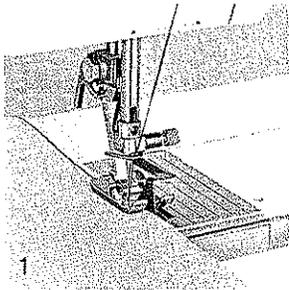


Edge stitching using the needle position

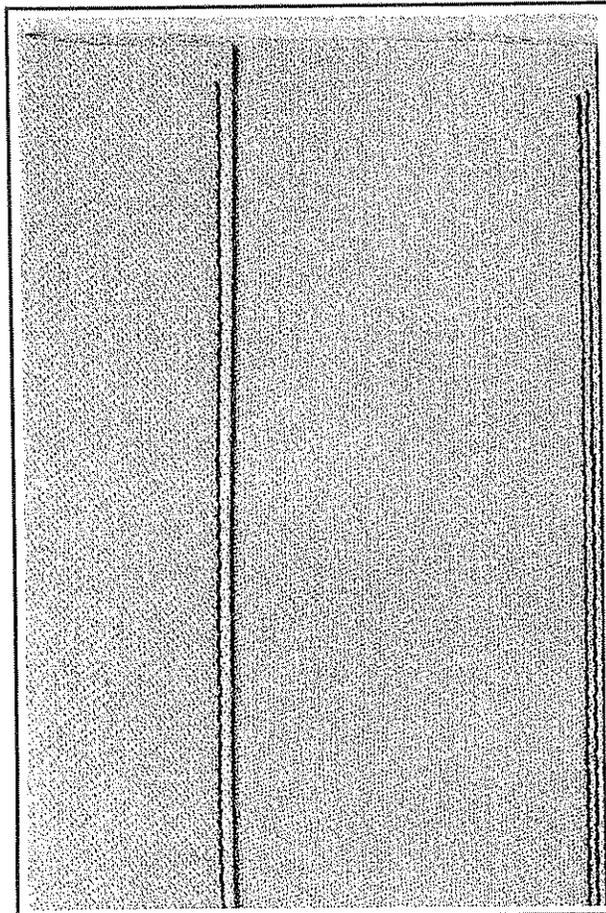
Edge stitching on collars, cuffs, lapels, hems etc.

Presser foot:	5
Thread:	sewing thread
Needle:	80
Stitch:	-----
Stitch width:	0
Stitch length:	2-5 as required
Needle position:	left/half left
Feed-dog:	sewing
Colour indicator:	

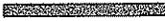
Place the edge of the fabric from the left against the guide of the Blind stitch foot (Fig. 1). Set the



needle position to left or half left.



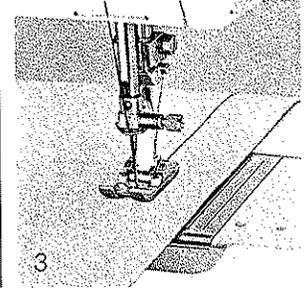
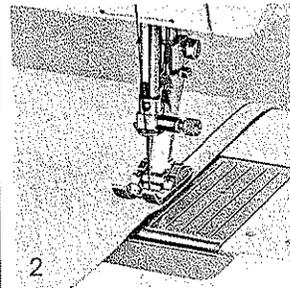
Top stitching, for edges of all kinds

Presser foot:	0
Thread:	sewing thread
Needle:	80
Stitch:	-----
Stitch width:	0
Stitch length:	2-5 as required
Needle position:	any position
Feed-dog:	sewing
Colour indicator:	

Guide the edge of the fabric to the edge of the presser foot or along the marks in the stitch plate.

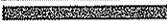
Widths:
(Needle position: centre)

- Edge of presser foot = 7.5 mm ($\frac{3}{16}$ " (Fig. 2)
- Marks in stitch plate
- Line 1 = 1 cm ($\frac{3}{8}$ "
- Line 2 = 1.5 cm ($\frac{3}{16}$ "
- Line 3 = 2 cm ($\frac{3}{4}$ "
- Line 4 = 2.5 cm (1")
- Line 5 = 3 cm ($1\frac{3}{16}$ "

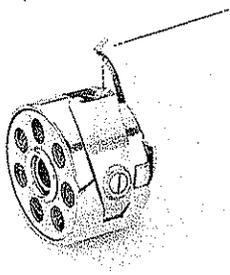


It is also possible to sew intermediate widths using the left, half left, right and half right needle positions.

Buttonholes – Buttonhole foot with slide

Presser foot:	buttonhole foot with slide 3B
Thread:	sewing thread / darning thread
Needle:	80–70
Stitch:	
Stitch width:	set automatically
Stitch length:	
Needle position:	set automatically
Feed-dog:	sewing
Colour indicator:	

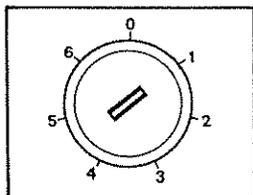
When sewing buttonholes, thread the lower thread through the finger of the bobbin case (Fig. 1).



1

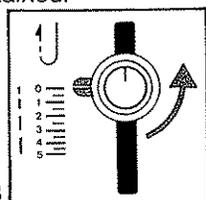
Setting buttonhole

1. Switch buttonhole knob to position 1 (Fig. 2).



2

2. Set stitch length: Turn knob to the right until it locks. The mark will be at the top (Fig. 3). Stitch length is 0. By rotating half a turn to the left (mark at the bottom) the basic stitch length setting for buttonholes is obtained.



3

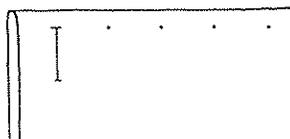
Set the stitch density according to the fabric. Turn anti-clockwise for thicker fabrics, clockwise for finer fabrics.

Always sew a trial buttonhole

The stitch length will vary slightly depending on the fabric.

Mark buttonholes

Mark one buttonhole only.

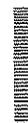
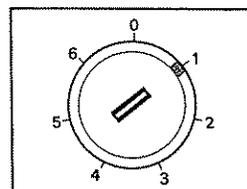


Sewing the buttonhole

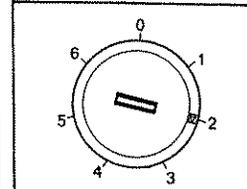
Bring the needle to the centre of the presser foot with the aid of the handwheel or with the needle stop. Lower the needle into the fabric at the start of the buttonhole. Lower the presser foot.

Sewing the first bead

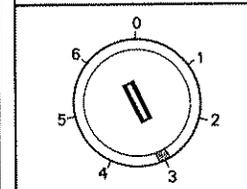
Stop at the end of the buttonhole marking. Set the slide at the side of the foot precisely to this length (Fig. 4). The length of all further buttonholes can then be sewn to this marker.



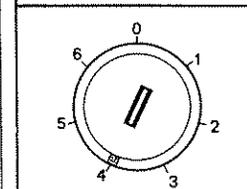
Knob to 1
The machine sews the first bead forwards.



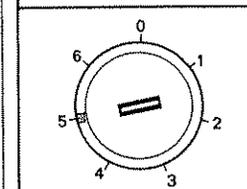
Knob to 2
The machine sews a reverse straight stitch.



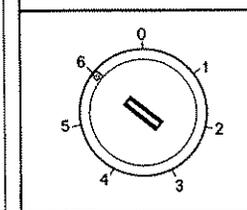
Knob to 3
The machine sews the bar tack.



Knob to 4
The machine sews the 2nd bead forwards.



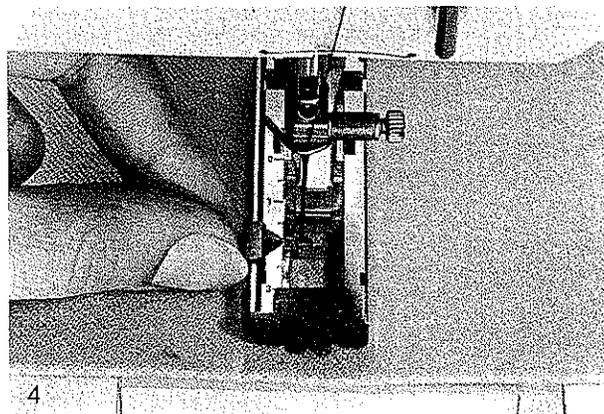
Knob to 5
The machine sews the bar tack.



Knob to 6
The machine sews the securing stitch.

Sew the buttonhole step by step. For further buttonholes, reset to 1. The sewing sequence continues as described.

For all other sewing, set knob to 0.

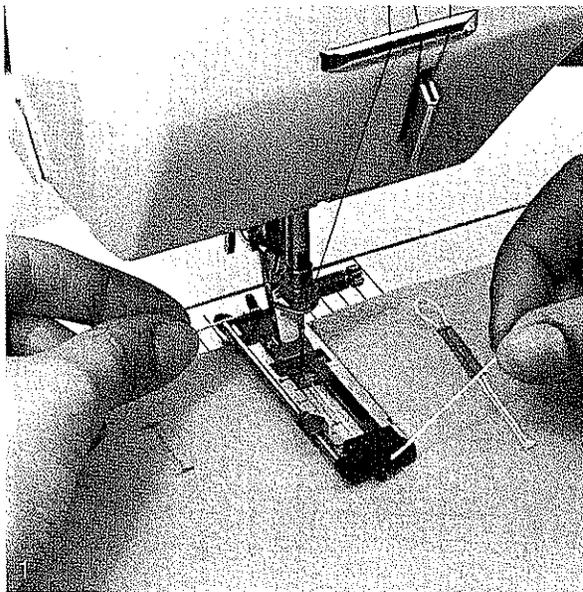


4

With gimp cord

The gimp cord strengthens the buttonhole

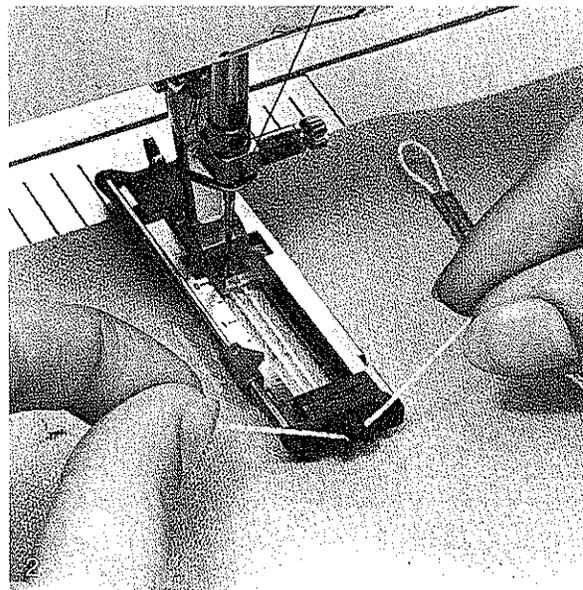
The gimp cord is especially important for all knitted fabrics – including hand and machine knits – to prevent the buttonhole from pulling out of shape. The thickness of the cord depends on the fabric to be sewn. Suitable cords are: perle cord no. 8, thick hand sewing thread or fine crochet cord. Sew a trial buttonhole. The loop of gimp should lie at the end of the buttonhole where the button will pull. Lay the fabric under the presser foot accordingly (Fig. 1).



Positioning the cord

It is easier to position the cord if the needle is already in the fabric. Bring the needle to the centre of the presser foot using the handwheel or needle stop. Lower the needle into the fabric precisely at the start of the buttonhole. Do not lower the foot yet.

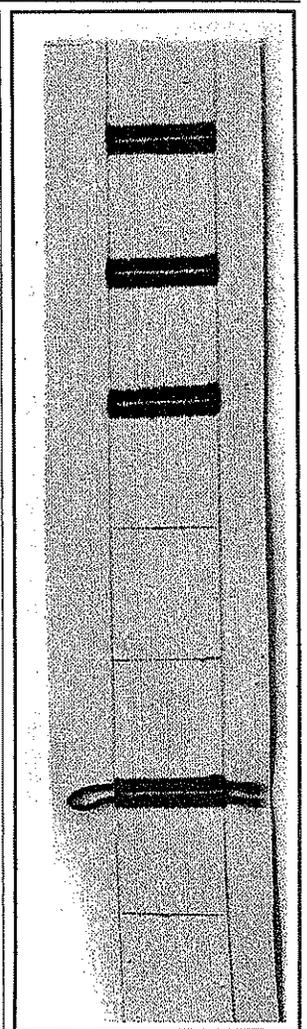
Guide the cord to the right under the buttonhole foot and hook it over the prong at the back (Fig. 1). Then bring it round to the left and forwards under the foot. Pull the ends of the cord into the retaining slots at the front (Fig. 2) and trim away any surplus.



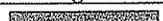
To secure the gimp cord and cut the buttonhole open, see page 34-35.

Jeans buttonhole

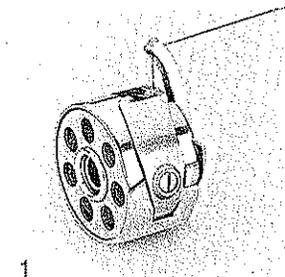
(strengthened buttonhole for Denim, sporty shirts and work clothes)
– Set colour indicator to RED.
– Set stitch length a little longer (approx. 1 – test).
– Set buttonhole to position 1, sew.
– At the END of the first forward bead, the needle should be going towards the LEFT. Then switch to position 2 and sew buttonhole as usual.



Buttonhole

Presser foot:	3
Thread:	sewing thread/darning thread
Needle:	80-70
Stitch:	
Stitch width:	set automatically
Stitch length:	
Needle position:	set automatically
Feed-dog:	sewing
Colour indicator:	

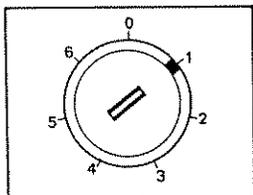
To sew buttonholes, thread the lower thread through the finger of the bobbin case (Fig. 1).



1

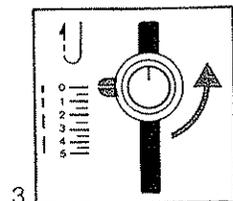
Setting buttonhole

1. Switch buttonhole knob to position 1 (Fig. 2).



2

2. Set stitch length: Turn knob to the right until it locks. The mark will be at the top (Fig. 3). Stitch length is 0. By rotating half a turn to the left (mark at the bottom)



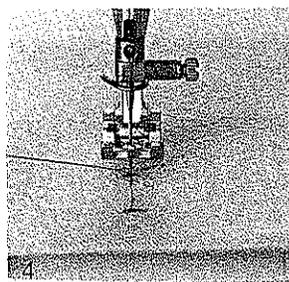
3

the basic stitch length setting for buttonhole is obtained.

Set the stitch density according to the fabric. Turn anti-clockwise for thicker fabrics, clockwise for finer fabrics. Always sew a trial buttonhole. The stitch length will vary slightly depending on the fabric.

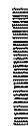
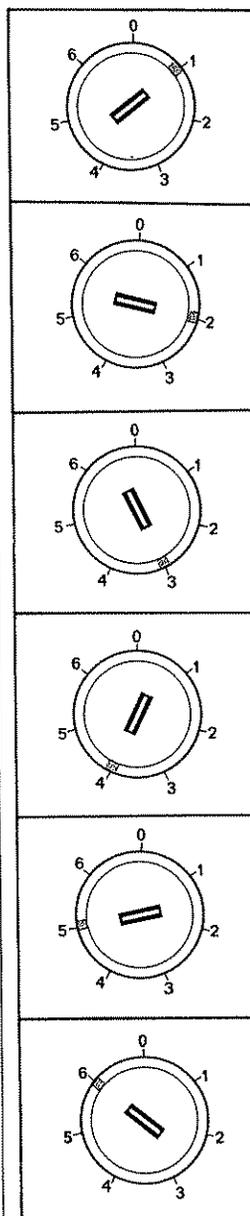
Sewing the buttonhole

Lower the needle with the aid of the handwheel and check that it is in the **centre** of the presser foot. If not, do one stitch by tapping the foot control once.



4

Lay the fabric under the foot, so that the edge of the fabric lies in front of the presser foot (Fig. 4). Lower the needle into the fabric precisely at the start of the buttonhole. Lower the presser foot and sew the buttonhole.



Knob to 1
The machine sews the first bead forwards.



Knob to 2
The machine sews a reverse straight stitch.



Knob to 3
The machine sews the bar tack.



Knob to 4
The machine sews the 2nd bead forwards.



Knob to 5
The machine sews the bar tack.



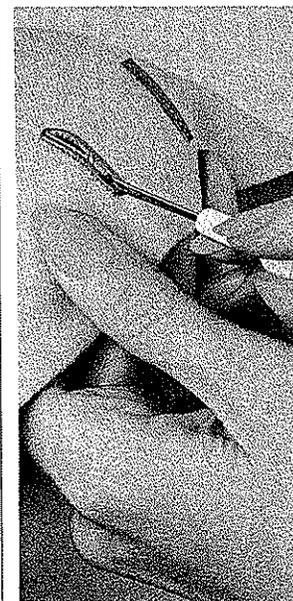
Knob to 6
The machine sews the securing stitch.

Further buttonholes

Reset button 1. The sewing sequence continues as described. For all other sewing, set knob to 0.

Cutting the buttonhole open

It is best to cut from each end of the buttonhole towards the centre (Fig. 5). This avoids cutting through a bar tack.



With gimp cord

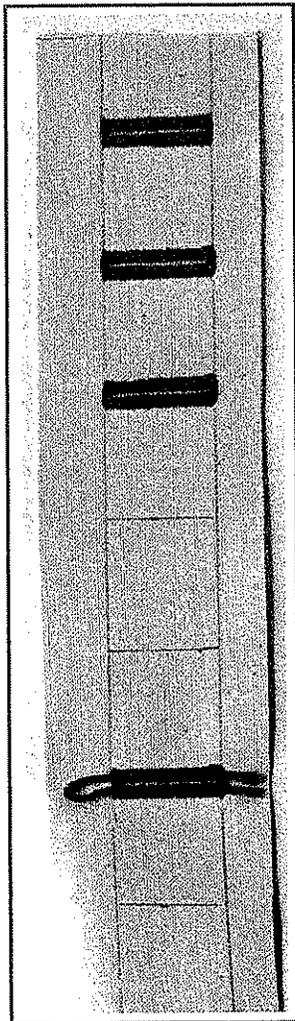
Buttonhole with gimp cord

The gimp cord strengthens the buttonhole.

The gimp cord is especially important for all knitted fabrics – including hand and machine knits – to prevent the buttonhole from pulling out of shape.

The thickness of the cord depends on the fabric to be sewn. Suitable cords are: perle cord no. 8, thick hand sewing thread or fine crochet cord. Sew a trial buttonhole.

Lower the needle with the aid of the handwheel and check that it is in the centre of the presser foot. If not, do one stitch by tapping the foot control once. Lay the fabric under the foot, so that the folded edge or seam lies in front of the presser foot. The loop of the gimp will lie at the end of the buttonhole where the button will pull (Fig. 2).



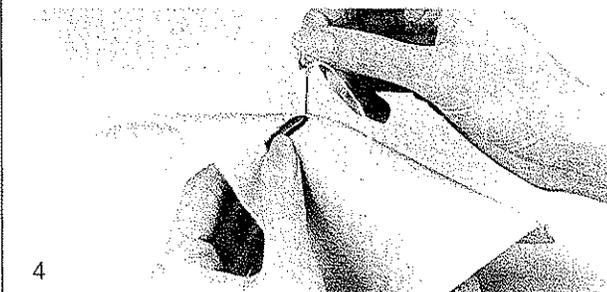
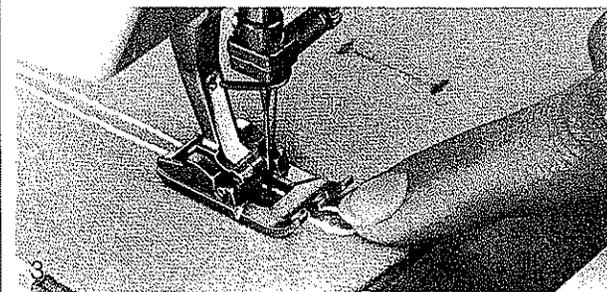
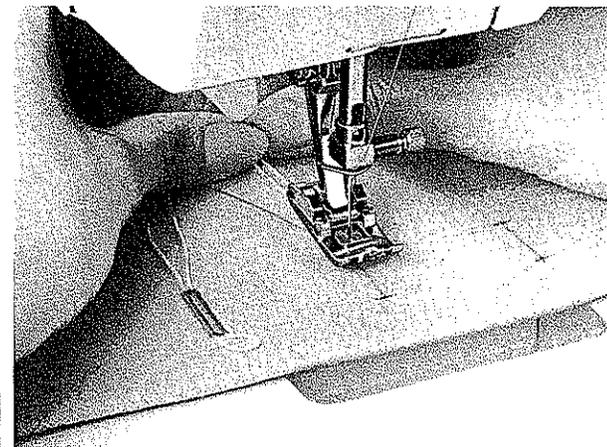
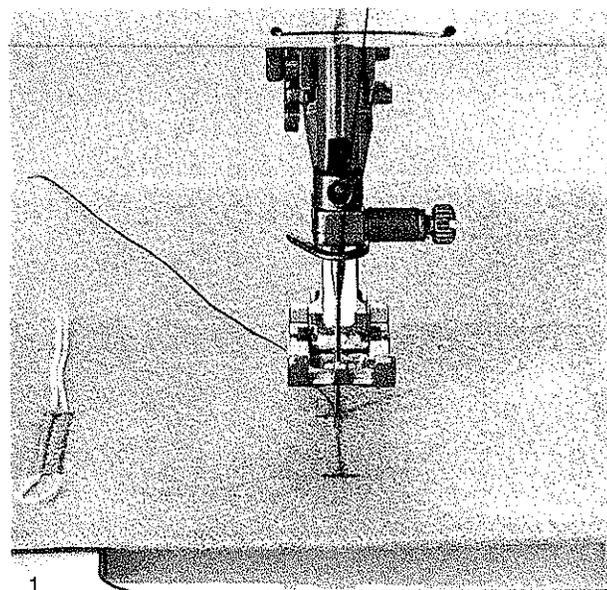
Sewing with gimp cord

It is easier to position the cord if the needle is already in the fabric: Lower the needle into the fabric precisely at the start of the buttonhole. Do not lower the foot yet (Fig. 1).

Hook the gimp cord over the centre prong of the buttonhole foot and take both ends back under the foot (Fig. 2). Lower the foot and check that the cord is able to slide, i.e. is not trapped by the foot.

Sew the buttonhole. At position 2 («reverse straight stitch»), the cord comes away from the prong of the foot. Therefore it is advisable to hold the loop of gimp down LIGHTLY with the finger (Fig. 3).

Finally, pull the loop of gimp through. With knitted fabrics, pull the gimp ends to the rear with a coarse hand sewing needle (Fig. 4) and tie or sew in securely. In woven fabrics, the gimp ends can be simply cut off.



Mending interlock fabric

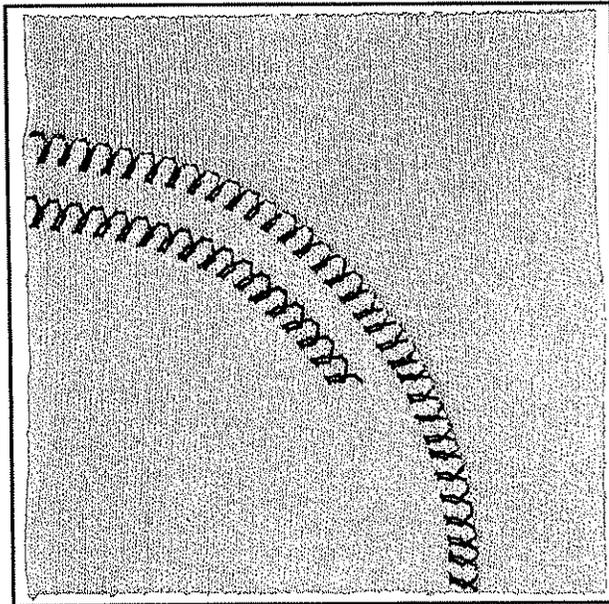
Patching using Jersey stitch

Primarily for mending interlock underwear

Presser foot:	1
Thread:	darning thread / Machine emb. 60
Needle:	80-70
Stitch:	
Stitch width:	5
Stitch length:	2
Needle position:	centre
Feed-dog:	sewing
Colour indicator:	

Small tears/worn areas are best darned. See page 38. For larger tears or worn areas, it is better

to sew on a patch, as this retains the elasticity.

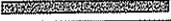


Cut out a patch, if possible from the sound part of a discarded similar garment. Where possible, round off the corners to preserve the elasticity in all directions. Pin on the patch and baste. Then sew with 1-2 rows of Jersey stitch. Finally, cut away torn/worn piece from behind patch.

For all knits, refer to the general pointers for «Sewing knitted fabrics», page 24.

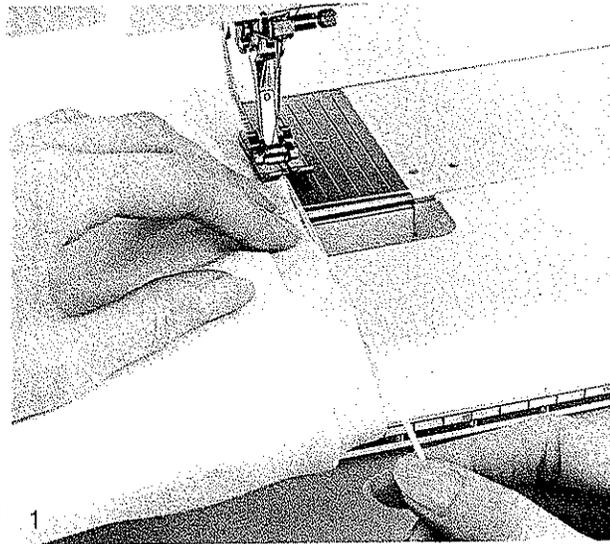
Edging with shirring elastic

The shirring elastic is used to restore distorted edges to their original shape (to save bands being replaced).

Presser foot:	0
Thread:	darning thread / Machine emb. 60
Needle:	80
Stitch:	
Stitch width:	4-5
Stitch length:	1½
Needle position:	centre
Feed-dog:	sewing
Colour indicator:	

Guide two strands of shirring elastic along the edge and oversew with zig-zag stitches, gently

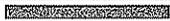
pulling the elastic thread (Fig. 1).

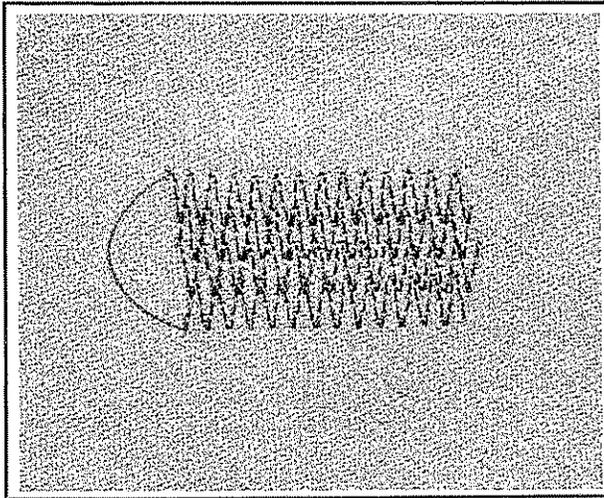


Mending woven fabric

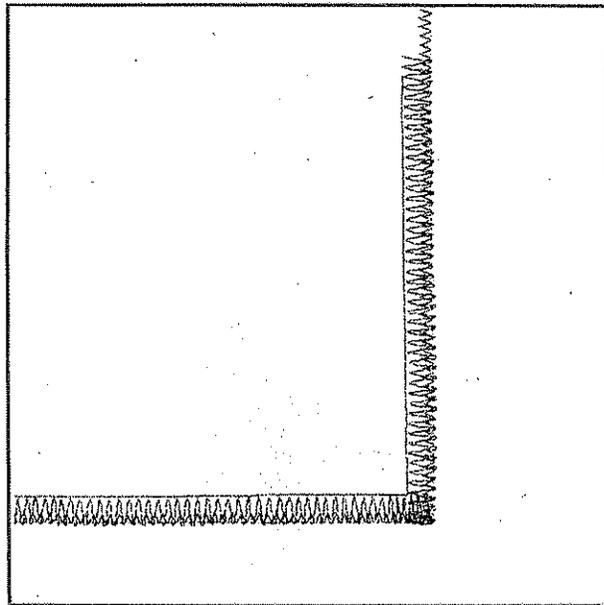
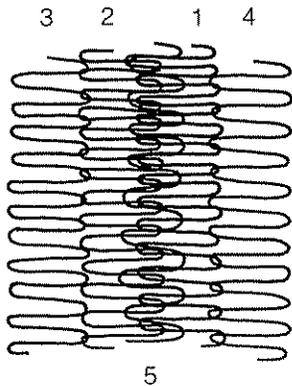
Mending tears using Running stitch

(Modern darning method) for tears and thin areas on virtually all fabrics.

Presser foot:	0
Thread:	darning thread / Machine emb. 60
Needle:	80
Stitch:	
Stitch width:	5
Stitch length:	
Needle position:	centre
Feed-dog:	sewing
Colour indicator:	



Always lay a fine fabric underneath. On tears, sew 3–5 rows of Running stitch, depending on the type of fabric (Fig. 1). On thin areas, sew sufficient adjacent rows to cover. Let each row overlap the previous one very slightly.



Patching with Running stitch

for overalls and children's jeans

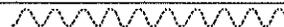
Presser foot:	0
Thread:	darning thread / Machine emb. 60
Needle:	80
Needle position:	centre
Feed-dog:	sewing

1st step

Stitch:	
Stitch width:	2
Stitch length:	approx. 1
Colour indicator:	

Do not cut out damaged areas. Pin patch to the right side and sew along edge with a small zig-zag stitch.

2nd step

Stitch:	
Stitch width:	5
Stitch length:	approx. ¼
Colour indicator:	

Oversew edges with Running stitch. Ensure that the whole of the Running stitch is on the patch, and that the needle, on its right swing just goes to the edge of the patch.

3rd step

Stitch:	-----
Stitch width:	0
Stitch length:	approx. ¾
Colour indicator:	

Sew a straight stitch on the inside edge of the Running stitch. The line of straight stitches will make it easier to cut away the worn area.

Darning

Principles of darning

The feed-dog must be lowered for darning, as the work is moved to and fro by hand and not by the feed-dog. It is important to guide evenly when darning.

– Use the sewing table and keep the elbows supported, when possible by the work table. Move the machine sufficiently far away from the edge to do this.

Recommendation

– Whenever possible, use a darning or embroidery ring to keep the darning area taut.

– Move the ring backwards and forwards without pressure, otherwise jerky movements and thread breakage will result.

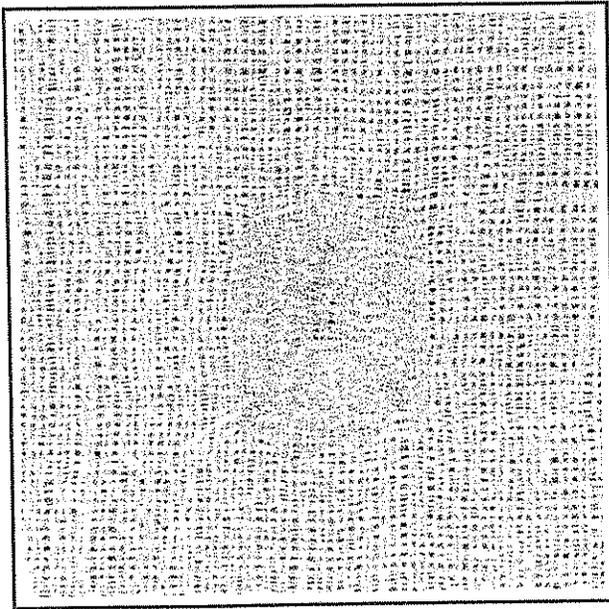
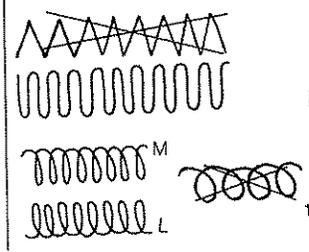
– Always work from left to right, moving up and down over the hole. Do not move the hoop from side to side.

– The ideal way to hold the ring is with the little fingers and thumbs to the outside of the ring, held firmly to give a smooth movement.

Presser foot:	9
Thread:	darning thread / Machine emb. 60
Needle:	80–70
Stitch:	-----
Stitch width:	0
Stitch length:	0
Needle position:	centre
Feed-dog:	lowered
Colour indicator:	

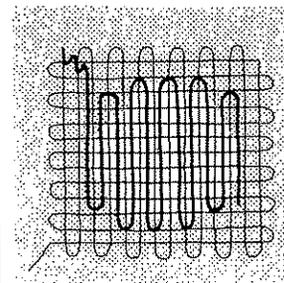
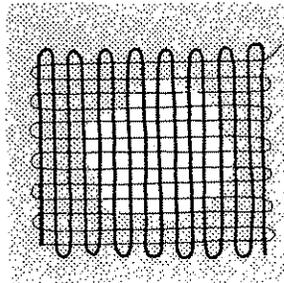
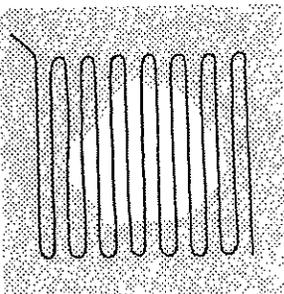
Important

Darn in a curved rather than a pointed shape, otherwise the fabric is liable to tear. Beginners often tend to prefer L and M movements, but care must be taken to ensure that this does not result in circular movements.



Darning technique

There are various methods of darning. Here is a method that is easy to learn:

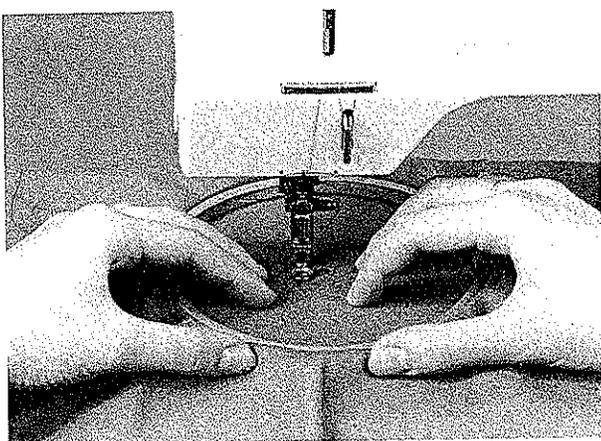


The three steps

1. Bring lower thread up, start at top left, work from left to right across hole, finish at top right, then turn through 90°.
 2. Again work from left to right, but not too densely that a ridge forms at the edge. Turn work through 180°.
 3. Fill in the darn, but only across the «hole». The stitches will be in the same direction so that they blend with the 2nd row.
- When the darning technique has been mastered, work the rows of stitches in irregular lengths so the darn blends into the fabric.

Main faults

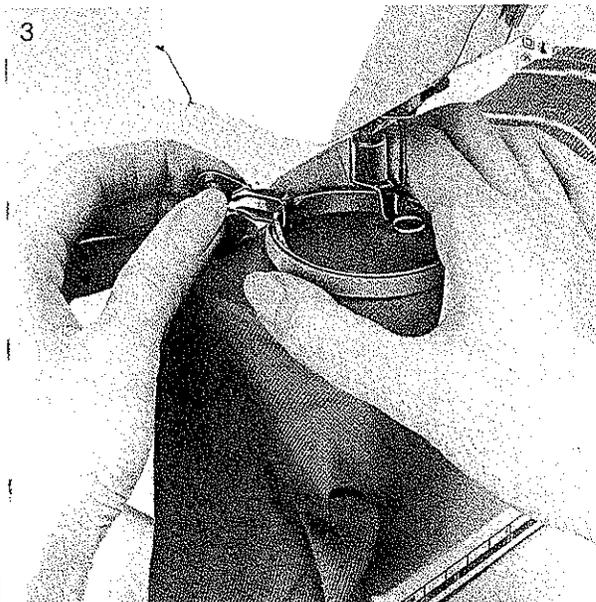
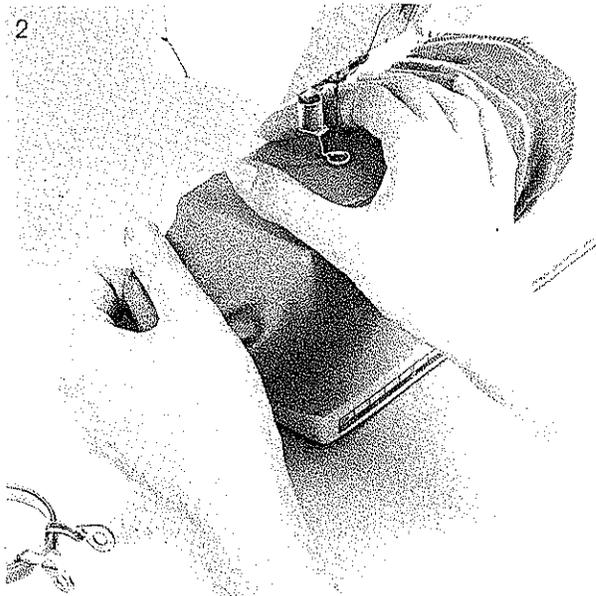
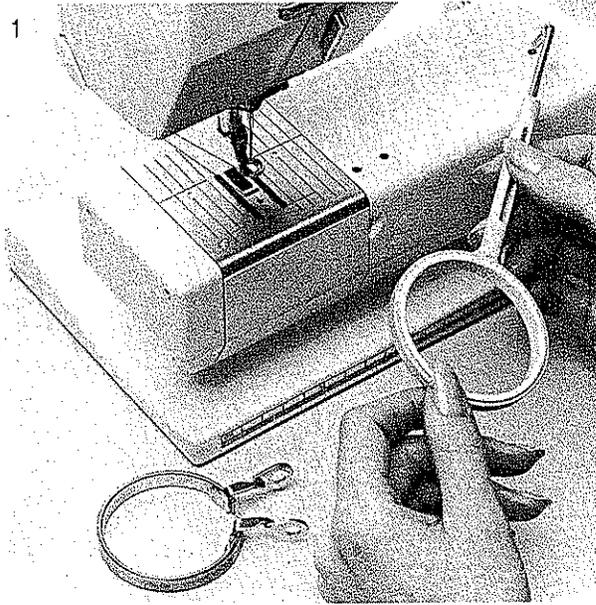
- Thread frequently breaks:
- Fabric is guided unevenly.
 - Fabric is guided too quickly.
- Stitching is unattractive, thread lies loose on top:
- Fabric is guided too slowly.
- Small knots form on the underside:
- Fabric is guided too slowly.



Darning with small darning ring

The small darning ring

The small darning ring is particularly practical for darning small torn/worn areas in fine fabrics and in fine underwear of all kinds, fine socks and pullovers, eg. in Helanca, interlock, jersey.



Stretching the work

- Fit the darning ring without the spring clip on to the free arm (Fig. 1).
- Slide the garment over both the free arm and the darning ring.
- Push the darning ring out as far as possible to the left.

- Place the index finger and thumb of the right hand on the darning ring to form a circle.
- With the left hand, stretch the fabric over the end of the free arm. Hold the tensioned fabric with the thumb of the right hand (Fig. 2).

- With the left hand, fit the spring clip as follows: Close the spring clip, insert under the index finger of the right hand and hold firmly. Then press the spring clip into the darning ring (Fig. 3).

Darning technique

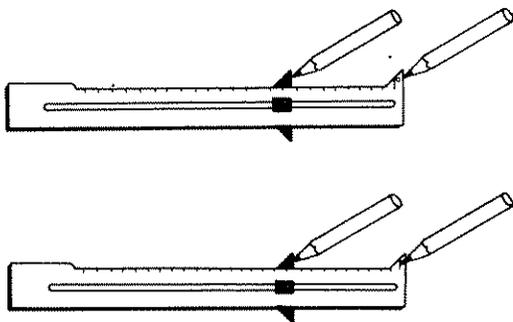
Tubular items are usually stitched up and down and then side to side as it is not possible to turn the work.

Ruler / Template for buttonholes, hems, pleats etc.

The ruler/template is extremely versatile and simple. Using the red slide, the required size can be set with millimetre accuracy.

There are two ways of using the template:

a) Using the edges, when lines are required.



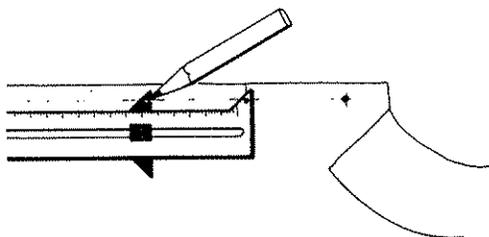
b) Using the small holes when dots are required.

Examples

1. Marking at intervals

For buttonholes, buttons, eyelets, pleats etc.

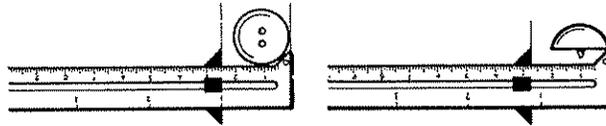
Set the desired space with the red slide. Transfer dots or lines to the work.



2. Calculation of buttonhole lengths

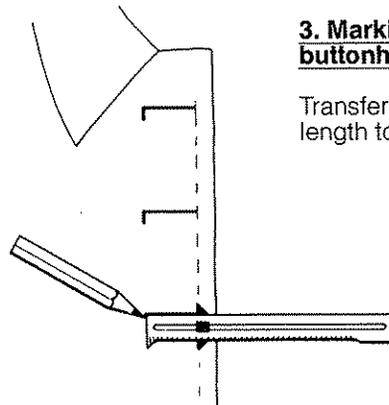
Flat buttons
Button + 2–3 mm ($\frac{1}{8}$ ")

Domed buttons (or thick fancy buttons)
Button + 5–8 mm
($\frac{1}{4}$ " – $\frac{3}{16}$ ")



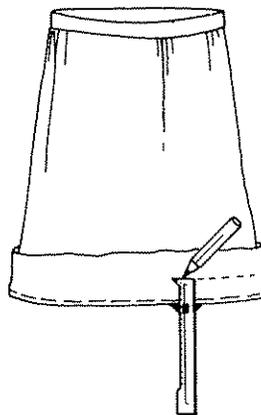
3. Marking of buttonholes

Transfer buttonhole length to the garment.



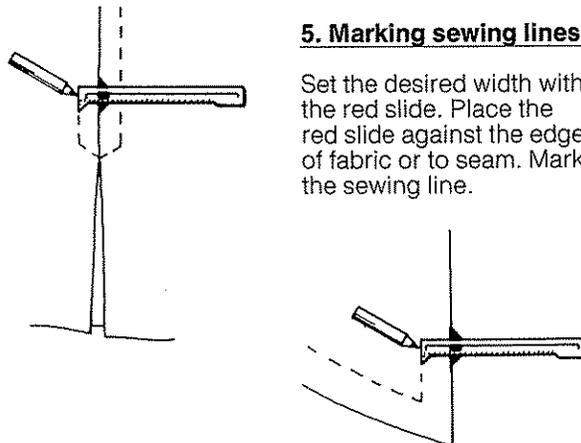
4. Marking of hem depths

Set the desired hem depth with the red slide. Place the red slide against the hem edge. Mark the hem depth.



5. Marking sewing lines

Set the desired width with the red slide. Place the red slide against the edge of fabric or to seam. Mark the sewing line.



Creative sewing

Dear BERNINA customer

We are sure that you are enjoying using your BERNINA, and all the more so now that you are experienced in working with it. However you have not exhausted all the possibilities of this modern sewing machine. The second part of this BERNINA book describes further work that can be done with your BERNINA. Special accessories (at extra cost) are needed for some of these tasks. Your local BERNINA dealer will be happy to advise you.