

A Ladies 16th Century
English Hat



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This linen lined, black silk-satin hat, adorned with a hatband of black braid augmented with a fine orange trim, and optional feathers held in place by a small pewter brooch, is made in the style of the pleated hat seen in Janet Arnold's Patterns of Fashion.

The Choice of Style:

Once again, my choice of hat was based around my developing wardrobe. As I was in the process of updating an old Middle Class Elizabethan ensemble, it seemed like the ideal time to make a Middle Class hat to match.

The hats depicted in various sources showing non-Royal figures generally tended to be of dark colours and some height. Although there was seldom enough detail to tell whether the crown was pleated or smooth, and whether it was fabric covered or plain felt, there was sufficient information to get a feel for the overall proportions and style.

The hat needed to be something I could just pop on, along with a good apron, on my way out to the markets. It also needed to look as if it was part of my middle class wardrobe.

I chose this particular style based on a number of reasons.

- It was my favourite of all the extant hats studied by Janet Arnold in her book "Patterns of Fashion: The cut and construction of clothes for men and women c1560-1620".
- This style was within both my abilities and resources to make.
- The style is a combination of, and variation on, two hats I have previously made
- I felt it would suit the feel of my Middle Class ensemble
- And, possibly most importantly of all, it looked like fun

Pattern Development:

A pattern was developed using my standard methods (described in more detail in my article on hat construction techniques.)

Numerous mock-up hats were constructed from newspaper and Sellotape and a final pattern taken from the one that best mirrored the proportions seen in period illustrations.

As usual, the paper mock-up was cut along the required seam lines and the pattern pieces, adjusted for the additional thickness of the layers of fabric.

Refer Appendix 1 for a closer consideration of the difficulties in developing a workable pattern for this hat.

Construction:

There was no machine sewing in this project. All stitching is done by hand using a steel needle and a combination of linen and cotton/polyester threads as the tasks called for different weights.

Materials:

Cardboard
Felt (100% Wool Tailor's - black)
Satin (100% Silk - black)
Lining (100% Linen - black)
Wax (white, hard candles)
PVA Glue
Thread (heavy linen & light polycotton - black)
Gimp Braid (black)
Accent ribbon trim (green & orange)
Feathers (optional – to compliment clothing)
Brooch (optional – to compliment jewellery)

Tools:

Fabric Scissors
Sewing Scissors
Paper Scissors
Pins
Needles (straight and curved, of varying sizes)
Bees Wax
Wax Brush

(Refer *Appendix 3: Compromises in Construction Materials* and *Appendix 4: Detailed Method* for more information)

Method:

Cut out the various pieces (Refer *Appendix 2: Pattern Pieces*) and edge everything with a risk of fraying with molten wax as seen in period examples¹.

Form the sides of the crown using the cardboard base pieces and then cover, inside and out, with felt. Also cover both sides of the crown top with felt.

Carefully attach the lining to the inside of the sides and the top ensuring a smooth finish before sewing the crown pieces together.

Sit the partially gathered silk circle over the otherwise completed crown. Fold each pleat to one side and stitch in place before making and attaching the brim.

Refer *Appendix 4: Detailed Method* for photographs and more detailed explanations of each step.

¹ Patterns of Fashion, Janet Arnold, Page 94, c 1575-1600 Silk Hat.

Decoration:

Trim

The trimming of this hat (namely the fine ribbon trim wound around the gimp-braid hat band, and attaching the fine trim to the outer brim) was copied directly from the extant hat pictured in *Patterns of Fashion: the cut and construction of Men and Women's clothing 1560-1630*.

Availability severely limited the selection of trims. The black gimp braid was chosen due to colour and width, as it was the only vaguely period style braid of suitable colour and dimensions.

The accent trim, of woven orange and green ribbon, was chosen from several fine braid options due to a combination of cost, colour and aesthetic appeal. Most of the discarded braids were either black (which would not be suitably visible) or used even more jarringly modern colours than the chosen trim, and I found the combinations to be displeasing.

Feathers

The optional feathers are a concession to SCA convention. For some reason, a late 16th century hat is not considered finished until there are feathers attached. It is for that reason that a small bunch of feathers has been created for wearing with this hat.

While I have not seen a portrait showing feathers on a pleated hat such as this, period portraits show many other hats adorned with either ostrich feathers or plumes from game birds. I have chosen a selection of plumes (from farmed birds) dyed to replicate feathers of game birds for this middle class hat. Not only did it seem appropriate, but I am yet to see a portrait of a middle class hat decorated with ostrich feathers.

Brooch

When the hats in portraits are depicted showing a whole feather plume, the feathers almost always emerge from a brooch. For this reason, and because it is a convenient method of attaching the feathers, a brooch is worn on this hat.

The preferred brooch worn on this hat is a pewter casting depicting the Caidan Cross. I choose to wear it for sentimental reasons, but find the pewter compliments the middle class outfit where gold feels too extravagant.

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Downloaded: January 2005

Appendices

Appendix 1

Difficulties

Proportions

One of the biggest difficulties to overcome was choosing the best proportions, both for the hat itself, but also in relation to the wearer.

As this hat was being made from a photograph of an extant example, where the proportions were obviously skewed by the angle the picture was taken from, it was exceedingly difficult to establish either the height or the angle of decrease in the crown.

In the end these factors had to be chosen from mock-ups based on how they flattered the wearer with some consideration of ease of manufacture.

Where the hat sat on the head was also not obvious from the extant hat as there were no pictorial instances of it being worn. Again, this was chosen based on how it flattered the wearer, but with consideration made for the issue of long and very thick hair. Obviously the hat had to be designed to sit above the hair. Hairstyles were trialled, with a low bun being the most consistently favoured option (over plaits crossed behind head, plaits crossed over back of head, French twist, and a very high bun). Measurements were then taken to ensure the hat would sit above the top of the standard low bun.

Cardboard

The ability of cardboard to form a smooth curve was another issue to contend with. Rolling the cut shape into some form of submission with a fire extinguisher seemed to help, although retaining a curve while allowing the glue to set proved beyond me. Next time I will fashion a curved press for setting the glue.

As it was, I forced some curve back into the glued area after the fact, by manipulating that section of the card by hand. Although most of the curve did not remain, there was enough softening of the area that it is not noticeable in the finished hat.

Pattern Pieces

Cut all from paper pattern unless otherwise stated.

- Brim: Cut 1 from cardboard
 Cut 1 from felt with 2cm seam allowance
 Cut 2 from silk with 1.5cm seam allowance
- Crown Top: Cut 1 from cardboard
 Cut 2 from felt using card as pattern
 Cut 1 from linen with 1.5cm seam allowance
- Crown Sides: Cut 1 from cardboard
 Cut 2 from felt using card as pattern
 Cut 1 from linen with 1.5cm seam allowance
- Crown Shell: Cut 1 from silk with 1 cm seam allowance

Variations from Extant Example in Construction Materials

Silk Outer Fabric

I have not used patterned velvet for the outer shell of the hat, as seen in the example in *Patterns of Fashion*. This was primarily due to the total lack of patterned velvets available at the time I was working on the hat, and the highly unlikely probability of any becoming available.

Silk velvet (rayon backed) was briefly considered (for using heat stamping to create an embossed pattern), but the fabric had a very long and sparse pile that separated in an unflattering fashion when folded. I discounted this option because it was aesthetically displeasing.

The other locally available fabric options included; tabby woven wool (suspect content & poor quality), wool felt (too fine), synthetic brocades, cotton velveteen, dupion silk (directionally slubby) and silk satin.

Silk satin was finally chosen, for three reasons; it is seen in portraiture of the time (pinked), I liked the fabric itself, anticipating it would give a fine finish to the hat and I had not used it before.

Felt Interlining

In the period hats detailed by Janet Arnold, there is no evidence for felt interlining over a cardboard base. I have used this technique to smooth out the joins in the base, and to add a layer to which I can stitch the linen lining and the silk outer layer (ie to approximate the properties of the felt based hats).

In felt based hats this would not be necessary, although some apparently have a loosely woven linen interlining where the hat has a silk lining.

The Use of Modern Cardboard

Cardboard was chosen for the base material in an attempt to make the hat a little more accurate to current understandings of period hat construction.

On page 94 of *Patterns of Fashions*, Arnold postulates about cardboard being the base material in some extant hats. This project was the latest in a series of attempts to create a hat on a cardboard base.

The papier-mache cardboard I experimented with previously was unsuccessful as a hat base due to the way the board tended to bend in sharp angles rather than a smooth curve, even after being rolled around a form. I am still dubious of its strength and was, at the time,

reluctant to try that again for a hat requiring a smooth curve, so turned towards more readily available and more modern forms of cardboard.

The Choice of Feathers

These feathers come from a feather duster, which exhibited a stunning variety of russet coloured plumes. As importing feathers can be extremely difficult due to our bio-security measures, this appeared to be the best option for obtaining vaguely 'natural' coloured feathers.

The Use of Cotton/Polyester Thread

While linen thread was used as much as possible, I resorted to cotton-polyester thread in those instances where a fine thread was required.

The linen thread easily purchased locally was too thick for much of the fine sewing and thus resulting in clearly visible stitches. In these instances a finer thread, one that could disappear more easily, was used for a tidier finish.

Had linen thread of such a weight been available it would have been used in preference to cotton or cotton/polyester mixes. Silk thread was not used in this project, as suitable weight of a good solid black was unable to be found.

Detailed Method:

Waxing Edges

All raw fabric edges were edged in wax to prevent fraying in line with a tantalising hint made my Arnold ([Patterns of Fashion](#), Janet Arnold, Page 94, c 1575-1600 Silk Hat).

A lit “10 hour” candle was used with a natural fibre brush to apply the molten wax to the fabric edges. (Further explanation and detailed method can be found in my article “Waxed Fabric Edges” found here: <http://helois.250free.com/projects/doc/wax.htm>)

The Cardboard Base

Constructing the Crown Walls

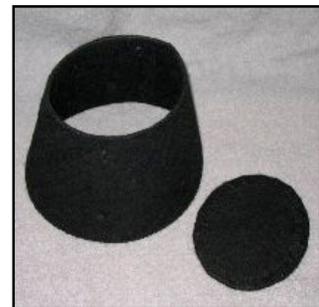
After cutting out the Crown Wall from cardboard, take a large needle and poke vertical pairs of holes all over the pattern piece. Once that is done, take a rolling pin (or fire extinguisher) and begin to create some shape in the card by rolling over the card on a soft-ish surface – such as carpet. Be sure to alter the orientation of the rolling pin to match the straight edges of each end of the card.

Once you have some curve in the card, bend it closed and glue. Be sure to hold the card closed until the glue takes.

The Felt Interlining

Stitching around the edge of the shape is seldom sufficient to give a good finish. However, basting with large stitches, evenly, over the whole piece results in a much smoother and also sturdier final product. This is what the large needle holes are for.

Ensure that the edges of felt butt together or tease the edge of one or both so that the overlap is not significantly thicker than the single or you will have strange lumps in your hat.



The Linen Lining

When lining the top of the crown:

Smooth out the linen lining fabric and lay the felt-covered card on top. Snip the edges of the linen being careful not to cut too close to the felt. (You don't want any gaps showing.) Now fold over and pin the edges checking the fit of the lining on the underside. If all is as it should be, i.e. there are no tension pulls or puckering, carefully stitch the linen tabs to the immediate layer of felt and remove the pins.

When lining the sides of the crown:

Smooth the linen around the inside of the felt & canvas wall pinning regularly. Once you get an overlap, leave unpinned and check that there are no pulls or puckering in the lining. If not, stitch down the hidden edge of the lining fabric and then fold over the free end and pin in place. Carefully snip the edges overhanging the felt covered wall, again ensuring you don't cut too close. Now fold these tabs over the outside of the wall and pin in place. If all is well, stitch them down and remove the pins. You can stitch down the free end at this point.

Putting the Crown Together

Carefully pin the two pieces together ensuring the edges match exactly and the lining all faces inwards.

I usually use the linen thread for this task. The stitches should take in both linen and felt.



The Silk Satin Outer Layer

Fold the circle into quarters and mark on each fold with chalk. Also mark off the quarters on the bottom of the crown with pins.

You will want to establish which way the sheen sits at the front of the hat at this point.

Sizing the Pleats

This is best done by trial and error over the frame with the quarter marks pinned in place. Continue altering the pleats until the proportions are consistent with those seen in the photograph of the extant hat. Or failing that, the pleats are best sized through tweaking the gathering until the proportions look good.

Stitching the Pleats

Once sized, fold under the hem and then fold each pleat over (in the same direction) and stitch it down. Keep the stitches small, and avoid coming out too far up the lining, as they will be visible if not oversewn when attaching the brim.

The Brim

If you have made any adjustments to the pattern, check your brim size at this point.

Repeat the basic manufacturing process on the brim. Fill any holes in the felt layer with felt off-cuts and stitch them in place.

Stitch the brim and crown pieces together being careful to hide the stitching where possible.