

**My  
BERNINA  
Guide**

840 841 842

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### **Important note (safety regulations)**

Please observe the sewing position while sewing. The moving needle is a source of danger (danger of injury to fingers). The sewing machine should be disconnected from the power supply by pulling out the plug from the socket when changing the needle, presser foot, bobbin or needle plate, when stopping work without supervision and during servicing (cleaning).

Dear Berrina Customer,

You are now the fortunate owner of a new Berrina! We congratulate you on your choice and thank you for the confidence you have placed in us.

We have called this introductory Tuition Book «My Berrina Guide» because we are convinced that it will enable you to make the best use of your sewing machine in the years ahead.

We hope that you will find it an invaluable aid to your sewing.

Very soon you will be thrilled by the easy operation of your Berrina and by its extreme versatility. But only if you master the techniques described in this book will you experience the true pleasure of sewing, and creating for yourself attractive and useful articles.

We advise you, therefore, to follow the text and study the illustrations in this book carefully while practising individual samples. If your glue your most successful samples in the appropriate spaced printed in red, you will provide yourself with a very useful reference book that will serve you for a life-time.

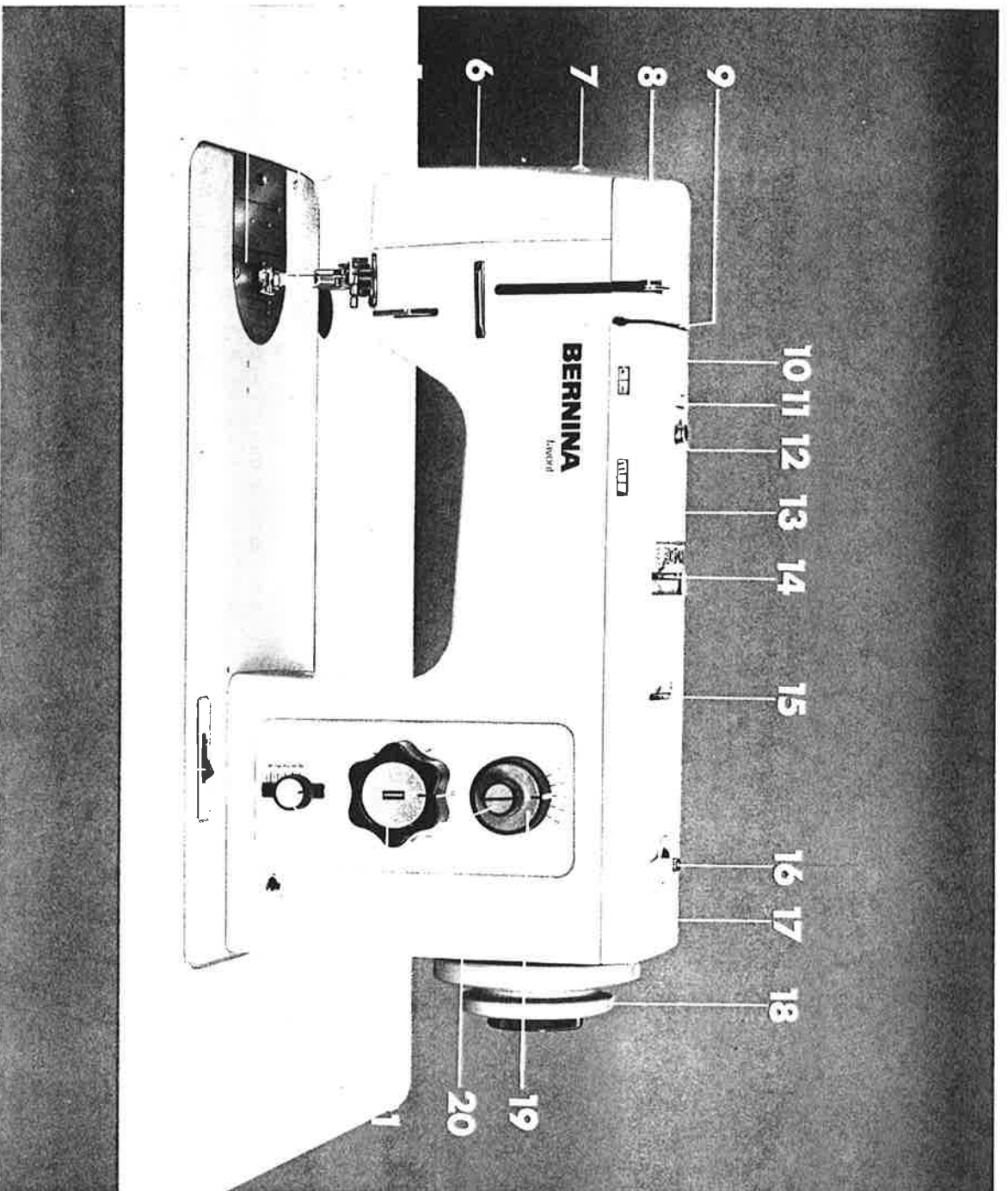
We wish you every success in your future sewing.

Fr. Gegauf Ltd., Manufacturer of Berrina Sewing Machines  
Steckborn TG / Switzerland

**Model 840** Zigzag sewing machine with built-in decorative, plain and utility stitches  
**Model 841** Zigzag sewing machine with plain and utility stitches  
**Model 842** Zigzag sewing machine

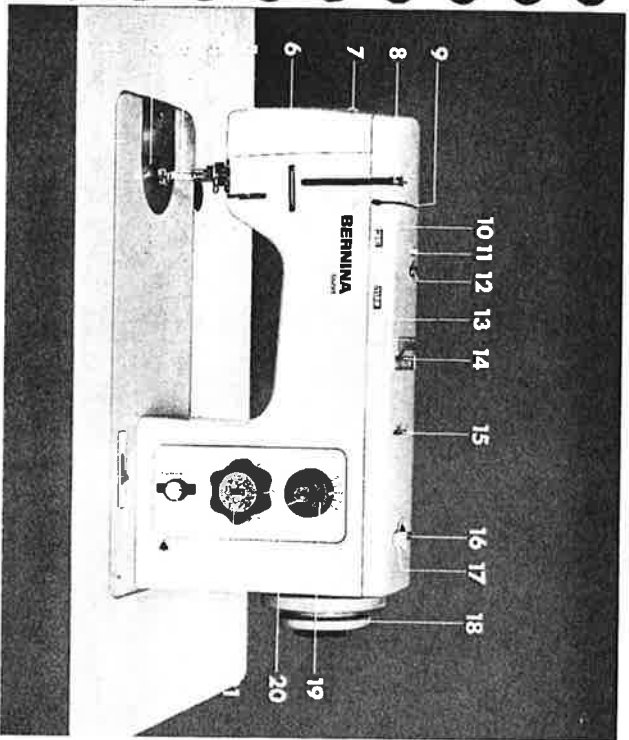
# The various parts of the machine

Model 840



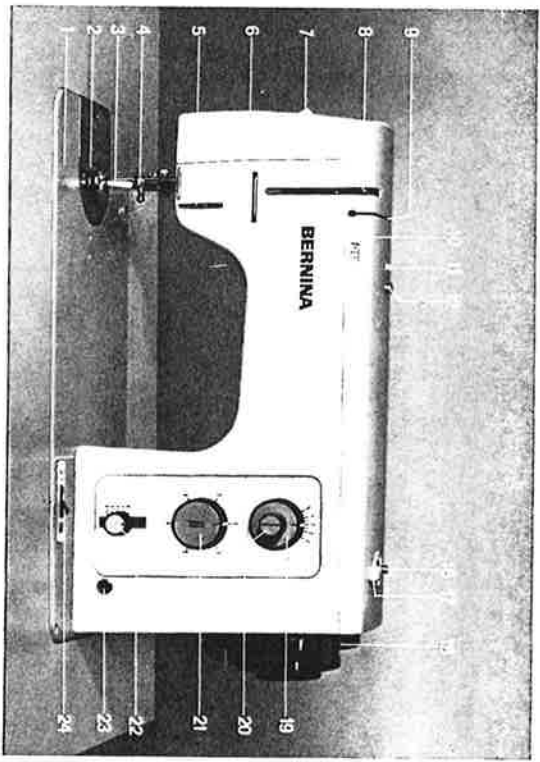
- 1 Base plate
- 2 Needle-plate
- 3 Presser-foot
- 4 Needle-clamp
- 5 Thread tension
- 6 Face-plate
- 7 Lamp switch
- 8 Take-up lever
- 9 Thread tension and thread guide
- 10 Tension indicator window
- 11 Thread tension control wheel
- 12 Winder pre-tension
- 13 Ornamental stitch indicator window
- 14 Selector lever for plain or ornamental stitch
- 15 On and off lever for automatic patterns
- 16 Winder spindle
- 17 Winder starting lever
- 18 Handwheel
- 19 Adjusting knob for straight stitch and zigzag
- 20 Left-Center-Right adjusting knob (needle position)
- 21 Knob for buttonhole sewing
- 22 Stitch length adjustment
- 23 Aperture for knee control lever
- 24 Drop-feed control

# The various parts of the machine



Model 841

- 1 Base plate
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Model 842

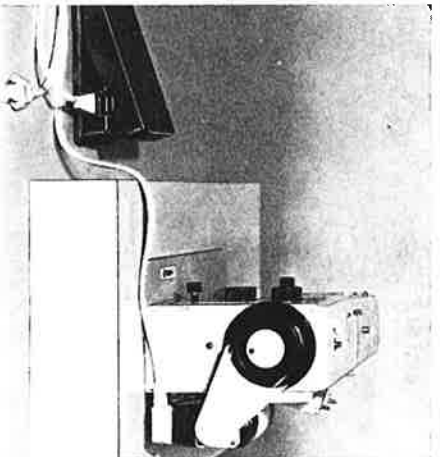
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# Electrical Connection

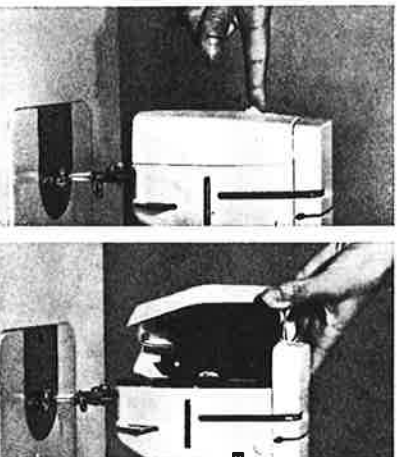
**Connecting up.** Compare the voltage indicated on the machine plate with that of your main voltage.

Remove foot control from case and connect it to the machine. Foot control and flex are connected by a special plug. When this plug is attached to the machine there remains only the flex plug to be connected to a power point. By pressing lightly on the foot control the machine is set in motion.

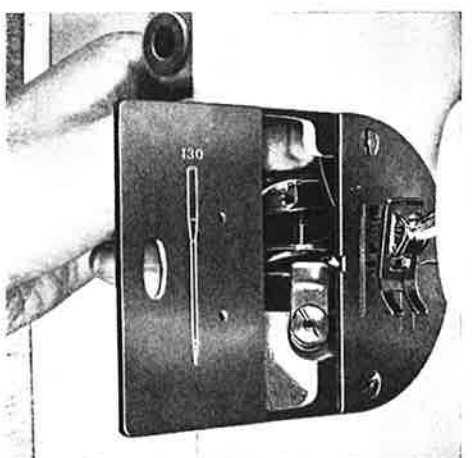
Please ensure that the cable is not pulled when removing the special plug from the machine. Hold the plug in the hand. Never lift the foot control by the cable.



**Light switch.** By pressing switch (7) the light can be switched on and off. Pull out light cover sideways to change the bulb. Press bulb upwards, turn anticlockwise and pull downwards. To insert bulb push up and turn it clockwise. (Sewing lamp: 15 watts)



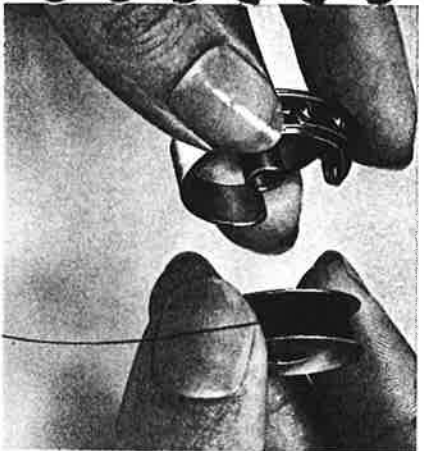
# Bobbin and Case



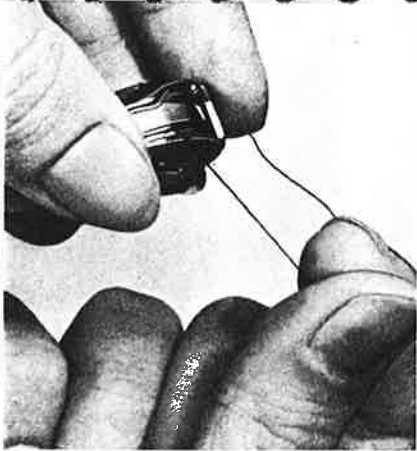
## Removing the bobbin case

Open stitch plate slide. Turn hand-wheel towards you until the needle is at its highest position.

Open the hinged latch with thumb and forefinger of the left hand and remove the bobbin case. The insertion of the bobbin case is carried out in the same manner.



**Insertion of bobbin into the bobbin case.**  
When the bobbin is in the case make sure that the thread unwinds in the direction of the arrow.



Draw thread through slot and then under tension spring. Do not hold the bobbin. The bobbin must turn in the direction of the arrow when unwinding.



**Insertion of the bobbin case into the hook.** Raise needle to top position by turning the handwheel. As when removing the bobbin case hold it by hinged latch with thumb and forefinger of the left hand. Hold bobbin case in such a way that the finger arm is directed upwards and fits into the notch of the hook race cover.

Check: Pull end of thread.

Needle and thread table	very fine	fine	medium	strong	large
Needle system 130	60	70	80	90	100
Mercerised sewing thread (3 ply)	50	50	50	40	40
Darning thread (2 ply)	50	30—50	30		

**Correct choice of needle and thread**

Use only needle system 130 for the Bernina machine class 840 (841/842). Make sure that both, needle and thread correspond with the sewing table given above. The usual needle numbers for sewing are 80, 90 and 100. For darning, needle numbers 70 and 80.

# Winding of thread on bobbin

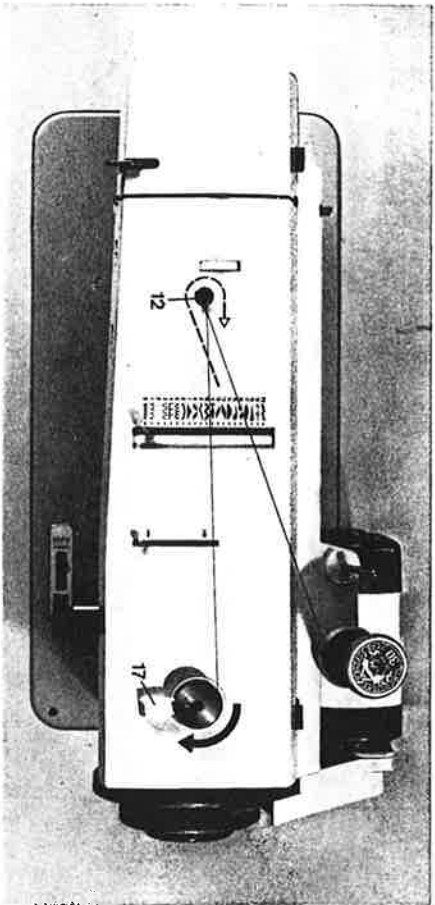
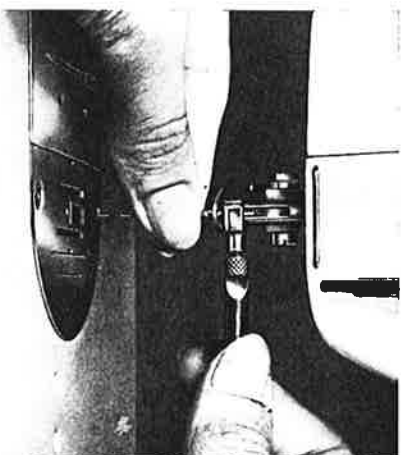
# To thread the machine

## Winding of thread on bobbin

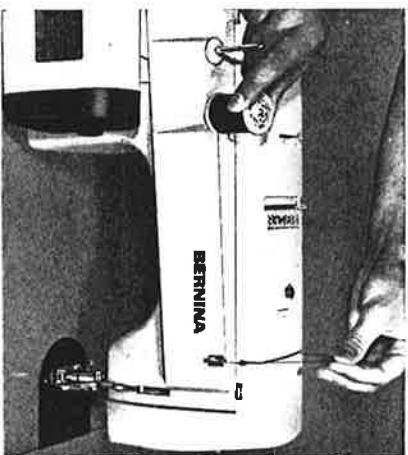
Loosen hand wheel: Hold hand wheel with the left hand. Loosen the hand wheel release with the right hand by turning anti-clockwise.



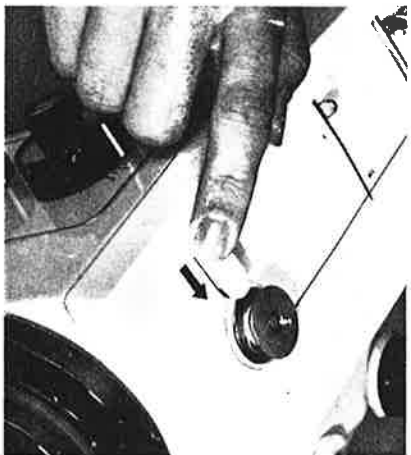
**Inserting the needle.** Loosen the needle clamp screw (# 4) half a turn. Push the needle upwards as far as it will go with the flat side of the needle to the rear. Tighten needle clamp screw.



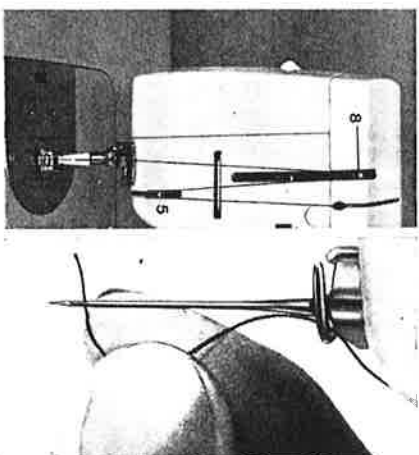
**Threading the machine.** The thread is guided from the spool to the needle in one movement. Presser foot and take-up lever must be in their highest position. Place spool on pin. Guide the thread with the left hand through the eyelet then pull it through the slot of the tension disc (# 9). With the right hand hold the spool steady.



Draw thread from the spool around (anti-clockwise) the pre-tension (12) and from there - as shown in the illustration - take it to the mounted bobbin. Press lever (17) towards the bobbin, the winder is switched on. Start motor with foot starter. When the bobbin is full the winding action stops automatically.



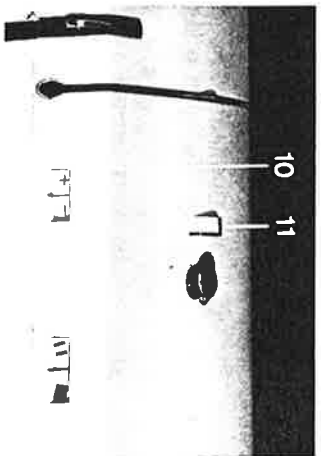
Now draw thread through the thread guide (5) up to the slot of the take up lever (8) and down to the needle eye. Thread the needle from the front to the back leaving a loose end of approximately 10 cm (4 ins.).  
If the presser foot with the white plate is attached, threading through the needle is greatly simplified (see also page 9).





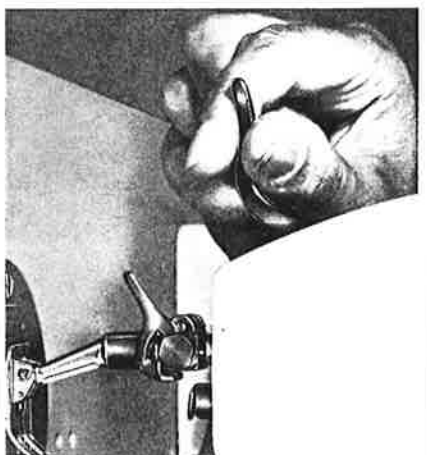
# Thread tension

**The thread tension discs.** Bernina has the unique advantage that during normal sewing the thread tension does not have to be altered. The tension centering wheel (11) can be regulated for special purposes. Four your guidance: Normal tension = Black line in center of window. + in center = Tighter tension. — in center = Looser tension.

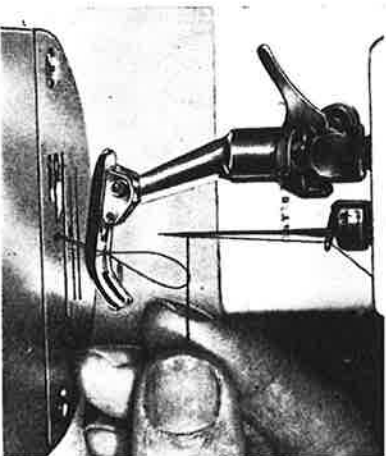


Use the correct presser foot for each type of work. Only in this way will you achieve easy and perfect work. The patented Bernina presser foot clamping lever permits quick and easy changes. The Bernina principle: "just clip it on!" the work is done in no time.

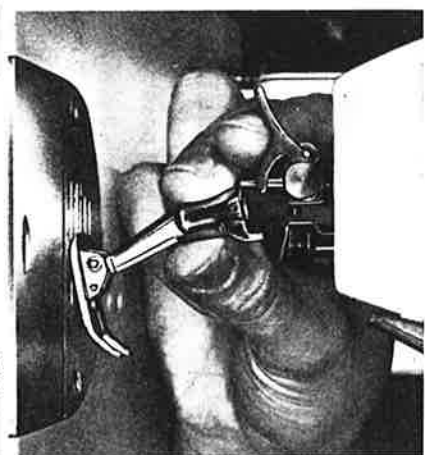
Raise presser foot by using lifting lever



**Bringing up the bottom thread.** Hold needle thread loosely. Now turn the hand wheel towards you, until the take-up lever is in its highest position. Pull the needle thread slightly and the bobbin thread will come up through the needle hole. Pull both threads under the presser foot and lay them sideways.

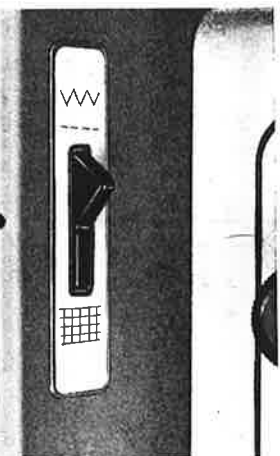


Loosen clamping lever and release presser foot



**Lowering the feed dog.** For certain types of sewing, in particular darning, the feed dog must be lowered.

**Darning.** Changeover is made with knob (24) on the bed-plate. The feed-dog is lowered by pressing the rocker to the right (darn symbol).

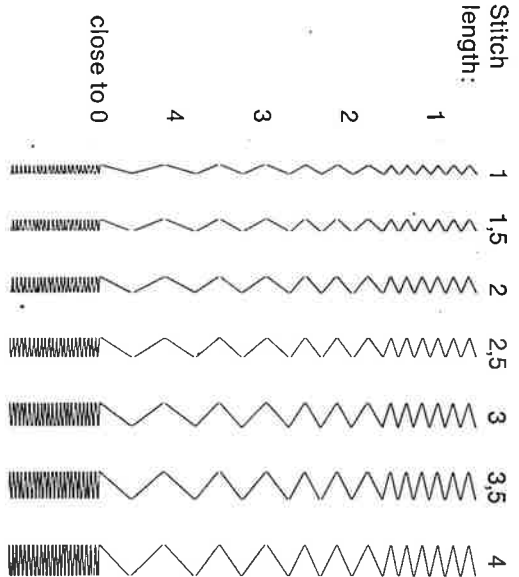


Fix the required presser foot on and push lever downwards. The presser foot is secured and the machine is ready for sewing. Only Bernina has this advantage.



# Satin Stitch – Zigzag sewing

Needle position: center  
Zigzag width:



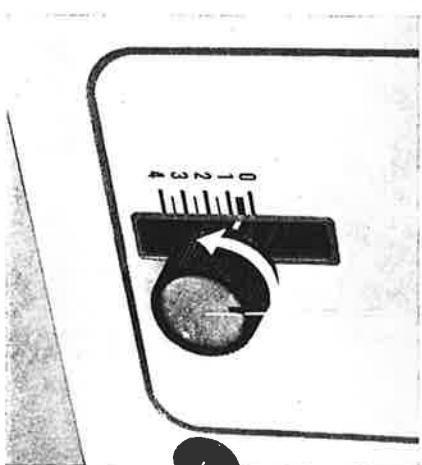
## Zigzag sewing

Before starting to sew please always ensure that the marker of the buttonhole knob (21) is at position «0».

The line on the zigzag knob (19) allows the zigzag width to be read on the scale behind.

Setting the machine for the zigzag width: use knob 19. The pointer on zigzag knob (19) indicates the zigzag width on the dial behind. For Straight stitching the pointer on the knob is set to 0. Turning the knob to the right from 0—4 the width of the stitch will increase. The larger the number the wider the stitch. While sewing, the knob may be moved freely. **But never turn the knob when the needle is still in the fabric.**

## Satin stitch spacing



The satin stitch spacing can be finely adjusted with the stitch length adjusting knob (22).

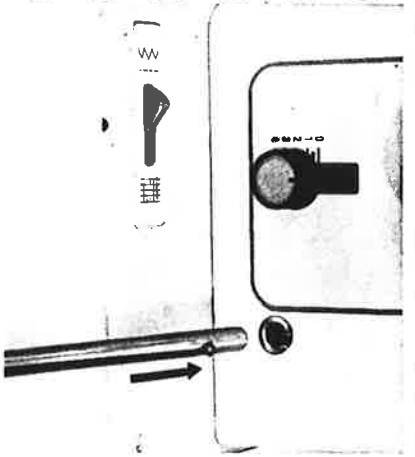
Turn knob (22) clockwise to the right until it engages. Marking line on knob should be vertical (stitch length 0). The satin stitch spacing can then be finely adjusted — depending on material and thread — by turning knob (22) to the left.

The 20 different ornamental stitches that can be made with the Bernina class 840.

(20)	Overlock (5)	
(19)	Stretch stitch (4)	
(18)	Universal stitch (3)	
(17)	Running stitch (2)	
(16)	Blind stitch (1)	
(15)		
(14)		
(13)		
(12)		
(11)		
(10)		
(9)		
(8)		
(7)		
(6)		
(5)		
(4)		
(3)		
(2)		
(1)		

Model 841

# Knee control / Lifter

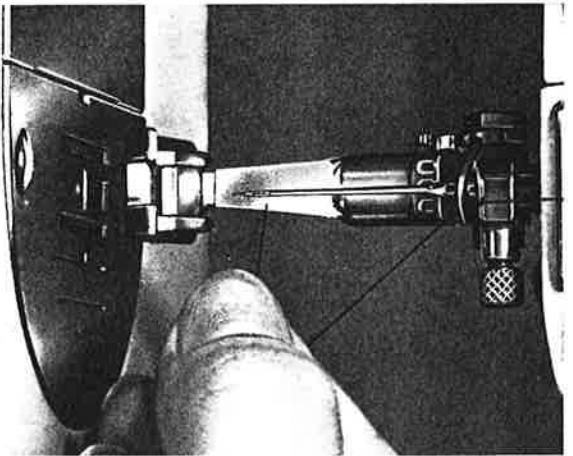


Inserting the knee lever

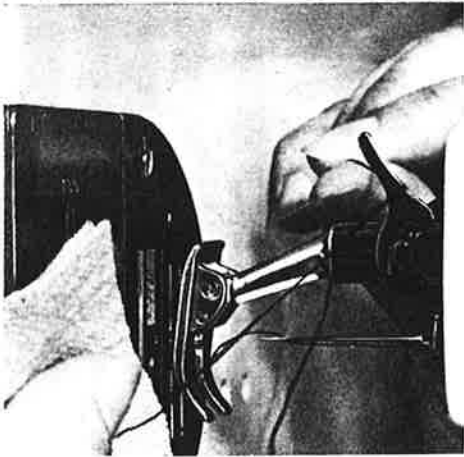
The presser foot is raised by pressing to the right (in direction of arrow).

Your Bernina machine has an attachable knee control lever. This knee lifter will be a welcome aid in many sewing operations. You will particularly appreciate this device for embroidery work. You can guide the work exactly with both hands since your "third hand", the knee, takes care of raising and lowering of the presser foot.

The knee lifter lever is secured in the case and can easily be removed from its clamp.

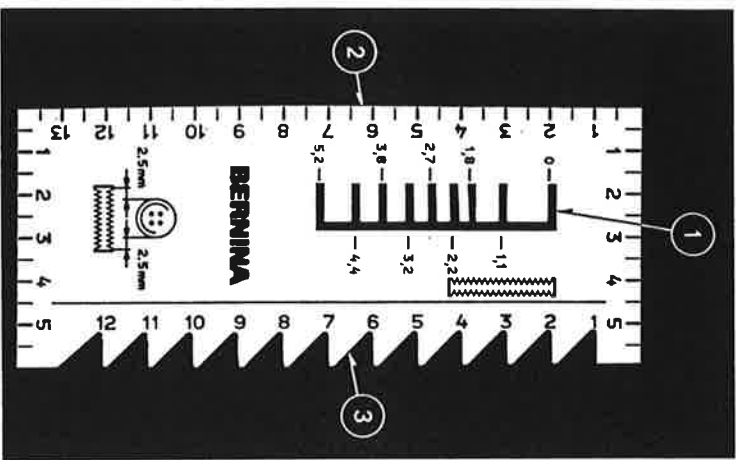


The presser foot with the white plate is a Bernina innovation. Set the needle with the handwheel high enough so that the eye of the needle is in front of the white surface. The eye becomes much more clearly visible and threading is thereby made considerably simpler.



**Thread cutter.** The lever on the presser foot bar is made in such a way that it can be used as a thread cutter. This small device helps to save time, especially when scissors are not close at hand.

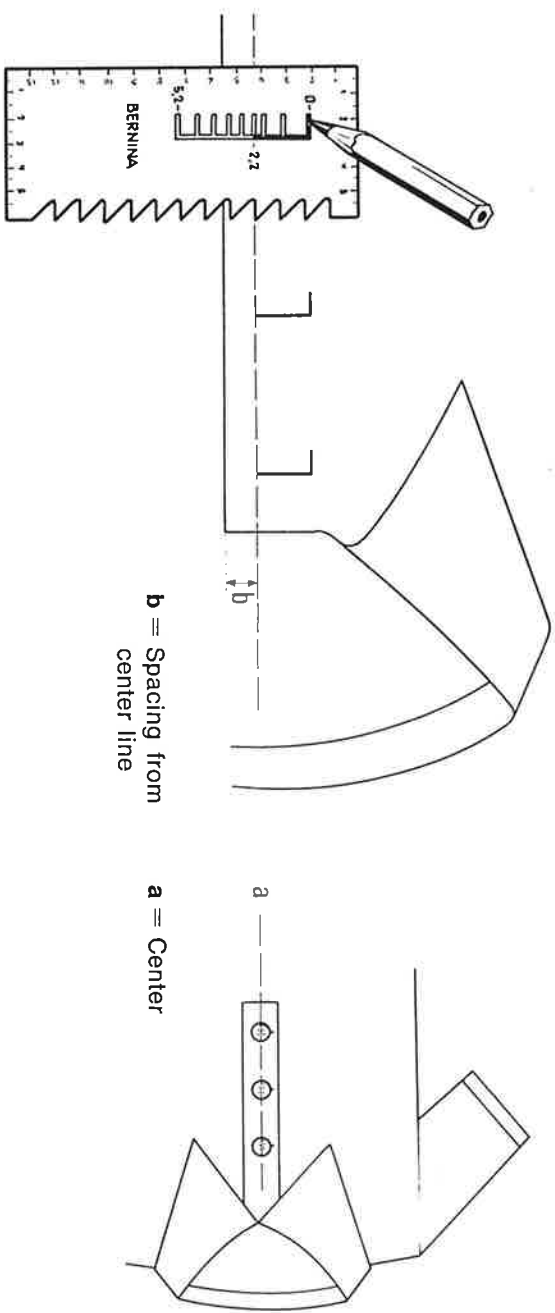
# Buttonhole gauge / Hem gauge



- 1 Buttonhole gauge
- 2 Ruler
- 3 Hem gauge

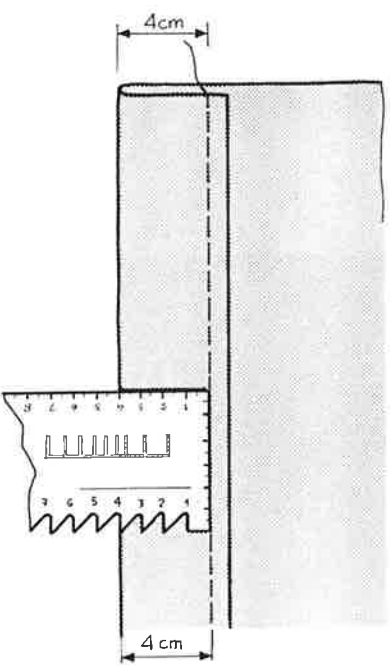
The plastic gauge which is enclosed with the accessories can be used as a ruler, as a hem gauge, or as a gauge for marking the length of buttonholes.

## Marking of buttonholes



Example: For buttons with a diameter of 2 cm ( $3/5$ ") a buttonhole with a length of 2.2 cm ( $7/16$ ") is marked.  
(For spherical buttons a little bit more.)

Marking the width of hems by means of the hem gauge.



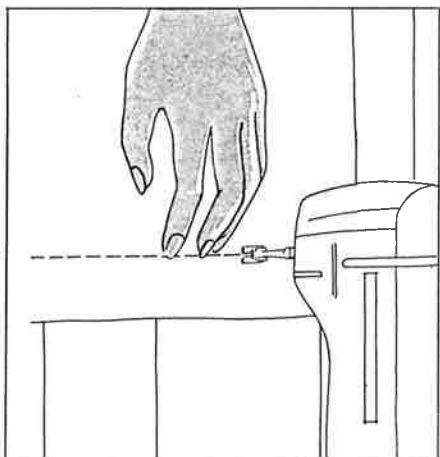
## Some technical hints

If you like to work as comfortably as possible we would advise you to observe the following points:

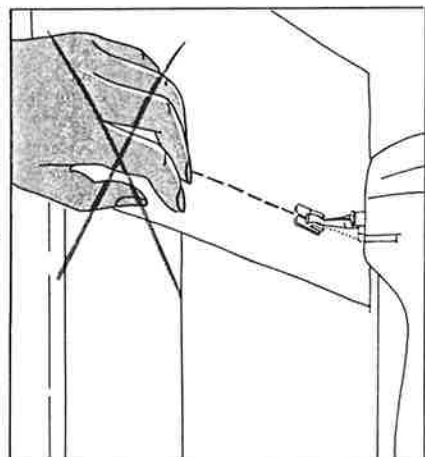
Sit exactly in front of the needle bar. The mastering of your sewing depends only on how you guide the material.

The basic rules are therefore:

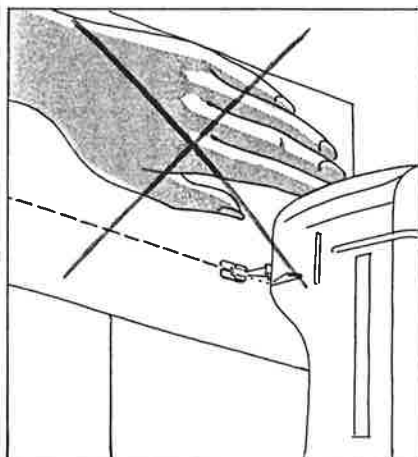
1. Guide the material as close as possible from the side, and near the presser foot



2. ... not from the front



3. ... and not with the hand flat. Nor must the material be pulled to the rear.

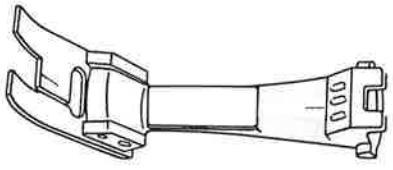


# Straight stitching

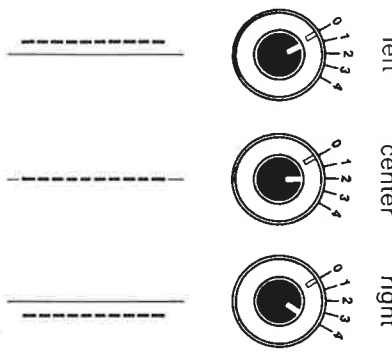
Zigzag foot 000

Needle:  
normally 80  
at times 70–100  
depending on the  
material and thread

Thread:  
adapted to the  
fabric sewn



left      center      right

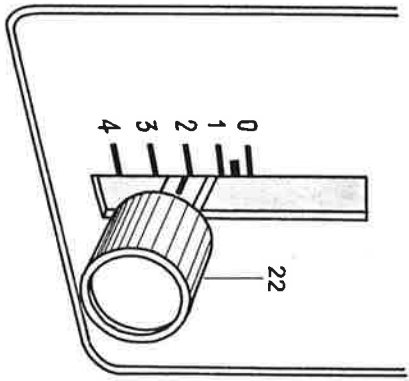


**Needle position**

With the needle position knob 20 the needle can be set at right or at left for buttonholes, blind hemming zippers, etc.

**For normal sewing the needle remains in the center.**

**Straight stitch**



Stitch width: (# 19) 0

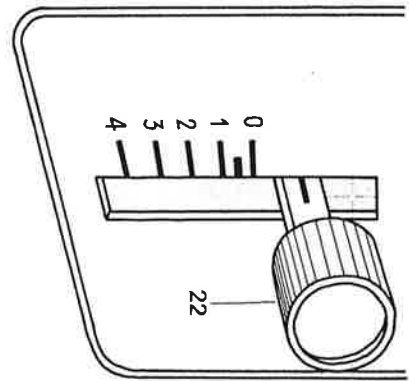
Stitch length: (# 22) 1–4

Needle position: (# 20) center

Feed control:  
Automatic: 0 WWWW (# 14)  
and MW (# 15)

Set stitch length lever at desired length.  
Normal stitch length: about 1 1/2–2

**Reverse sewing**

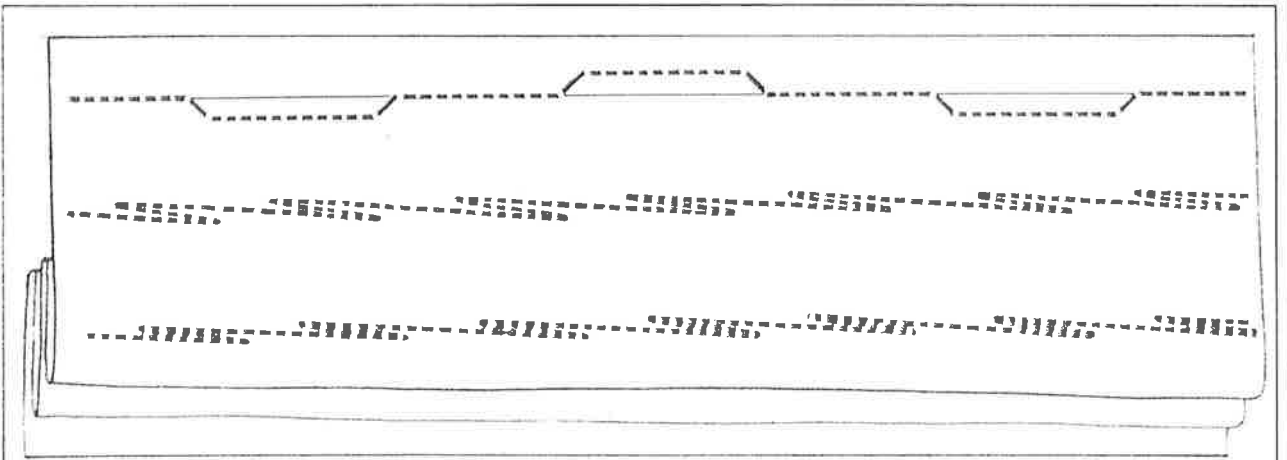


**Reverse sewing**

To sew reverse move stitch length lever (22) upwards (where no numbers are marked). Stitch length lever must be held by hand.

**Securing in thick seams**  
(Stitch length not too short.)

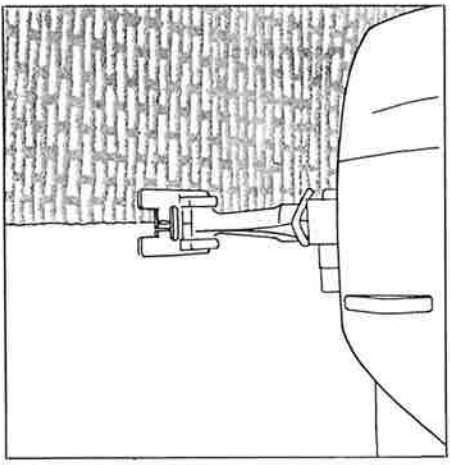
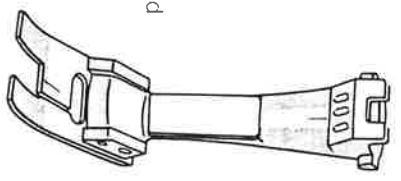
Before stitching in reverse always leave the needle completely down in the material. Then move lever to reverse sewing. The same applies when sewing forward again.



Zigzag foot 000

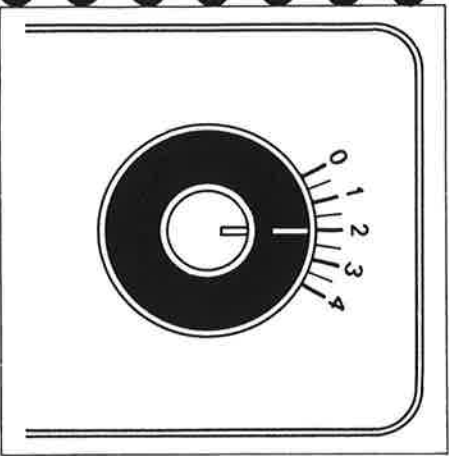
Needle:  
normally 80  
at times 70 – 100  
depending on the  
material and thread

Thread:  
adapted to the  
fabric sewn  
if possible 50



Guide the cut edge under the **center** of the foot so that the needle actually goes once into the material and once outside.

As a general rule the following is valid: zigzag not too wide, stitch length not too long. First trim the edge neatly.

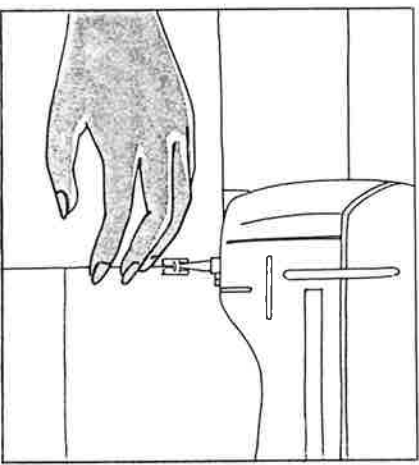


### Zigzag sewing

Set zigzag width (#19) according to work and material.

### Finishing Edges

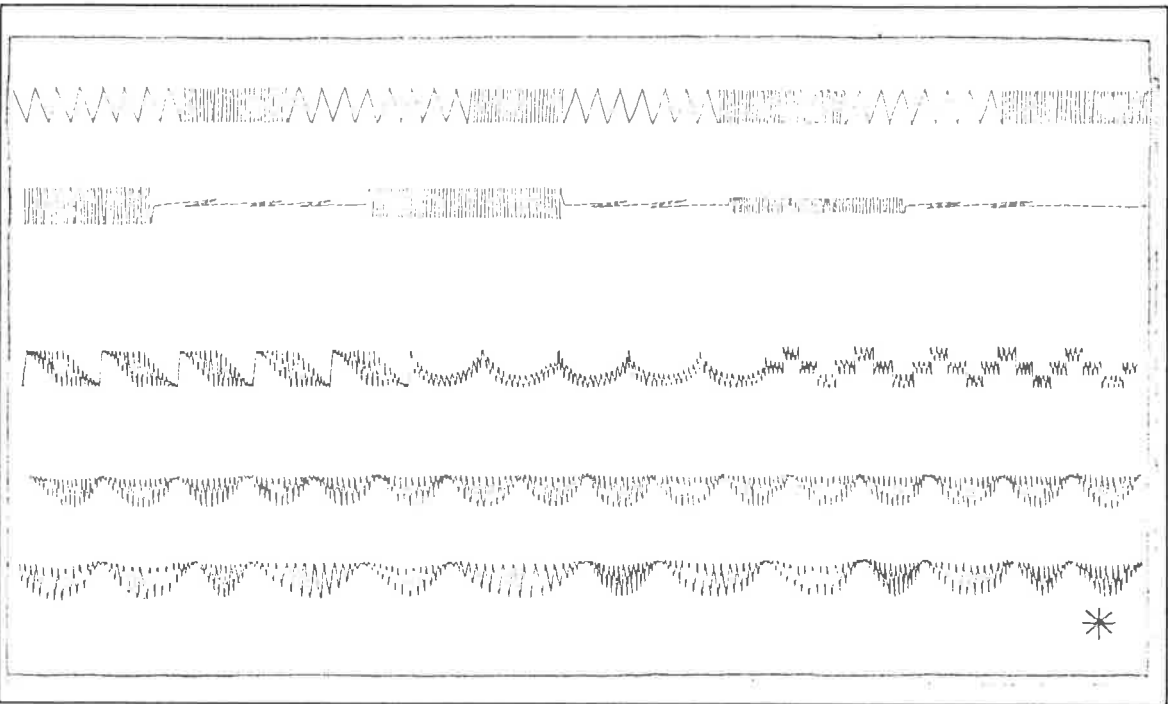
- Stitch width: (#19) 2 1/2 – 4
- Stitch length: (#22) 1 – 2
- Needle position: (#20) center
- Automatic: 0 WWW (#14) and WW (#15)
- Feed control: WW



If you guide the work like this: From the front, close to the foot, fingers on the edge, you will easily get a neat finish.

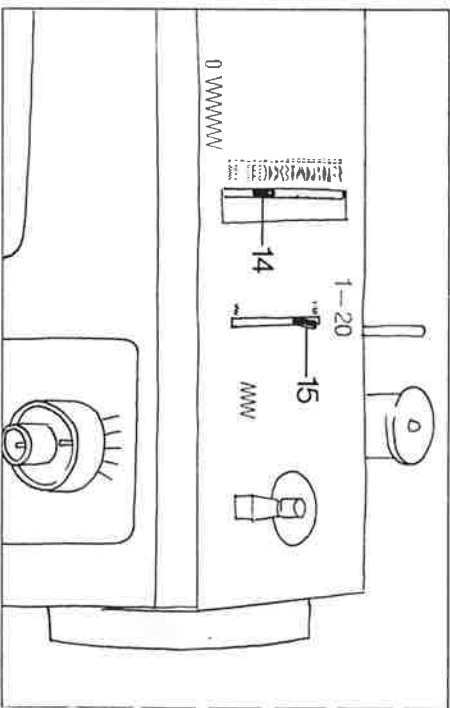
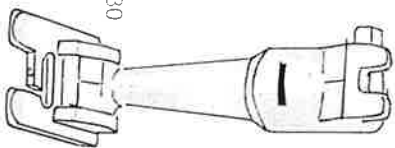


# Automatic stitches



\* When embroidering always use the slide-on sewing table so that the work can enter **evenly** under the foot. Pushing or pulling produces irregular patterns.

Embroidery foot 030  
 Needle: 80 70  
 Embroidery  
 thread: 30

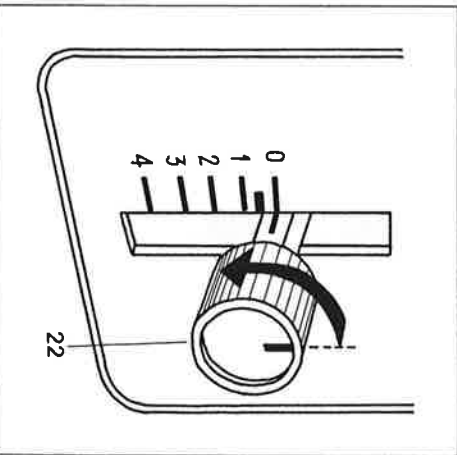


## Automatic

To connect the automatic patterns: push lever 15 to rear (away from you). Pull lever 14 to right and set it next to desired pattern. When doing this do not leave the needle down in the material.

Stitch width: (# 19) 4  
 Stitch length: (# 22) almost 0  
 Needle position: (# 20) center  
 Feed control: MW

Paper underlay when needed



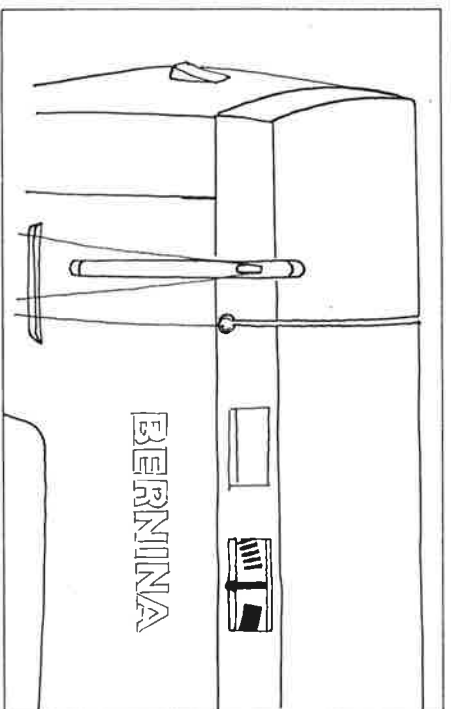
## Satin stitch (Close zigzag)

Stitch width: (# 19) 4-1 1/2  
 Stitch length: (# 22) almost 0  
 Needle position: (# 20) center  
 Automatic: 0 WWW ( # 14)  
 and MW ( # 15)  
 Feed control: MW

The satin stitch spacing can be finely adjusted by turning the stitch setting knob (22) from the stop "0" to the left (direction of arrow). (See also page 8.)



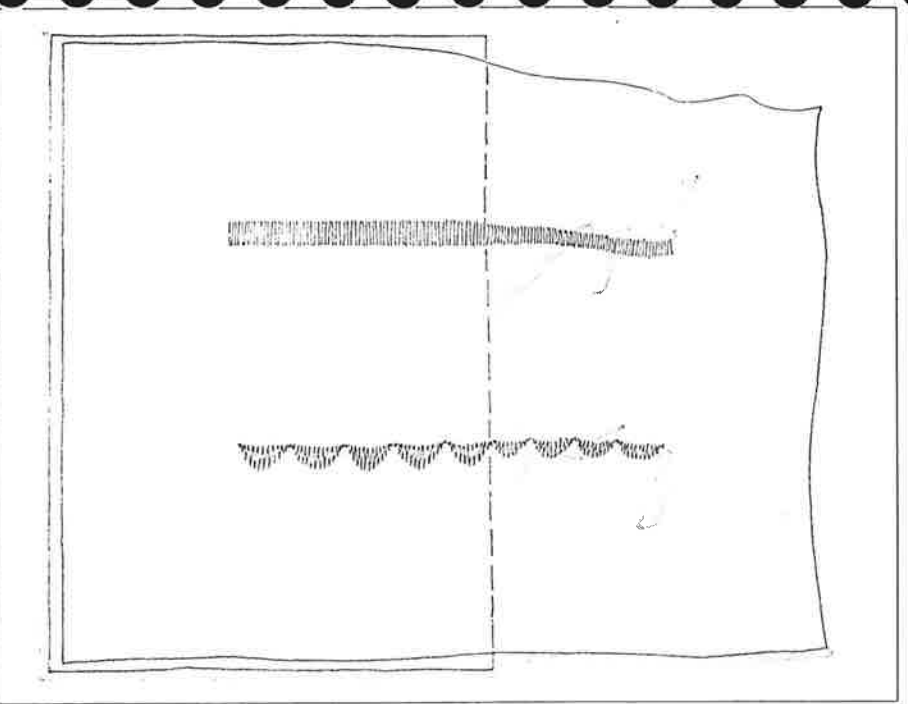
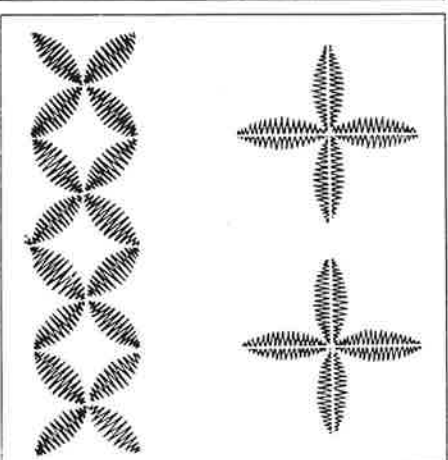
# Automatic patterns



## Pattern indicator

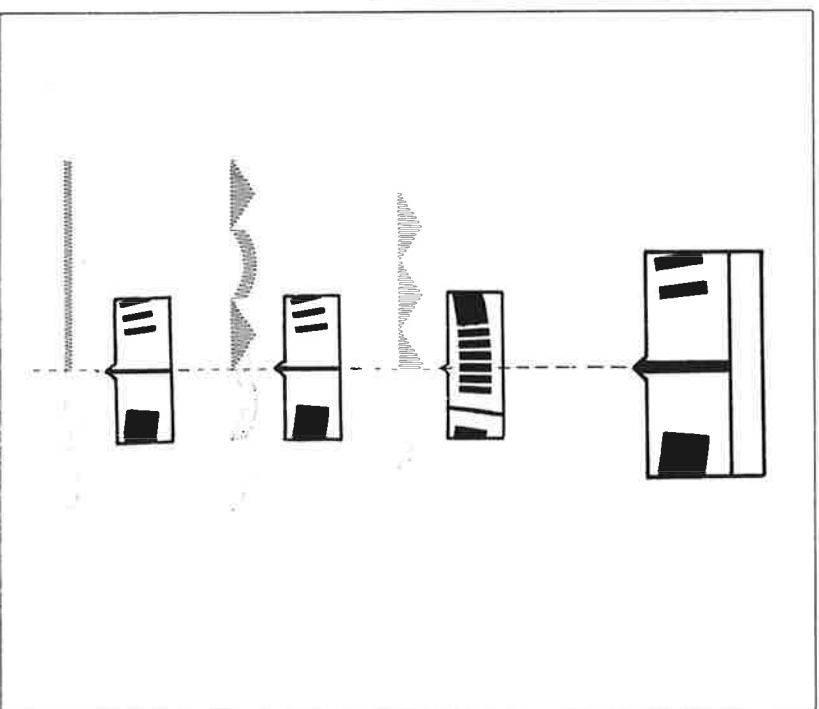
The pattern indicator 13 shows the position of a pattern. Every time the red line reaches the center, one pattern is finished and another started. (Indicator disc makes one complete rotation.)

This indicator is especially useful when embroidering borders, making up stars and flowers, etc., and when combining different patterns together.



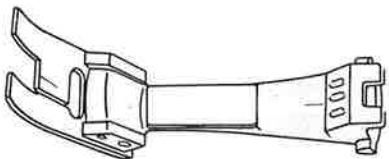
When embroidering it is advisable to lay paper underneath to prevent the material from puckering. (Do not use tissue paper, as this is too soft. Typewriting paper is excellent.)

Note: Use "spray starch" when fabric permits using it. This works very well and it is not necessary to use paper underneath.



# Hems on Jersey material

Zigzag foot 000  
 Needle: 80-70  
 Thread:  
 30 or 50



## Hems for Jersey underwear

Needle position: (#20) center  
 Automatic: 0 WWW (#14) and WW (#15) WW  
 Foot control:

### Single turned-in hems

Stitch width: (#19) 3  
 Stitch length: (#22) 1 1/2

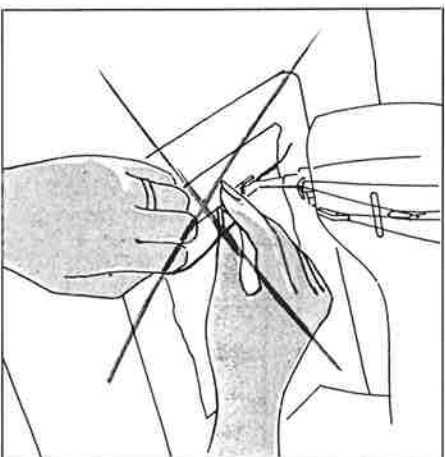
### Double turned-in hems

Stitch width: (#19) 2 1/2  
 Stitch length: (#22) 1 1/2

## The Waving of Jersey

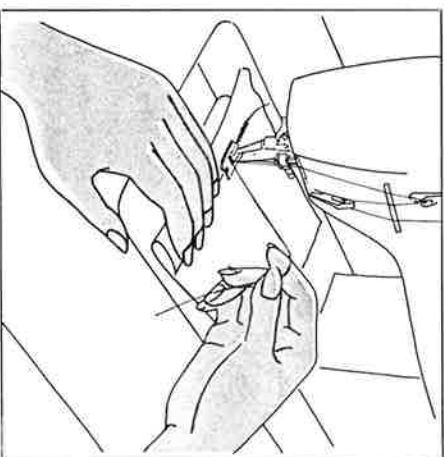
To prevent the Jersey from waving, guide an extra thread inside the zigzag. (Not only for hems but whenever jersey stretches, e. g. patching, oversewing, etc.)

Press with a damp cloth before removing the extra thread.



### How to hold the extra thread

Not like this, because you obscure the view of the work.

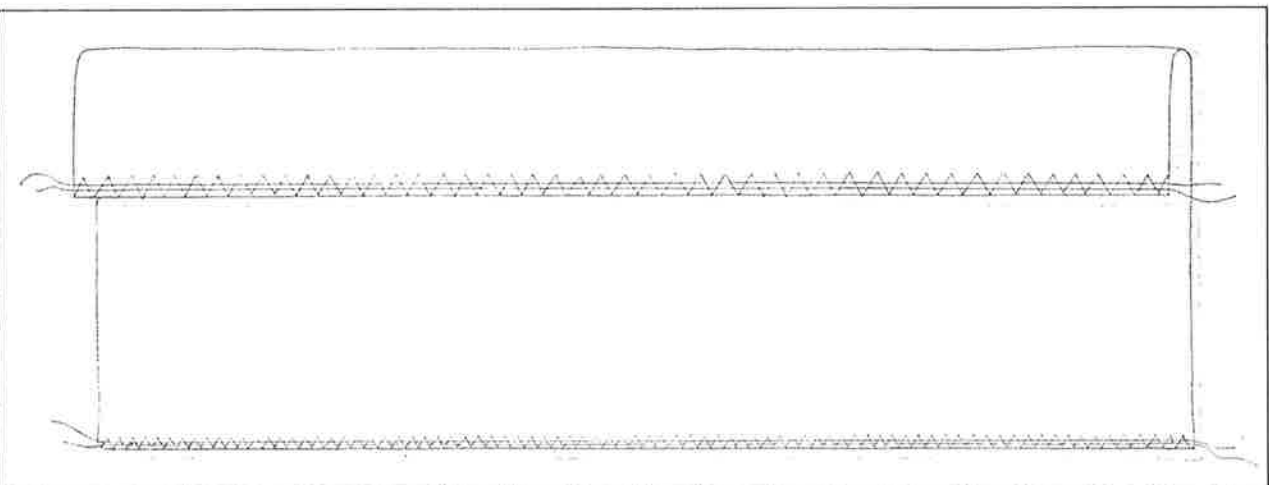


But like this: This way the view is clear and the work can be guided easily.

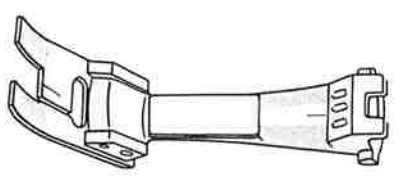
### Important

Hold the thread slightly taut while sewing and the Jersey will not stretch so much.

The thread can also be guided through the hole in the needle plate like pintuck cord. See page 49. (Especially useful for a large patch.)



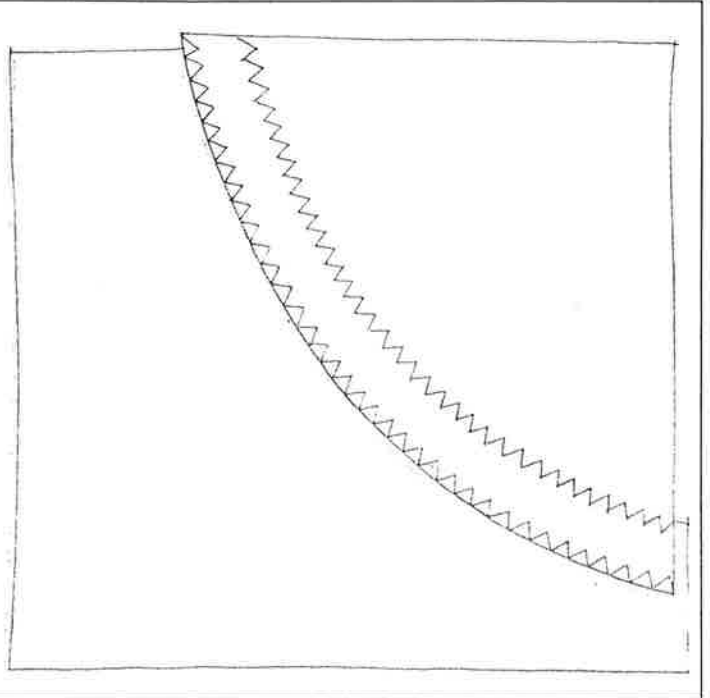
Zigzag foot 000  
 Needle: 80-70  
 Thread:  
 30 or 50



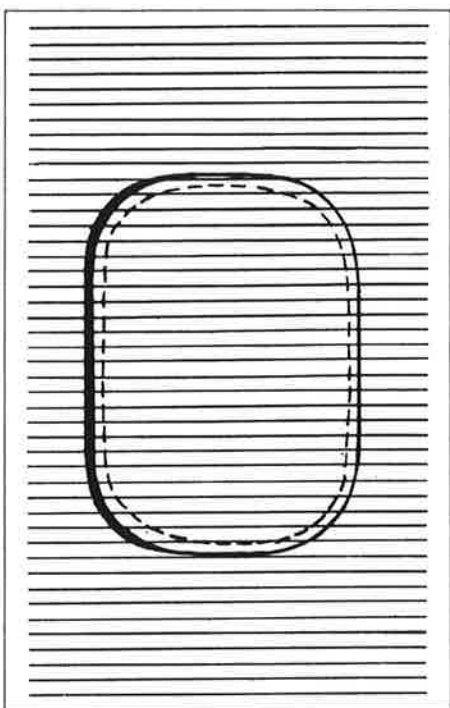
## Patching Jersey

Stitch width: (# 19) about 3  
 Stitch length: (# 22) 1-1 1/2  
 Needle position: (# 20) center  
 Automatic: 0 www (# 14)  
 and mw (# 15)  
 mm

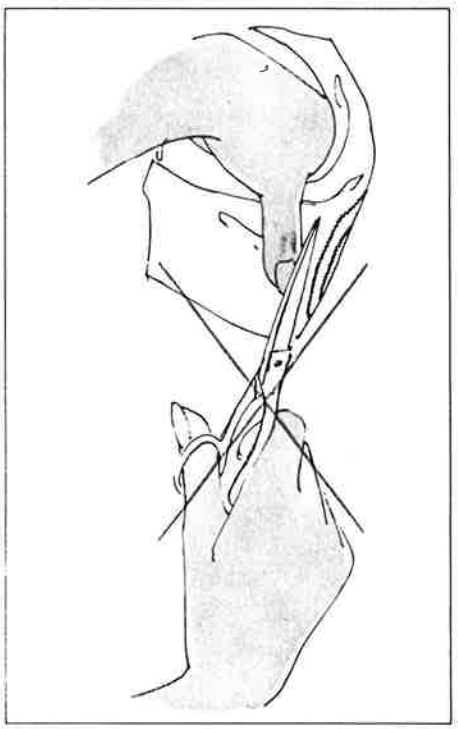
Baste the new piece on to the right side of the work, then sew it on, first with the zigzag just covering the edge, then a second time one presser foot width from the first seam. For cotton Jersey use the extra thread to avoid waving.  
 Afterwards cut the damaged piece out on the wrong side. (Hold the scissors correctly.)



Whenever possible make the patches in round shapes.

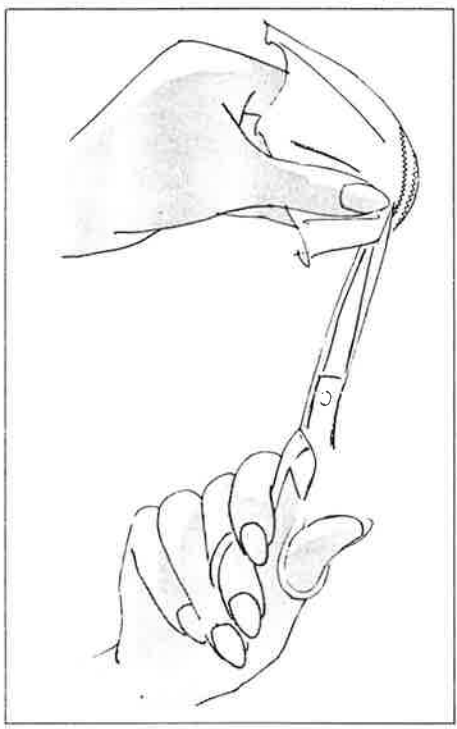


When square patches are unavoidable at least the corners should be rounded.



## How not to hold the scissors

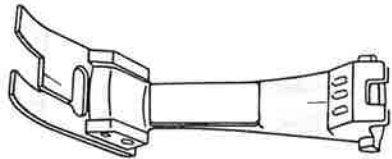
Whenever you have to trim close to a zigzag the scissors should **not** be held like this (with the backs of the hands towards you). There is a risk that you might cut into the stitches.



This way is much easier. **Palm of the hand towards you holding the scissors quite flat!!!** Cut only with the points of the scissors. The thumb of the left hand should be close to the seam just where the scissors are cutting.

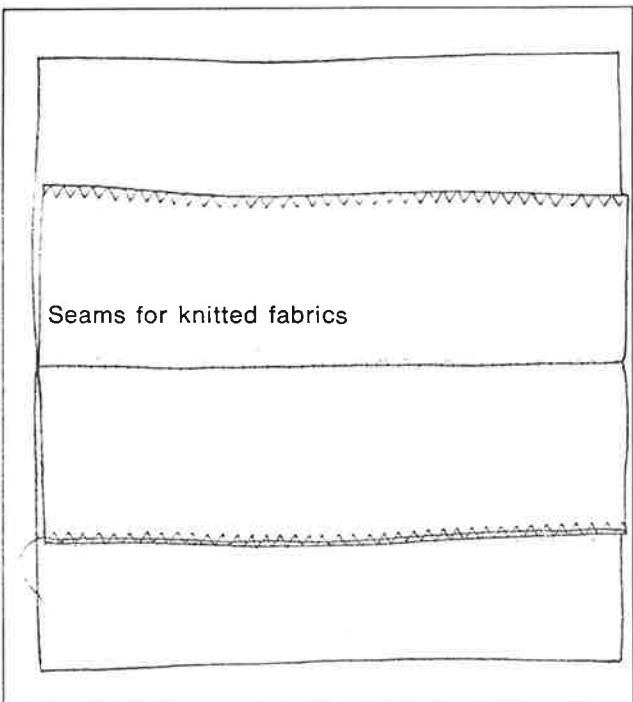
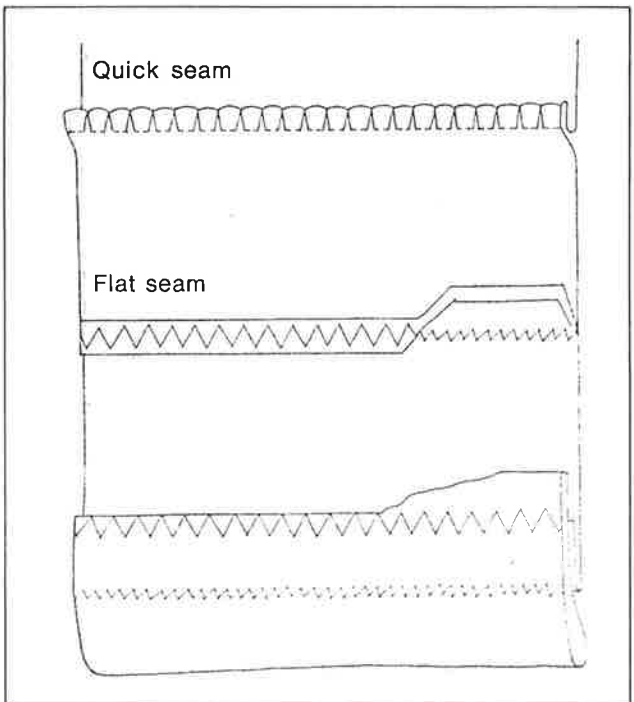
# Elastic seams on Jersey

Zigzag foot 000  
 Needle: 80-70  
 Thread: 30



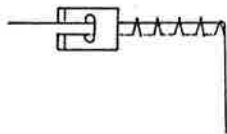
## Four important points, when sewing Jersey

1. Baste always with darning thread.
2. Use only a perfect needle. A blunt needle leaves holes.
3. Use fine mercerised thread.
4. Press each seam after sewing and not all seams together when the work is completed.



## Seams on Jersey

Needle position: center  
 Feed control: MM  
 Automatic: 0 WWWW (# 14) and MW (# 15)



## Quick seam

Stitch width: (# 19) 3-4  
 Stitch length: (# 23) 1/2-1  
 Automatic: Blindstitch (Pattern No. 1) and lever 15 at 1-20

**Joins up and oversews simultaneously. Important! Cut edges must be on left.**

## Flat Seam — Cotton Jersey Underwear

**1st run :** join up at **one presser foot width.**

Stitch width: 1 (# 19) Stitch length: 1-1 1/2 (# 22)

**2nd run :** press seam open and sew over it on right side.

Stitch width: 3 (# 19) Stitch length: 1-1 1/2 (# 22)

**To finish off cut the remaining material. Hold the scissors correctly.**

## Seams for Knitted Fabrics: Dresses — Skirts — Sweaters

Stitch width: 1 (# 19) Stitch length: 1 (# 22)

Knitted fabrics can be joined up like other materials. Seams are pressed open but remain stretchy.

# Very elastic seams

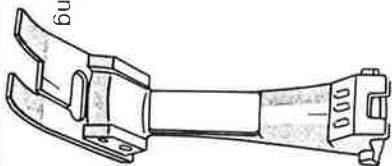
## Stretch seam

for ski trousers and very elastic fabrics like Helanca, Crimplene etc.

Stitch width: (# 19) 1-1 1/2  
 Stitch length: (# 22) 1/2-3/4  
 Automatic: Stretch *with* <sup>width</sup>

Needle position: center  
 Feed control: MM and 1-20 (lever 15)

**Sew tacked seam.** (Lay the work under the presser foot in such a way that the somewhat wider zigzag stitch is directed towards the cut edge.) Press seam open and if necessary overcast.



Zigzag foot 000  
 Needle: 80  
 Thread: Mercerised sewing thread 30-50

## Flat joining seam

Especially for Lycra fabric (e.g. Girdles)

Stitch width: (# 19) 2 1/2

Stitch length: (# 22) 1/2-3/4

Automatic: Universal stitch

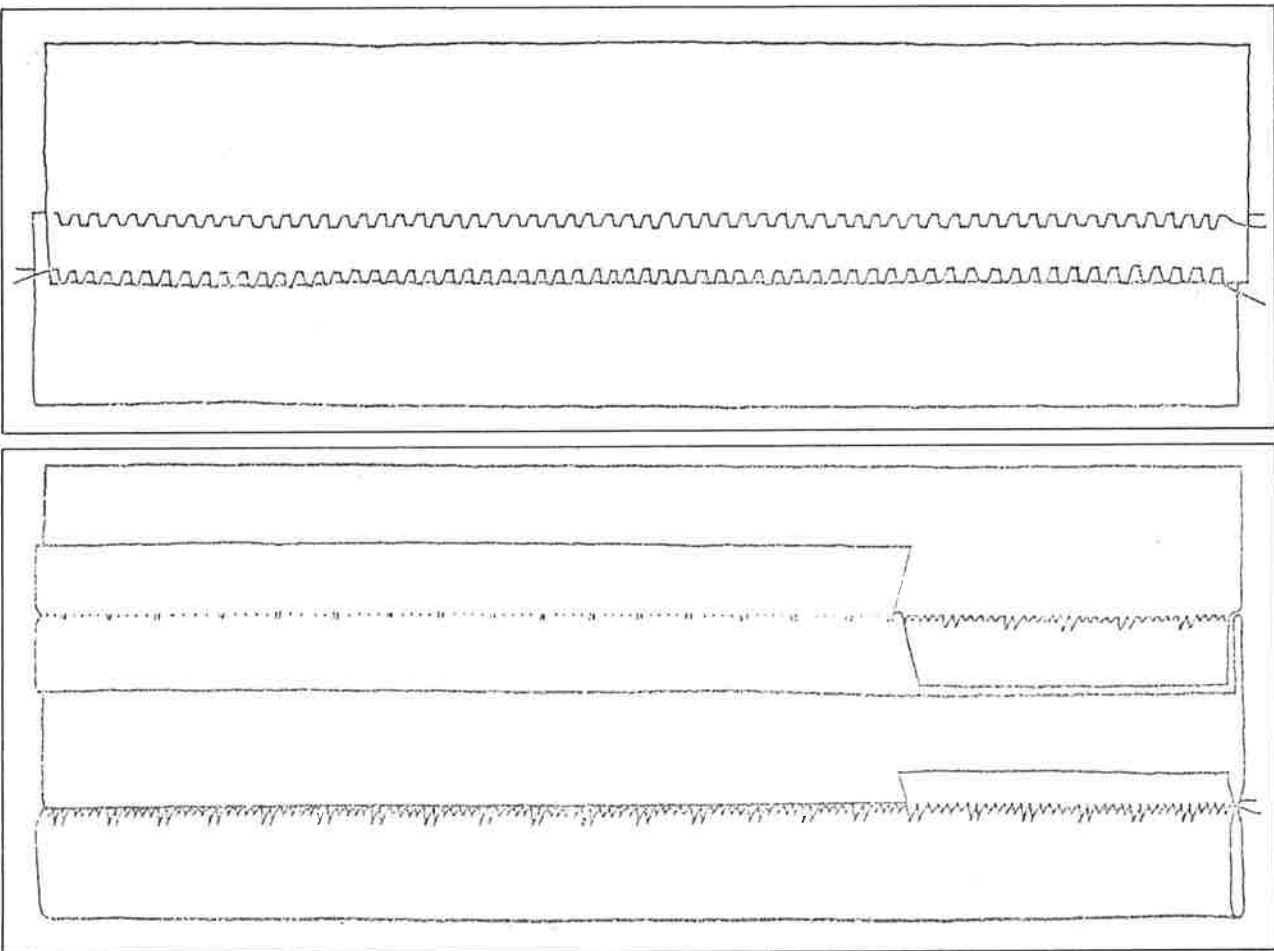
1 1/2 and 1-20

center

MM

Needle position:  
 Feed control:

Lay cut edges approximately 1/4" over each other, then oversew edges.



**Stretch seam as hem**  
 only for Jersey underwear.

Stitch width: (# 19) 3-4

Stitch length: (# 22) approx. 3/4

Automatic: Stretch *with* <sup>width</sup>

and 1-20 (lever 15)

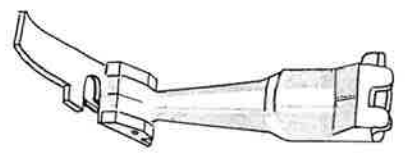
Needle position: center

Feed control: MM

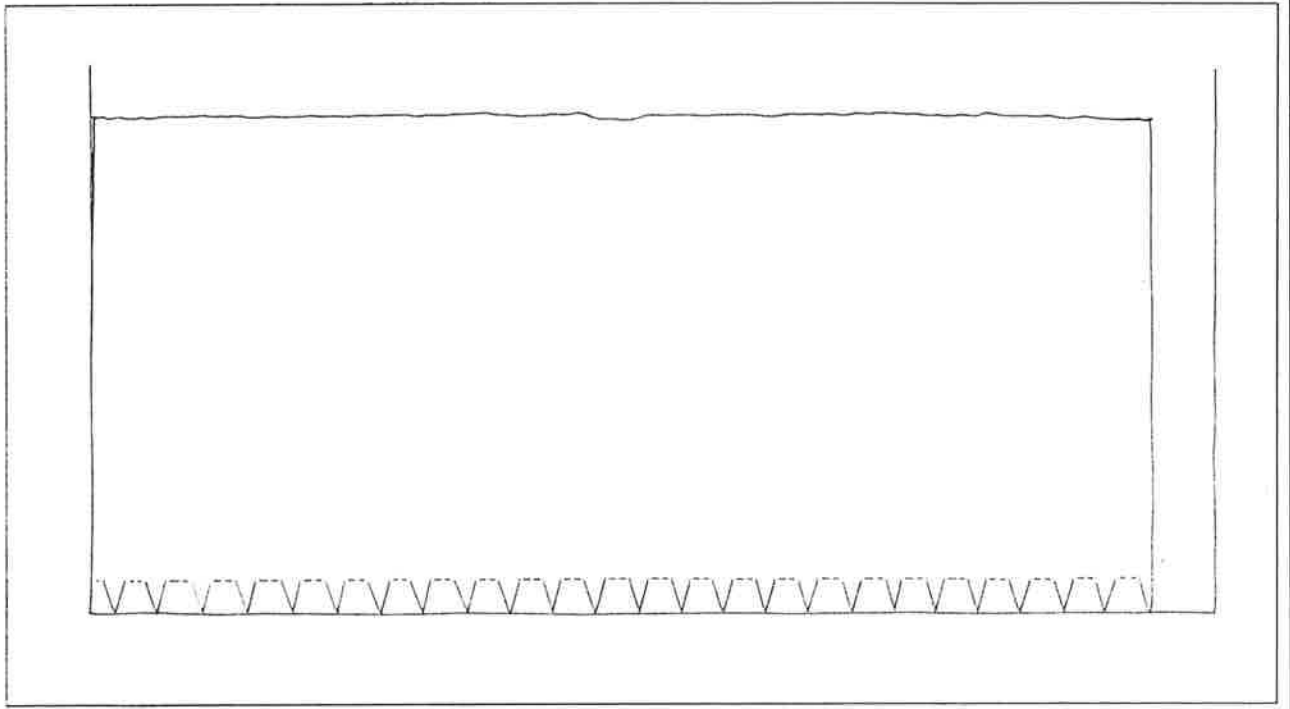
**Iron hem.** (Do not turn under the edge.) Measure depth of hem and then sew. (Lay the work under the presser foot so that the somewhat wider zigzag stitch is directed towards the edge of the hem.) Finish by cutting away surplus fabric on the sewn edge.

# Overlock

Overlock foot 470



The following point must be observed with overlock sewing:  
**Synthetic fabrics should always be sewn with a synthetic thread.**



## Overlock seam

Stitch width: (# 19) 4

Stitch length (# 22): 1 1/2-3

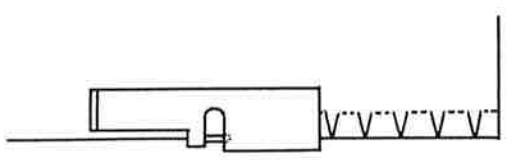
Needle position (# 20): right

Automatic: overlock (# 14) and 1-20 (# 15)

Feed control: mm

The overlock seam is used for sewing together and neatening in one operation.

**Warning:** material edge must lie to the right.

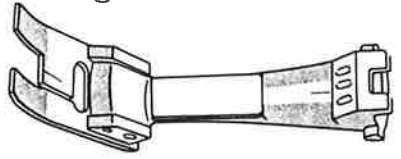


### Shell Edging

Stitch width: (# 19) 4  
 Stitch length: (# 22) 1  
 Needle position: (# 20) center  
 Automatic: blindstitch  
 (Pattern No. 1) and lever No. 15 at 1-20  
 MM

Feed control: Place folded edge to the **left** as for quick seam.

Zigzag foot 000  
 Needle: 80-70  
 Thread: 50



### Lace on Jersey

Stitch width: (# 19) 1 1/2-2  
 Stitch length: (# 22) 1/4-1/2  
 Needle position: (# 20) center  
 Automatic: 0 WMMW and MW  
 Feed control: MM

Pin or baste lace on and sew straight on with zigzag. Trim off surplus on wrong side along zigzag. Hold the scissors correctly.

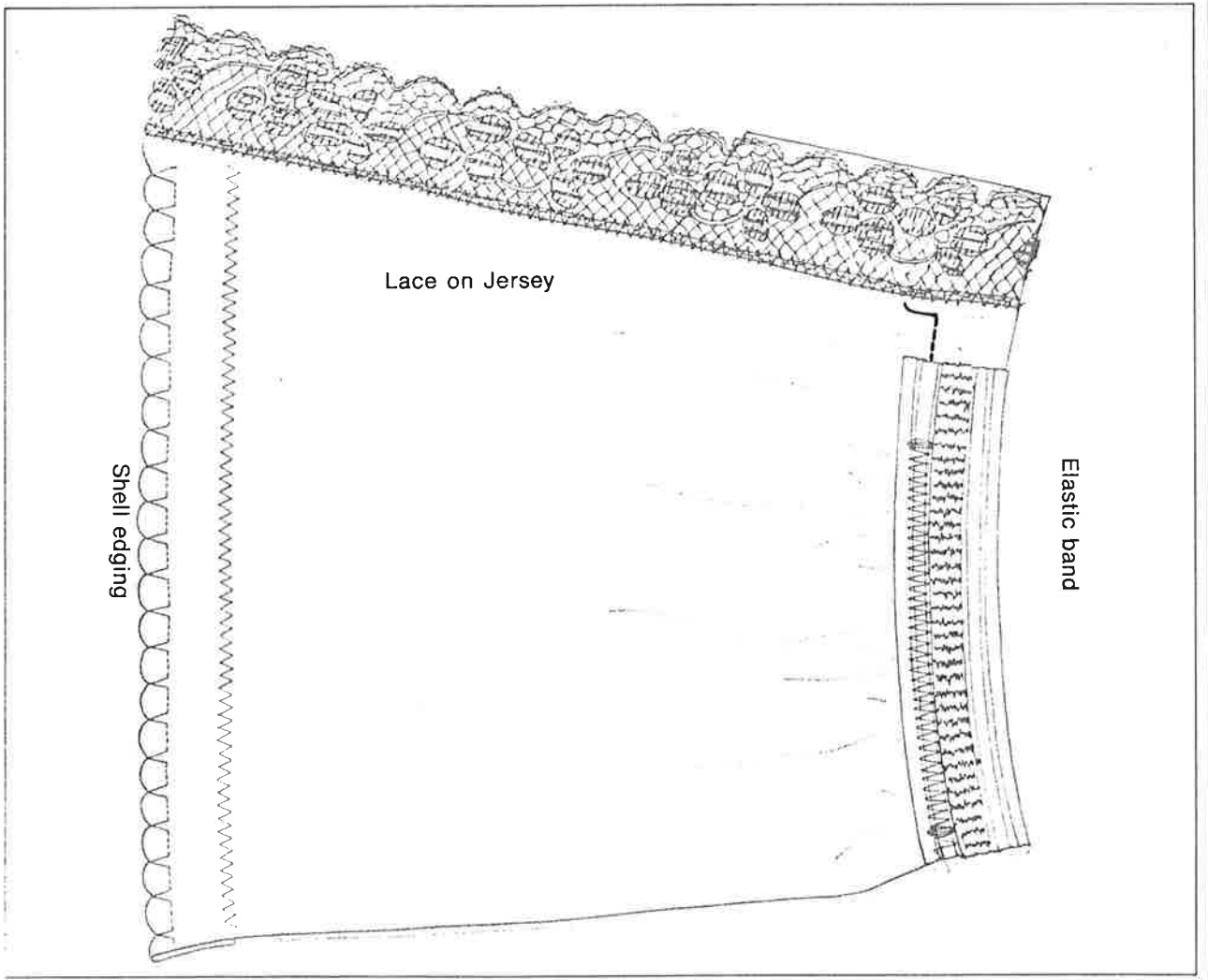
### Elastic band

Stitch width: (# 19) 3  
 Stitch length: (# 22) 1-1 1/2  
 Needle position: (# 20) center  
 Automatic: Universal stitch  
 Feed control: MM

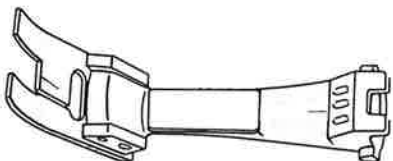
Do **not** pull the elastic while sewing. The zigzag stitch stretches as much as the elastic.

The easiest way when sewing Jersey is to gather it up first, sewing long straight stitches, then draw the under thread and pull work up to desired length.

After this, pin on the elastic and sew it with zigzag. Trim off surplus material on the wrong side. (Hold the scissors correctly.)



Zigzag foot 000  
Needle: 80-70  
Thread: 50



## Lace (and insertion) in material

Needle position: (#20) center  
Automatic: 0 WWW (#14)  
and MW (#15)  
Feed control: MM

### 1st run

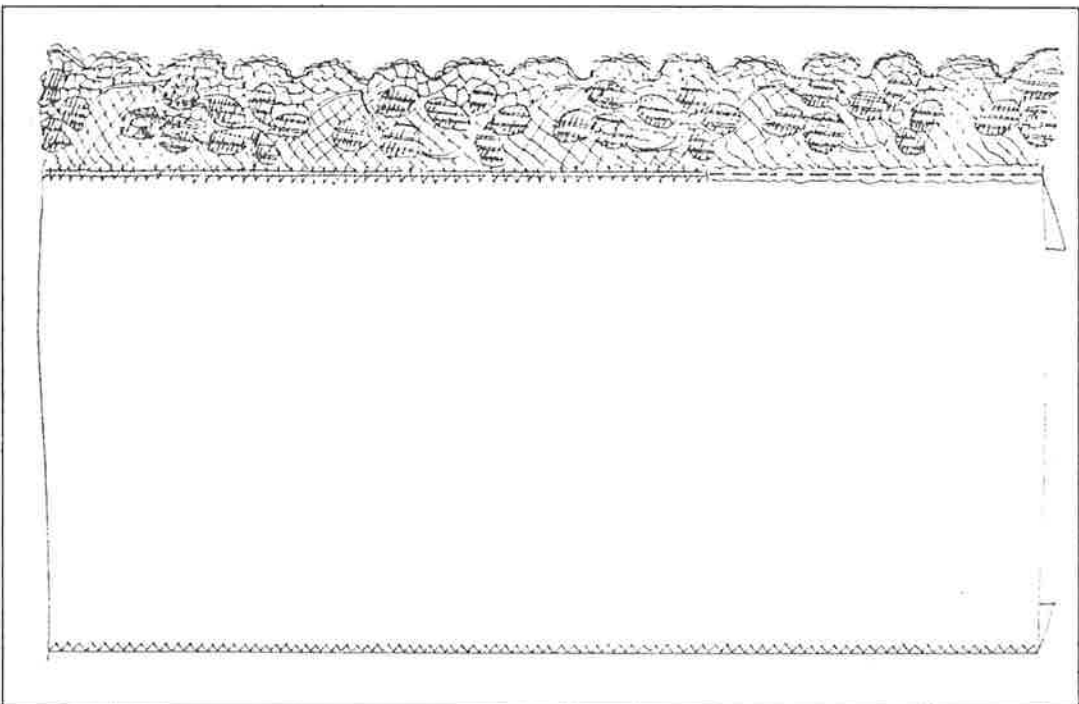
Stitch width: (#19) 0  
Stitch length: (#22) about 1

Pin in place, baste it and sew on with  
straight stitch.

### 2nd run

Stitch width: (#19)  $1\frac{1}{2}$ – $2\frac{1}{2}$   
according to lace  
Stitch length: (#22) about  $\frac{1}{4}$ – $\frac{1}{2}$

Fold turning to wrong side against  
straight stitch and press. Sew a zigzag  
seam over the straight stitch. Then cut  
off the turnings along the zigzag seam.  
Hold the scissors correctly.



## Narrow edging

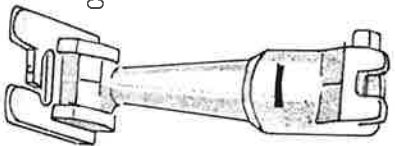
Stitch width: (#19) about  $1\frac{1}{2}$ –2  
Stitch length: (#22) about  $\frac{1}{4}$ – $\frac{1}{2}$   
Needle position: (#20) center  
Automatic: 0 WWW (#14) and MW (#15)  
Feed control: MM

Prepare and press turnings. Sew zigzag over this pressed  
edge as for oversewing. (Guide work as for oversewing.)  
Finally trim away turnings. Hold scissors correctly.



# Elastic thread

Embroidery foot 030  
Needle: 80  
Thread: 30-50

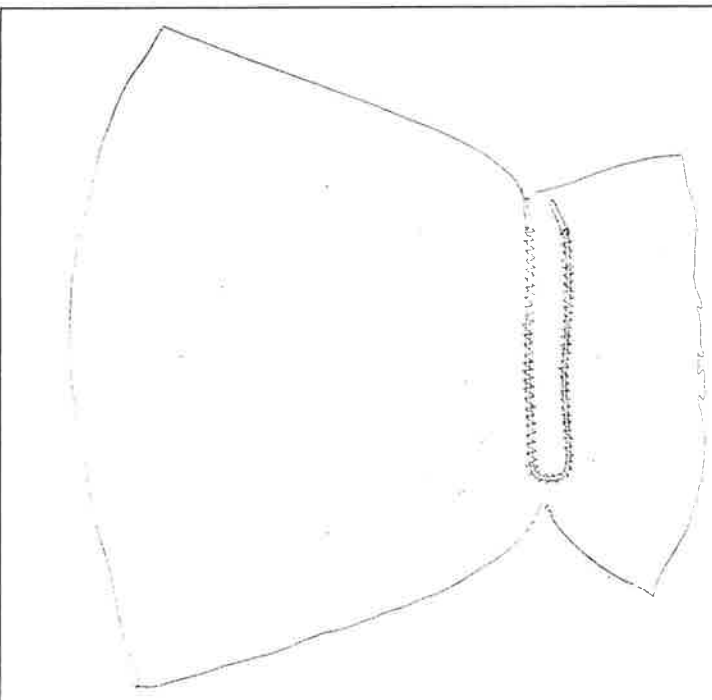
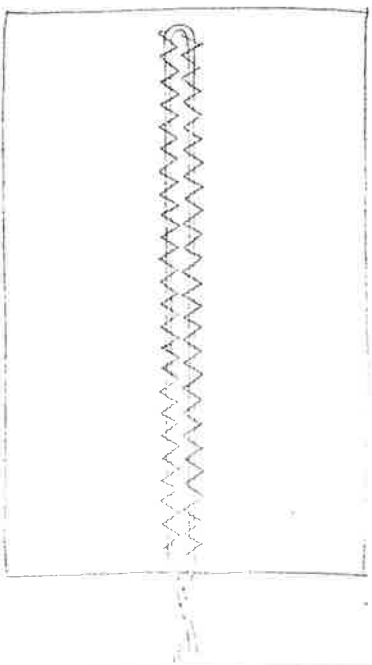


## Applying elastic thread

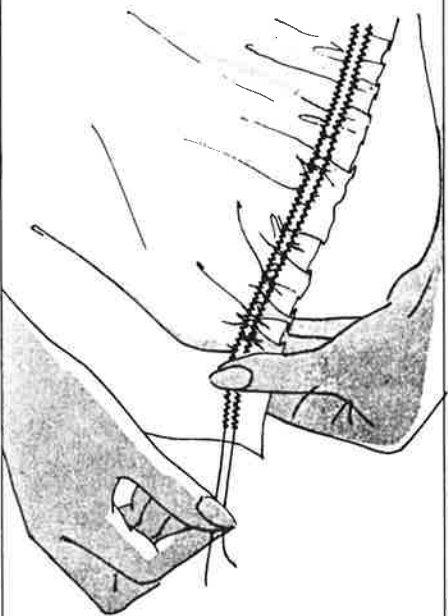
Stitch width: (# 19) 2  
Stitch length: (# 22) 2  
Needle position: (#20) center  
Automatic: 0 WWW (# 14) and MW (# 15)  
Feed control: MM

Thread the elastic through the hole in the embroidery foot and pull it while sewing. The more you pull the more it gathers. For a second row (one presser foot width) **pull material straight while sewing.**

When doing it on socks do not pull the elastic too much.



# Gathering of material



## Gathering material

Stitch width: (# 19) 2  
Stitch length: (# 22) 2 (for heavy fabrics up to 4)  
Needle position: (#20) center  
Feed control: MM  
Automatic: (# 14) 0 WWW and MW (# 15)

### Pearl Cord

The pearl cord is threaded through the hole of the embroidery foot (as with elastic thread) and oversewn with zigzag. Contrary to elastic, the cotton is not pulled while sewing but only **afterwards**. (Hold both yarns and gather material.) Always sew two rows at a distance of 2 cm (1/4 inch.).

## Normal gathering

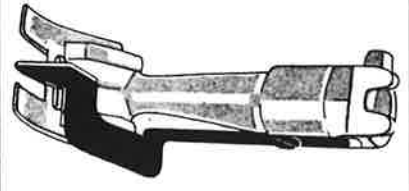
Short pieces or sheer fabrics can also be gathered in this way:

Stitch width: (# 19) 0  
Stitch length: (# 22) 4

Sew two rows of straight stitch, then hold both bottom threads and gather up to the desired width.

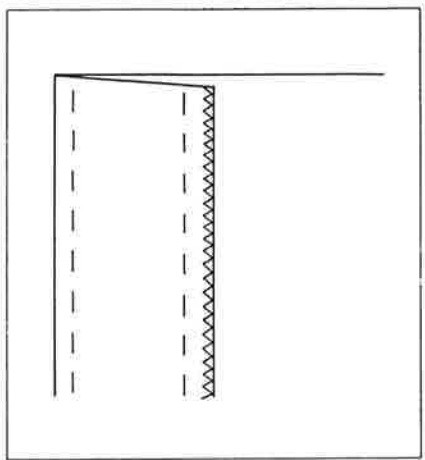
# Blind hem stitch

Blindstitch foot 016  
 Needle: 80-70  
 Thread: 30

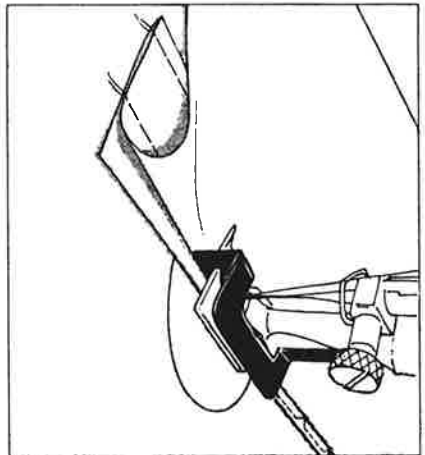


## Basic Setting

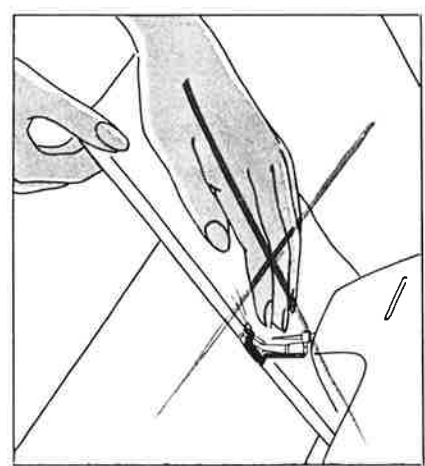
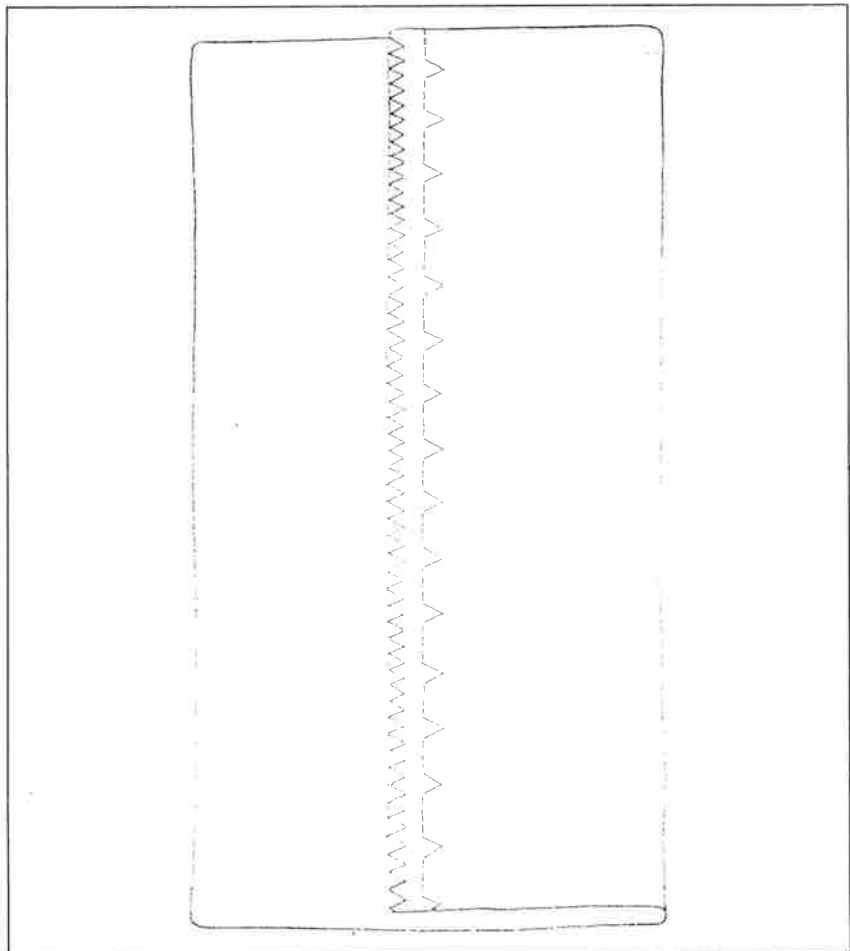
Stitch width: (# 19) about 2 1/2  
 Stitch length: (# 22) about 2 1/2  
 Needle position: (# 20) right  
 Feed control: MM  
 Automatic: Blindstitch  $\overline{\text{TVV}}^{\wedge}$  (1)  
 and 1-20 (lever 15)



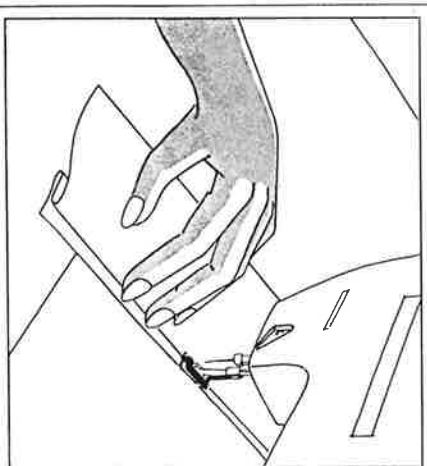
Oversew and prepare the hem as diagram, baste with machine or by hand a 1/4" from edge and press.



This is how the work is placed under the foot. Adjust the zigzag so that the needle just catches the edge of the fold.



Very poor position.



This is the correct way. Fingers of left hand must lie on the folded edge so that they can "feel" the regular feeding of the work. Hold the work very lightly while sewing.

# Buttonholes

## Buttonhole sewing

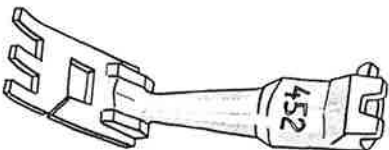
Turn buttonhole knob (21) to position 1. Before starting, move needle downwards, about to foot height, and check whether needle is in the middle of the presser foot. Otherwise turn the hand-wheel until the needle is raised again.

**But in no event alter position of zigzag and needle!**

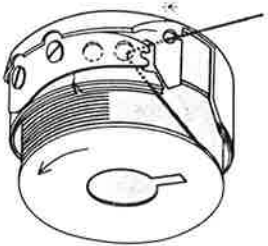
Now push work under foot and place needle exactly at the buttonhole start. Set satin stitch spacing, i. e. stitch setting lever (22) to stitch length almost 0.

It is best to check the satin stitch spacing on a spare piece of material before starting to sew.

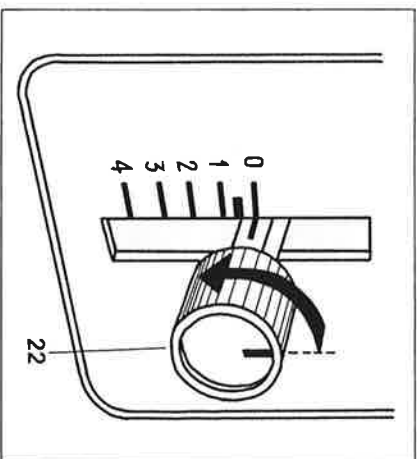
The satin stitch spacing can be finely adjusted depending on material and thread by turning the knob (22).



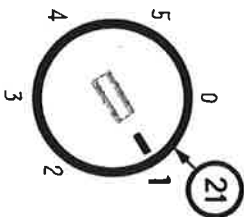
Buttonhole foot 452  
Needle: 80-70  
Thread: 50



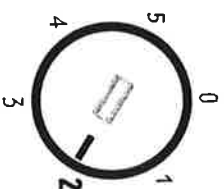
Lower thread through the slotted hole for sewing buttonholes. \*



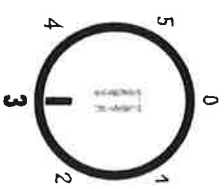
**Sew the first bead forwards.**



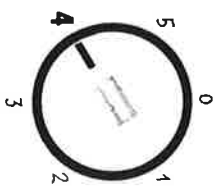
Needle raised  
Set knob to number 2  
Machine sews the bar tack.



Needle raised  
Set knob to 3  
Machine sews second bead backwards.



Needle raised  
Set knob to number 4  
Machine sews the bar tack

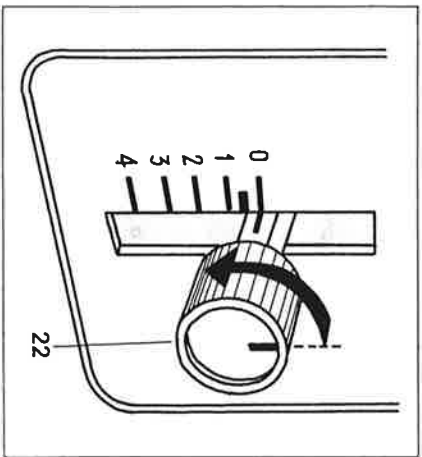


Needle raised  
Set knob to 5 and make several sew-up stitches



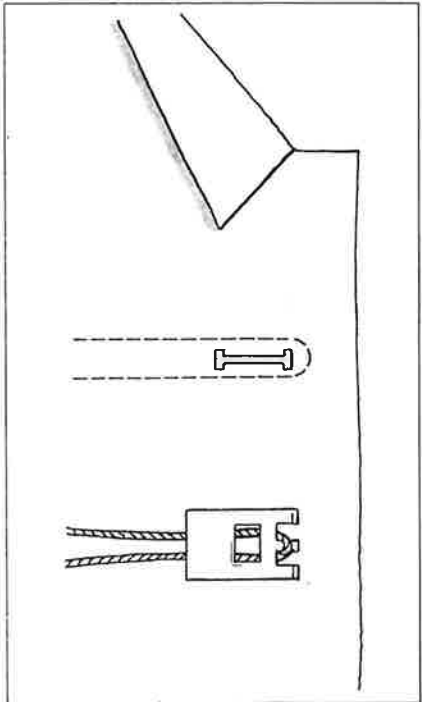
Set knob to 0  
If further buttonholes have to be sewn, knob (21) should be set again to number 1. Remaining procedure as described above.

# Corded buttonholes



## Fine adjustment of buttonhole satin stitch

The stitch density can be adapted in the simplest way to suit the material with stitch regulator knob (22). It is recommended to sew a trial buttonhole on a scrap of the material to be used.

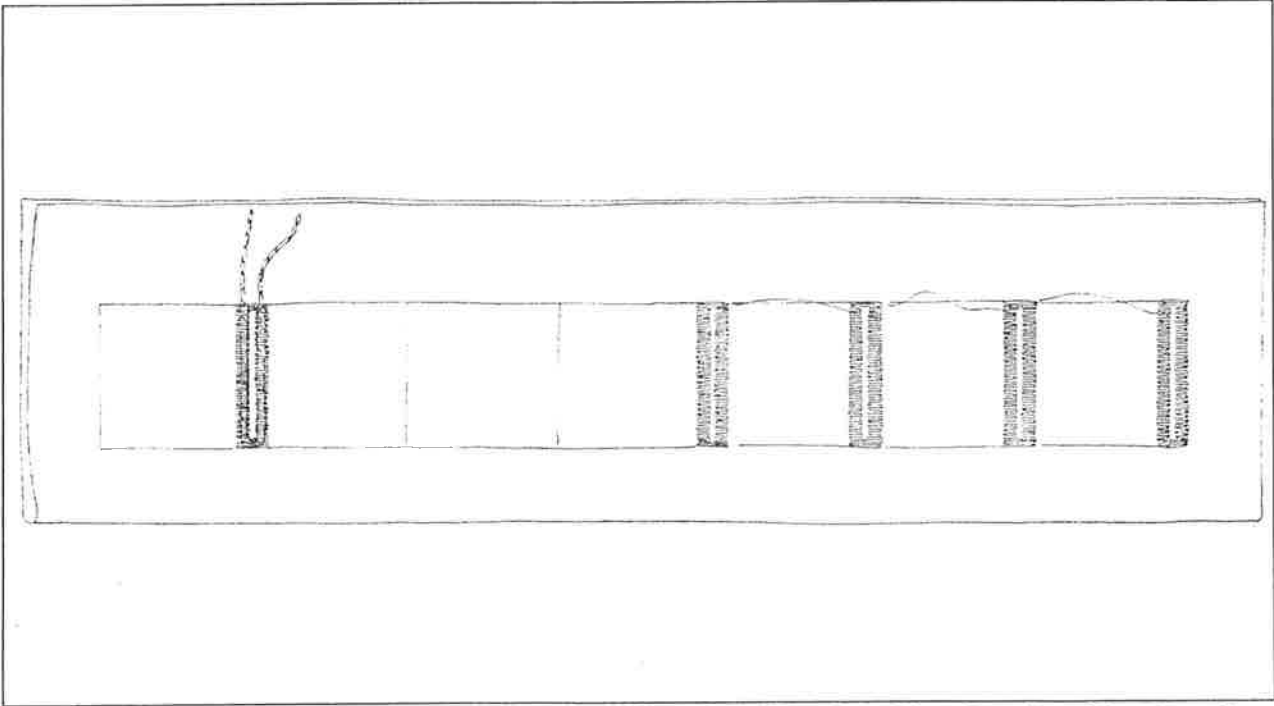


To ensure that the buttonhole is subsequently reinforced where the button pulls, by the loop of the inserted cord, always introduce the work so that the edge of the material lies in front of the presser foot.

1. Engage buttonhole device. Move needle downwards to foot level, to check that it comes in the middle of the foot opening. If not do one stitch by hand, but **never change** zigzag or needle position. Bring work underneath foot and put needle down exactly at the beginning of buttonhole (inner end). Do not lower the foot yet.



2. Place inserted cord above the middle bridge on the presser foot and pull both ends under the foot to the rear. Do not hold cord, as this prevents work from feeding through.



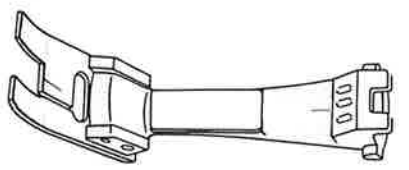
### Patching with running stitch

Needle position: (#20) center  
Feed control: MM

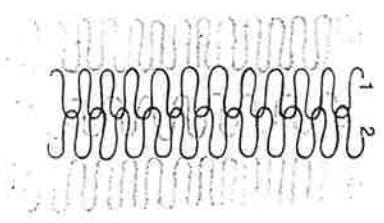
#### 1st run

Stitch width: (#19) 1 1/2-2  
Stitch length: (#22) 1-1 1/2  
Automatic: 0 WWWW (#14) and WW (#15)

Do not cut off damaged part but baste the new patch on right side of work, and sew it on with a small zigzag.



Zigzag foot 000  
Needle: 80-70  
Thread: 60/3-70/3



### Modern "Darning" with running stitch

Stitch width: (#19) 4  
Stitch length: (#22) close to 0  
Needle position: (#20) center  
Automatic: Running stitch and 1-20 (lever 15)  
Feed control: MM

Always underlay a fine fabric. Sew 2-5 rows of running stitch (according to the type of material).

#### 2nd run

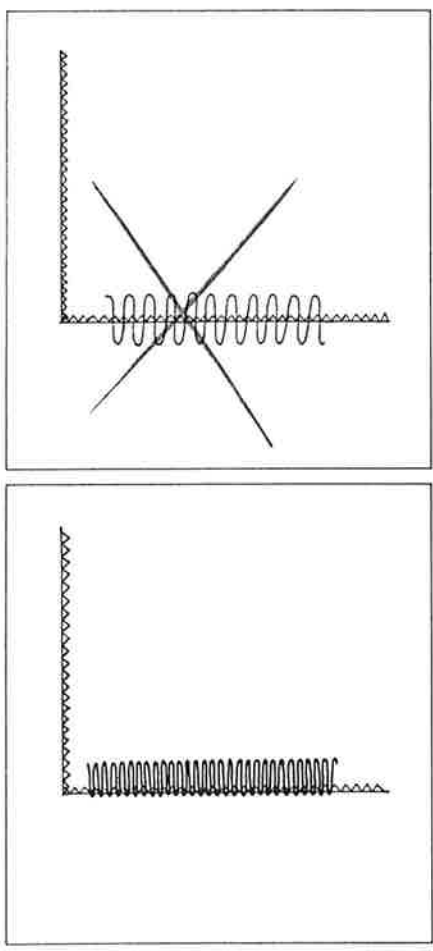
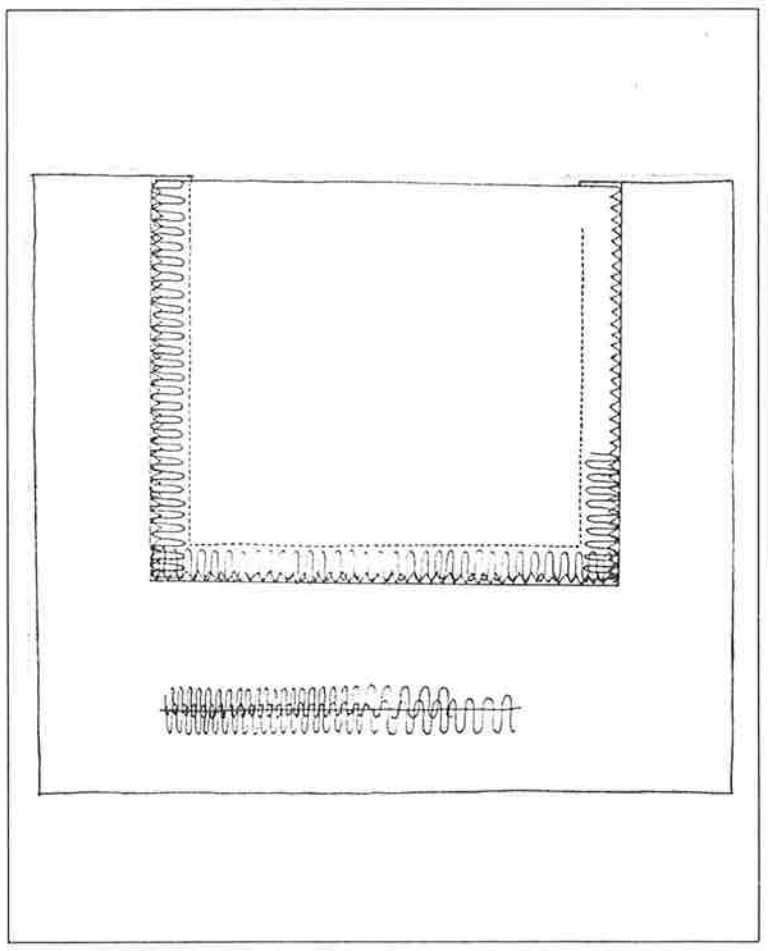
Stitch width: (#19) 4  
Stitch length: (#22) close to 0  
Automatic: Running stitch and 1-20 (lever 15)

Now sew over patch edge with running stitch. Take care to oversew edges correctly.

#### 3rd run

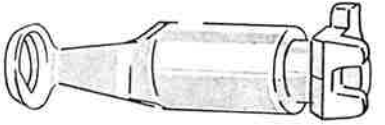
Stitch width: (#19) 0  
Stitch length: (#22) 1  
Automatic: 0 WWWW and WW

Along inner edge of running stitch sew a straight stitch. Cut away damaged part. (Straight stitch makes the trimming much more easy.)



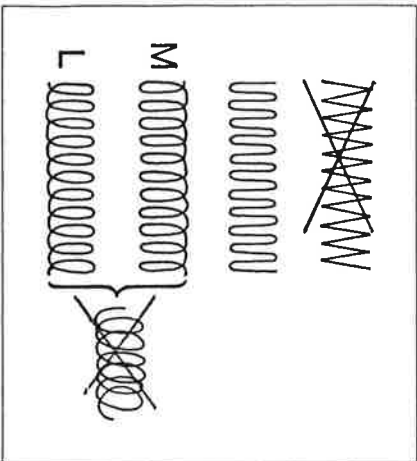
Oversew edges correctly: See diagram. Running stitch should not overlap the edges.

Small  
darning foot 285  
Needle: 80-70  
Thread: 50



## Darning material

Stitch width: (# 19) 0  
Stitch length: (# 22) 0  
Automatic: 0 WWWW and WW  
Feed control: # # # #



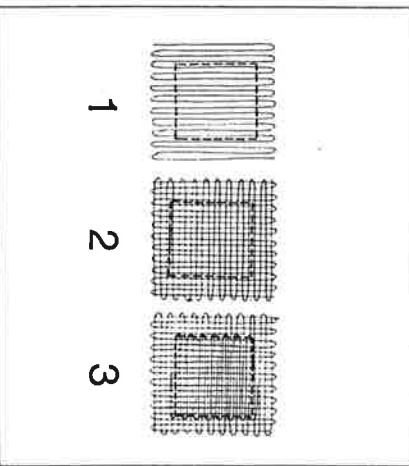
## How to darn correctly

Make the turning points of each row blunt or the stitching will draw little holes at the ends. Beginners may prefer the L or M movement.  
Take care not to get circles.

The quick mastering of this work depends on regular guiding.

Therefore:

- Hold the hoop correctly.
- Always work from left to right (as when writing).
- Move work lengthways (not sideways) for selvedge and wetway.

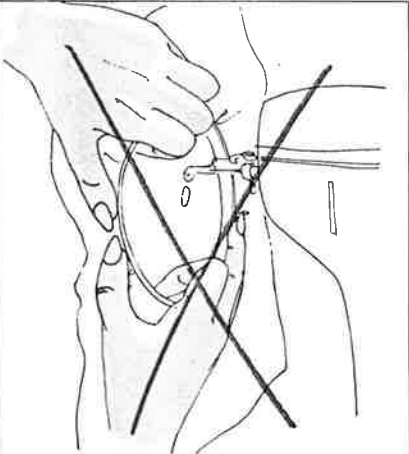


## A careful darn is done in 3 runs

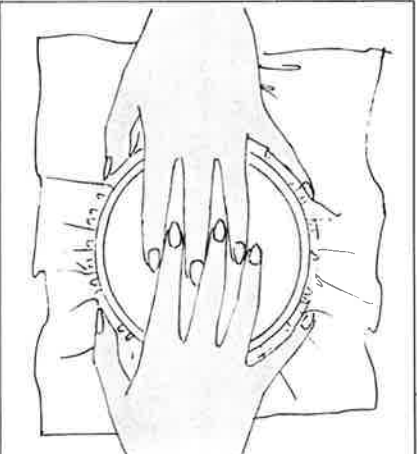
1. Wet-way, only over hole itself.
2. Selvedge-way. (Not too dense or it becomes too thick around the hole.)
3. Same way as 2nd run but only over hole itself losing threads in 2nd run of stitching.

## Main faults when darning

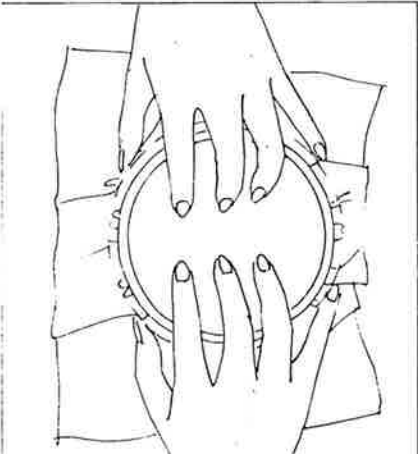
Frequent thread breaking — work guided irregularly.  
Poor stitch (looping on top) — work moved too quickly.  
When wrong side of work is "grainy" — you are moving the work too slow.



**Do not hold hoop like this.**  
This will produce irregular guiding with frequent thread breakage.

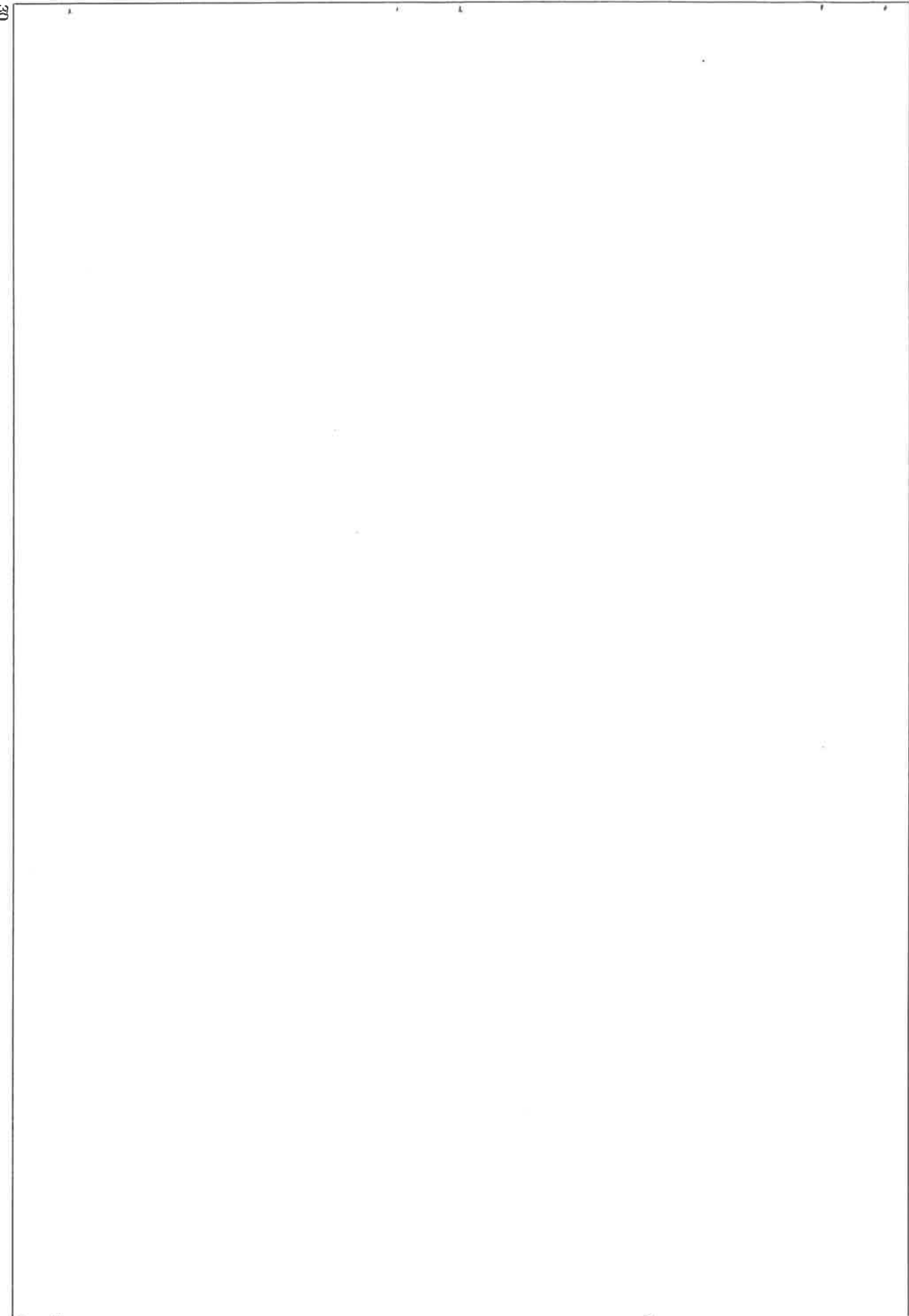


... but like this.  
Whatever is to be guided must be firmly held.  
Thumb facing the frame (slightly bent) side of little finger to the frame.  
Starting position of the fingers as in the picture — opposite one another.



Then pulled back a little.  
The frame is **guided** however by the outer fingers.

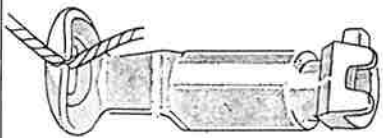
Dear Berrina Customer,  
We are sure you will enjoy your Berrina even more now that you have learned how to use it. This modern machine has an enormous potential. The second half of your Berrina book describes supplementary jobs that can be carried out on the Berrina. Some of them require extra accessories which are provided against additional cost. Your Berrina dealer will be glad to help.





# Darning with wool

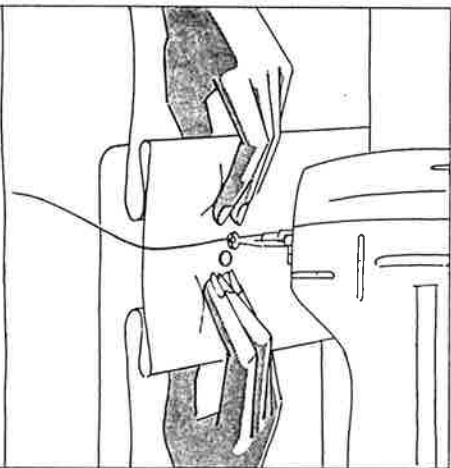
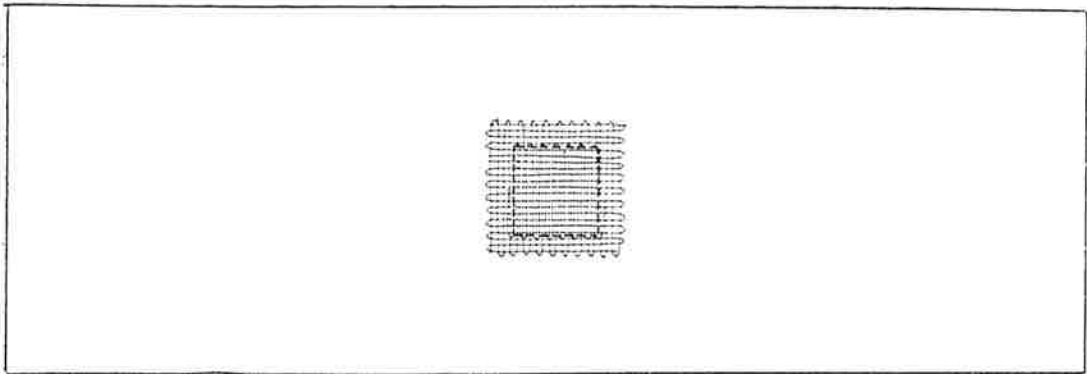
Wool darning foot 272  
 Needle: 80—70  
 Thread: 50  
 (For Terry Cloth use strands of untwisted thread instead of wool)



## Darning of Woollens and Terry Cloth (towels)

Stitch width: (# 19) 3—4  
 Stitch length: (# 22) 0  
 Needle position: center  
 Automatic: 0 WWWW and WW  
 Feed control:

Thread machine with matching thread. Lay the wool in the slot of the presser foot. The wool will then be guided automatically.



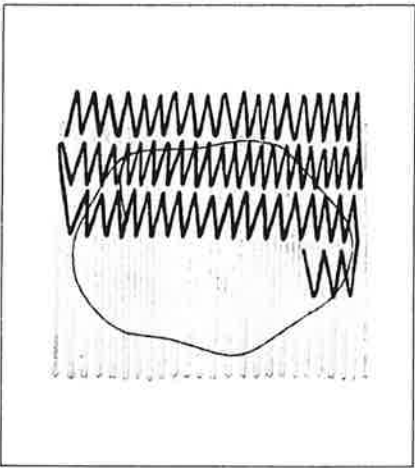
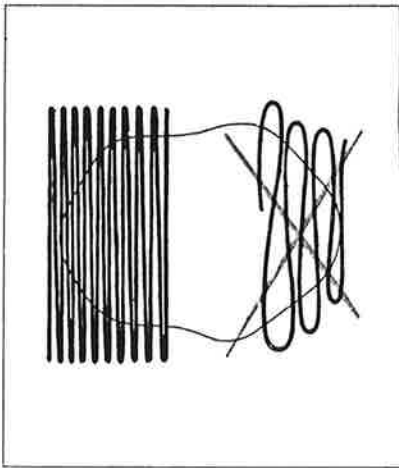
### 1st run: Applying the wool

Start the work on the left, a little above the hole. Stitch down the wool with one or two stitches, and leave the needle down.

Hold the area to be mended correctly. Do not push the work to and fro on the machine, but hold it taut while you guide.

When applying the wool bear the following points in mind:

- Do not make too deep a curve at the ends or the threads will be too far apart.
- Apply the wool threads close together over the hole (they may even lie slightly over one another). Always move work sideways (left to right and vice versa).

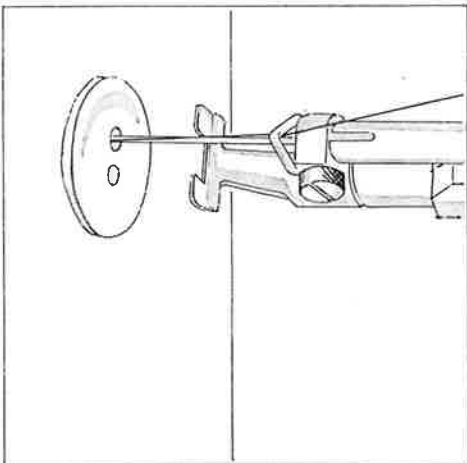
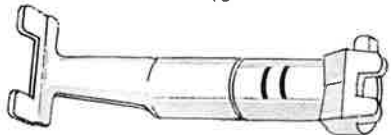


### 2nd run: Oversewing the threads

Cut the wool at the presser foot. Hold work again as before. Now sew across the new wool threads with a zigzag. The zigzag rows should not overlap nor lie apart from one another.

# Sewing on buttons

Button presser foot 152  
 Needle: 80  
 Mercerised sewing  
 thread: 60/3—70/3  
 or  
 embroidery  
 thread: 30—50



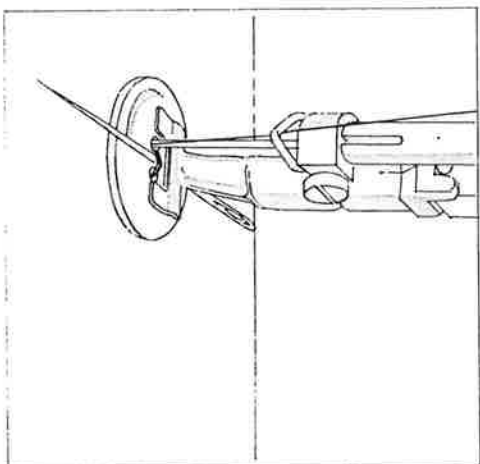
## Sewing the button on

Stitch width: 3—4  
 Stitch length: 0  
 Needle position: left  
 Automatic: 0 WWWW and MW  
 Feed control: lowered

Every zigzag presser foot can be used for button sewing. However, those who sew buttons on often will find the button presser foot superior. The wide gap in front allows a clear view.

Slide piece of work under the presser foot. Place button on marked spot and let needle into the left hole. Then lower presser foot.

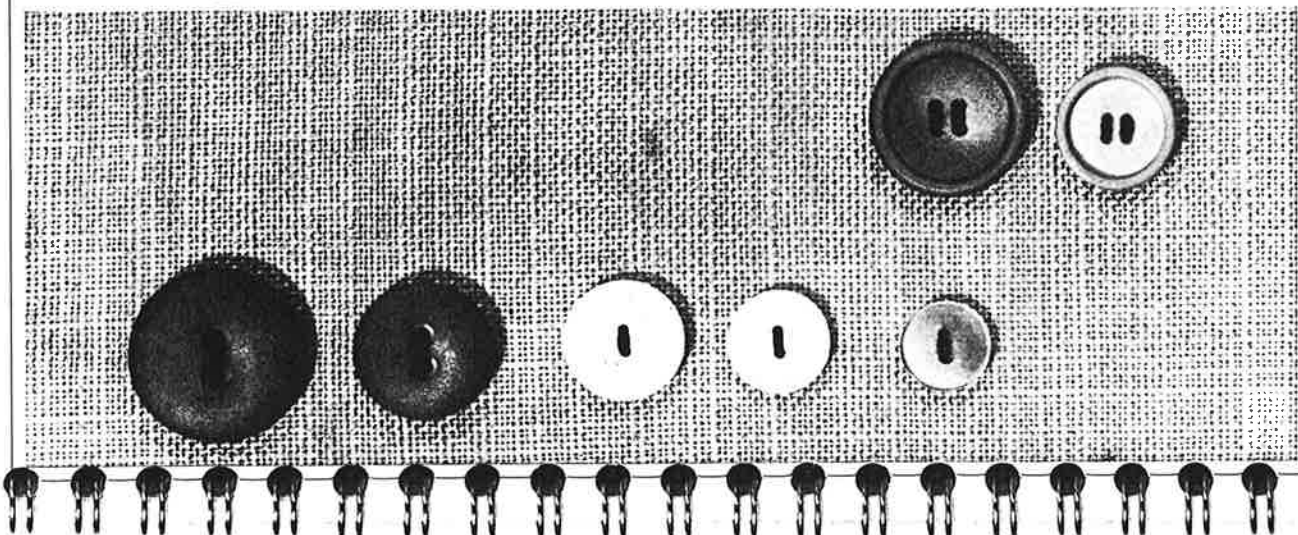
The zigzag width is nearly always 3—4 as the distance between the holes is usually the same, with the exception of decorative buttons.



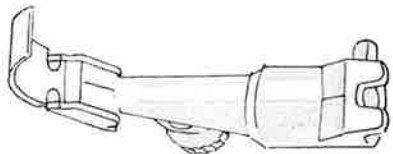
Turn hand wheel until needle is in its highest position. Adjust zigzag width and make a trial stitch turning hand wheel by hand. You will then see whether the width of the zigzag is correct. If necessary, adjust zigzag. Now sew the button on. Less stitches are needed for light weight materials. To finish raise needle. Set zigzag to 0 and sew some fastening stitches.

If a shank is required, lay a darning needle on the button and sew over it. (Add a few more stitches than usual.)

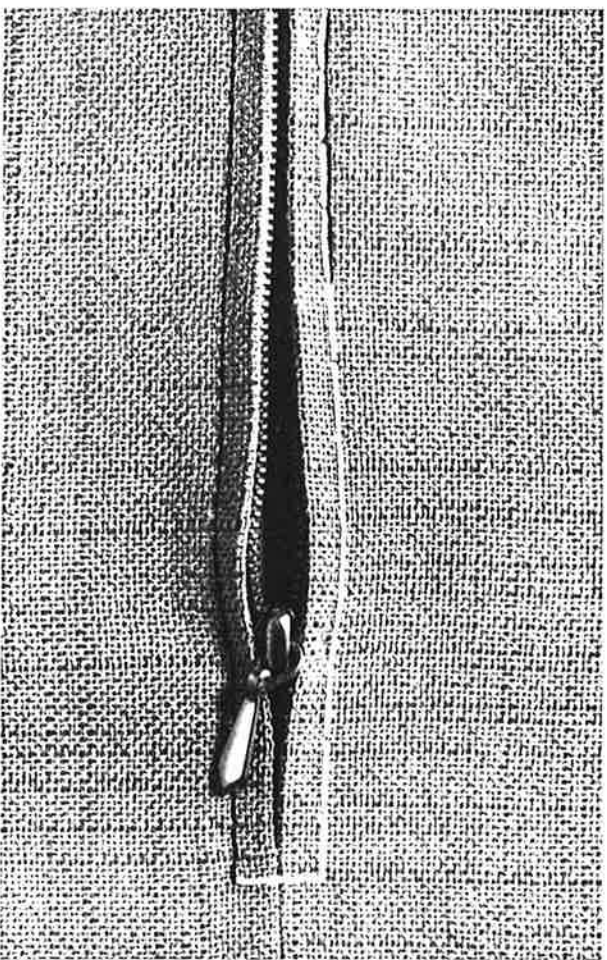
**Method:**  
 Lower drop feed control and set machine. Leave zigzag on 0.



Zipper foot 007  
Needle: 80  
Thread: 30



Stitch width: 0  
Stitch length:  $1\frac{1}{2}$ —2  
Automatic: 0 WWWW and MM  
Needle position: according to side set left or right  
Feed control: sewing MM



The zip is basted in by short stitches so that the teeth are entirely covered by the material. Open the zip before you sew it in.

Sew down each side from top to bottom, once with the needle position right and once with the needle position left.

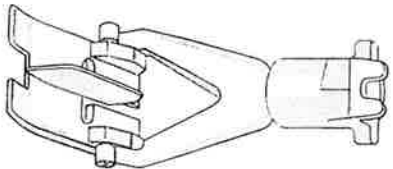
### **Hint: The easiest way to insert a zip**

Sew seam first with a very long straight stitch or basting stitch, then press open. (Damp if necessary.) Finish the edges then unpick seam. (When stitches are very long they are easy to remove.)

When inserted like this both sides remain even and are not distorted.

# Tailor tacking

Tailor tacking  
foot 419  
Needle thread:  
according to  
materials and  
colours



Automatic: 0 WWWW and MW  
Needle position: center  
Feed control: MM

## Tailor tacking with sewing thread

Needle: 80  
Stitch width: 2---about 1 3/4  
Stitch length: 4

## Tailor tacking with basting thread (especially for wool materials)

Use basting thread for top thread only;  
and normal sewing thread for the bobbin.

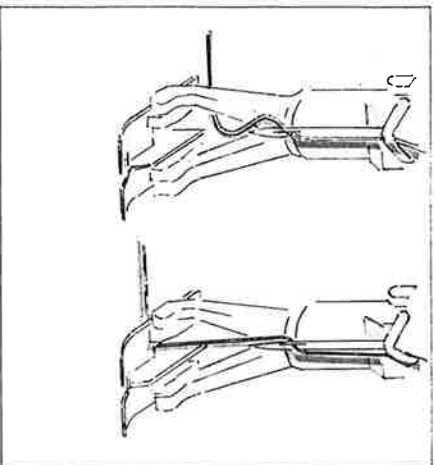
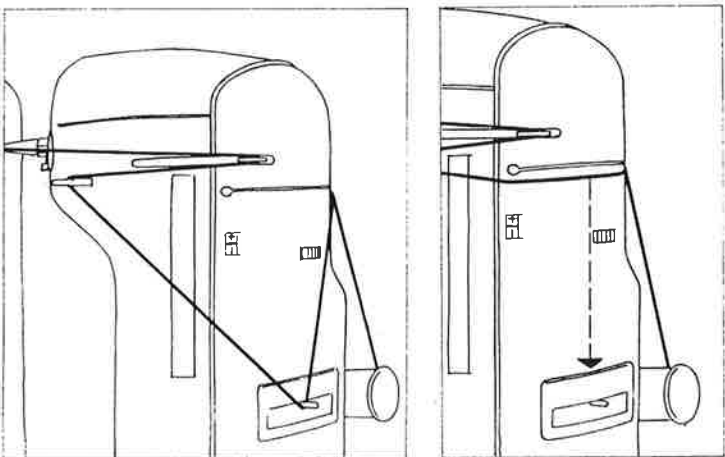
Needle: 90  
Stitch width: 2  
Stitch length: 4

## Tailor tacking with darning thread (for thin materials)

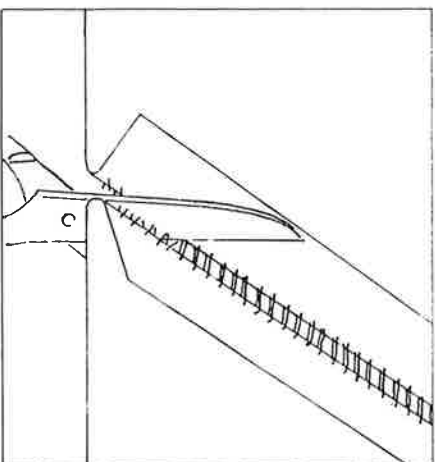
Needle: 70  
Stitch width: about 1 3/4  
Stitch length: 4

### Important preparation

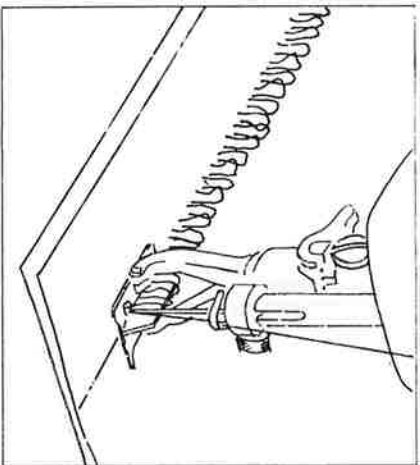
1. First set zigzag and put needle in its highest position. Presser foot is to be attached only after this procedure, in order to avoid damaging the needle.
2. Remove top thread from tension slot altogether and pass round pattern lever 14. When work is finished replace thread in the tension slot.



Draw thread to the rear under the presser foot. Before starting to sew always lay the thread sideways under the presser foot.

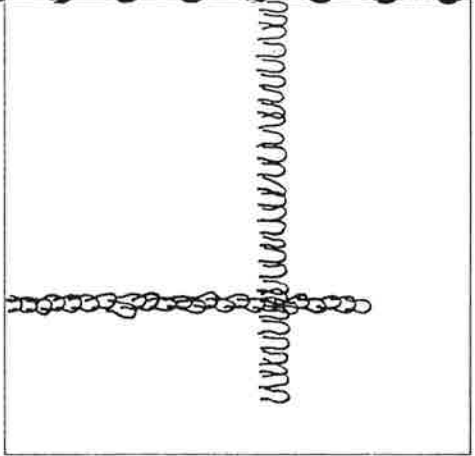


Pull both sides of the material gently apart and cut through the threads.

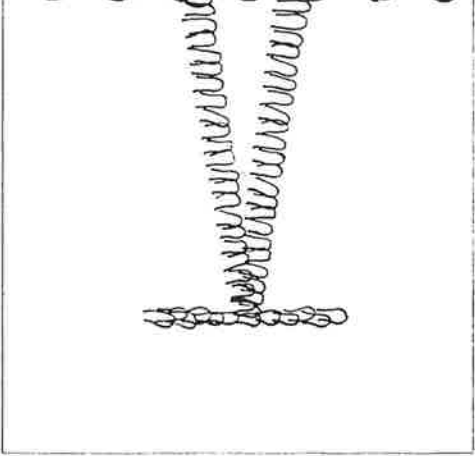


A pattern can be transferred onto the fabric with the aid of the tailor tacking foot, this forms the necessary loops.

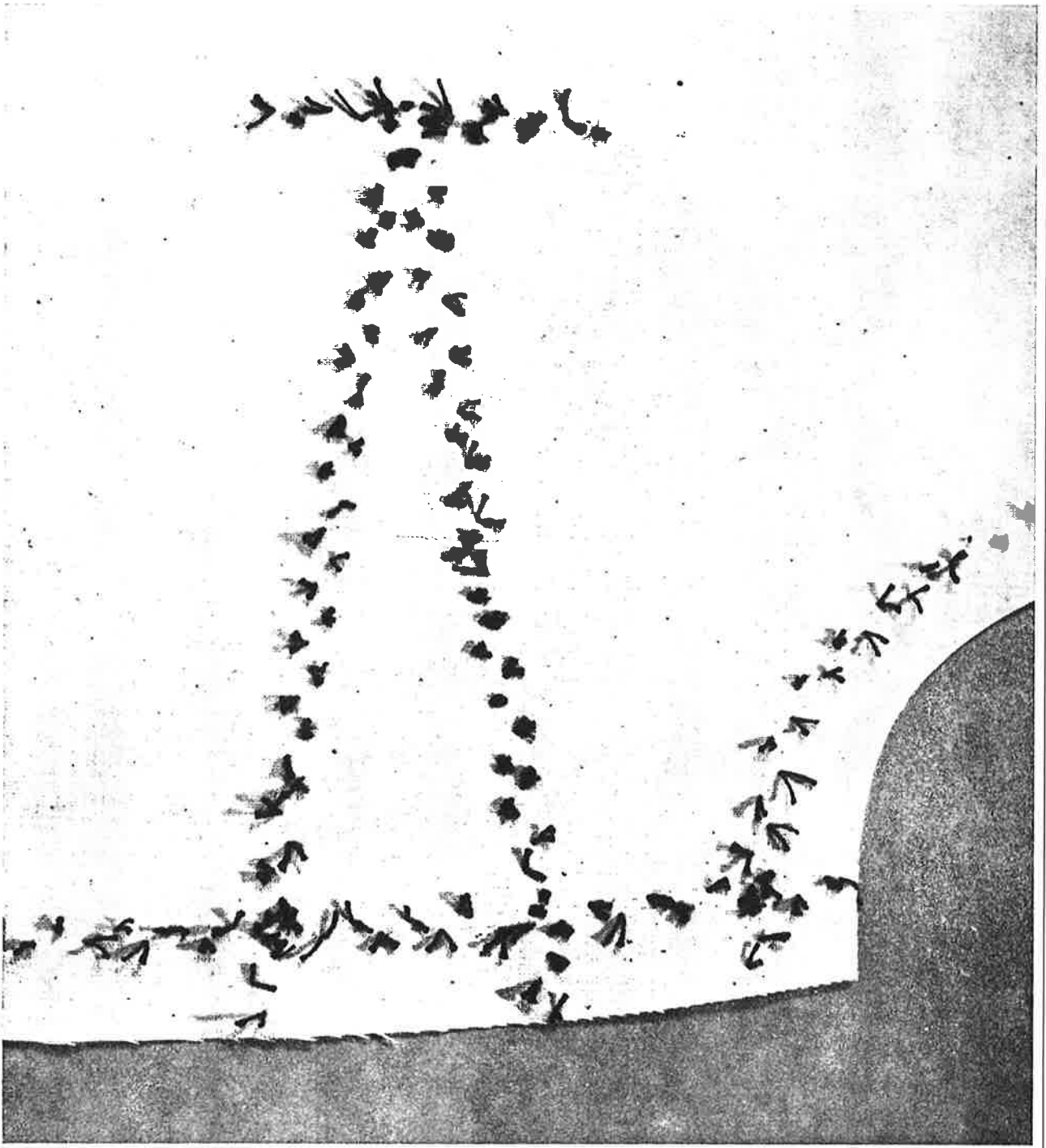
When tacking by hand one works directly alongside the pattern. It is to be recommended when working by machine (saves time) to transfer the pattern onto the material with chalk and then remove the pattern. It is understood that the pieces of material should be pinned down first before basting to prevent slipping.



Mark the corners this way ...

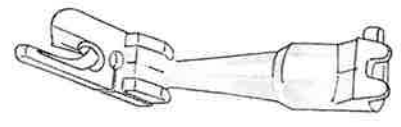


... and the darts like this



# The Hemmer

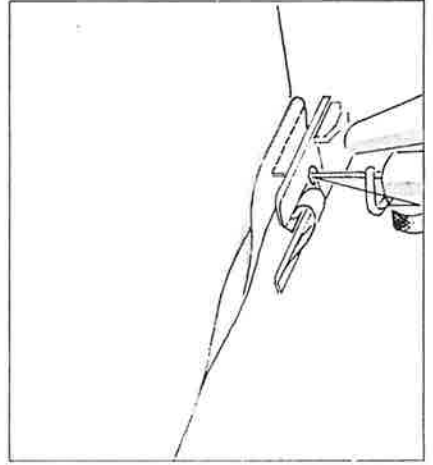
Hemmer: 003  
 Needle: 30 - 70  
 Mercerised sewing  
 thread No. 30



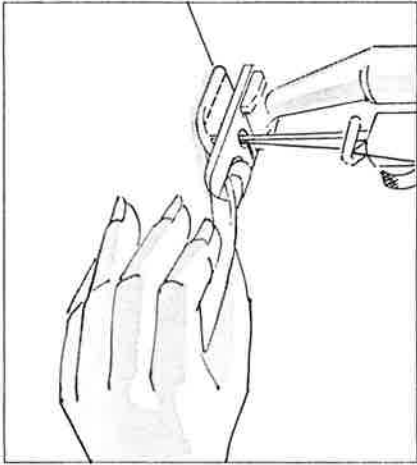
Stitch width: 0  
 Stitch length: 1 1/2--2  
 Automatic: 0 WWWWW and WW  
 Needle position: center  
 Feed control: WW



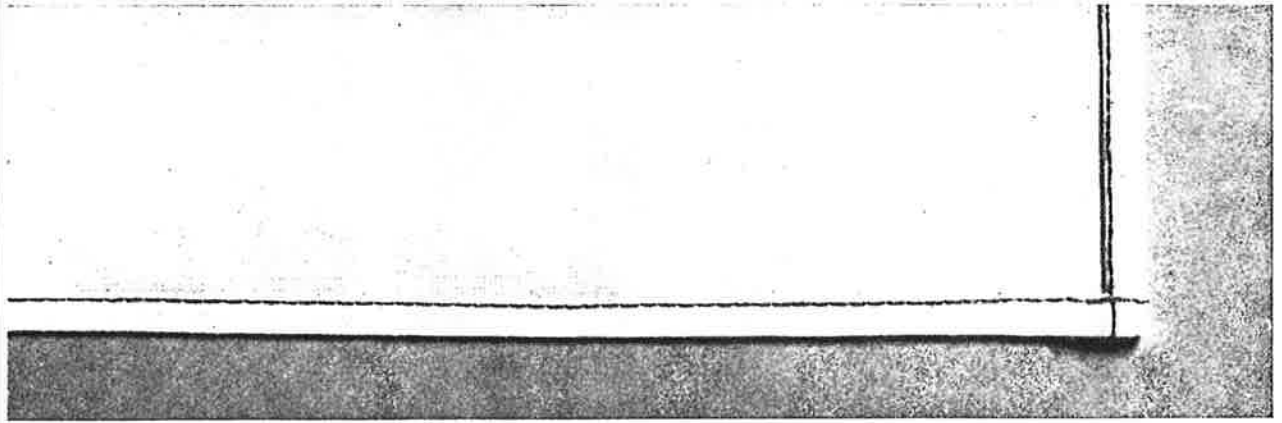
**How to guide the work**  
 When guiding fabric hold it taut and lift it slightly. The edge of the fabric must be vertical and run through the machine in a straight line.



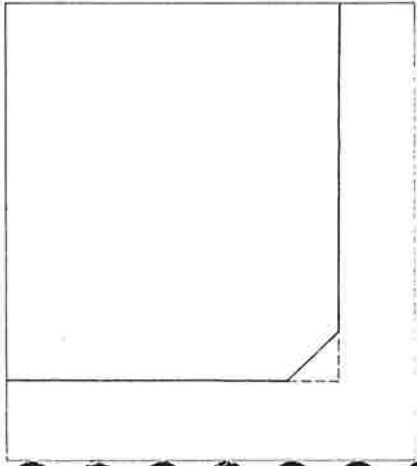
**To begin sewing:** Fold edge of fabric twice (not too wide). Lay work under the presser foot and sew a few stitches.



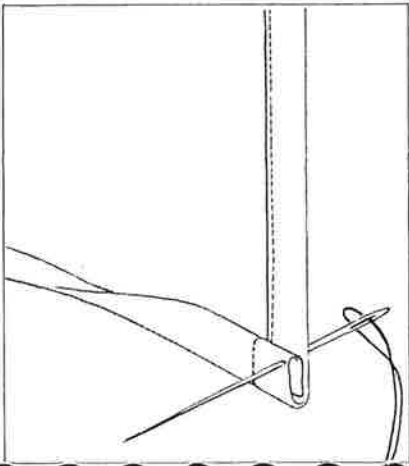
Leave needle in the fabric and lift presser foot. Tautly hold the first fold under the presser foot with the left hand and draw it through the spiral on the presser foot.



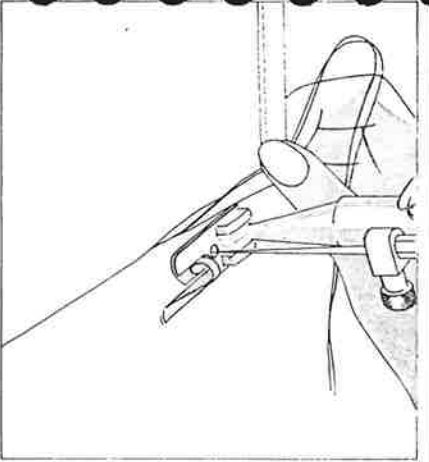
**The corners:** These are sewn in two stages as follows:



First cut a little off (not too much otherwise they will pull apart). Sew first seam.



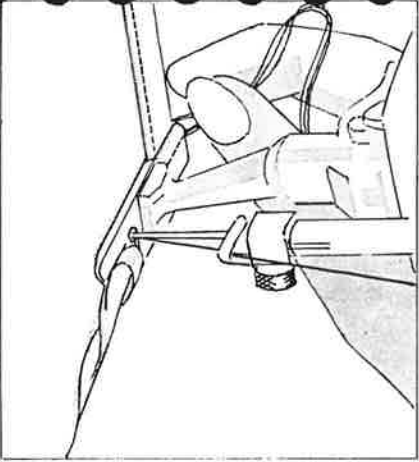
Fold edge of fabric twice and draw a strong thread through by hand.



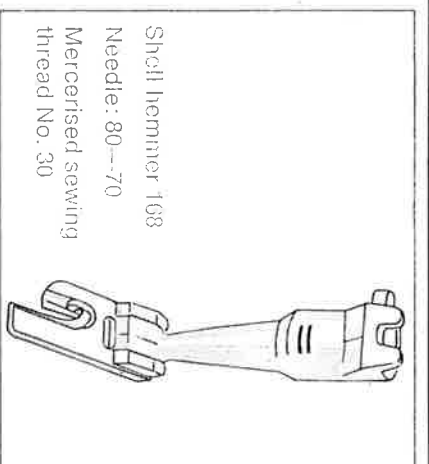
Hold corner (together with thread) with thumb and forefinger of the right hand and lay the work near the presser foot.



With the left hand hold the first fold near the presser foot and draw through the spiral on the foot. Still holding the fabric taut draw it towards you and lay the end under the needle. Stick the needle in and lower foot.



To facilitate sewing on the corner one should hold the tacked thread together with the sewing thread and pull gently until the presser foot no longer lies on the corner.



Shell hemmer 168

Needle: 80—70

Mercerised sewing thread No. 30

Stitch width: 4

Stitch length: 2 1/2—3

Automatic:

0 WWWW and WW

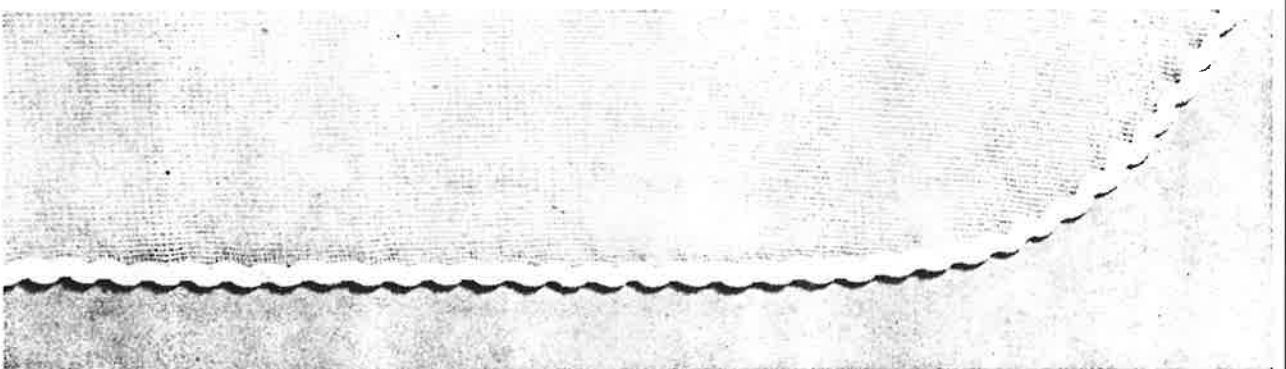
Needle position:

center

Feed control:

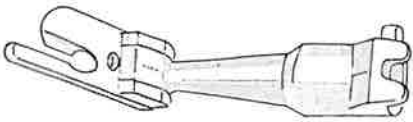
WW

Use the same method as for normal hemming.

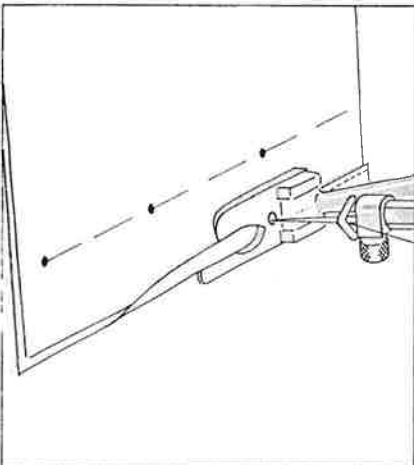


# The Lap Hemmer (Feller)

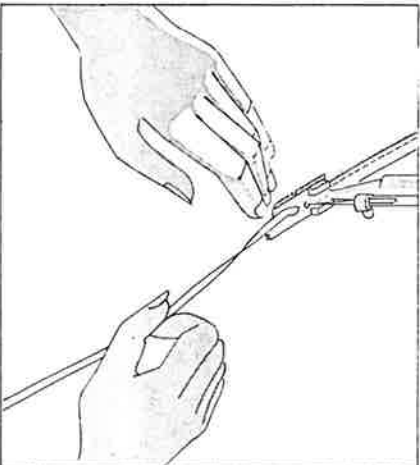
Lap hemmer 174  
 Needle: 80—70  
 Mercerised sewing  
 thread No. 30



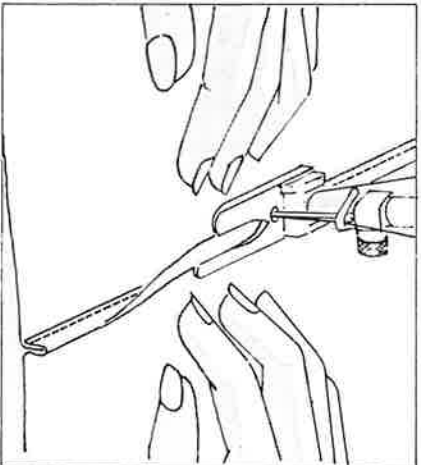
Stitch width: 0  
 Stitch length: 1 1/2—2  
 Automatic: 0 WWW and WW  
 Needle position: center  
 Feed control: mm



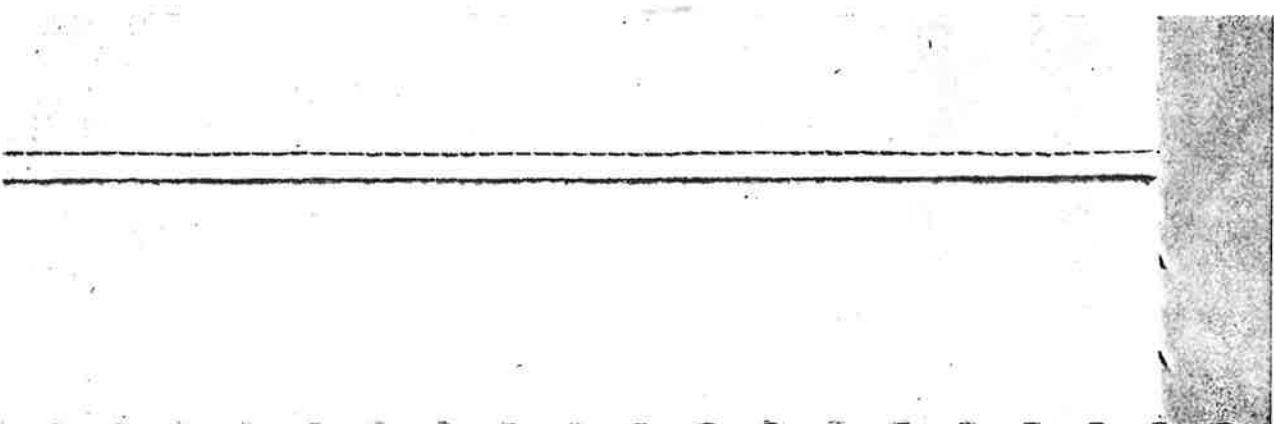
**First operation:**  
 Pin both pieces of fabric together so that the piece underneath projects by 3 mm (1/8"). Fold overlapping piece over the top piece and slide it under the presser foot. Sew a few stitches. Leave needle in the fabric, lift presser foot and guide fabric into the foot.



When sewing make sure that the same width of material enters the feller all the time. Guide the fabric as you do when sewing a hem.

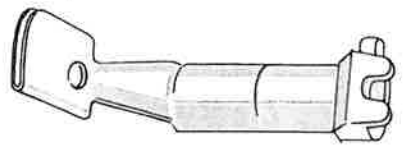


**Second operation:**  
 Now iron seam well, guide it again into the feller and sew the second row of stitches. Pull fabric slightly sideways on both sides of the feller.

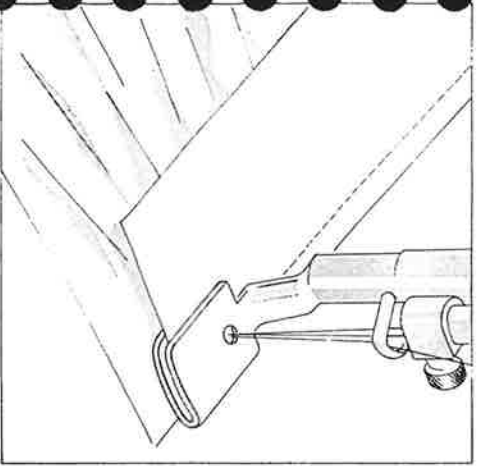




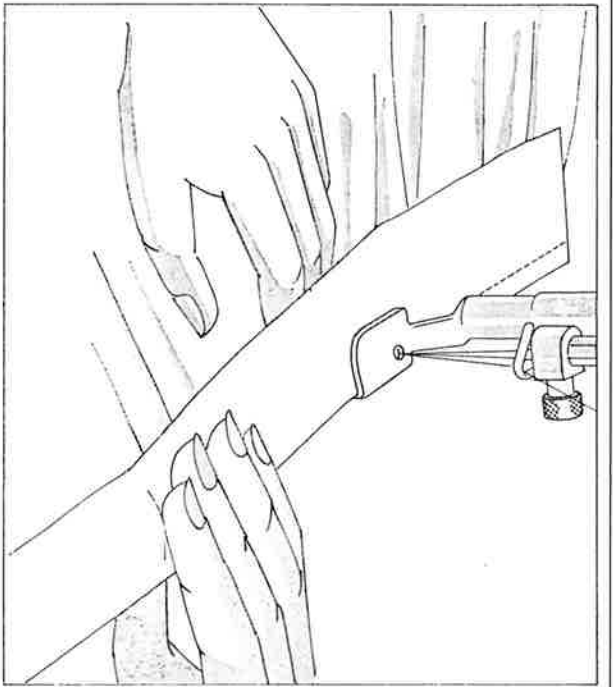
Presser foot:  
Gatherer 179  
Needle: 80—70  
Mercerised sewing  
thread No. 30



Stitch width: 0  
Stitch length: 1½—4  
Automatic: 0 WWW and MW  
Needle position: center  
Feed control: mm

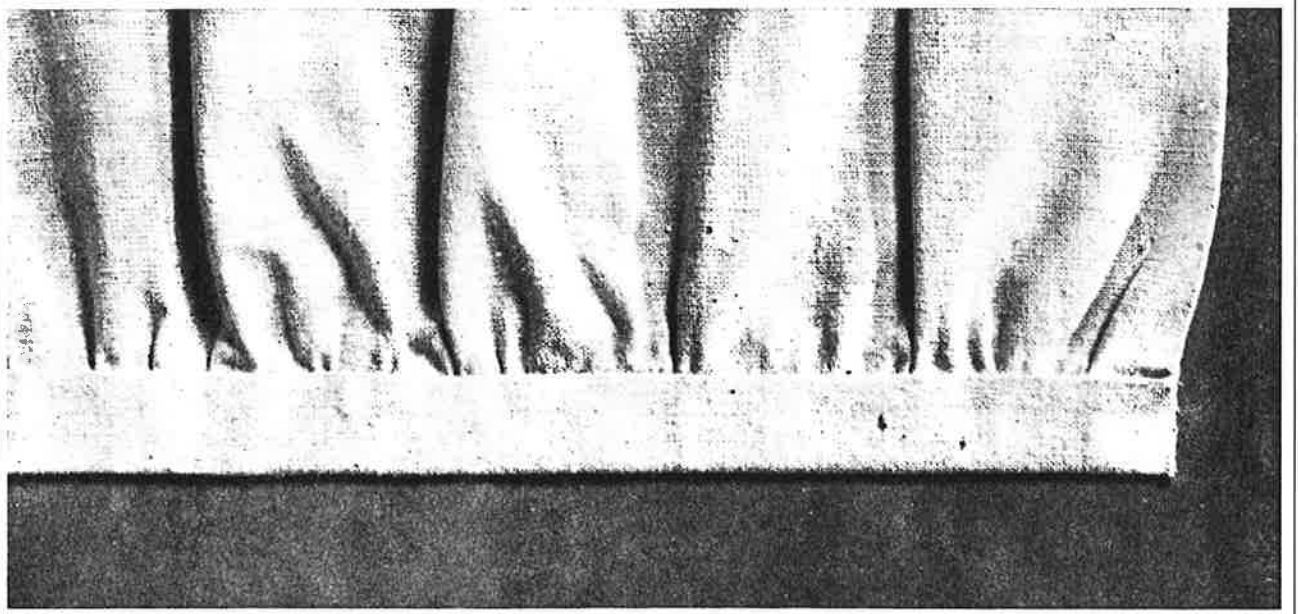


The material to be gathered always lies under the foot and the flat piece in the slot.

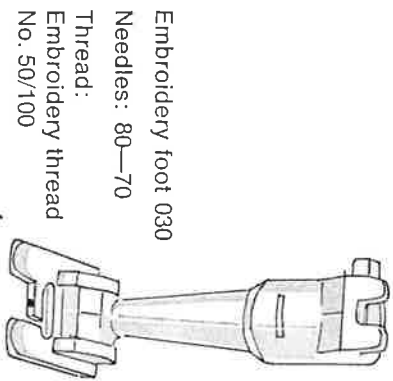


The flat piece of material is inclined to slip out of the slot. In order to avoid this the work should be guided as shown in the illustration, by holding the lower piece with the left hand and the upper piece with the right hand. Always pull slightly towards the right hand corner of the presser foot.

Calculation: The amount of gather depends on the length of the stitch. The longer the stitch the tighter the gather. For tight gathering the upper piece of material can be pulled a little.



# Applique work



Embroidery foot 030  
 Needles: 80—70  
 Thread:  
 Embroidery thread  
 No. 50/100

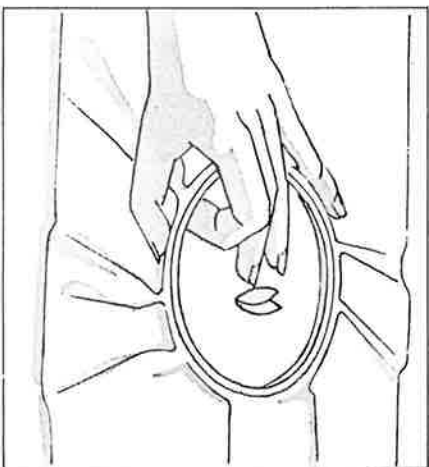
Automatic: 0 WWW and WW  
 Needle position: center  
 Feed control: MM

## Guiding the work

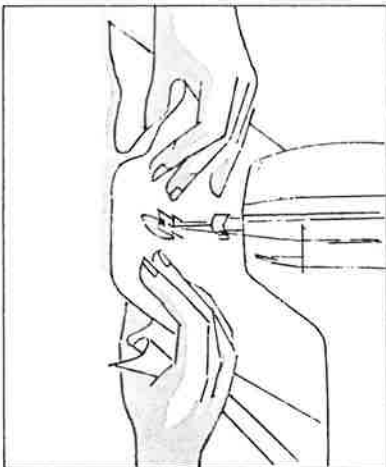
You may work with or without the frame; however, taut material can be guided more easily.

**Important:** The machine feeds automatically but only in a straight line. For curves the work must be guided by hand i. e. the frame or the material must be lightly held by one or both hands and should not be pressed onto the sewing table.

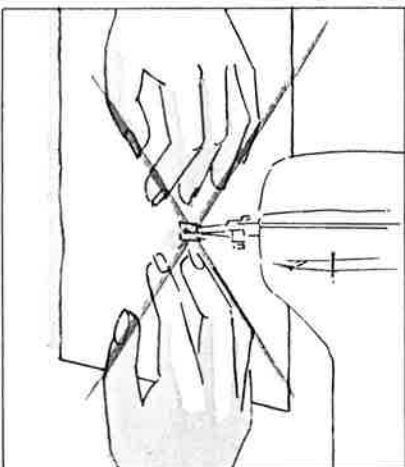
**Guiding with the frame:** The left hand must hold the frame steady, because often the frame is guided during sewing with this hand only.



**Guiding without frame:** «You can only guide the work if it is held lightly.» Nevertheless, it is essential to hold the material itself rather taut. This is the only way the work can be turned as the design requires.



**Correct:** Place thumbs under the material. Make a fold if the piece of work is large (see diagram). Guide near the presser foot.



First put your hand in the position as when darning. Then draw forefinger back to the inner edge of the frame. Extend the middle and the ring fingers. Your hand now has complete control of the frame and the best possible freedom of movement.

**Notice:** Do not place the forefinger parallel to the thumb, otherwise the movement of your hand will be restricted.

## Working sequence

**Preparation:** Trace design on the wrong side of the material with the aid of special tracing paper. See that the motive is in reverse. The design can also be traced onto iron-on Vilene and the Vilene ironed on to the wrong side of the material. (Especially recommended for rough and irregularly woven fabrics that are difficult to draw on.) If a design that is to be used often trace on thin Vilene and then transfer it onto the material. Vilene can be tacked on to a garment to stiffen it if desired.

### 1st run:

Stitch width:  $\frac{1}{2}$ —1  
 Stitch length:  $\frac{1}{4}$ — $\frac{1}{2}$

Tack material for applique onto the right side.

1. Sew along the traced lines on the wrong side.

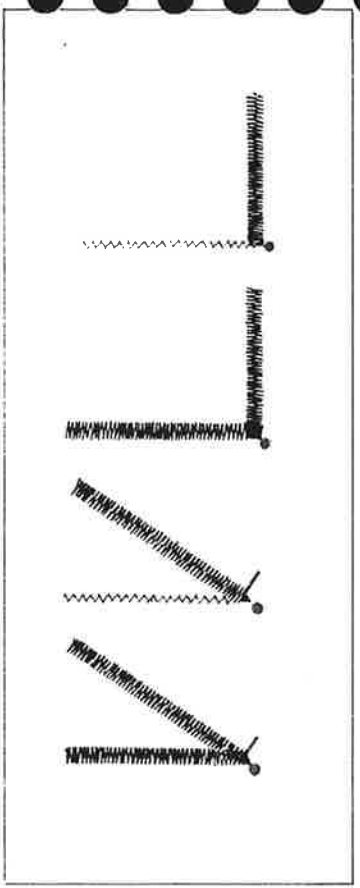
2. Turn to right side and cut away neatly along the sewn lines any surplus applique material. (At the same time remove the frame.) Hold scissors correctly.

### 2nd run:

Stitch width:  $1\frac{1}{2}$   
 Stitch length: almost 0

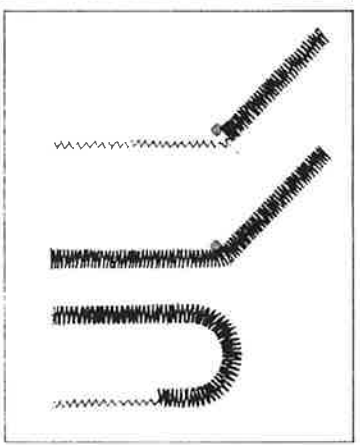
Cover the cut edge on the right side with Satin Stitch. Sew corners and small curves, stitch by stitch (using hand wheel).

Finish by tracing the lines through the were not appliqued and sew from the right side.

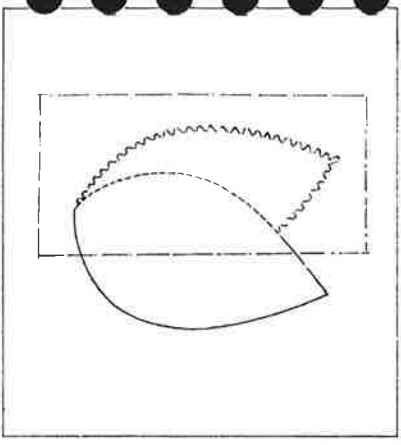


**Sewing the corners**

**1. Rectangular corner:** Put the needle on the outer edge, turn the work and continue sewing. The corner will now be oversewn.



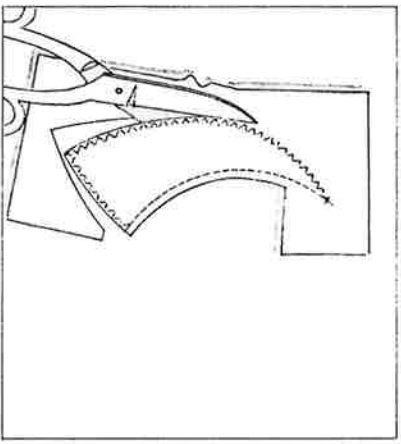
**2. Pointed corner:** Stop sewing  $\frac{1}{2}$  cm ( $\frac{1}{8}$ " ) in front of the corner. Then turn back zigzag while sewing onto 0. Raise presser foot and turn the material. Set zigzag onto  $1\frac{1}{2}$  again and carefully continue sewing.



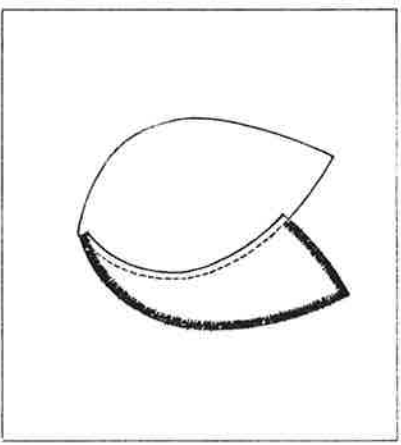
**Multi-colour applique work**

**The lower part:**

1. Only this part of the applique material should be tacked on. Sew around: Where the colours overlap use straight stitch and zigzag the other contours.

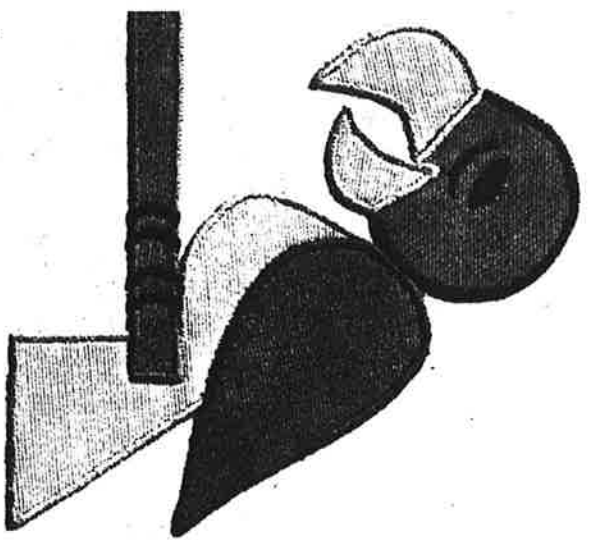


2. Trim away surplus applique material, cutting as closely as possible to zigzag stitches. Where a straight stitch has been used leave  $\frac{1}{2}$  cm ( $\frac{1}{8}$ " ) beyond stitches.

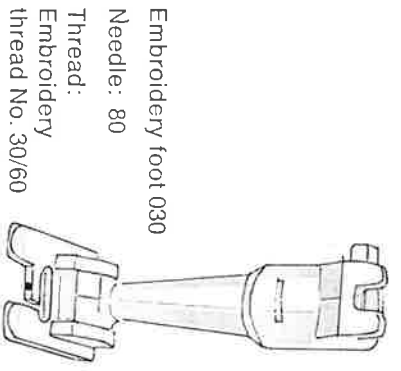


3. When covering the contours leave the straight stitched edge uncovered. This will be covered again by the next part.

**Top part:** Complete in the usual manner for applique work.



# Satin Stitch embroidery

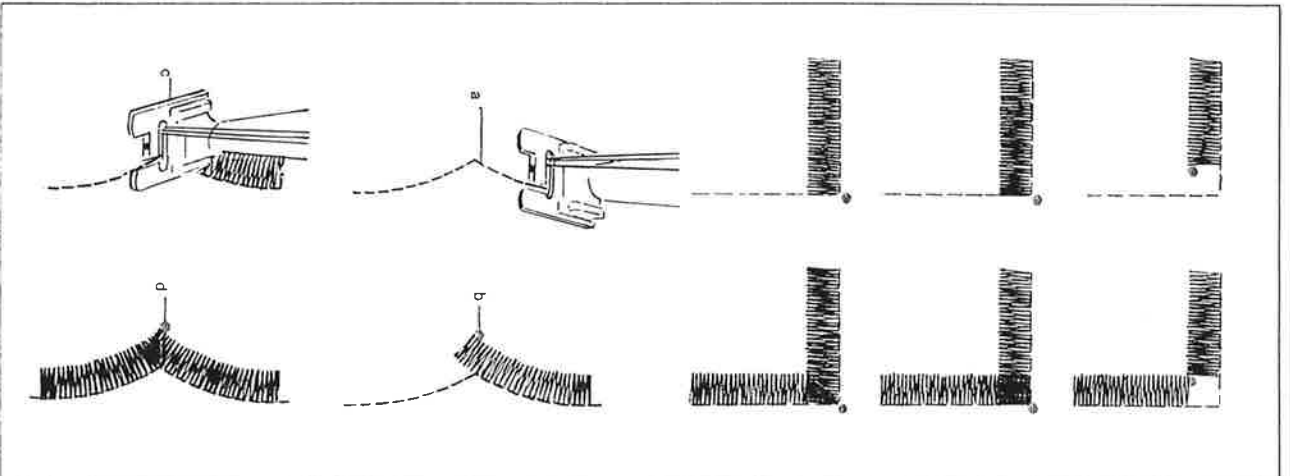


Stitch width: 4  
 almost 0  
 Automatic: 0 WWW and MW  
 Needle position: center  
 Feed control: MW

**Remember the following**  
 when embroidering over satin stitch  
 and ornamental stitch seams:

The stitch length for embroidery is to be adjusted to a short length. The material may block progress when the foot moves over a seam already embroidered. By guiding the work close to the foot and assisting its movement the difficulty can be removed.

If the foot is almost over the edge of the seam, hold the material back a little otherwise the foot will glide away and this will result in a long stitch (which will look as if a mistake has been made).



## Satin stitch corners

- 1. Open corner:** Sew until a space the width of the stitch is left in the corner. Place needle on the inside edge. Turn work and continue sewing.
- 2. Closed, oversewn corner:** Sew to the corner. Put needle on the outer edge, lift presser foot and turn work. Lower foot again and continue sewing (help a little by placing finger near the foot, see embroidery over satin stitch or embroidery seams).

**3. Corner with diagonal design** (rectangular): Sew to the corner. Place needle on the outer edge. Lift foot, turn sewing work. Needle position, left or right (according to design) sew zigzag on 0. Lower foot. **Now whilst sewing slowly** turn zigzag onto 4 again; sewing slowly!

**4. Corner with diagonal design** (for festoonery). Needle position left!

a) Lay the work under the foot so that the design can be seen in the slot that runs lengthwise. b) Sew to the corner, i.e. till the needle is about to make a stitch from the left on the line drawn to assist you. c) Raise foot, turn work and turn zigzag to 0. Lower foot again. Make sure that the design appears once again in the slot that runs lengthwise. d) During sewing turn the zigzag again slowly onto 4; sew slowly!

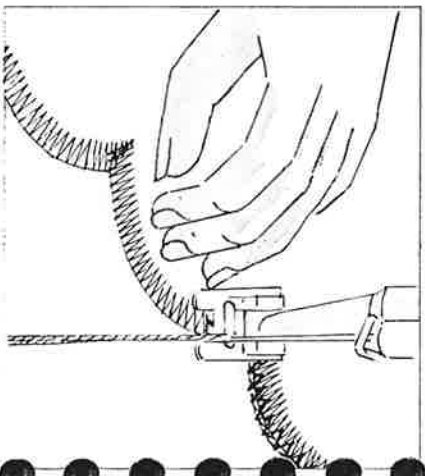
**Borders for table-cloths, table-napkins, doilies etc.**

## Border scallops

**Preparation:** Draw the scallops with the aid of a cardboard stencil onto the material. Mark all the corners with white crayon. Underlay with paper.

**1st run:**  
 Stitch width: 4  
 Stitch length: almost 0  
 Sew satin stitch seam. Remove paper and carefully cut round the scallops.

**2nd run:**  
 Stitch width: 2½—3  
 Stitch length: 1—1½  
 Oversew edge with zigzag. At the same time guide a pearl cord along the edge making sure that it does not slide over or under it.



**Note:** The machine feeds in a straight line and not in curves. The border corner must therefore be held straight and the scallop edge must be guided on the straight line. **Guide slowly and near the foot.**

## Straight border

### Preparation:

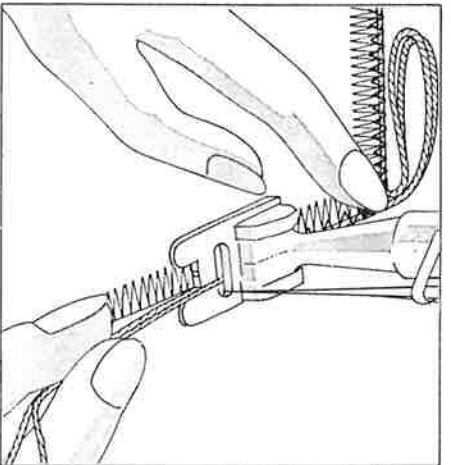
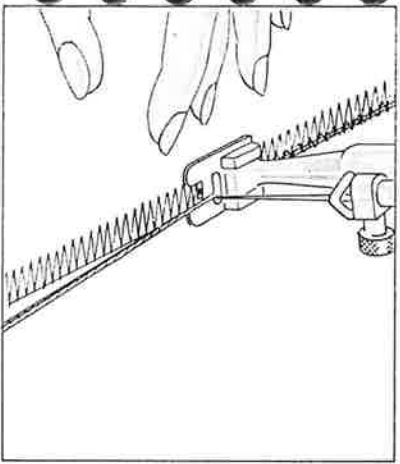
Draw border line, underlay with paper.

### 1st run:

Stitch width: 4

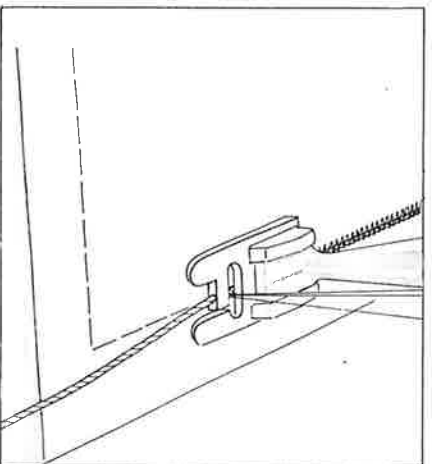
Stitch length: almost 0

Sew satin stitch seam. Remove paper and cut away surplus material.



**Corner:** Sew to the corner. Lower drop feed control. Sew three stitches using the hand wheel. Leaving the needle in the work at the inside edge, raise foot, turn work. Make a loop with the cord, lower foot and sew further three stitches. Raise drop feed control and continue sewing carefully. Pull on the loop until the foot no longer lays on the corner. To make loop disappear pull the ends of the cord. (See diagram.) Push corner stitch over the corner and continue sewing.

## Narrow border



### 1st run:

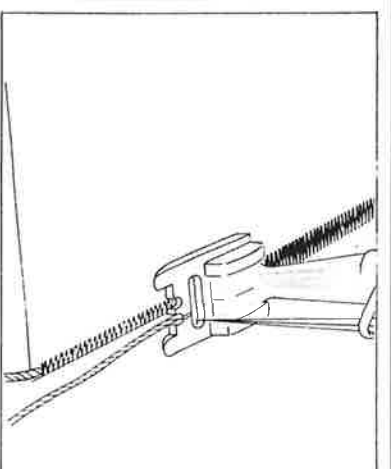
Foot: Embroidery foot

Stitch width: 1 1/2

Stitch length: 1/4

Needle position: center

Draw perl yarn No. 5 or 8 (according to material) through the hole of the embroidery foot. Sew seam with satin stitch. Cut surplus material away carefully.



### 2nd run:

Foot: Small button-hole foot

Stitch width: 2—3 (according to material)

Stitch length: almost 0

Needle position: center

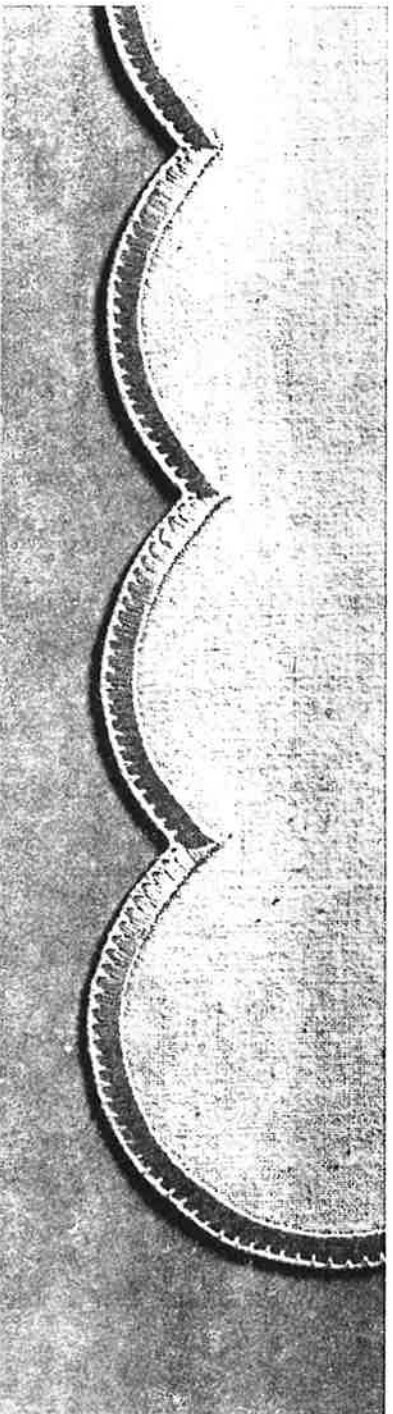
Now completely cover the first satin stitch seam with a second. Lay the work under the foot in such a way that the satin stitch seam is in the **left** slot of the foot. Place the cord (mostly 1-ply) into the **right** hand slot of the foot. In this way the yard is joined exactly to the edge. Make the corner in the same way as with the wider border.

### 2nd run:

Stitch width: 2 1/2—3

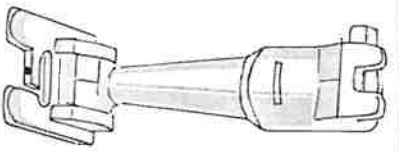
Stitch length: 1—1 1/2

Oversew edge with zigzag. At the same time guide through pearl cord (No. 8 three- to five-ply) taking care that it neither slides over or under the edge.



# Embroidering with the automatic

Embroidery foot 030  
 Needle: 80  
 Thread:  
 Embroidery  
 thread No. 30/60



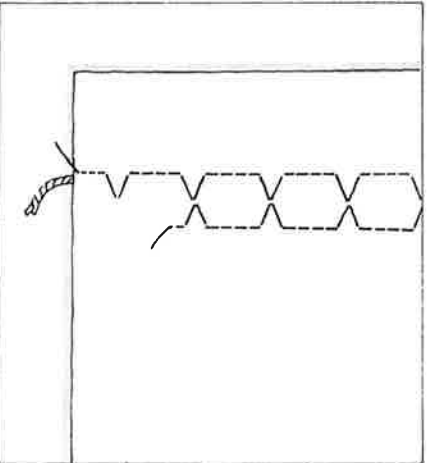
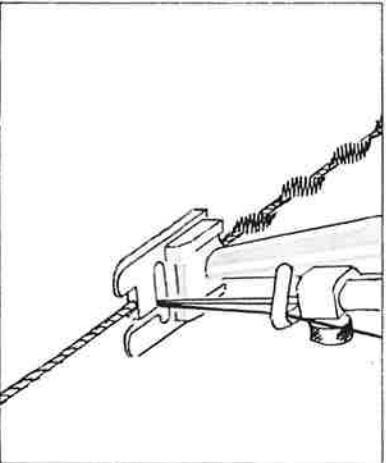
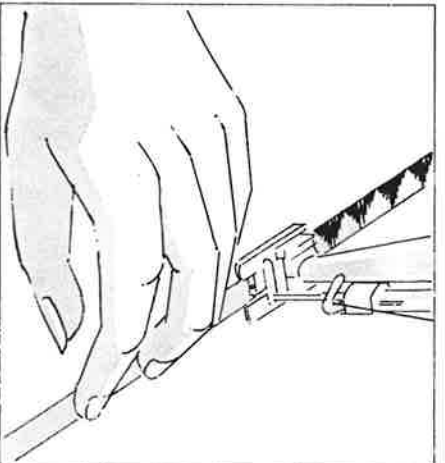
As with hand embroidery, one must have a knowledge of the basic rules for embroidering with the automatic. It is worth while spending some time studying and practising these rules.

## Before you begin any embroidery work note the following:

1. Attach embroidery foot, have paper ready.
2. Use the same colour embroidery thread for the top and the bottom.
3. Practise with a remnant of material (and underlay with paper).
4. Observe work in the foot hole.
5. Always embroider first and then complete the rest of the sewing.

## Braiding

Stitch width: 4  
 Stitch length: almost 0  
 Automatic: As desired and 1—20  
 Needle position: center  
 Feed control: *mm*



With one-sided patterns watch whilst sewing only the left-hand side of the braid, for the pattern must completely cover the edge. (Lay the braid on the material straight. Guide near the foot; stretch braid a little.) When both sides of the pattern are the same, which alternately both left and right edges of the braid, so that they are well oversewn by the pattern. (Watch the sewing procedure in the foot hole!)

## Over-embroidering with cord

Stitch width: 4—3  
 Stitch length: almost 0  
 Automatic: As desired and 1—20  
 Needle position: center  
 Feed control: *mm*

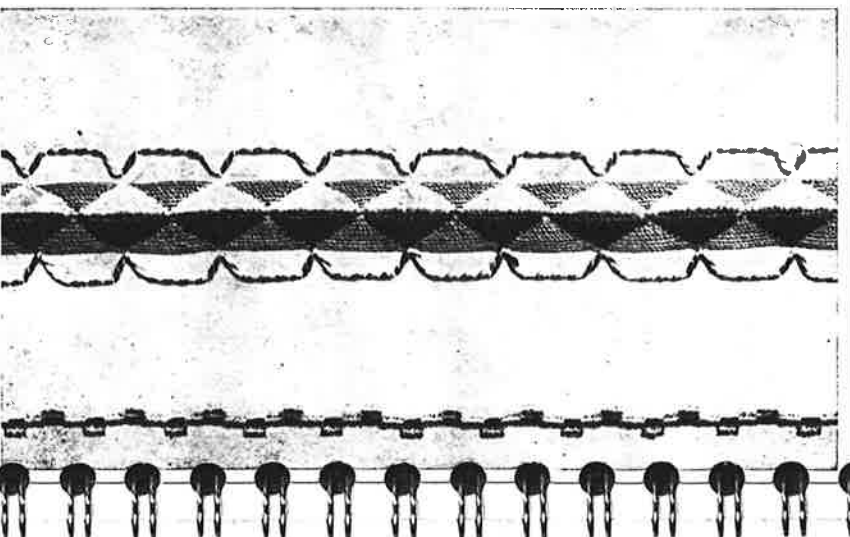
Guide cord (Lurex thread) at the same time through the hole in the embroidery foot.

## Cord in the bobbin case

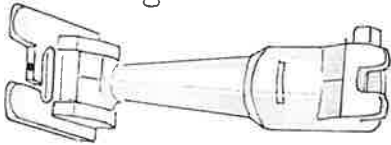
(also plain or metallic thread)

Stitch width: 4  
 Stitch length: 2—3  
 Automatic: 1—4 or 5 and 1—20  
 Needle position: center  
 Feed control: *mm*

To be worked on wrong side. Trace design onto paper or Vilene. Loosen bobbin tension and tighten upper tension a little.



Embroidery foot 030  
 Needle: 80  
 Thread:  
 Embroidery  
 thread No. 30/60

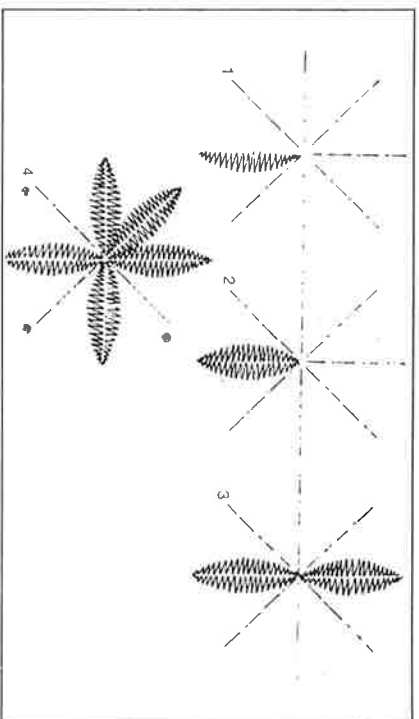
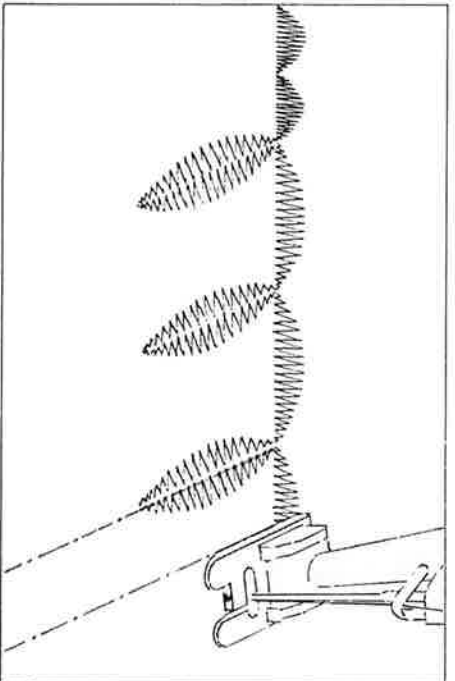
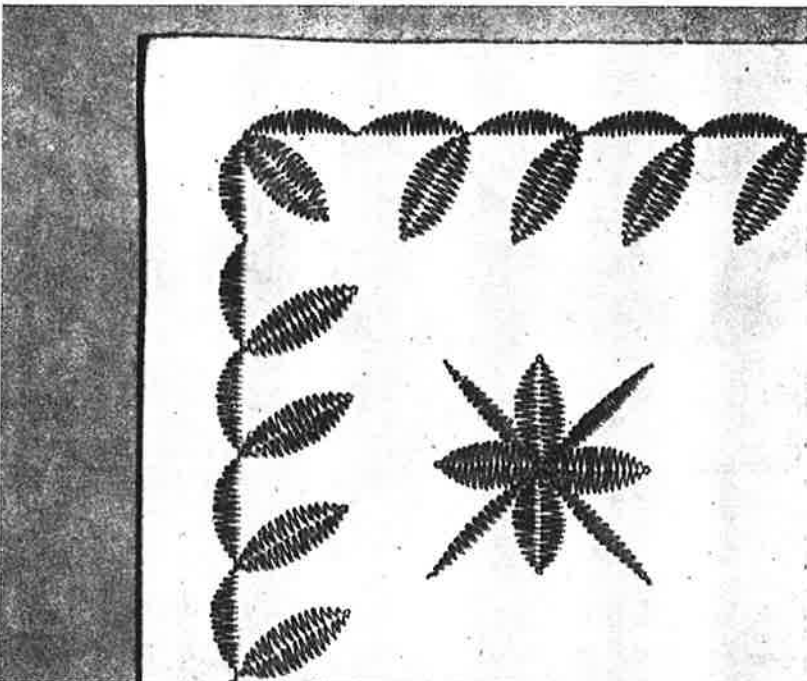


Stitch width: 4--2  
 Stitch length: 1/4--1/2  
 Automatic: As desired and 1--20  
 Needle position: center  
 Feed control:  $\overline{\text{mm}}$

## Lengthening the pattern

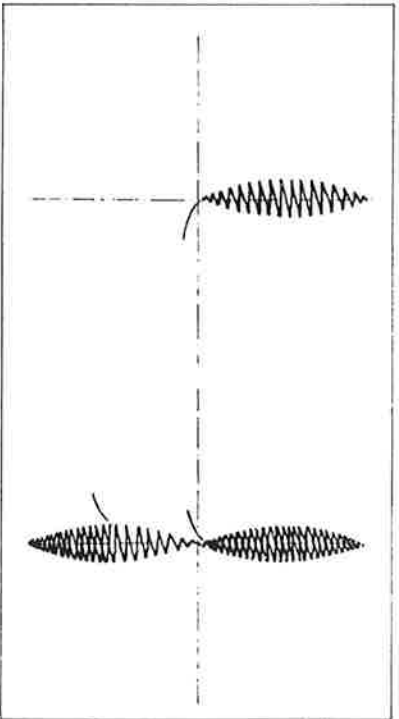
It is recommended to practise this technique before one sews flowers and stars. (Watch the sewing through hole of the foot.)

1. Hold right hand on the hand wheel.
2. After sewing half of the motif (one small leaf = two motifs) sew slowly to avoid sewing past the end of the pattern.
3. When the pattern is finished it will be indicated on the pattern indicator.
4. The parallel position of the leaves is attained when the foot stands parallel to the middle of the previous leaf.



## Flowers and stars

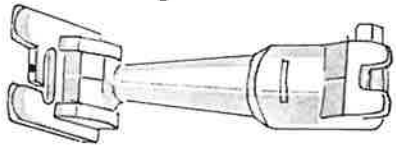
1. Always begin in the middle.
2. Do not sew past the end of the pattern when in the center of the star, otherwise the leaf opposite will either be longer, shorter or displaced.
3. When the needle has reached the center, **always** make sure that is really in the middle. If it is not exactly in the middle, put it there.
4. For the leaves in between, position the **needle** on the middle line between the leaves already sewn.



Oversew each leaf once again on this motif.

# Embroidering with the automatic

Embroidery foot 030  
Needle: 80  
Thread:  
Embroidery  
thread No. 30/60

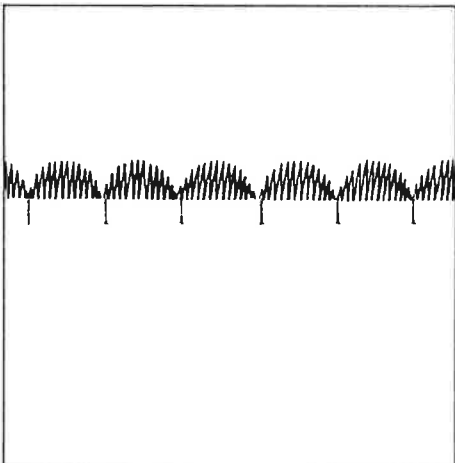


Stitch width: 4-2  
Stitch length: almost 0  
Automatic: As desired and 1-20  
Needle position: center  
Feed control: MM

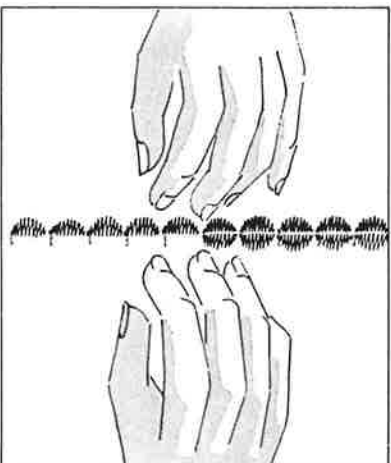
## Placing two patterns opposite one another

If two patterns are to be placed opposite one another, one side of the presser foot runs on the previously sewn pattern. In this way the density of the satin stitch becomes closer, and the patterns may not correspond automatically. To correct this readily the work should be assisted a little. It is worth while practicing this guiding technique first. As soon as it is mastered, it will be a joy to do.

**The best way to practise:** Use smooth, ironed cotton (not too large, approximately 8×8"), underlay with paper.

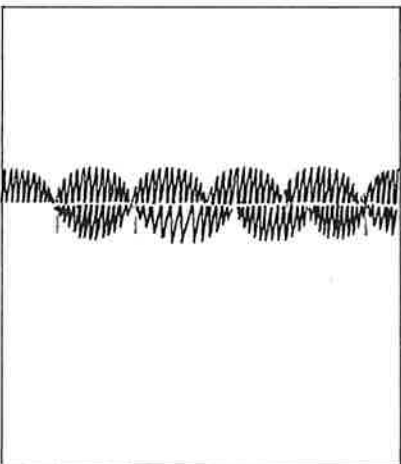


1. Sew first side. Turn work and mark all the places for the motifs (for practice only).

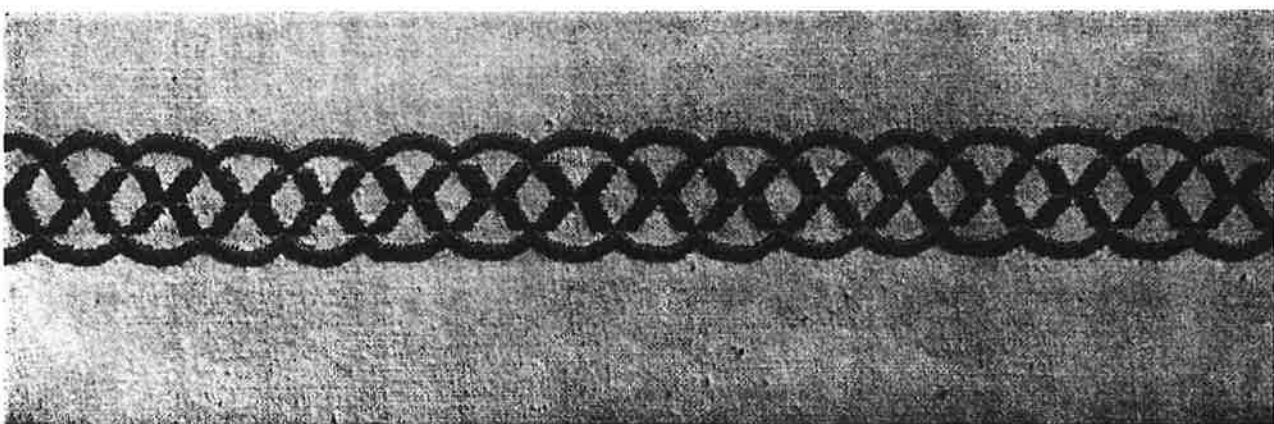


2. When resuming sewing, guide near the foot in such a way that all fingers lie on the material; **However**, the middle fingers guide the most. They must be always **exactly on the mark**. (After a motif has been sewn the fingers move down to the next one, i. e. from motif end to motif end.)

3. The first few patterns are usually not successfully positioned, because the guiding feeling is missing. Never, however, raise the foot and place the needle on a new pattern beginning.



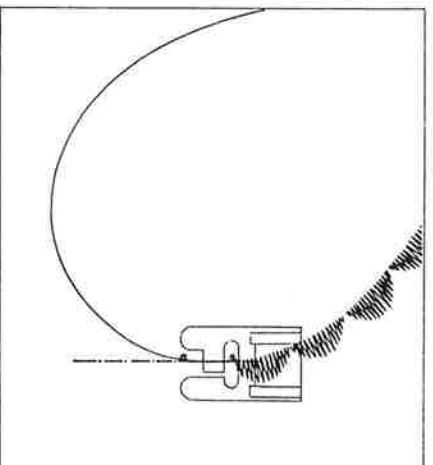
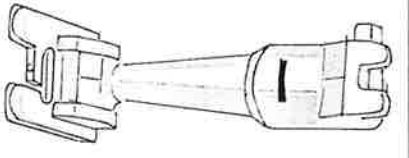
4. If the motifs do not match up push the work slightly. The result will be a longer motif but the next pattern should match correctly.





# Embroidering with the automatic

Embroidery foot 030  
 Needle: 80  
 Thread:  
 Embroidery thread  
 No. 30/60



When one motif is finished leave the needle in the work, raise foot and turn slightly, then sew next motif.

With very small curves one can assist guiding the material during sewing. (Thumbs under the material, see Applique: Guiding without frame.)

Stitch width: 4—2

Stitch length: almost 0

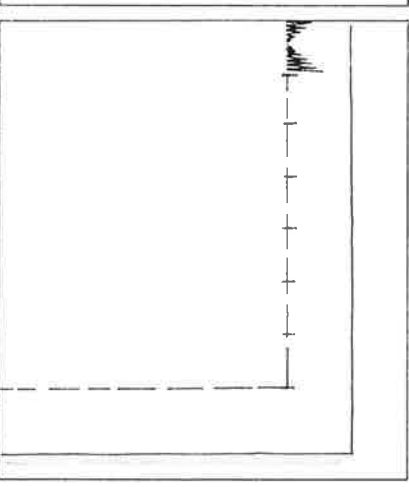
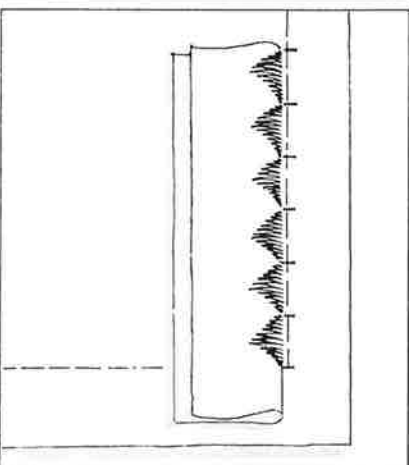
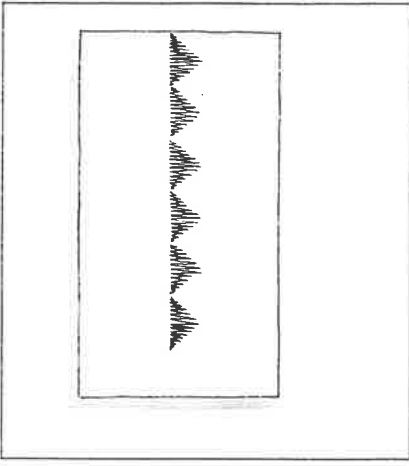
Automatic: As desired and 1—20

Needle position: center

Feed control:  $\overline{mm}$

## Sewing small curves

If one imagines a curve made of small straight lines then it is understood that one can sew the individual motifs of a curve in the same manner.

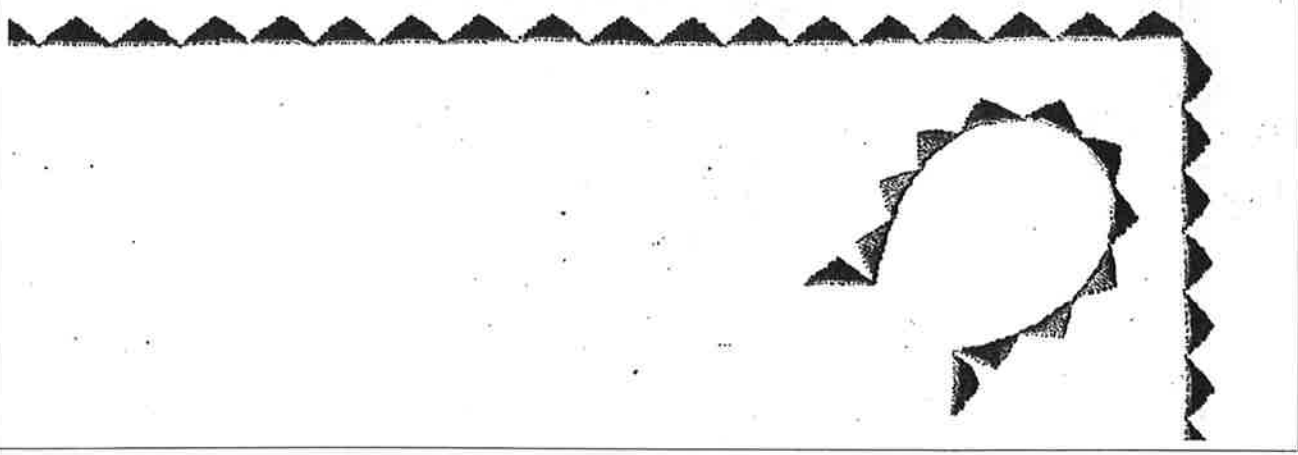


## Preparing a triangle

Practise with a remnant of material (underlay with paper)

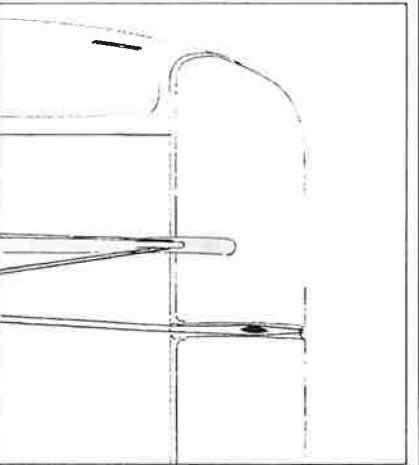
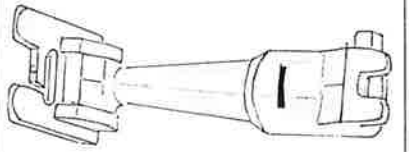
Lay this trial piece on the marked corner and transfer it onto the material (at least 6 motifs).

In this way one can see whether the pattern has to be balanced by pushing or pulling the material.



# Double and treble needle

Embroidery feet 030  
Thread:  
Embroidery thread  
No. 30 or 60



## Double needle

These special needles produce very beautiful effects on delicate materials, be it shades of one colour or different colours.

## Adjustment

Automatic: As desired and 1---20  
Needle position: center  
Feed control:  $\overline{MVA}$

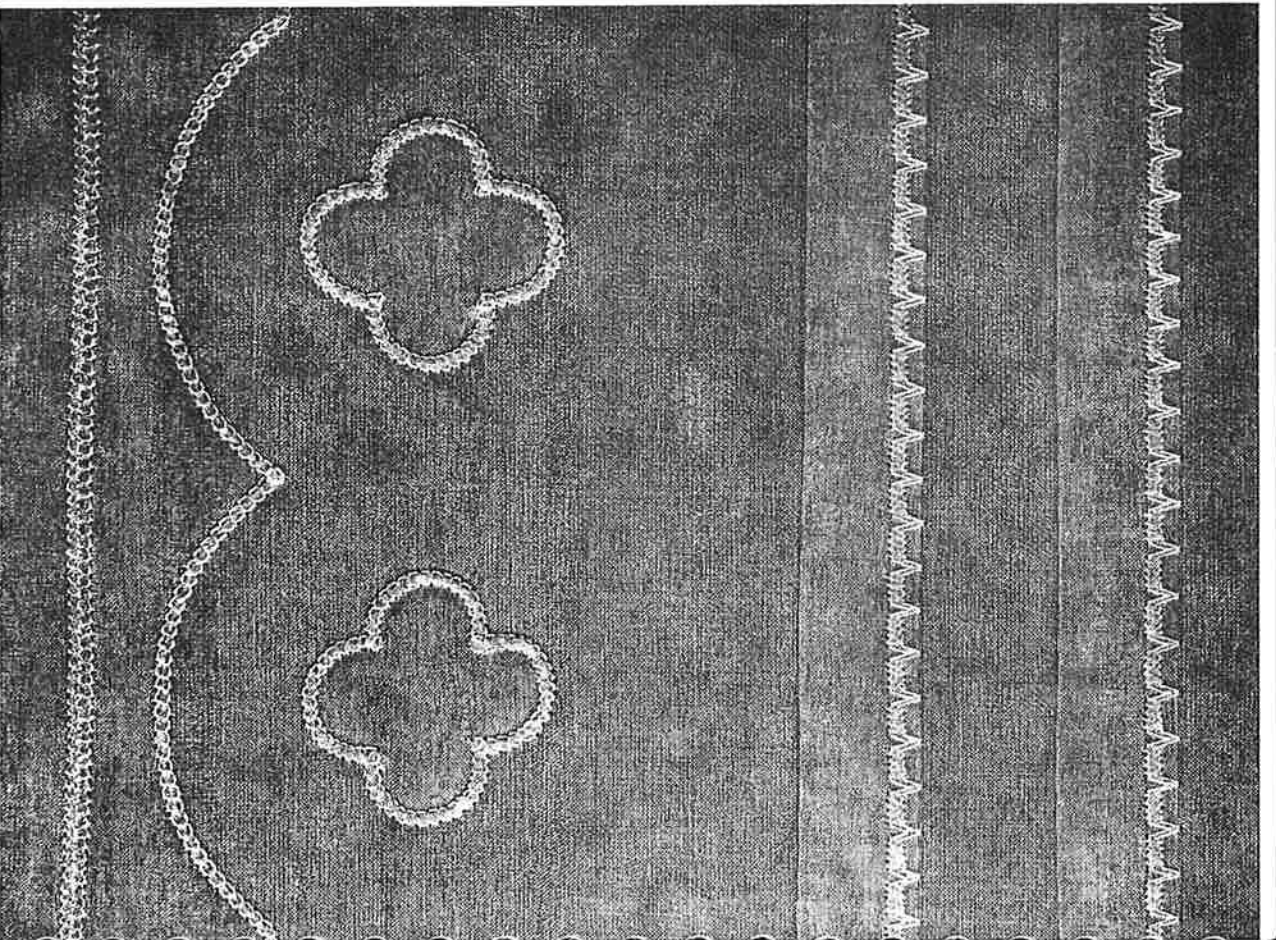
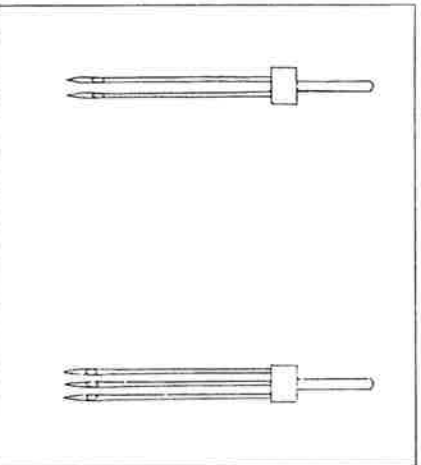
When threading through the thread tensioner ensure that one of the threads is placed to the left of the intermediate disk and one to the right. With the triple needle the threads for the two outer needles should be inserted on one side and the thread for the center needle on the other side of the intermediate disk.  
(Keep third thread on a lower thread bobbin and place below the left hand upper thread bobbin on the reel holder.)

## Double needle

Stitch width:  $2\frac{1}{2}$   
Stitch length:  $\frac{1}{4}$ ---1  
(according to pattern)

## Triple needle:

Stitch length:  $1\frac{1}{2}$   
Stitch width:  $\frac{1}{4}$ ---1  
(according to pattern)



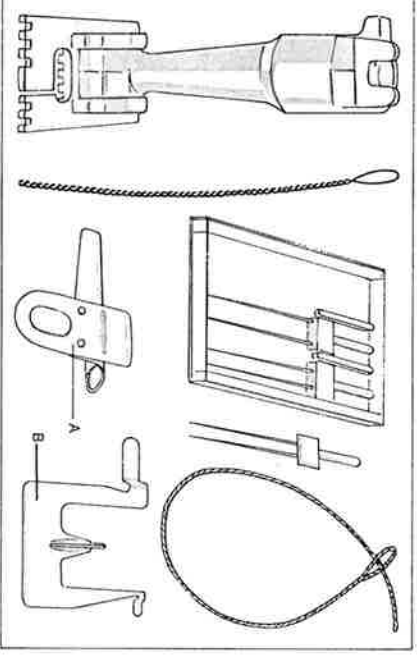
# Pintucking

## Sewing pintuck corners

Corners cannot be turned directly at right-angles as in normal sewing owing to the double needle. The procedure is, therefore, as follows: Insert needles with points (up to eye), half turn work, do one stitch (with handwheel) leaving needle points in work.

Complete the turn and continue sewing.

- Pintuck foot 028
- Double needle
- Pintucking guide A
- Threader
- Pintuck tongue B
- Thread merc. 60/3—70/3 or darning thread 50



## Sewing pintucks

- Stitch width: 0
- Stitch length: approx. 1 1/2
- Automatic: 0 WWW and MW
- Needle position: center
- Feed control: to sewing

### Preparation

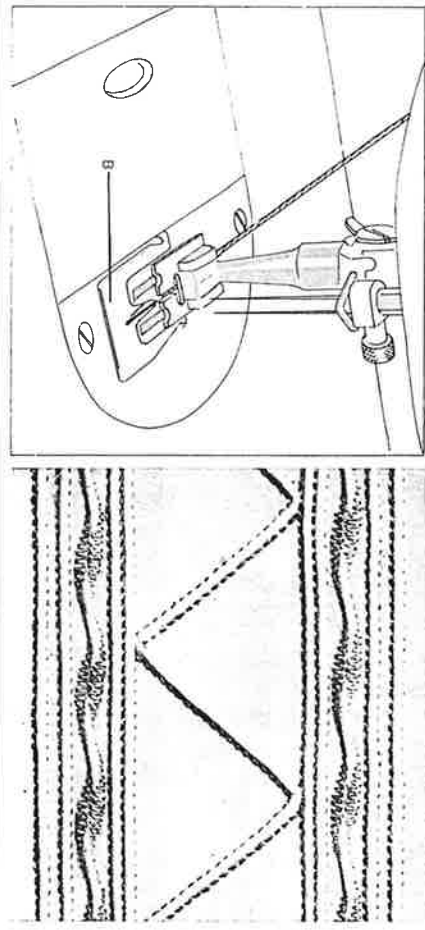
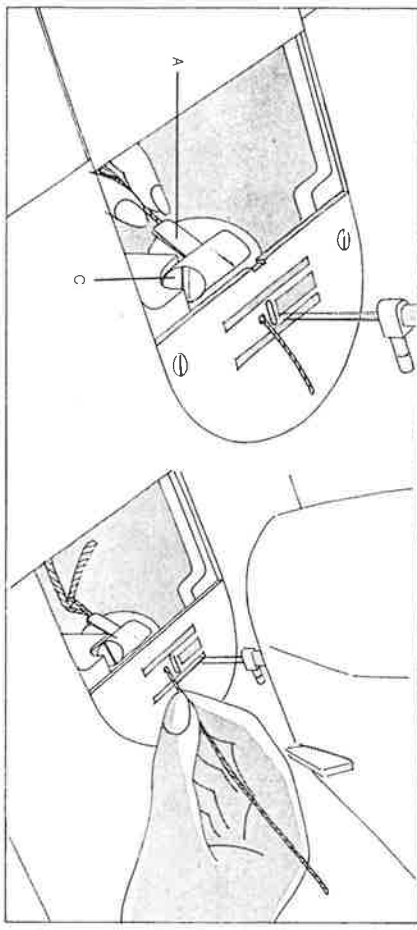
Release screw C and exchange small plate for pintuck guide A (can be left in machine).

Insert pintucking needle.

Introduce pintucking thread: push threader (small wire with loop) through pintucking guide from below so that it emerges in the stitch plate from the circular hole in front of the stitch hole.

Insert pintuck thread in the coil and pull upwards with the aid of the wire.

Pintuck tongue B is required for thick or stiff materials to ensure the pintuck is better formed (fix tongue on stitch plate).



For pintucking, two top threads (for double needle) are required. When threading the machine take care that the two threads are not twisted together, but bring them singly from the take-up lever to the needles.

**Uniform spacing between pintucks** is achieved automatically by the grooves in the foot.

If decorative stitches have to be made between, a space of exactly the width of one presser foot is necessary. (In this case the foot must be taken close up to the previous pintuck.)

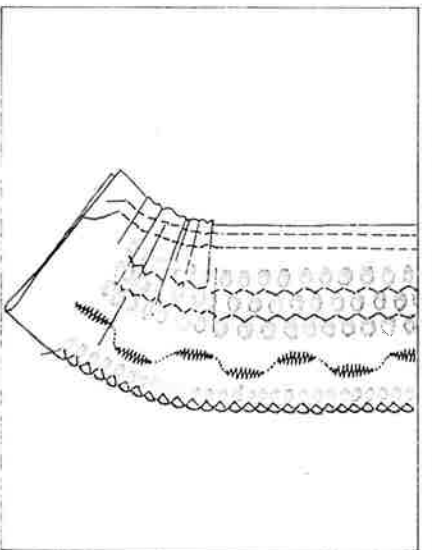
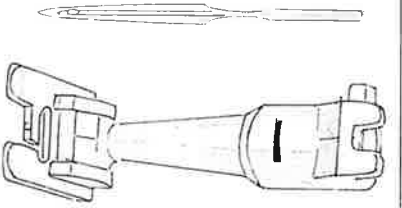
## Decorative stitches with double needle (withdraw pintuck cord)

- Stitch width: 2 1/2
- Stitch length: approx. 2
- Needle position: center
- Automatic: as down 01
- Feed control: to sewing
- Embroidery cotton: No. 40/2

If decorative stitches have to be sewn between or very close to pintucks, the pintuck foot should be used since it takes over guidance. Otherwise the embroidery foot is used in general for sewing fancy stitches.

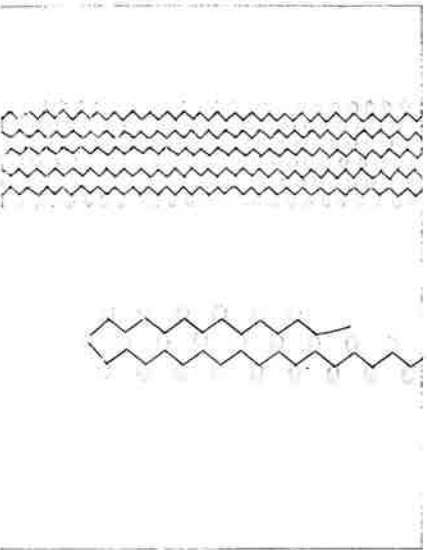
# Hemstitching (for fine fabrics)

Embroidery foot 030  
 Needle: Single hemstitch needle  
 Thread: Embroidery thread No. 50/100



## Single hemstitch needle

Stitch width: 2  
 Stitch length: 1  
 Needle position: center  
 Automatic:  $\eta$  WWWW and WW  
 Feed control:  $\underline{ww}$



## Ruche

Iron bias strip of organdy in two. Sew hem stitches at the desired distance over the folded edge. Sew the ornamental stitch in between with a normal needle.

An Entre-deux (insertions) is worked in the same way.

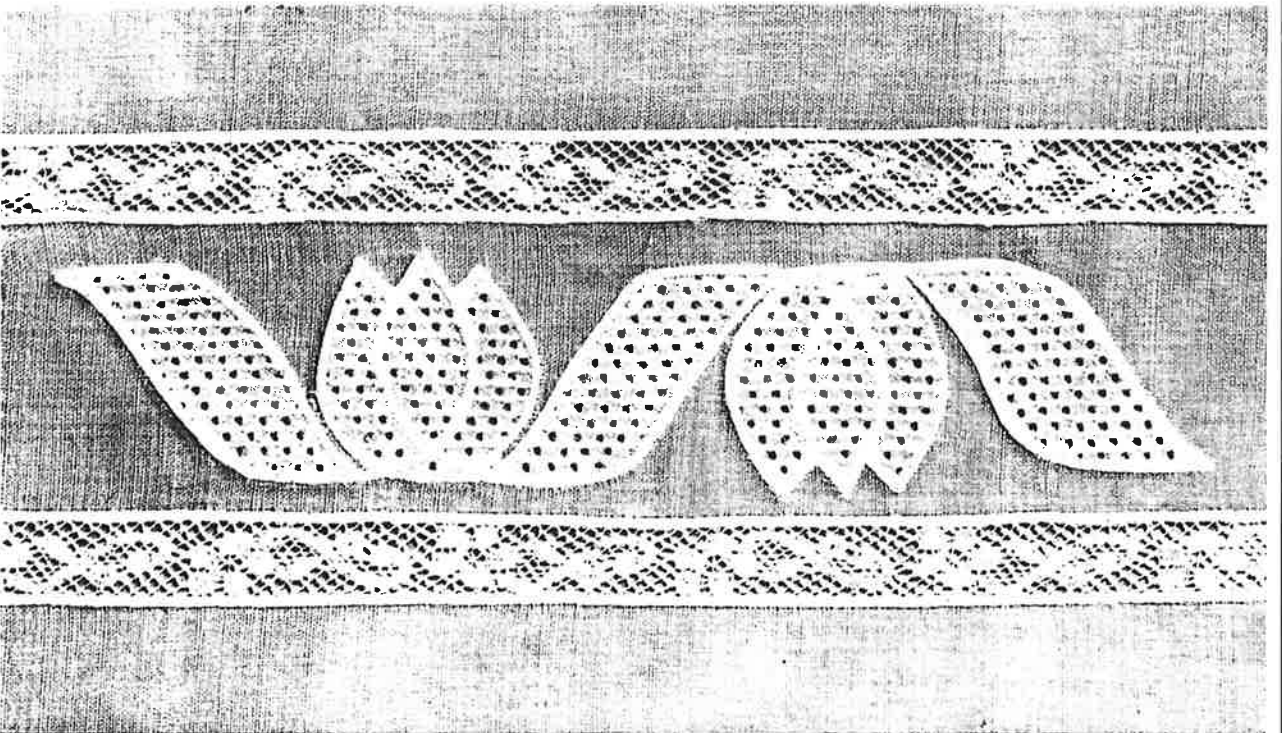
## Applique with Pre-Embroidered Material (use Organdie double)

Hem stitch a piece of fine material in the manner described until you get a trellis effect. With this trellis make a normal applique. Finish by cutting away background material from under trellis.

## Trellis work with metallic thread (Lurex)

Can be used as a border (e.g. for a stole). A very attractive effect is brought about if a double metallic thread is led through the hole in the embroidery foot.

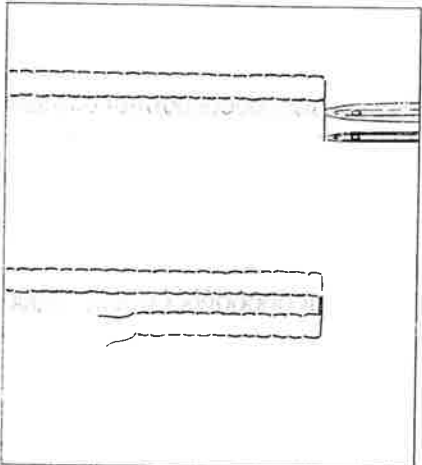
**Method**  
 Sew first row of stitching. Leave tip of needle in work, turn and sew second row (the needle will then pierce holes of first row on one side).



## Ordinary Hem-stitching

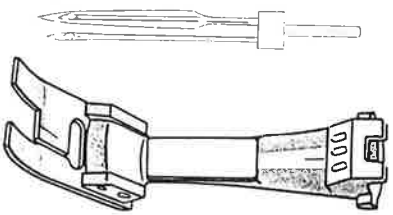
Stitch width: 0  
Stitch length: 1 3/4

Sew first hemstitch row of embroidery, raise needle and foot, turn work. Put wide needle in the first hole of the previously sewn row and resume sewing. In order that the hemstitch needle can sew exactly into the holes of the first seam. Do not hold back work.



## Double hemstitch needle

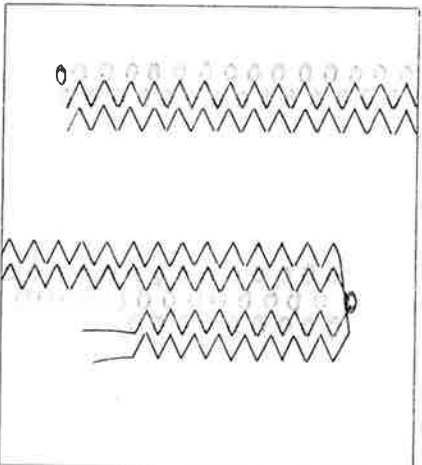
Zigzag foot 000  
Needle: Double hemstitch needle  
Thread:  
Embroidery  
Thread No. 50/100



## Zigzag Hem-stitching

Stitch width: 1 3/4  
Stitch length: 1 3/4

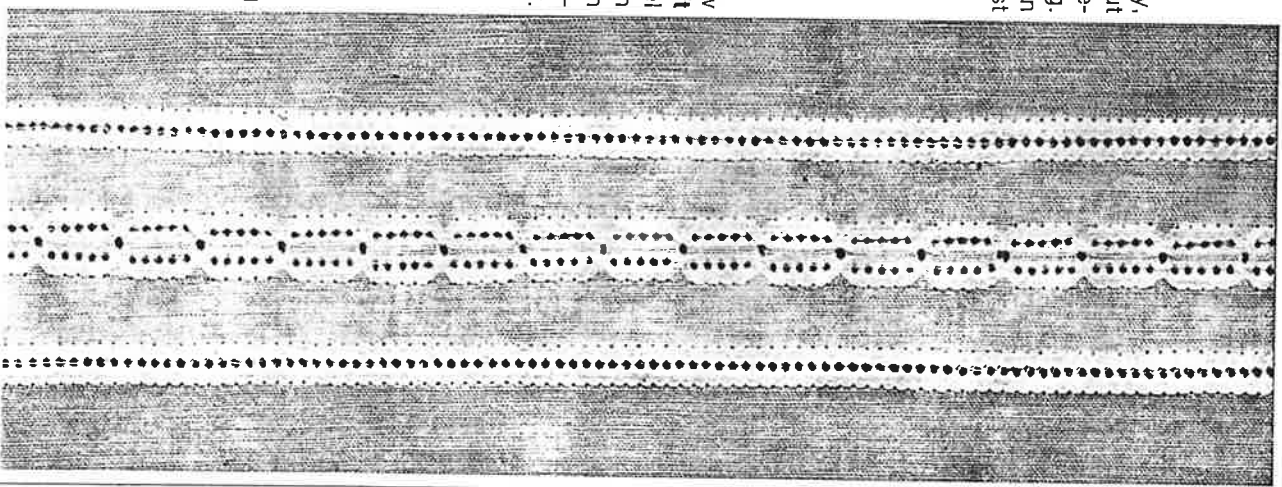
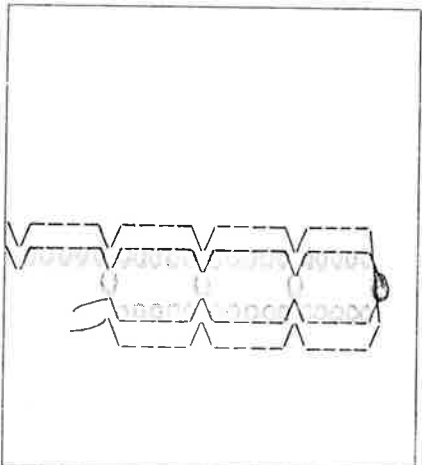
Sew the first side of the hemstitch row of embroidery. Just pierce the last left stitch, then turn back the hand wheel again and raise the presser foot. Turn work. With the wide needlestitch through the previously pierced hole and continue sewing. Do not hold the work back.



## Fancy Hem-stitching

Stitch width: 1 3/4  
Stitch length: 1 3/4  
Automatic: / V V \ and 1—20

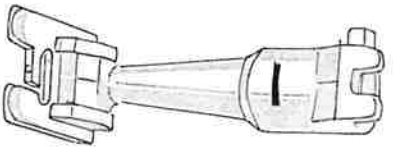
Worked in the same way as the zigzag hem-stitching.



Automatic: 0  
Needle position: center  
Feed control: mm

# Circular embroidery

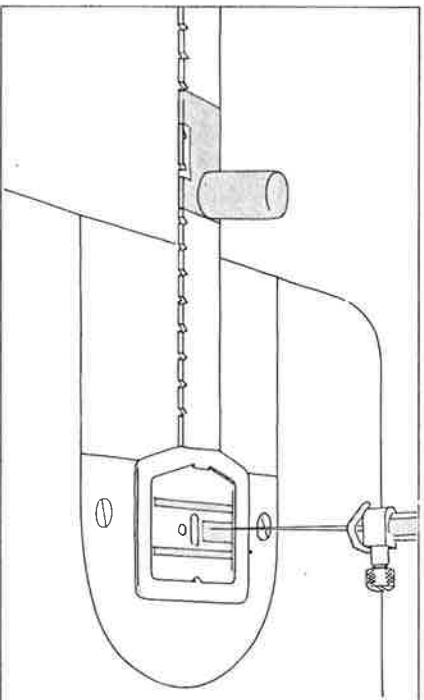
Embroidery foot 030  
 Needle: 80  
 Thread:  
 Embroidery  
 thread No. 30/60



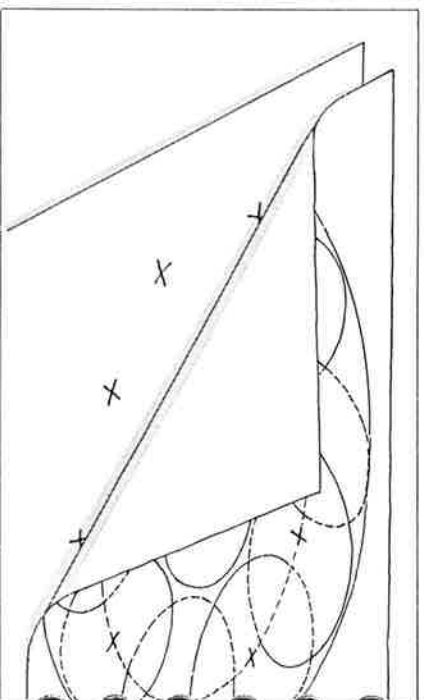
Stitch width: 4—2  
 Automatic: almost 0  
 Needle position: As desired and 1—20  
 Feed control: center  
 MW

For circular embroidery the material should be stiffened (with Vilene) or preferably worked in an embroidery hoop. To prevent large pieces from pulling fold in the corners and fasten with safety pins.

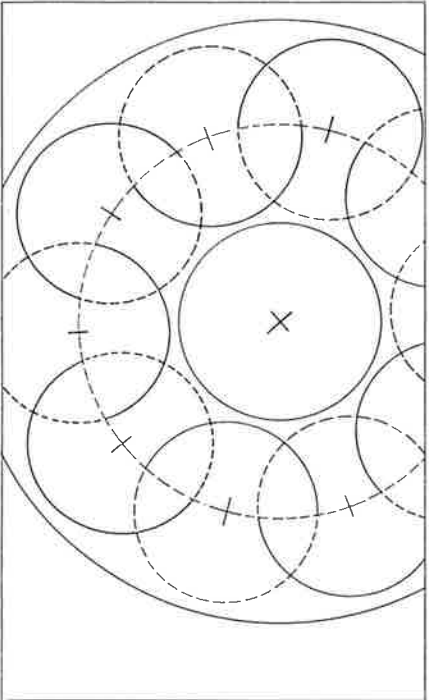
**Easy Circular Embroidery**  
 (Circles with the same center point)  
 Place the embroidery work onto the prong (arrange distance from needle accordingly) and embroider. If further circles are to be embroidered the work must be moved accordingly.



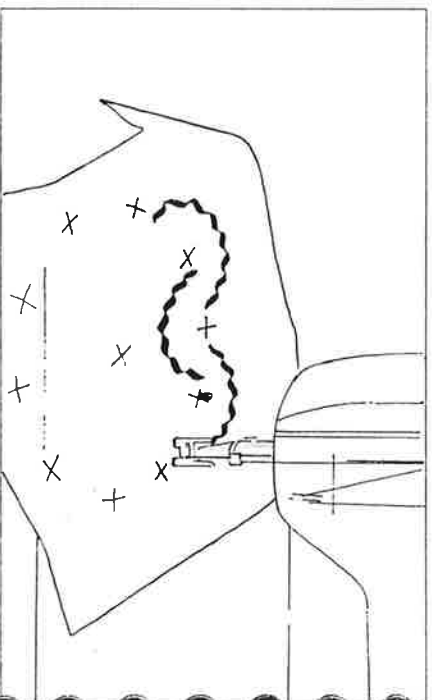
Secure the circle embroidery attachment this way.



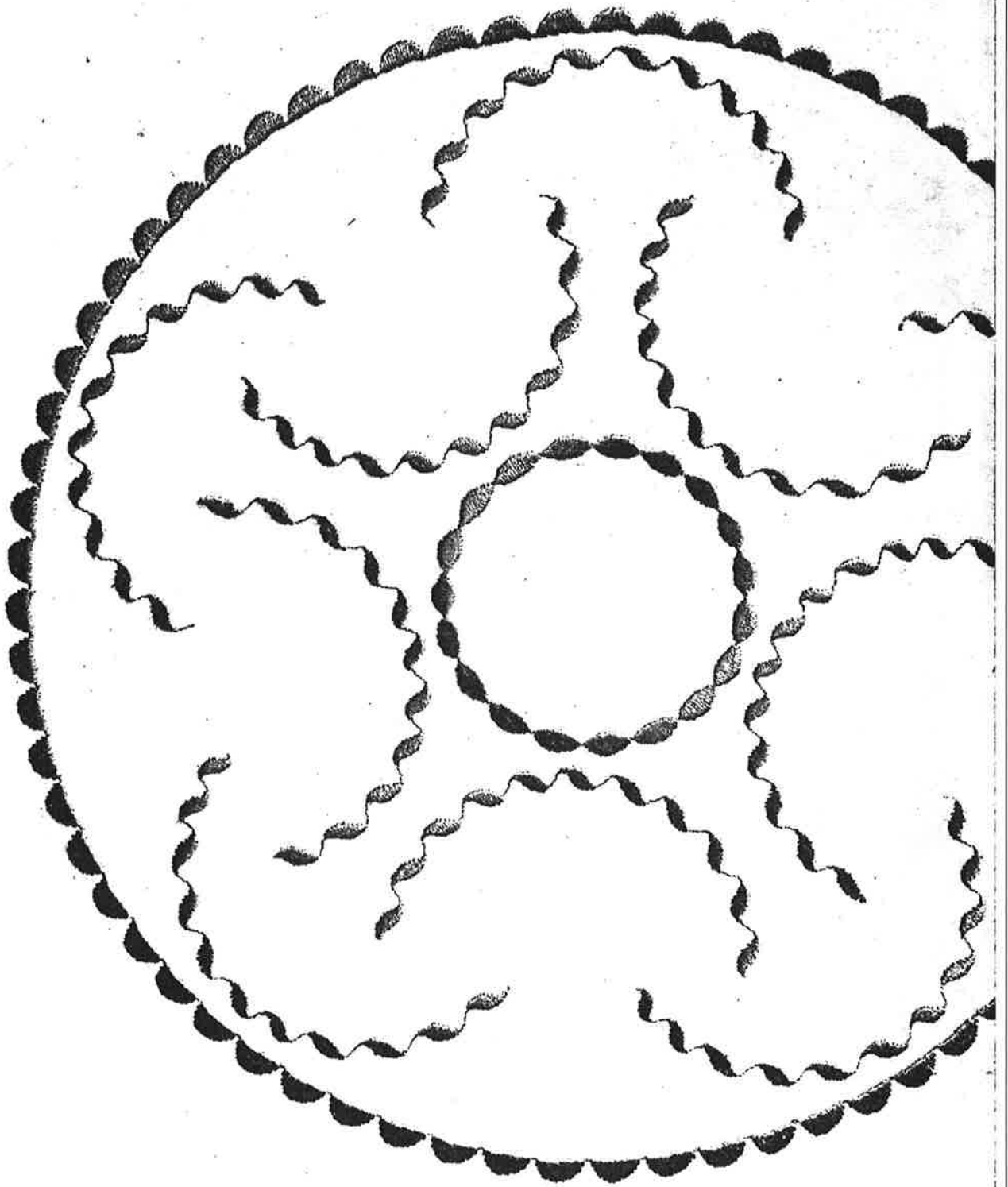
Transfer the center point of all the circles onto the material with tracing paper.



**Combinations of circles**  
 Distinctly marking the center make a design on paper with a pair of compasses.



Secure a center point onto the prong and embroider the required parts of the circle.



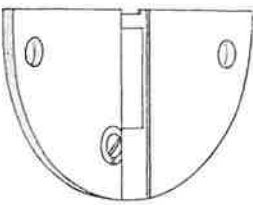
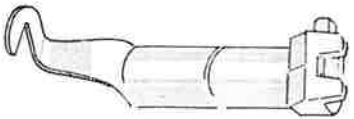
Circular embroidery

# Eyelet or English embroidery

Special foot for  
Eyelet embroidery 194

Needle: 80—70

Thread: Embroidery  
thread 50



Special needle plate

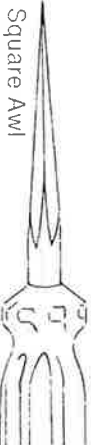
Slide  $\phi$  2 mm

Slide  $\phi$  3 mm

Slide  $\phi$  5 mm



Round Awl



Square Awl

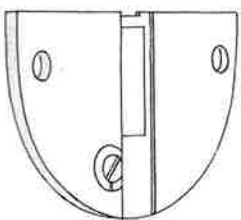
Stitch width:  $1\frac{1}{2}$  small /  $2\frac{1}{2}$  large

Stitch length: 0

Automatic: left

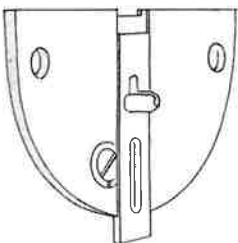
Needle position: 0 WWWW and WW

Feed control: lowered

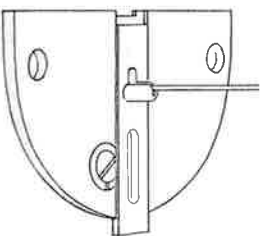


## Preparation

1. Set machine, change needle plate, placing the screw at top left.



2. Loosen screw, secure required slide with the prong slot on the left, but do not tighten screw yet.



3. Place the needle (swinging to right) into the opening, then slide the plate along until the needle is just inside the prong. Carefully tighten screw.

**Thread bottom cotton through hole.**  
(Page 25)

## Method

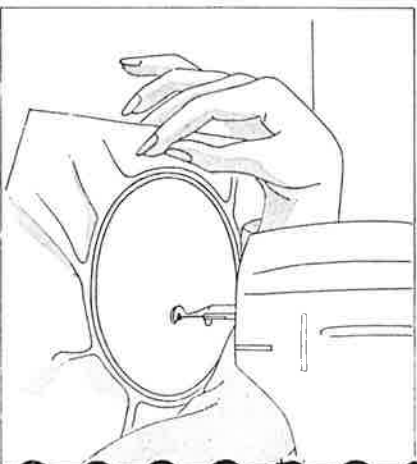
1. Always use frame. Stretch material.
2. Punch holes with hand awl, pushing halfway through for small and right through for large eyelets. (Square awl for felt and leather.)
3. Secure work onto the prong and sew eyelet embroidery. Sew twice around the small holes and three times around the large.

**Important:** Turn the frame faster for the first round (a), then for the following rounds (b) and **do not change the sewing speed.**

4. Set zigzag to 0. Turn work again and fasten with a few stitches.

## Guiding the work

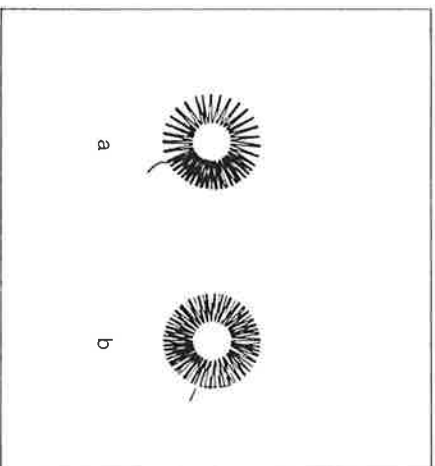
(When sewing with large pieces of material, fold back the corners and secure them with safety pins to prevent pulling when turning.)



Hold the work in such a manner that can be turned around in one go without stopping the machine and renewing one's hold. **Turn without varying movement**

Allow machine to run at a medium and constant speed.

**Important:** Start turning as soon as machine is in motion. Stop machine as soon as one has finished turning, otherwise uneven tickness will occur.

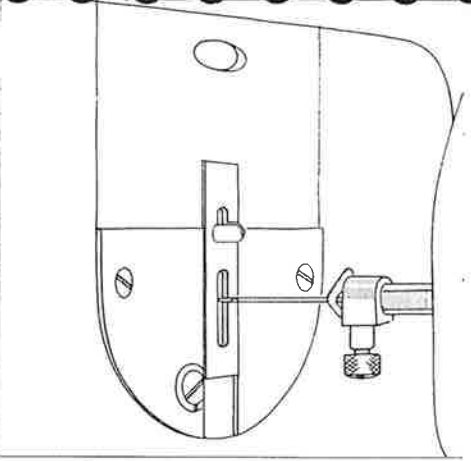




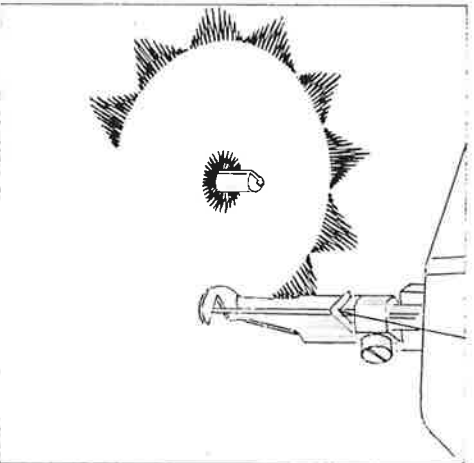
# Ornamental stitching around the eyelet embroidery

(work with frame)

Stitch width:	4
Stitch length:	0
Automatic:	As desired and 1--20
Feed control:	lowered TTTTT

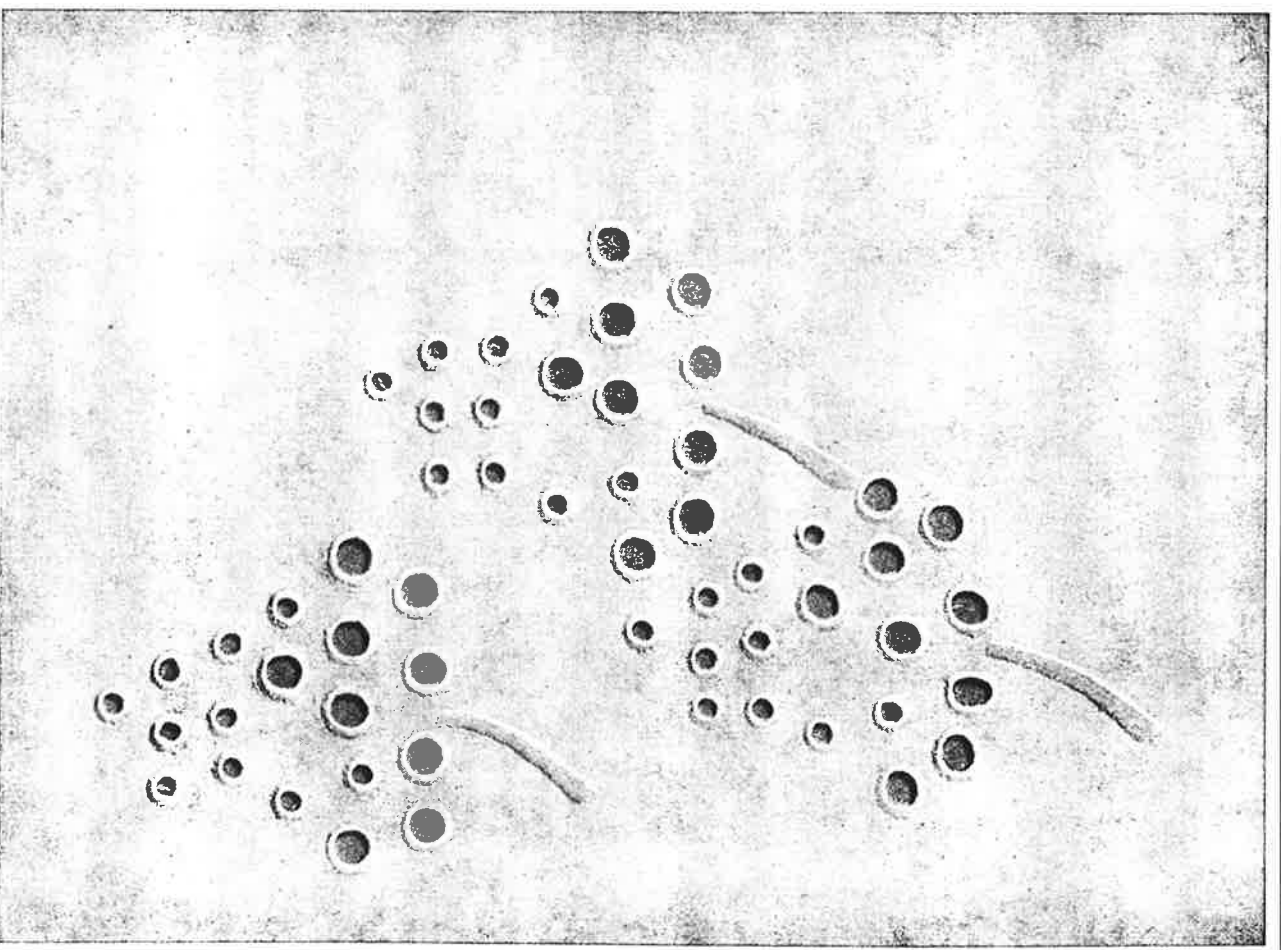


Put needle into its highest position.  
Loosen screw and move slide towards the left according to size of circle required. The opening in the plate underneath should be clear and not covered by the slide.




Secure embroidered hole onto the prong, set pattern indicator to center and embroider circle. As the drop feed control is lowered, the embroidery frame must be turned by hand too. Naturally the circle cannot be sewn in one go as with punch embroidery.

Interrupt the work after a few motifs and renew hold on embroidery frame. One must sew slowly and **unvaryingly** if the embroidery is to appear neat and even. It is recommended to use the slow speed of the machine.



Without foot  
 Needle: 80—70  
 Thread:  
 Embroidery  
 thread 50

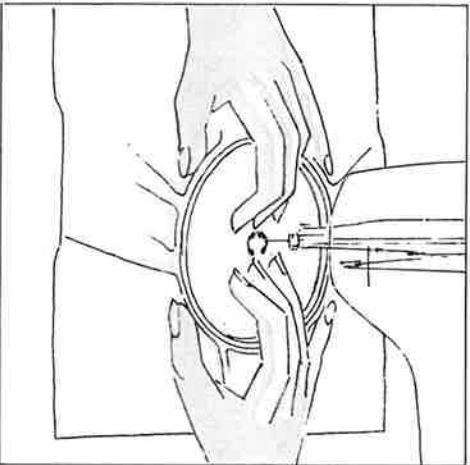
Stitch width: 4—2  
 Stitch length: 0  
 Automatic: 0 WWWW and WW  
 Needle position: center  
 Feed control: lowered 

Stretch the material tightly in the frame as the work is to be carried out without a foot. **Important:** Lower the foot lever just the same as usual, otherwise the top thread tension will remain open and unattractive work will result. If the bottom thread is drawn through the finger of the bobbin case the work will run more smoothly (as with button-hole sewing).

### Method

Bring up the bottom thread through the material, sew a few straight stitches and cut the thread ends. Set zigzag. Place needle ready to begin and make a test stitch. The drawn line must be in the middle of the zigzag.

Move the frame as though wanting to write with it. **Do not stop moving frame until the monogram is complete.**

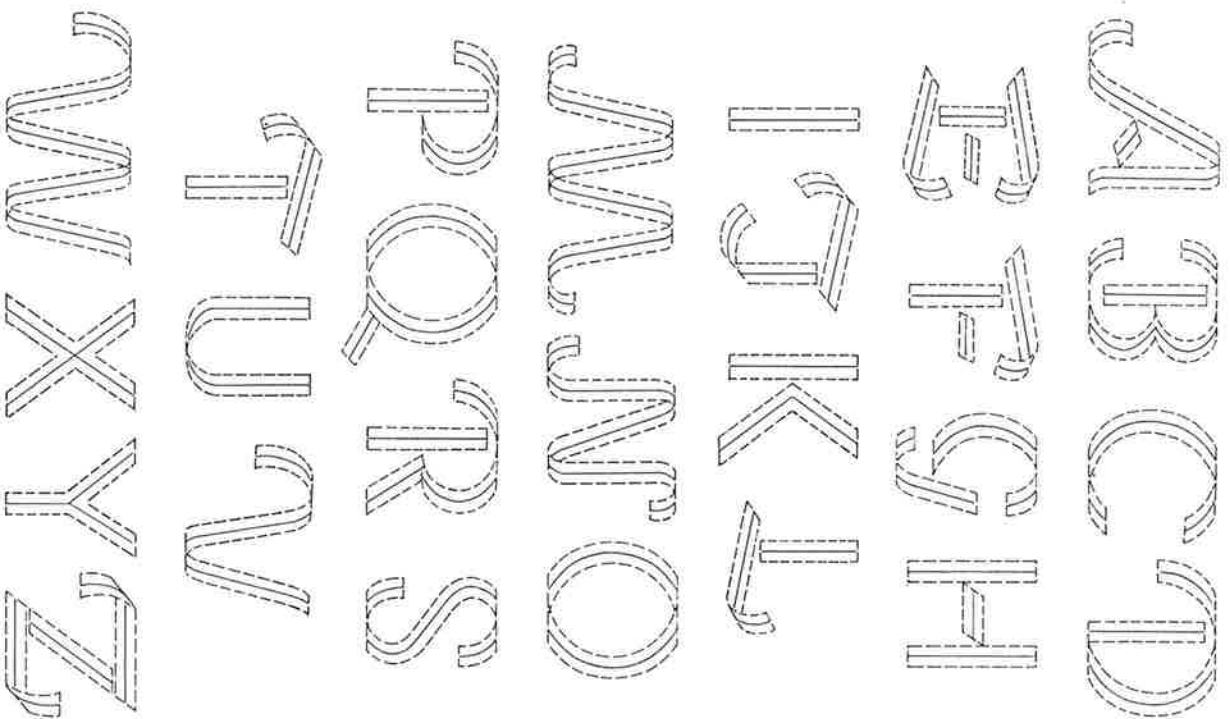


### Guiding the work

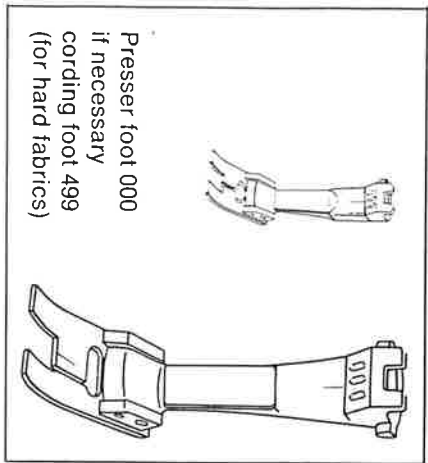
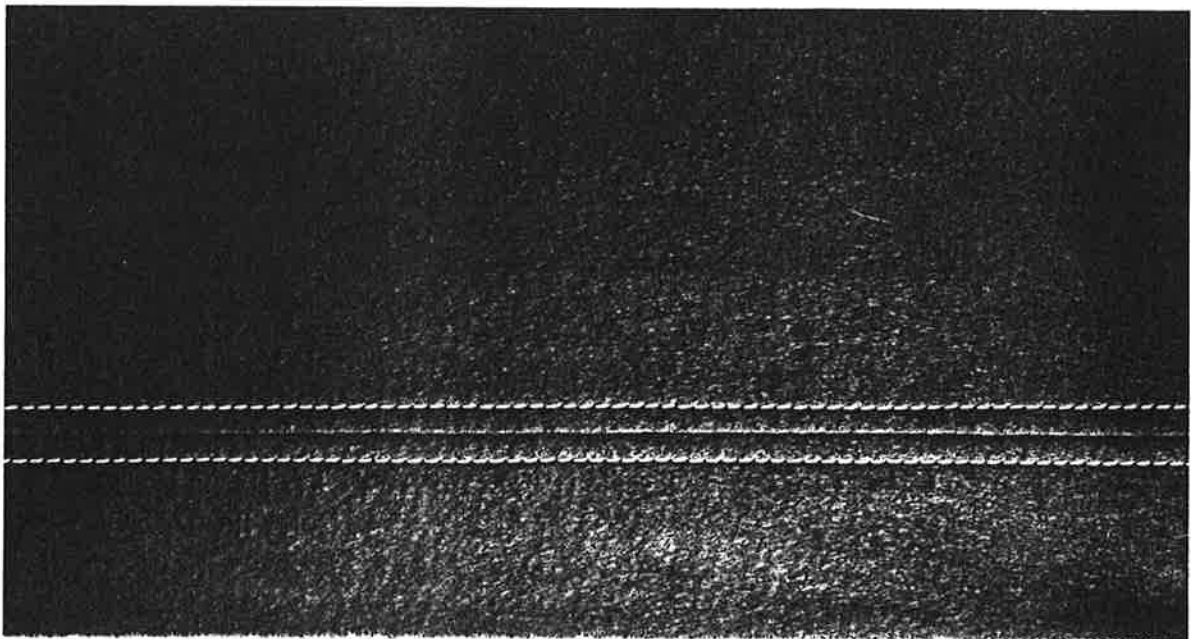
Hold frame as when darning. Do not move fingers while working, as jerky movements produce uneven monograms.

To produce a perfect monogram a great deal depends on how the frame is held. The more securely the work is held the better the result.

**Important:** Allow the machine to run rather quickly; however, the frame should be guided slowly and steadily.



Standard straight stitch: stitch length 4



Cordonnet can be worked in two ways:  
 A — as upper thread  
 B — in the bobbin case

**Important:**

The sewing machine needle has a long groove at the front. It must be possible for the thread to lie completely in this groove while sewing, otherwise wrong stitches and broken threads result, in addition to an unsightly stitch pattern. The thickness of the needle must therefore correspond as always to the thread thickness. In addition, synthetic cordonnet is being used increasingly.

Hence the golden rule is:  
 When cordonnet as upper thread  
 Needle No. 110

It is quite possible that for certain kinds of fabric even a needle No. 100 (possibly No. 90) produces a perfect result.

**Sew a trial sample**

**A. Cordonnet as upper thread**

Needle No. 110  
 Presser foot 000, if necessary cording foot 499  
 Lower thread normal sewing thread or synth. thread  
 Stitch width 0  
 Stitch length 4  
 Needle position centre  
 Automatic 0 (model 900 knob (14) ---- (A))  
 Feed-dog to sewing

**Sew a trial sample.**

**B. Cordonnet in the bobbin case**

If the work cannot take the thick no. 110 needle, the cordonnet thread must be sewn as lower thread. In this case, work is done on the back of the material if the sewing line is not visible, e.g. when sewing-on pockets, they are first sewn on from the right side with darning thread (contrasting colour), stitch length 4. This basting seam provides the sewing line on the back and is easily removed at the end.

There are two possibilities of sewing cordonnet from the bobbin case.

**1. Normal backstitch**

Needle No. 80  
 Presser foot No. 000  
 Upper thread normal sewing thread or synth. thread, colour as cordonnet  
 Stitch width 0  
 Stitch length 4  
 Needle position centre  
 Automatic 0 (model 900 knob (14) ---- (A))  
 Feed-dog to sewing

Place bobbin with cordonnet in case (use cordonnet case, it is identified by a black flap). **Sew a trial sample.**

## Saddle stitch ▶

**2. Saddle stitch**  
(Only for Bernina machines with CB-bobbin hook)

If a particularly long stitch is required (over 4 mm), this can be obtained using the Magic needle and zigzag stitch (not blindstitch).

Thread upper eye of Magic needle  
Presser foot No. 000

Upper thread normal sewing thread or synth.  
thread colour as cordonnnet

Stitch width 4

Stitch length 2-4

Needle position centre

Automatic 0 (model 900 - knob (14)

Feed-dog WWWW (B)  
to sewing

Place cordonnnet in bobbin case as in 1.

Work is again performed on the back of the material.

**Sew a trial sample.**

**Warning:** the decorative seam is formed (as with basing) at the left-hand needle penetration.

The Magic needle is only available as No. 80. Therefore cordonnnet **cannot** be sewn as upper thread with this needle. See introductory comments.

## 3. Fancy saddle stitch

The Bernina universal stitch produces an attractive fancy saddle stitch.

Thread upper eye of Magic needle

Presser foot No. 000

Upper thread normal sewing thread or synth. thread

Colour: contrasting with cordonnnet

Stitch width 4

Stitch length 2-3

Needle position centre

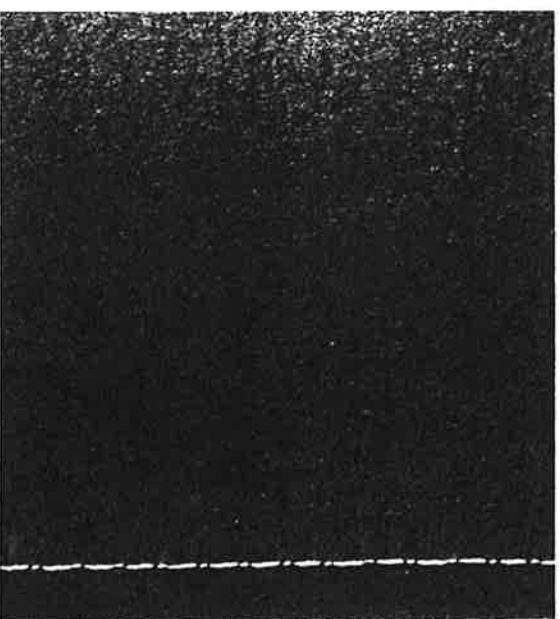
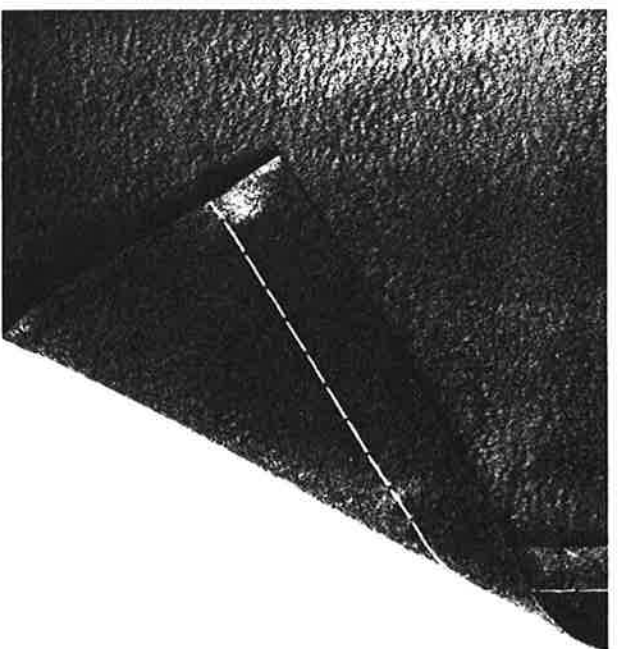
Automatic No. 3 *magic* (Nr. 4 Kl. 807/810)  
model 900 - knob (14) *magic* (1)

Feed dog *to sewing*

**Sew a trial sample.**

Saddle stitch and fancy saddle stitch are suitable for soft materials.

Fancy saddle stitch ▶



**1. Generally,** most breakdowns are caused by incorrect handling of the machine. If breakdowns do occur then examine whether:

- a) the needle is inserted properly (the **flat side** of the needle must be at the back);
  - b) the correct needle is being used (see needle and thread table);
  - c) the machine is cleaned properly. Lift free arm cover plate and remove sewing lint;
  - d) the hook race is clean and oiled;
  - e) there are pieces of thread caught between the thread tension discs or under the bobbin case spring;
  - f) hand wheel is secured properly.
- g) Before starting to sew please always ensure that the marker of the buttonhole knob (21) is at position «0».

**2. If the upper thread breaks.** Can have the following causes:

- a) the thread is too tight;
- b) use of inferior needles (buy them preferably at a Bernina dealer);
- c) needle inserted wrongly. Flat side must be at the **back**;
- d) the needle is blunt or crooked;
- e) poor quality or knotted thread.

Thread has dried out due to long storage:

- f) the needle plate hole is pitted by needle and needs repolishing (bring the free arm cover plate to authorized Bernina dealer);
- g) hook point is damaged (call authorized Bernina dealer).

**3. If bottom thread breaks.** Can have the following causes:

- a) the bottom thread tension is too tight;
- b) bobbin is crushed and jammed in the bobbin case;

c) Needle hole in throat plate is damaged by the needle and needs repolishing (call authorized Bernina dealer to change needle plate).

**4. Faulty stitches.** Can have the following causes:

- a) wrong needle. Use system 705 B only;
- b) needle is crooked or not inserted correctly (push needle right up in the needle bar!);
- c) low quality needle, roughly polished.

**5. Needle breaks.** Can have the following causes:

- a) needle clamp screw is not sufficiently tightened;
- b) the material was withdrawn towards the operator and needle bent (material should always be withdrawn to the rear);
- c) when sewing over **thick part** material was pushed whilst the needle was still in, therefore it bent, touched the throat plate and broke.
- d) when cheap cotton, irregularly twisted or even containing knots is used.

**6. Seam irregularities.** A bad uneven seam results:

- a) if thread remnants are between the thread tension discs;
- b) if thread remnants are under the bobbin case tension spring.

**7. Machine runs slowly**

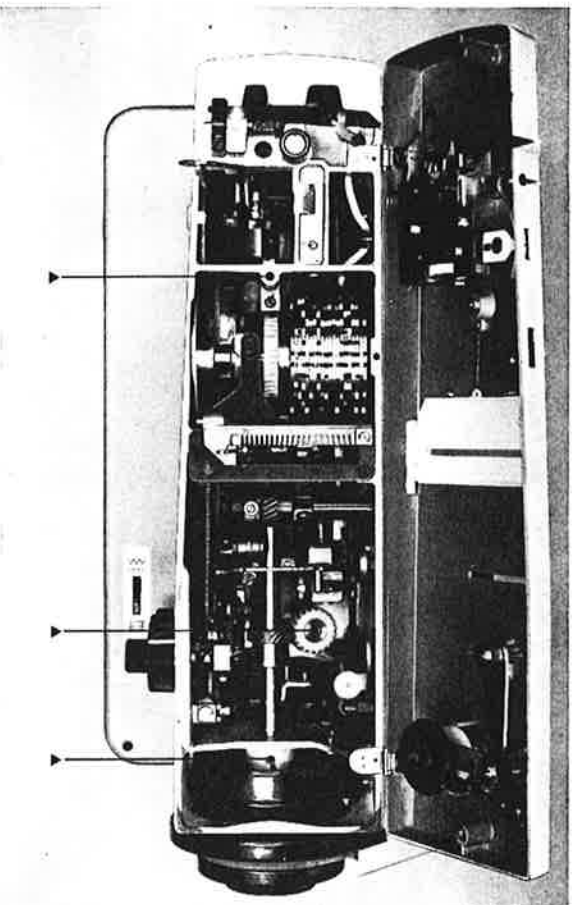
- a) Motor does not function properly (call authorized Bernina dealer);
- b) foot starter does not function properly (call authorized Bernina dealer);
- c) tension of driving belt is either too tight or too loose;

d) use of low quality oil can block the movement. The machine must be dismantled and cleaned. Call Bernina dealer;

e) machine has been standing in a cold room.

**When you bring your machine to an expert, please take along accessories and foot starter.**

# Cleaning and oiling



The main oiling points under the top cover of the machine.

**Cleaning the machine.** Scraps of thread are left beneath the stitches plate and around the shuttle during sewing. Open stitch plate and clean shuttle. Clean and oil shuttle. 1—2 drops of oil after 3—4 hours of sewing. Remove bobbin case.

## Oiling

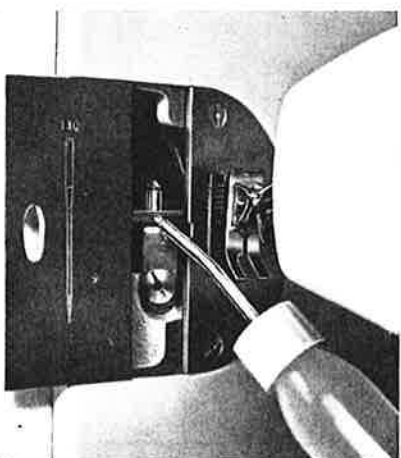
After 30—45 hours running (depending on the country and climate) the machine should be oiled. If too much oil is applied the excess will drain off unused and stain machine and material.

Always oil the machine **before use** and not afterwards. Use clear sewing machine oil only, free from resin and acid. Obtainable at all Bernina dealers.

Proper oiling of the machine assures its free running and long life.

All the oiling points on the machine are marked in red.

Unmarked points are provided with self-oiling bushings and thus need no oiling.



## Important note (safety regulations)

Please observe the sewing position while sewing. The moving needle is a source of danger (danger of injury to fingers). The sewing machine should be disconnected from the power supply by pulling out the plug from the socket when changing the needle, presser foot, bobbin or needle plate, when stopping work without supervision and during servicing (cleaning).

# Remarks

Bernina Dealers' notes regarding instructions, home calls and possible guarantee work

Date	Notes

Subject to changes in design from those shown in text and illustrations.