

# Pleated Pillbox

## Millinery TechniqueBook



**Website** | [www.jrmillinery.co.uk](http://www.jrmillinery.co.uk)  
**Email** | [jenny@jrmillinery.co.uk](mailto:jenny@jrmillinery.co.uk)  
**Instagram** | [@schoolofmillinery](https://www.instagram.com/schoolofmillinery)  
**Facebook** | School of Millinery with Jenny Roberts

# ABOUT JENNY ROBERTS...

Jenny Roberts is a Yorkshire based milliner with over 20 years' fashion styling and millinery experience. Her designs have featured on the front page of 'The Times,' in 'Vogue's Top 'Ascot' hats', 'Marie Claire' and the 'Daily Mail,' and she has also featured in 'Tatler' as 'the Best Milliner in Yorkshire, UK.'

Jenny started her label in 2006 after working for many retailers including the design team at 'Debenhams.' She completed her HNC training in Millinery in 2006, having previously gained a 1st Class Honours in 'Fashion and Textiles Management.' She loves the challenge of creating unique headwear which both enhances her clients look and makes them feel fabulous. In 2015 Jenny launched 'The School of Millinery.' She offers tuition in all aspects of millinery from her studio in Harrogate, UK live, virtually via zoom and through recorded tuition and TechniqueBooks. She teaches to the highest standard for hobby and professional milliners and caters for all abilities.

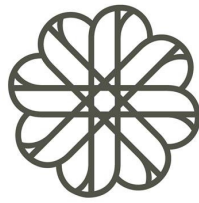
She has many years of experience in designing, making and teaching millinery and is thrilled to have taught at the 'London Hat Week,' for 'The British Millinery Association' and 'The American Institute of Millinery' as well as being an instrumental part of the Education Committee for 'The British Hat Guild.'

Jenny says, 'I am passionate about inspiring students to explore the possibilities of millinery and to create something unique and original, taking students from makers to designers. I am really excited to share our 'Millinery Technique Books,' with our students and provide a tool which students can print out and follow both visually and through words, we think they will be a great addition to our virtual and studio courses.'



Email: [jenny@jrmillinery.co.uk](mailto:jenny@jrmillinery.co.uk)  
Website: [www.jrmillinery.co.uk](http://www.jrmillinery.co.uk)

Instagram: [@schoolofmillinery](https://www.instagram.com/schoolofmillinery)  
Facebook: [School of Millinery with Jenny Roberts](https://www.facebook.com/SchoolofMillinerywithJennyRoberts)



JENNY ROBERTS

ORIGINAL BRITISH MILLINERY  
SCHOOL OF MILLINERY

# About this Technique Book

From weddings to Royal Ascot, the pleated pillbox is a glamorous cocktail hat fit for any occasion.

In this TechniqueBook, you will learn how to block a hat base using buckram. Learn how to wire, line and cover with silk or Fabric for a beautiful professional finish. How to use bias pleats to cover a pillbox. Create a silk bow to adorn your cocktail hat. Learn how to create a couture lining and use the techniques to cover cocktail hats. Finally, you will learn how to professionally finish your hat and will learn how to attach an appropriate head fitting.

Jenny will share with you her method to create this style, which continues to be a popular trend in headwear because of its ease of wear and modern elegance.

## WHO IS THIS COURSE AIMED AT?

This course is aimed at students who want to expand their knowledge of millinery techniques and create headpieces using any fabric.

This class is suitable for all levels, but you should be able to hand-sew. You should also know how to use a straight stitch on a basic sewing machine.

# COURSE EQUIPMENT

## MATERIALS



Medium weight fabric, suggestions include silk dupion and duchess satin. (Must have a bias) Could be more than 1 colour if your design desires

2 metres of double sided (heavy weight) stiffened buckram, this can be black or white but if using a light fabric choose the white buckram colour

Millinery wire 2 metres (could be brim reed or spring wire)

Tape - this is ideally surgical tape, but could be masking tape

Petersham in a colour to compliment your silk choice

1 - 2 metres of stiff sinamay to back the bow (could be a contrast or a complimentary colour to the silk)

Choice of head fitting - either an elastic or hairband

1/2 metre of Mac Fleece (if students are unable to get this, it is suggested that they use Tarleton as an alternative or use a heavy weight silk/fabric for covering instead of medium weight

## Mac Fleece Supplier:

<https://www.macculloch-wallis.co.uk/p/4161/non-fusible-woven/mw/macfleece>



**\*Note\*** - Materials shown are only a sample size of the overall materials



# COURSE EQUIPMENT

## TOOLS

Wooden round button hat block (this must be round)

Millinery blocking pins

Steamer (or steam facilities from an iron)

Iron and an ironing board

A polystyrene dummy head or poupee/crown block

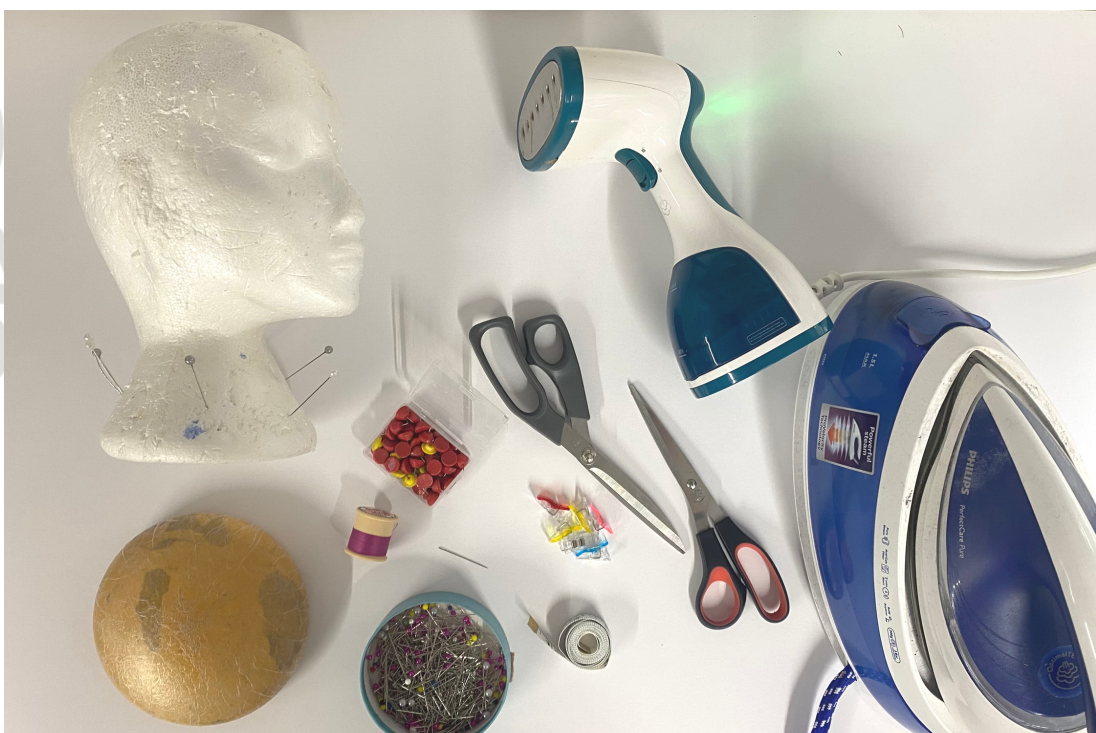
Fabric and non-fabric scissors

Pins

Needle and thread to match your fabric colour

Tape measure


Pegs (optional)



# STEP BY STEP...

## Blocking: Buckram Button Base

1. Cover your block in cling film/press and seal to protect from moisture and any sticky residue left from the buckram.

 **Top Tip** - use a thin coating of oil (any cooking oil) over the clingfilm/press and seal as this will help when taking the buckram off the block

2. Cut a piece of buckram big enough to ensure there is enough to fit across the block and plenty to cover a couple of inches past the blocking line on the underside of the block.




3. There are a couple of ways of blocking the buckram, you could

- a. Wet the buckram under running water and shake off the excess.
- b. Spray both sides of the buckram with water.
- c. Thoroughly steam the buckram.

### NSEW buckram on block

Scan QR code to watch video  
Click QR code to open link



 **Top Tip** - once the buckram is damp it will become sticky so work as quickly as you can with it and with as little handling as possible.

4. Block the buckram to shape over the block just enough to pin in a N.E.S.W formation on the straight of the grain.






# STEP BY STEP...

## Blocking bias of buckram

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 **Top Tip** - don't be afraid to pull the buckram quite tight it will almost stretch around the curve of the button and any wrinkles will disappear.

5. You will be left with four "ears" of excess fabric. Take an ear at a time and add lots of steam and pull the ear tightly so the windows of buckram come together, making sure there are no creases. (Note - You may need to form more "ears" and tackle the four sections in smaller subsections.) When you are happy that all creases and folds are gone, and your buckram is smooth to the blocking line, pin past the blocking line.



 **Top Tip** - try not to over handle and over steam the buckram as the stiffer strength decreases and the base will be less robust. An indication of this is if on black buckram there appears to be a white residue

6. When fully pinned, cut away any excess buckram whilst damp (its easier than when it is stiff and dry)



# STEP BY STEP...

## Taking buckram off the block

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### Preparing: Buckram Button Base

7. It is important to wait until your buckram is dry before wiring your blocked pillbox shape.



**Top Tip :** You can do this by using a hair dryer or putting your blocked buckram near a safe heat source. It is important that before you take the buckram off the block, that it is fully cooled or the shape will distort.

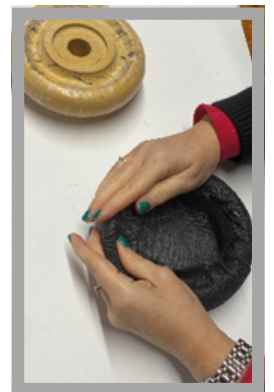
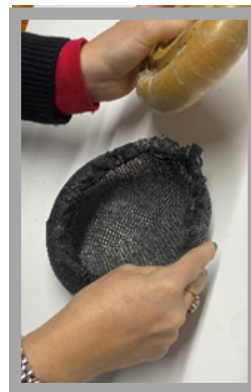
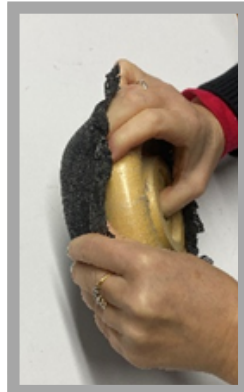
8. Remove pins and push buckram from the blocking line up to the centre middle of the top. You will get an air pocket and hear a light crack on release. Do this all around the circumference of the buckram on the block until it becomes loose. You will know when it is loose because the wooden button will rotate inside the buckram.



9. Once it's loose, remove by putting fingers inside the shape and pulling the block out.




**Top Tip -** If the buckram is stuck you can use a piece of plastic parcel wrap tape or bendy spatula to gently prise off. If the buckram is distorted on release, use the warmth of your hands to gently shape out any bumps and creases.

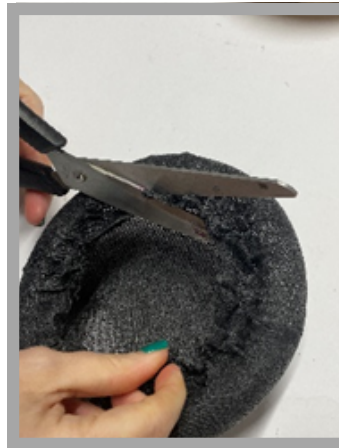
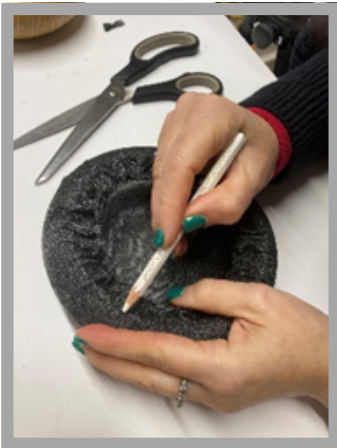
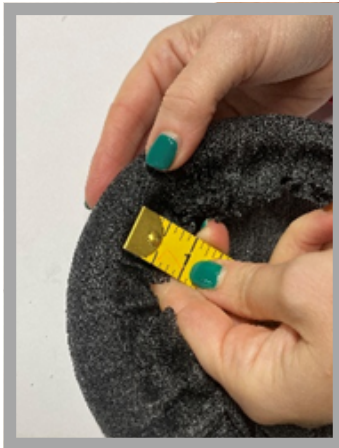




# STEP BY STEP...

10. Cut off any excess buckram around the edge of the shape. Make sure you are leaving a 1-inch skirt of buckram past the blocking line (note it sometimes helps to highlight the blocking line with chalk)

 **Top Tip:** It is important to leave a slight skirt on the buckram. This is so that you can have a surface to which you can sew your pleats to and later your petersham - it also ensures the design is neat inside.



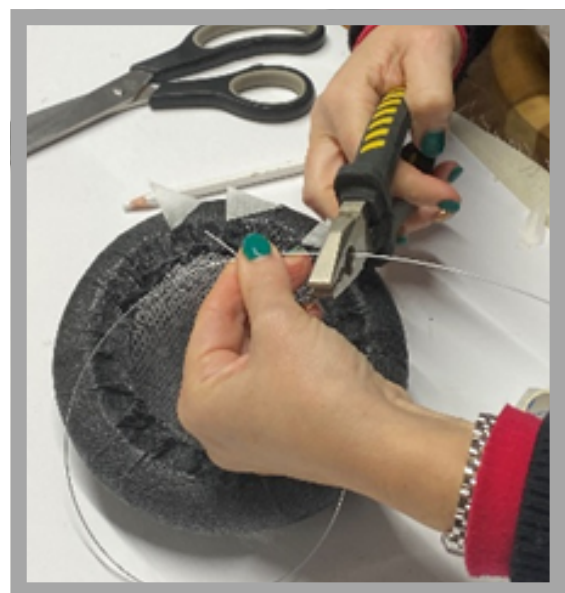
## Measuring the wire

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## Wiring: Buckram Button Base

11. Measure the wire for the base.  
As the base is round (or can be oval with more practice) use metal spring wire or brim reed



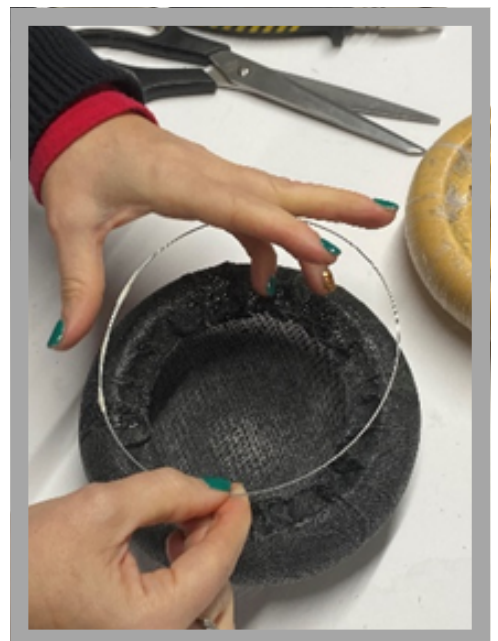
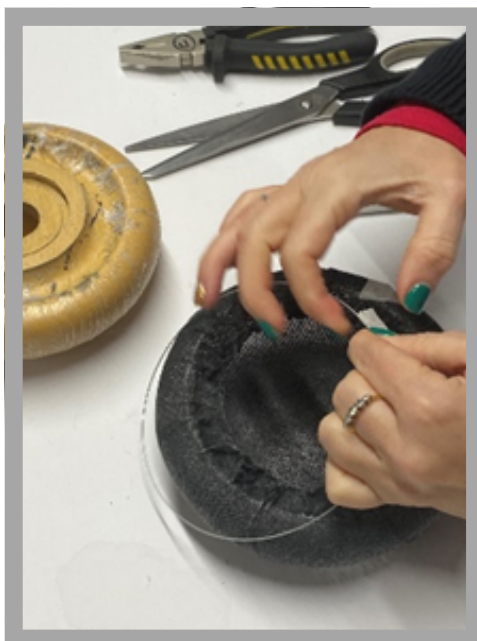
12. Next take a small piece of (ideally surgical) tape and cut into 3 small triangles.

# STEP BY STEP...

13. Measure your cut wire against the base, taking care to measure it by where you are going to sew it in - this will be the blocking line. You will need an approx. 2 inch overlap of wire where it meets.



14. When you are happy that it is the correct size, hold the wire tight and wrap a piece of the tape around the centre of the join. Start from the triangle point of the tape and wrap around the overlapped wire. This ensures a neat tight taped join which isn't bulky. At the cut ends of the wire add the other two pieces of tape in the same way. Ensuring the tape is wrapped tightly to avoid the ends popping out.



# STEP BY STEP...

15. Take your circle of wire and put it inside the buckram base, making sure it is a taut fit on the blocking line. You will need to hold it to the blocking line to make sure when you squeeze the circle of wire that it is a snug fit and keeps the base in shape



**Top Tip:** If the wire is either too big or too small, extract your wire and take the tape off the wire and start the process again.

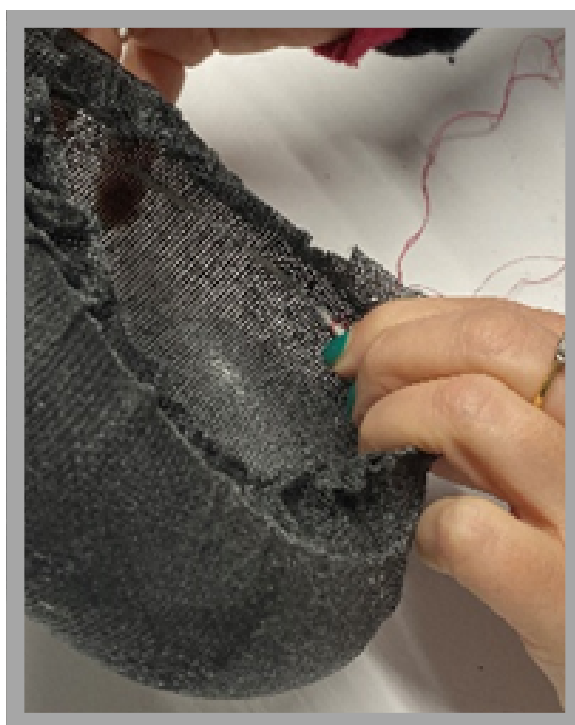


## **Sewing the wire in the buckram**

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16. When you are happy that the wire is the correct fit, stitch in place along your blocking line. Usually, we would use small stab stitches on the outside of the hat so they are not visible, but because this will soon be covered with pleats it means that the neatness isn't a priority this time





# STEP BY STEP...

## Cushioning the Surface: Buckram Button Base

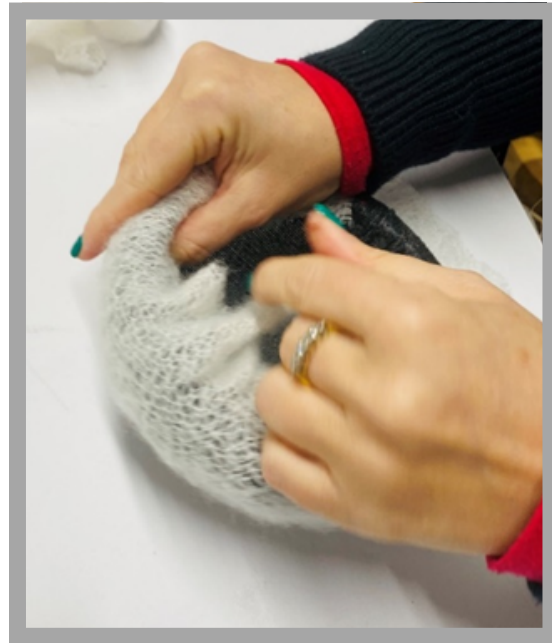
### Covering with ice wool

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17. Once you have wired your pillbox, cover the entire surface with either ice wool (trade name MacFleece), Tarleton, Domet or another fabric which will give a smooth buoyant surface in which to place your fabric pleats. The reason for this is that we don't want the rough buckram to show through the smooth silk.

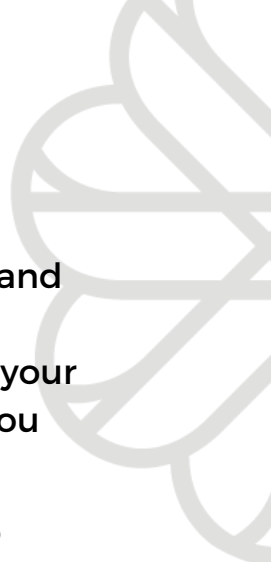


18. Take your chosen material (ice wool/macfleece) over the skirt of the buckram base on the inside of your button and tack on with cotton thread.





# STEP BY STEP...



## Creating Pleats of Fabric

The pleats of fabric are individual strips of fabric, with one raw edge and one folded edge.

If you don't like maths skip to 'Measuring and Cutting your fabric for your pleats', but if you want a rough idea of how to calculate how many you need follow the below process.

19. First calculate approximately how much of the fabric you need to make into strips. For this we do a rough calculation.

Estimate the amount of length of pleats you need by following these steps...

### Measuring for silk strips

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Click QR code to open link



a) Measure from the point where your pleat's start (often the middle or off centre on top of your pillbox) all the way to the widest outer edge of the underside of your button base (this will be the edge of your skirt). This will give you the length of each of the longest pleats. But you need to allow for the strip to fold over the 1-inch skirt on the underside you left previously, so add 1 inch to this measurement. This measurement will give you the maximum length needed for any 1 pleat.



b) Decide what width of pleats you want showing on your design, (remember the narrower the pleat the more you will need and the more sewing there will be.)



**Top Tip:** You may also decide to put some closer together and some wider apart as a design choice. If this is the case, then choose the maximum width you will be using in your design

# STEP BY STEP...

## Examples of different width pleats



**0.5 inch**



**1 inch**

c) Measure the circumference of the pillbox, using the widest part of the button shape (The outer edge)



### Calculation Part 1

C (circumference) i.e. 20 inches / B (width of shown pleats) i.e. 1 inch = number of pleats on show - i.e. 20

### Calculation Part 2

A (length of longest pleat) i.e. 8 X  
Calculation part 1 (number of pleats) i.e. 20  
= 160 inches worth of length of pleats required.

### Calculating the width of pleat

This is the shown width (B) i.e. 1 inch plus half of this measurement again (.5 inch)  
total width you need to cut is 1.5 inch

### In summary

You will need approximately no more than 160 inches length of pleat by 1.5 inches wide/



**NB: Do not cut the lengths of fabric - leave un-cut**

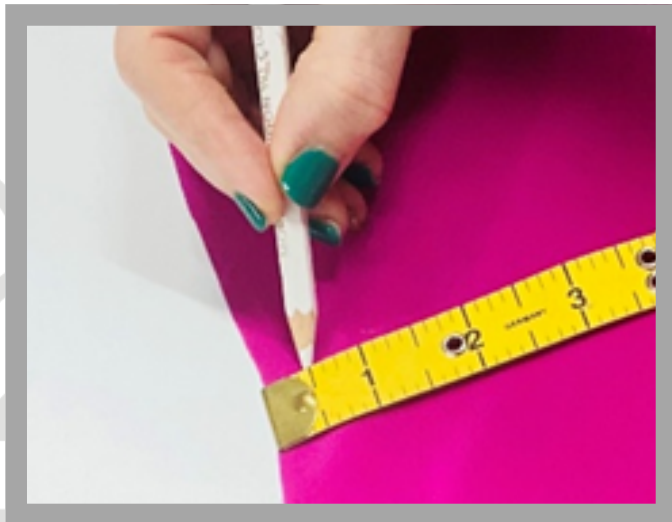
# STEP BY STEP...

## Measuring and Cutting your Strips of Fabric for your Pleats

20. Use the exact bias of your fabric and cut yourself strips of fabric (the length approximated) using the measurement of the final width (actual shown width plus half again). For more info on 'Finding the Bias' see the information in the useful info at the back of this workbook.

### Cutting silk strips

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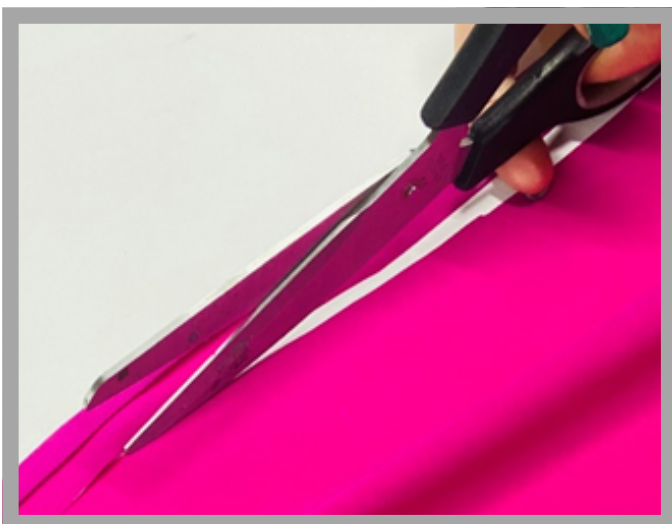
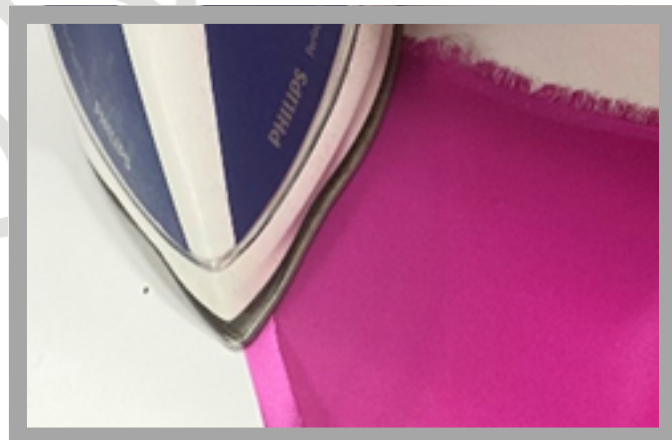


21. There are many ways of cutting the fabric you may decide to

- Cut the fabric then fold over and iron on the seam by measuring twice or
- Fold over the seam and iron then measure the shown width



22. Continue to cut the strips the full bias of your fabric until you have enough lengths based on your estimations. Remember, you are not cutting into short strips at this stage you are keeping the length as long as your bias.





# STEP BY STEP...

## Sewing your pleats to you base

23. Decide where the starting point of your pleats will be. This is often to one side of your pillbox or the centre. Also, start this process at the back or side of your head placement.

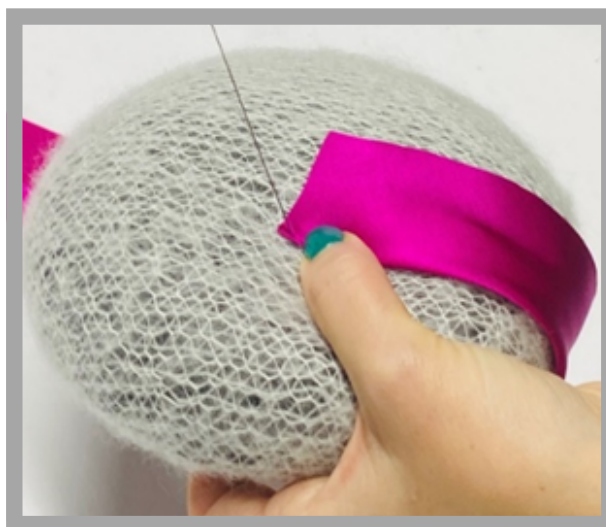
### Sewing the first pleat

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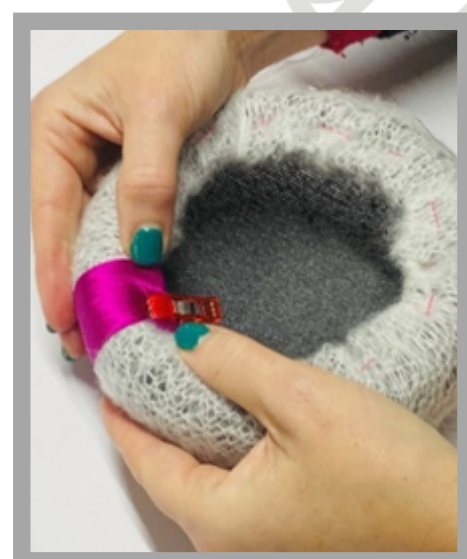
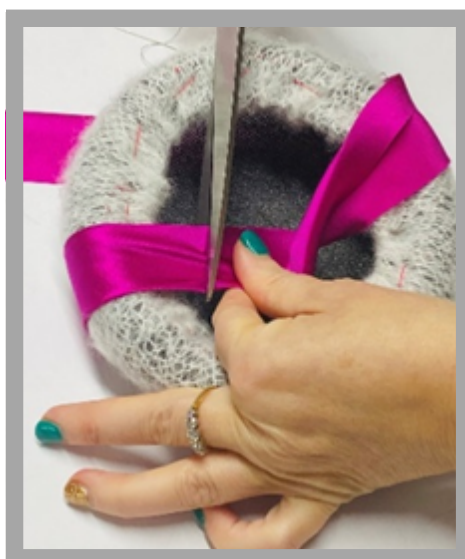
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24. Take the folded edge of the first strip and taking your first needle over-sew on the end of this corner (the folded edge) until secure (use a knot stitch), finish with the needle anchored on the upside of the pillbox and leave the thread attached



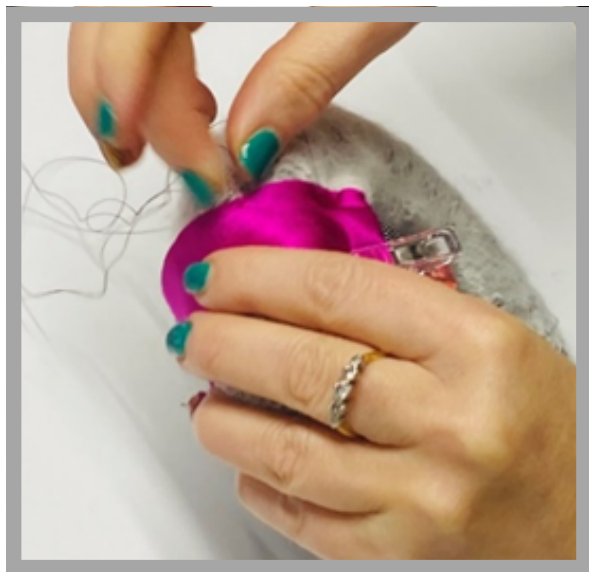
25. Carefully pull the strip over the skirt to the inside of your pillbox. Cut your strip to leave an overhang of an inch. Pull the strip and pin or peg in place.





# STEP BY STEP...

26. Using your second needle secure at the bottom near the skirt



27. Using wide (approx. 1.5 inch) stitches up along the raw edge of the strip, Place your needle on the top of the pillbox away from the strip, ready to use again

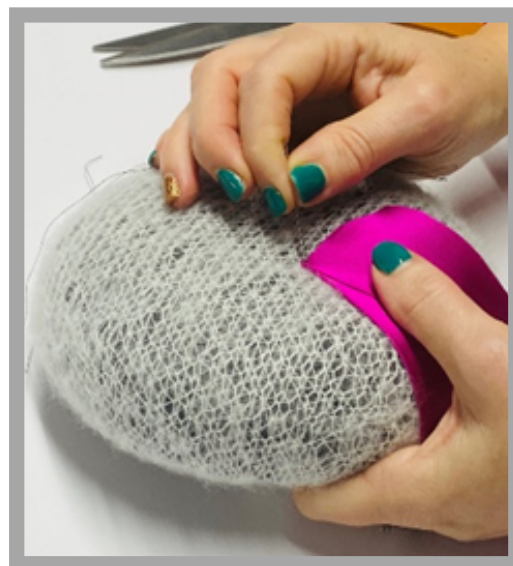
## Sewing the second pleat

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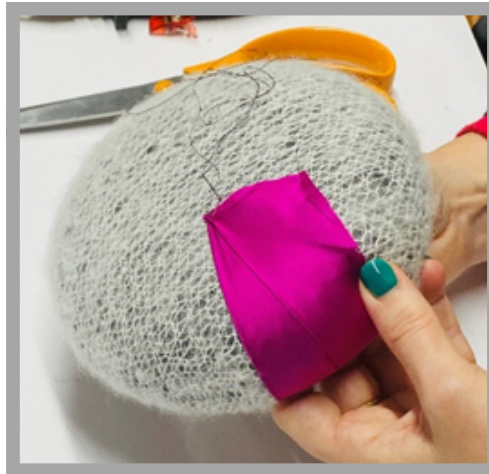
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28. Take your second strip, attach at the top of your pillbox using your first needle in the same position as your first strip.



29. Guide the second strip over the skirt of the raw edge of your 1st strip (ensuring that no ends are poking out) (measuring the shown width as you go) then cut and secure under the skirt of the pillbox and up along the raw edge



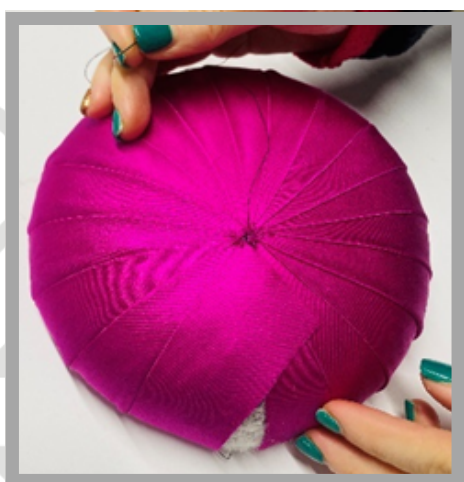
# STEP BY STEP...

30. Continue this technique all around your pillbox making sure that you space the strips evenly if desired – you could also play with using different coloured strips



31. When you start to get back towards the beginning of your pillbox start to estimate how many strips you will need to make sure you have an even spread and don't end up with a small strip at the end if you are wanting an even spread

32. As you get nearer the end you will need to tuck the top of the strips into the previous strip to ensure they sit correctly. The final strip may need a couple of stitches tucked underneath the length of the strip.



## Sewing the last pleat

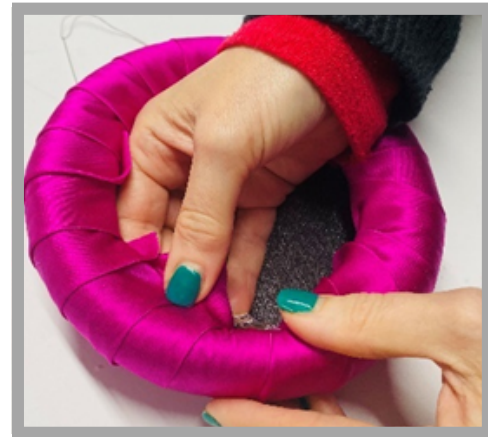
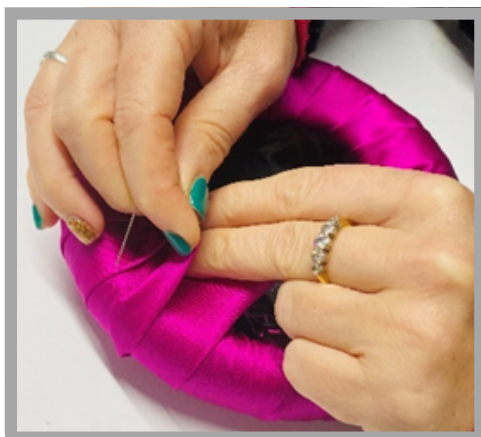
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# STEP BY STEP...

33. On your final strip tuck all of it underneath the first strip and also on the underside tuck it under the flap of the first strip



34. Now sew a line of stitches to the edge of you skirt, larger stiches on the underside and stab stitches on top to secure all the loose edges of your strips



# STEP BY STEP...

## Curving the petersham

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Click QR code to open link



## Sewing in your Petersham

35. Once your pleats are complete you can sew your inner petersham ribbon on the skirt side of your pillbox and you are ready to attach any trim and lining to your pillbox.

36. Choose coordinating petersham and curve using the iron. Put the tip of the iron on the end of the petersham and guide the iron down the petersham, pulling the petersham into a curve shape as you go. This will ensure the petersham sits neatly inside the button



37. Starting from what will be the back of your hat, start to sew the petersham in just below the blocking line onto the skirt. Use small stab stitches at the front and longer stitches at the back to move along, as these won't be seen.

38. When you get to the end. Fold your loose end back on itself a cm to provide a neat finish. Then continue with your stab stitches until you finish where you started. Finish with a couple of loop knots to secure your stitching.



# STEP BY STEP...

## Trims: Sinamay and Silk Fabric Bow

### **Cutting the pattern for the bow**

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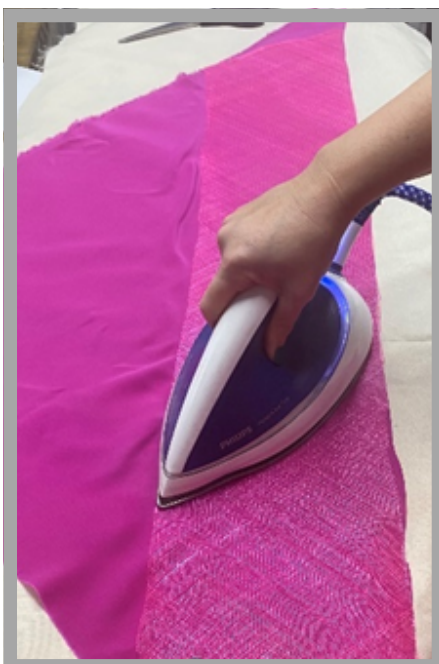
39. Cut a piece of sinamay on the bias, cut it with angled ends. You will need to add on an extra 2cm to the overall measurement of your end bow.



**Top Tip:** The reason we cut 2 cm extra is the edge will be folded twice. Each fold will be 1cm so this will reduce the finished bow by 2cm all around the edge. The size depends on how wide you want your finished bow to be minus the 2cm.

40. Cut a bias piece of fabric the same size as your bias piece of sinamay, then iron flat and smooth

41. Place the sinamay on top of the fabric and press down with an iron to stick the sinamay to the fabric.



# STEP BY STEP...

42. Next fold over one long edge of the length by 1cm, pressing and steaming as you move along the edge. Repeat along the other long edge. Leave to cool.



43. When cool, repeat the process, folding over another 1cm along the long edge to catch in the raw edge of fabric and sinamay. The fabric should stick to the sinamay to give a crisp edge. Peg it in place and let it cool



44. Next tidy up the ends and cut off any excess fabric and sinamay so you have a clean point



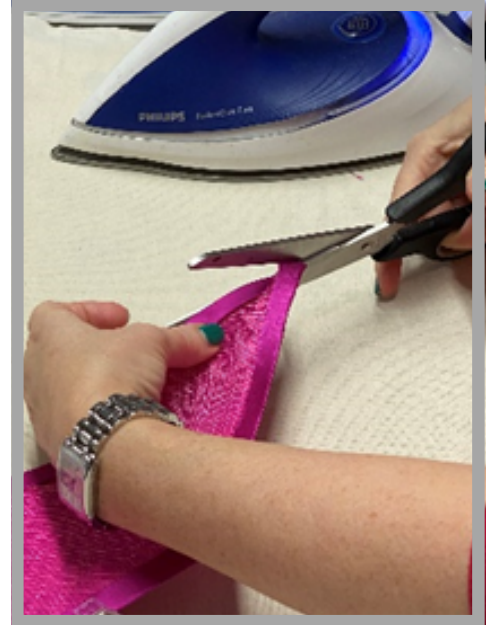
# STEP BY STEP...

## Mitring the corners

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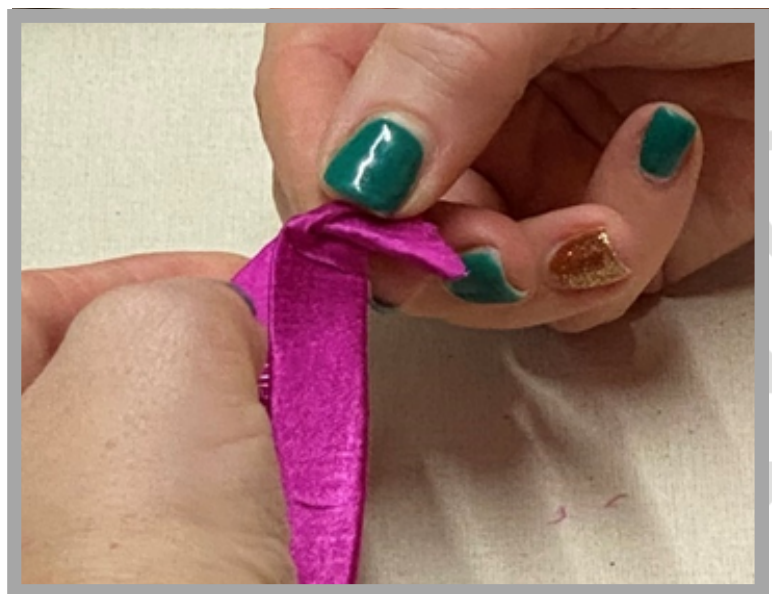


45. Next mitre the tail ends, Fold the end length over by 1 cm. You will now have an excess point hanging over the long edge, Snip this off so the corner has no overhang.



46. Now fold over a further 1cm but this time do not as yet cut off the excess

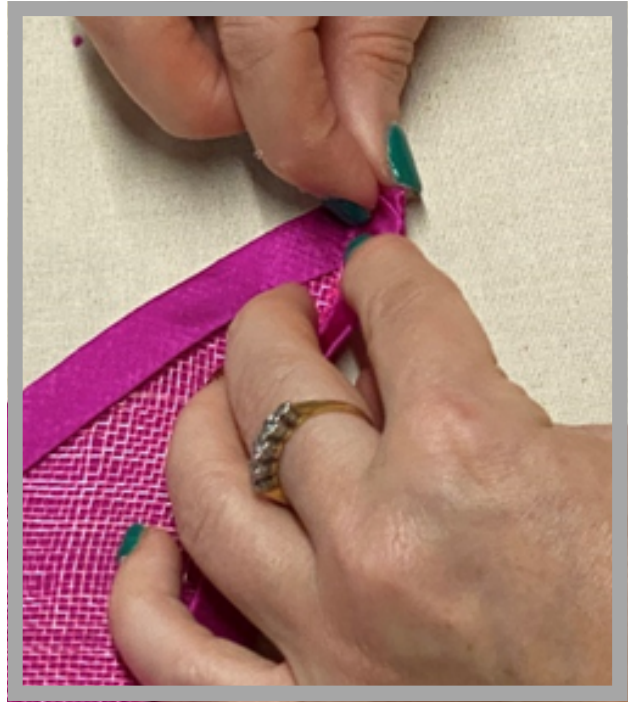
47. Take the remaining excess point and fold outwards to create a straight edge (this gives you an indication of where you next need to fold inwards on the next step).





# STEP BY STEP...

48. Then open out the 2nd 1cm fold and fold the point inwards on the same fold line you have just made but the opposite way to trap the fabric inside. Then close the second 1cm fold back again trapping the raw folded edge. (note depending on the angle you are working to, you may need to trim a little of the bulk off, but leave enough to fold over)

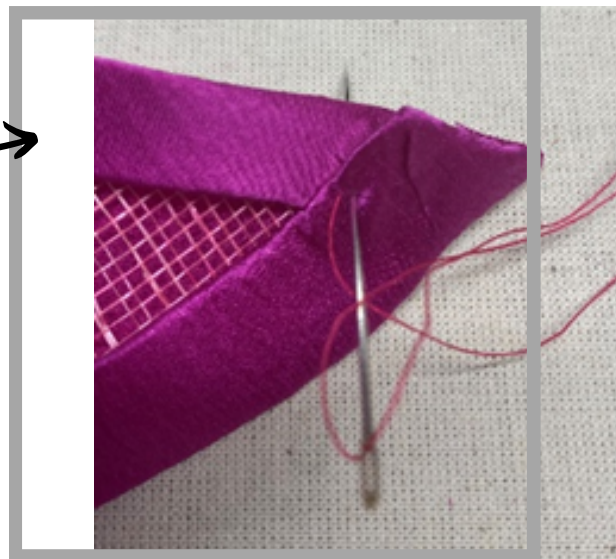


49. Press hard with an iron and peg to hold, as you will have many layers of fabric and sinamay at the tip.

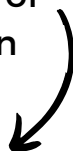


# STEP BY STEP...

50. When cool stitch the tip to secure in place.

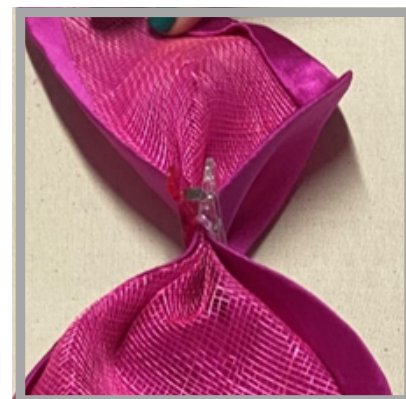
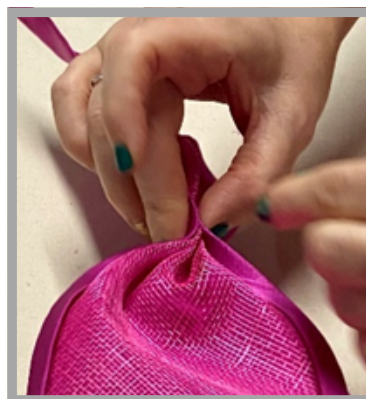
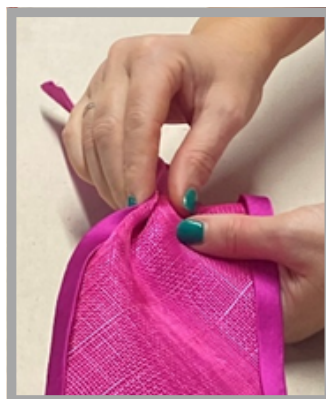


51. Decide how many loops you want to split your bow into, and how long you want your tails to be. This might be governed by your starting length. You will now be gathering up the width of your bow where the intersections of the pointed ends and loops are. First add steam to soften the sinamay and gather the width of the fabric at this point and peg it in place



## Creating bow ruches

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52. Do this for each intersection



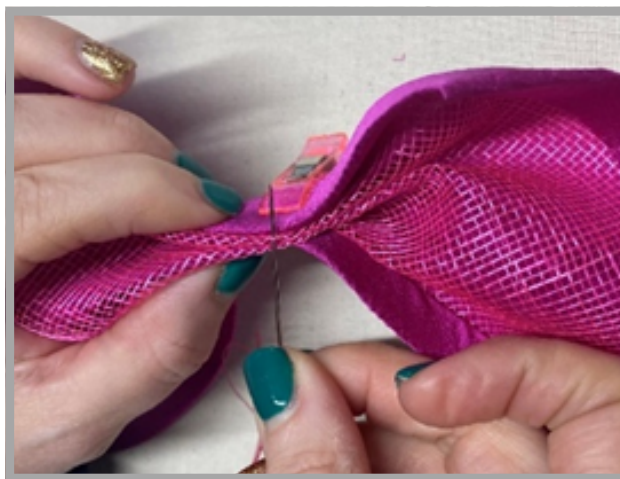


# STEP BY STEP...

53. Now sew each of these gathers together individually using a stab stitch so the stitches are hidden

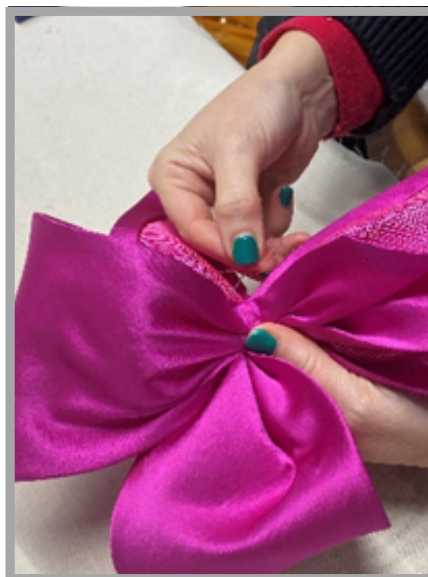
54. After you have sewn the intersections together you have a length ready to manipulate into a bow.

55. Steam each loop one at a time and fold from one intersection to the other creating a loop. Sew as you go or peg and sew once you have joined all the intersections



## Forming the bow

Scan QR code to watch video  
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56. At this point you will have a 3 loop bow with 2 tails, once sewn you can then re steam it and manipulate it into the bow shape that you desire.

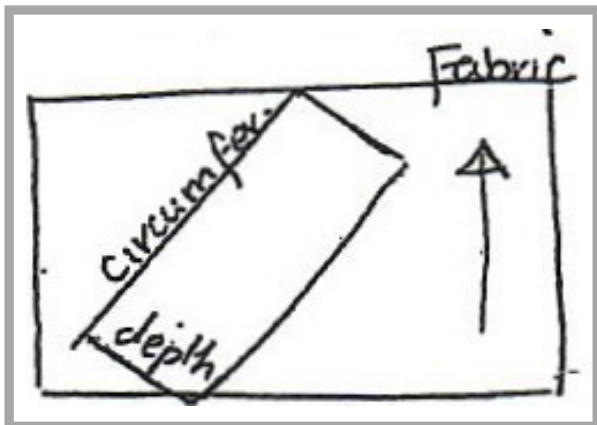




# STEP BY STEP...

## Creating a Couture Lining

57. Take measurements of the lining needed from the button block. For the length of the fabric, take circumference of button plus an inch seam allowance. For the width, use the depth of the crown plus seam allowance. Cut a bias strip of fabric to the measurements taken



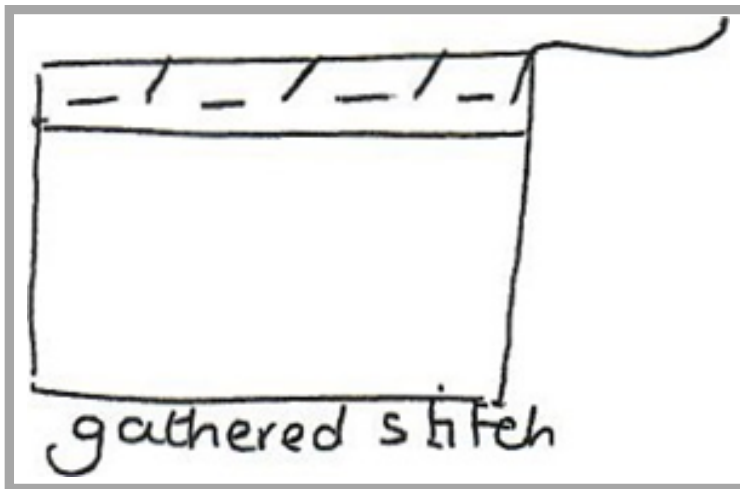
58. The fabric used for linings needs to be of a medium / light weight ideally. Too light and the lining doesn't stay in the crown unless you stitch it. Too heavy will make the hat bulky, heavy and uncomfortable. If you wish, express your personality in the lining, choose dramatic colours or print your own fabrics & If you look inside some Philip Treacy hats, the linings range from shell prints to Andy Warhol designs

59. Sew the bias strip together along the shorter lengths, to make a sleeve, with the wrong side of the fabric outwards

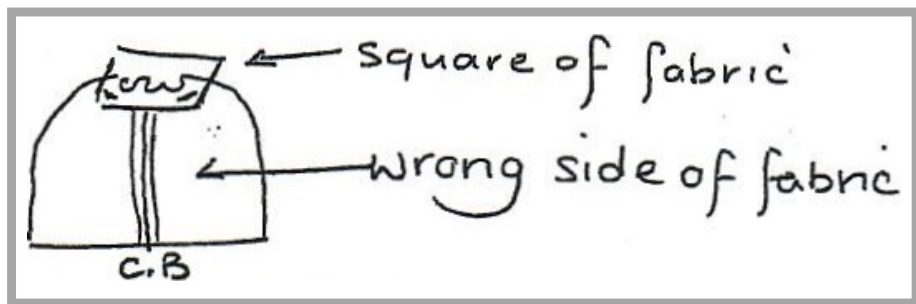


# STEP BY STEP...

60. Fold the top of the fabric over twice, pin this and do a gather stitch on the top, then pull the thread gently to gather the fabric. Stitch to secure the end



61. Cut a small square of fabric to sit behind the hole, tack this in place.



62. Now trim your hat with your bow or alternative trim, making sure you stitch in place using your Knot stitch technique in useful info at the back of this tutorial.

# STEP BY STEP...

63. Put the lining inside the hat and stitch in place with a running stitch on the edge of the skirt. The Petersham ribbon will hide your stitches and the skirt edge. Take care not to sew through the petersham.



## Headfittings

You can now decide how to hold your design in place on the head, this could be a headband or an elastic.

Have your needle threaded and ready.

64. When sewing a headband in place. Place the headband on your head so it is comfortable. Then place the design on your head and look in the mirror and get the desired angle correct. Then carefully hold one side of the headband and remove from your head, you are then ready to sew this side of the headband to the petersham or to the underside of your percher. Follow the process again for the other side.

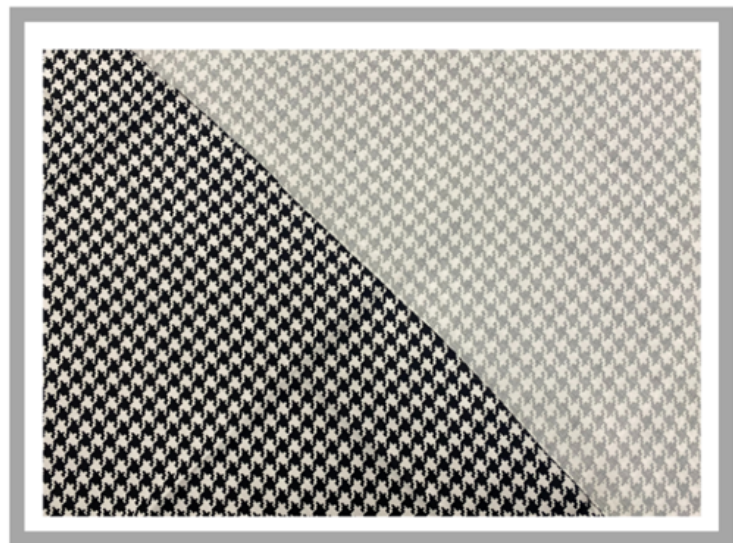
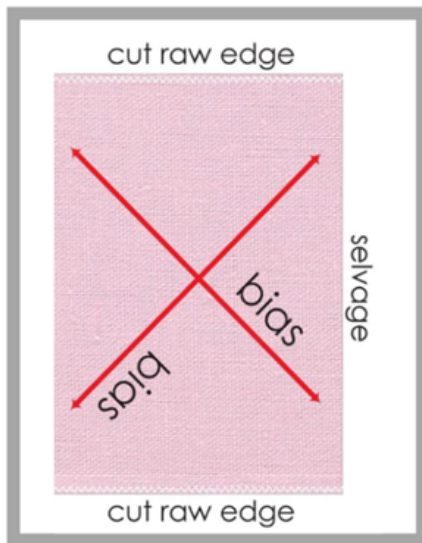
65. When sewing an elastic on. Place the design on your head and run an imaginary line from behind your ear up to about an inch in front of your hair line where the side of the percher sits - this is the angle you need to use when sewing your elastic in. Do the same on the other side but take the elastic up so it is at the stretch that you require and stitch it in place. Sometimes it helps to thread the elastic through to the underside of your petersham (between stitches) and tie a knot - it is this knot that you stitch into your hat.



# Useful Information

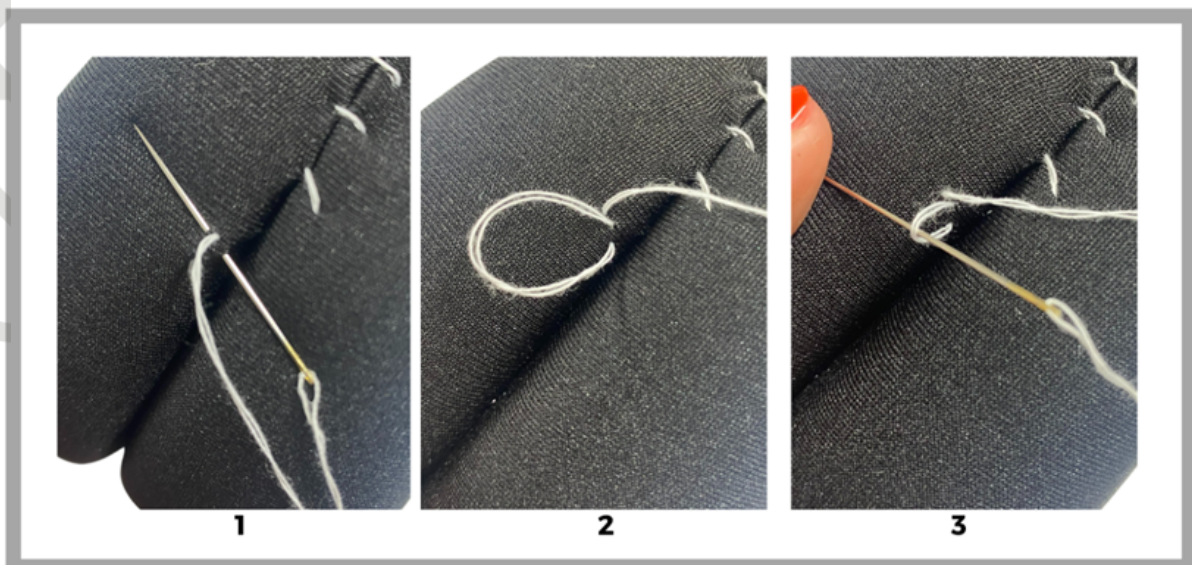
## Learning Point: How to Find the Bias of a Fabric.

Take the bottom corner of the fabric and fold it up to the top straight edge of the fabric to create a diagonal. This diagonal will be the bias. To check this ensure it stretches when pulled. The straight edge at the top should not have any stretch (unless it's a 4 way stretch fabric)



## Learning Point: What is a Knot Stitch/Rachet Knot?

On your final stitch leave a loop of your thread without pulling it all the way through. Bring your needle either back through the fabric then straight through the loop, or just straight through the loop and the knot will tie. To be extra secure, you can repeat this twice.



# FAQ's



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