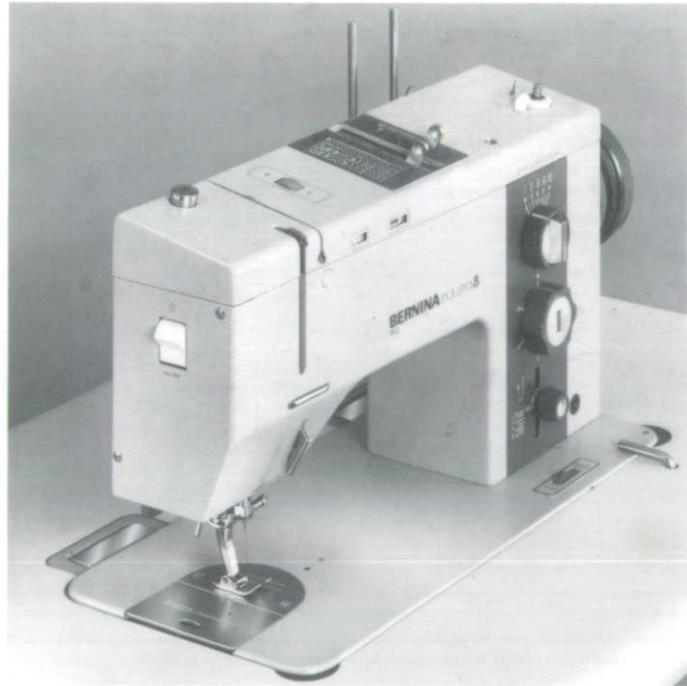


Bernina
Favorit
940



Bernina
Industrial
950

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Important!

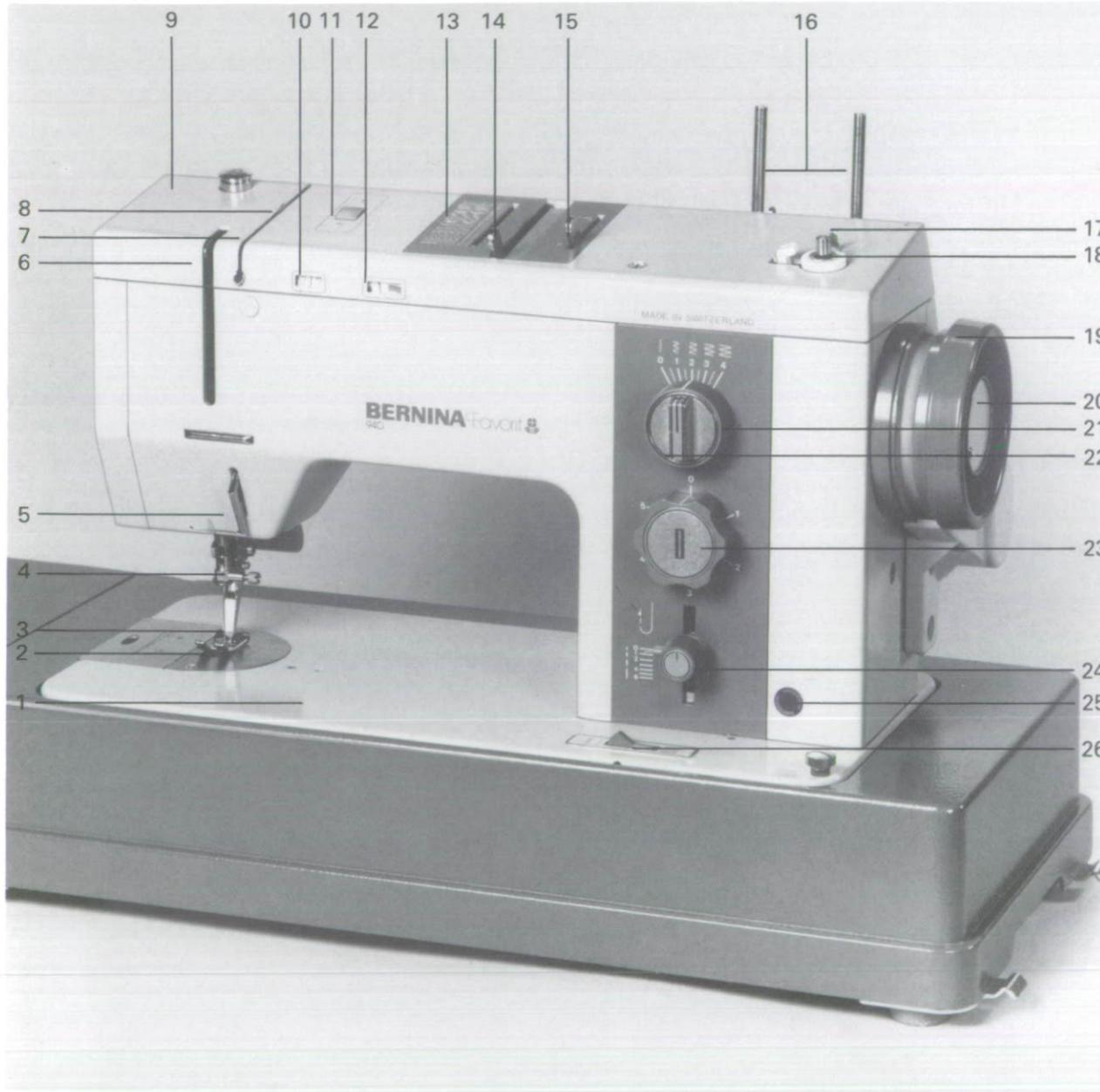
Safety Regulations

Subject to BEAB and OSHA safety regulations (official testing centres in Great Britain and the U.S.A.).

The following safety regulations must be observed without fail:

- The moving needle is a source of danger (risk of injury to fingers). The sewing position must therefore be kept under constant observation.
- Manipulations within the area of movement of the needle, such as changing the needle, the presser foot or stitch plate, must only be performed with the machine switched off (main switch set to  position). The same applies when removing and replacing the lower thread bobbin or hook.
- During maintenance work (cleaning or lubricating) or changing the light bulb and interruptions in sewing or after completion of work, the machine must be disconnected from the power supply by pulling out the mains plug.
- Repairs to the electronic section, especially the changing of the lead wire to the foot control unit, may only be carried out by one of our service agencies.

View of Bernina 940/950



- 1 Base plate
- 2 Needle plate
- 3 Presser foot
- 4 Needle holder clamp
- 5 Thread regulator
- 6 Thread take-up lever
- 7 Thread tension slot
- 8 Thread tension disc
- 9 Top frame cover
- 10 Thread tension indicator
- 11 Adjusting wheel for thread tension
- 12 Pattern indicator
- 13 Practical and decorative stitch scale
- 14 Selector lever
- 15 Changeover lever
- 16 Reel holder pins
- 17 Bobbin spindle
- 18 Hand-wheel
- 19 Thread cutter
- 20 Hand-wheel release screw
- 21 Stitch width knob
- 22 Needle position knob
- 23 Buttonhole knob
- 24 Stitch length knob
- 25 Opening for knee lifter
- 26 Switch for sewing or darning

Dear Bernina Customer,

We would like to congratulate you on the purchase of your new Bernina sewing machine and thank you for the confidence shown in our products.

You have acquired a top-quality Swiss product, manufactured with the utmost skill and care at our Bernina factory in Steckborn/Switzerland.

This Instruction Book provides you with all the necessary information about your Bernina and its countless applications for sewing work.

If you should require further details or advice about your sewing machine or sewing problems, please contact your Bernina stockist.

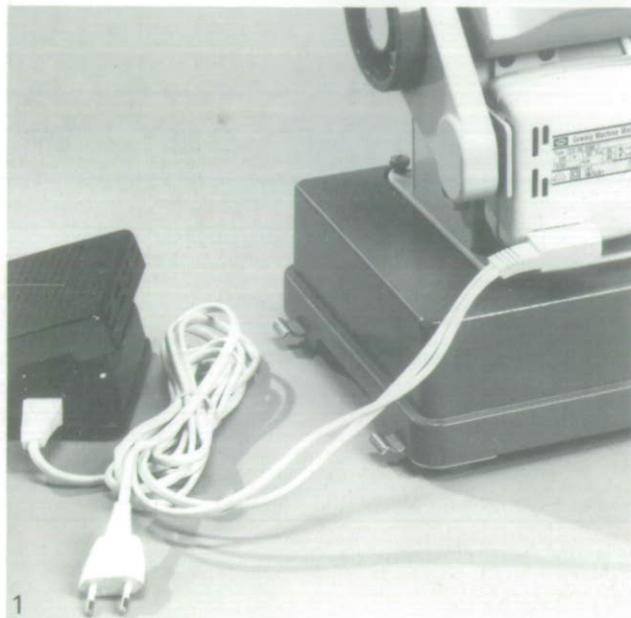
We hope you are successful and happy with your sewing and dressmaking work.

With kind regards

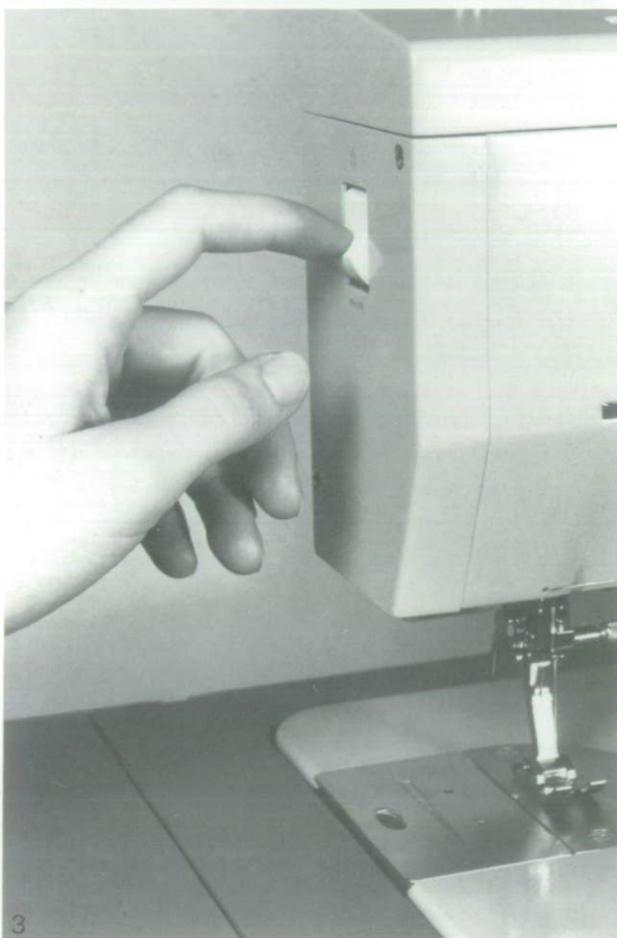


Odette Ueltschi-Gegauf, Chairman of the Board
FRITZ GEGAUF LTD.
Manufacturer of Bernina Sewing Machines, CH-8266 Steckborn, Switzerland

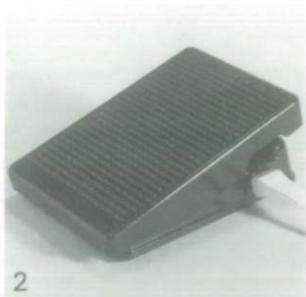
Electrical Section



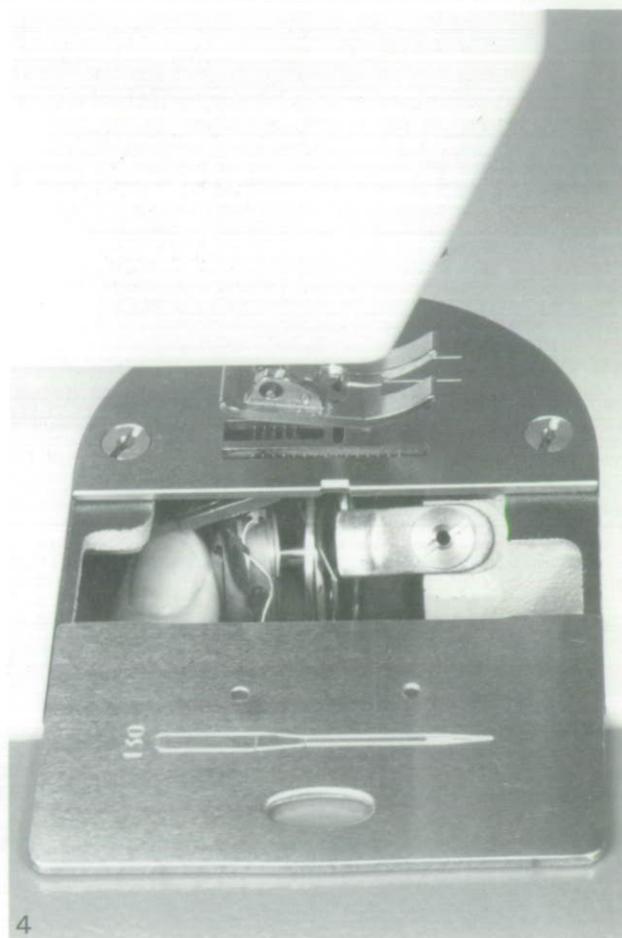
Connecting mains cable and foot control unit
The terminals on the machine for mains cable and foot control unit can be seen in Fig. 1.



Sewing light
The sewing light is switched on and off with the switch fitted in the front cover (Fig. 3).



Foot control unit
For controlling the sewing speed (Fig. 2).

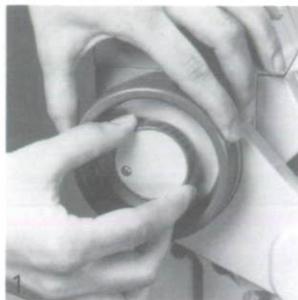


Removing Bobbin Case
Open needle plate slider. Turn hand-wheel towards you until the needle is in the uppermost position. Grip bobbin case by the latch with thumb and index finger of the left hand and remove it.

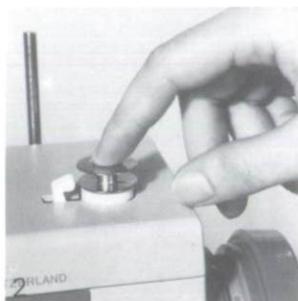
The bobbin case is inserted in the same way (Fig. 4).

Winding Lower Thread

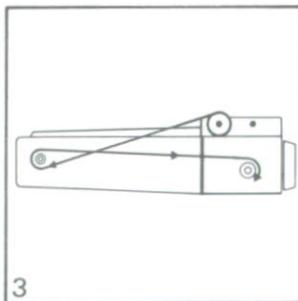
- Release hand-wheel: hold hand-wheel steady with left hand.
- With the right hand loosen release screw by turning towards you (Fig. 1).



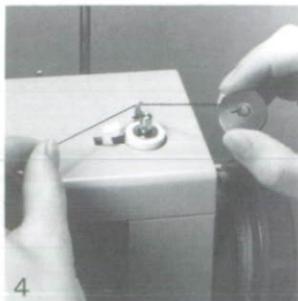
- Place empty bobbin on spindle (Fig. 2).



- Place reel on a reel pin and take thread clockwise around the pre-tensioning to the empty bobbin. Wind round empty bobbin several times, also in a clockwise direction (Fig. 3).
- Start bobbin winding device by operation foot control unit. When the bobbin is full, the winding device switches off automatically.

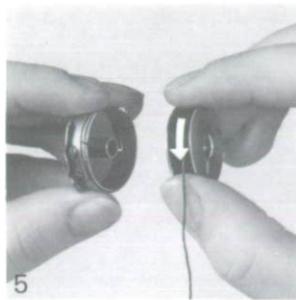


- Cut thread when removing bobbin by drawing over the small blade (Fig. 4).

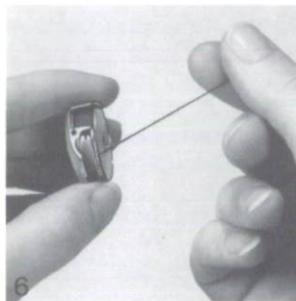


Inserting Bobbin

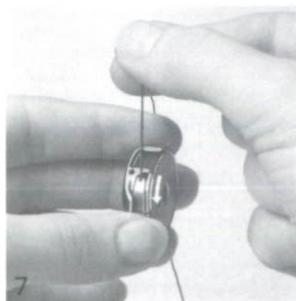
- Hold bobbin case in one hand, insert bobbin so that the thread is wound in the anti-clockwise direction, see arrow (Fig. 5).



- Draw thread through the slot and below the spring until it lies in a T-shaped slot at the end of the spring. Do not hold bobbin for this purpose (Fig. 6).



- When drawing the thread, the bobbin must turn in the anti-clockwise direction of the arrow (Fig. 7).

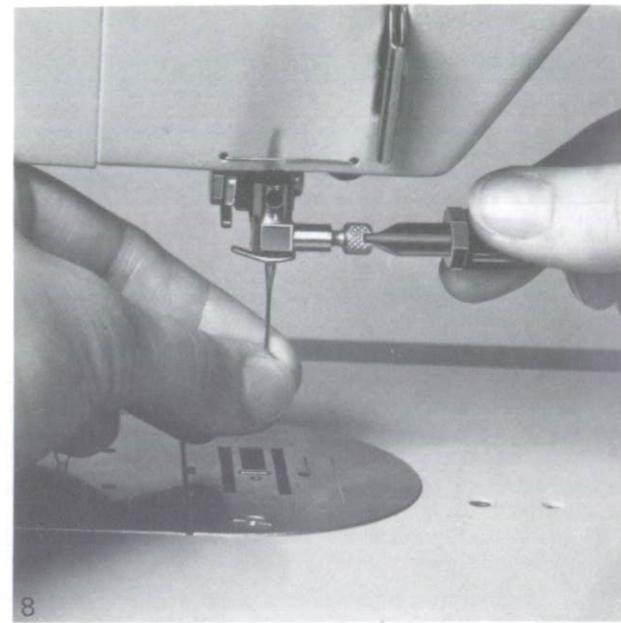


Inserting bobbin case into hook

- Turn hand-wheel and bring needle to uppermost position. Grip bobbin case by the latch with thumb and index finger of the left hand, as when removing.

- Insert bobbin case so that the notch points upwards and can fit into the carrier finger.

Inserting Needle



- Check whether needle is up.
- The accessories box contains a small black screwdriver for loosening or tightening the needle clamp.
- Loosening the needle clamp: half a turn to left, anti-clockwise (Fig. 8).

Inserting needle Model 940:
Flat shank side of needle always at rear.

Inserting needle Model 950:
Long thread groove must always be to the front (round shank needle).

Changing Presser Foot

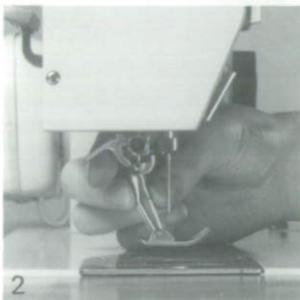
The success or otherwise of a piece of sewing largely depends on the correct choice of presser foot. It must therefore be simple and quick to change the presser foot.

(See page 9 concerning presser feet and their range of application).

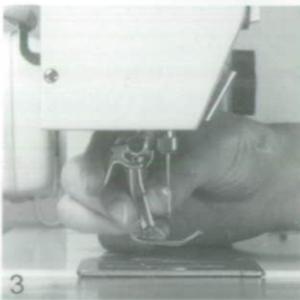
- Check whether needle is up. Raise presser foot (Fig. 1).



- Raise clamping lever with the index finger of the right hand and remove the presser foot using the middle finger and thumb (Fig. 2).

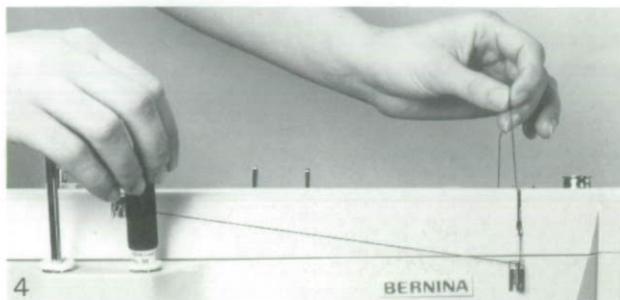


- Securing the presser foot: same procedure, but press clamping lever downwards with index finger (Fig. 3).

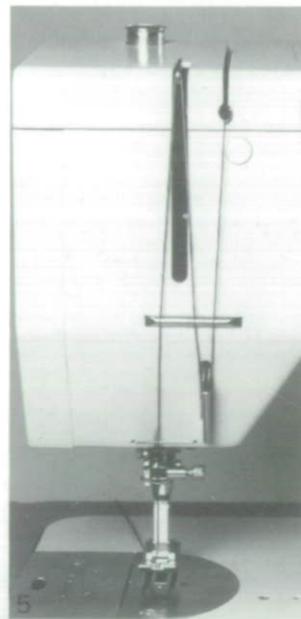


Threading Upper Thread

- Check whether needle is up.
- Raise presser foot.
- Place reel of thread on one of the two reel holder pins. Hold reel of thread firmly while threading (Fig. 4).



- First suspend the thread in the thread guide at the rear of the machine, then place in the slot of the take-up lever at the top and then again downwards to the needle holder thread guide (Fig. 5).



- Always thread needle from front. The small white plate at the front of the presser foot shaft makes it easier to thread the eye of the needle.

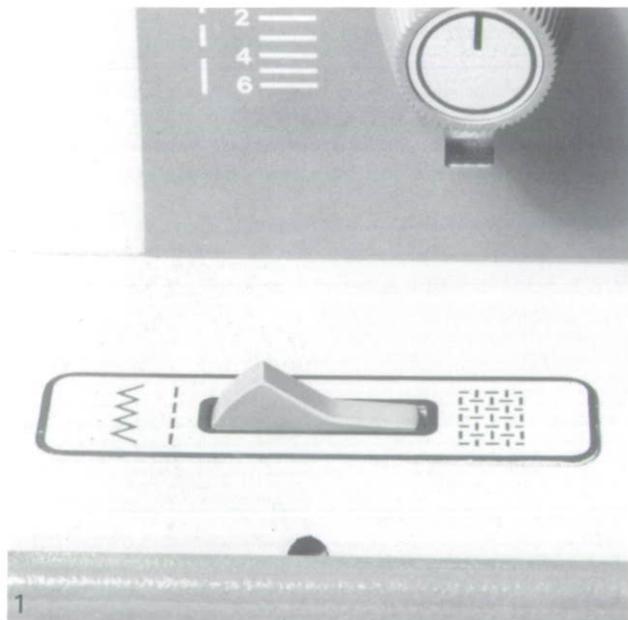
Bringing out Lower Thread

- Hold end of upper thread loosely.
- Turn hand-wheel once towards you until the thread take-up lever is up.
- By pulling thread slightly the lower thread is drawn out through the needle plate hole.
- Tighten upper and lower threads slightly and place visibly under the presser foot (Fig. 6).



Lowering Feed-Dog

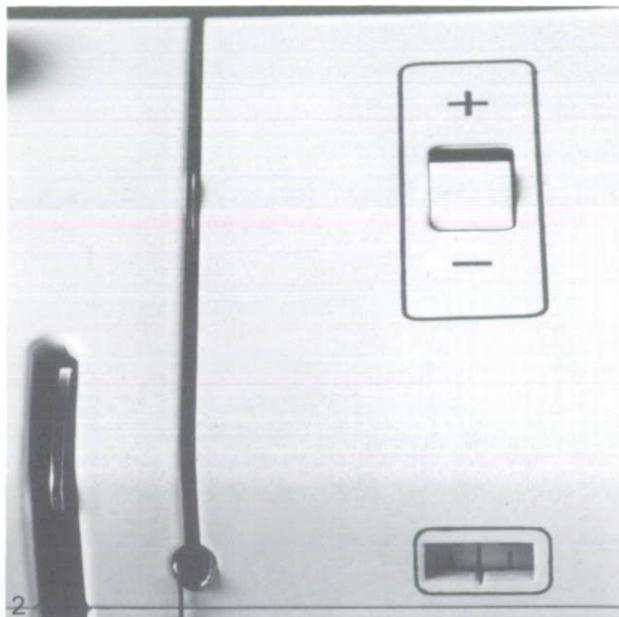
For certain types of sewing, mainly darning, the feed-dog must be lowered (Fig. 1).



Darning: The feed-dog is lowered by switching the changeover switch to the right i.e. to the darning symbol.

☞ = sewing ☞ = darning

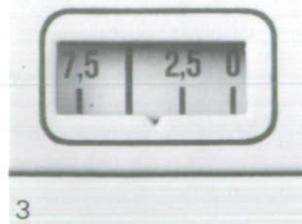
Thread Tension



For special sewing work, e.g. for sewing the tailor tacking stitch, the thread tension can be adjusted with the adjusting wheel (Fig. 2).

Turning this wheel backwards, towards the "+" sign, produces a tighter upper thread tension. The figures 7,5 and 10 appear in the window. Turning the adjusting wheel forwards, towards the "-" sign, produces a looser upper thread tension. The figures 2,5 and 0 appear in the window (Fig. 4). Do not forget: reset thread tension to normal red line in the middle, when a special piece of sewing requiring tension

alteration has been completed (Fig. 3).



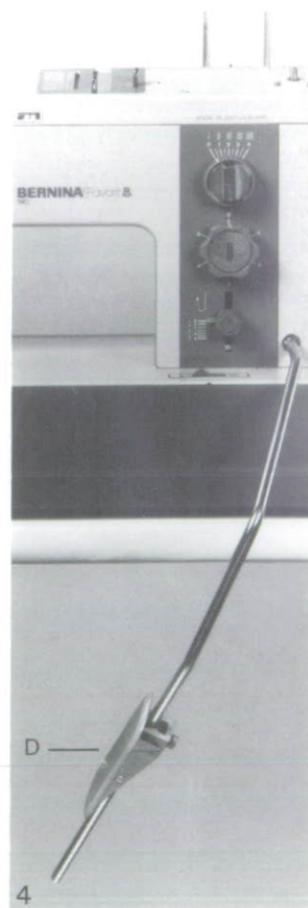
Presser Foot Lifter

Many sewing operations are considerably simplified if both hands can be used for guiding the work. The presser foot lifter is used for raising and lowering the presser foot with the right knee, leaving the hands free (Fig. 4).

Attaching the presser foot lifter:

- Insert presser foot lifter so that it hangs to the left. If the presser foot lifter is pressed to the right, the presser foot is raised. It should be possible to operate with presser foot lifter comfortably with the right knee without altering your customary sitting position (Fig. 1).

The angle of the presser surface D can be adjusted to suit the user.



Needle and Thread Table

Needle	70	80	90	100	110-120
Darning thread	✿	✿			
Embroidery thread No. 30		✿			
Sewing thread Mercerised cotton		✿	✿		
Sewing thread synthetic		✿	✿		
Sewing thread coarse Mercerised cotton, synthetic			✿	✿	
Buttonhole thread for decorative seams (cordonnet)				✿	✿

The needle size to be used depends on the thread selected, **the needle must match the thread.**
The adjoining table indicates which needle is suitable for which thread.

Needle system Model 940 = 130/705H

Needle system Model 950 = 287WH

Special Needles

Special needles make it easier to sew difficult materials.

Ball-point needles help to prevent damage to the fabric.

System 130/705 H-SES = fine round tip for fine knitted fabrics, particularly synthetics.

System 130/705 H-SUK = medium round tip for medium to coarse knitted fabrics, particularly synthetics.

System 130/705 H-S = stretch (only Nm 93) specially for elastic synth. knitted fabrics.

Jeans needles penetrate hard fabrics more easily.

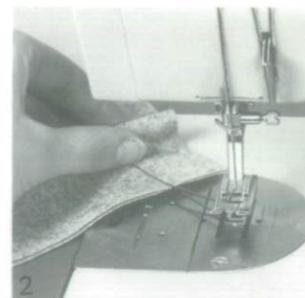
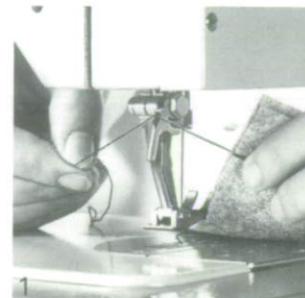
System 130/705 H-J = slender tipped form for jeans fabrics and other compact, hard fabrics.

Leather needles penetrate leather more easily.

System 130/705 H-LR = cutting tip particularly for hard leather.

Some Sewing Tips

Before removing the material with the left hand, the thread take-up lever and the presser foot should be up (Fig. 1).



For cutting the thread use the cutting blade on the clamping lever of the presser foot (Fig. 2).

Presser Feet

Presser feet are an important aid to sewing. They are provided with grooves and guides. The success or failure of a piece of sewing depends considerably on the correct choice of presser foot.

The presser feet are not therefore only suitable for a specific operation. They are also used for simplifying any other work.

For example the buttonhole foot:

Buttonhole = main application

Gathering = further application.

Several presser feet look very similar at first glance. They are provided with numbers to avoid confusion.

The presser feet illustrated here belong to the standard accessories in most countries. In other countries with different sewing practices, however, the range of presser feet may be different.

Special presser feet can be obtained for more specialised sewing work. Ask your Bernina dealer for advice.

000



Presser foot

**Straight stitch
zig-zag
Practical stitches**

007



Zipper foot

Sewing in zips
Sewing piping close
along stitching line
raised seam

016



Blind stitch foot

Blind hemming
Edge stitching

030



Embroidery foot

**Decorative stitches
satin stitches**
Appliqué, oversewing
beading cord, couching
on woollen thread

285



Darning foot

Darning
Monograms by free
hand
Free hand embroidery

452



Buttonhole foot

Buttonholes
Gathering

470

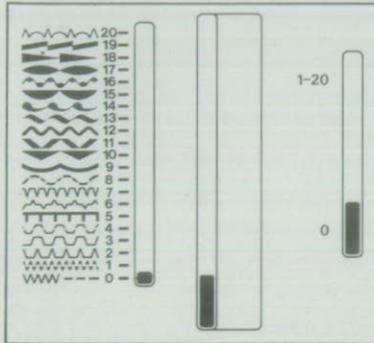


Overlock foot

Vari-overlock seam
Vari-overlock hem
Overcasting seams

Straight Stitch

Presser foot: 000
 Thread: to suit material
 Needle: to suit the thread

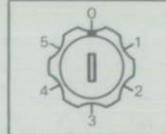


Stitch selection: selector lever 0
 changeover lever 0

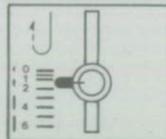
Stitch width: 0
 Needle position: centre



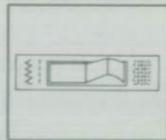
Buttonhole: 0



Stitch length: 1-6



Feed-dog: sewing

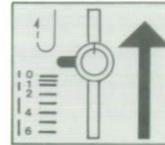


Forwards sewing

With the settings specified, the machine sews forwards with the stitch length selected. The stitch length is selected according to the sewing work and material to be sewn.

Reverse sewing

Move and hold stitch length knob upwards above 0 until reverse sewing is completed. When the knob is released, the machine sews forwards again with the previously selected stitch length.



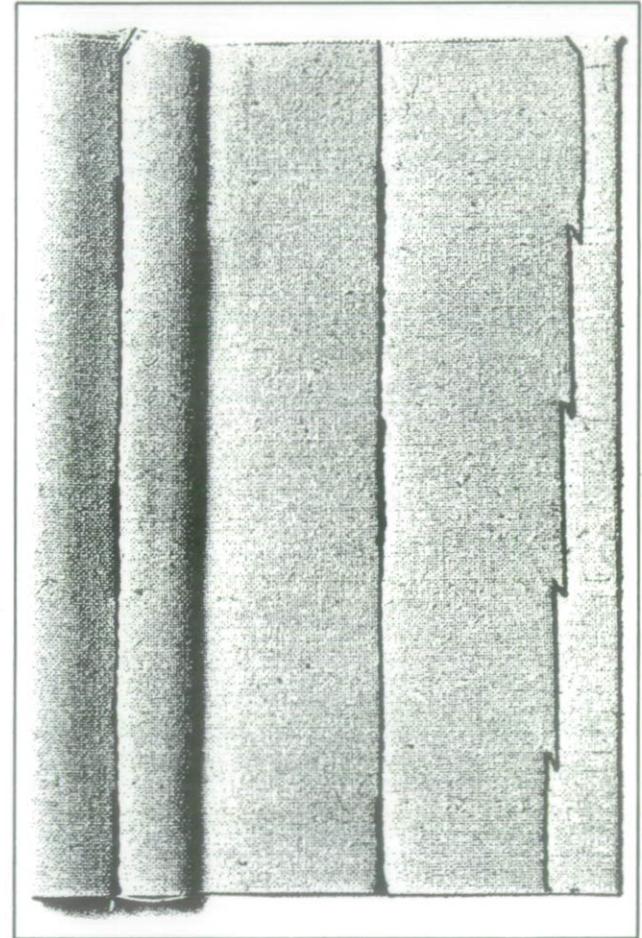
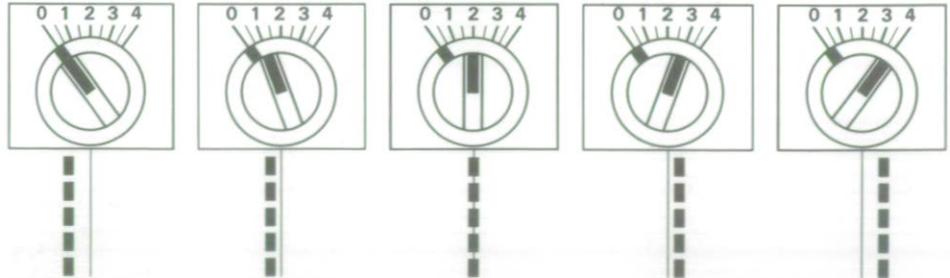
Securing the end

Sew approx. a few stitches reverse and then forwards again at beginning and end of seam.

The needle is at the centre for normal sewing.

Five needle positions

The position of the stitch can be set at five positions right or left with the knob for setting the needle position.



Zig-zag

Setting zig-zag

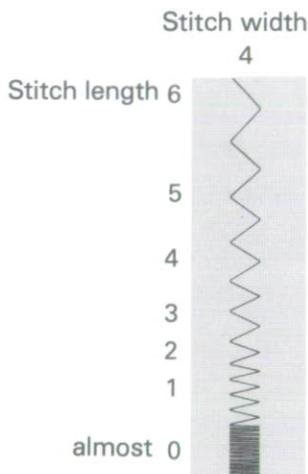
Presser foot:	000
Thread:	to suit material
Needle:	to suit thread
Stitch selection:	selector lever 0 changeover lever 0
Stitch width:	1-4
Stitch length:	1-6
Needle position:	centre
Feed-dog:	sewing

Zig-zag setting the width:

The **width** of the zig-zag stitch is set with the stitch width knob. It can be set fully variably up to 4 mm.

The stitch width can be altered while sewing or with the machine stationary.

But the needle must not be in the material when the machine is stationary!



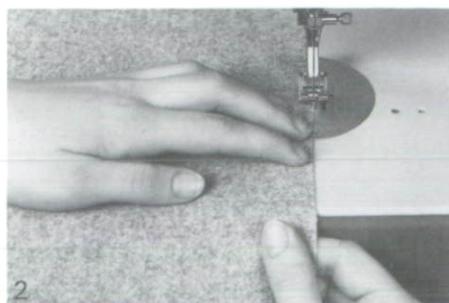
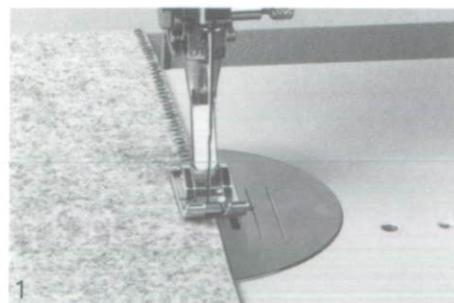
Overcasting edges

Presser foot:	000
Thread:	darning thread, possibly sewing thread
Needle:	80-70
Stitch width:	2½-4
Stitch length:	1-6

In general: zig-zag should not be too wide and stitch length not too long, cut edge neatly first. Use darning thread if possible, particularly for fine material.

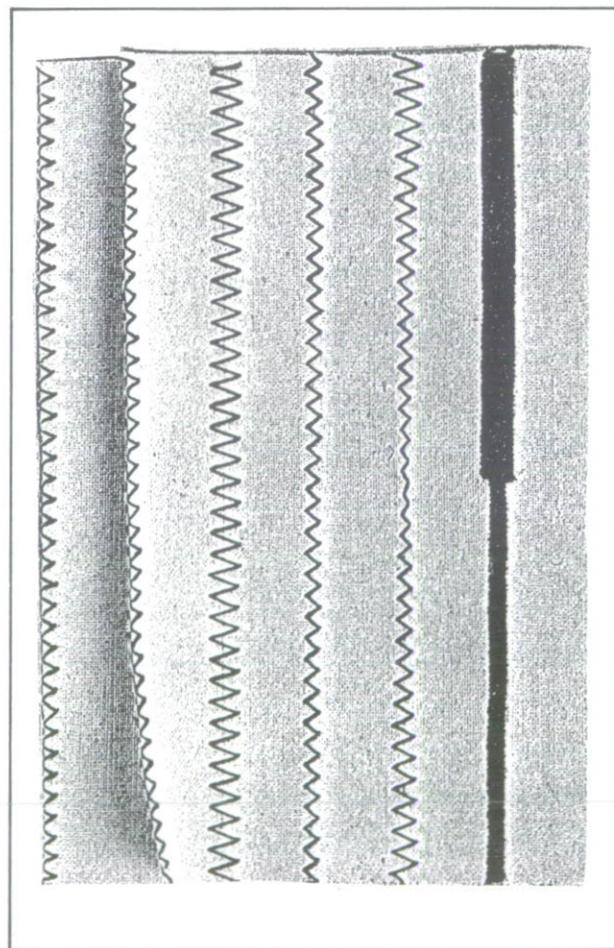
Guide edge of material in **centre** of presser foot, so that the needle penetrates alternately in the material and the outside (Fig. 1).

If sewn on the edge, also guide on the edge (Fig. 2).



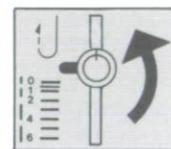
Satin-stitch = close zig-zag

Presser foot:	030 embroidery foot
Thread:	embroidery thread 30
Needle:	80
Stitch width:	1½-4
Stitch length:	almost 0



Set stitch length for very close zig-zag:

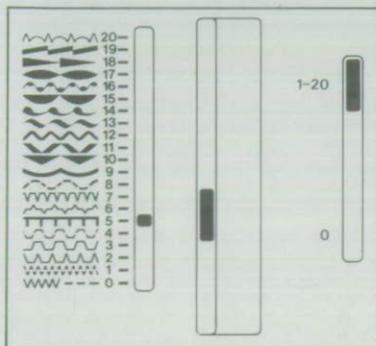
Turn stitch length knob to the right until it locks. Mark on knob is on top. Stitch length is then 0. By turning half a revolution to the **left** - mark is underneath - **the basic setting** of stitch length is obtained.



Adjust stitch density from basic setting to suit material. Turn a little to the left for thicker material, a little to the right for finer material.

Selecting the Stitches 1... 20

Presser foot: 000
 Thread: to suit the presser foot
 Needle: to suit the thread



Stitch selection: selector lever 1... 20
 changeover lever 1-20

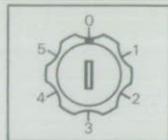
- Press selector lever to right to disengage and set to desired stitch 1... 20
- Set changeover lever to 1-20.

Stitch width: 1-4

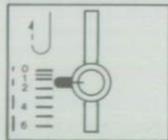
Needle position: centre



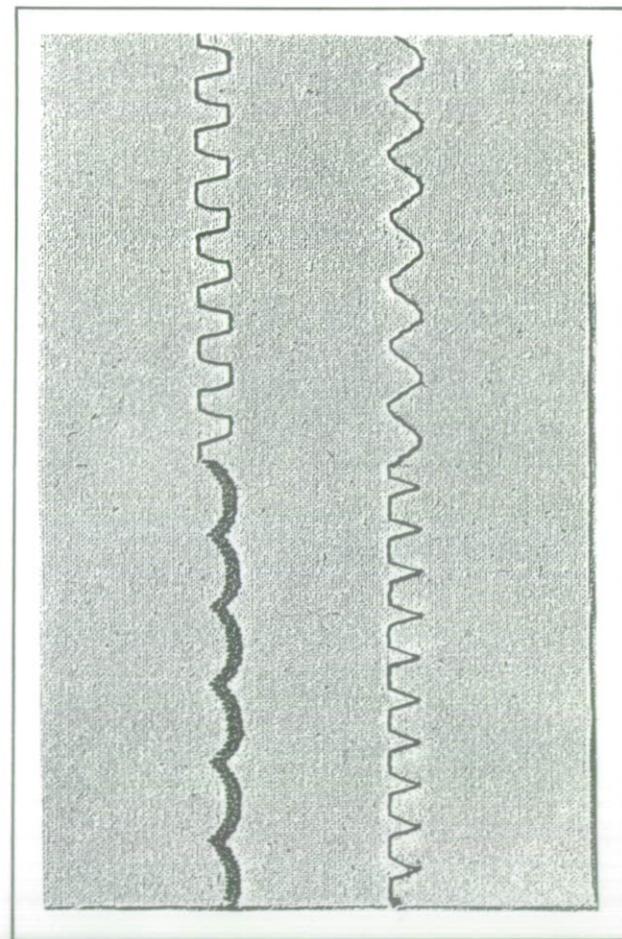
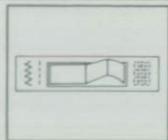
Buttonhole: 0



Stitch length: 1-6



Feed-dog: sewing



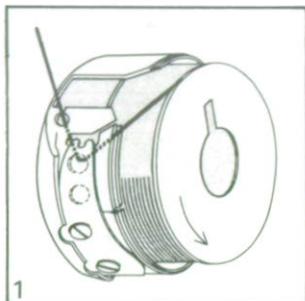
Application of Practical Stitches

<p>1 Sewn-out zig-zag</p>  <p>For most types of material</p> <p>Overcasting loosely woven fabrics Reinforcing and repairing edges Decorative seams</p>	<p>2 Blind stitch</p>  <p>For most types of material</p> <p>Blind hemstitch, shell edging on soft jerseys and fine materials Decorative seams</p>	<p>3 Universal stitch</p>  <p>For firmer knitted materials and fabrics, felt, leather, etc.</p> <p>Flat joining seam, visible hems, patchwork, mending jersey, sewing on elastics Decorative seams</p>	<p>4 Lycra stitch</p>  <p>Specially for lycra material</p> <p>Flat joining seams and hems Finishing of seams in foundation garments</p>	<p>5 Stretch stitch</p>  <p>For highly-elastic materials</p> <p>Highly-elastic, open seam for ski, riding-, climbing, hiking- and activity wear</p>
<p>6 Gathering stitch</p>  <p>For most types of material</p> <p>Gathering with cord, joining seam = cut edges pressed over and pushed together</p>	<p>7 Vari-overlock</p>  <p>Particularly for fine synthetic and silk jerseys, helanca and cotton and woollen jerseys</p> <p>Highly-elastic overlock seam and highly-elastic hem, particularly for sports underwear, pyjamas, T-shirts, sweaters, track-suits, etc.</p>	<p>8 Running stitch</p>  <p>For most types of material</p> <p>Darning with running stitch, mending material, reinforcing edges etc.</p>	<p>9 Scallop stitch</p>  <p>Particularly for woven fabrics</p> <p>Edgings for tablecloths, serviettes, collars, cuffs etc.</p>	<p>10 - 20 Decorative stitches</p> 

Buttonholes

Presser foot:	452
Thread:	sewing thread / darning thread
Needle:	80-70
Stitch selection:	selector lever 0 changeover lever 0
Stitch length:	practically 0
Feed-dog:	sewing

To sew buttonholes, through the slotted bore-hole thread lower thread of the bobbin case.

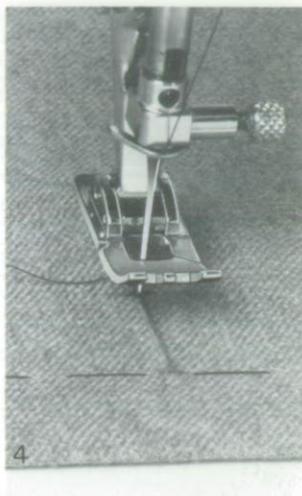
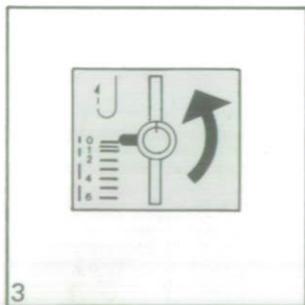
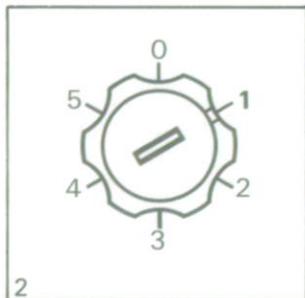


Buttonhole setting

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

2. Set stitch length as follows. Turn knob to right until it locks. The mark is now on top (Fig. 3) and the stitch length is 0. Now make half a turn to the left (marking line to the bottom) and this will give the basic setting for the stitch length.

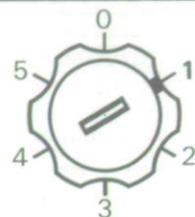
Adjust stitch density to suit material: turn a little to left for thick fabrics – to right for fine fabrics. Always sew a trial buttonhole. The stitch length varies slightly depending on the type of material.



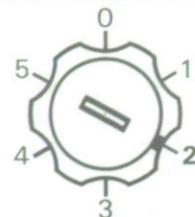
Sewing the buttonhole

Place the material under the foot so that the edge of the material lies in front of the presser foot (Fig. 4).

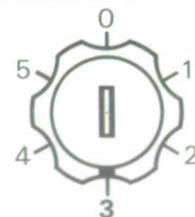
Move needle down with the handwheel and check whether it is at the centre of the presser foot. If not, turn handwheel once. Position work beneath foot and place needle exactly at start of the buttonhole. Lower presser foot and sew buttonhole.



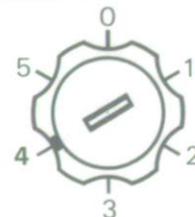
Knob to 1
Machine sews first
bead forwards



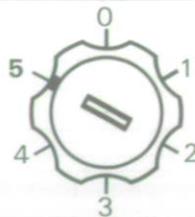
Knob to 2
Machine sews bar
tack



Knob to 3
Machine sews
second bead
reverse



Knob to 4
Machine sews bar
tack



Knob to 5
Machine does
securing stitches

Reset knob to 1 for further buttonholes. Continue sewing as described above. Set knob to 0 for all other sewing work.

Cutting open buttonhole

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



Corded buttonholes

The gimp cord strengthens the buttonhole.

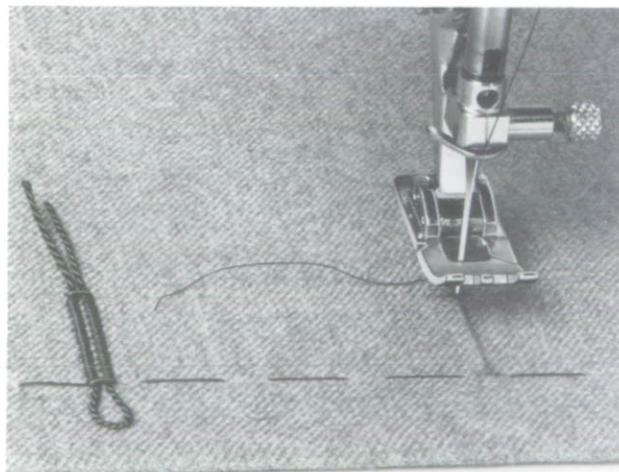
The gimp cord is particularly important in all knitted materials – both hand and machine knitted – to ensure that the buttonhole does not pull out of shape.

The thickness of the cord depends on the material to be sewn.

The following are suitable: beading thread No. 8, buttonhole thread, thick hand sewing thread, or fine crochet cord. Sew a trial buttonhole.

Place material under the foot so that the edge of the material lies in front of the presser foot. The

loop of the cord then comes at the end of the buttonhole which is pulled by the button (Fig. 6).



6

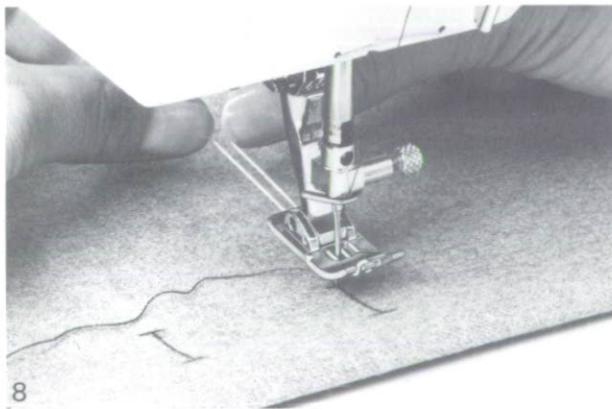
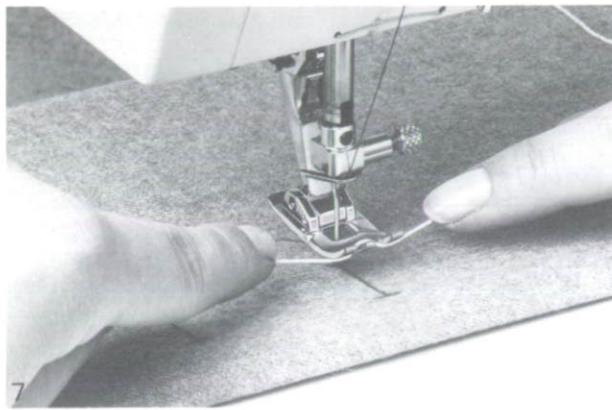
Sewing with gimp cord

It is much easier to position the cord if the needle is already in the material:

1. Move needle down using hand-wheel and check whether it is at the centre of the presser foot. If not, operate needle stop once. Position material beneath foot and place needle exactly at start of buttonhole. Do not lower foot yet.

2. Place cord over the centre stem of the buttonhole foot (Fig. 7) and take both ends under the foot to the rear (Fig. 8). Lower foot and **check whether cord can slide** i.e. is not stuck.

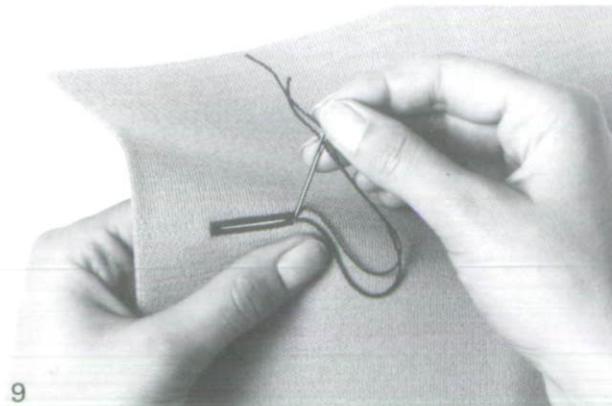
3. Sew buttonhole, do not hold cord as it must be able to move.



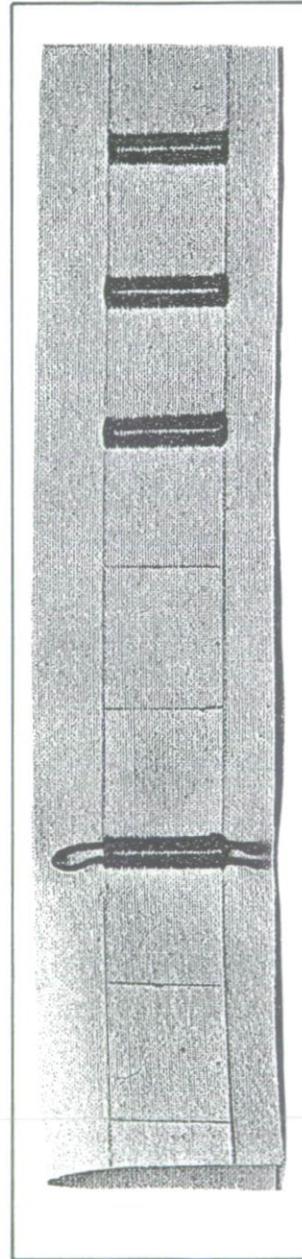
8

Finally pull the loop of the cord into buttonhole. In knitted fabrics thread ends of cord to rear with large hand sewing needle (Fig. 9) and tie or sew in securely.

The cord end can be cut off in woven material.



9



Changing the Bulb

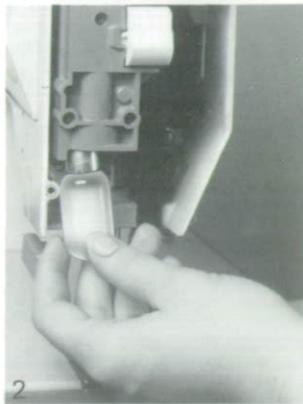
Use 220V/15W bulb with bayonet socket.
(Model 950:
12V/15 W bulb)

• **Disconnect the sewing machine from the power supply by pulling out the plug from the socket.**

• **Remove front cover:**
(Fig. 1)
Loosen the two screws with screwdriver.



• **Removing old bulb:**
(Fig. 2)
– Press bulb upwards, twist to left and withdraw.



• **Inserting new bulb:**
(Fig. 3)
– Press safety strap to right with the right hand, insert new bulb with the left hand: press upwards and twist to right to the stop.



• **Replace front cover.**
Secure front cover again with the two screws.

Cleaning the Machine

During sewing pieces of thread and fluff collect under the needle plate and around the hook. These remnants must be removed from time to time. The needle plate must be removed for this purpose. Loosen the two screws with the special screwdriver and remove needle plate. Then remove pieces of material and thread with a brush or cloth. Do not use hard objects for this purpose.

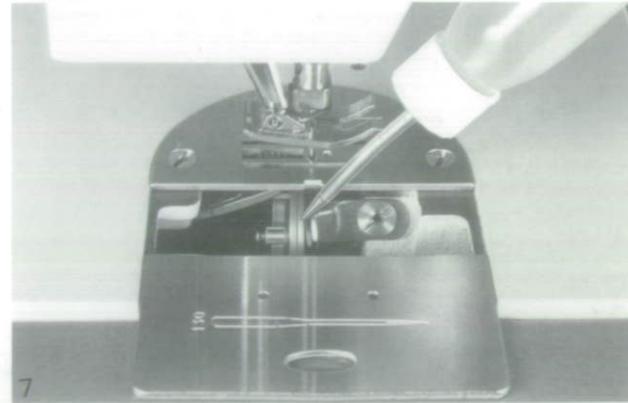
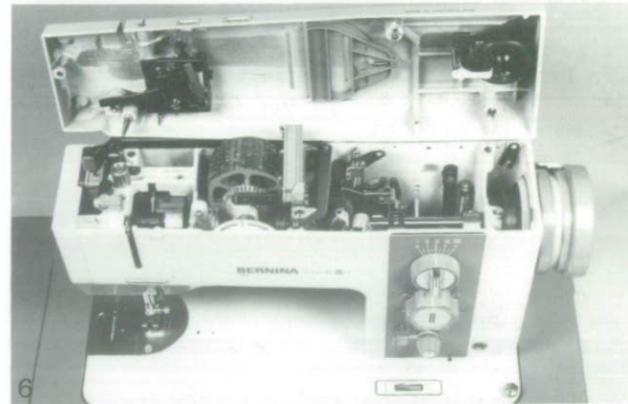
Lubricating the machine
Correct lubricating ensures that the machine will run quietly and increases its durability. Bearings provided with self-lubricating bushes do not have to be oiled. Use transparent, resin and acid-free sewing machine oil, which is obtainable from all Bernina shops. The machine should be lubricated (1–2 drops) after 30–40 working hours, according to country and climate. Too much oil flows off unused and soils the machine and sewing work.



Dismantle top frame cover when lubricating
Screws 175 and 165 hold the top frame cover secure. Press screws down with screwdriver and turn a half turn right in the clockwise direction (bayonet locking system) (Fig. 4). Top frame cover can then be lifted off (Fig. 5).



Lubricating the hook
(Fig. 7)
1–2 drops of oil after 3–4 sewing hours. Remove bobbin case. Place to oil is marked red.



Fritz Gegauf Ltd. Manufacturer of Bernina Sewing Machines, CH-8266 Steckborn, Switzerland

BERNINA®