

Item:

This hat is constructed in a manner similar to a round tipped hat made of lamb suede with embroidered embellishments, estimated to have been made in 1600-1610, and located at the German National Museum in Nürnberg (Nuremberg), Germany.

Origin and Spread of the style:

The round tipped style of hat can be seen in portraiture for both men and women beginning in the 1570s through the late 1620s. The round tip can be made of pleated fabric, simulated pile, leather, or pressed felt.

Samples of Round Tipped Hats

			
Pleated fabric slightly bulbous- c.1575-1600 Silk Hat Germanisches National museum Nuremberg.	Round tipped pleated hat - Elizabeth Knolsley 1560	Leather - c.1600-10 Leather Hat Germanisches National museum Nuremberg	Pressed felt – Philip of Spain

The leather element of the hat can be seen in several surviving extant hats. Of particular interest is the fact that all of the existing leather hats have some type of embroidered decoration on them and are constructed in a similar manner to the hat I have constructed. They are all made of pieced leather, embellished with embroidery in lines that encircle the hat and the top of the brim is made as part of the embroidered pieces. Based upon Janet Arnold’s research as well as my own primary research of the round tipped leather hat in the German National Museum and the flat tipped leather hat located at the Museum of London.

Surviving Leather Hats

1600-1610	Round tip	Pieced leather with embroidery	Located in GNM – Nuremberg, Germany
1558-1600	Flat tip	Pieced leather with embroidery	Located at Stibbert Museum - Florence, Italy
1550 – 1610	Flat tip	Pieced leather with embroidery	Located at Prado Museum, Spain
1550-1610	Flat tip	Pieced leather with embroidery	Located at Museum of London, London

Construction of the round tipped leather hat:

From Janet Arnold's Patterns of Fashion	Additions & annotations after personal examination of original hat
<p><i>Hat is embroidered cream leather, with suede finish, now discolored to very pale grey. It is made of eight shaped pieces of felt (to bottom dotted line ---). The felt is butted together to make a smooth surface and joined. One layer of linen, cut to the same shape, is put on top of the felt and another below. ...Rows of stitching may be seen through the silk lining inside the hat. The felt brim is stitched to the crown and the foundation is then brushed down or soaked with glue size of some kind to make it stiff. The zigzag edges of linen are stroked down over the felt. (Arnold, p94)</i></p>	<ul style="list-style-type: none"> • Leather is a lamb suede • Glue sizing is used between layers of felt and linen • Leather and linen are placed on paper-mache foundation. • The "rows of stitching" are only the dye transferred from the outside stitching.
<p><i>The edge of the brim is bound with a strip of leather from the right side, holding the felt and leather together. It is rolled over the edge and stitched on the dotted line, the zigzag edge is stuck to the felt underside</i></p>	<ul style="list-style-type: none"> • The piece of leather described is two pieces of leather; the zigzag edge is on an inside piece of leather. The stitching is on a second piece of leather, which is used over the top of the joining piece.
<p><i>The brim is made from felt covered with leather, shape cut to outside line, ivory silk lining cut to inner line. Brim measures 83.1cm round the outer edge.</i></p>	<ul style="list-style-type: none"> • The top of the brim is made from the bottom of the embroidered pieces. The underside of the brim, is covered by a leather piece made of two pieces joined in center front and center back on the underside of the brim. The leather is sewn in two pieces. There is an inner lining of silk over the wool felt brim between the felt and leather.
<p><i>Shell shape at back of hat may have been used to hold a feather.</i></p>	<ul style="list-style-type: none"> • It is stuffed with horsehair, which is visible through bug holes. This element has been glued onto the hat. – unknown glue type
<p><i>Ivory silk taffeta lining for side of crown, with one join. The lining seems to be glued to the linen layer.</i></p>	<ul style="list-style-type: none"> • The lining may have become attached to the inside papermache over time and may not have started out glued. Unclear at this time.
<p><i>The hatband measures 63.6 cm where brim meets crown and 55.8 at top of hatband. The leather is eased to fit the shape over a firm padding</i></p>	<ul style="list-style-type: none"> • Padding is likely wool felt as some can be seen behind the hatband where some stitches have come loose.
<p><i>The embroidered leather panels are butted together for smooth joins all of which are covered with couched silver thread with silk core, then worked with chain in ivory silk, now discolored, down the center. Finished width of decoration is 3mm</i></p>	<ul style="list-style-type: none"> • It seems more likely that the chain stitch was done first then the silver cord was laced through the stitching. There are no couching stitches that can be seen from the outside of the hat.

Construction process of this example of the hat:

I have used as many of the period materials as I was able to locate to produce this hat. Substitutions are noted in the table below.

*Materials used in original hat	*Materials I used
Lamb suede	Same
Wool felt	Same
Flax linen	Same
Silk sewing thread	Same
Flat silk embroidery thread	Same
Linen Paper – paper mache	Same
Animal skin glue	Same
Silk taffeta	Same
Silk satin	Same
Silver cord with silk core	Silver woven with silk core
Paper patterns	Same
Marking ink	Marking pen
Round tip hat block	Same
Leather awl	Same
Leather needles	Glovers needles
Additional embroidery needles	Same
Wooden button blank	Same
Silk sweat band	Silk petersham

*Exact amounts and sources of materials can be found in appendix 1

Preparing patterns:

Measure head plate circumference and add 2 inches. Proceed to calculate the diameter needed for each of the 8 pieces of suede, wool felt, and linen which will be used.

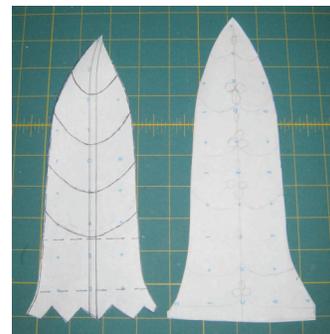
Draw out the pattern using 1X1 inch paper. Add design to pattern so it can easily be transferred to the suede when needed. Make a separate pattern for the suede, wool felt, and linen. Additionally, make a paper pattern of the brim, indicating the headplate. Cut out the pattern pieces and place to one side.

Begin by stretching the lamb suede using a radial stretching technique. The purpose is to remove the stretch and “sizing” inherent in suede animal hides. This was a well know process used in glove making as early as the 15th C (Villon). Stretch it firmly, as it will continue to stretch throughout the project if not properly sized at this time.(Villon)

Trace the pattern onto the backside of the suede. Ink was used in the mid 15th C for marking suede for gloves and may have been used for other clothing related leather goods, (Ryse-Jones) One could use a permanent ink pen such as a sharpie.

Using a pinking wheel or similar tool, mark the leather at even intervals, then using an awl; punch each of the holes into which embroidery will pass. The reason to pre-punch one’s holes is that the silk thread will shred and become unusable very quickly if one tries to embroider without pre-punching, even if using a glovers’ needle. If one wanted, one could run the lines under a sewing machine using a leather needle and leather foot. I began by using the pinking wheel, but ended up using the machine technique due to time constraints.

Mount the suede onto a piece of linen with the ink facing the linen and the punched holes now visible on top. Attach to the linen using either a whipstitch or machine sewn around the edges of



Pattern pieces. On left, linen/wool felt pattern. On right, leather pattern.

the suede. Attach the linen to stretcher bars. One could attach using thread or some other method. I attached the linen to the stretcher bars using staples. Begin embroidering the suede.



Suede on stretcher bars

Base Embroidery:

This is my second embroidery project and my first using suede.

The original hat is stitched using lines of chain stitch to make a wavy design around the hat. To that end, each of the 8 pieces of suede are stitched individually, then assembled. Additionally, each piece was satin stitched with a 3 lobe design which may have been a stylized fleur-de-lis. (Junta Zander-Seidel). The silver lacing is added later in the construction process. I used flat silk embroidery floss by Krinick. I used a wooden stiletto to help keep the silk from becoming twisted or otherwise behaving badly.



Back of open chain stitch at join

Once the pieces are embroidered, they are cut out. The pieces are attach together using an open chain stitch, which will leave a whipstitch look on the back of the pieces. Join 4 pieces and 4 pieces. At this time, add the lacing of the silver wrapped silk cording.

Lacing:

Using two tapestry needles, lace the cording under the loops of the open chain stitch creating a figure 8 pattern down the seams.



hat with lacing along seams

The paper mache layer:

The base of the tip is made of paper mache. The paper inside the hat has Germanic writing on it, which can still be seen and read. From the written text, Dr Zander-Seidel, curator of the textiles at the GNM, suggested that the paper was most likely old account receipts but was unable at this time to determine if they are household accounts or shop accounts. With this in mind,

I began by making paper that would likely have been used in mid 15th C Germany. Most of the paper used for accounting and such was rag/linen paper. I used linen lint as the linter for making paper. I made paper in the usual manner and then ran it through a laser printer to print German accounts onto the paper. I tore the paper into small bits, and using rabbit skin glue, proceeded to make a paper mache tip. I used a wooden hat block covered with plastic to allow the finished tip to slide off more readily.



Paper mache tip on wood hat block

Wool Felt and Linen layers:

The wool felt layers are cut using the previously developed pattern. Once cut, they are butted together and sewn. Glue sizing is used between the layers for stiffening. The dried tip is then placed on the glue-sized brim and attached using rabbit skin glue. Using the zig zag edge, the tip is smoothed onto the brim. Set this to the side and wait for it to dry. Once it is dried, cut out the head plate leaving 1/2 inch for the tabs to be folded up into the tip and stitched.



The tip is then placed upon the



tip glued to brim

The Hat Band:

The hatband is made of suede with chain stitch and lacing places at intervals such that they intersect with the lines on the hat. In the case of this hat, they are 1 1/8 inches apart. They may vary depending upon the tip size of the wearer. It is additionally backed with felt and linen. This helps give the hatband a more three dimensional look.

The hatband is edged with silver cord. The cord is slightly larger diameter around the bottom of the hatband than around the top of the hatband. The cording is couched directly onto the hatband.



Hatband with chain stitch laced with silver wrapped silk

Assembling:

Once one has the tip, brim, embroidered suede and embroidered hatband one is ready to begin assembling the actual hat.

Place the suede skin over the hardened tip and roll it down the tip. If everything has been measured well, it will fit like a second skin. If it is slightly off, one can remove it and make any small adjustments as needed. One of the issues I encountered was that the suede stretched as I worked with it so that I needed to make a couple of major adjustments which lead to some of the embroidered areas not lining up as well as I had expected.

Finishing brim edge:

The piece of leather around the brim edge described by Janet Arnold is actually two pieces of leather; the zigzag edge is on an inside piece of leather. The stitching is on a second piece of leather, which is used over the top of the joining piece. Cut a strip of suede 3/4 inch wide for the top piece. Punch holes down the center to couch cording onto the edge of the brim.

The inside leather joining piece is cut and added using glue which then connects the embroidered brim with the felt under the brim. The leather under brim is added on top of a silk backing. This layer is held using the solid piece of leather with the embroidered cord. This is also attached using glue. I used jewel clips to hold the edge until it was dry.

Additionally, the original hat had two joins in the leather under the brim. This would have allowed the leather to be cut in smaller pieces and conserve suede. Cut brim with headplate adding 1/2 inch for tabs. Fold the suede tabs up into the hat and stitch using large stab stitches. They will appear on the outside of the hat but are covered by the hatband. Attach the hatband at this time using animal glue.

Top Button:

The button is added to the top of the tip. It is low to the hat and is embroidered as well using simple lines of silk in a radiating pattern from the center. It is attached through all layers including the lining. I used a modern metal button with a long shank that I covered in suede and silk threads and attached using silk sewing thread.

Lining:

The lining is cut as an arch with a round top sewn together using one seam. The original hat used cream silk taffeta, I used red as it was a common silk color and I like it better.

Sweatband:

The hatband in the original is made of the same white silk taffeta as the lining. I am using silk petersham as I like the comfort of this better than silk taffeta.

Feather Holder:

Made of leather with chain stitch embroidery and lacing around and down the spine of the shape. Attached using glue.

Things I learned with this project:

- Suede will continue to stretch while one is working with it. Next time, I will get the suede wet after the first stretching to help alleviate this issue.
- Satin stitching on suede is much harder than satin stitching on fabric. I ended up not making the flues as I could not get the satin stitch to lie smoothly and I was running out of time to perfect it. I will try again on the next hat.
- Soie Platte is beautiful when it is finished, but suede shreds if very effectively, prepunched holes must be slightly larger than the needle one is using. The suede will self heal such that one can not see the slightly larger hole.

Sources and Bibliography for this project

Primary Source:

Personal visit the German National Museum in Nuremberg, Germany to examine this hat and talk with Curators to get their takes on this hat as well.

Personal visit to Stibbirt Museum (Florence) to view another leather hat from the same time period

Visit to the Museum of London to visit the flat tipped leather hat there. Talked with curator and handled hat.

Secondary Sources:

Picture of the original hat along with pattern of this particular hat.

Arnold, Janet: *Patterns of Fashion The cut and construction of clothes for men and women c1560-1620*, Macmillan 1985. Revised edition 1986. (ISBN 0-89676-083-9)

Visits to museums to view and take pictures when able of paintings of people wearing 16th C hats to include:

Uffizi – Florence

Stibbirt – Florence

Pitti Palace – Florence

German National Museum – Nuremberg

Bavarian National Museum – Munich

Museum of London – London

Costume Museum – Bath, UK

National Portrait Gallery, London

Louvre – Paris

Opinions of original materials:

Personal emails from:

Junta Zander-Seidel - curator of textiles German National Museum

Paul Ryse-Jones – Secretary for the Worshipful Company of Glovers of London

Tertiary Sources: The following contain comments about hats in general in Elizabethan England with some overview discussion on hat making and wearing. Many pictures of painting., and suggestions about how hats were made and worn.

Ashelford, Jane: *The Art of Dress: Clothing and Society 1500-1914*, Abrams, 1996.

Ashelford, Jane. *The Visual History of Costume: The Sixteenth Century*. 1983

Corson, Richard. *Fashions in Hair: The First Five Thousand Years*. London: Peter Owen, 1965

Dreheer, Denise. *From the Neck Up An Illustrated Guide to Hatmaking* Madhatter press: Minneapolis, 1981

Digby, George Wingfield. *Elizabethan Embroidery*. New York: Thomas Yoseloff, 1964.

Ginsburg, Madeleine. *The Hat: Trends and Traditions*. New York: Studio Editions, 1990.

Hearn, Karen, ed. *Dynasties: Painting in Tudor and Jacobean England 1530-1630*. New York: Rizzoli, 1995. ISBN 0-8478-1940-X.

Kliot, Jules and Kaethe. *Millinery Feathers, Fruits and Flowers*. Lacis: Berkeley CA, 2000

Powell, Vee, *How to Make Hats and Accessories*. Garden City NY City Publishing Co 1946.

Villon, A.M. *Practical Treatise on the Lather Industry*. Translated from French by F.T. Addyman. London: Scott, Greenwood, 1901

Appendix 1

- Lamb suede hide
- 1 yard 3.1oz linen
- ½ yard wool felt flat silk embroidery thread - about 100M
- 8 yards of silver with silk core #12
- silk sewing thread
- 2 blunt tapestry needles size 18
- 3-4 blunt tapestry needles size 12
- 3 each glover's needles #11 and #14
- leather awl – fine point
- non-bleeding marking pen
- pattern pieces – 8 for leather, 8 for linen and felt
- tracing paper
- glue – rabbit skin
- round tipped hat block
- paper for paper mache
- About 3-6 weeks depending upon skill level and available time.