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THE CLOTH SEAL: A MARK OF QUALITY, IDENTIFICATION, OR TAXATION?

JOHN CHERRY

SIGNS INDICATING POSSESSION have been, and continue to be, stamped, impressed, engraved, or branded on animals, houses, and objects.¹ As manufacture and trade developed in the Middle Ages, marks were applied to objects to indicate their source, quality, and the fact that their purveyors or importers had paid duty or tax. In the city of Winchester, for example, during the fourteenth century every baker sealed the loaves he had baked.² Throughout England, in the following century, products were marked by craftsmen such as masons, carpenters, makers of salt blocks, and coopers (who made barrels). Examples of such marks elsewhere in Europe can be found on thimbles, window leads, glassware, clay pipes, ceramic butter pots, imported wire, and kosher food.³ Metals—such as gold, silver, pewter, and metal ingots—were marked by stamping. Documents were authenticated, before the advent of signatures, by marking with a cross, by the imposition of wax seals, or by tagging with lead or wax seals affixed by parchment strips or cords.

Those wanting to mark textiles sought similar means of identification, and this article will explore how and why the lead seal came to be used for the authentication of cloth.⁴ In addition to documents, lead seals have also been used for sealing containers such as wine bottles, for the authentication of relics and sealing of reliquaries, or the sealing of rooms. But, compared with the vast quantity of literature devoted to the wax seals, they have received little attention. This study will show how the lead cloth seal has become an increasingly important area of sigillography and can illuminate the history of manufacture, trade, and taxation from the medieval to modern eras.

I wish to offer this article in memory of Geoff Egan, a London archaeologist whose work illuminated the subject of cloth seals.

1 For the practice of marking animals and objects, see Pim, Yatsenko, and Perrin, *Traditional Marking Systems*; and <http://markstudies.org>.

2 For seals on bread, see Keene, *Survey of Medieval Winchester*, 255; and Furley, *Ancient Usages*, 34–35. Bread was also marked in Hereford, England, in 1557: see Morgan, *Regulations*, 2. The unusually large and flat seal matrix of Benedict the Baker in the British Museum may have been used for loaves: see Tonnochy, *Catalogue of Seal-Dies*, 25, no. 161.

3 For seals on other objects, see Egan, “London.” For wine bottle seals, see Jeffries and Major, “Mid 17th- and 19th-Century English Wine Bottles.” Seals were also used for kosher foods: see Egan, *Lead Cloth Seals*, no. 356. Lead seals are still used by postal services and customs officials worldwide.

4 For other non-archaeological uses of seals, see Bautier, “Notes sur des usages,” 127.

Cloth Seals: Nature and Forms

In western Europe, cloth was usually (but not always) sealed by attaching a lead seal to the cloth itself, by bending a blank of lead over the edge of the cloth and stamping a mark or design on one or both sides of the lead. (Occasionally a wax seal was applied directly to the cloth: see below.) The lead seal for textiles first appears in the archaeological record of northern Europe in the thirteenth century, and was in widespread and continuous use until the early twentieth century. Its beginnings coincide with the development of textile trade, the expansion of urbanism, and the growth of population. This growth led to a need for more clothing and an assurance that the material of which such clothing was made was of reliable quality.⁵

Very occasionally, cloth seals have been found still attached to a fragment of cloth, providing valuable evidence; mostly, however, extant lead seals were detached and discarded. In these cases, the evidence for the type of cloths that were once sealed can be deduced only from the devices and inscriptions on the seal itself. Although lead decays when exposed in some conditions, such as to moisture and air (and oak drawers), it will survive well in anaerobic conditions. Moreover, even detached seals sometimes carry the imprints and fibres of the accompanying textile, so that the evidence derived from the seal can be compared with that of the textile. An example, preserved in the British Museum, is a two-part lead seal folded over the edge of a textile ([Figure 7.1](#)). Since the seal displays only an eroded image of a portcullis, it is not easy to identify—beyond being a sixteenth-century aulnage (tax) or subsidy seal. More can be said thanks to the textile, however, which was a coarse woollen fabric of dark brown colour and of a simple tabby weave: one of the most complete textile survivals attached to an English cloth seal.

Lead seals could be attached in a number of ways. Sometimes the impression was made by squeezing the lead blank between a pair of pliers or pincers and sometimes by striking the blank between dies. Sometimes the two faces were achieved by affixing the underside of the lead in an engraved metal block and pressing the obverse with another block. In medieval England seals were usually formed of two discs, one of which had a hole and the other a rivet; the connecting strip was folded so that the rivet came through the hole, fastening the seal to the cloth ([Figure 7.2](#)). By the end of the sixteenth century, however, English seals consisted of four-part seals. In France Antoine Sabatier, a physician, detected a greater range of seal forms (see below), but it is not clear how many of these are medieval in origin, or

⁵ The best general survey in English for Europe, comprising both manufacture and lead seals, is Endrei and Egan, "The Sealing of Cloth." See also Egan, "Leaden Seals for Textiles" and *Lead Cloth Seals*.

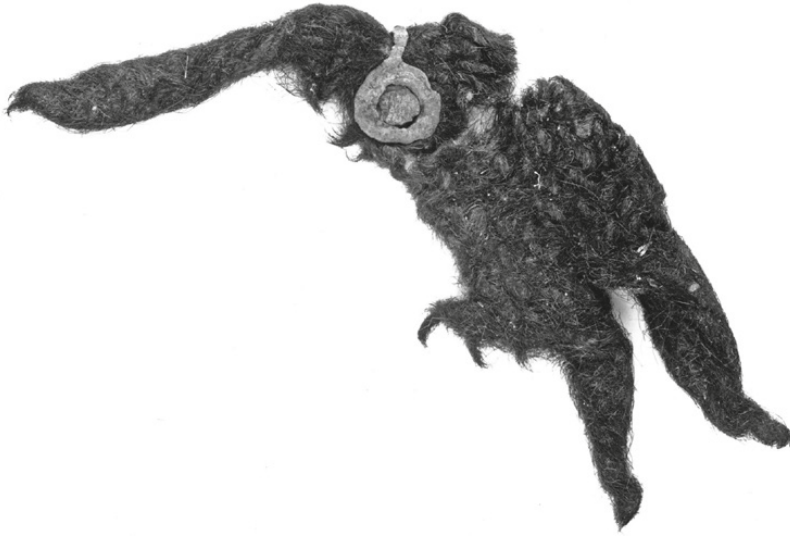


Figure 7.1. Lead cloth seal folded over and still attached to a piece of coarse woollen cloth. It shows a portcullis, indicating that it was a seal for the aulnage. BM ET B E and P 1871,0714.115. © Trustees of the British Museum.

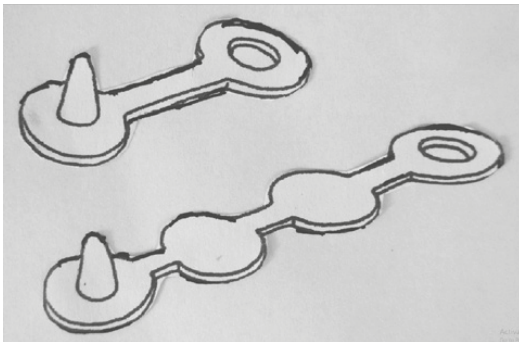


Figure 7.2. Drawing of blank two- and four-part seals, showing the pointed rivet and the circular outer disc on a two-part (above) and a four-part seal (below). After Egan, *Lead Cloth Seals*, fig. 1. Photo © John Cherry.

whether sealing technologies became similarly more complex in the early modern era. Variations in lead-sealing techniques, and their possible regional and chronological variations, constitute an interesting field for future research.

Lead seals were usually attached in the place or area of manufacture, though sometimes they could be affixed at a later time to record either the customs or tax paid. It is often difficult to determine whether a seal was used on textile rather than on other goods. Many examples are poorly struck, worn, or damaged or have

survived only in a fragmentary form. The small number of textile seals that have come down to us and the difficulty of identifying and dating them makes it doubtful that they will ever be used for accurately estimating the extent of production and the trade. Even if the place of attachment can be determined, the exact role played by the textile seal is often uncertain. The difficulty of identification, and the commercial rather than the legal function of the seals, mean that cloth seals have been largely ignored in the discourse on seals and sealing.

Lead is malleable enough to take an impression but durable enough to survive exposed on the surface of the cloth as it was transported. It was also less expensive and needed less preparation than the wax (though wax was occasionally used, as we shall see). Lead was mined widely across Europe in the Middle Ages, often as a by-product of silver; in England, for example, there were mines in Devon, the Mendip Hills (Somerset), and Derbyshire. Lead was used for seal matrices and as a substance for sealing (as in papal *bullae*), as well as for cloth seals. While there has been little research on the metallurgy of lead matrices or seals, a study undertaken on the British Museum collection shows that many cloth seals are lead-based alloys containing small amounts of tin, usually not more than 6 per cent. The tin must have been deliberately added to lower the melting point and to make the seal harder than if it were made of pure lead. In the seventeenth century, some cloth seals were also gilded through the application of mercury and the process of fire-gilding. This is another area in need of further and more systematic research on the sources of the materials, and in order to determine whether the extent of tin varied in different places and traditions.

Lead seals were usually produced as blanks in moulds, usually of stone; [Plate 7.1](#) shows one part of a two-part mould found in London, used to cast four two-part seals ([Figure 7.2](#)).⁶ Such moulds are often damaged and therefore difficult to date; another field for further research could begin by identifying the number and nature of surviving stone moulds across Europe, in order to create a corpus of mould types and to establish different casting practices. At present, assigning textile seals to a particular region or purpose in the textile trade is primarily achieved by analysing surviving inscriptions, which can yield evidence of the language used, the name of a town, or an indication of the seal's meaning. Often the device is heraldic: a coat of arms or other motifs. For example, the obverse might display the heraldic mark of the town, while the reverse might indicate the dimensions of the fabric. Merchants' marks used by merchants to brand bales appear rarely on cloth seals, though in England they are frequently found on the monumental brasses that

⁶ Museum of London, acc. no. 81.234. Crowfoot, Pritchard, and Staniland, *Textiles and Clothing*, does not mention cloth seals.



Plate 7.1. One half of a stone mould, which would have been joined to the other half by lead plugs. It was used for casting four lead blanks at a time. Museum of London MOL.81.234. © Museum of London.

were laid down in churches to commemorate their careers after death.⁷ Sometimes names are abbreviated to initials and often, in the seventeenth and eighteenth centuries, ligatures or scrolls are used to join the letters. In the seventeenth century the collectors of the aulnage, a tax levied by the English government, tended to put their names in full on rectangular seals. Here again, much more work is needed to identify the designs of cloth seals and their connection to particular manufacturing centres, which often used the same markings on coins and jettons.

The lead cloth seal was sometimes impressed at the place of weaving or at the time of a secondary process, such as fulling or dyeing. The sealed cloth was then often transported by land and sea to another country, and the seal may have become detached from the cloth when it was turned into a manufactured product, such as clothing, soft furnishings, or upholstery. The archaeologist can therefore find detached seals at the place of primary production, at that of a secondary process, or at the place of final use—or, indeed, anywhere, on land or sea, between those points (see below). In order to understand the significance of distribution patterns, we need to identify the circumstances in which cloth seals were created,

⁷ Elton (*Cloth Seals*, 375–83) provides a most useful appendix on cloth workers' privy marks.

and subsequently lost or removed. Mostly, it appears that seals were taken off by tailors in the final phase of their use of a given roll of cloth, though whether the pattern of distribution really maps the location of these tailors is doubtful. In any case, most cloth seals were presumably melted down to provide lead for other purposes; those that have been excavated may have survived by accident.

Some seals have been found either on the banks or beds of rivers, such as the Thames and the Avon. From their designs and their find locations, it seems that they were applied to cloth at the time of its dyeing, not at the time of weaving.⁸ They may, of course, have been sealed at both stages of the manufacturing process. In England, in the late sixteenth century to the seventeenth, dyeing was regulated by the London Dyers' Company, which marked approved cloths with lead seals indicating the colourant used and the person responsible for applying it: some seals found in London accordingly carry the heraldic arms of the Dyers' Company, a chevron between three madder bags. (A madder bag contained the dye called red madder, *rubia tinctoria*.) Other seals use letters to specify certain dyes; for instance, "W" designated woad, which produced a blue-coloured cloth. The Latin numerals "I," "II," and "III," meanwhile, probably indicate the number of washes. Sometimes the initials of the Company searcher (charged with identifying faulty cloths) or the location of the dye-house are shown.⁹

Lead cloth seals continued to be used into the twentieth century, but their use in Europe was greatest in the seventeenth and eighteenth centuries. During this period the number of seals affixed to each cloth increased, while the regulation of manufacture and trade became more complex. As a result, the system of sealing came to be perceived as a hindrance to trade. The English government, therefore, abandoned the seal for the aulnage tax in 1724; not only had this seal system become cumbersome, but its profits had been farmed out and benefited individuals rather than the government.

The Origins of Textile Sealing

Lead was more commonly used for sealing in southern than in northern Europe, where wax may have been scarcer and therefore more costly, and where, most importantly, lead was also favoured by long-standing political and social traditions. Where did the practice originate, and why? To date, the tradition of lead sealing and its reception has been little studied, with most studies focused on the use of

⁸ Egan, "Industry and Economics" and "Leaden Seals for Textiles."

⁹ Egan, "Cloth Seals" [2001], 43–77, contains a good account of the relationship between cloth seals, dyeing, and the river Avon at Salisbury. See also Egan, *Lead Cloth Seals*, no. 269 (dated 1628).

lead and gold bulls for documents. But we know that lead sealing was widespread in the early eastern Roman Empire (Byzantium) and in the parts of Italy under Byzantine influence, including the Roman papal curia, whose chancery issued bulled documents from the sixth century onwards.¹⁰ From there, it is thought to have spread to northern Italy and Spain, and also to southern France. In Byzantine territories, lead seals were used on a very large scale, including in the silk industry. Officials in charge of organizing and taxing the silk industry applied blank roundels of lead with an iron boulloterion, shaped like a pair of pliers. Traces of rough cloth have been found on some of the early seals of the *kommerkiarioi* (commerce officials), revealing that they were affixed to bags or bales containing the precious material, and not on the silks themselves.¹¹ The special quality of the silk's dye was also indicated by the attachment of a lead seal, by the chief of the purple factories.¹²

The manufacture and export of silk could have provided a route by which the practice of sealing textiles with lead came to northern Europe. Silk weaving was introduced in Spain during the eighth century, since "Spanish" veils, possibly of Islamic workmanship, were given to Roman churches by Popes Gregory IV (r. 827–844) and Leo IV (r. 847–855). In the eleventh century, silk was also produced in Sicily, Lucca, and Genoa, though the finer silks worn at the Sicilian court were imported from the eastern Roman Empire.¹³ No seals are recorded as having been attached to these silks. The first silk fabric with a lead seal still attached to it was found on the shroud wrapped around the body of a holy man, the Blessed Giacomo Salomoni, in the cathedral of Forlì; the seal, which bears the lion of St. Mark, can therefore be dated close to the year of Giacomo's death, in 1314. This is later than the first appearance of the cloth seal in northern Europe. The seal at Forlì comes from Venice, however, which may indicate that the practice of applying lead seals to textiles had a Venetian origin.¹⁴ In Venice, the seal of the Silk Office bore the lion of St. Mark. By the fifteenth century, however, the Venetian authorities had developed an elaborate system for sealing different types of silk, depending on the quality and colour of the weaves. Other textiles, both cotton and woollen, were also woven in Venice, and it may be that the seals used for silks

10 A good summary of lead sealing from the documentary point of view may be found in Pastoureau, *Les sceaux*, 37–39. Lead was used for the manufacture of seal matrices and false seal matrices as early as the twelfth century in northern Europe, but it seems unlikely that this spurred the use of lead for sealing textiles.

11 Cheynet and Caseau, "Sealing Practices"; Zacos and Vegler, *Byzantine Lead Seals*.

12 Lopez, "Silk Industry."

13 Monnas, *Merchants, Princes and Painters*.

14 Constantini, "Le linceul." For another Venetian sealing silk in Italy, see Rizzoli, *L'università dell'arte della lana*, 101, fig. 36, no. 5.

were lighter and thinner than those for thicker textiles.¹⁵ More research is needed in the rich Venetian archives in order to explain the functions and spread of lead sealing, since it is possible that Venice may have provided a model or a route for the practice of sealing textiles.

The Discovery, Study, and Historiography of Cloth Seals in England and France

To understand the state of our current knowledge of cloth seals, we need to look at the history of their collecting and the previous perceptions of their uses and functions. This section compares the historiography of cloth seals in England and France, chosen as two countries in which much study has been undertaken.

England

In England, the first record of a cloth seal derives from the collections of Sir Hans Sloane (1660–1753), which were later to become part of the British Museum.¹⁶ In the middle of the nineteenth century, excavations on the London embankment of the Thames produced many cloth seals, which were collected by Charles Roach Smith. In his catalogue, published in 1854, he (oddly) describes such seals as “marks”:

Cloth marks occur of the towns of Canterbury, Exeter, Norwich, London, Colchester and Taunton, and of places on the Continent. The marks of the manufacturers of serges [twill fabric with diagonal lines or ridges on both sides] and baize [a coarse felt-like woollen material, usually green] at Colchester are particularly numerous and mostly bear the date 1571, which was soon after the baize makers of the Netherlands, driven from their country by religious persecution, settled at Colchester.¹⁷

15 It would be useful to compare the thickness of silk and cloth seals. Unfortunately, the thickness of the Forli seal is not published. Little is known of Italian seals for cloths: see Doren, *Die Florentiner Wolltuchindustrie*, 98. Leaden seals seem likely to have spread to the linen industry in the fifteenth century (these fabrics had apparently been marked with linseed oil from time immemorial).

16 MacGregor, “Sloane, Sir Hans”; Cherry, “Sir Hans Sloane and the Collecting of History.” In the early eighteenth century John Lewis published a bronze seal matrix, which he connected to fifteenth-century legislation relating to the cloth trade in England: Lewis, *A Dissertation*, 6, and frontispiece no. 5.

17 Roach Smith, *Catalogue*, 155. See Kidd, “Charles Roach Smith.” His collection is now in the British Museum, and many cloth seals from it are published in Collections Online: www.britishmuseum.org/research/collection_online/search.aspx. Items from this collection begin with the registration numbers B, E, and P 1857,0507.01

In general, though, cloth seals, such as those illustrated in [Figures 7.3 to 7.5](#), aroused little interest for the rest of the nineteenth century. In the second half of the twentieth century, a fortuitous meeting between a Hungarian scholar, Professor Walter Endrei, and Geoff Egan, an archaeologist trained at Cambridge, led to the resumption of the study in England (Endrei, a social historian, had worked on English kersey, a type of coarse woollen cloth named from the village of Kersey in Suffolk). Together they produced “The Sealing of Cloth in Europe” (1982), in which Endrei considers the European background of the practice while Egan contributes information on British finds, and particularly that of lead seals. This was the most fundamental and all-embracing study of the subject at the time.¹⁸

In 1994, Egan wrote the first catalogue of local, aulnage, and foreign cloth seals in England, which provided a most useful guide to their identification. He also drew attention to the use of copper alloy seal matrices for sealing cloths with wax. Such matrices had previously been misdated by two distinguished historians of seals and sealing, Walter de Gray Birch and A. B. Tonnochy. Both had assumed that such matrices were for documents connected with the textile trade, rather than for the sealing of textiles themselves. Egan’s important insight dispelled the notion that all cloth seals were made of lead, and established that wax was also attached directly to the cloth, though no pieces of cloth with wax seals attached have ever been found. Egan’s wide survey also brought into scholarly discussion finds from post-medieval archaeological excavations in Europe and North America, and explored the extent to which cloth seals can be used to elucidate trade.¹⁹ The most recent work on English cloth seals, to date, is a survey by Stuart Elton, published in 2016, which provides an illustrated guide to the identification of lead seals attached to cloth (see below).

Taxation and the Cloth Seal in England

With its wealth of information on the cloth seal as a seal of taxation, England provides a good case study. In England, the practice of aulnage sealing was distinct from the sealing of textiles by the local guild or town. Aulnage (or alnage) comes from the French word *aune*, meaning “ell” (a measure of cloth), and initially referred to the size and quality of cloth. In Richard I’s reign, from 1189 to 1199, the Assize of Cloth stated that “woollen cloths, wherever they are made, shall be of the same width, to wit, of two ells within the lists, and of the same goodness in the middle and sides.” This ordinance was developed into a tax on woollen cloth in the reign of Edward I (1270–1307), when an official called an “alnager” was appointed. His

¹⁸ Endrei and Egan, “The Sealing of Cloth.”

¹⁹ Egan, *Lead Cloth Seals*, nos. 291–95.



Figure 7.3. Obverse of lead seal for the Dutch immigrant community, who came as religious refugees to Colchester in 1565 and 1570. It reads: DWTS / CO(LCH)EST ... / SAEY. 230 ... / DRAE(T) / 15(...) ("Dutch Colchester Say, 230 15(71)"). Say was a type of woollen fabric. BM BE and P S. 169 (see Egan, *Lead Cloth Seals*, no. 25). © Trustees of the British Museum.



Figure 7.4. Lead cloth seal for the United East India Company, established 1708, showing the mark "V(E)IC," for "United (East) India Company." Probably found in London. BM B, E, and P 1910,0407.54 (see Egan, *Lead Cloth Seals*, no. 294). © Trustees of the British Museum.



Figure 7.5. Lead cloth seal for Wesel, Germany, showing two crowned letter "B"s. The legend would have been "Finn Bombasinen der Wesel." BM B, E, and P S 214 (see Egan, *Lead Cloth Seals*, no. 318). © Trustees of the British Museum.

duty was to measure each piece of cloth, and to affix a stamp (the first reference to such a mark) to show that it was the appropriate size and quality, and that the tax had been paid.²⁰ The marking of cloths by the aulnager is first mentioned in 1328, though it may have occurred earlier.²¹ The role of the aulnager was extended in 1353, when a cloth subsidy was introduced on each saleable textile. The first lead cloth seal for the aulnage is recorded on April 30, 1380, when it was declared that “no whole cloth half cloth or dozen made within the liberties of London be sold before it be sealed by a serjeant of the chamber, appointed for the purpose, with a seal of lead ordained [for the purpose].”²² The collection of the aulnage was “farmed out” as early as the fourteenth century, meaning that the Crown accepted a fixed and certain sum for the proceeds of the tax, which might vary according to production, while the person or body who purchased the “farm” would gather in as much tax as they could. Thus, a document of 1439, which records Henry VI granting the aulnage of London to the Company of Drapers, gives details for sealing various types of cloth and their dimensions, but fails to mention the material of the seal itself. The Company then regranted the aulnage to two citizens for ten years, for a fee.²³

Turning now to the sigillographic evidence, a number of extant copper alloy seal matrices have survived with a Latin inscription identifying them as the matrices for the subsidy of cloth. They display various devices, such as a crown, the crowned head of the king, the fleur-de-lis, or the royal arms. The matrix for the cloth subsidy in Kent (Plate 7.2) bears a cusped crown in the centre, over a fleur-de-lis with a legend around the edge.²⁴ The choice and relative chronology of these devices is not clear. The king’s head may be the earliest, while the later combination of the leopard’s head and fleur-de-lis dates to the reign of Edward III (1327–1377). The copper alloy matrix of the subsidy seal for London bears the arms of England with France ancient (that is, a semé de fleurs-de-lis), which

20 Lipson, *Economic History of England*, 461–62, 494.

21 The series of copper alloy matrices was first published by Birch, *Catalogue*, nos. 1060–63; and Tonnochy, *Catalogue of Seal-Dies*, nos. T29–33, T52. Egan (*Lead Cloth Seals*, 9) has shown that their dating of the matrices is inaccurate. Observations on this series have been made by Cherry, “Heads, Arms and Badges,” especially 14; and Ailes, “Powerful Impressions,” especially 22. There is a need for a full survey of these seals and their impressions, together with the documentary evidence for their manufacture.

22 Sharpe, ed., *Calendar*, 145–46.

23 Johnson, “History,” 216–20.

24 London, British Museum B, E, and P 1920,0415: see Egan, *Lead Cloth Seals*, no. 46. Another is that referred to by Lewis, *A Dissertation*, 6, and frontispiece no. 5. More medieval cloth subsidy seal matrices have since been found in England and recorded by the Portable Antiquities Scheme (PAS): see Christie, “Medieval Britain and Ireland,” 300 and fig. 5.



Plate 7.2. Face of the fifteenth-century copper alloy matrix, and a modern cast from it, for the subsidy for Kent. BM B E and P 1920,0415.18 (see Egan, *Lead Cloth Seals*, no 46).
© Trustees of the British Museum.

must date it between 1340 and 1405.²⁵ The royal arms continued to appear in the fifteenth century, when the system was reorganized. On the copper alloy matrix of the cloth subsidy for Salisbury (Plate 7.3) there appear the rose and the Sun, badges of the Yorkist Kings of England (1461–1485).²⁶ Such matrices could have been used for wax or lead, though we know that lead gradually replaced wax for cloth sealing in the fifteenth century. A statute of 1464 specifies the use of lead seals with stamps on both sides. Another statute required wax sealing at both ends of the textile, except on the cloths of London and Bristol, on which lead was to be used as previously (*come il ad este accustume*). It may be that sealing cloths with wax was practised only in lesser centres of the cloth trade. Indeed, the only known use of a cloth subsidy matrix to make an impression in wax occurs on a parchment document, dated 1380, relating to a property transfer in Monmouth, on the Welsh border. There is no known relationship between the sigillant, John Brugge (whose name is more likely to mean John of the Bridge than John from Bruges), and the aulnage system. It was simply an arbitrary use of the matrix.²⁷

In 1483/4 legislation decreed that the seals for the aulnage were to have the arms of England on one side and those of the local town or city on the other. This helps us to distinguish aulnage subsidy seals impressed between 1483 and 1553.

²⁵ Rye, *Catalogue*, 160, no. 96.

²⁶ Cherry, "Seal Matrices and Impressions," 321.

²⁷ The document is illustrated in Egan, *Lead Cloth Seals*, 160, fig. 9. The charter is at London, British Library, Add. Ch. 55, 247.



Plate 7.3. Modern impression from the late fifteenth-century copper alloy matrix for the subsidy for Wiltshire. It is inscribed “S’ SUBC’PANNOR’IN COM’VVILTEC.” British Museum B, E, and P 1851,11–21.2 (see Egan, *Lead Cloth Seals*, no. 104). Reproduced with permission of the Salisbury Museum. Photo © John Cherry.

Such seals are known only from London and Bristol, however.²⁸ In 1551/2 there was a major revision of the aulnage system via the Great Statute of Clothing, which increased the number of distinct textiles subject to the aulnage, including some new fabrics, by about thirty. For this, a new series of seal matrices was engraved with different county names, with the initials “ER” (for Edwardus Rex, Edward VI) and the date “1553” in Arabic numerals. Most systems of taxation lead to avoidance, however, and clothiers often attempted to avoid fees by the manufacture of counterfeit seals. In 1418 an assembly headed by the mayor of Salisbury and the king’s aulnager in Wiltshire found that John Corscombe, one of the city’s leading clothiers—who had himself held the post of aulnager four years previously—had twenty-one colour-stripped (*straguil*) cloths (a local speciality) in his house, all sealed with forgeries of the royal and city cloth seals.²⁹ No counterfeit seals have

²⁸ Egan, *Lead Cloth Seals*, 23, no. 4, and “Cloth Seals” [2001], 49, no. 1; Birch, *Catalogue*, no. 1062.

²⁹ Egan, “England’s Post-Medieval Cloth Trade,” 6; Carr, *The First General Entry Book*, 54, entry 190.

yet been identified for this date, but seals bearing a poorly rendered version of the portcullis, dating from the next century and mentioned above, are thought to be counterfeits placed on unexamined cloths to avoid paying tax.

In the sixteenth century, faulty cloths also acquired their own seals, a peculiarity of the English system. Originally, textiles with serious defects would be destroyed, but now a seal stamped with a letter "F" was to be attached to defective cloths, later to be replaced with a seal reading "faultie" in full. So a seal that had begun as a mark of quality now indicated faulty production. At the same time, seals were expected to include the length in yards. Early in the reign of Elizabeth I, the initial "Y" (for "yards") indicated length, while weight was denoted with the initial "P," for "pounds." Sometimes width was indicated, too.³⁰ Seals had thus acquired the nature of a label.

In the seventeenth century, the official inspecting the cloth applied an additional searcher's seal, usually stamped with the initials or name of the searcher. In 1605, the profits of the aulnage were farmed out by the Crown to a favourite of James I, Ludovic Stewart (1583–1624), the Duke of Lennox and Richmond, as aulnager-general for England. This may indicate the difficulties involved in obtaining full payment of the revenues from an aulnage system that had become extremely complex, as evidenced by John May's book published in 1613. May advocated the use of six, rather than four, seals: one for the length of the piece after immersion in water, to induce any shrinkage; one for width and defects; a searcher's seal for weight, another for length after tentering (stretching), and others for shearing and fulling; and, finally, the official aulnage seal. His recommendations were not carried out, but they speak to the difficulty of controlling quality through many different stages of production.³¹ The system clearly had become over-complex. Moreover, the practice of sealing as a form of taxation was seen as a hindrance to trade and a burden on the producers and merchants. Ultimately, the office of the aulnager and the system of sealing for the purposes of taxation were abolished in 1724.³²

France

Just as discoveries on the banks of the Thames gave impetus to the study of cloth seals in England, so in France, at the same time, the discovery of lead seals in the embankment of the river Seine gave Arthur Forgeais (1822–1878), a numismatic

³⁰ Egan, *Lead Cloth Seals*, 23, no. 4; Birch, *Catalogue*, no. 244.

³¹ May, *A Declaration*, 14–15.

³² Although this was the ending of the aulnage seal, clothiers continued to seal cloths with seals advertising their firms. A recent find in Somerset of excavated cloth seals issued by the firm of Weres and Company dating from the late eighteenth century. This firm continued sealing its cloths at least into the nineteenth century: see Burnett, "Finds Reported."

scholar, the opportunity to study them. Forgeais mainly concentrated his attention on pilgrim badges, however, and neglected the cloth seals.³³ In 1912, Antoine Sabatier turned his attention to lead seals as evidence for French fiscal administration and guild regulations in his *Sigillographie historique des administrations fiscales, communautés ouvrières et institutions diverses ayant employé des sceaux de plomb (XIV^e–XVIII^e siècles)*, which was subtitled *Plombs historiés de la Saône et de la Seine*. Sabatier discussed and illustrated a wide variety of lead seals, ranging from those issued at fairs by customs officials (for materials such as salt, tobacco, cloth, linen, silk, braid, paper, and bonnets, and for gilding) to those used by royal agents, commercial companies, and hospitals, and for the identification of foreign textiles. His work revealed that the practice of using lead seals seems to have been more widespread and diverse throughout France before the Revolution than anywhere else, extending to craftsmen and manufacturers and including the marking of packages and bales, among other uses. He noted that these lead seals were usually circular, and that the pointed-oval shape, so common among wax seals attached to charters and documents, was unknown. He also observed that these seals were moulded in advance of sealing in different forms, some in globules, others in small spheres or rectangular plaques, all of which would have been pierced for tags. Sabatier was the first to classify seals by different methods of closure. There were seals with a tunnel (*sceaux à tunnel*), seals with plates (*sceaux à plateaux*), seals with a loop or handle (*sceaux cebélières*), seals with a hole (*sceaux troués*), and, lastly, seals that clipped on (*sceaux agrafés*). The first two types were the most common and the last three had specialized uses.³⁴

In the 1990s, Dominique Cardon considered the use of cloth seals as evidence for the control of the cloth industry. For her, the application of seals was part of the system developed to regulate the practice of home working, in which the weavers and their families worked in private houses, and officials were appointed to inspect their work, to ensure adequate quality. By reviewing the ordinances governing the trade, she showed that the cloth seal was often applied at the place of control, rather than at the place of manufacture, and that the seal validated the length and weight of the piece.³⁵ She drew special attention to two collections of lead seals. The first, in the Museo Bottacino of Padua, was recovered from the canals of the town; the second was collected by Abbé Eugène Cortade from the sand of the port of Collioure, in southern France, near the Spanish border. Cardon also

³³ Forgeais, *Collection*. Sabatier explicitly noted that Forgeais passed over commercial and fiscal seals in complete silence.

³⁴ Sabatier, *Sigillographie historique*, 5–30, and “Étude revisionnelle.”

³⁵ Cardon, *La draperie*, 594–600. The cloth seals of Padua are not included in Rizzoli, *I sigilli*.

explored the written sources, which revealed that the making of false dies was a widespread concern, with denunciations of this practice registered at major cloth-producing centres such as Valenciennes, Ypres, and Cologne. In 1372, the citizens of Tourcoing applied for permission to have a seal engraved with their communal arms, so that they could mark and guarantee the quality of their cloths.³⁶

A recent study by Jean-Louis Roch concentrates on the cloth seals of Rouen, showing how they changed according to the materials being sealed. After 1424, cloth was sealed with the letters “SR” (for “Sceau de Rouen”), under a crown on the obverse and with an *Agnus Dei* on the reverse; this was a symbol of the town, and also appears both on the city seal (from the middle of the thirteenth century) and on the seal matrix of the mayor. In the seventeenth century, however, a new textile, fine serge, was developed in Rouen, which was sealed with a special seal bearing the legend “DE ROUEN” in the middle and including the word “SERGE.” More importantly, Roch draws attention to the official registers kept during the eighteenth century, which contain impressions of the marks and seals used as a record of their authenticity.³⁷

Textiles and Trade

As noted above, the origins of the practice of lead sealing in northern Europe—that is, beyond the Mediterranean basin—are unclear. To date, the earliest textile seal identified in this region is a lead seal found at Amsterdam, in an archaeological layer dating to 1275. This seal shows a key, with wards upwards, and bears the legend “+VAN LEUDEN,” which means that the cloth came from Leiden, a notable cloth-manufacturing city in the Low Countries. It was known in the medieval period as the *Sleutelstadt* (key city), since the main church was dedicated to St. Peter and the arms of the city contained two red keys: hence the key on the seal.³⁸ This find emphasizes the place of production and suggests an active trade in cloth from Leiden to Amsterdam. We do not know how quickly the practice of sealing textiles with leaden seals spread to other countries and towns, or even if the Low Countries were the first to adopt this practice—although this is plausible. For example, another early lead seal for cloth comes from Malines (Mechelen), a

36 Cardon, *La Draperie*, 600; Tourcoing’s request indicates the importance attached to such seals.

37 Roch, “Les sceaux.”

38 Amsterdams Archaeologische Dienst WA-136-1: see Egan, *Lead Cloth Seals*, 1–2, British Museum, B, E, and P 1992,0204.52. Another sixteenth-century seal with the keys of Leiden has been published by Egan, “Cloth Seals” [2012], 240–41.

Flemish centre for the production of fine woollens.³⁹ It was discovered in London, in a late fourteenth-century archaeological layer at Swan Lane, in 1981. On one side the seal bears the arms of Malines (three pallets) surrounded by the name of Floris Berthoult (fl. 1275–1331), a leading potentate in the region. The other side displays a crosier with the inscription “EPS LEODI,” a reference to the bishop-princes of Liège, whose authority Malines acknowledged from 1305 onwards.⁴⁰

On both the seals of Leiden and Malines, heraldry is an important part of the design and helps identify the seals’ origins. On the cloth seals of Rouen, the name of the city is abbreviated (“SR”), suggesting that its cloth was so well known as to need no other identification. The cloth seals of Augsburg, in Germany, displayed the letter “A” and a pine cone, which was also used for Augsburg silver marks. Augsburg produced textiles known as fustians (mixed linen warp and cotton weft fabrics) which, known in England as Ousbrow fustians or Augusta fustians, were sealed with seals bearing the letter “A.” Such seals are found in at least a dozen counties in England, representing one of the most common and widespread of all textile imports.⁴¹ England also imported textiles from further afield, since a seal from Elblag (Elbing) in Poland has been found in Salisbury.⁴²

On some seals, the language of their legends permits geographic identification. In Wesel, Germany, bombazines (a fabric of silk and wool or, later, cotton and wool) were produced from the sixteenth century to the eighteenth and were exported into England in the seventeenth century. Their seals have two crowned “B”s in the centre, with the legend “Finn Bombasinen der Wesel” (Figure 7.5). Here, the initials reflect the name of the fabric rather than the place.⁴³ Strasbourg also provided seals with a German legend, reflecting its German identity until 1681.⁴⁴

The evidence that cloth seals provide for England’s post-medieval cloth trade was reviewed by Egan in 1995.⁴⁵ North Sea trade is indicated by a lead seal from Gouda, found in Warkworth, in northern England. One side reads “GOV/DA” and

39 Munro, “Economic Depression.”

40 Egan, *Lead Cloth Seals*, 112, 194, fig. 43, no. 325. More late medieval seals from Malines have been recorded in England (in London and Yorkshire) than from any other single location on the Continent.

41 *Ibid.*, 106. They are also found in great numbers on the Continent: see Noël Hume, *Martin’s Hundred*, 190–91; and Egan, “A Group of Seals” and “Leaden Cloth Seals.”

42 Egan, “Cloth Seals” [2001], 73, no. 164.

43 *Ibid.*, no. 318.

44 *Ibid.*, nos. 101–5, 305. The registration number for the Strasbourg seal in the British Museum is B E and P SI 181. Sir Hans Sloane’s collection contained a thick cloth seal from Strasbourg, which seems not to have been found in the earth.

45 Egan, “England’s Post-Medieval Cloth Trade.”

the other “HEPERSEE” [“R”?“K”], probably the name of a clothier or merchant. It probably dates from the sixteenth or seventeenth century, though an identical find from Deventer has been dated to 1500.⁴⁶

In the post-medieval period, trade between European countries became inter-continental, an expansion attested by cloth seals. The Africa Royal Adventurers was one of the first companies to pursue trade with West Africa, though no lead cloth seals have been found in Africa; all the known examples come from England.⁴⁷ The United East India Company (VEIC, established in 1708) also used seals to mark textiles. Some textiles were intended for export, not only to India but also to China and the rest of Asia, including the area now comprising Malaysia and Indonesia. Seals attached to these textiles (Figure 7.4) display the company’s initials, “VEIC,” and figures that probably refer either to the length and weight of the cloth or to consignment numbers.⁴⁸ In the Americas, cloth seals have been found and studied in many colonial settlements, notably Jamestown.⁴⁹ Lead seals recovered in ships by nautical archaeology confirm the development of shipping in the seventeenth and eighteenth centuries. Examples include some 150 seals found in a shipwreck off the south coast of Norway, dated to the 1630s or 1640s,⁵⁰ and the cloth seals found in the wreck of the Dutch East Indiaman the *Batavia*, which sank off the coast of western Australia in 1629.⁵¹

Future Research

A corpus of all shipwreck finds of textiles and seals would be of the greatest value in assessing which textiles were sent where, and when, and would enable the mapping of trade patterns.

Dating and establishing the provenance of cloth seals is crucial to their analysis, since the functions of these seals differed in times and places. They could signal the payment of taxation; the provenance, size, quality, defectiveness, or size of the fabric; and even the use of dyes and other substances. Nevertheless, whereas

⁴⁶ Egan, “Report of the Portable Antiquities,” 308: PAS NCL-801996.

⁴⁷ Egan, *Lead Cloth Seals*, no. 291.

⁴⁸ Ibid., no. 294. See also Egan, “Leaden Seals: Examples”; Montgomery, *Textiles in America*; and Noël Hume, *Martin’s Hundred*.

⁴⁹ For cloth seals found in Jamestown, see <http://historicjamestowne.org/selected-artifacts/lead-cloth-seals>.

⁵⁰ Molaug, “Lasten i Babelvraket.”

⁵¹ See <http://museum.wa.gov.au/maritime-archaeology>. This is only one of a number of significant wrecks that occurred off the coast of western Australia.

many wax seals are still attached to documents, which can provide valuable information about sealers, cloth seals are rarely found attached to textiles, and thus lack such enabling context. This can be remedied by exploring both local and national archives across Europe, in order to understand the use of seals in textile manufacture and the way that their use varied regionally. It is only by analysing the documentary sources for the manufacture and trade in textiles that one can discover this. All too often, the archaeological evidence for regulation is left to a few pages in an appendix, or even just a footnote, in works on textile history. Cardon has shown what scholarly research can achieve for the French textile industry, providing a model for other regional studies of the textile industry and its archaeology.⁵²

The process of identifying cloth seals must also rely on the seals' design features, which means that we need a comprehensive catalogue of these. The most comprehensive reference catalogue to date in English is that produced by Elton, which includes seals found within, or originating from, the United Kingdom. Illustrated with clear digital colour photographs, the catalogue begins with the cloth seals produced in known locations, then deals with seals for types of cloth and named seals for faulty cloth. Elton also makes a first attempt to provide a typology of seal devices by including an appendix of "distinctive identification features on cloth seals"; additionally, he includes valuable lists of known aulnagers and their agents, and known sixteenth- and seventeenth-century clothworkers' privy marks (merchants' marks).

Apart from the problem of identification, one of the key questions for further research is the way in which the cloth seal developed in Europe. Much needs to be done to track and understand the appearance of the Mediterranean lead seal in northern Europe. Far more research, particularly in Spain and Italy, would help to determine how widely the use of the lead seal in the eastern Roman Empire was adopted. Too often, seal specialists have been bounded within the narrow confines of countries and specialities. It is appropriate, in this issue of *The Medieval Globe*, to call for more research across national boundaries.

Another fruitful approach would be the comparative study of lead sealing practices beyond the Middle Ages. It may seem strange to suggest this in a journal of medieval studies, but the sealing of goods and textiles does not respect the simplistic division between medieval and modern. The recent discovery of many seals with Russian inscriptions in Scotland, mainly dating from the eighteenth century to the early twentieth, has enabled John Sullivan to make a major and authoritative study of the Russian cloth trade with Britain, which reveals that seals were also attached to fur. Moreover, his project involves the identification

52 Cardon, *La draperie*.

of Russian lead seals attached to flax bales from northern English and Scottish mills, and makes a very useful distinction between bale seals, used to tie huge quantities of raw vegetable material, such as hemp and flax plants, and those seals that fastened together bags of smallish items, such as cement, manure, tea, flour, or sugar.⁵³

With respect to the medieval period, the number of cloth seals on which Egan and Endrei's study was based is infinitesimal compared with the number of seals that were attached to cloth. New finds and discoveries, in increasing the corpus of extant cloth seals, will further our understanding of them. A recent find of 266 cloth seals in the river Wear at Durham, the largest river assemblage of seals outside London, is being examined by Gary Bankhead, whose work contributes to our understanding of European, and especially Hanseatic, trade.⁵⁴ In England and Wales, lead cloth seals are often registered by the Portable Antiquities Scheme (PAS), which records finds by metal detectorists and other individuals in an online database. This is becoming an increasingly important tool for scholars. If one searches for "cloth seal with images," for example, 2,584 entries appear.⁵⁵ This constitutes a considerably larger sample than the whole of the British Museum collection. The PAS finds can also be analysed geographically by the counties in which they have been found (Norfolk: 450; Suffolk: 231; Lincolnshire: 207; Hertfordshire: 181; and Greater London Authority: 160). It is noteworthy that all of these are in the east of England. The first western English county to yield cloth seals is Somerset, with ninety-four items. Of the seals from Lincolnshire, sixteen can be categorized as medieval, but only three of these can be identified precisely—two from Malines and one from Ypres—perhaps demonstrating the importing of cloth through Lincolnshire ports.

Research will also be facilitated by the online publication of museum collections. The British Museum (collections online) displays 645 results for the search term "cloth seal" (though some of these are Japanese cloth paintings with seals). The search for "textile seal" produces 216 results. This resource is especially important because very few museums exhibit cloth seals, so there is very little opportunity for a visitor to see them. A notable and excellent exception is the Museum de Lakenhal ("cloth hall") in Leiden. Dating from 1641, this building features weathered sculptures showing the searching and sealing of cloths (Figure 7.6) at a time when

53 Sullivan, *Russian Cloth Seals*. There is much ongoing research on this: see <http://peacehavens.co.uk/BSHOME.htm>.

54 Bankhead, "A Cultural, Scientific, and Technical Study."

55 See <https://finds.org.uk>.



Figure 7.6. Stone sculpture from Museum De Lakenhal, Leiden, showing guild officials inspecting cloth. On the left is an official applying the seal with a hammer. Reproduced with permission of the Lakenhal Museum, Leiden. Photo: A. Dingjan (detail).

the sealing of cloth was at its height. In 2012, a cloth seal was adopted as the museum's emblem, giving a new life to the cloth seal in this century.⁵⁶

Cloth seals, if properly identified, will show patterns of textile trade. It is likely that those buying the textiles did not need the seals to tell them where the cloth had come from. Cloth seals may have confirmed the salesman's patter; they surely satisfied governments that tax had been paid.

56 The Lakenhal has a good website, <http://lakenhal.nl/en/story/leiden-cloth>, dedicated to the history and variety of Leiden cloth.

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Abstract This survey explores the origins of the lead cloth seal and its use in the primary production process of cloth making, secondary processes such as dyeing, and widespread application in the taxation and the regulation of trade. It concentrates especially on the discovery, study, and historiography of cloth seals in England and France, and explores how the study of such seals provides evidence for manufacturing and commerce in the medieval and post-medieval worlds.

Keywords cloth seals, archaeology, collecting, England, France, trade, commercial marks, matrix, taxation, sigillography