably final) state of *Joseph and Potiphar's Wife* (B39 ii), signed and dated 1634 in the plate; the fourth (and final) state of *The Flute Player* (B188 iv), signed and dated 1642 in state ii; and the second state of the signed but undated *The Fourth Oriental Head* (B289 ii).⁵⁰ Only the Foolscap with Seven-Pointed Collar AA.c.a. watermark in *The Flute Player* exists as a full image.⁵¹ The watermark in *Joseph and Potiphar's Wife* is a fragment retaining just the peaks of the Foolscap, as can be

seen on the website of the British Museum.⁵² An image of the watermark in *The Fourth Oriental Head*, which is a fragment presenting just the roundels at the bottom of the watermark, is available in the archive of the Netherlands Interuniversity Institute for Art History (NIKI–Florence) as file EH011002. *The Flute Player* (B188 iv) appears in three entries in Hinterding’s “Chronological List of Rembrandt’s Papers”: 54 (with Basel Crosier B’a.), 56 (with Foolscap with Five-Pointed Collar A.a.), and 72 (with Foolscap with Five-Pointed Collar I.a.). Hinterding asserts 1641, 1643, and 1648 as the respective dates for these papers.⁵³

36. The AA.c.a. watermark is identical to entry 502 in the 2008 Laurentius catalogue, which appears in document inv. no. 959–174 in the Zeeland Archive, dated 1653, with a use location of The Hague.⁵⁴ The overlay GIF in [figure 12](#) reveals an exact match between the watermark AA.c.a. in state iv of *The Flute Player* and the watermark of the document. The date of the document is five years later than the latest printing date of 1648 assigned to any impression of *The Flute Player* in Appendix 3 of Hinterding’s catalogue.⁵⁵ This encourages considering a printing date of closer to 1653 for the final state impression of *The Flute Player* on paper watermarked with the Foolscap with Seven-Pointed Collar AA.c.a.. For visual reference, an image of that impression, held by the Herzog Anton Ulrich Museum, Braunschweig, is reproduced in [figure 13](#).
37. A comparison with the previously mentioned impression of *The Flute Player* state iv in the British Museum ([fig. 8](#)), shows that the Braunschweig impression is printed more faintly, consistent with the later print date, due to wear from repeated printing of this plate that features passages of drypoint. In this process, the artist uses a sharp stylus to scratch lines directly into the surface of the copper plate, raising shavings of metal called “burr.” When the plate is inked, drypoint burr prints as areas of rich black. However, this burr is fragile, and only a few passes through the press quickly wear it away. This difference from early to late impressions of *The Flute Player* is especially visible in the earthen bank at the lower right, which in the British Museum impression still shows the velvety black tone associated with drypoint burr, while in the Braunschweig impression it has almost completely worn away. Further, if we accept the watermark fragments in *Joseph and Potiphar’s Wife* and *The Fourth Oriental Head* as additional exact matches to the AA.c.a. watermark in the dated document, these, too, can be seen as later reprints from their plates, also around 1653.

Variant A.c.

38. The Foolscap with Seven-Pointed Collar labeled A.c. appears on impressions of the second and final state of two plates: *Self-Portrait in a Cap and Scarf with Face Dark: Bust* (B17 ii), which is signed and dated 1633 in the plate in state ii, and *The Artist Drawing from the Model* (B192 ii), which does not have a plate date.⁵⁶ The A.c. watermark is identical to entry 575 in the 2008 Laurentius catalogue: document inv. no. 958–13–11 in the Zeeland Archive, dated 1652, with a use location The Hague.⁵⁷ The overlay providing confirmation of the match appears in [figure 14](#).⁵⁸
39. The document-print watermark match in this case seems to support a print date of circa 1652 for the later reprints with the Foolscap with Seven-Pointed Collar A.c. watermark. The date is further corroborated by other watermarks that appear in impressions of the final

state of *Self-Portrait in a Cap and Scarf with Face Dark: Bust* (B17 ii) and *The Artist Drawing from the Model* (B192 ii). Impressions of the final state of B17 appear in entries 24, 25, 56, and 73 in Hinterding's "Chronological List." The date associated with entry 73 is 1650.⁵⁹ Impressions of the final state of B192 appear in entries 47, 52, and 81 in the "Chronological List." The date associated with entry 81 is 1652.⁶⁰ The dates of these late impressions align with the document-print Foolscap with Seven-Pointed Collar A.c. match, indicating that their final states, printed on paper with the Foolscap with Seven-Pointed Collar A.c., are also late reprints dated circa 1652.

Variant O.a.

40. The Foolscap with Seven-Pointed Collar O.a. appears in only one print, *The French Bed (Le lit à la française)* (B186 iv), which is signed and dated 1646 in the plate.⁶¹ This print appears in Hinterding's "Chronological List of Rembrandt's Papers" in entries 73 (shared watermark: Foolscap with Five-Pointed Collar K.a.) and 81 (shared watermark: Strasbourg Lily E'.a.).⁶² The various impressions in these two entries are dated, respectively, 1650 and 1652.⁶³ The O.a. watermark is identical to entry 408 in Laurentius's 2008 catalogue, illustrated on p. 215. It appears in document inv. no. 969–105 in the Zeeland Archive, dated 1663, with a use location of The Hague. This match, illustrated by the overlay GIF in [figure 15](#), suggests a much later printing of this impression of B186 iv than 1652.

Variant K.a.

41. A comparison of the Foolscap with Seven-Pointed Collar K.a.b. and K.a.c. watermarks observed on Rembrandt's prints and corresponding watermarks on archival documents from Laurentius's study—identical in all but the minutest respects—raises the necessity for care required when asserting matches and drawing attendant conclusions from them. The Foolscap with Seven-Pointed Collar watermarks in K.a.b. and K.a.c. in Hinterding's catalogue are themselves nearly identical.⁶⁴ However, close looking and the overlay GIF in [figure 16](#) suggest differences in the bridge of the fool's nose and the jut of the chin, with K.a.b. presenting the straighter nose and a slightly more protruding chin. Foolscap with Seven-Pointed Collar K.a.b. appears in only one impression of the only state of *The Flight into Egypt: Crossing a Brook* (B55) in Hinterding's catalogue.⁶⁵ Foolscap with Seven-Pointed Collar K.a.c. appears in seven impressions of seven different plates, including *The Flight into Egypt: Crossing a Brook* (B55).⁶⁶ *The Flight into Egypt: Crossing a Brook* is signed and dated 1654 in the plate, which is the latest date associated with the impressions on paper with the watermark Foolscap with Seven-Pointed Collar K.a.c. *The Flight into Egypt: Crossing a Brook* is listed as appearing in impressions bearing seven other watermarks in addition to K.a.b. and K.a.c.⁶⁷ None is associated with a plate date after 1654. Two impressions of B55 with Foolscap with Five-Pointed Collar F.a. watermarks are dated 1654.⁶⁸ Finally, the appearances of Foolscaps with Seven-Pointed Collar K.a.b. and K.a.c. are marked with an asterisk, indicating that "The copperplate was also reprinted after Rembrandt's death [in 1669]."⁶⁹
42. An equally indistinguishable pair of Foolscaps with Seven-Pointed Collar nearly identical to each other and to Foolscaps with Seven-Pointed Collar K.a.b. and K.a.c. are seen as entries 508 and 509 in the 2008 Laurentius catalogue.⁷⁰ Curiously, 509 has a straighter nose bridge,

but 509 has the less protruding chin (see the overlay GIF in [figure 17](#)). This complicates a one-to-one correspondence with K.a.b. and K.a.c. Entries 508 and 509 appear, respectively, in documents inv. nos. 996–9 and 998–25 in the Zeeland archive. Inv. no. 508 is dated 1691, and inv. no. 509 is dated 1693; both were used in The Hague.⁷¹

43. Figures 18–21 illustrate the four possible cross-use matches: K.a.b. and 508 ([fig. 18](#)), K.a.b. and 509 ([fig. 19](#)), K.a.c. and 508 ([fig. 20](#)), and K.a.c. and 509 ([fig. 21](#)). Not only are each of the watermark pairings nearly identical, but the spacing of their vertical chain lines, when overlaid, also matches, further suggesting the sheets came from the same pair of molds. This cross-match closeness, taken along with the slight but visible nose and chin deviations in the face of the fool noted above, make it difficult to fully assert whether a match is present or not. If we do assert a cross-match between one of K.a.b and K.a.c. with either 508 or 509, this suggests that the associated Rembrandt impressions were printed posthumously, since all of the watermarked documents postdate 1669. If we cannot assert a match, this group therefore offers evidence of the potential exceptional similarity of handmade watermarks—and their neighboring chain line patterns—over as long as four decades. This similarity indicates the caution required in using *nearly* identical watermarks alone as evidence of similar dating in a limited time window.
44. As such, a visual comparison of specific impression characteristics may shed some light on the paper question. We carefully compared the Art Institute of Chicago's impression of *The Flight into Egypt: Crossing a Brook* (B55, only state) appearing on the Foolscap with Seven-Pointed Collar K.a.b. paper under consideration here ([fig. 22](#)) with an impression of the same print from the Frits Lugt Collection, Fondation Custodia, Paris ([fig. 23](#)), which appears on a Foolscap with Five-Pointed Collar F.a.b. paper confidently datable to the plate date of 1654.⁷² In the Paris impression, the drypoint burr from the lines of the landscape just to the left of the donkey's tail still prints visibly, whereas in the Chicago impression, nearly all vestiges of drypoint burr in that area have gone, indicating a later printing. It therefore seems unlikely that the K.a.b. paper on which the Chicago impression appears could date from the same year the plate was made.
45. Additionally, at some point prior to the 1691 and 1693 dates inscribed on Laurentius documents 508 and 509, the plate for *The Flight into Egypt: Crossing a Brook* (which still survives) seems to have been owned by Amsterdam print publisher Clement de Jonghe (1624/25–1677), as it shows up in his posthumous inventory of 1679.⁷³ There is no evidence that Clement de Jonghe sold the Rembrandt plates in his possession, as his sons carried on the print publishing business after his death in 1677.⁷⁴ However, even if De Jonghe's sons did sell the plate, its inclusion as lot 16 in the 1767 sale of the collection of Amsterdam merchant Pieter de Haan (1723–1766) is strong evidence that it remained in Amsterdam at least during the 1690s and may have been used to print impressions in that decade.⁷⁵
46. The print found on the K.a.c. paper is *The Raising of Lazarus: Small Plate*, B72 i/ii, a plate dating from 1642 ([fig. 24](#)). Since Rembrandt seems to have used little drypoint in this print, its visual characteristics provide less direct help in assessing the when this reprint was made. However, the B72 plate (now in the Museum of Fine Arts, Boston) may also have been owned by Clement de Jonghe and may thus have also been printed posthumously.⁷⁶ Further, this plate also appears in the stock list of publisher Claes Claesz. Visscher III (1649–1702),

recorded after 1682, offering yet another possible printer for this impression on the K.a.c. paper and linking its use to the early 1690s to synchronize with the 1691 and 1693 dates of the archival documents appearing on this same paper.⁷⁷

Concluding Remarks

47. The print-document watermark matches discovered via this library search and overlay creation process present various implications for the dating of the prints appearing on these papers.
48. First, the printing dates of some impressions of the fourth state of *The Flute Player* (B188) are confirmed by Foolsap with Five-Pointed Collar H.b.a. and H.b.b. matches with dated documents as quite close to the date of 1642 inscribed in the plate in its second state. The printing dates of other impressions of the fourth (and final) state of *The Flute Player* with different watermarks appear throughout the 1640s. Impressions of B188 iv appear in entries 54, 56, and 72 of the “Chronological List of Rembrandt’s Papers” in Hinterding’s catalogue with the assigned paper dates of 1641, 1643, and 1648. For the impression of B188 iv with the Foolsap with Seven-Pointed Collar AA.c.a., a print-document watermark match suggests consideration of a printing date around 1653, which is later than any other presently suggested in Hinterding’s catalogue. This later printing date is supported by visual evidence presented by the impression characteristics.
49. Second, a print-document watermark match supports confirmation of the creation date for *Jan Lutma, Goldsmith (1584–1669)* (B276), bearing the Foolsap with Five-Pointed Collar N.a.b. watermark, as the plate date 1656 subsequently inscribed in state ii.
50. Third, the print-document watermark match for the Foolsap with Seven-Pointed Collar A.c. for the final state of *Self-Portrait in a Cap and Scarf with Face Dark: Bust* (B17 ii) and the final state of *The Artist Drawing from the Model* (B192 ii) suggests dating them to the same year (1652) as reprints of these two plates appearing on other papers.
51. Fourth, *The French Bed (Le lit à la française)* (B186) has impressions dated as late as 1652 in the “Chronological List of Rembrandt’s Papers” in volume 2 of Hinterding’s catalogue. A fourth (and final) state with the Foolsap with Seven-Pointed Collar O.a. watermark presents a match with a document with a significantly later paper use date of 1663. Since the *French Bed* plate does not survive (and is not among those plates in the 1674 inventory of Dutch print publisher and dealer Clement de Jonghe),⁷⁸ it is reasonable to presume that this impression was pulled around 1663, before the plate disappeared.⁷⁹
52. Fifth and finally, *The Flight into Egypt: Crossing a Brook* is signed and dated 1654 in the plate in its only state. One impression features a Foolsap with Seven-Pointed Collar K.a.b. watermark and a second shows a Foolsap with Seven-Pointed Collar K.a.c. These two watermarks are extremely similar to each other and to two watermarks in documents dated 1691 and 1693, which encourages a closer look at the prints as posthumous reprints. A posthumous creation is indeed likely based on visual comparison of securely dated early impressions of this print, and also since this plate was probably owned by Clement de Jonghe, and Pieter de Haan a century later (both of whom may have produced posthumous

prints), and still survives today.⁸⁰ It is also possible that Rembrandt may have intended this plate as part of a series of the youth of Christ, along with *The Adoration of the Shepherds, with the Lamp* (B45), *The Circumcision in the Stable* (B47), *Christ and his Parents Returning from the Temple* (B60), *The Virgin and Child with the Cat and the Snake* (B63), and *Christ Disputing with the Doctors* (B64).⁸¹

53. The implications of watermark matches between prints and documents illustrate the use of such matches in estimating the dates for printed impressions of various states of a given plate. Examples with Foolscaps with Five-Pointed Collar include print-document watermark matches that support both dating a state with the plate date inscribed in a later state and dating a state with the plate date inscribed in an earlier state. Four examples of Foolscap with Seven-Pointed Collar print-document watermark matches all suggest dates for impressions created after their associated plate dates. In one case, evidence lends support to a posthumous dating.
54. Further discoveries of print-document watermark matches from the creation of marked watermark libraries for other Rembrandt watermark types are likely to offer additional complementary insights into Erik Hinterding's huge contributions toward understanding the production history of Rembrandt's prints.⁸² The rich data trove derived from Rembrandt's well-studied prints offers a robust platform for further investigation of print-document watermark correspondences, and there is more to be learned about his oeuvre. Of course, as further watermarks appearing on prints by Rembrandt's artistic contemporaries are recorded, this technique could naturally be expanded to reveal further archival matches. In this way, the technique would expand beyond Rembrandt, to address lesser-known artists or prints—especially those undated in the plate—or to more closely follow the journey of plates repeatedly editioned by subsequent publishers. As such, the print-document match process constitutes a forensic instrument that should join the toolbox of methods for the multifaceted investigation of prints that includes print connoisseurship, stylistic analysis, and available primary sources.

Acknowledgements

For watermark image permissions and sage advice, the authors wish to thank Frans Laurentius, Netherlands Interuniversity Institute for Art History (NIKI–Florence), and Sound & Vision. We are grateful also to the National Endowment for the Humanities; Brittany R. R. Rubin, Herbert F. Johnson Museum Print Room Assistant 2015–2020; paper moldmaker Timothy Moore; and the many Cornell students who contributed to the completion of the WIRE Rembrandt watermark decision tree. We also wish to express our gratitude to *JHNA* associate editor Bret Rothstein for his enthusiasm and essential feedback on this article, and especially to Erik Hinterding, curator of prints at the Rijksmuseum, whose groundbreaking research on Rembrandt's watermarks made this further inquiry possible.

Biographies

Charles Richard (Rick) Johnson Jr. received his PhD in electrical engineering from Stanford University in 1977. Rick joined the electrical engineering faculty at Cornell University in 1981, was named the Geoffrey S. M. Hedrick Senior Professor of Engineering in 2008, retired in 2021, and began PhD studies in art history, completed in May 2026, at the Vrije Universiteit Amsterdam with the thesis title “Advances in Computational Art Connoisseurship: Digital Image Processing of Manufactured Patterns in Art Supports.”

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Andrew C. Weislogel, acting chief curator and Seymour R. Askin Jr. '47 Curator of Earlier European and American Art at Cornell University's Herbert F. Johnson Museum, holds a PhD in the history of art from Cornell University. Co-founder of the Watermark Identification in Rembrandt's Etchings (WIRE) project, Weislogel co-curated *Lines of Inquiry: Learning from Rembrandt's Etchings*, whose catalogue received CAA's 2019 Alfred H. Barr Jr. Award for Smaller Museums, Libraries, Collections, and Exhibitions.

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Illustrations



Fig. 1 Modern laid paper mold and deckle made by Timothy Moore. Photo credit: David O. Brown, Herbert F. Johnson Museum of Art

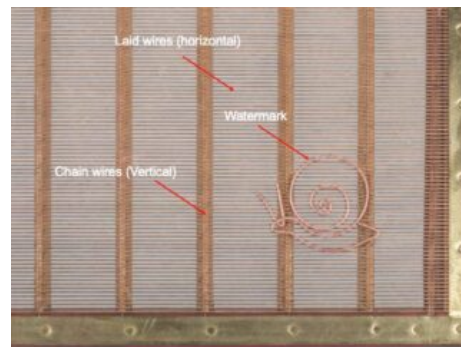


Fig. 2 Modern laid paper mold made by Timothy Moore showing mold cover construction and watermark attachment. Photo credit: David O. Brown, Herbert F. Johnson Museum of Art



Fig. 3 Bull's-head watermarks, plate V in Allan Stevenson, *The Problem of the Missale Speciale* (Bibliographical Society, London, 1967). Plates not paginated. Courtesy the Bibliographical Society

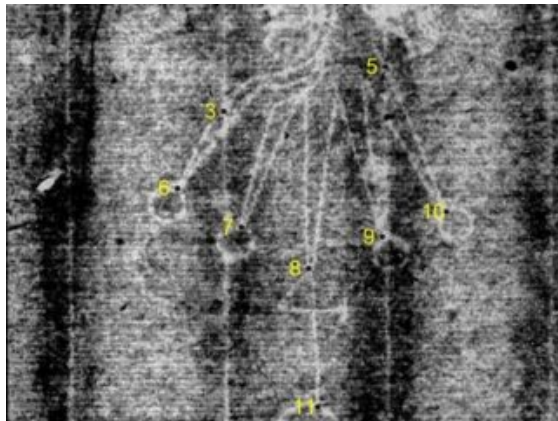


Fig. 4 Point-marked Foolscap with Five-Pointed Collar watermark, scanned from entry 483 in Theo and Frans Laurentius, *Watermarks 1600–1650 Found in the Zeeland Archives* (Hes & De Graaf, 2007), 211. Courtesy Frans Laurentius. Numbered points applied using watermarkPointMarker software introduced in C. Richard Johnson Jr., William A. Sethares, and Margaret Holben Ellis, “Overlay Videos for Quick and Accurate Watermark Identification, Comparison, and Matching,” *Journal of Historians of Netherlandish Art* 13, no. 2 (Summer 2021), DOI: 10.5092/jhna.2021.13.2.1.



Fig. 5 Overlay GIF created using *visualizeOverlays* software introduced in Johnson, Sethares, and Ellis, “Overlay Videos,” of marked watermark from entry 483, in Laurentius, *Watermarks 1600–1650*, 211; and marked watermark of Foolscap with Five-Pointed Collar H.b.a. from entry EH 026097 in the Dietz Dataset in the collection of Netherlands Interuniversity Institute for Art History (NIKI–Florence) (this dataset is not publicly available). Watermark in Laurentius, *Watermarks 1600–1650* courtesy Frans Laurentius. Permission to publish entry from Dietz Dataset granted by the Netherlands Interuniversity Institute for Art History (NIKI–Florence)

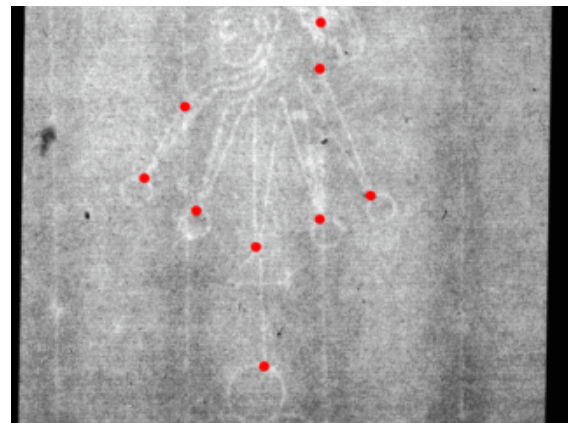


Fig. 6 Overlay GIF with marked watermark (locations indicated with red dots) of Foolscap with Five-Pointed Collar watermarks H.b.a and H.b.b. from entries EH 026097 and EH026096 in the Dietz Dataset. Permission to publish granted by Netherlands Interuniversity Institute for Art History (NIKI–Florence)



Fig. 7 Bar graph quantifying similarity with Foolscap with Five-Pointed Collar with points marked in fig. 4 (here labeled F5PC-L1-483), generated using *watermarkLibrarySearch* software introduced in Johnson, Sethares, and Ellis, “Overlay Videos,” using searchable library created from scans of Foolscap with Five-Pointed Collar watermarks in Laurentius, *Watermarks 1600–1650*, 211–237, and Laurentius, *Watermarks 1650–1700*, 199–207, and collection of all Foolscap with Five-Pointed Collar watermarks in Erik Hinterding, *Rembrandt as an Etcher* (Sound & Vision, 2006), 3:195–243. The shortest nonzero bar from the close-up excerpt on the right is F5PC-H1-H-b-a, illustrated in the overlay in figure 4. Courtesy Frans Laurentius and Sound & Vision (this searchable library is not publicly available)



Fig. 8 Rembrandt van Rijn, *The Flute Player*, 1642, etching and drypoint on laid paper (B188 iv), 11.6. x 14.3 cm, The British Museum, London, inv. no. 1973–U.959 (artwork in the public domain)

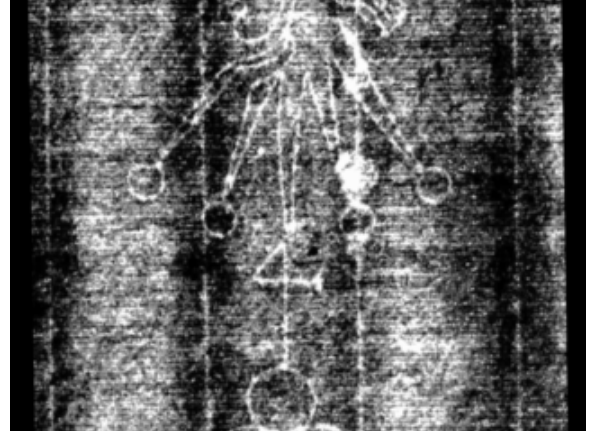


Fig. 9 Overlay GIF of marked watermark entry 545 in Laurentius *Watermarks* and marked watermark of Foolscap with Five-Pointed Collar H.b.b from Dietz Dataset entry EH 026096. Created using *visualizeOverlays* software introduced in Johnson, Sethares, and Ellis, “Overlay Videos,” Watermark in Laurentius, *Watermarks 1600–1650*, 234, courtesy Frans Laurentius. Permission to publish entry from Dietz Dataset granted by Netherlands Interuniversity Institute for Art History (NIKI–Florence)



Fig. 10 Overlay GIF of marked watermark from Laurentius *Watermarks* entry 381 and marked watermark Dietz Dataset entry EH 026038 of Foolscap with Five-Pointed Collar N.a.b. GIF created using *visualizeOverlays* software introduced in Johnson, Sethares, and Ellis, “Overlay Videos.” Watermark in Laurentius, *Watermarks 1650–1700*, 204, courtesy Frans Laurentius. Permission to publish entry from Dietz Dataset granted by Netherlands Interuniversity Institute for Art History (NIKI–Florence)

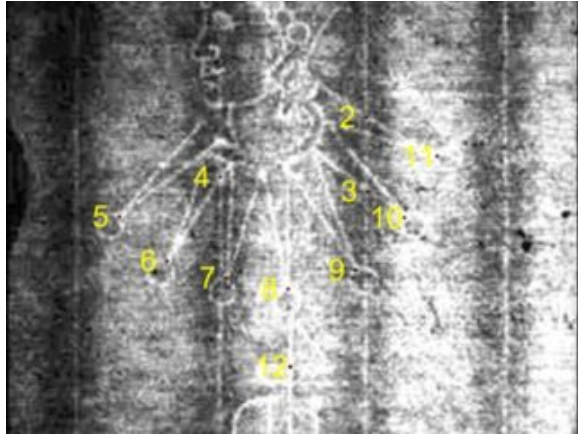


Fig. 11 Point-marked Foolscap with Seven-Pointed Collar. Watermark scanned from entry 502 in Laurentius, *Watermarks 1650–1700*, 242, courtesy Frans Laurentius. Numbered points applied using *watermarkPointMarker* software introduced in Johnson, Sethares, and Ellis, “Overlay Videos”

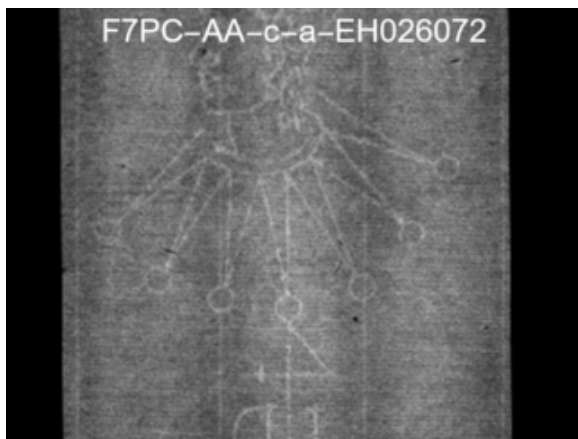


Fig. 12 Overlay GIF of marked watermark from fig. 10 and marked watermark of Foolscap with Seven-Pointed Collar AA.c.a from entry EH 026072 in Dietz Dataset. GIF created using *visualizeOverlays* software introduced in Johnson, Sethares, and Ellis, “Overlay Videos,” Watermark in Laurentius, *Watermarks 1650–1700* courtesy Frans Laurentius. Permission to publish entry from Dietz Dataset granted by Netherlands Interuniversity Institute for Art History (NIKI–Florence)



Fig. 13 Rembrandt van Rijn, *The Flute Player*, dated in the plate 1642, etching and drypoint on laid paper (B188 iv), 11.6 x 14.2 cm, Herzog Anton Ulrich Museum, Braunschweig, inv. no. 5535 (artwork in the public domain)

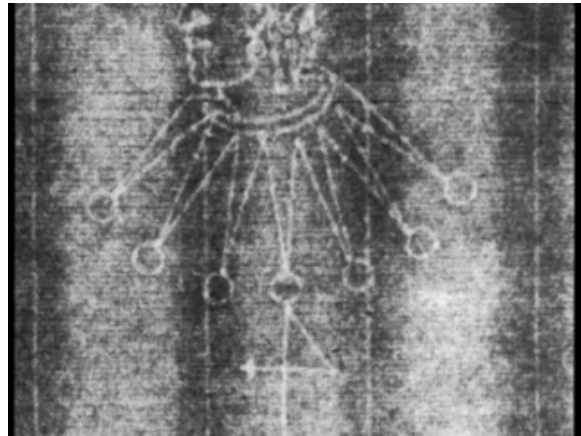


Fig. 14 Overlay GIF of marked watermark from entry 575 in Laurentius, *Watermarks 1650–1700*, and marked watermark of Foolscap with Seven-Pointed Collar A.c. in Nancy Ash and Shelley Fletcher, *Watermarks in Rembrandt's Prints* (National Gallery of Art, Washington, 1998), 115. created using *visualizeOverlays* software introduced in Johnson, Sethares, and Ellis, “Overlay Videos.” Watermark in Laurentius, *Watermarks 1650–1700*, 270, courtesy Frans Laurentius.

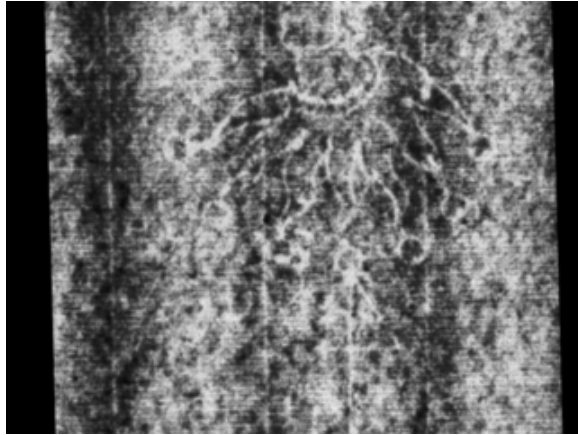


Fig. 15 Overlay GIF of marked watermark from entry 408 in Laurentius, *Watermarks 1650–1700*, and marked watermark of Foolscap with Seven-Pointed Collar from entry O.a in Hinterding, *Rembrandt as an Etcher*, 3:278. GIF created using *visualizeOverlays* software introduced in Johnson, Sethares, and Ellis, “Overlay Videos.” Watermark in Laurentius, *Watermarks 1650–1700*, 217, courtesy Frans Laurentius. Entry O.a in Hinterding, *Rembrandt as an Etcher*, 3:278, in overlay courtesy Sound & Vision Publishers.



Fig. 16 Overlay GIF of marked Foolscap with Seven-Pointed Collar watermarks from entries K.a.b. and K.a.c. in, respectively, entries EH027005 and EH026061 in the Dietz Dataset. GIF created using *visualizeOverlays* software introduced in Johnson, Sethares, and Ellis, “Overlay Videos,” Permission to publish entries from Dietz Dataset granted by Netherlands Interuniversity Institute for Art History (NIKI–Florence)

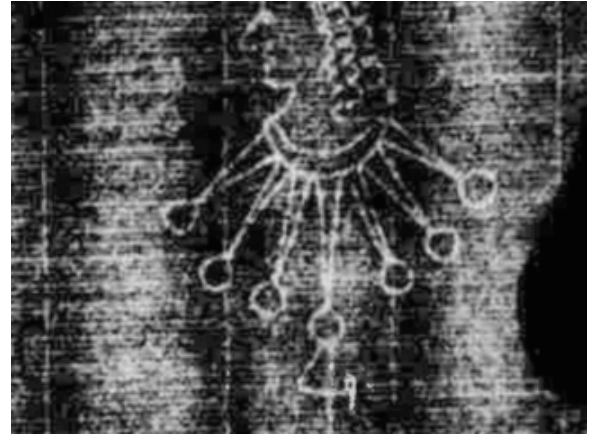


Fig. 17 Overlay GIF of marked watermarks from entries 508 and 509 in Laurentius, *Watermarks 1650–1700*. GIF created using *visualizeOverlays* software introduced in Johnson, Sethares, and Ellis, “Overlay Videos,” Watermark in Laurentius, *Watermarks 1650–1700*, 244, courtesy Frans Laurentius.

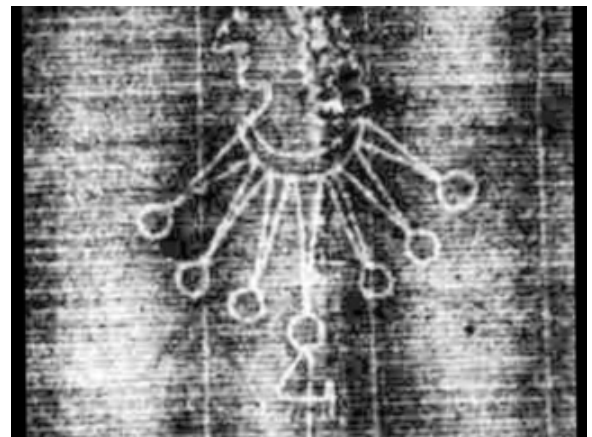


Fig. 18 Overlay GIF of marked watermark from entry 508 in Laurentius, *Watermarks 1650–1700* and marked watermark of Foolscap with Seven-Pointed Collar K.a.b from entry EH 027005 in Dietz Dataset. GIF created using *visualizeOverlays* software introduced in Johnson, Sethares, and Ellis, “Overlay Videos.” Watermark in Laurentius, *Watermarks 1650–1700*, 244, courtesy Frans Laurentius. Permission to publish entry from Dietz Dataset granted by Netherlands Interuniversity Institute for Art History (NIKI–Florence).

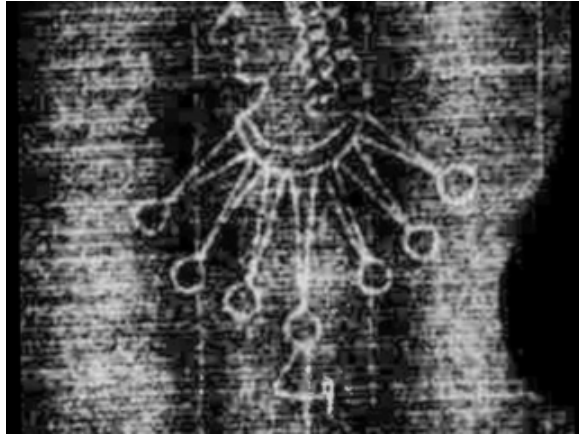


Fig. 19 Overlay GIF of marked watermark from entry 509 in Laurentius, *Watermarks 1650–1700* and marked watermark of Foolschap with Seven-Pointed Collar K.a.b. from entry EH 027005 in Dietz Dataset. GIF created using *visualizeOverlays* software introduced in Johnson, Sethares, and Ellis, "Overlay Videos." Watermark in Laurentius, *Watermarks 1650–1700*, 244, courtesy Frans Laurentius. Permission to publish entry from Dietz Dataset granted by Netherlands Interuniversity Institute for Art History (NIKI–Florence)

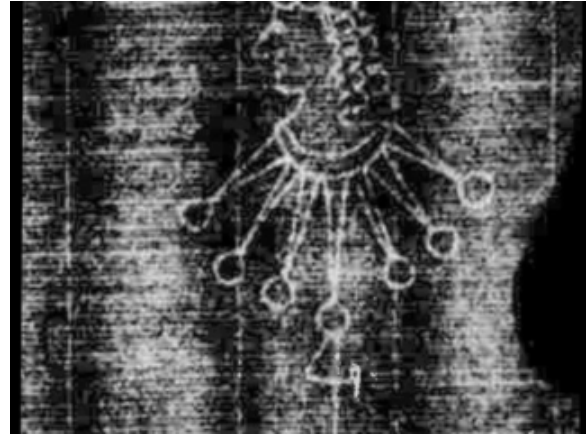


Fig. 21 Overlay GIF of marked watermark from entry 509 in Laurentius, *Watermarks 1650–1700* and marked watermark of Foolschap with Seven-Pointed Collar K.a.c. from entry EH 026061 in Dietz Dataset. GIF created using *visualizeOverlays* software introduced in Johnson, Sethares, and Ellis, "Overlay Videos." Watermark in Laurentius, *Watermarks 1650–1700*, 244, courtesy Frans Laurentius. Permission to publish entry from Dietz Dataset granted by Netherlands Interuniversity Institute for Art History (NIKI–Florence)



Fig. 20 Overlay GIF of marked watermark from entry 508 in Laurentius, *Watermarks 1650–1700* and marked watermark of Foolschap with Seven-Pointed Collar K.a.c. from entry EH 026061 in Dietz Dataset. GIF created using *visualizeOverlays* software introduced in Johnson, Sethares, and Ellis, "Overlay Videos." Watermark in Laurentius, *Watermarks 1650–1700*, 244, courtesy Frans Laurentius. Permission to publish entry from Dietz Dataset granted by Netherlands Interuniversity Institute for Art History (NIKI–Florence)



Fig. 22 Rembrandt van Rijn, *The Flight into Egypt: Crossing a Brook*, dated in the plate 1654, etching, drypoint, and burin on laid paper (B55, only state), 9.4 x 14.4 cm, Art Institute of Chicago, 1938.1758 (artwork in the public domain). Later impression showing drypoint burr no longer printing to the left of the donkey's tail.



Fig. 23 Rembrandt van Rijn, *The Flight into Egypt: Crossing a Brook*, dated in the plate 1654, etching, drypoint, and burin on laid paper (B55, only state), 9.4 x 14.4 cm, Fondation Custodia, Collection Frits Lugt, Paris, inv. no. 1683 (artwork in the public domain). Impression datable via watermark to 1654, showing vestiges of drypoint burr to the left of the donkey's tail.



Fig. 24 Rembrandt van Rijn, *The Raising of Lazarus: Small Plate*, dated in the plate 1642, etching (B72 i/ii), 14.9 x 11.2 cm. Herzog Anton Ulrich Museum, Braunschweig, inv. no. AB 3.90a (artwork in the public domain). Watermark match to dated archival documents suggesting posthumous impression.

Endnotes

1. Dard Hunter, *Papermaking Through Eighteen Centuries* (William Edwin Rudge, 1930), 109.
2. Edo G. Loeber, *Paper Mould and Mouldmaker* (Paper Publications Society, 1982), 2-4.
3. Loeber, *Paper Mould*, 5.
4. Loeber, *Paper Mould*, 5.
5. Charles-Moïse Briquet, *Dictionnaire historique des marques du papier des leur apparition vers 1282 jusqu'en 1600, avec 39 figures dans le texte et 16, 112 facsimilés de filigranes* (A. Picard & fils; A. Jullien, 1907).
6. Charles-Moïse Briquet, "De la valeur des filigranes du papier comme moyen de déterminer l'âge et la provenance de documents non datés," *Bulletin de la Société d'Histoire et Archéologie de Genève* 1, no. 2 (1892): 192.
7. Briquet, "De la valeur des filigranes," 193, as translated in Neil Harris, *Paper and Watermarks as Bibliographical Evidence* (Institut d'histoire du livre, 2010), 48, https://air.uniud.it/retrieve/e27ce0c5-079a-055e-e053-6605fe0a7873/Harris_Paper_%20and_Watermarks_2017.pdf.
8. Briquet, "De la valeur des filigranes," 193, as translated in Harris, *Paper and Watermarks*, 48.

9. Allan Stevenson, *The Problem of the "Missale Speciale"* (Bibliographical Society, 1967).
10. Stevenson, *Problem of the "Missale Speciale,"* 152.
11. Alan Tyson, *Mozart: Studies of the Autograph Scores* (Harvard University Press, 1987). The reader is encouraged to consult Tyson's preface (v–vi) and first chapter, "New Dating Methods: Watermarks and Paper Studies" (1–9), in their entirety.
12. Tyson, *Mozart Studies*, 8, figure 1.4.
13. Cliff Eisen, review of *Mozart: Studies of the Autograph Scores*, by Alan Tyson *Music & Letters* 70, no. 1 (1989): 103.
14. Erik Hinterding, *Rembrandt as an Etcher*, 3 vols. (Sound & Vision, 2006).
15. Nancy Ash and Shelley Fletcher, *Watermarks in Rembrandt's Prints* (National Gallery of Art, Washington, DC, 1998).
16. Hinterding, *Rembrandt as Etcher*, vol. 3, as described in Hinterding, *Rembrandt as Etcher*, 2:333–335, and discussed in Erik Hinterding, "Should Prints Be Redated Because of Watermark Evidence? Some Examples and Considerations," in *Rembrandt Now: Technical Practice, Conservation, and Research*, ed. Marika Spring and Ashok Roy (Archetype, 2022), 105–114.
17. Hinterding, *Rembrandt as an Etcher*, 2: 127–130. See also Allan Stevenson, "Watermarks are Twins," *Studies in Bibliography* 4 (1951/1952): 57–91.
18. "Using this method of dating, we have learned that Rembrandt produced his prints in small editions and often reprinted from his copperplates. There are editions of the same print from 1631, 1632, 1634, 1635, and so on. Analysis of the results of the research into the watermark has shown that Rembrandt used approximately six different kinds over the course of a year, leading to the conclusion that he must have purchased his paper in fairly small quantities (per squire [*sic*] or a few squires [*sic*] at the time). It can also be concluded that these different types of paper did not last long in Rembrandt's workshop—only in some very rare cases has paper been found (recognisable by its watermark) that must have been in use over an extended period of time, usually several years. Without exception, these proved to be larger paper formats: median, royal and imperial size. In most cases, however, there is no indication that the paper was retained over a long period." Hinterding, "Should Prints be Redated," 107–108.
19. Hinterding, *Rembrandt as an Etcher*, 1:48.
20. Frans Laurentius to C. Richard Johnson Jr., February 6, 2026. This point is further bolstered by the recent identification of a group of exact watermark matches among Rembrandt prints, drawings by Rembrandt and contemporaries, and archival documents. Confirmed via watermark overlay videos created by C. Richard Johnson Jr., four drawings (including one by Rembrandt himself) appear on the exact same Paschal Lamb D.a. watermarked paper as a Rembrandt print. A further pair of drawings and an archival document also show the exact same watermark as the twinmark found on another impression of that same Rembrandt print, in the same state. These matches, along with the five print-document Foolscap watermark matches enumerated in this article, all demonstrate that paper produced from the same molds was used for prints, drawings, and documents. Matches discovered with this Paschal Lamb D.a.a. twinmark are: Rembrandt, *Pieter Haringh* ("Young Haringh," 1609–1685) (B275), etching, fifth and final state, Metropolitan Museum of Art, New York, 29.107.30, in Hinterding, *Rembrandt as an Etcher*, 2:167; Willem Drost, *Eliezer and Rebecca at the Well*, Harvard University Art Museums, 1999.136, in William W. Robinson and Susan Anderson, *Drawings from the Age*

of Bruegel, Rubens, and Rembrandt: Highlights from the Collection of the Harvard Art Museums (Yale University Press, 2016), cat. 27, 107; Pupil of Rembrandt, *The Prodigal Son Receives His Inheritance*, Herzog Anton Ulrich Museum, Braunschweig, Museumsnr. Z1811, in Thomas Döring, *Aus Rembrandts Kreis: Die Zeichnungen des Braunschweiger Kupferstichkabinetts* (Michael Imhof, 2006), cat. 44, 116; Rembrandt, *The Dismissal of Hagar and Ishmael with Abraham Wearing a Turban Standing Outside a Doorway*, British Museum, 1860,0616.121, https://www.britishmuseum.org/collection/object/P_1860-0616-121; and, attributed to Constantijn van Renesse, *The Good Samaritan Arriving at the Inn*, Art Institute of Chicago, 1927.5191, <https://www.artic.edu/artworks/49231/the-good-samaritan-arriving-at-the-inn>. Matches with the Paschal Lamb D.a.b. twinmark are: Rembrandt, *Pieter Haringh* (“Young Haringh,” 1609–1685) (B275), etching, fifth and final state, Rijksmuseum, Amsterdam, RP-P-1962-100, in Hinterding, *Rembrandt as an Etcher*, 2:167; Attributed to Willem Drost, *Christ and the Woman Taken in Adultery*, Museum Boijmans van Beuningen, Rotterdam, in Hinterding, *Rembrandt as an Etcher*, 2:167 (as “Anonymous Pupil”), and also cited in Robinson and Anderson, *Drawings from the Age of Bruegel*, 109; Willem Drost, *The Prophet Elijah by the Brook Krith*, Staatliche Museen zu Berlin Kupferstichkabinett, KdZ 1111, in Holm Bevers, *Zeichnungen der Rembrandtschule im Berliner Kupferstichkabinett: Kritischer Katalog* (Sandstein, 2018), cat. 40, 83–84; and document 717, Zaandam Archives inv. no. 958, date of paper use 1652, origin Angoumois, papermaker Léon Augereau, in Theo Laurentius and Frans Laurentius, *Watermarks 1650–1700 Found in the Zeeland Archives* (Hes & De Graaf, 2008), 42.

21. Hinterding, *Rembrandt as an Etcher*, 2:333–416. Although the total number of paper batches terminates with 105 on p. 411, we note that batch 79, listed on p. 394, is accidentally followed on p. 395 by a numbering skip back to 78. Thus, when properly counted, the total number of actual batches is 107, not 105.
22. Frans Laurentius to C. Richard Johnson Jr., May, 2023. Laurentius, co-author of numerous watermark catalogues, including the ones cited here, has expressed the professional opinion that he considers the basic paper use date gap to be six years or fewer
23. C. Richard Johnson Jr., William A. Sethares, and Margaret Holben Ellis, “Overlay Videos for Quick and Accurate Watermark Identification, Comparison, and Matching,” *Journal of Historians of Netherlandish Art* 13 no. 2 (Summer 2021), DOI: [10.5092/jhna.2021.13.2.1](https://doi.org/10.5092/jhna.2021.13.2.1).
24. Hinterding, *Rembrandt as an Etcher*, 2:116–149; Theo Laurentius and Frans Laurentius, *Watermarks 1600–1650 Found in the Zeeland Archives* (Hes & De Graaf, 2007), 211–237; Laurentius, *Watermarks 1650–1700*, 199–280.
25. Laurentius, *Watermarks 1600–1650*, v.
26. The variants are Foolscaps with Five-Pointed Collar H.b. and N.a. and Foolscaps with Seven-Pointed Collar AA.c., A.c., K.a., and O.a. The two Foolscaps with Five-Pointed Collar variants H.b. and N.a. have matches with watermarks in Laurentius, *Watermarks 1600–1650*, and Laurentius, *Watermarks 1650–1700*, respectively. Foolscaps with Seven-Pointed Collar variants A.c., AA.c., O.a., and K.a. have matches with watermarks in Laurentius, *Watermarks 1650–1700*. The matches of the two K.a. subvariants with watermarks in dated documents are very close but display minute differences that bring their exactness into question.
27. Only the variant N.a. appears in Appendix 3 of Hinterding, *Rembrandt as Etcher*, 2:407, as entry 94 of the 105 paper batches vetted for inclusion based on Hinterding’s certainty around their dates.

28. These “B” numbers reference the catalogue of Austrian print scholar Johann Adam Bernhard Ritter von Bartsch (1757–1821), who was the first to systematically catalogue and order Rembrandt’s prints by subject matter (Self-Portraits, Old Testament Scenes, New Testament Scenes, Saints, Genre Scenes, Nudes, Landscapes, Portraits). This catalogue, Adam Bartsch, *Catalogue Raisonné de toutes les Estampes qui forment l’Oeuvre de Rembrandt, et ceux de ses principaux Imitateurs* (Vienna, 1797), 2 vols., was adapted and revised in Christopher White and Karel G. Boon, *Rembrandt’s Etchings, an Illustrated Critical Catalogue*, 2 vols. (Van Gendt, 1970), a catalogue still widely accepted. We follow the convention of notating states of the plate using roman numerals following the Bartsch number.
29. See Andrew C. Weislogel and C. Richard Johnson Jr., “Decision Trees and Fruitful Collaborations: The Watermark Identification in Rembrandt’s Etchings (WIRE) Project at Cornell,” in *Lines of Inquiry: Learning from Rembrandt’s Etchings*, ed. Andrew C. Weislogel and Andaleeb Badiie Banta (Herbert F. Johnson Museum of Art, Cornell University, 2017); and C. Richard Johnson Jr., “Decision Trees for Watermark Identification in Rembrandt’s Etchings,” *Journal of Historians of Netherlandish Art* 12, no. 2 (Summer 2020), DOI: [10.5092/jhna.2020.12.2.5](https://doi.org/10.5092/jhna.2020.12.2.5).
30. The watermark images appear in Hinterding, *Rembrandt as an Etcher*, vol. 3, and their cataloguing by watermark type and Bartsch number appears in Hinterding, *Rembrandt as an Etcher*, vol. 2.
31. The WIRE Project decision tree is accessible at <https://rembrandtwireproject.github.io>.
32. For access to this software and its user guide, refer to Johnson, Sethares, and Ellis, “Overlay Videos.”
33. The watermark is entry 483 in Laurentius, *Watermarks 1600–1650*, 211. Point 4 is omitted, as its location (where the vertical chain line first intersects the braid) is obscured. The overlay video in figure 5 is based solely on the match of the remaining ten points in the two marked watermarks.
34. More details about the operation of this software, and the underlying mathematics, are provided in Johnson, Sethares, and Ellis, “Overlay Videos.”
35. See Johnson, Sethares, and Ellis, “Overlay Videos.”
36. Laurentius, *Watermarks 1650–1700*, xviii.
37. Laurentius, *Watermarks 1650–1700*, xviii.
38. Hinterding, *Rembrandt as an Etcher*, 2:124.
39. Laurentius, *Watermarks 1600–1650*, 32.
40. Laurentius, *Watermarks 1600–1650*, 34.
41. Hinterding, *Rembrandt as an Etcher*, 2:291–292. For an explanation of Bartsch numbers, see n. 28.
42. Hinterding, *Rembrandt as an Etcher*, 2:370–371.
43. Hinterding, *Rembrandt as an Etcher*, 2:291–292.
44. Hinterding, *Rembrandt as an Etcher*, 2:371–372, and Appendix 3, entry 56. Entry 56 actually cites two impressions of B188 iv as bearing Foolscape with Five-Pointed Collar variant A.a. However, the inclusion of the impression labeled HAUM 5535 from the collection of the Herzog Anton Ulrich-Museum is incorrect. The last impression listed for B118 iv in Hinterding, *Rembrandt as an Etcher* (2:292) as a Foolscape with Five-Pointed Collar should also be corrected to a Seven-Pointed Collar. This impression is listed correctly as having a Foolscape with Seven-Pointed Collar variant AA.c. in the “Catalogue”

of Hinterding, *Rembrandt as an Etcher*, 2:139. This impression will be discussed in a later section of this article, as the Foolscap with Seven-Pointed Collar AA.c.a, matches a watermark in Laurentius, *Watermarks 1650–1700*.

45. Hinterding, *Rembrandt as an Etcher*, 2:134.
46. Hinterding, *Rembrandt as an Etcher*, 2:134.
47. Hinterding, *Rembrandt as an Etcher*, 2:407.
48. Images of the two N.a. variant Foolscap with Five-Pointed Collar watermarks (N.a.a. and N.a.b.) appear in Hinterding, *Rembrandt as an Etcher*, 2:236–237. Other watermark variants appear in both of the first two states of B276, all dated 1656 in Hinterding, *Rembrandt as an Etcher*, vol. 2, Appendix 3: Foolscap with Seven-Pointed Collar variants A.a. (entry 96) and A.b. (entry 95), and Arms of Amsterdam variants E.a. (entry 97) and N.a. (entry 98).
49. N.a.b. appears in Hinterding, *Rembrandt as an Etcher*, 3:237. The document watermark is entry 381 in Laurentius, *Watermarks 1650–1700*, 204. Its date and use location appear in the index on p. 24.
50. Hinterding, *Rembrandt as an Etcher*, 2:139.
51. Hinterding, *Rembrandt as an Etcher*, 3:252. This image has the caption “Foolscap with Seven-Pointed Collar-AA-c-a_Haum-5535A.” See n. 44 for mention of mistakes in citing HAUM-5535, including its incorrect listing in entry 56 of the “Chronological List” in Hinterding, *Rembrandt as an Etcher*, 2:372.
52. Rembrandt, *Joseph and Potiphar’s Wife*, British Museum, F,4.64, https://www.britishmuseum.org/collection/object/P_F-4-64.
53. Hinterding, *Rembrandt as an Etcher*, 2:370, 2:372, 2:384.
54. The image of the watermark is from entry 502 in Laurentius, *Watermarks 1650–1700*, 242. The date and location of use are from page 30. Entry 502 in the “Reference” list in Laurentius, *Watermarks 1650–1700*, 31, is noted as “comparable with” type A.b. in Ash and Fletcher, *Watermarks in Rembrandt’s Prints*, 115, which appears as AA.a. in Hinterding, *Rembrandt as an Etcher*, 2:139.
55. See the commentary at the end of entry 72 in Hinterding, *Rembrandt as an Etcher*, 2:385, regarding the date associated with Foolscap with Five-Pointed Collar I.a. This entry includes the latest date in Hinterding, *Rembrandt as an Etcher* for an impression of B118 iv, as noted earlier. However, entry 72 lists B118 iv with a question mark, which also appears in the listing of the Foolscap with Five-Pointed Collar I.zz. in Hinterding, *Rembrandt as an Etcher*, 2:292 and 2:126. The second listing is among “Uncertain References.” The commentary for entry 72 in Hinterding, *Rembrandt as an Etcher*, vol. 2, Appendix 3, dismisses the date of ca. 1653 assigned to impressions of B211 bearing a Foolscap with Five-Pointed Collar I.a, in favor of the plate date of 1648 inscribed in B232 iii, which also has a question mark appended to its entry. Coincidentally, ca. 1653 is the date of the document matching the Foolscap with Seven-Pointed Collar AA.c.a. in an impression of B118 iv not included as an entry in Appendix 3 of Hinterding, *Rembrandt as an Etcher*.
56. Hinterding, *Rembrandt as an Etcher*, 2:138.
57. For its image, see Laurentius, *Watermarks 1650–1700*, 270. For its data, see Laurentius, *Watermarks 1650–1700*, 34.
58. The image in Hinterding, *Rembrandt as an Etcher*, 3:248, for the Foolscap with Seven-Pointed Collar A.c. is the watermark in the impression of *The Artist Drawing from the*

Model (B192 ii) in the collection of the National Gallery of Art, Washington, DC, which also appears under the same label in Ash and Fletcher, *Watermarks in Rembrandt's Prints*, 115.

59. See the entry for Foolscap with Five-Pointed Collar K.a. in Hinterding, *Rembrandt as an Etcher*, 2:389.
60. See the entry for Strasbourg Lily E'a. in Hinterding, *Rembrandt as an Etcher*, 2:402.
61. No state is given for the appearance of the inscribed date, as there are no impressions of states i to iii of B186 with watermarks listed in Hinterding, *Rembrandt as an Etcher*, 2:291. The inscribed date could appear in any state from i to iv.
62. See Hinterding, *Rembrandt as an Etcher*, 2:387, 2:399.
63. The impression of B186 formerly described as state v, with a Strasbourg Lily E'a.b. watermark, mentioned in Hinterding, *Rembrandt as an Etcher*, 2:291, is now recognized as a partial impression of state iv; see Erik Hinterding and Jaco Rutgers, *The New Hollstein Dutch & Flemish Etchings, Engravings, and Woodcuts, 1450–1700: Rembrandt*, ed. Ger Luijten (Sound & Vision, 2013), cat. no. 230, 2:134. This makes state iv the final state.
64. They are illustrated in Hinterding, *Rembrandt as an Etcher*, 3:273 and 3:274.
65. Hinterding, *Rembrandt as an Etcher*, 2:144.
66. Hinterding, *Rembrandt as an Etcher*, 2:144–145.
67. Hinterding, *Rembrandt as an Etcher*, 2:257–258.
68. Hinterding, *Rembrandt as an Etcher*, 2:405, and Appendix 3, entry 88.
69. See Hinterding, *Rembrandt as an Etcher*, 2:144–145, for the entries marked with an asterisk, and the List of Abbreviations, 2:15, for the meaning of the asterisk.
70. Both appear in Laurentius, *Watermarks 1650–1700*, 240.
71. See Laurentius, *Watermarks 1650–1700*, 30.
72. Erik Hinterding, *Rembrandt Etchings from the Frits Lugt Collection* (Thoth, 2008),
73. 1:122–123.
74. Erik Hinterding. "The History of Rembrandt's Copperplates, with a Catalogue of Those That Survive," *Simiolus* 22, no. 4 (1993–1994): 309.
75. M. M. Kleerkooier and W. P. van Stockum Jr., *De boekhandel te Amsterdam voornamelijk in de 17e eeuw: Biografische en geschiedkundige aantekeningen* (M. Nijhoff, 1914–16), 332–335, cited in Hinterding, "History of Rembrandt's Copperplates," 262.
76. Hinterding, "History of Rembrandt's Copperplates," 264.
77. Hinterding and Rutgers, *Rembrandt*, cat. no. 206, 2:96.
78. Hinterding, "History of Rembrandt's Copperplates," 262, 309.
79. Dieuwke de Hoop Scheffer and Karel G. Boon, "De inventaris-lijst van Clement de Jonghe en de Rembrandt etsplaten," *Kroniek van het Rembrandthuis* 25 (1971): 1–17.
80. Hinterding notes that this impression is in a private collection (see entry for Foolscap with Seven-Pointed Collar O.a in Hinterding, *Rembrandt as Etcher*, 2:146). Visual examination of this impression would likely offer some idea of plate wear shown in the impression.
81. Hinterding, "History of Rembrandt's Copperplates," 309.
82. Hinterding and Rutgers, *Rembrandt*, cat. 277, 2:228.
83. Hinterding, *Rembrandt as an Etcher*, 2:421–422.

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