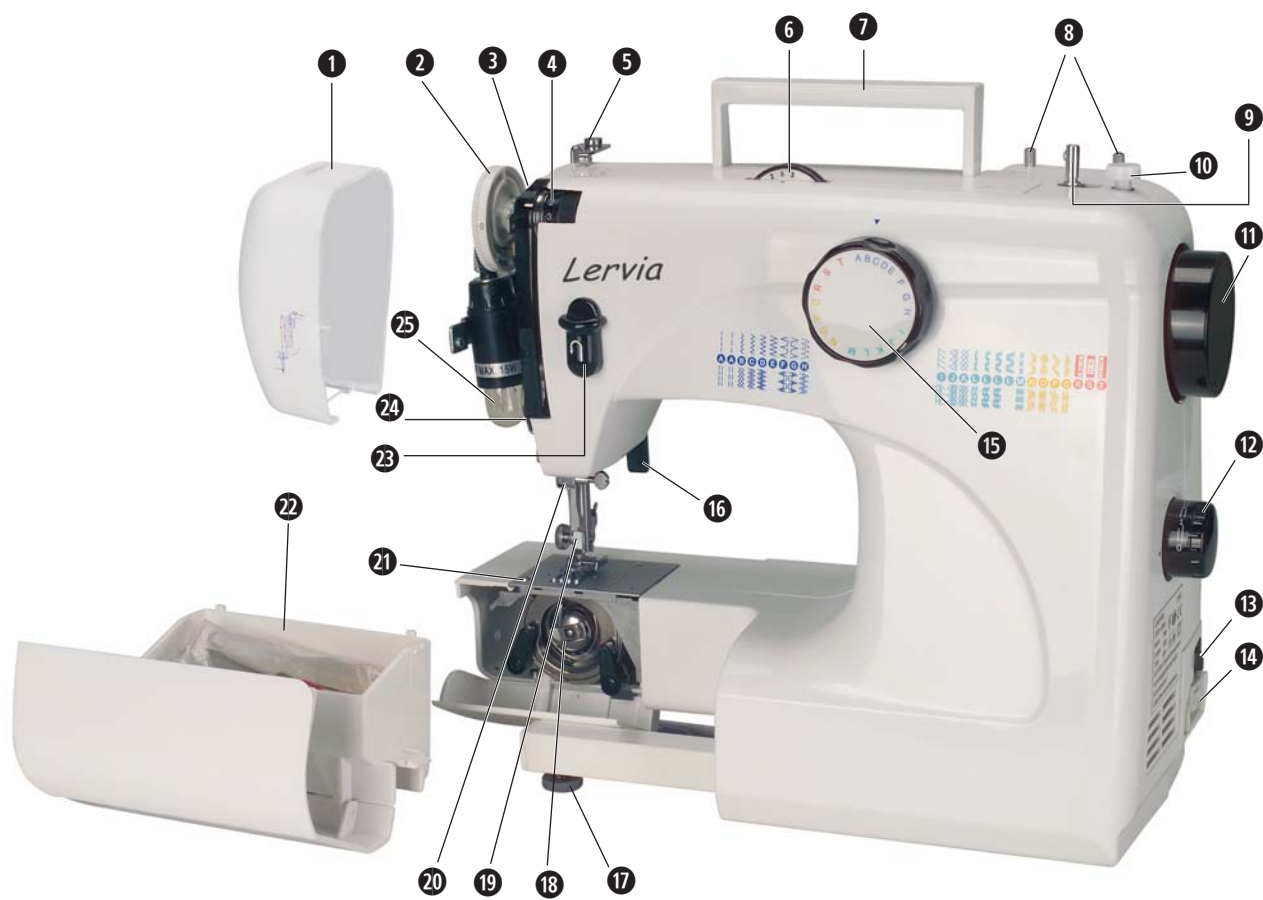


# Lervia

© KH4000 Automatic Free-Arm Sewing Machine  
Operating instructions









## Lervia Automatic Free-Arm Sewing Machine

<b>1. Intended Use</b>	<b>4</b>	<b>11. Sewing</b>	<b>17</b>
<b>2. Technical data</b>	<b>4</b>	a) To place the material	17
<b>3. Package contents</b>	<b>4</b>	b) To start a seam	17
<b>4. Operating elements</b>	<b>4</b>	c) To finish off a seam	17
<b>5. Safety instructions</b>	<b>5</b>	d) Guiding the material	18
<b>6. Setting up</b>	<b>6</b>	e) Changing the sewing direction	18
<b>7. Switching On / Off</b>	<b>6</b>	f) Selecting a stitch pattern	19
<b>8. Threading</b>	<b>7</b>	g) Straight stitch	19
a) Threading the lower bobbin	7	h) Zigzag	19
b) Threading the lower thread	8	i) Stitch pattern table	20
c) Threading the upper thread	11	j) Blind hem	21
d) Retrieving the lower thread	12	k) Material-Thread-Needle Table	22
e) Threading with 2 needles	12	l) Seam guide	23
<b>9. Attaching accessories</b>	<b>13</b>	m) Overcast stitch	23
a) Changing needles	13	n) Stretch seams	23
b) Changing the stitch plate	13	o) Sewing buttonholes	24
c) Changing the snap-on foot	14	p) Buttonhole table	24
<b>10. Settings</b>	<b>15</b>	q) Sewing on buttons	25
a) Setting the upper thread tension	15	r) "Edge-to-edge" sewing	25
b) Setting the lower thread tension	15	s) Decorative stitches	25
c) Setting the presser foot pressure	16	t) Sewing a zipper	26
d) Setting the stitch width	16	u) Sewing with the twin needle	27
e) Setting the stitch length	16	v) Embroidery	27
		w) Thread cutter	27
		<b>12. Care</b>	<b>28</b>
		a) Clean the gripper area	28
		b) Clean the feeder	28
		c) Clean the casing	29
		d) Oil the gripper track	29
		e) What else needs oiling?	29
		f) Storing	30
		<b>13. Troubleshooting</b>	<b>30</b>
		<b>14. Warranty and service</b>	<b>31</b>
		<b>15. Disposal</b>	<b>31</b>

Keep this manual for future reference and pass it on with the equipment to any future users.

## Operating instructions Lervia Automatic Free-Arm Sewing Machine

### 1. Intended Use

The sewing machine is **intended** ...

- for use as a movable machine,
- for sewing of typical household textiles and ...
- only for private household use.

The sewing machine is **not intended** ...

- to be installed at a fixed location,
- for processing of other materials  
(e.g. leather or other heavy materials  
such as tent or sail fabrics)
- for commercial or industrial use.

### 2. Technical data

Power supply	: 230 V / ~50 Hz
Motor output	: 70 W
Bulb power	: 15 W
Bulb voltage	: 230 V / ~50 Hz
Bulb thread	: E14 thread
Protection class	: II

### 3. Package contents

(see front fold-out page)

- 1 sewing machine
- Ⓐ 1 blind hem foot
- Ⓑ 1 seam guide
- Ⓒ 1 zipper foot
- Ⓓ 1 buttonhole foot
- Ⓔ 1 button foot
- Ⓕ 1 sewing foot holder (attached)
- Ⓖ 1 finger protector (attached)
- Ⓗ 1 zigzag foot (attached)
- Ⓘ 1 knife
- Ⓙ 1 oil tube
- Ⓚ 1 set of needles (incl. twin needle)
- Ⓛ 3 screwdrivers
- Ⓜ 2 felt wheels
- Ⓝ 1 darning plate
- Ⓞ 3 bobbins
- Ⓟ 1 foot switch
- Operating instructions
- Warranty booklet

### 4. Operating elements

(see rear fold-out page)

- 1 Front cover
- 2 Selector wheel (contact pressure sewing foot)
- 3 Threading hook
- 4 Selector wheel (upper thread tension)
- 5 Upper thread guide
- 6 Selector wheel (stitch width)
- 7 Carrying handle
- 8 Thread spool carrier
- 9 Winder spindle
- 10 Spool stop
- 11 Handwheel
- 12 Selector wheel (stitch length)
- 13 ON / OFF switch
- 14 Foot switch connection
- 15 Stitch pattern selector
- 16 Foot lever
- 17 Adjusting foot
- 18 Bobbin case
- 19 Foot holder
- 20 Needle retainer
- 21 Stitch plate
- 22 Box compartment
- 23 Lever (reverse operation)
- 24 Tension spring
- 25 Lamp

## 5. ⚠ Safety instructions

Like any other electrical device, a sewing machine can cause serious, even life-threatening injuries. To avoid this, and in order to work safely:

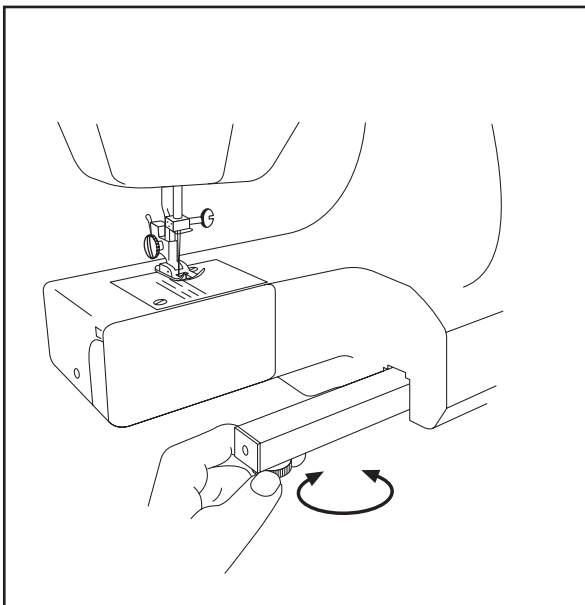
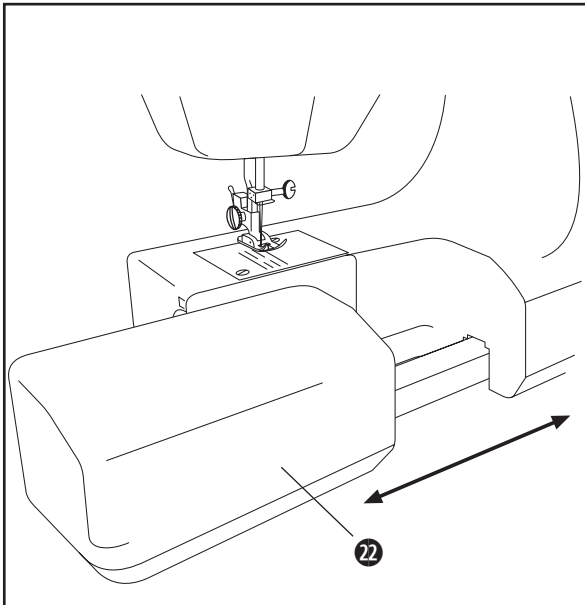
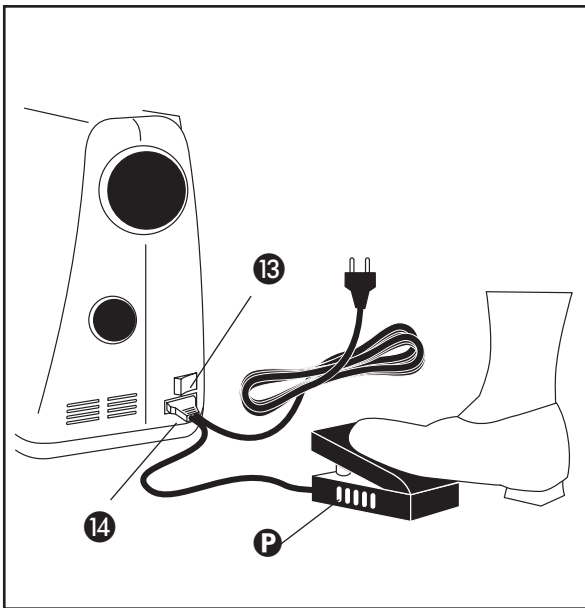
- **Before initial use of your sewing machine, read these operating instructions thoroughly.**
- **Keep the operating instructions in a suitable place near the machine. When passing the appliance on to others, always enclose the operating instructions.**
- **Always disconnect the power supply when leaving the machine unattended.** This will prevent the risk of accidents if the machine is switched on accidentally.
- **First pull the power plug before changing the bulb or performing maintenance work on the machine.**  
This will prevent possibly life-threatening electric shocks.
- **Do not remove the plug from the socket by pulling on the cable. Always grip the plug and not the cable when pulling out the power plug.**
- **Only use the sewing machine in dry rooms.**
- **In case of any visible damage on the machine, the foot switch or the power cable:** Have the damage repaired by Customer Service before using the sewing machine again.
- **Never let children or elderly persons handle the machine unsupervised** because they may not properly appreciate the possible dangers. Keep electrical appliances outside the reach of children.
- **Never use the machine when the ventilation apertures are blocked. Keep the ventilation apertures of the machine and the foot switch free from fluff, dust and waste material.**

## ⚠ Warning against injuries and material damages:

According to legislation, you as the user of an electrical appliance are responsible for preventing possible accidents through safety-conscious behaviour:

- **Keep your work space tidy.** An untidy workplace can lead to accidents.
- Provide adequate **lighting** when working!
- **Do not wear loose clothing or jewellery,** as these can be caught in the moving parts. You should also wear a hair net if you have long hair.
- Avoid **abnormal posture.** Remain steady and in a well-balanced position at all times.
- **Be alert!** Pay attention to what you are doing. Always take a rational approach to your work. Never work with the sewing machine if you are unable to concentrate or if you are feeling unwell!

If accidents occur as a result of handling the machine with insufficient care, or failure to follow the safety instructions in this manual, then the manufacturer cannot accept liability.



## 6. Setting up

- Place the **sewing machine** on a stabile table.
- Plug the **foot switch P** into the connection socket **14** of the machine and ...
- insert the **plug** into the wall socket.

If the worktop is **not completely even**, you can compensate for slight unevenness as follows:

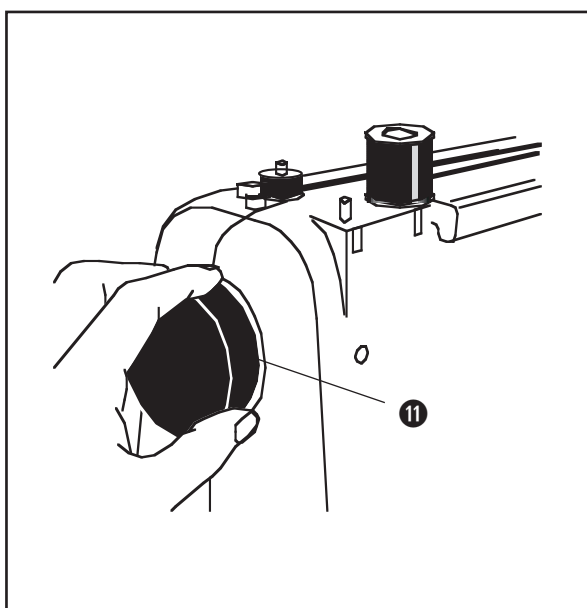
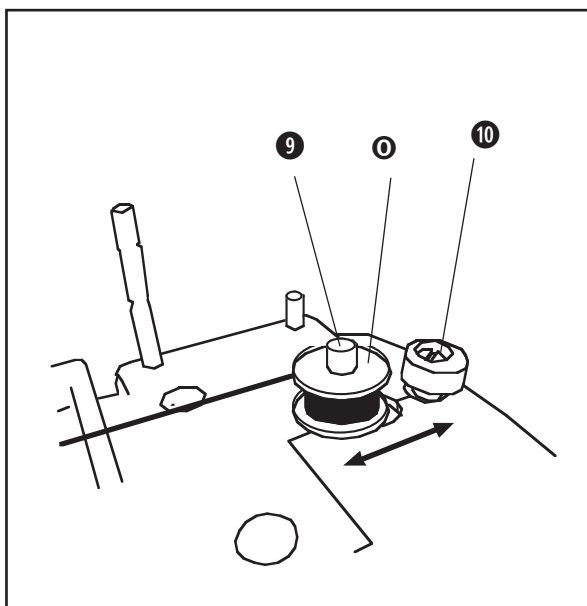
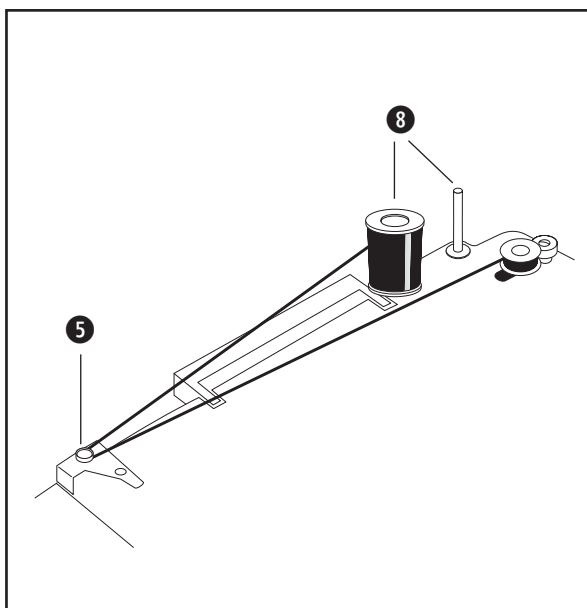
- Pull the **box compartment 22** off to the side, it is only slid on, not firmly attached.
- You can turn the **adjusting foot 17** that becomes visible underneath in order to make the sewing machine rest properly.

You can simply slide the box compartment **22** back on – for instance if you need this as an "extension table" for sewing large material. You can also leave the box compartment **22** off, for example for free-arm sewing of arms, trouser legs, etc. The box compartment **22** is also used to store the accessories.

## 7. Switching On / Off

You should familiarize yourself with these methods of switching on and off, so that you can take the correct action in the event of an emergency:

- You can switch the sewing machine on or off by pressing the **switch 13**. The bulb **25** indicates the operating state.
- If you pull out the **foot switch plug**, the machine is without power.
- If you pull the **power plug** from the socket, the machine and the foot switch are without power.



## 8. Threading

### ⚠ Warning:

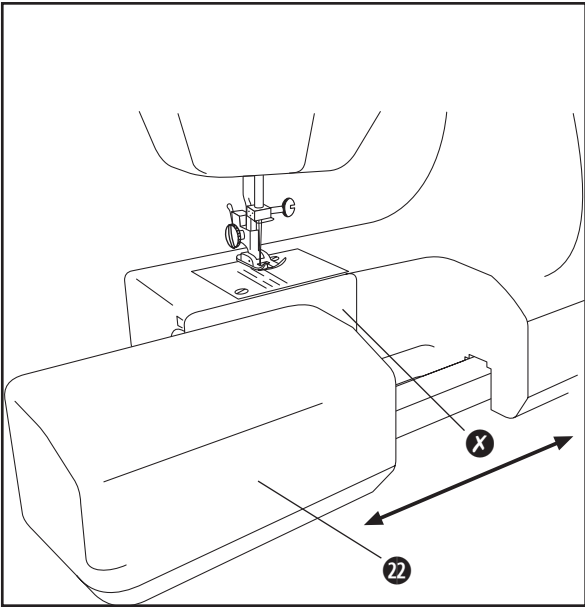
Make sure that the sewing machine is switched off and the plug has been pulled out of the socket when threading in order to avoid injury if the sewing machine should be accidentally switched on.

#### a) Threading the lower bobbin

To load the lower bobbin with thread:

- Pull out one of the two **thread spool carriers** 8 on top and place a spool of thread there.
- You can place a felt pad M underneath the **spool of thread**, so that the bobbin runs evenly.
- Place an **empty spool** 0 on the **winder spindle** 9.
- Pull the thread through the upper thread guide 5.
- Wind the loose end of the thread clockwise a few times around the empty spool 0.
- When the first windings of thread are taut against the spool, press the spool with the winder spindle 9 against the **spool stop** 10.
- Pull the **handwheel** 11 on the right of the machine slightly outward in order to disconnect the sewing mechanism from the motor.
- Now switch the sewing machine on and step on the foot switch P. Once the spool is full, cut the thread.
- Press the winder spindle 9 back to the left and remove the full spool.
- Do not forget to push the **handwheel** 11 back in – otherwise the sewing mechanism remains disconnected from the motor.

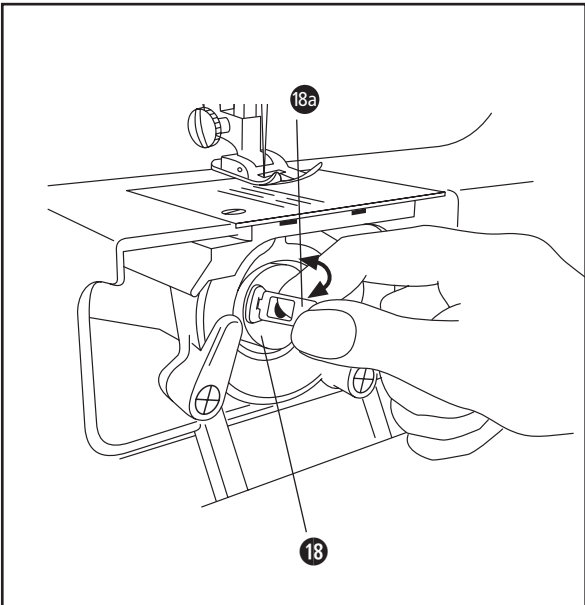




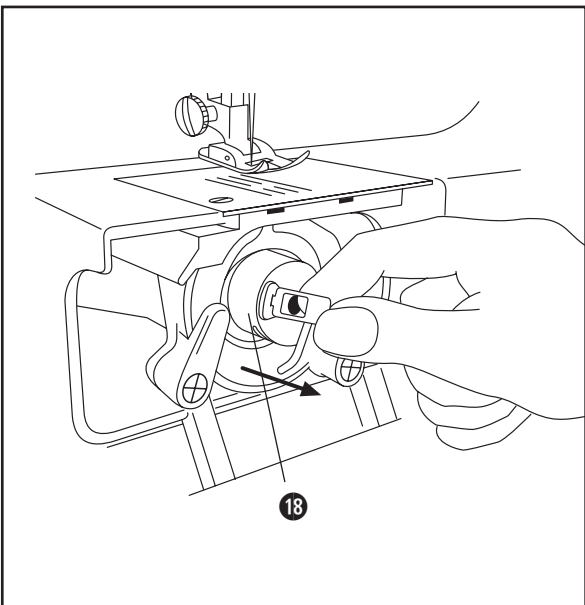
## b) Threading the lower thread

Turn the handwheel 11 in an anti-clockwise direction to fully raise the needle.

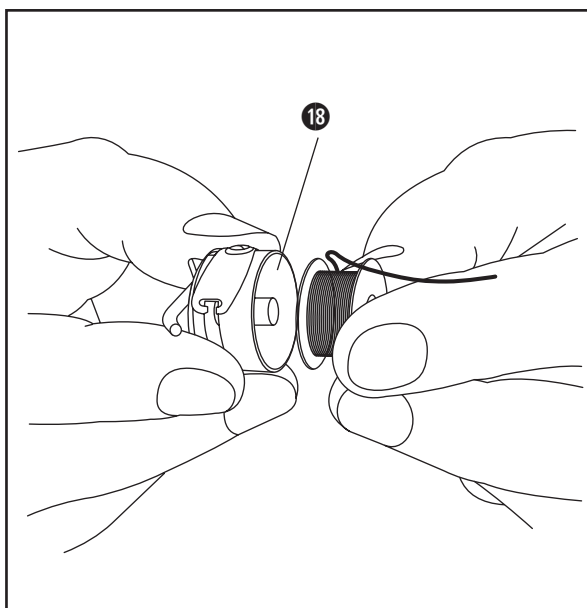
- Pull the **box compartment 22** off to the side, it is only slid on, not firmly attached.
- Then open the **gripper flap X** situated behind it.



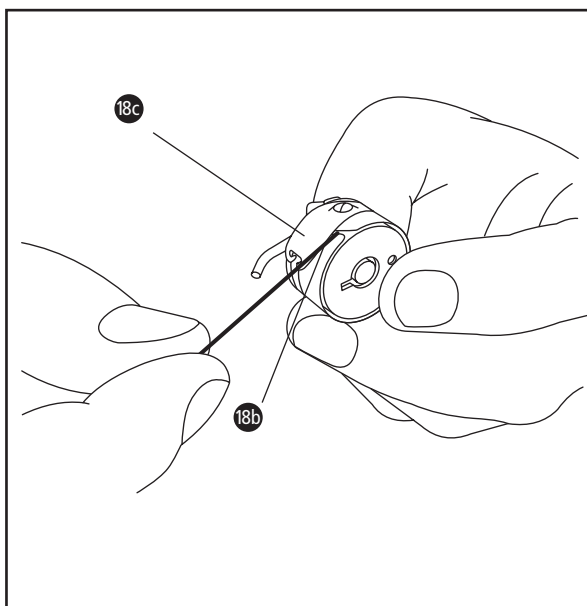
- Fold out the **folding lever 18a** of the bobbin case 18 ...



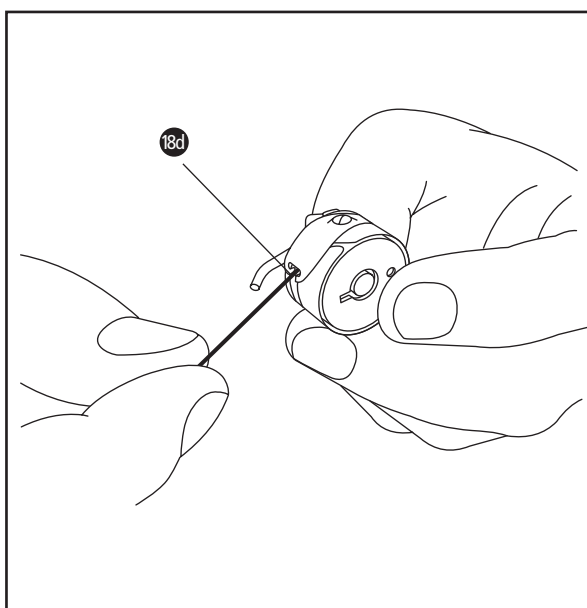
- and pull out the **bobbin case 18** as shown.



- Unwind approximately 10 cm of thread from the spool and slide this into the bobbin case 18 so that the spool unwinds anti-clockwise.

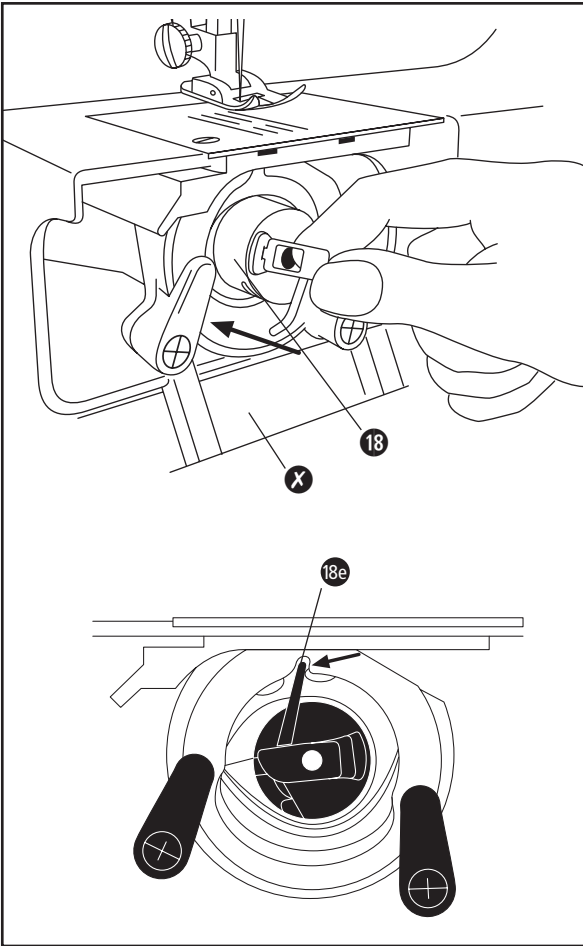


- Pull the unwound end of the thread through the gap 18b in the side wall of the bobbin case ...
- under the tension spring 18c ,

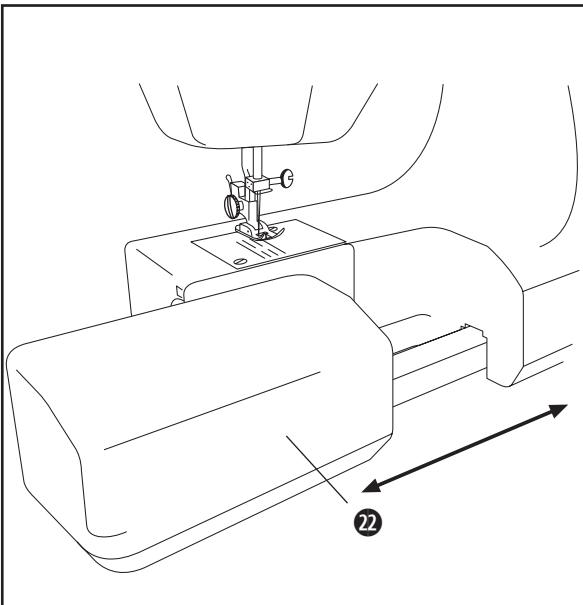


- until the thread comes out the slit 18d in the bobbin case.

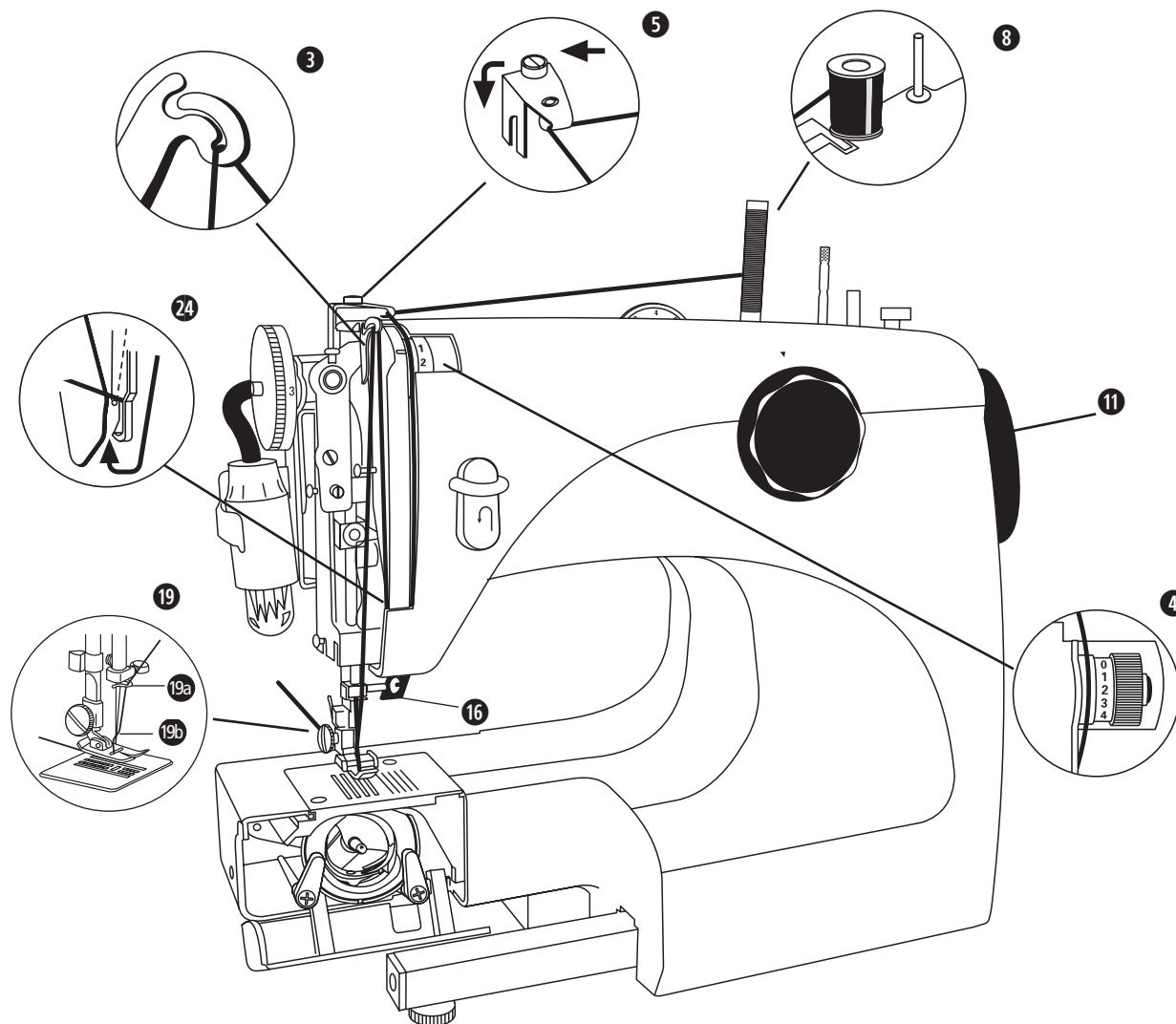
**i** For optimal setting of the lower thread tension, see Chapter 10.



- Put the bobbin case 18 back on the pin and ...
- turn the bobbin case 18 until the driver 18e catches in the notch.
- Lay the excess thread such that it does not bind anywhere ...
- then close the gripper flap X.



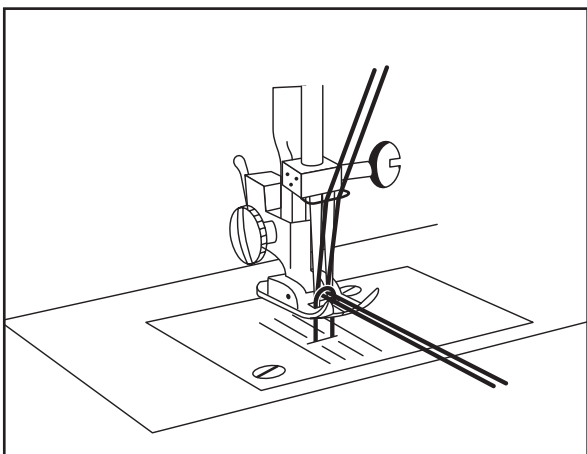
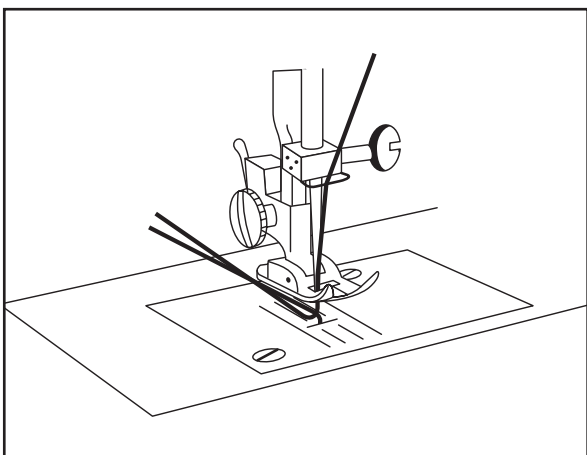
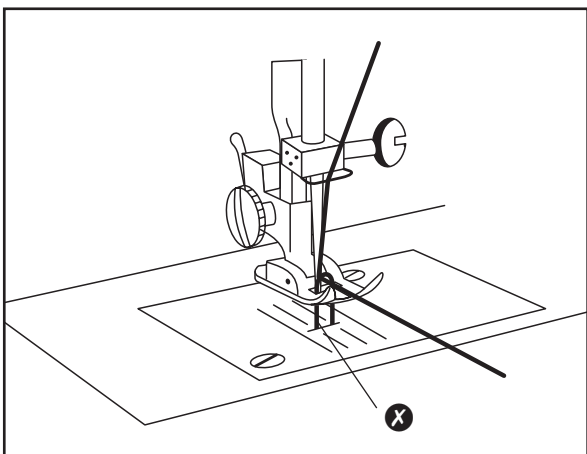
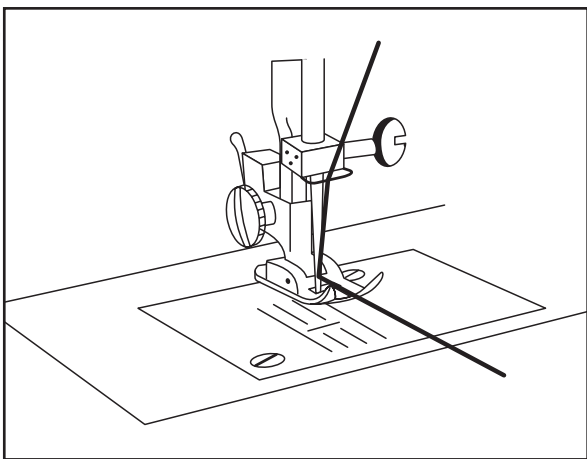
- You can simply slide the box compartment 22 back on – for instance if you need this as an "extension table" for sewing large material. You can also leave the box compartment off, for example for free-arm sewing of arms, trouser legs, etc.



### c) Threading the upper thread

To pass in the upper thread, it is **not** necessary to open the front of the sewing machine. The illustration is for guidance only. Before you begin threading, turn the handwheel **11** anti-clockwise to position the threading hook **3** in the uppermost position. Use the foot lever **16** to raise the needle retainer **19**.

- Pull out one of the two **thread spool carriers** **8** on top and place a spool of thread there.
- You can place a **felt pad M** underneath the spool of thread, so that the bobbin runs evenly.
- Guide the thread through the **upper thread guide** **5**, ...
- over the selector wheel for the **upper thread tension** **4**, ...
- underneath the **tension** **24** spring, ...
- over the **threading hook** **3**,
- through the **thread guide** **19a**, from the front through the **eye of the needle** **19b** and finally under the **needle retainer** **19** towards the back.
- Lower the needle retainer **19** with the foot lever **16**.



#### d) Retrieving the lower thread

- Turn the handwheel ⑪ in an anti-clockwise direction to fully raise the needle.
- Use the foot lever ⑯ to raise the needle retainer ⑲ .
- With the left hand, firmly hold the end of the upper thread that comes through the eye of the needle.
- Then use your right hand to turn the **handwheel** ⑪ one full turn anti-clockwise.
- The upper thread now pulls up the lower thread in a loop X.
- As soon as the lower thread appears, pull carefully on the upper thread held in your left hand. In this way, you can pull the lower thread clear.
- Pull out the two threads by about 10 cm.
- and lay these away to the back, as shown. The sewing machine is now ready to use.

#### e) Threading with 2 needles

When you have inserted the **twin needle** as described in Chapter 9:

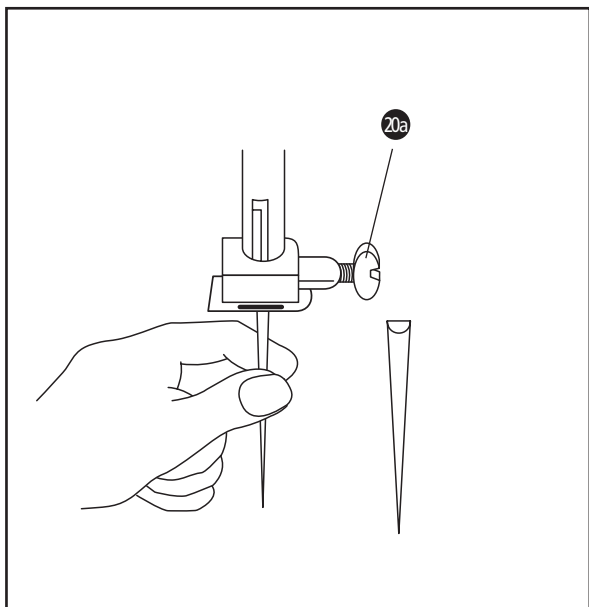
- Pull out both **thread spool carriers** ⑧ on top and place two spools of thread there.
- You can place a felt pad ⑭ underneath the **spool of thread**, so that the bobbin runs evenly.
- Run both **upper threads** exactly as they would be run for threading a single thread, ...
- except for threading at the needle: in this case, thread the two ends of the upper threads **separately** through the two **needle eyes**.
- The **lower thread** is then threaded in exactly the same way and lifted upward, as for a single thread.



## 9. Attaching accessories

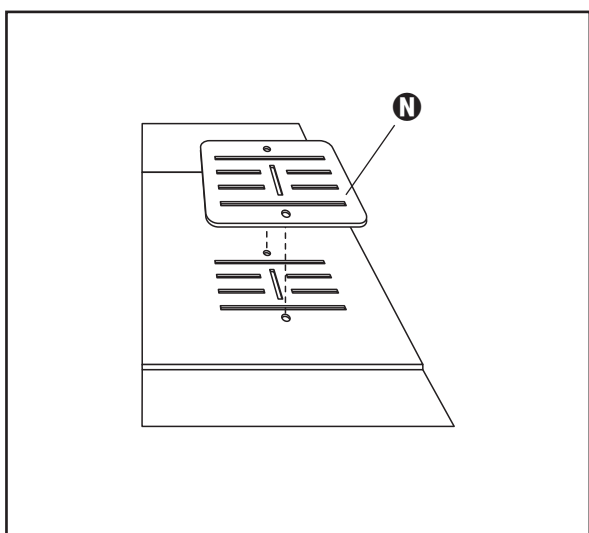
### ⚠ Warning:

Make sure that the sewing machine is switched off and the plug has been pulled out of the socket to prevent accidents caused by un-intentional switching on.



### a) Changing needles

- Turn the handwheel **11** in an anti-clockwise direction to fully raise the needle.
- Loosen the **clamping screw 20a** and pull the old needle out.
- Insert the new needle, with the **flat side toward the back**. Insert it up to the top
- and tighten the **clamping screw 20a** again well when finished.



### b) Changing the stitch plate

At the factory, the "zigzag" stitch plate is inserted, which can be used for most stitching work and decorative seams. However, if you wish to use the darning plate supplied:

- Turn the handwheel **11** in an anti-clockwise direction to fully raise the needle.
- Insert the **darning plate N** into the existing zigzag stitch plate so that the flat guide pins grip into the recesses in the existing plate.
- If you no longer need the darning plate, simply remove this again.



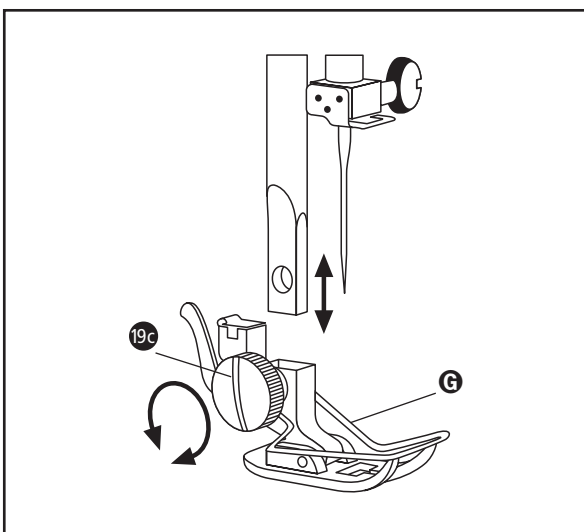
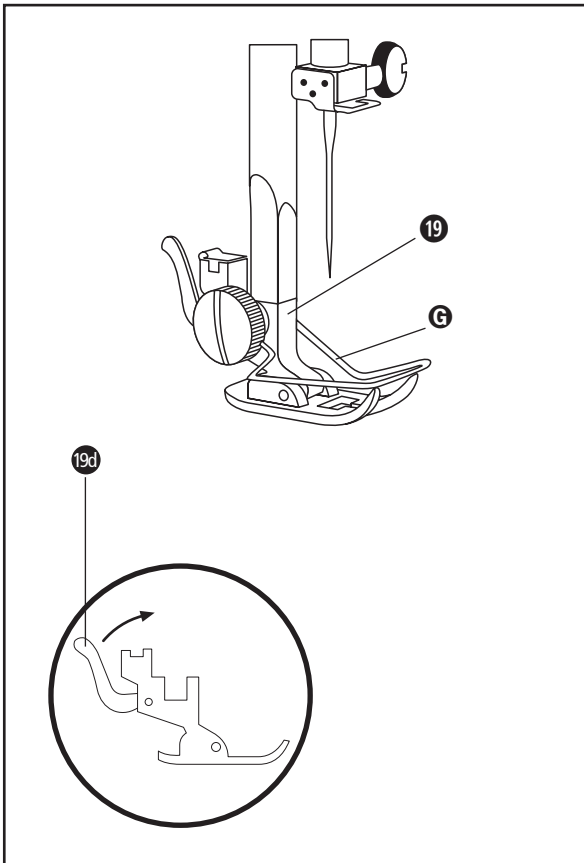
### c) Changing the snap-on foot

With the sewing machine you are provided with four snap-on-feet, which you can simply use as required:

- Ⓐ blind hem foot
- Ⓒ zipper foot
- Ⓓ buttonhole foot
- Ⓔ button foot

To change the snap-on foot:

- Turn the handwheel 11 in an anti-clockwise direction to fully raise the needle.
- Position the foot lever 16 in the upward position in order to lift the needle retainer 19 up.
- Press the lever 19d upward. The snap-on foot can now be easily removed from the needle retainer 19.
- Now place the new snap-on foot under the needle retainer 19. Make certain that the notch on the needle retainer is located directly above the metal pin of the snap-on foot.
- Press the foot lever 16 back down and let the needle retainer 19 slide into the snap-on foot.

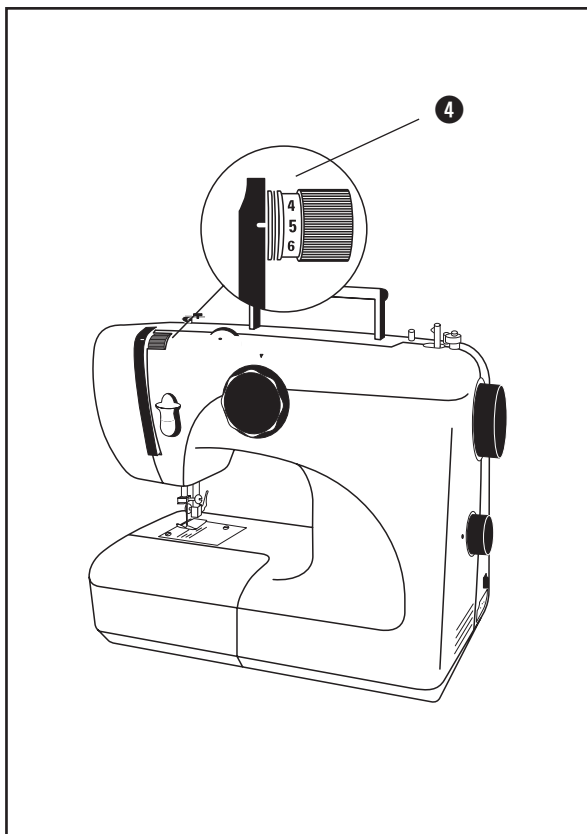


To uninstall the needle retainer 19:

- Loosen the foot screw 19c and pull the needle retainer 19 off downward, including the finger protector G.

To install the needle retainer 19 :

- Place the needle retainer 19 including finger protector G back onto the guide rod and tighten the foot screw 19c again.



## 10. Settings

The tension of the upper and lower thread is **set correctly** if the twining of the two threads cannot be seen on the top or bottom sides of the material after sewing.

If even one of the two tensions is **not set correctly**, an unclean seam will result. The stitches will then lie flat on the material.

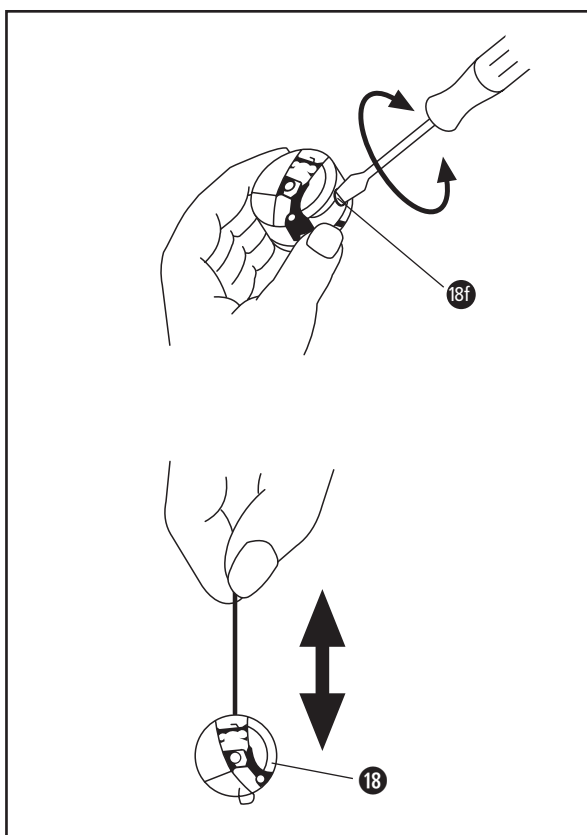
### a) Setting the upper thread tension

- You can select the strength of the upper thread tension by turning the selector wheel for the **upper thread tension 4**. If this thread is ...

- **too tight** (higher setting), then the upper thread is loose and the material is being 'sewed' with the lower thread only.

- **too loose** (lower setting), then the lower thread is loose and the material is being 'sewed' with the upper thread only.

The upper thread tension is normally between 4-6.



### b) Setting the lower thread tension

- You can set the strength of the lower thread tension by turning the **screw 18f** on the **bobbin case 18**. Turn it ...

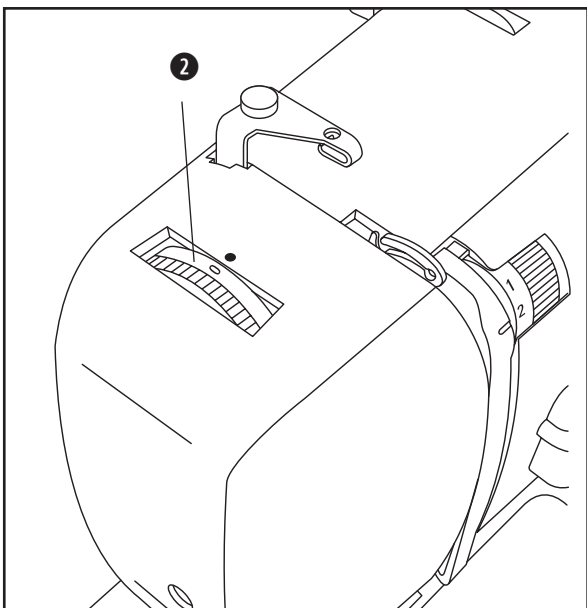
- **clockwise** to **increase** the tension.

- **anti-clockwise** to **reduce** the tension.

Be certain not to turn the screw **18f** completely out of the bobbin case **18**.

- The lower thread tension is set correctly if the bobbin case **18** can be turned slowly and evenly ("fall down test").





### c) Setting the presser foot pressure

Here you can set the pressure with which the material is pressed onto the stitch plate.

- Now set the contact pressure on the **selector wheel 2**.

"0" if **no pressure** is to be applied, for example for darning with free-hand stitches  
 "1" for **light** fabrics (curtains)  
 "2" for **average** fabrics (normal)  
 "3" for **heavy** fabrics (jeans).

### d) Setting the stitch width

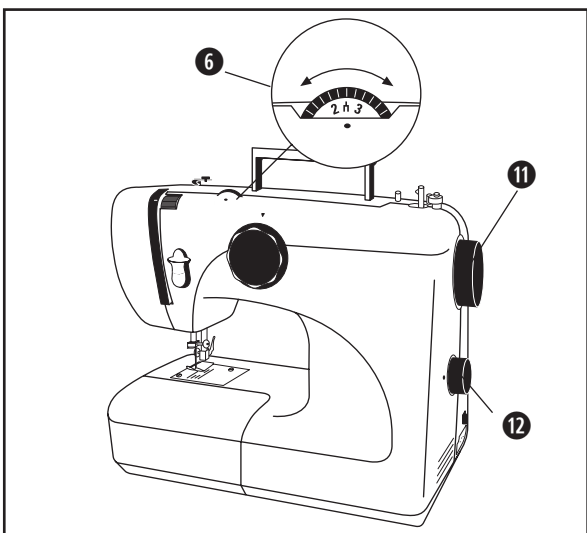
Here you can set the width of seam for zigzag patterns.

- Turn the handwheel **11** in an anti-clockwise direction to fully raise the needle.

- Select a stitch width from 0 - 5 on the **selector wheel 6**...

"0" straight  
 "1" narrow  
 "5" wide

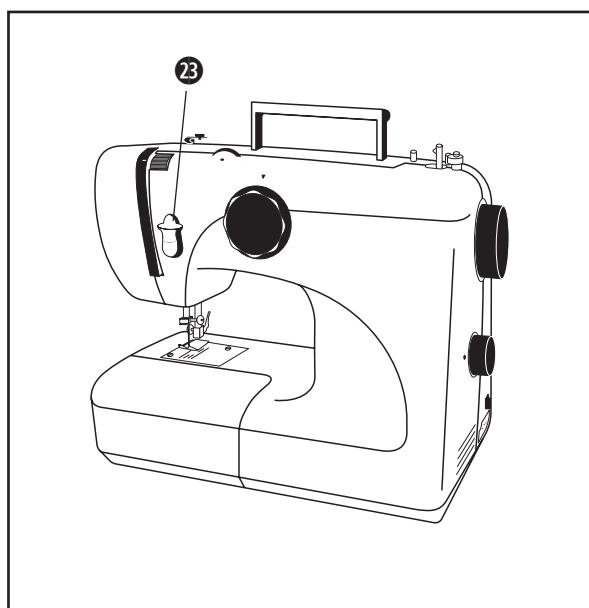
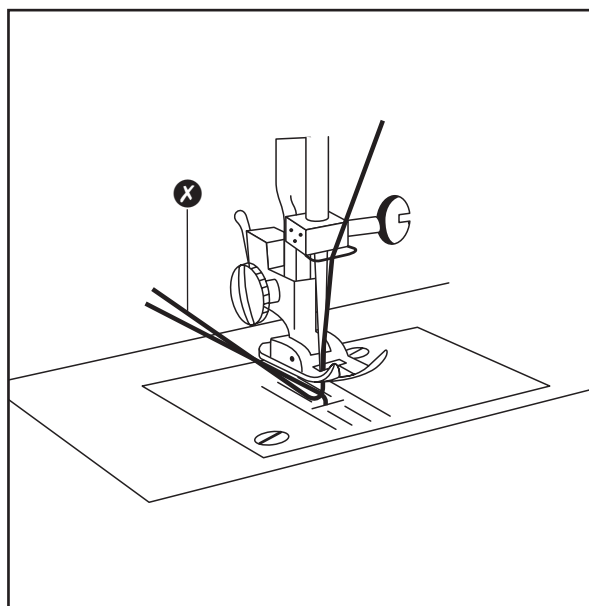
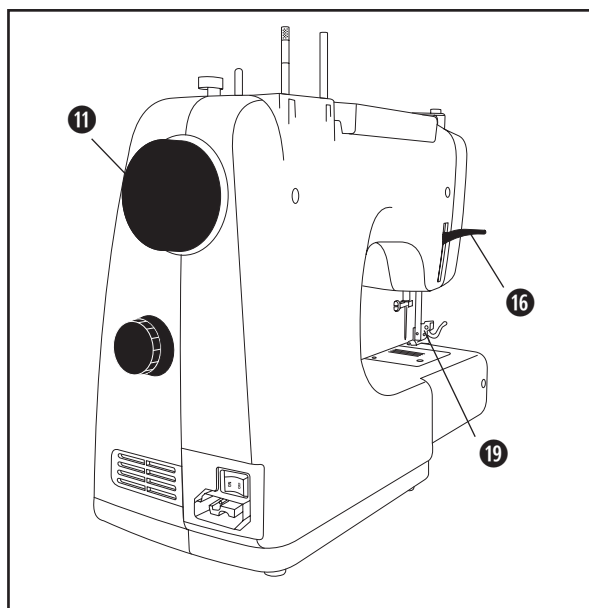
**Important:** When the **twin needle** is inserted, the selector wheel may not be set any higher than "3". A higher setting will cause the twin needle to break!



### e) Setting the stitch length

Here you can set how far the material is to be transported during sewing. This therefore determines the gap (length) between the stitch points.

- Select the stitch length from 0 - 4 on the **selector wheel 12**...  
 "0" if the material should not be transported.  
 "1" short  
 "4" long



## 11. Sewing

If you have placed the thread and everything is set correctly, as described in the previous chapters:

### a) To place the material

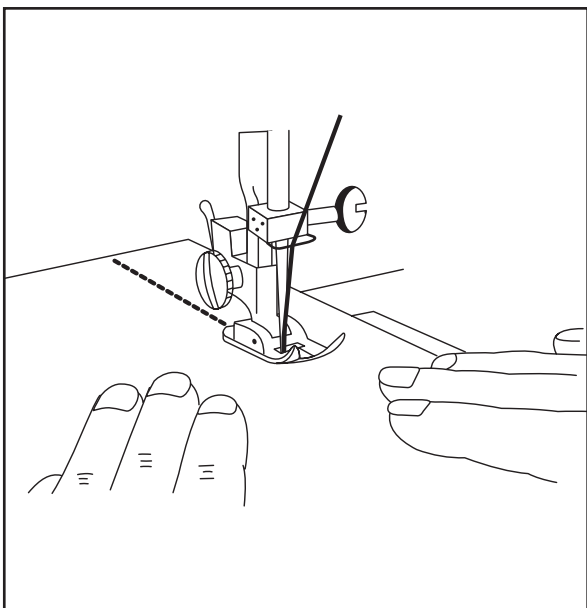
- Turn the handwheel **11** in an anti-clockwise direction to fully raise the needle.
- Use the **foot lever 16** to raise the **needle retainer 19**.
- Place the material under the sewing foot and lower the sewing foot back down.

### b) To start a seam

- Hold the two **thread ends run to the back X** firmly with the left hand.
- Step very carefully on the **foot switch P** – just enough to do the first 3-4 sewing motions. While doing this, guide the material with the right hand.
- Once the first sewing motions have been performed successfully, hold the **lever for backward operation 23** pressed briefly ...
- and press again on the **foot switch P** – just until you have returned to the starting point of the seam. When you now want to continue with the seam from that point, it is held firmly by several overstitches.

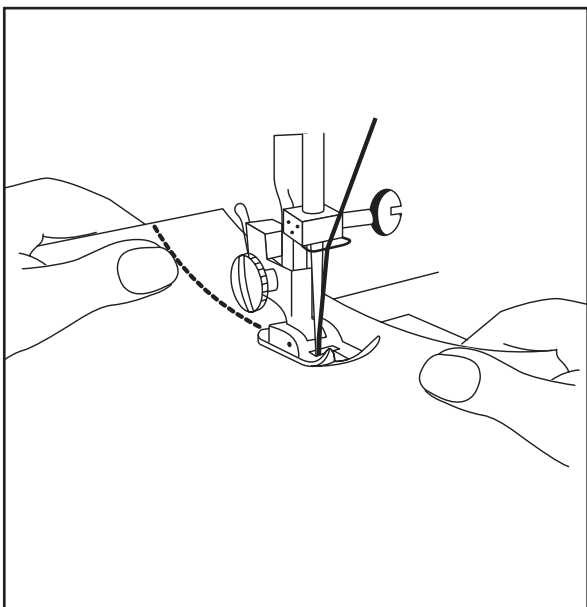
### c) To finish off a seam

Sew back and forth at the end of the seam using the reverse lever, as at the start of the seam. The end of the seam is now also held firmly.

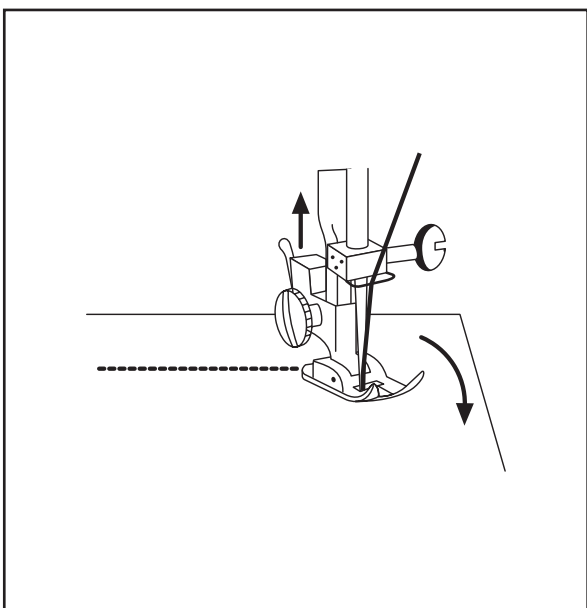


#### d) Guiding the material

- Only guide **normal materials** as shown in the diagram. Avoid pulling it, as this can cause the needle to bend or break.
- Very **fine materials** pull inward slightly during sewing. To prevent this, lay a thin paper under the material and sew this in with the material. When you have finished sewing, carefully pull the paper away from the material; the result is a very clean stitch.



- For **stretchable** materials, it can be necessary to guide the material in before and after the sewing foot to prevent it from pulling in.

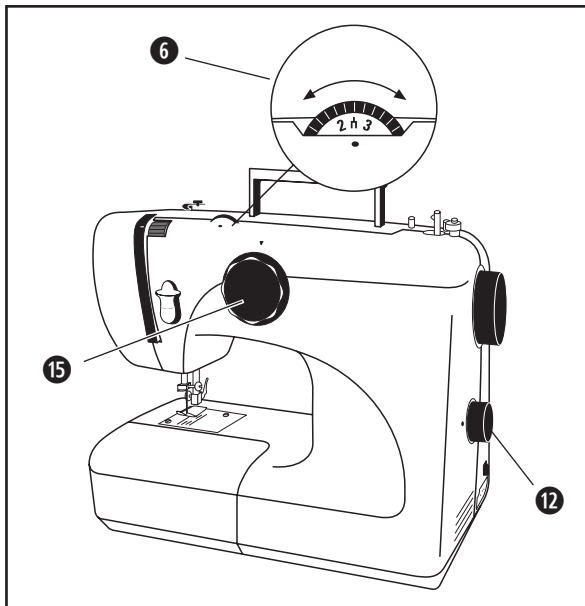


#### e) Changing the sewing direction

You have arrived at a certain point, and you now want to continue sewing in a different direction.

- The simplest way to do this is to hold the **turning point** and let the **needle stick in the material**.
- Use the **foot lever 16** to raise the needle holder **19**.
- Pull the material around the needle in the desired direction
- then lower the **needle retainer 19** down.

You can now continue sewing in the usual way in the new direction.

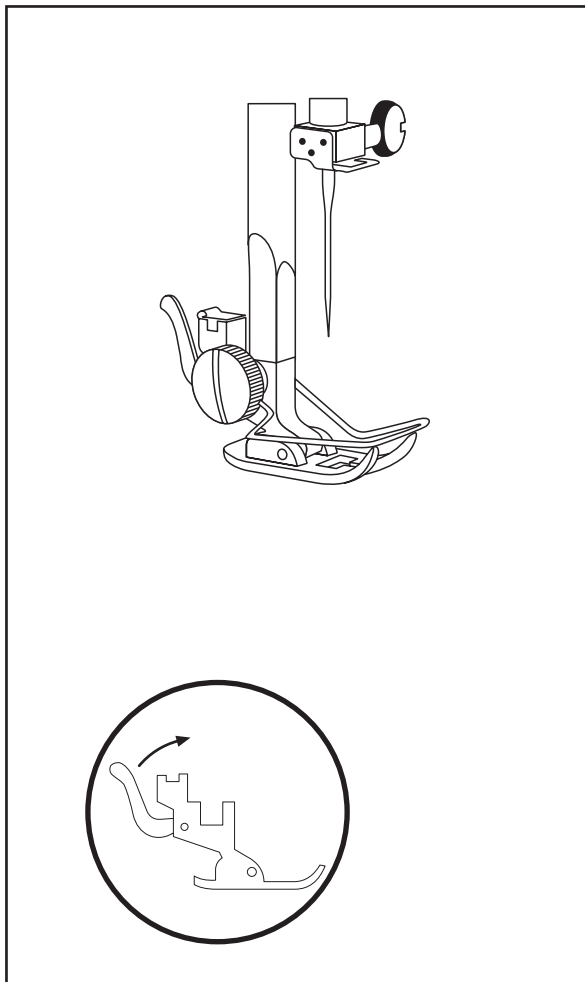


## f) Selecting a stitch pattern

To select a particular pattern, take the following steps:

- Select the stitch pattern with the **stitch pattern selector 15**.
- Select the stitch length by means of **the 12 selector wheel**.
- Select the stitch width by means of the **selector wheel 6**.
- Attach the respective **snap-on foot**, as described in Chapter 9.

You can find the required settings in the table **on the next page**. If two values are set for the stitch length, these are understood as "from ... to ..." values.



## g) Straight stitch

This is the most frequently used type of stitch. The zigzag sewing foot is used for both straight and zigzag stitches. A smaller size of stitch should be selected for sewing finer materials.

## h) Zigzag

The zigzag stitch is universal. The zigzag stitch pattern consists of short stitches set closely after one another and is suitable for sewing initials, figures, appliqués etc.

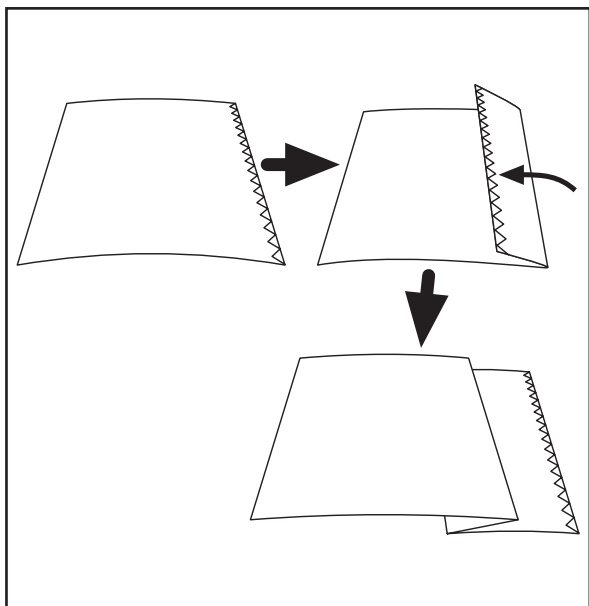
i) Stitch pattern table

	Stitch pattern	Stitch length	Sewing foot	Stitch width	
A	Straight stitch			0	
B-E	Zigzag			1-5	
F	Blind stitch			3-5	
G	Blind hem			3-5	
H	Three-step zigzag stitch			3-5	
I	Slant over edge stitch			3-5	
J	Single overlock stitch			3-5	
K	Honeycomb stitch			3-5	
L	3-fold zigzag			2-5	
M	Stretch straight stitch			0	
N	Shell stitch			3-5	
O	Honeycomb stitch			3-5	
p	3-edged block stitch			3-5	
q	Semi-circular stitch			3-5	
R-T	Buttonhole			5	
	Free-hand embroidery			Without	0-5

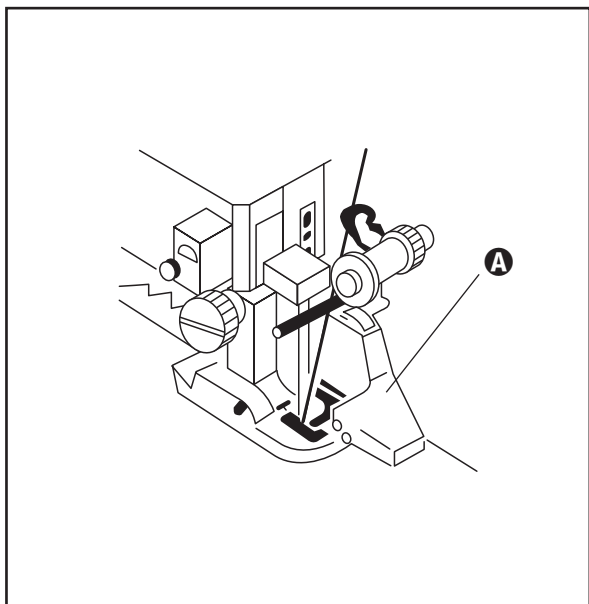


## j) Blind hem

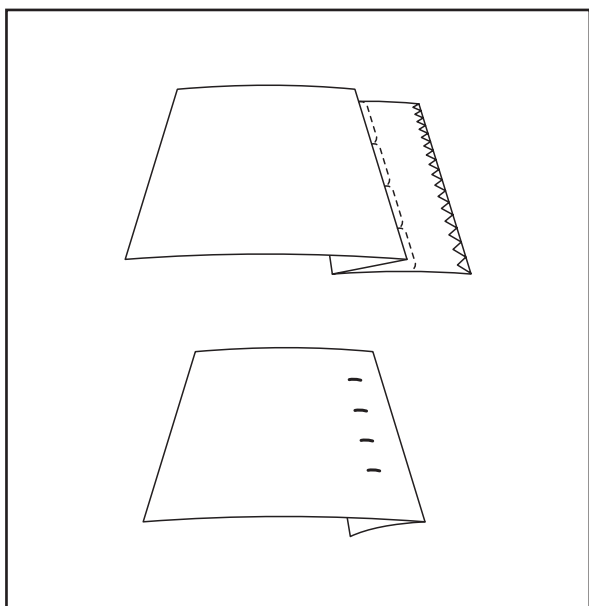
- **Fold** the material as shown. Make the fold as wide as you want the finished seam to be: The lower fold should be inset by about 5 mm.



- Use the **blind hem foot** **A**. While sewing, check the hem width and needle position to be sure the hem is even.






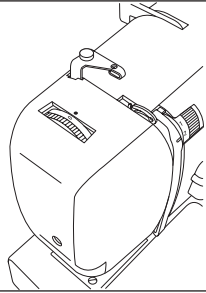

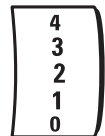







- **Sew** the blind hem on the underside of the material, so that only the peak of the zigzag stitch pierces the top part of the material. When you have finished sewing, push the left of the material over to the right and smooth out. The seam is almost invisible!

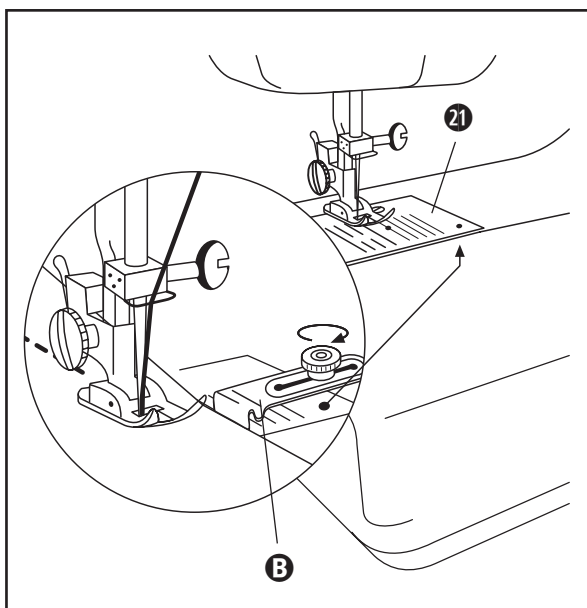


The table on the next page shows a suggestion for setting the various values depending on the material used.

**k) Material-Thread-Needle Table**

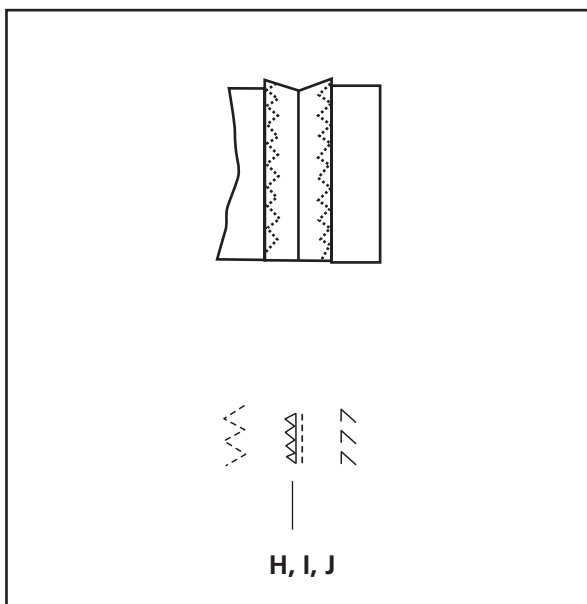
Please refer to the details for the various materials.

	Material	Thread	Needle	Presser foot pressure	Stitch length		Upper thread tension	
				See p. 16 	Straight stitch	ZZ		
					Stitch length selection 			
Light	Nylon	Cotton 80		1	1-3	1-4		
	Cotton jersey	Man-made fibre 60						70 (10)
	Silk	Silk 50						80 (12)
	Woll-silk	Man-made fibre 50 silk	80 (12)					
Middle	Poplin	Cotton 60-80	80-90 (12-14)	2	0.5-3	0.5-4		
	Fine Jersey	Man-made fibre 60	80 (12)					
	Gabardine	Silk 50	80 (12)					
Heavy	Denim	Cotton 50	90-100 (14-16)	3	0.5-3	0.5-4		
	Jersey	Man-made fibre 50	80-90 (12-14)					
	Tweed	Silk 50	80-90 (12-14)					



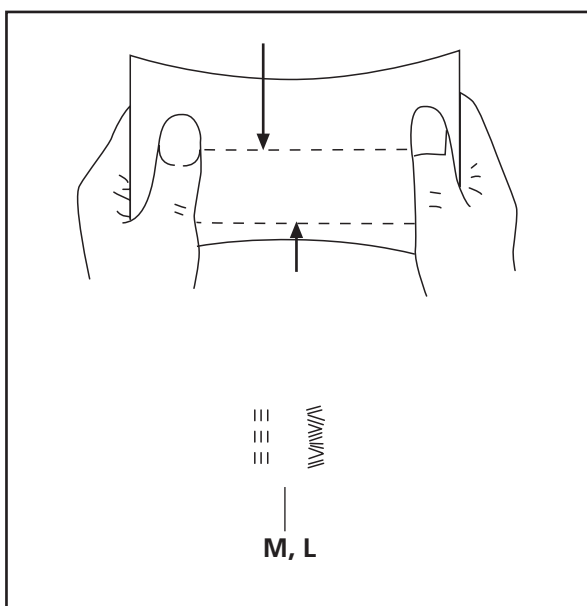
### l) Seam guide

- Use the **seam guide B** for sewing longer hems or seams that should have an even distance to the edge of the material.
- Screw the **seam guide B** into the threaded hole on the right of the **stitch plate 21**. Set the desired seam width, then tighten the knurled screw.
- While sewing, the edge of the material must touch the seam guide. The seam guide can also be screwed in obliquely for sewing corners.



### m) Overcast stitch

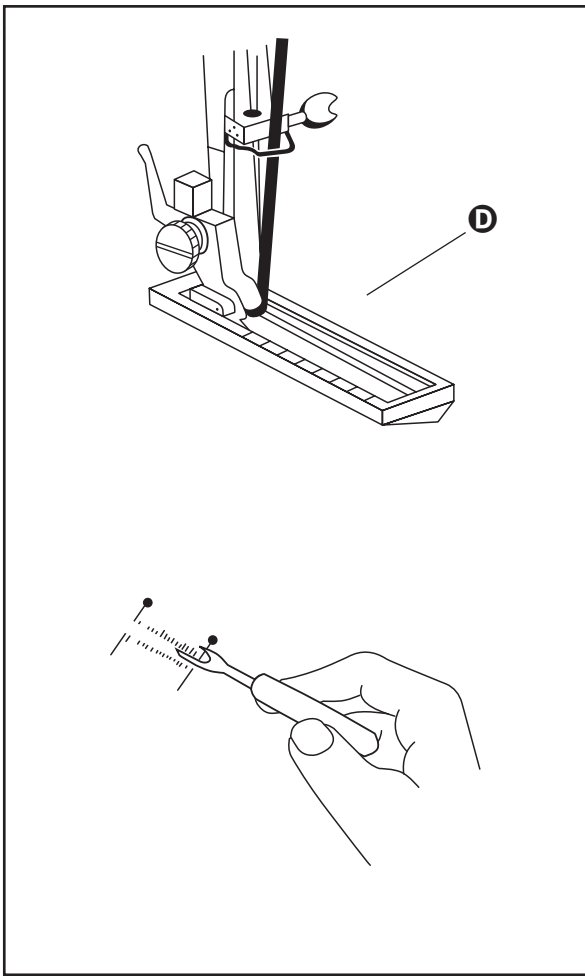
- Select the stitches (**H, I, J**) if you want to prevent the fraying of the cut edges.



### n) Stretch seams

- Select the stitches (**M or L**) for knitted, Jersey and other stretchable textiles. This type of seam can be stretched without the thread breaking. The stretch seam stitch produces a highly strain-resistant, straight seam.



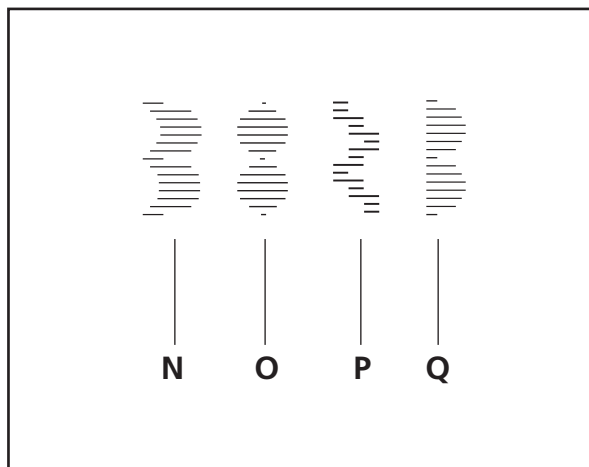
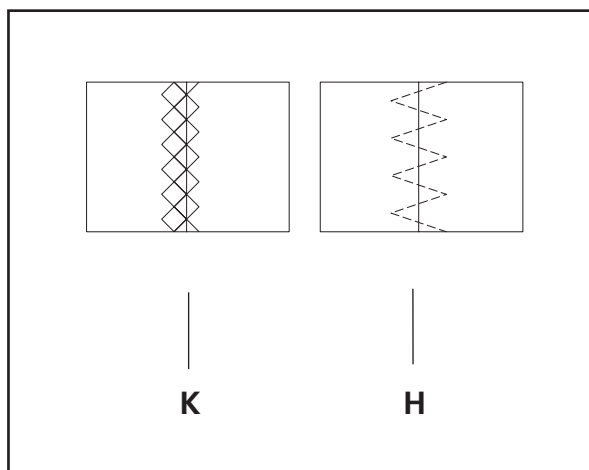
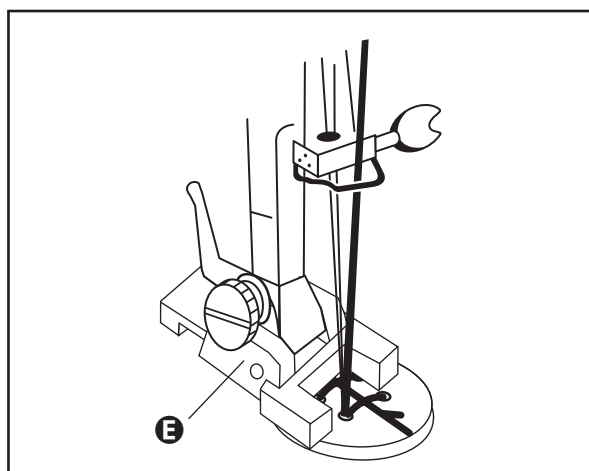
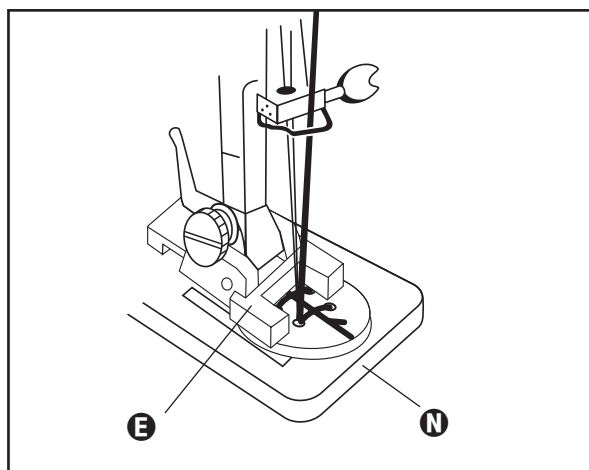


**o) Sewing buttonholes**

- Attach the **buttonhole foot D**, as described in Chapter 9.
- Refer to the table for:
  - the required **stitch length**
  - the required **stitch pattern**
  - the required **method** for sewing.
- When finished, you can **cut** the buttonhole in the middle, as shown.

**p) Buttonhole table**

	Pattern selector (Stitch pattern)	Sewing Method	Settings/stitch length
R			1. Set selector to "R" 2. Sew the left side 3. Raise needle
S			4. Set selector to "S" 5. Sew 5-6 stitches 6. Raise needle
T			7. Set selector to "T" 8. Sew the right side 9. Raise needle
S			10. Set selector to "S" 11. Sew 5-6 stitches 12. Raise needle



#### q) Sewing on buttons

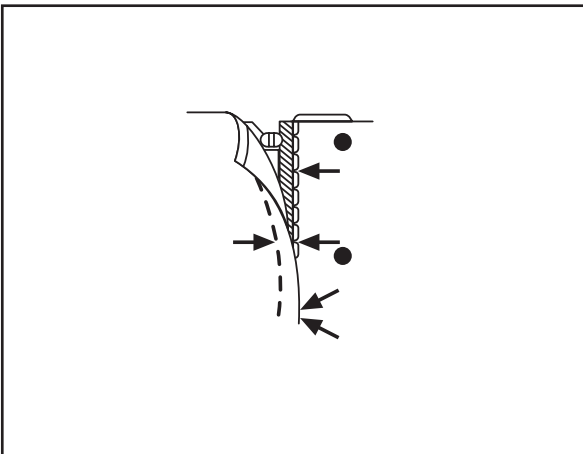
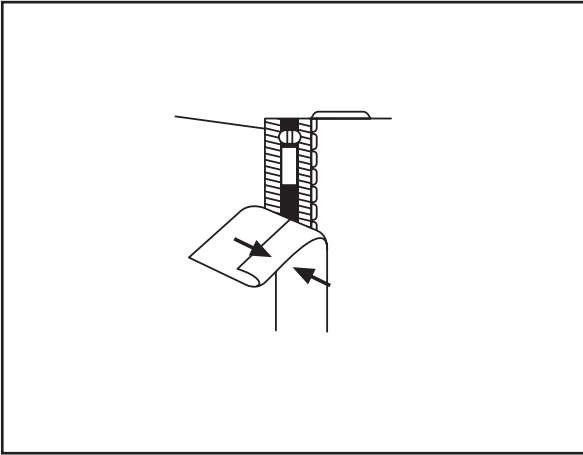
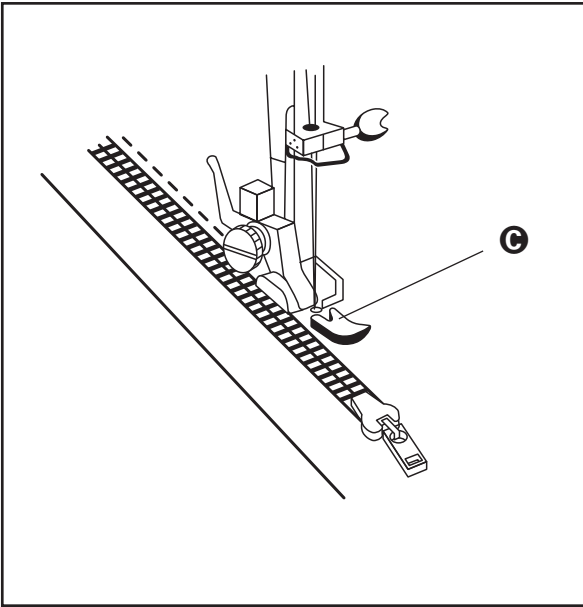
- Attach the **button foot** **E** and ...
- place the **darning plate** **N** on the existing zigzag stitch plate, as described in Chapter 9.
- Lay the button between the **button foot** **E** and the material and lower the button foot **E** down.
- Turn the **handwheel** **11** anti-clockwise. Check whether the needle passes cleanly through both button holes.
- Adjust the **stitch width** of the zigzag mode as necessary.
- If the sewing machine hits both button holes during hand operation, you can now sew 5-7 stitches with the machine by carefully pressing on the foot switch **P**.

#### r) "Edge-to-edge" sewing

- To do this, select the three-stitch zigzag ("H") or the honeycomb stitch ("K") as the stitch pattern.

#### s) Decorative stitches

- Select the stitch patterns **(N-Q)** if you want to apply various decorative stitches to your textiles.

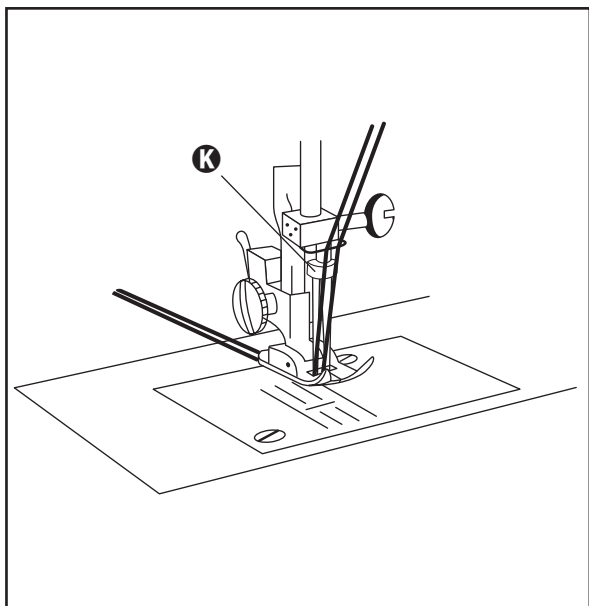


### t) Sewing a zipper

Using the **zipper foot** **C** you can sew along the right and left-hand edges of the zipper without damaging the zipper or the needle.

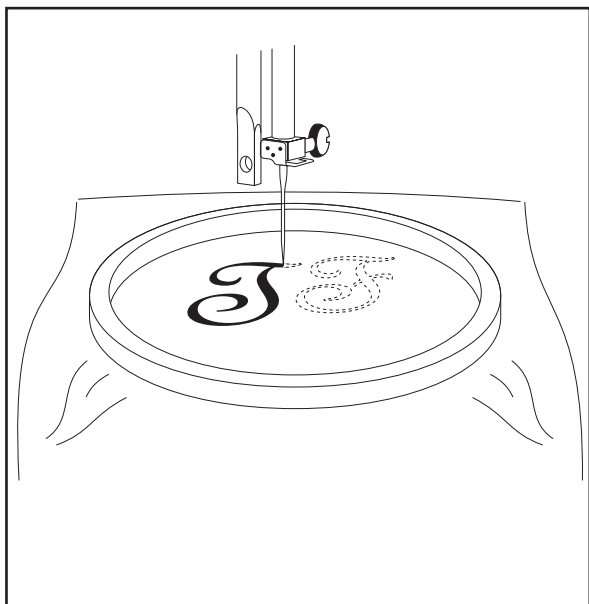
The zipper foot is also useful for sewing edges or parallel seams.

- Attach the **zipper foot** **C**, as described in Chapter 9.
- Then select the straight stitch **(A)** as stitch pattern.
- Fold over approximately 2 cm of material and lay the zipper under the material fold such that the links just protrude. It might be helpful to stitch in the zipper first.
- Then sew as closely as possible along the zipper links.
  - To sew the **left side of the zipper**, the foot **C** must be placed to the left of the needle.
  - To sew the **right side of the zipper**, the foot **C** must be placed to the right of the needle.



#### u) Sewing with the twin needle

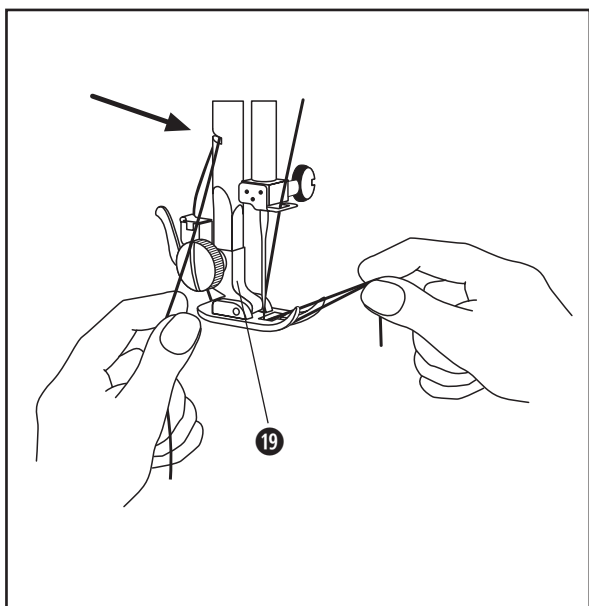
- Insert the **twin needle K** with the **flat side toward the back**.
- Thread the thread as for normal sewing. Both threads are threaded **together** through the guides – up to the twin needle.
- Only there are the two upper threads threaded **separately**.
- Make certain that the setting for the **stitch width** is not greater than "3" – otherwise, the needle will break off.



#### v) Embroidery

**⚠ Important:** When embroidering, the **foot lever 16** must be in the bottom position, otherwise the upper thread tension is disabled.

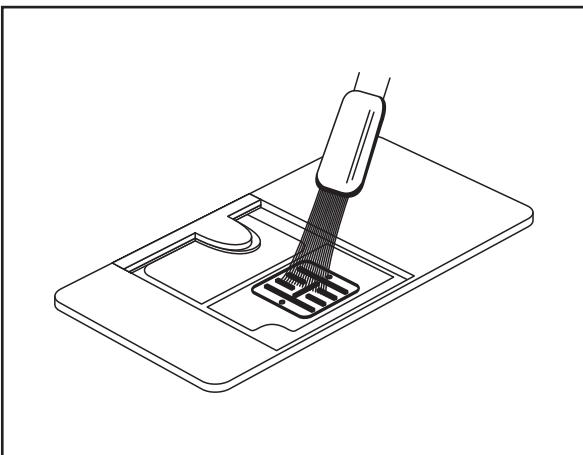
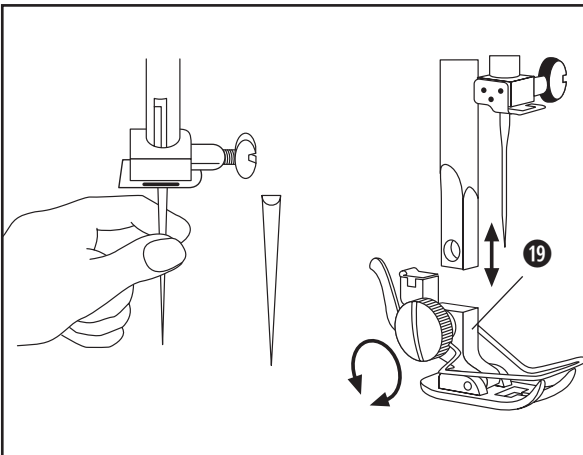
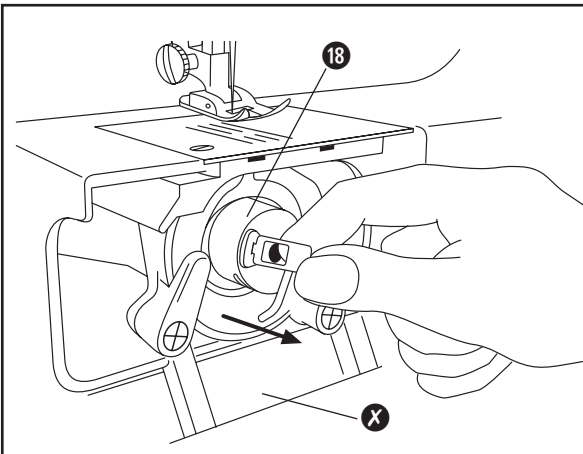
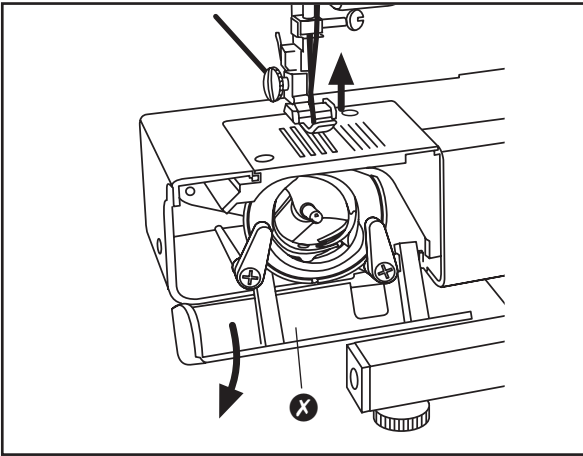
- Take the **needle retainer 19** off and ...
- place the **darning plate N** on the existing zigzag stitch plate, as described in Chapter 9.
- Select an appropriate stitch pattern (A or B).
- The stitching is now performed free-hand. Move the material tensioned in the embroidery frame according to the embroidery pattern while controlling the speed of the needle movements with the foot switch **P**.



#### w) Thread cutter

When you have completed a seam, or if you wish to cut the threads for any other reason:

- Simply pull the thread over the sharp **blade** above the **needle retainer 19** to cut off the thread.



## 12. Care

After each use, remove any pieces of thread, material, and fluff. Only in this way will you ensure that the sewing machine continues to work correctly and lasts for a long time.

### ⚠ Warning:

**Make sure that the sewing machine is switched off and the plug has been pulled out of the socket to prevent accidents caused by unintentional switching on.**

### a) Clean the gripper area

#### ⚠ Important!

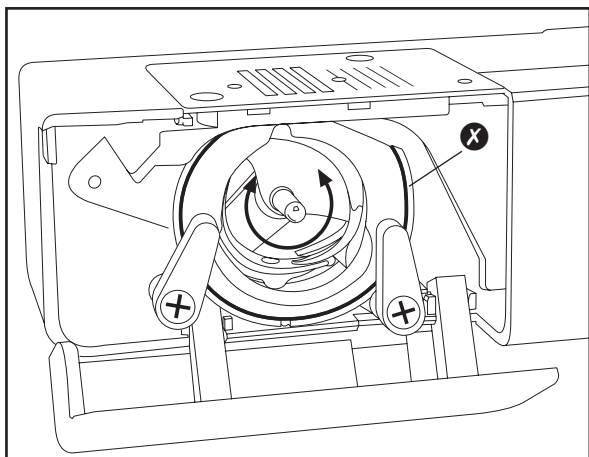
Never disassemble the mechanical elements in the gripper area! Extensive experience with mechanical devices is required in order to reassemble these.

Only Customer Service has the special equipment necessary for disassembling the gripper mechanisms. If you carry out repair work yourself, the warranty will automatically be voided. It should be enough for the user just to clean this area with a brush or vacuum cleaner.

- Turn the handwheel **11** in an anti-clockwise direction to fully raise the needle.
- Then open the **gripper cover X**
- and take out the **bobbin case 18**.
- Now remove all dirt with a brush or vacuum cleaner (with fine brush attachment).

### b) Clean the feeder

- Remove the **needle** and
- Take the **needle retainer 19** off, as described in Chapter 9.
- Loosen the screws inserted in the **stitch plate 21** and dismantle the stitch plate. Now remove the front cover **1**, if necessary, to better reach the screws. You can now clean the **feeder**.



### c) Clean the casing

#### ⚠ Danger!:

Never open any parts of the machine casing other than those described in this manual. There are no operating elements inside. Otherwise there is a risk of **injury and potentially life-threatening accidents**.

- Clean all plastic surfaces with a soft, dry- cloth.
- Do not use cleansers or abrasive materials – the casing could be scratched.
- **The parts of the appliance may never be submerged in water or other liquids!** This could damage the appliance.

### d) Oil the gripper track

#### ⚠ Important!

Apply the oil very sparingly. Excessive oil on the working parts can soil the thread and your fabrics.

- Drip 2-3 drops of oil into the **narrow gap X** between the gripper and the gripper track ...
- and turn the **handwheel 11** a few times to rotate the **gripper** completely. This will distribute the oil.

Just a little oil applied in this way, once or twice per year, is sufficient. The main purpose is to prevent rust from forming if the machine is left unused for long periods.

### e) What else needs oiling?

Nothing - no other working parts require lubrication. You should not lubricate anything unless it is necessary, as oiled parts attract dust and may then become stuck.

**f) Storing**

Keep the sewing machine ...

- at a **dry location** so that no rust forms on the metal mechanical parts,
- always under the supplied **covers** to prevent dust from entering the sewing machine,
- outside the reach of **small children** or elderly persons, so that they cannot endanger themselves through unsupervised operation.

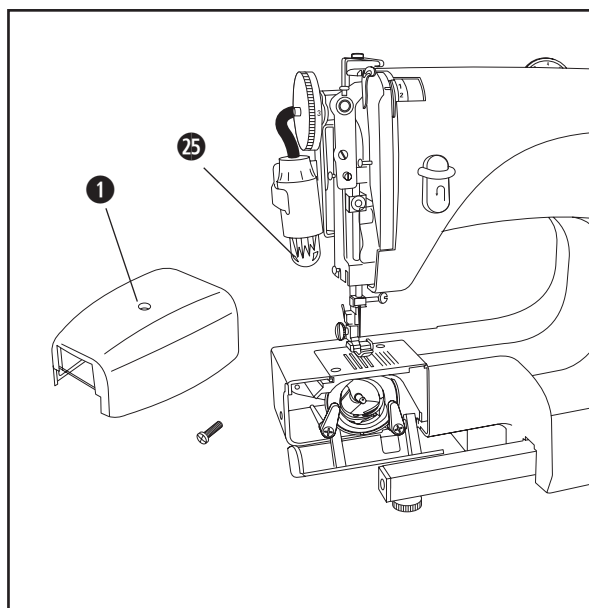
**13. Troubleshooting**

If something is not working, you can use the table below to try and correct the fault. If you are unable to remedy the problem yourself, please contact the customer service department (see warranty card).

**⚠ Warning:**

**Make sure that the sewing machine is switched off and the plug has been pulled out of the socket to prevent accidents caused by unintentional switching on.**

<b>Fault / Problem:</b>	<b>Check:</b>	<b>Possible remedy:</b>
Material is not being moved through	Machine is not sewing - is only the handwheel turning?  Stitch length wheel set to "0"?  Is the contact pressure of the sewing foot too low?	Press in the handwheel!  Set it at a value from "1" to "4".  Increase the contact pressure of the sewing foot!
Needle is breaking	Needle set incorrectly?  Needle is bent?  Do the needle + thread + material comply with the table in Chapter 10?	Set flat end towards the rear!  Insert a new needle.  Select the right needle for the thread and the material!
Upper thread is breaking	Was it threaded correctly?  Zigzag setting too wide? Upper thread tension too firm?  Scoring / scratches on the gripper?	It's best to re-thread from the beginning! Try with a smaller width! Select the middle setting.  Replace the gripper.
Lower thread is breaking	Lower thread tension too taut?  Needle set incorrectly?  Was it threaded correctly?  Dust and fluff in the gripper?	Reduce the thread tension.  Set flat end towards the rear!  It's best to re-thread from the beginning! Clean the gripper area
Ripples in the material	Too much tension?  Contact pressure sewing foot too high?  Do the needle + thread + material comply with the table in Chapter 10?	Reduce the tension!  Reduce the contact pressure!  Select the right needle for the thread and the material!



### The bulb no longer lights?

If the bulb is burned out, replace it with an identical one purchased from a specialised dealer. The designation is "15W - E14".

- Use the supplied **screwdriver 1** to loosen the screw on the front side of the **front cover 1**.
- Take off the **front cover 1**.
- Unscrew the defective **bulb 25** and screw a new one into the **socket**.

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## 14. Warranty and service

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The warranty conditions and the service address can be found on the warranty slip.

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## 15. Disposal

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**Do not dispose of the device in normal domestic waste.**

Dispose of the device over a registered waste disposal firm or through your communal waste disposal facility. Observe the currently valid regulations. In case of doubt, consult your waste disposal facility.

Keep the sewing machine's **transport packaging**. It may be useful for storing the machine, but is particularly useful if you want to ship the sewing machine for repair. Most instances of damage occur when the machines are being transported.





*Lervia KH 4000*

