

Some possible examples of extant
aiglets meant to be sewn onto garments.

Gerald A. Livings
glivings@livingstonjewelers.com
(608) 444-9093

Much of this information is drawn from “Aiglets: Medieval, Post Medieval, and Modern. June 2017” (<http://www.livingstonjewelers.com/library/aigletsJune2017.pdf>). While not necessary, downloading and reading the the above link will help to better understand the information in this short paper.

Other information is from the Portable Antiquities Scheme website and database (<https://finds.org.uk/>) and the British Museum (<http://www.britishmuseum.org/>).

In April of 2006, the Portable Antiquities Scheme central unit became an official department within the British Museum, the Department of Portable Antiquities & Treasure. The Portable Antiquities Scheme is a partnership project which records archaeological objects found by the public in order to advance our understanding of the past.

Additional Information:

Additional information may be found on my website: www.livingstonjewelers.com/aiglets.html.

Errors, Omissions, And Questions:

Please contact Gerald A. Livings at glivings@livingstonjewelers.com with any errors, omissions or suggestions. Questions are welcome as well.

Figure Index

An assembled point ready to be riveted.....	6
The iron wire inserted ready to be trimmed to length.....	7
Peening over the rivet with a small concave punch.....	7
The bottom of the rivet and the cupped tool for riveting.....	8
The finished rivet.....	8
Lace tag with Unique ID: NMS-F13D26.....	9
Lace tag with Unique ID: SUR-91CC76.....	10
Lace tag with Unique ID: LON-FE3341.....	11
Lace tag with Unique ID: BUC-E33633.....	13
Lace tag with Unique ID: LON-5E0F81.....	14
Gold aiglet 1. Photo by (name withheld by request).....	15
Gold aiglet 2. Photo by (name withheld by request).....	16
Lace tag with Unique ID: SUR-754F8E.....	17

Introduction

There is no conclusive evidence to show that aiglets were sewn to laces, cords, and ribbons from the during the 8th to 16th centuries.

So far the author has examined images of only one garment that is shown with possibly original to the garment, extant aiglets. These are shown on a garment at the Metropolitan Museum, but the supposed extant aiglets are sewn so badly, it is suspected they were added or “repaired” at some point before the garment was acquired for the collection or during conservation.¹ Because of this, it can not be reliably listed as an example.

With an examination of written documents and of extant aiglets found in Europe, it is possible to hypothesize that some type 1, 4, 5, and especially type 6 aiglets, were sewn to laces, cords, and ribbons during the 8th to 16th centuries. Due to type 2 and 3 aiglets being formed around a cord when manufactured, it is unlikely these were sewn as an additional form of securement

This paper will examine several images of extant aiglets that have been found in Europe. While the records of many of these do not note attachment possibilities, several characteristics may suggest sewing was an attachment option.

For each aiglet pictured, information about the aiglet will be shared. The characteristics that may suggest sewing will be highlighted. An attempt will be made to put into context those characteristics that put forward the hypothesis that sewing was a legitimate attachment method.

Historical reference that implies type 6 aiglets may have been sewn.

There are several descriptions in Queen Elizabeth's day books regarding accounts of aiglets being returned to goldsmiths for repair and replacement of lost aiglets. These would most likely be almost exclusively type 6 aiglets.

Out of the many historical references that imply this, the following entry is typical: "F 91 [381] Item delyvered to Mr Peter the vijth of October for to mend and to new trim vij per[e] of Agletes of gold emameled white. Item delyvered the xvij of October to him on[e] aglet to be mended and on[e] button of gold knotted with thre pearles in it. Reaceyved of Peter the xxiiijth of November ij Aglets which have new topes mad[e] to them." ²

It is reasonable to also assume the jeweler "Mr Peter" mentioned in the passage above was also the jeweler who made the aiglets for Queen Elizabeth originally. And as such would be able to match the enamel colors to properly repair the aiglets.

As the author of this paper, and as a jeweler, one primary consideration for the design and creation of jewelry is the eventual need for repair. Riveting is considered a permanent attachment method and is not conducive to needed inspection, service, cleaning and repair of jewelry items.

As such the author believes this passage indicates that sewing aiglets would have been a likely attachment method the same as for buttons.

An introduction to riveting aiglets with an explanation of the process

This section has been excerpted from "Aiglets: Medieval, Post Medieval, and Modern. June 2017".³

If an aiglet was riveted to a lace, tape, braid, or ribbon, it was normally done with soft iron, copper or brass rivets.

Below will be a short introduction to riveting as the author was able to determine from examining tool marks on extant aiglets.

Measurements of extant aiglets in the authors collection that still have rivets showed that the average rivet diameter was about 0.8 mm, while the range varied from about 1.0 mm to 0.6 mm. This was with only a few aiglets so as the author examines more extant aiglets, this may change.

These rivets need to extend through a thin tube of metal, and a cord made from wool, linen or leather. For this reason, the diameter of the rivet needs to be matched to the diameter of the aiglet. As a rivet becomes longer to extend through both sides of an aiglet, the diameter needs to become larger so it does not bend in the center when struck with a hammer, thereby removing the possibility of peening the ends of the rivets against the metal of the aiglet.

The larger the aiglet, the larger the diameter of the rivet must be.

The following shows the process for riveting type 1 aiglets. It is very similar for type 2 and type 3 aiglets. It should be noted that before the aiglet blanks were formed around mandrels, a punch was used to leave two small dimples in the top of the aiglet.

After the type 1 aiglets are made, the cords are tipped with glue and inserted into the aiglets to dry. After drying for a day, they are placed on an anvil with grooves. A very fine, sharp punch is used to make a very small hole just smaller than the rivet wire on either side. This is where the dimples punched into the blanks help. They allow the hole to be made without the point rolling off of the aiglet.



Figure 1: An assembled point ready to be riveted

A wire is carefully inserted and cut so it is slightly protruding on each side. The rivet is then placed on the table of the anvil and the peen is started with a very light, small steel hammer designed for riveting. The aiglet is turned so that the top and bottom of the rivet can start to deform into a mushroom shape that is wider than the holes in the aiglet.



Figure 2: The iron wire inserted ready to be trimmed to length

After the peen is started, the aiglet is placed in a groove of the anvil that is tight fitting to the top curve of the aiglet. Very carefully using the riveting hammer, continue to peen over the rivet until the mushrooming edges start to become flush with the surface of the aiglet.

At this point, the base of the rivet on the lower side resting on the aiglet should be close to flush with the side of the aiglet.

The final work to peen the top end of the rivet is done with a small steel punch with a concave end. Place this over the top of the rivet and using a light brass hammer, tap the punch until the rivet has been peened over to make a very small depression in the aiglet. When finished, the top of the rivet should be in this small depression, just under the line made by the surface of the aiglet. The bottom end of the rivet should be flush to the bottom of the aiglet due to being pressed against the anvil as the top was peened over.



Figure 3: Peening over the rivet with a small concave punch

It should be noted that this concave ended punch has an outside diameter of 1.3mm. So slightly larger than the diameter of the wire stock used for the rivet.

The reason the rivet is peened over with a small concave punch is the need to be flush or below the surface of the aiglet to prevent catching and to the surface is so they do not catch on, and cut the threads of the eyelets. This method most closely duplicates the appearance of extant aiglets.

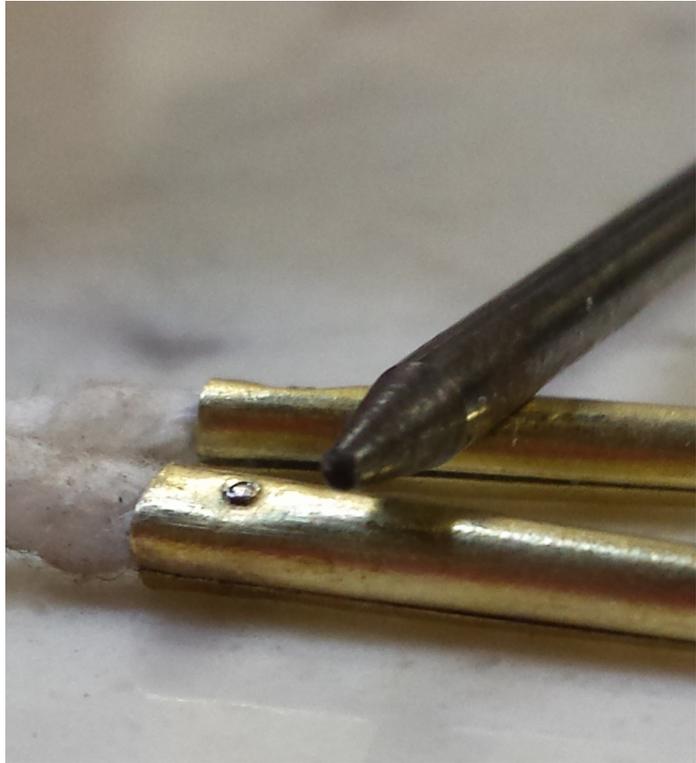


Figure 4: The bottom of the rivet and the cupped tool for riveting



Figure 5: The finished rivet

You can clearly see the bottom side of the rivet, where it was against the anvil, has come through the brass, has mushroomed, and the brass itself is tight against the rivet.

The head of the rivet is also in a small depression made by the punch and will not snag eyelets during use.

An examination of several extant aiglets

Portable Antiquities Database Information.

LACE TAG with Unique ID: NMS-F13D26

Incomplete silver lace tag or aglet made from butt-jointed sheet forming a tube and decorated with a repoussé lattice with a pellet in the centre of each lozengiform cell, and two transverse ribs at the upper edge, below which are two empty circular holes. Tapering slightly towards the lower edge which is broken raggedy, and now squashed almost flat. The tag may contain the remains of decayed leather, just visible at one end. Surviving length 19mm. Maximum width 5mm. Weight 0.3g.⁴



Figure 6: Lace tag with Unique ID: NMS-F13D26

Most likely the silver was patterned by placing over a form made of bronze or iron with this pattern on it, then placing a piece of leather or lead over the silver and hammering the metal into the form. The patterned silver would then be used to make objects such as this type 1 aiglet.

This aiglet is included to emphasize some of the tool marks visible that indicate riveting as a method of attachment. Of the two holes at the upper intact end, one is curled in where the peening tool would have deformed the metal and the other side is flared out and split where this rested against a curved groove topeen the bottom of the rivet. This clearly shows the same marks as the brass aiglet in the above introductory section on riveting.

Make note of the marks left by the tools during the riveting process.

Portable Antiquities Database Information.

LACE TAG with Unique ID: SUR-91CC76

A post medieval lace tag, or aiglet, made from a rolled triangular sheet. In the wider end are four securing holes. Broad period: POST MEDIEVAL. Date from: Circa AD 1600 to: Circa AD 1800. Length: 34.88 mm. Weight: 1.13 g. Diameter: 5.48 mm

This might be closer to a modern aiglet due to a possible date of manufacture from 1600 to 1800.⁵



Figure 7: Lace tag with Unique ID: SUR-91CC76

The type 1 aiglet above, due to the placement and condition of the holes at the top, does seem to indicate that this was sewn onto a cord. At some point it was either hit with a rectangular shaped punch, or was smashed accidentally. If done intentionally, this would not be enough by itself to secure the aiglet to a cord.

Note the rounded ends on the top. With four tabs, each with a drilled or punched hole. The curves and the edges indicate this was shaped before this type 1 aiglet was formed around a mandrel. This is a fairly thick gauge of metal so the holes have the slight taper that can be attributed to being punched flat, and then curving in slightly as the aiglet was formed over a curved mandrel.

Portable Antiquities Database Information.

LACE TAG with Unique ID: LON-FE3341

A post medieval gold lace tag (aglet) dating AD1500-1550. The body of the object consists of a gold sheet tube. At each end of the tube is a border of wire in the rope twist design. There are two sets of two parallel wires in the rope twist design along opposite sides of the tube and this creates two main panels on the body of the object. Each panel is decorated with rope twist wire and this creates decorative cells, with one much larger cell in each panel. One end of the tube has a border of four triangular panels containing a rope twist wire circle within each triangle, one of which creating a border around a perforation. The other two sides of the triangle are finished with a rope twist wire border. The opposite end of the tube has a domed openwork top consisting of a six-petalled flower made of rope twist wire with one central knob and a rope twist wire border at the base of the knob.

Dimensions: Length: 14.51mm; Width: 5.5mm; Thickness: 2.52mm; Weight: 0.7g.⁶



Figure 8: Lace tag with Unique ID: LON-FE3341

This is a gold type 6 aiglet. Rounded into a tube again this would be about 3.5 to 4 mm in circumference. So it is reasonable to assume from the size,

From the size, and having been decorated with one or more colors of enamel in the cells defined by the filigree, the author believes this would not be used on the end of a lace used to pass through sewn eyelets. It is more reasonable as a purely decorative item.

It is unlikely that a gold item with vitreous glass enameling would be riveted to a cord as a way of securing it. It is also unlikely the four tabs at the top would have been bent into the cord as a method of securing this aiglet as it would have almost certainly broken the enamel.

In the experience of the author having made several enameled aiglets, that riveting will damage 5 out of 6 aiglets. The enamel can not take the shock of the rivet being peened over closer to than about 2mm to the enameled areas. And even then, many times the enamel was damaged.

The gold roping on the tabs of this aiglet reaches down to touch the band that was most likely the top border of the enameled area. Bending the gold tabs on this would have most likely cracked the enamel.

There is no evidence in this image that the gold tabs were ever bent. No thin areas, creases, lines, tool marks or cracks. Some of these marks would have been visible as a result of the tabs being bent to secure the aiglet to the cord. As a third point, these tabs are very large. Large to the point of being decorative only. Aiglets with crimped ends or tabs bent into the cord to secure the aiglet are quite small.

This image is of the aiglet before cleaning. After cleaning the possibility of this aiglet having two or more small holes near the top for attachment is very likely and that there would that would not be any tool marks that would be associated with riveting.

Portable Antiquities Database Information.

LACE TAG with Unique ID: BUC-E33633

A slightly distorted, post medieval, gold cloisonné aiglet or lace end. The object consists of a gold tube squashed into an elliptical cylinder, with a dome shaped end. The design on the outer surface consists of cells or cloisons delineated by twisted gold wire soldered onto the body of the object.

These would have been filled with coloured enamels of which only the white survives. The mouth of the aiglet has a border of nine small circles around it. Below that are rectangular panels, three containing S shapes rope-wise, which have traces of white enamel. These alternate with three panels filled by a rope pattern, made by twisting the twisted cloison wire. The domed end is bordered by a strand of twisted wire and has a ten petalled flower with a circle of twisted wire around a ball knob. All the background enamel has gone so the writer can only speculate about whether the aiglet was colourful or all gold and white.⁷



Figure 9: Lace tag with Unique ID: BUC-E33633

This is a type 6 aiglet as it would not have been functional in any way. It is 19.67 mm in length, and in its current shape, 8.12mm and 0.63mm wide and thick respectively. Rounded out into a tube once again, it would be approximately 5.5 mm diameter. The enamel can be seen in the leaf shaped cloisons but not in the round ones around the top edge. This would be a wise design element as it gives an uniform appearance at the top and allows ease of attachment.

Portable Antiquities Database Information.

LACE TAG with Unique ID: LON-5E0F81

A Post Medieval gold aiglet dating to the first half of the 16th century. This aiglet is constructed from a gold cylinder; there is no visible seam where the two ends meet. The majority of the body of the aiglet has no decoration except a band of decoration at the open end and a filigree cage at the opposite end. The band of decoration at the open end comprises two bands of twisted rope filigree with pellets regularly spaced between them. There are two holes for attachment on opposing sides of the cylinder. There is a small hole next to one of the attachment perforations but this appears to be a flaw during manufacture. The other end is closed by a filigree cage in the shape of an eight-petalled flower (comprising eight wire pointed ovals radiating from a central pellet). The shape of the aiglet is squashed along the length and there are cracks near the middle.

Dimensions: length: 14.76mm; width: 5.76mm; weight: 0.54g.⁸

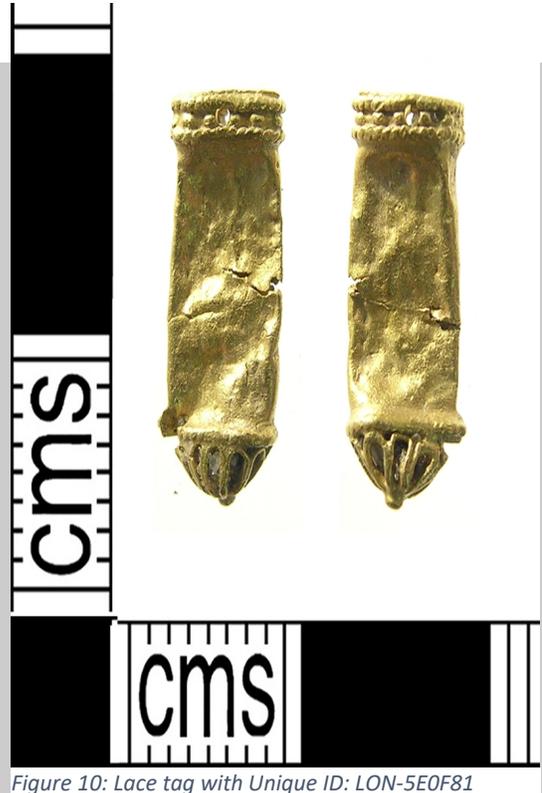


Figure 10: Lace tag with Unique ID: LON-5E0F81

This type 6 aiglet has been dated to the first half of the 16th century. This description and the image itself implies that the aiglet was likely made by a talented goldsmith who could fuse his own sheet stock into tubes and then assemble this skillfully. Most likely constructed in three components that were later joined together as a completed object.

It is notable that the holes at the top are very large and regular in shape. The beads next to the holes in the top show no evidence of being deformed by the tools used during the riveting process.

This type 6 aiglet was found on the Thames Foreshore and is currently being evaluated as possible treasure.

The place of discovery and visual inspection indicates that this is probably gold. It is likely this will be added to the Thames Tudor Gold Scattered Mini Hoard.⁹

An average example of jewelry workmanship. This aiglet shows a circle on the top end (bottom side of the photograph) that is surrounded by twisted wire.

The design at the open end appears to have been overheated past fusing temperatures and was just starting to melt. The cap at the end has an extra bit of metal that should have been filed off next to the bead. The metal section in the center most likely was fused as a flat section, then rounded into a tube to surround the body of the aiglet.

The lack of any tool marks associated with riveting in addition to the design of this aiglet (the wire around the hole in this aiglet) indicates that sewing would have been the most likely method of attachment.

As more information becomes available on this particular aiglet, it will be added to this paper.



Figure 11: Gold aiglet 1. Photo by (name withheld by request)

This type 6 aiglet has been recently found on the Thames Foreshore and is currently being evaluated as possible treasure.

The place of discovery and visual inspection indicates that this is probably gold. It is likely this will be added to the Thames Tudor Gold Scattered Mini Hoard.¹⁰

This aiglet measures 9mm in length. The top is surrounded by two twisted rings composed of two smaller wires twisted together. The space between the rings of twisted wire at the top seems to have a greater outside diameter than the main body of the aiglet. Does this indicate the top components were fused together as a unit, then slid over the body of the aiglet and fused together again?

The lack of any tool marks associated with riveting, in addition to the design of this aiglet, makes any method of attachment other than sewing unlikely.

As more information becomes available on this particular aiglet, it will be added to this paper.



Figure 12: Gold aiglet 2. Photo by (name withheld by request)

Portable Antiquities Database Information.

LACE TAG with Unique ID: SUR-754F8E

A Post Medieval conical silver lace tag made from sheet silver. The terminal is pointed while the attachment end flares outwards. Around the rim of the flared end are four small circular attachment holes for sewing onto the lace.

Length: 32.96 mm. Weight: 2.09 g.

Diameter: 9.6 mm

There remains a possibility that this object is a silver cockspur.¹¹



Figure 13: Lace tag with Unique ID: SUR-754F8E

It is included as a reference as it is a similar size and shape to aiglets and the punched holes can clearly be seen to resemble those on the figures earlier in this paper.

The four holes are clearly for attachment via sewing to a soft leather strip, but in the opinion of the author, this is not a lace tag. Compare the similarity of the punched holes for attachment to the holes in the top of the aiglet in figure 7.

¹ Date: ca. 1580, Culture: European, Medium: silk, metallic thread, brass, Dimensions: Length at CB: 22 ¾ in. (57.8 cm), Credit Line: Catherine Breyer Van, Bomel Foundation Fund, 1978, Accession Number: 1978.128. <http://www.metmuseum.org/collections/search-the-collections/83202?img=7>.

² Arnold, J. (1980). "Lost from Her Majesties back": items of clothing and jewels lost or given away by Queen Elizabeth I between 1561 and 1585, entered in one of the day books kept for the records of the wardrobe of robes. [London]: Costume Society. Page 82. "

³ Livings, Gerald A. (2017) Aiglets Medieval Post Medieval and Modern. Page 71.

⁴ Darch, E (2014) NMS-F13D26: A POST MEDIEVAL LACE TAG Web page available at: <https://finds.org.uk/database/artefacts/record/id/650625> [Accessed: Feb 16, 2018 5:49:12 AM]

⁵ Williams, D (2008) SUR-91CC76: A POST MEDIEVAL LACE TAG Web page available at: <https://finds.org.uk/database/artefacts/record/id/223124> [Accessed: Feb 16, 2018 5:22:08 AM]

⁶ Parol, J (2013) LON-FE3341: A POST MEDIEVAL LACE TAG Web page available at: <https://finds.org.uk/database/artefacts/record/id/583165> [Accessed: Mar 2, 2017 4:47:34 PM]

⁷ Tyrrell, R (2011) BUC-E33633: A POST MEDIEVAL LACE TAG Web page available at: <https://finds.org.uk/database/artefacts/record/id/476293> [Accessed: Mar 2, 2017 4:46:08 PM]

⁸ Sumnall, K (2015) LON-5E0F81: A POST MEDIEVAL LACE TAG Web page available at: <https://finds.org.uk/database/artefacts/record/id/754070> [Accessed: Feb 13, 2018 2:51:17 AM]

⁹ Personal Interview: Tuesday, February 13, 2018. Gold aiglet. Photo by (name withheld by request). Place of Discovery, Thames Foreshore. Date of discovery, February 22, 2016.

¹⁰ Personal Interview: Tuesday, February 13, 2018. Gold aiglet. Photo by (name withheld by request). Place of Discovery, Thames Foreshore. Date of discovery, February 03, 2018.

¹¹ Williams, D (2017) SUR-754F8E: A POST MEDIEVAL LACE TAG Web page available at: <https://finds.org.uk/database/artefacts/record/id/826650> [Accessed: Feb 24, 2018 5:34:38 AM]

Notes: Considering the size and diameter, it is almost certainly a cockspur (gaff) used for the blood sport of cockfighting. These would have been used in pairs and tied to the leg of a bird where the natural spur had been partially removed. The bird would have then been placed in a small ring called a cockpit with another trained bird, and allowed to fight until one or the other was killed. These being made from silver would have been owned by a very successful breeder of and trainer of fighting fowl.