

**PFAFF**

**212**

**213**

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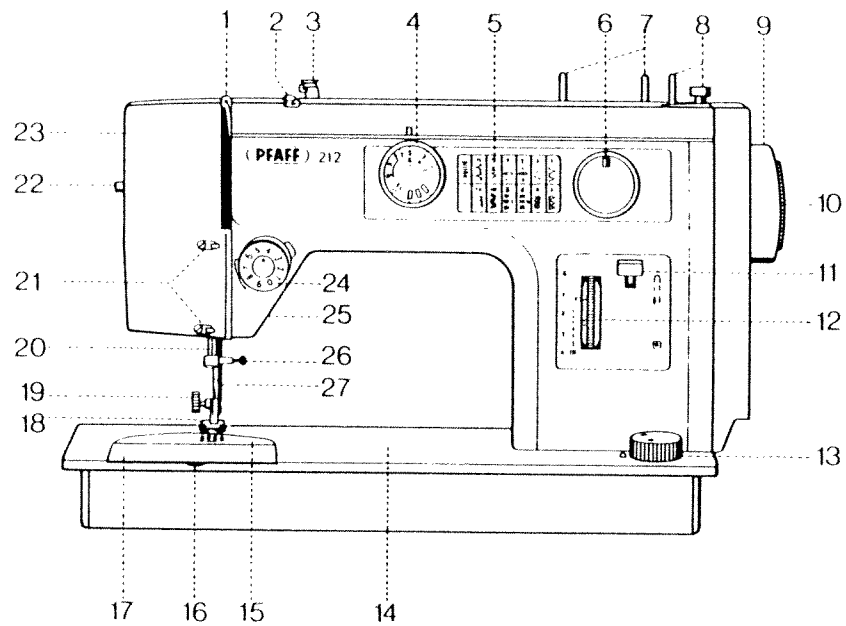
**Instruction book**

Needle and thread chart						
If, for example, you wish to sew a bed sheet, look up section "Table and bed linen". Look to the right and you will see thread size 60. The type of thread is shown at the top. The needle size (80) is given in the last column. Where it is possible to use silk threads we have placed an "X".	Cotton	Silk	Synthetic (Polyton, Polyester)	Linen	Embroidering and darning thread	Needle size
	Fine linen, batiste	100				80
Tulle, muli, organdy		X			80	80
Fine silk, crêpe		X			80	80
Fine knitted fabrics made of pure cotton, cotton-rayon blends, tricot, charmeuse	100	X			80	70
Fine fabrics made of nylon, Diolen, Dacron, Terylene, Orion, Vestan, and synthetic curtain materials	100	X	100-180		80	80
Medium fabrics made of nylon, Dacron, Trycel, etc.	70	X	80-140		60	60
Silks		X			60	60
Lightweight taffets, muslin	80	X			60	60
Foambacks	80	X	100			
Table and bed linen, terry cloth	60				50	80
Heavy silks		X			50	50
Linen	60				50	50
Lastex, Helanca	60	X	80-120			
Fine leather, leatherette, plastic	60	X	80-140		50	50
Light outerwear, jersey	80	X	80		50	50
Heavy outerwear	40	X	80			
Heavy linen, bed ticking	40				30	90
Denim	40			50	30	
Heavy fabrics, mantling	30	X				
Canvas, leather, burlap	30		50	40	30	100

\* For embroidering and darning, a No. 50 thread is usually sufficient.  
**Needle system 130 R**

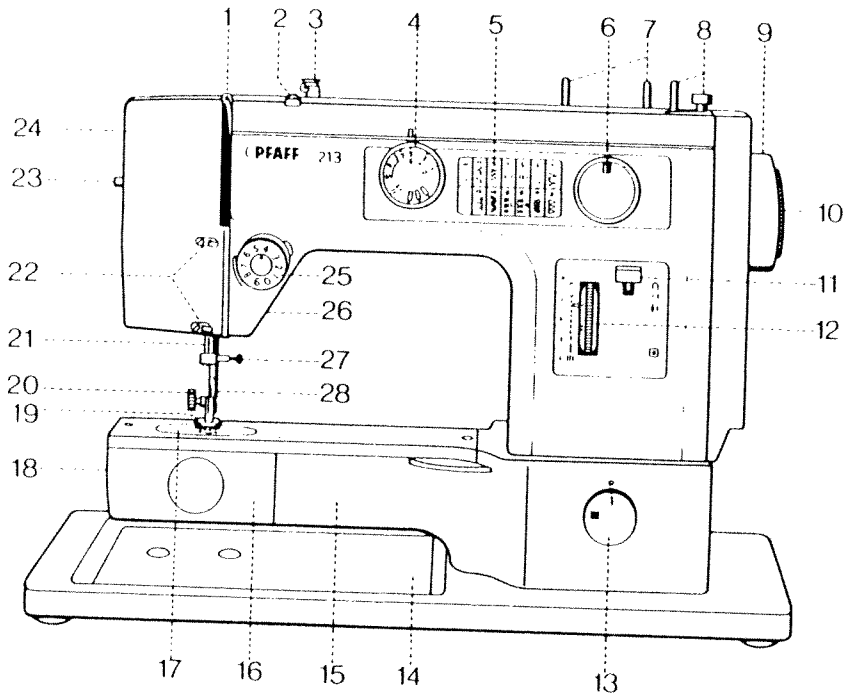
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### Parts of the PFAFF 212

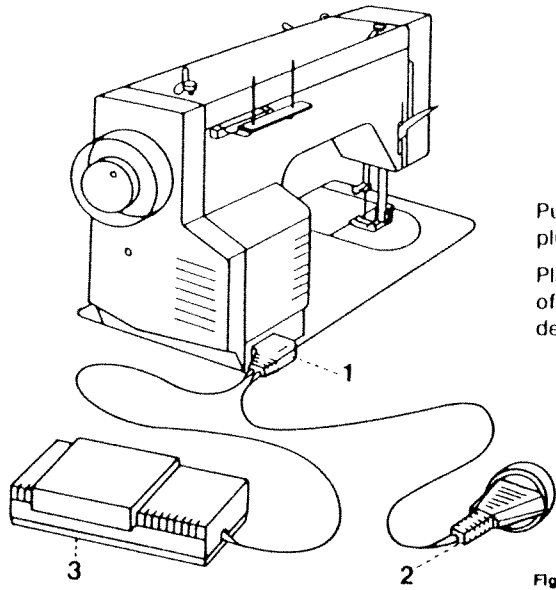
- |    |   |    |                                |
|----|---|----|--------------------------------|
| 1  | Take up lever                           | 14 | Bedplate                       |
| 2  | Thread guide                            | 15 | Needle plate                   |
| 3  | Bobbin winder tension with thread guide | 16 | Shuttle (not visible)          |
| 4  | Utility stitch selector                 | 17 | Bedplate cover                 |
| 5  | Utility stitch chart                    | 18 | Sewing foot                    |
| 6  | Colour range selector                   | 19 | Sewing foot holder with screw  |
| 7  | Spool holder (at back)                  | 20 | Needle bar                     |
| 8  | Bobbin winder                           | 21 | Thread guides                  |
| 9  | Balance wheel                           | 22 | Sewing light switch            |
| 10 | Disengaging knob                        | 23 | Face cover                     |
| 11 | Reverse feed control                    | 24 | Thread tension                 |
| 12 | Stitch length control                   | 25 | Presser bar lifter (at back)   |
| 13 | Drop feed knob                          | 26 | Needle holder with set screw   |
|    |   | 27 | Presser bar with thread cutter |



### Parts of the PFAFF 213

- |   |                                   |
|---|-----------------------------------|
| 1 Take-up lever                           | 15 Free arm                       |
| 2 Thread guide                            | 16 Flap                           |
| 3 Bobbin winder tension with thread guide | 17 Needle plate                   |
| 4 Utility stitch selector                 | 18 Shuttle (not visible)          |
| 5 Utility stitch chart                    | 19 Sewing foot                    |
| 6 Colour range selector                   | 20 Sewing foot holder with screw  |
| 7 Spool holder (at back)                  | 21 Needle bar                     |
| 8 Bobbin winder                           | 22 Thread guides                  |
| 9 Balance wheel                           | 23 Sewing light switch            |
| 10 Disengaging knob                       | 24 Face cover                     |
| 11 Reverse feed control                   | 25 Thread tension                 |
| 12 Stitch length control                  | 26 Presser bar lifter (at back)   |
| 13 Drop feed knob                         | 27 Needle holder with set screw   |
| 14 Base plate                             | 28 Presser bar with thread cutter |

### Electrical connections



Push plug 1 into the machine socket and plug 2 into the wall outlet.

Place foot control 3 within easy reach of your foot. The more the pedal is depressed, the faster the machine runs.

Fig. 1

### Work support of model 213

To enlarge the sewing area for ordinary sewing operations, push the work support onto the free arm as far as it will go. As you do this, the position pin enters the hole provided for this purpose. To remove the work support, pull it off the free arm toward the left.

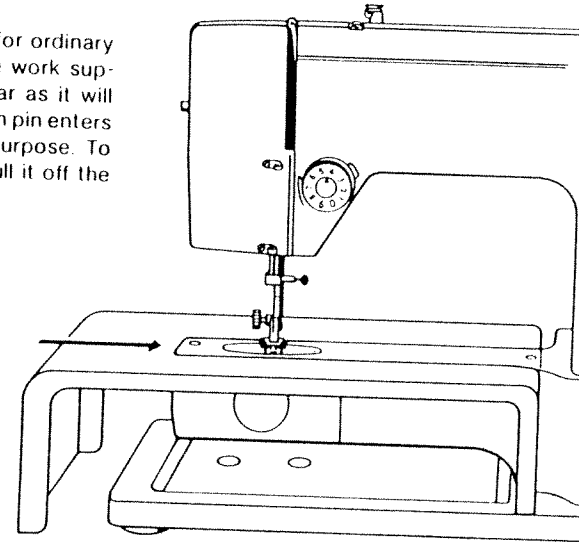


Fig. 2

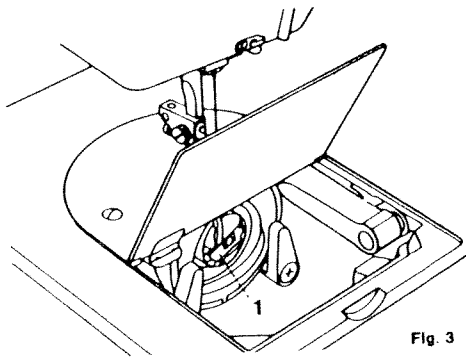


Fig. 3

**Removing the bobbin case**

Fig. 3: Model 212  
 Fig. 4: Model 213

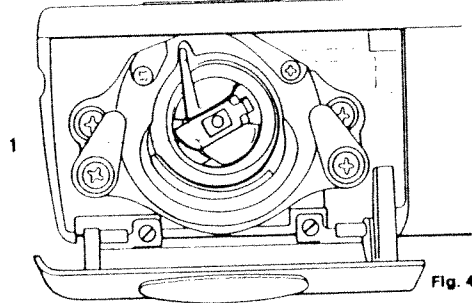


Fig. 4

Turn the balance wheel toward you until the take-up lever is at its highest point. Open the bedplate cover or the free-arm flap. Lift bobbin case latch 1 with thumb and forefinger, and pull the bobbin case out. Then release the latch so that the bobbin can drop out.

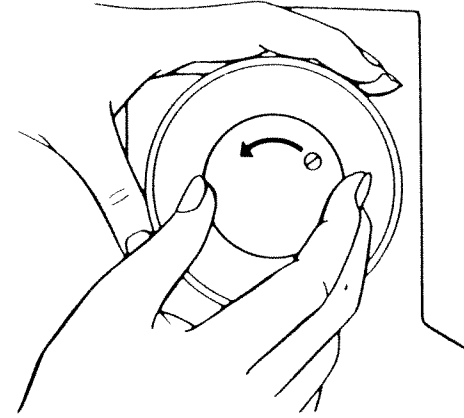


Fig. 5

**Disengaging the sewing mechanism**

Hold the balance wheel steady with your left hand and, with your right hand, turn the disengaging knob toward you (see arrow in Fig. 5). The sewing mechanism is now disengaged. To engage it again, turn the knob away from you until it is tight.

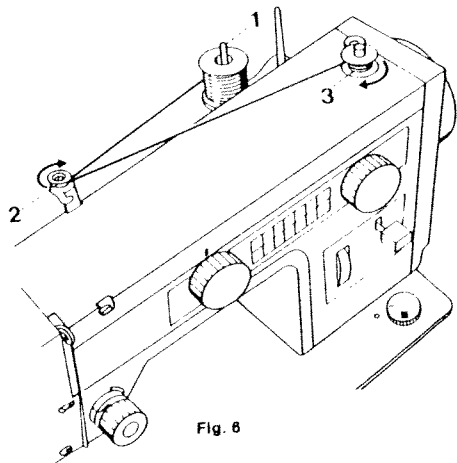


Fig. 6

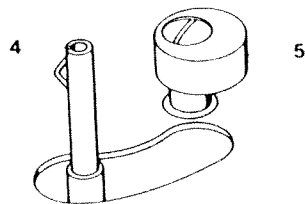


Fig. 7

### Winding the bobbin

Select the thread from the chart on the inside front cover.

Disengage the sewing mechanism and place a spool of thread on pin 1 (Fig. 6) Push a bobbin onto spindle 4 (Fig. 7) and press against stop 5 Pull the thread under tension disc 2 (see arrow) Wind a few turns of thread on bobbin 3 in the direction indicated by an arrow. Run the machine. When the bobbin is full, the bobbin winder will stop automatically. Remove the bobbin. If you do not need a full bobbin, push it away from the stop when enough thread has been wound.

### Threading the bobbin case

Pull about 10 cm (4 inches) of thread from the bobbin. Take the bobbin case in your left hand and insert the bobbin into the bobbin case as shown in Fig. 8.

Pull the thread into the slot of the bobbin case (Fig. 9)

Then draw the thread the left under the tension spring so that it comes out of the opening, as shown in Fig. 10.

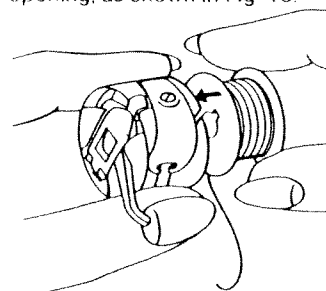


Fig. 8

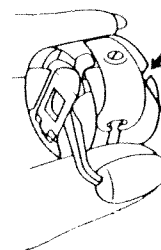


Fig. 9

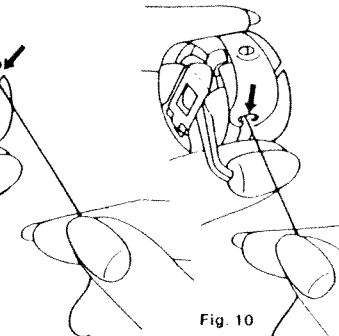


Fig. 10

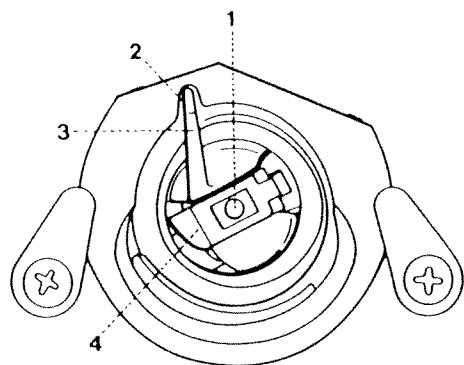


Fig. 11

### Inserting the bobbin case

Bring the take-up lever to its highest point.

Lift latch 4 so that the bobbin will not fall out. Push the bobbin case onto pin 1, making sure that finger 3 enters slot 2. Push the bobbin case in as far as it will go, then release latch 4. Lightly press against the bobbin case to make sure it has snapped into place.

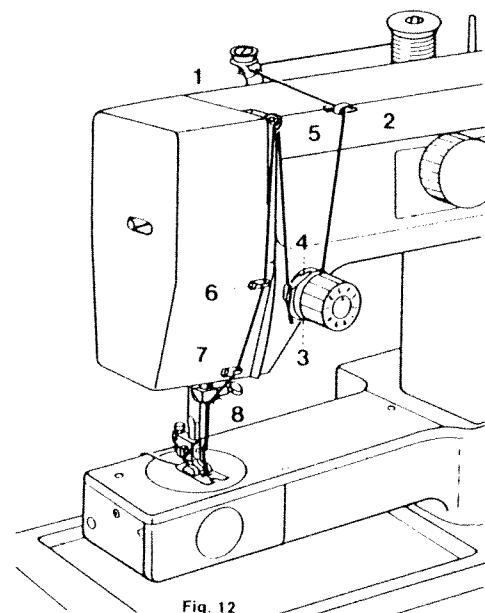


Fig. 12

### Threading the needle

Bring take-up lever 5 to its highest point. Place a spool of thread on one of the spool pins. Pull the thread through guides 1 and 2, clockwise around and between tension discs 3 and through the thread check spring.

Now draw the thread upwards behind guide 4, through the hole in take-up lever 5 and through guides 6, 7 and 8. Thread the needle from front to back and pull about 10 cm (4 inches) of thread through its eye.



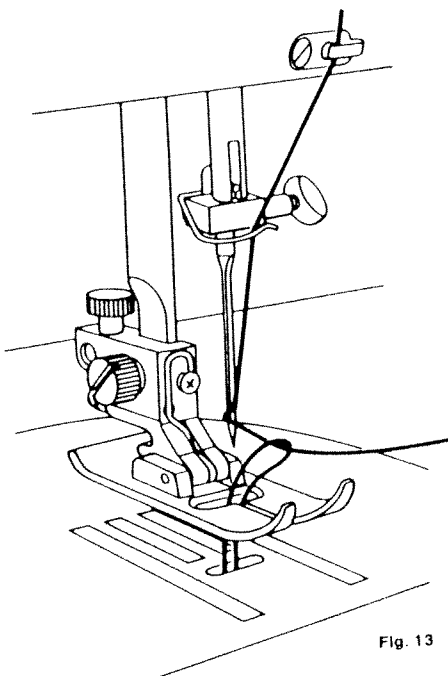


Fig. 13

### Drawing up the bobbin thread

Hold the end of the needle thread in your left hand. Turn the balance wheel toward you until the needle moves down and up again and the take-up lever has reached its highest point. Pull the needle thread tight to draw the bobbin thread out of the needle hole. Lay both thread ends (abt. 10 cm or 4 inches long) back under the sewing foot.

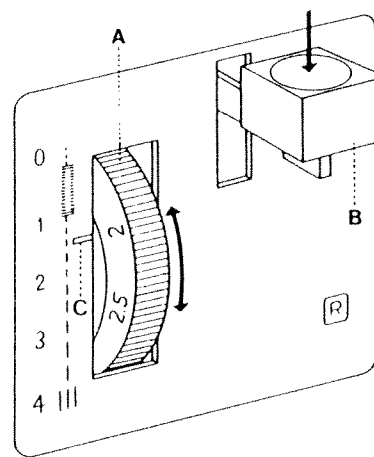


Fig. 14

### Regulating the stitch length and sewing backwards

1. White utility stitches: The stitch length is set by turning stitch length control **A** until the number indicating the desired stitch length between 0 and 4 is opposite mark **C**. The numbers indicate the stitch length in millimeters.

2. Red utility stitches: To sew red utility stitches, turn the stitch length control to 4.

3. Sewing backwards: To sew backwards and backtack a seam, press down reverse feed control **B**. When you release the control, the machine will sew forwards again.

### Regulating the thread tensions

I wrong



I Upper tension too loose or lower tension too tight.

II wrong



II Upper tension too tight or lower tension too loose.

III right



III Tensions evenly balanced.

Fig. 15

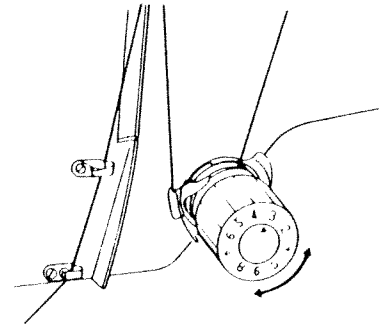


Fig. 16

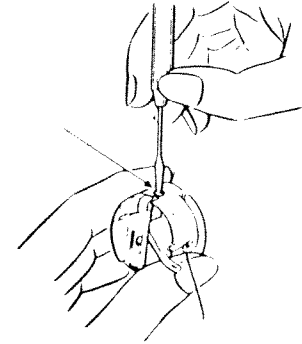


Fig. 17

### Needle thread tension

The normal setting is between numbers 3 and 5 on the tension regulating knob. Turn this knob clockwise toward 9 for a stronger tension, or anti-clockwise toward 0 for a weaker tension.

### Bobbin thread tension

The bobbin thread tension is regulated by turning the screw shown in Fig. 17 with a small screwdriver. Turn this screw clockwise for a stronger tension, or anti-clockwise for a weaker tension.

## Selecting the utility stitch

Select the desired stitch from the utility stitch chart.

1. The utility stitch chart has two colour ranges, white and red. For "white" utility stitches turn the colour range selector until mark **B** (Fig. 19) is at the top, for "red" utility stitches turn the selector until mark **B** is at the bottom.

2. Turn the utility stitch selector until the number designating the stitch chosen is positioned below mark **A** (Fig. 18).

For the "red" utility stitches, turn the stitch length control to 4.

The different utility stitches and their applications are shown in the chart on the opposite page.

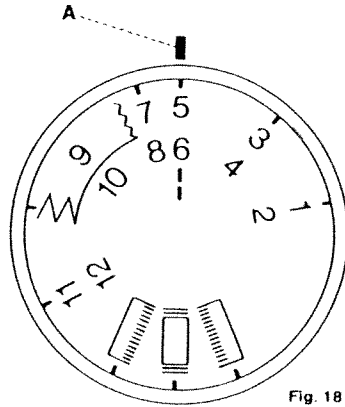


Fig. 18

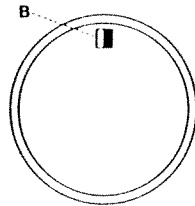


Fig. 19

## Utility stitch chart

white	1		Shell-edge stitch for finishing edges	
	3		Elastic stitch for inserting patches, darning and sewing stretch fabrics as well as terry cloth	
	5		Straight stitch (central needle position) for all ordinary sewing operations	
	7		Straight stitch (left needle position) for all ordinary sewing operations	
	9		Zigzag stitch for finishing edges, applique work and sewing on buttons	
	11		Blindstitch for making invisible hems	
			Buttonhole - left seam	
			Buttonhole - bartack	
			Buttonhole - right seam	
	red	2		Pullover stitch for joining two pieces of fabric and simultaneously finishing their edges
		4		Honeycomb stitch for sewing terry cloth and finishing hems on stretch fabrics
6			Elastic triple straight stitch for seams exposed to great stress, e.g. inside leg seams and shoulder seams (left needle position)	
8			Elastic triple straight stitch for seams exposed to great stress, e.g. inside leg seams and shoulder seams (left needle position)	
10			Elastic triple zigzag stitch for mending corsetry and lycra fabrics	
12			Overlock stitch for joining two pieces of fabric and simultaneously finishing their edges	

## Changing the needle

Turn the balance wheel toward you until needle bar 1 is at its highest point. Loosen needle set screw 2 and take out the needle. Insert a new needle 3 with the flat side of its shank facing away from you, and push it up as far as it will go. Tighten screw 2 again. Use only **System 130/705 H** needles. For the proper needle size see the table on the inside front cover

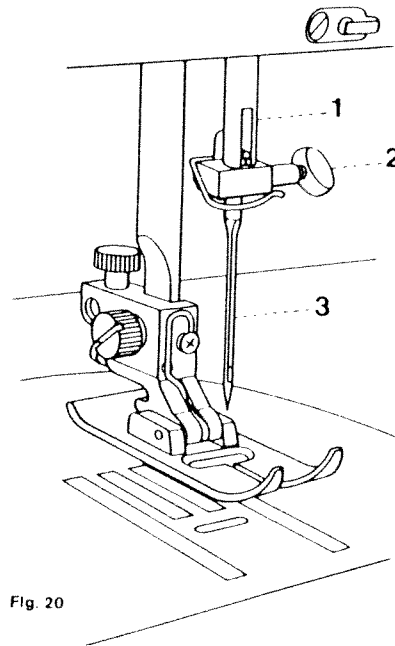


Fig. 20

## Changing the sewing foot

Raise the needle and the sewing foot. Press the red button 1 to release the sewing foot shoe.

To attach the sewing foot shoe, place it under the sewing foot holder and hold it in place with your left hand. Lower the presser bar lifter and at the same time reposition the sewing foot shoe so that pin 2 enters slot 3.

Hole 4 and screw 5 serve for fitting an edge guide which you can buy from your dealer

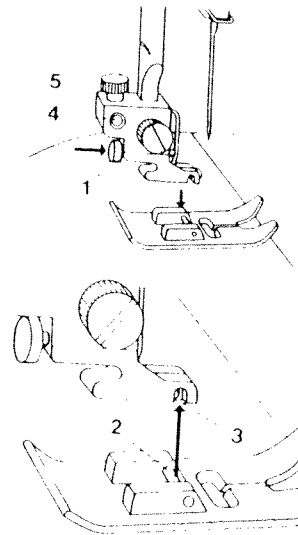


Fig. 21

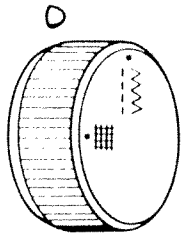


Fig. 22

### Dropping the machine feed

The machine feed has two positions which are set by turning the drop feed knob (Fig. 22).

Machine feed dropped for embroidery, darning and button sewing

Machine feed raised for sewing

### Basic rules

Always turn the balance wheel towards you – never allow a threaded machine to run without material under the sewing foot – always pull the ends of both threads under the sewing foot and towards the back before sewing – always raise the take-up lever before and after sewing

The machine is now ready for sewing.

### Safety rules

1. Be careful to avoid finger injuries by the needle when sewing.
2. Make sure you unplug the power cord whenever you want to change the needle, sewing foot, bobbin or needle plate, when you want to clean and oil the machine or have to interrupt sewing and leave the machine for a while.
3. Be sure to use only a 15-watt light bulb in the sewing lamp.

## Sewing

Make sure the disengaging knob on the balance wheel is tight

### Straight-stitch sewing

The machine sews straight stitches when the utility stitch selector is set at 5 or 7 and the mark on the colour range selector is at the top.

There are two straight-stitch settings:  
5 = central needle position; 7 = left needle position

### Zigzag sewing

The machine sews zigzag stitches when the utility stitch selector is set at the desired stitch width in range 9 and the mark on the colour range selector is at the top.

The maximum stitch width is 5 mm

It is important that you never change the stitch width unless the needle is up.

## Sewing on buttons

Bring the needle bar to its highest point, drop the machine feed and attach the clear-view foot. Turn the colour range selector so that its mark is at the top.

To begin with, turn the utility stitch selector to 7. Place a button on the material and under the sewing foot, making sure that the left hole of the button is exactly under the needle. Lower the presser bar lifter, then turn the utility stitch selector far enough into range 9 that the needle enters the right hole of the button when you turn the balance wheel. Slowly sew about 10 stitches, then turn the utility stitch selector to 7 again and sew a few tying stitches.

Four-hole buttons are sewn on as shown in Fig. 23.



Fig. 23

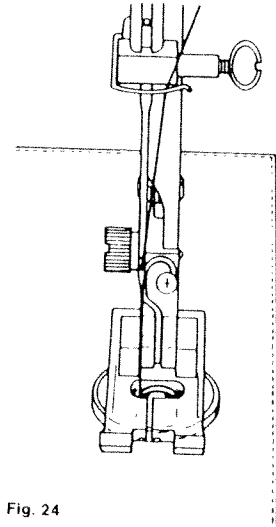


Fig. 24

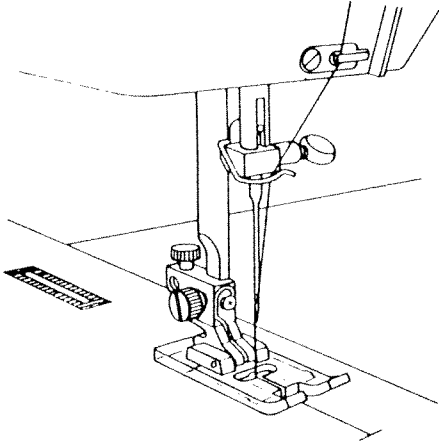


Fig. 25

### Sewing buttonholes

Attach the clear-view foot. Mark the position and length of the buttonhole on the material. Turn the colour range selec-

tor until its mark is at the top and turn the utility stitch selector to the **left buttonhole seam**. Regulate the stitch length so that the stitches are close together. Turn the balance wheel toward you until the needle is positioned at the far left (at 1 in Fig. 26). Adjust the material so that the point at which the buttonhole seam is to begin is exactly under the needle, and lower the sewing foot. Sew the left seam in the desired length and stop with the needle positioned above point 2. Turn the utility stitch selector to "bartack" and sew about 5 bartacking stitches. Stop with the needle positioned above point 3.

Turn the utility stitch selector to the **right buttonhole seam** and sew the right seam the same length as the left. Stop sewing at point 4 and raise the needle out of the fabric.

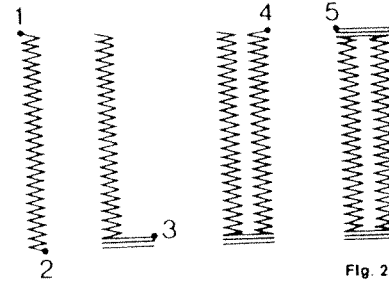


Fig. 26

Turn the utility stitch selector to "bartack" again and sew about 5 bartacking stitches. Stop with the needle positioned above point 5.

Turn the utility stitch selector to 7 and sew several tying stitches.

Carefully cut the buttonhole open with a seam ripper, making sure you do not damage the buttonhole seams and the bartacks.

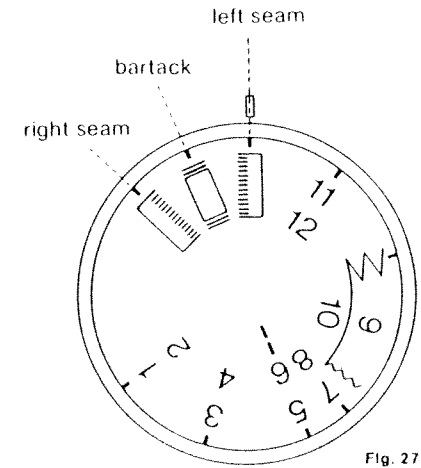
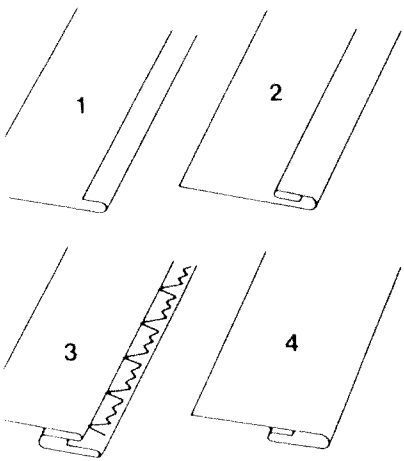


Fig. 27

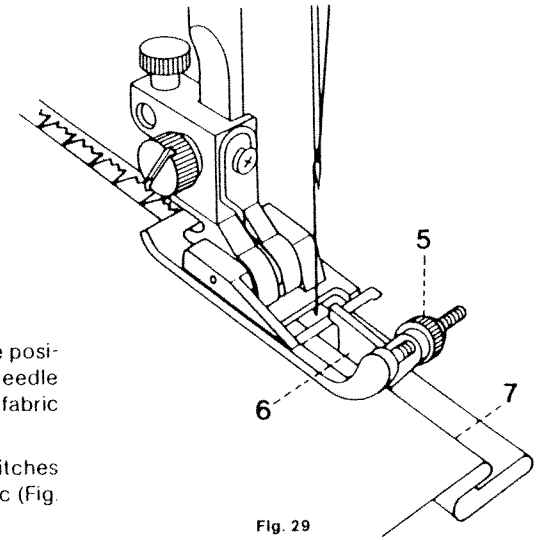


### Blindstitching hems

Attach the blindstitch foot. Turn the utility stitch selector to 11 and turn the colour range selector so that its mark is at the top.

Turn the fabric wrong side up and fold its edge back by 1 cm (abt. 1/2"), as shown at 1 in Fig. 28. Then fold the material to the desired hem width, as shown in drawing 2, and baste. Fold the hem down so that its folded edge protrudes by about 3 mm (abt. 1/8"), as shown in drawing 3.

Place the fabric with its folded edge under the sewing foot and lower the presser bar lifter.



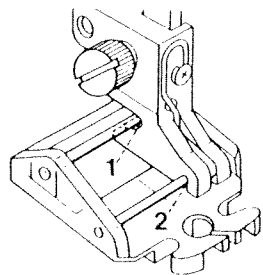
Turn screw 5 (Fig. 29) to adjust the position of edge guide 6 so that the needle at the left of its throw just catches fabric edge 7 (see Figs. 28-3 and 29).

The hem is sewn correctly if no stitches show on the right side of the fabric (Fig. 28-4).

On heavy woolen fabrics the hem is folded once only and its raw edge is finished with zigzag stitches before it is hemmed.

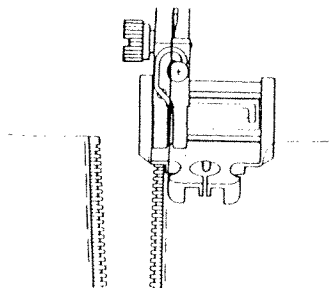
Fig. 29





### Inserting zippers

Raise the needle and attach the adjustable zipper foot as follows: insert the rear stud into slot 1 (Fig 30) and push up the toe of the foot so that the front stud enters slot 2. Push the zipper foot toward the right as far as it will go. Baste the right half of the zipper on the fabric. Then sew in the right half of the zipper (Fig 31) Raise the needle and the zipper foot. Push the foot toward the left as far as it will go. Then sew in the left half of the zipper.



### Embroidering and darning

Set the machine for straight or zigzag stitching, as desired. Remove the sewing foot and drop the machine feed. Place the material in an embroidery hoop (Fig. 32), then put it under the needle. Lower the presser bar lifter. Hold the hoop in both hands (Fig. 33). Run the machine at high speed and move the hoop back and forth, taking care that your fingers do not get into the path of the needle. Before you start embroidering, increase the lower tension a little so that the bobbin thread is not pulled through to the surface of the material. This will enhance the appearance of the embroidery. Darning is made in the same way. Cover the damaged area with dense stitches. Tears can be darned with the normal sewing foot by sewing back and forth.

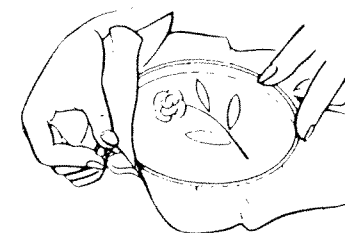


Fig. 32

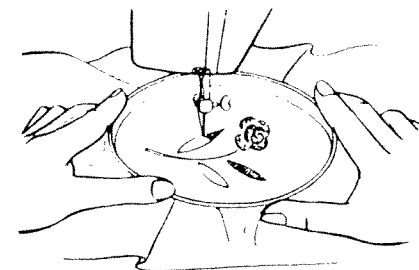


Fig. 33

### Removing the work

Raise the needle and the sewing foot. Remove the work from the machine by pulling it toward the rear, and trim both threads with the aid of the thread cutter. Make sure to leave thread ends about 10 cm (4 inches) long in the machine with which to start the next seam.

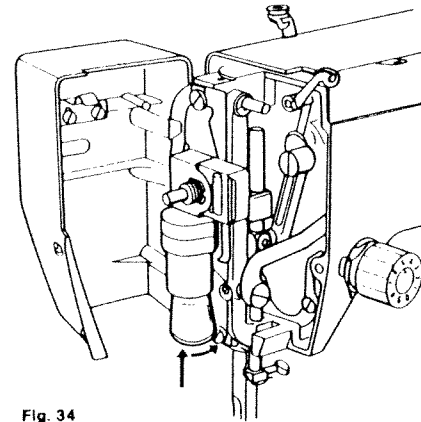


Fig. 34

### Changing the light bulb

Open the face cover. Push the bulb up a little, then turn it anti-clockwise and pull it out. Insert a new bulb so that its pins slide into the socket slots, push it up and turn it clockwise, as shown by arrows in Fig. 34.

## Machine care

### Oiling

All bearings behind the face cover and under the top cover and the bedplate have to be oiled from time to time. The shuttle race must also be oiled now and then. To do this, remove the bobbin case.

Always use high-grade (resin-free) sewing machine oil. After oiling, run the machine for a short time on a piece of waste material in order to get rid of excess oil.

### Cleaning the shuttle race

Raise the needle and take out bobbin case **F** with bobbin **E**. Swing latches **D** outwards and remove shuttle race ring **B**. Carefully pull shuttle **A** out of its race. Clean shuttle race **C** with a soft brush, making sure that no brush hairs are left behind. Replace shuttle and shuttle race ring and lock them in position with latches **D**.

Model 212

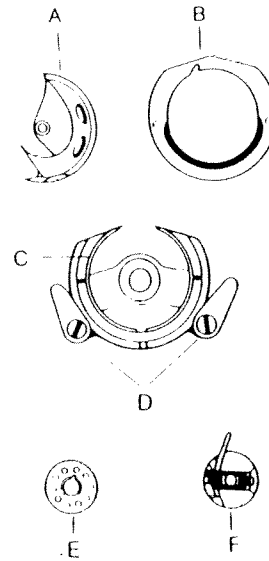


Fig. 35

Model 213

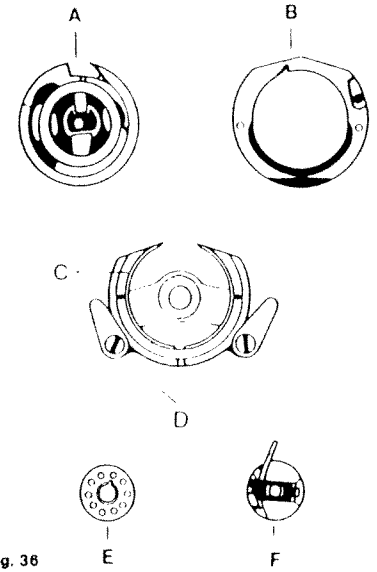


Fig. 36

## Trouble shooting

### Needle thread breaks

Cause:

1. Needle not threaded correctly.
2. Thread tension too tight.
3. Something is wrong with the needle.
4. Thread used is too heavy for the needle.
5. Needle inserted improperly.
6. Sewing foot, shuttle or shuttle race may be damaged.

Remedy:

Thread the needle from front to back.

Turn tension dial toward 0 somewhat.

Needle may be blunt or bent. Insert a new system 130/705 H needle.

Use needle of the proper size as indicated in the Needle and Thread Chart.

Push the needle up as far as it will go, making sure the flat side of its shank faces toward the back.

Replace the damaged part or send it in for repair.

### Seam puckers

Cause:

1. The thread tension is too tight.

Remedy:

Adjust both tensions as instructed on pages 16 and 17

### Bobbin thread breaks

Cause:

1. If the bobbin thread is not wound correctly, it gets entangled.
2. The bobbin thread has slipped out from under the tension spring.

Remedy:

Wind the thread properly, as instructed on page 10.

Take the bobbin out of the bobbin case, replace, and thread the bobbin case again.

### Faulty stitching

#### Cause

1. Both threads are of inferior quality

#### Remedy:

Use high-quality thread only, which has not been kept in storage too long.

### Needle breaks

#### Cause:

1. Fabric is too thick.
2. The material is pulled by the sewer.
3. The needle is of inferior quality

#### Remedy:

Use a thicker needle as indicated in the Needle and Thread Chart.

Don't pull the fabric.

Buy high-quality needles only.

### Thread forms kinks

#### Cause:

1. The thread tension is not properly adjusted.
2. The thickness of the material and the thread size are not in accord.
3. The needle thread is not placed between the tension discs.

#### Remedy:

Adjust both tensions as instructed on page 17.

Select needle and thread to suit the material, as indicated in the Needle and Thread Chart.

Raise the sewing foot and draw the needle thread between the tension discs.

Machine runs heavily and is noisy

Cause:

1. Dust and pieces of thread have accumulated in the shuttle race.
2. Machine has not been serviced for a longer time.
3. The machine is clogged by inferior oil.

Remedy:

Clean the shuttle, as instructed on pages 34 and 35.

Read the instructions on page 34.

Have a mechanic clean the machine thoroughly.

	Stitch selector	Stitch length Stitch width	Thread tension	Presser foot
<i>Elastic blindstitch hemming</i> Hemming in elastic fabrics.		 Orange Orange		Blindstitching presser foot 41 14 228 
<i>Single-overlock</i> Joining and overcasting in one. Seams in knit and stretch fabrics. Mending of overlock seams.		 Blue Blue		Regular presser foot 41 11 383 Roller presser foot 41 13 901 
<i>Elastic straight stitch</i> Joining of elastic fabrics. Extra strong, for example for crotch sewing.		 Yellow Yellow		Regular presser foot 41 11 383 
<i>Buttonholes</i> Stitch width dial on 0, then pull out width dial and then turn the dial 1-2-3-4-0.		 0-4		Buttonhole presser foot 41 11 650 
<i>Reinforced buttonholes</i> Stitch width dial on 0, then pull out width dial and then turn the dial 1-3-1-2-3-4-0.		 0-4		Buttonhole presser foot 41 11 650 
<i>Sewing on buttons</i> Adjust the stitch width to suit the size of the button. Feed dog lowered		 0-4 3-4		
<i>Raised seams</i> Twin-needle with or without gimp cord. The stitch length can be varied.		 2 0		Raised seam presser foot 41 11 389 Raised seam attach- ment 40 15 427 
<i>Marking</i> Transference of markings from pattern to fabric.		 4 1,5-2		Special marker stitch foot 41 13 931 