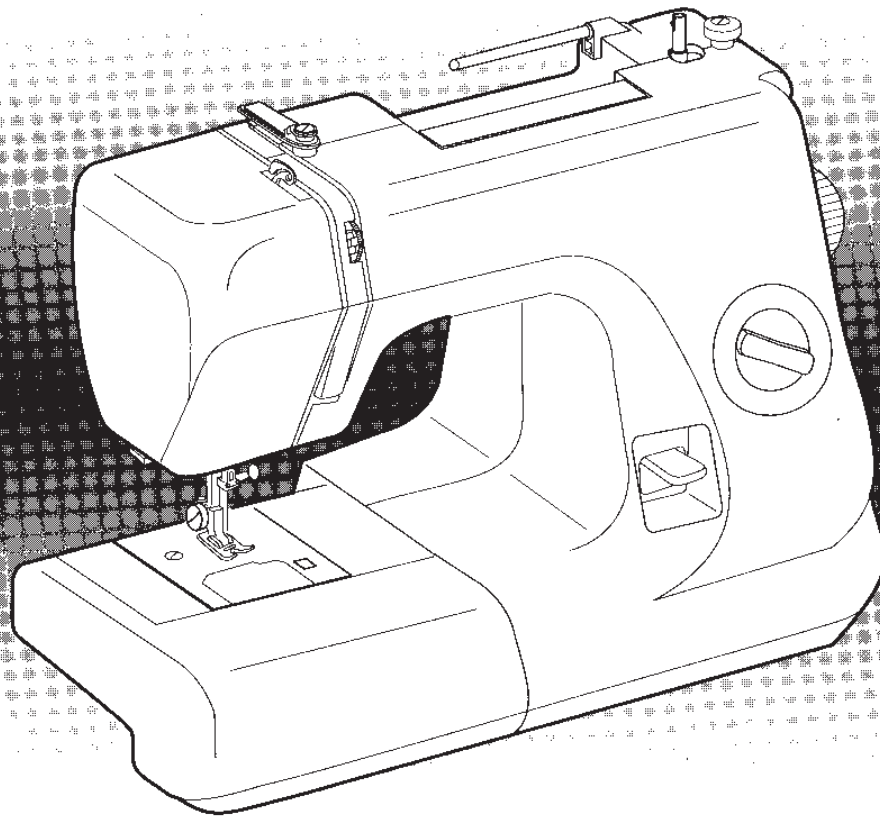


# INSTRUCTION BOOK



MODEL **659**

**JANOME**

# IMPORTANT SAFETY INSTRUCTIONS

Your sewing machine is designed and constructed only for HOUSEHOLD use.

Read all instructions before using this sewing machine.

**DANGER** - To reduce the risk of electric shock:

1. This sewing machine should never be left unattended when plugged in. Always unplug this sewing machine from the electrical outlet immediately after using and before cleaning.
2. Always unplug before replacing sewing machine light bulb. Replace bulb with same type rated 15 Watts.
3. Do not reach for this sewing machine if it has fallen into water. Unplug immediately.
4. Do not place or store this sewing machine where it can fall or be pulled into a tub or a sink. Do not place in or drop into water or any other liquid.

**WARNING** - To reduce the risk of burns, fire, electric shock or injury to persons:

1. Do not allow this sewing machine to be used as a toy. Close attention is necessary when this sewing machine is used by or near children.
2. Use this sewing machine only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this manual.
3. Never operate this sewing machine if it has a damaged cord or plug, if it is not working properly, if it has been dropped and damaged or dropped into water. Return the sewing machine to the nearest authorized dealer or service center for examination, repair and electrical or mechanical adjustment.
4. Never operate this sewing machine with any air opening blocked. Keep ventilation openings of the sewing machine and foot controller free from accumulation of lint, dust and loose cloth.
5. Never drop or insert any object into any opening of the sewing machine.
6. Do not use outdoors.
7. Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
8. To disconnect, turn all controls to the off "0" position, then remove the plug from the outlet.
9. Do not unplug by pulling on the cord. To unplug, grasp the plug, not the cord.
10. Keep fingers away from all moving parts. Special care is required around the sewing machine needle.
11. Always use the proper needle plate. The wrong plate can cause the needle to break.
12. Do not use bent needles.
13. Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
14. Turn off the sewing machine's power switch when making any adjustment in the needle area such as: threading the needle, changing the needle, threading the bobbin, changing presser foot and the like.
15. Always unplug the sewing machine from the electrical outlet when removing covers or when making any other adjustments mentioned in this instruction manual.

## OPERATING INSTRUCTIONS

The symbol "0" on the power switch indicates the "off" position of the switch.

For sewing machines with a polarized plug (one blade wider than the other), to reduce the risk of electric shock, this plug is intended to fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet.

Foot Controller YC - 482 J or TJC - 150 is for use with Sewing Machine 659 (for U.S.A. market only).

When using your sewing machine for the first few times, place a waste fabric under the presser foot and run the machine without thread for a minute. Wipe away any oil which may appear.

## SAVE THESE INSTRUCTIONS

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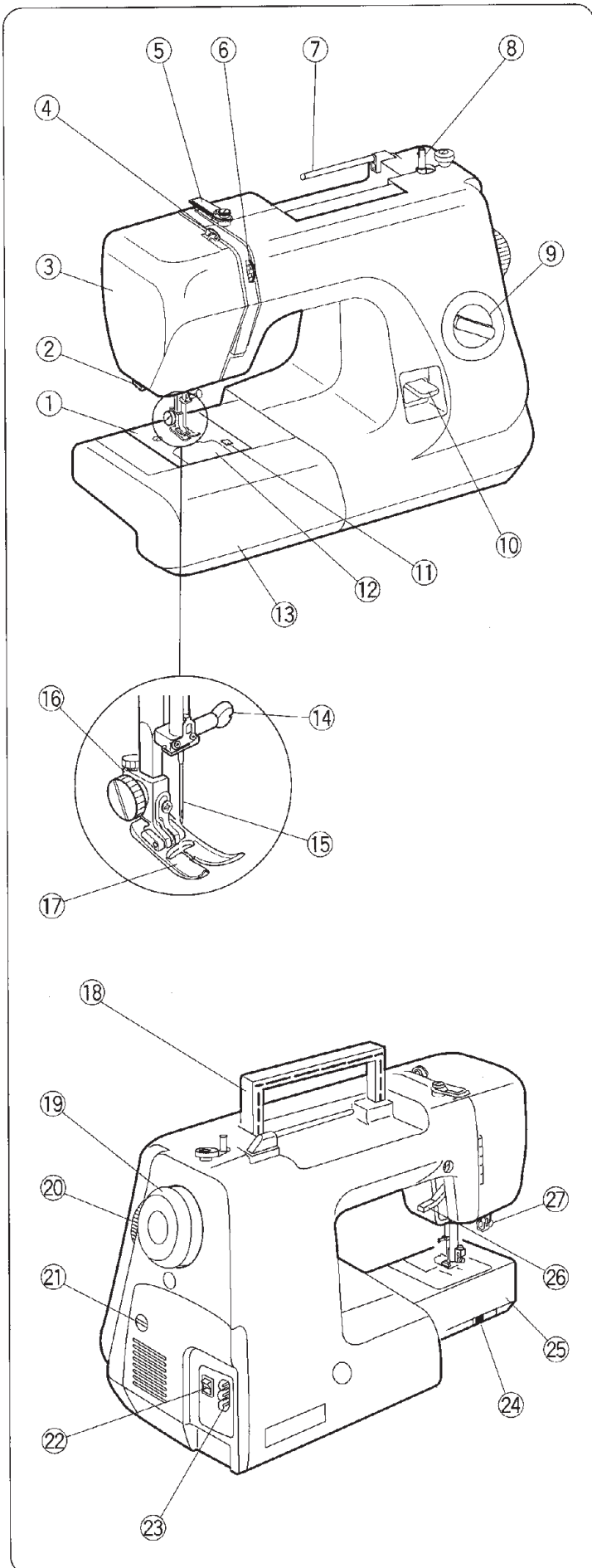
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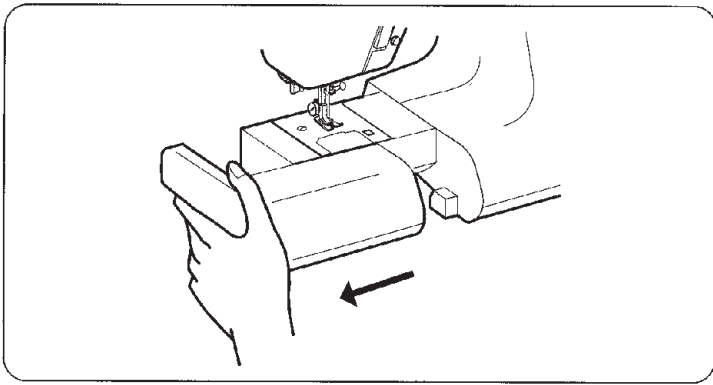
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## SECTION I NAMES OF PARTS

### Names of Parts



- ① Needle plate
- ② Thread cutter
- ③ Face plate
- ④ Thread take-up lever
- ⑤ Thread guide
- ⑥ Thread tension dial
- ⑦ Spool pin
- ⑧ Bobbin winder spindle
- ⑨ Pattern selector dial
- ⑩ Reverse stitch lever
- ⑪ Hook cover plate release button
- ⑫ Hook cover plate
- ⑬ Extension table (Accessory storage box)
- ⑭ Needle clamp screw
- ⑮ Needle
- ⑯ Foot holder
- ⑰ Presser foot
- ⑱ Carrying handle
- ⑲ Handwheel
- ⑳ Stitch length dial
- ㉑ Feed balancing dial
- ㉒ Power switch
- ㉓ Machine socket
- ㉔ Drop feed lever
- ㉕ Free arm
- ㉖ Presser foot lifter
- ㉗ Buttonhole lever



## Extension Table

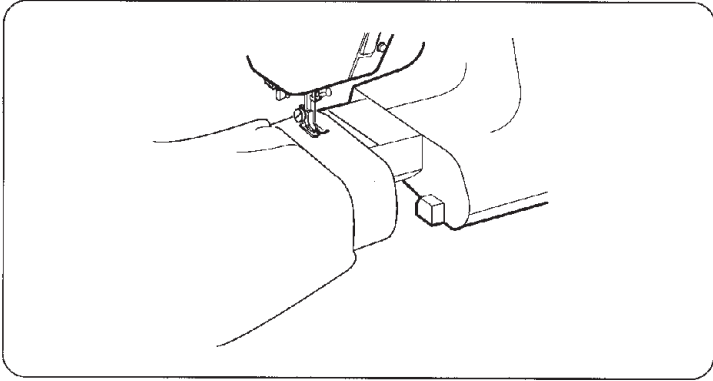
The extension table provides added sewing surface and can be easily removed for free arm sewing.

### Detaching the table:

Pull the table away from the machine, as illustrated.

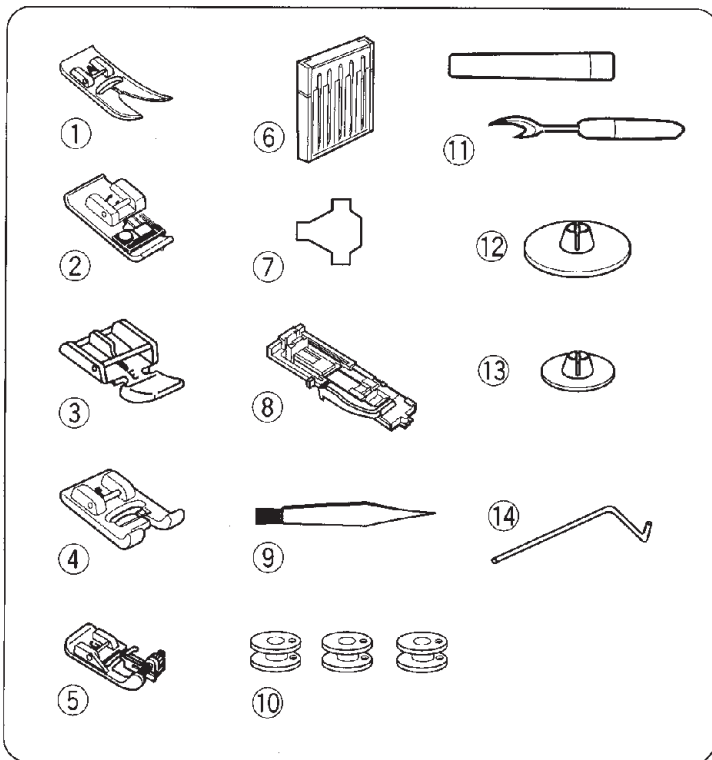
### Attaching the table:

Push the extension table until it snaps into the machine.



### • Advantages and uses of free arm sewing:

- Avoid fabric bunching around the needle when bartacking to reinforce pockets, plackets and waistlines.
- For stitching sleeves, waistbands, pants legs or any circular garment area
- For darning socks or mending knees, elbows or areas of wear in children's clothes



## Standard Accessories and Storage Place

- ① A: Zigzag foot
- ② C: Overedge foot
- ③ E: Zipper foot
- ④ F: Satin stitch foot
- ⑤ G: Blind stitch hem foot
- ⑥ Set of needles
- ⑦ Screwdriver
- ⑧ R: Automatic buttonhole foot
- ⑨ Lint brush
- ⑩ Bobbins
- ⑪ Seam ripper
- ⑫ Large spool holder
- ⑬ Small spool holder
- ⑭ Quilting bar
- ⑮ Extension table

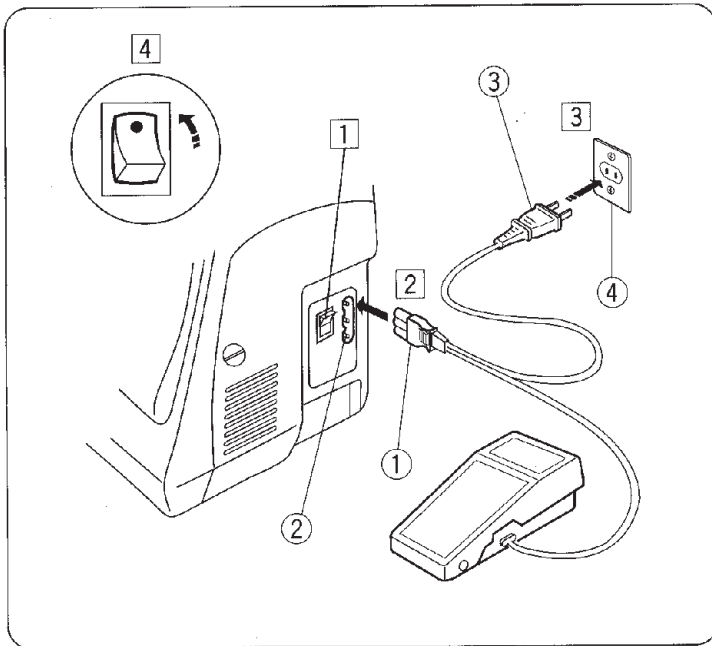
## SECTION II GETTING READY TO SEW

### Connecting Machine to Power Supply

Before connecting the power cord, make sure the voltage and frequency shown on the machine conform to your electrical power.

- ① Machine plug
- ② Machine socket
- ③ Power supply plug
- ④ Electrical outlet

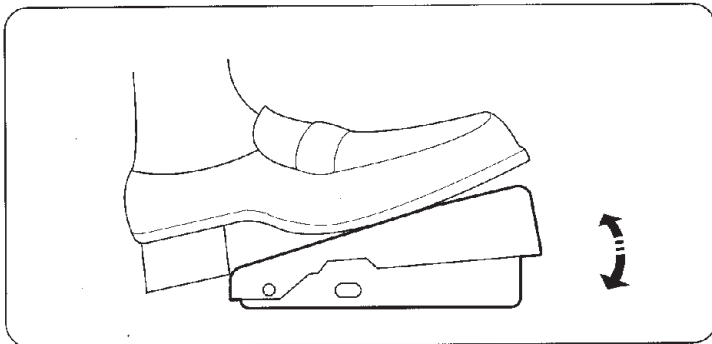
- ① Turn off the power switch.
- ② Insert the machine plug ① into the machine socket ②.
- ③ Insert the power supply plug ③ into the electrical outlet ④.
- ④ Push the power switch to turn on the power and sewing light.



### Controlling Sewing Speed

#### • Foot control

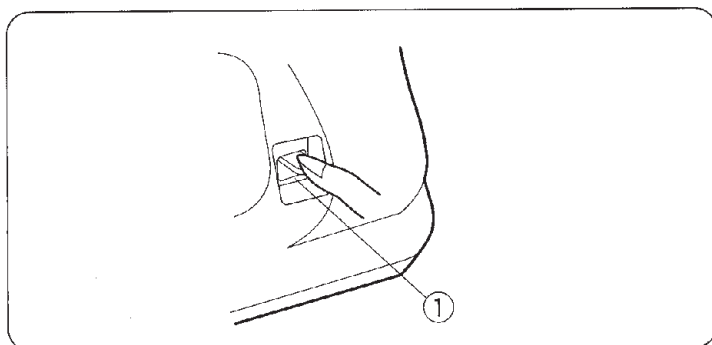
Sewing speed can be varied by the foot control. The harder you press on the control, the faster the machine runs.



### Reverse Stitch Lever

The machine will sew in reverse while the reverse stitch lever is depressed.

- ① Reverse lever



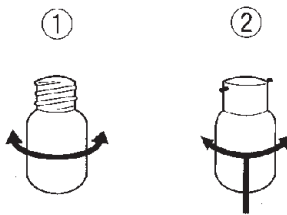
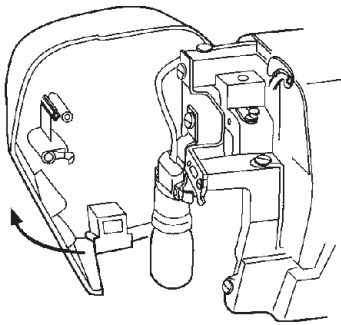


## Removing and Attaching the Light Bulb

The sewing light is located behind the face plate. To change the bulb, open the face plate.

**NOTE:** When replacing the bulb, unplug the machine.

**CAUTION:** Wait for the light bulb to cool down before touching it.



① To remove: Turn the bulb counterclockwise.  
To replace: Turn the bulb clockwise.

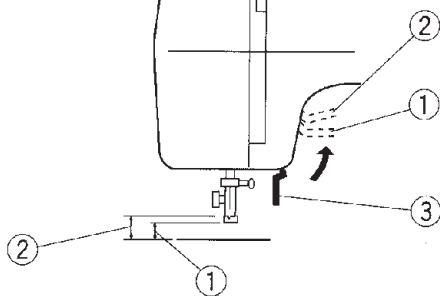
② To remove: Push and turn counterclockwise  
To replace: Push and turn clockwise.

## Presser Foot Lifter

The presser foot lifter raises and lowers your presser foot.

You can raise it about 0.6cm (1/4") higher than the normal up position for easy removal of the presser foot or to help you place heavy fabric under the foot.

- ① Normal up position
- ② High position
- ③ Presser foot lifter



## To Attach and Remove the Presser Foot

① Press the red button on the back of the foot holder. The presser foot will drop off.

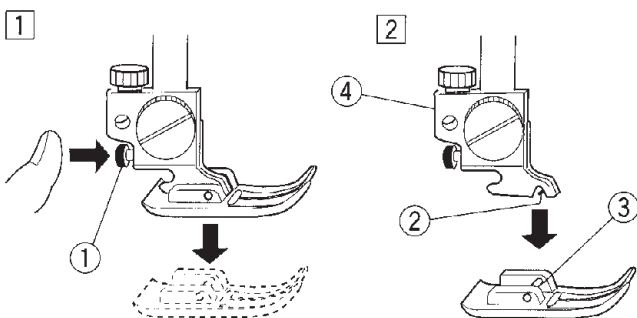
① Red button

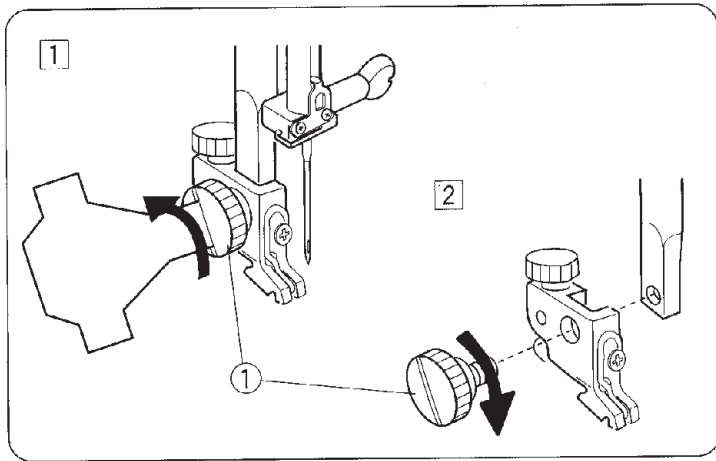
② Place the selected presser foot so the pin on the foot lies just under the groove of the foot holder. Lower the presser bar to lock the foot in place.

② Groove

③ Pin

④ Foot holder





## To Remove and Attach the Foot Holder

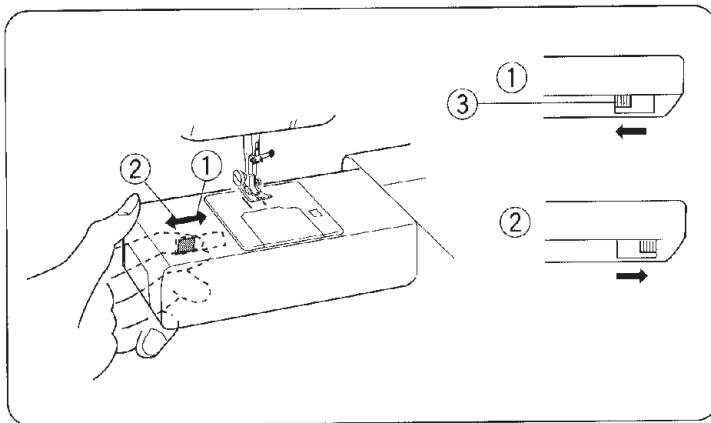
### 1 Removing the foot holder:

Remove the thumb screw by turning the screw counterclockwise with the screwdriver.

① Thumb screw

### 2 Attaching the foot holder:

Match the hole in the foot holder with the threaded hole in the presser bar. Fit the thumb screw into the hole. Tighten the screw by turning it clockwise.



## Dropping the Feed Dogs

For button sewing etc., drop the feed dogs.

When finished sewing, raise the feed dogs.

The feed dogs must always be up for normal sewing.

① Lowered position

② Raised position

③ Drop feed lever



## Changing Needles

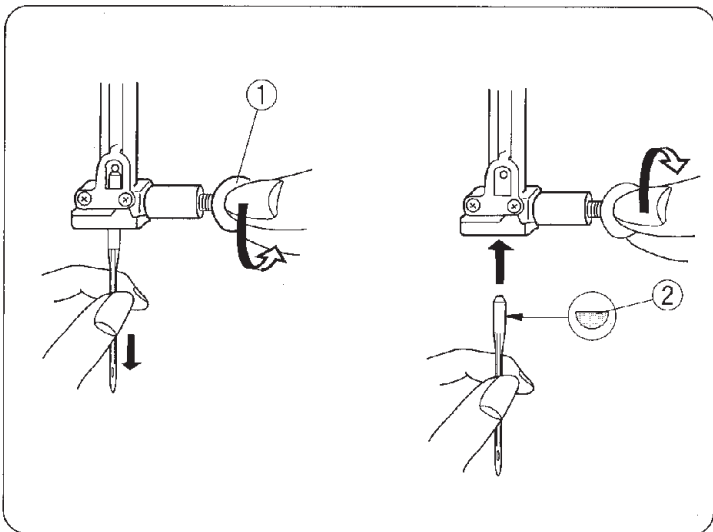
- 1 Turn off the power switch.
- 2 Raise the needle by turning the handwheel towards you and lower the presser foot. Loosen the needle clamp screw by turning it counterclockwise. Remove the needle from the clamp.
- 3 Insert the new needle into the needle clamp with the flat side to the rear. When inserting the needle into the clamp, push it up as far as it will go. Tighten the clamp screw firmly by turning it clockwise.

### • To check for a good needle

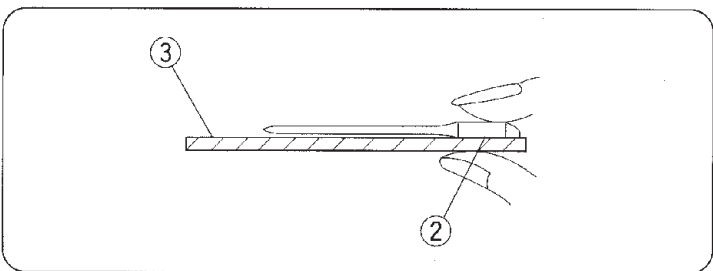
Put the flat side of the needle onto something flat (the needle plate, glass etc.).

The gap between the needle and the flat surface should be consistent. Never use a bent or blunt needle.

**NOTE:** Check your needles frequently for barbed or blunted points. Snags and runs in knits, fine silks and silk-like fabrics are permanent and are almost always caused by a damaged needle.



- 1 Needle clamp screw
- 2 Flat side of needle



- 3 Flat surface

## Selecting Needle and Thread

FABRICS		THREADS	NEEDLE SIZE
<b>LIGHT WEIGHT</b>	Crepe de Chine, Voile, Lawn, Organdy, Georgette, Tricot	80 to 100 Fine Silk 80 to 100 Fine Cotton 80 to 100 Fine Polyester	9 or 11
<b>MEDIUM WEIGHT</b>	Linens, Cotton, Pique, Serge, Double Knits, Percale	50 Silk 60 to 80 Cotton 50 to 80 Synthetic Cotton-covered Polyester	11 or 14
		50 Cotton	14
<b>HEAVY WEIGHT</b>	Denim, Tweed, Gabardine, Coating, Drapery and Upholstery Fabric, Canvas	50 Silk 40 to 50 Cotton 40 to 50 Synthetic Cotton-covered Polyester	14 or 16
		30 Silk 30 Cotton	16

### NOTE:

\* In general, fine threads and needles are used for sewing thin fabrics, and thicker threads and needles are used for sewing heavy fabrics.

Always test thread and needle size on a small piece of fabric which will be used for actual sewing.

\* Use the same thread for needle and bobbin.

\* When sewing stretch, very fine fabrics and synthetics, use a blue tipped needle.

The blue tipped needle effectively prevents skipped stitches.

## Winding the Bobbin

### • Set the spool

Lift up the spool pin and place the spool of thread on it with the thread coming off the spool as illustrated. Press the large spool holder firmly against the spool of thread.

\* The small spool holder is used with small or narrow spools of thread.

- |                  |                      |
|------------------|----------------------|
| ① Ordinary spool | ④ Large spool holder |
| ② End of thread  | ⑤ Small spool        |
| ③ Spool pin      | ⑥ Small spool holder |

### • Removing the bobbin

Gently slide the hook cover plate release button to the right and remove the cover plate. Lift out the bobbin.

- |                                   |
|-----------------------------------|
| ① Hook cover plate release button |
| ② Hook cover plate                |

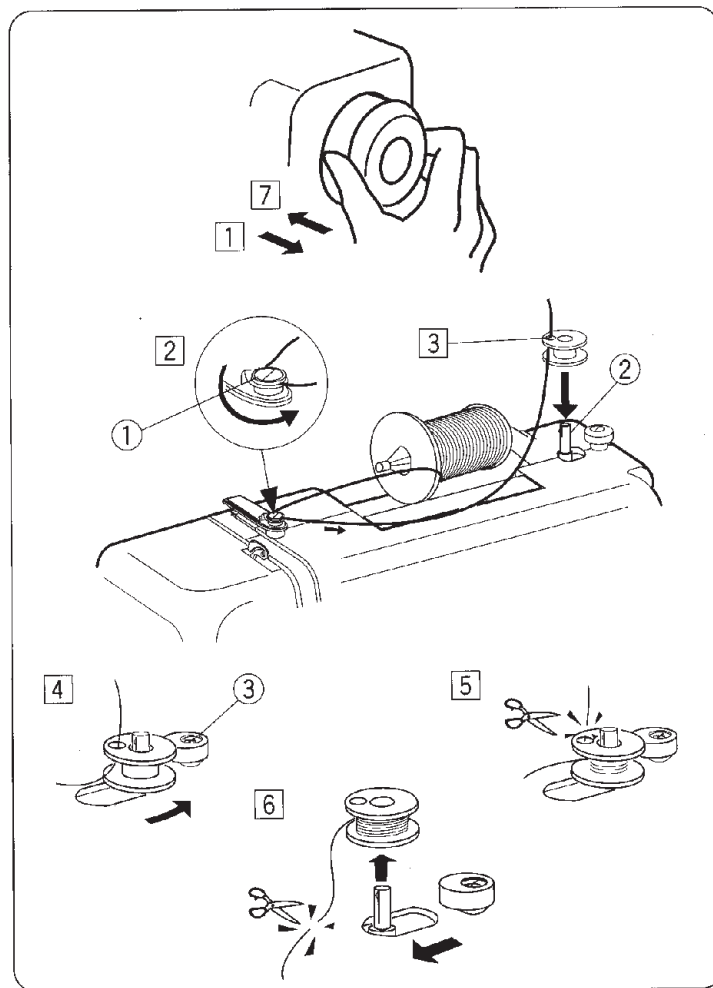
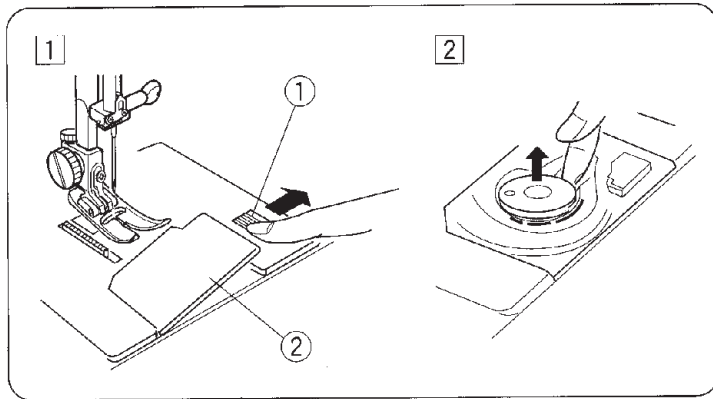
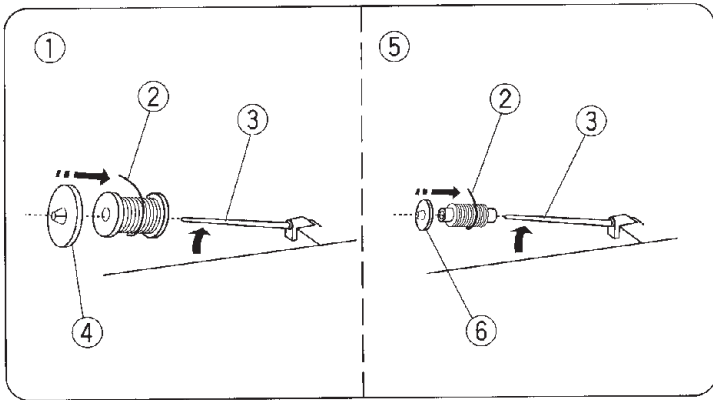
### • Winding the bobbin

- 1 Pull the handwheel away from the machine to disengage clutch.
  - 2 Guide the thread around the thread guide.
  - 3 Thread through the hole in the bobbin from the inside to the outside, then put the bobbin on the bobbin winder spindle.
  - 4 Push it to the right.
  - 5 With free end of the thread held in your hand, depress the foot control. Stop the machine when it has made a few turns, and cut the thread close to the bobbin.
- \* Stop the machine when it has made a few turns, and cut the thread close to the hole in the bobbin.
- 6 Depress the foot control again. When the bobbin is fully wound, it will stop automatically. Return the bobbin winder to its original position by moving the spindle to the left, and cut the thread as illustrated.
  - 7 Push in the handwheel to engage clutch.

- |                         |
|-------------------------|
| ① Thread guide          |
| ② Bobbin winder spindle |
| ③ Bobbin winder stopper |

### NOTE:

- \* The machine will not sew until the handwheel is pushed in.
- \* Do not move the bobbin winder spindle while the machine is running.



## • Inserting the bobbin

- 1 Place the bobbin in the holder with the thread running off counterclockwise.

- ① Bobbin
- ② Bobbin holder
- ③ End of thread

- 2 Guide the thread into the notch (A) on the front side of the bobbin holder. Draw the thread to the left, sliding it between the tension spring blades.

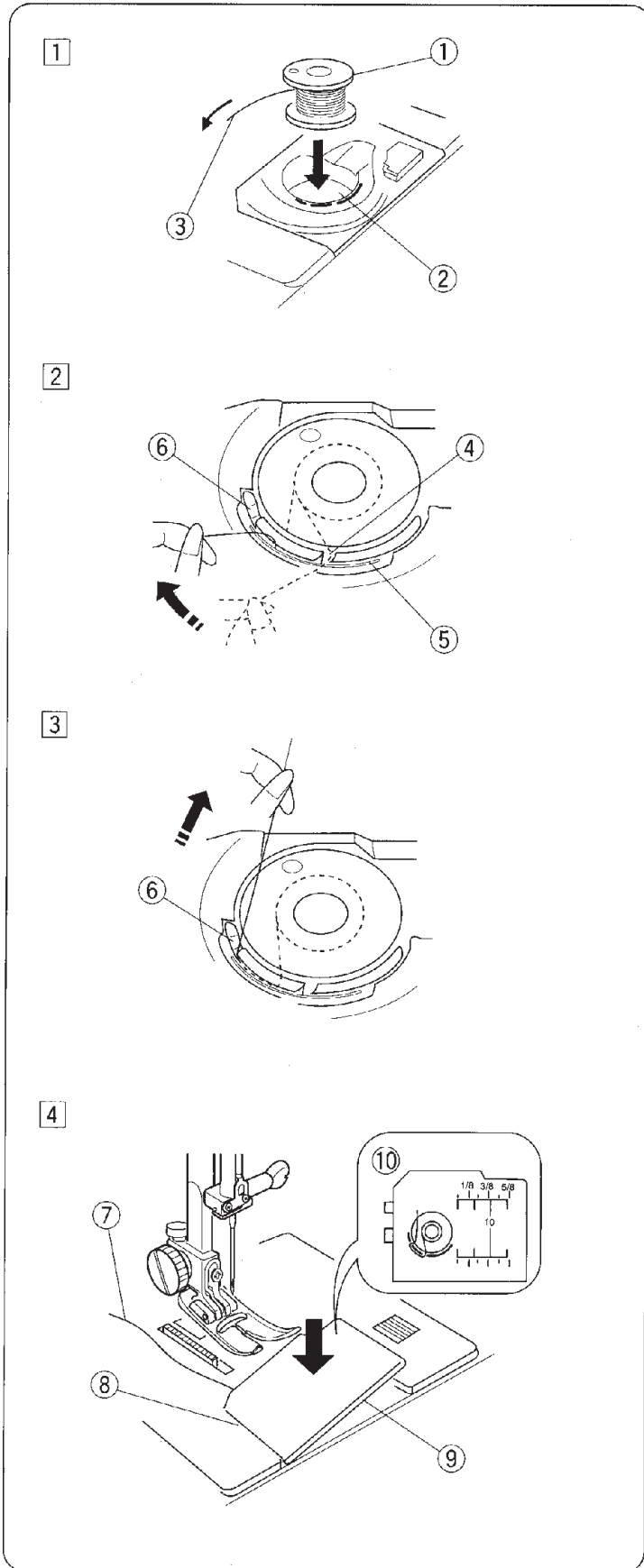
- ④ Notch (A)
- ⑤ Spring

- 3 Continue to draw the thread lightly until the thread slips into notch (B). Pull out about 15 cm (6") of thread.

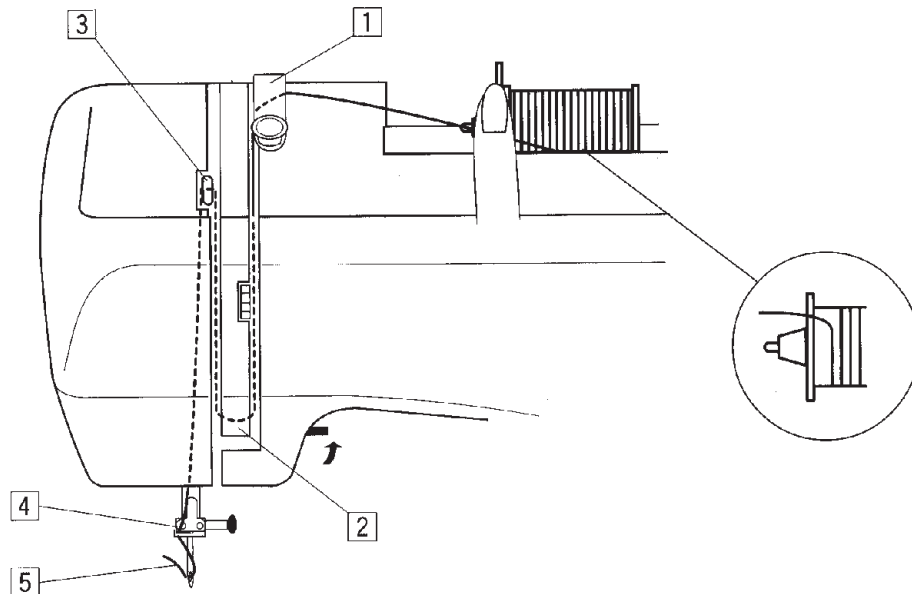
- ⑥ Notch (B)

- 4 Attach the hook cover plate. Check the threading by referring to the chart shown on the hook cover plate.

- ⑦ Bobbin thread
- ⑧ Edge of hook cover plate
- ⑨ Hook cover plate
- ⑩ Threading chart



## Threading the Machine



### • To set the needle thread

- 1 Raise the presser foot with the presser foot lifter. Lead the thread from the spool and pass it through the thread guide. Then draw it down along the right slot.

① Thread guide

- 2 Then, down around the check spring holder.

② Check spring holder

- 3 Raise the take-up lever to its highest position by turning the handwheel towards you. Firmly draw the thread from right to left over the take-up lever and down into the take-up lever eye.

③ Thread take-up lever

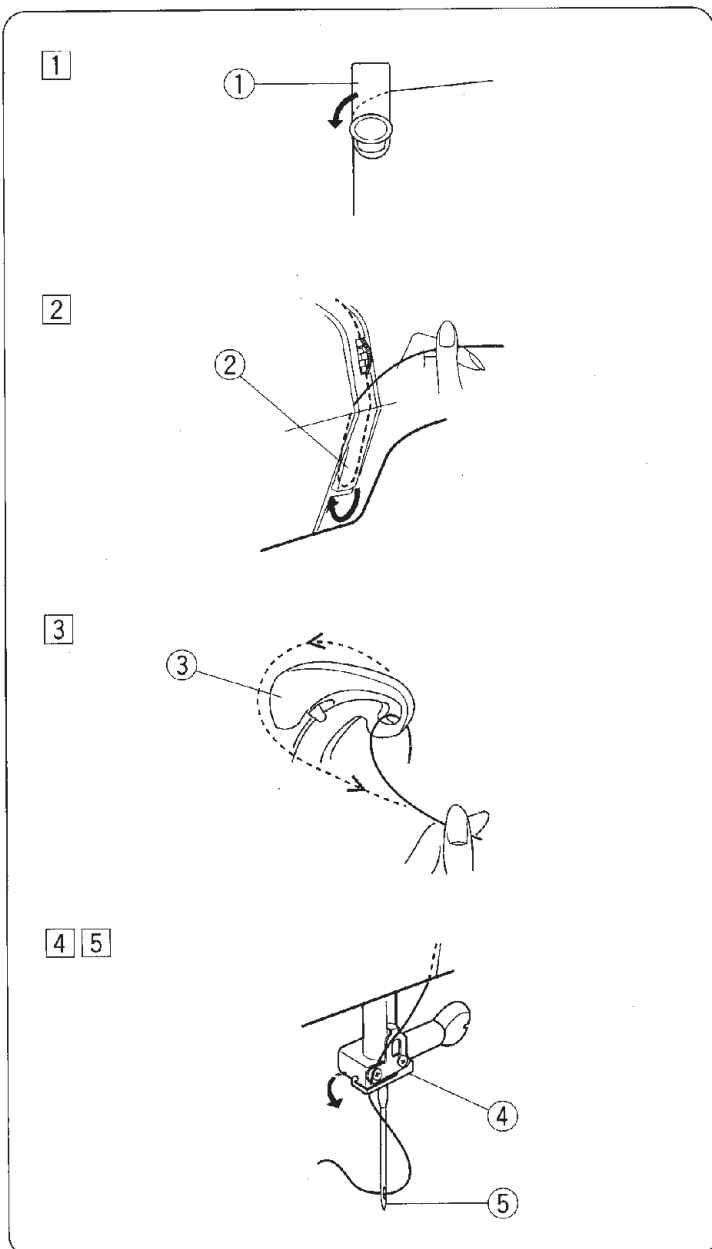
- 4 Draw the thread down and slide the thread behind the needle bar thread guide from the left.

④ Needle bar thread guide

- 5 Thread the needle from front to back.

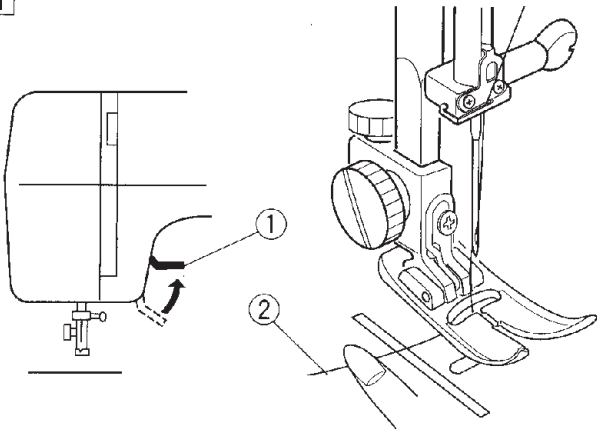
⑤ Needle

**NOTE:** You may want to cut the end of the thread with sharp scissors for easier needle threading.



## • Drawing up the bobbin thread

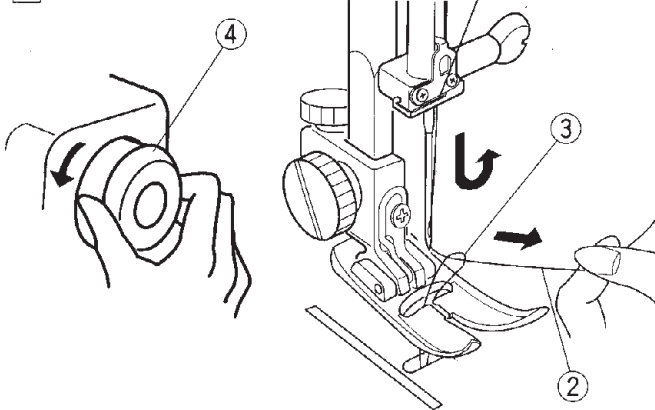
1



1 Raise the presser foot and hold the needle thread lightly with your left hand.

- ① Presser foot lifter
- ② Needle thread

2

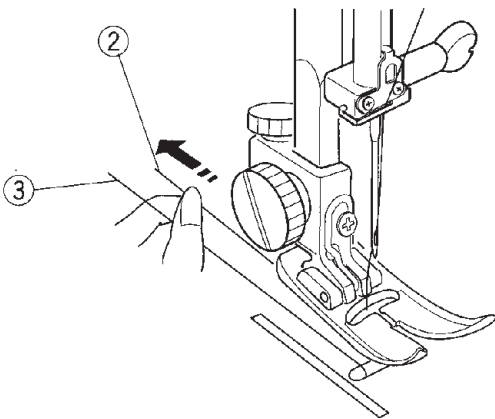


2 Turn the handwheel slowly towards you with your right hand until the needle goes down and until the take-up lever is at its highest position.

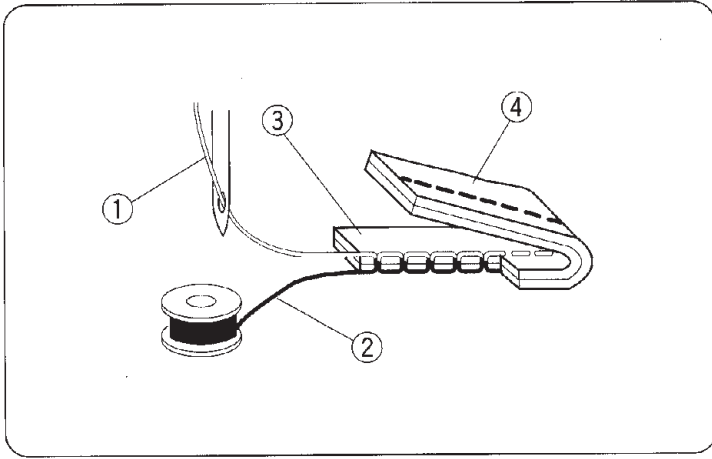
Bring the bobbin thread up by pulling the top thread.

- ③ Bobbin thread
- ④ Handwheel

3



3 Pull 10 to 15 cm (4" to 6") of both threads back and under the presser foot.



## Balancing Needle Thread Tension

### • Choose the correct tension

For straight stitch:

The ideal straight stitch will have threads locked between the two layers of fabric, as illustrated on the left (magnified to show detail).

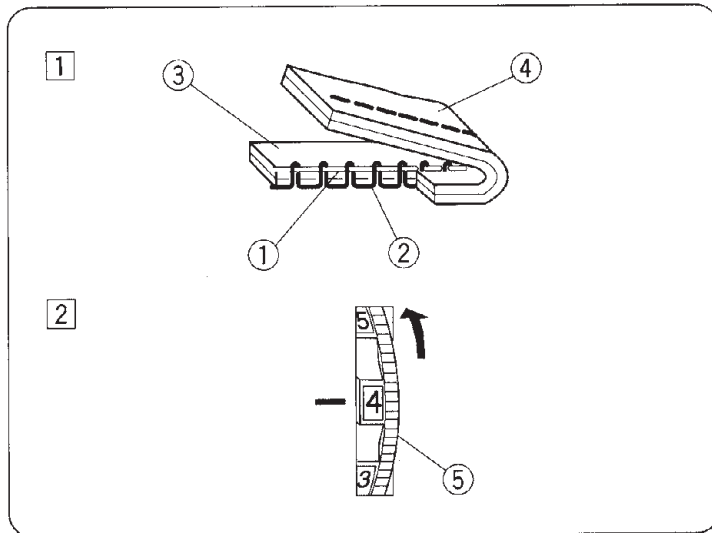
If you look at the top and bottom of the seam, you will notice that there are no gaps, that each stitch is smooth and even.

When adjusting the top thread tension, the higher the number, the tighter the top thread.

Results depend on;

- \* stiffness and thickness of the fabric
- \* number of fabric layers
- \* type of stitch

- ① Needle thread (Top thread)
- ② Bobbin thread (Bottom thread)
- ③ Right side of fabric
- ④ Wrong side of fabric

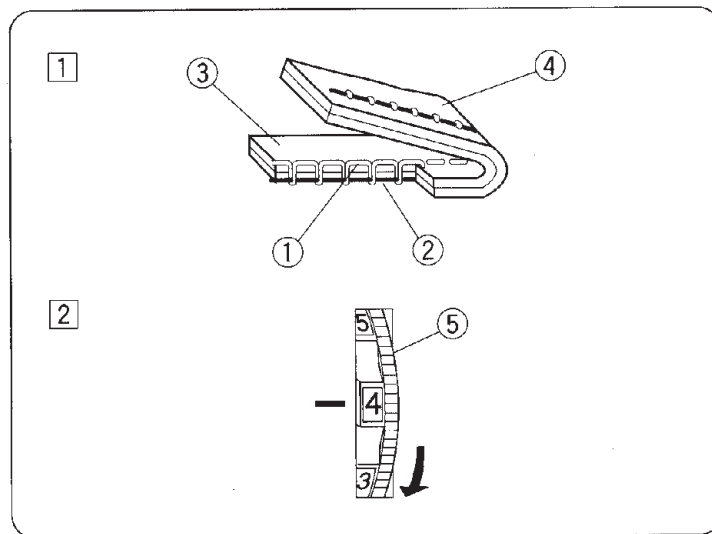


### • Tension is too tight

- ① The bobbin thread shows through on the right side of the fabric and it will feel bumpy.

- ② Turn the thread tension dial upwards (to a smaller number) to loosen the top thread tension.

- ⑤ Thread tension dial



### • Tension is too loose

- ① The top thread shows through on the wrong side of the fabric and it will feel bumpy.

- ② Turn the thread tension dial downwards (to a larger number) to tighten the top thread tension.

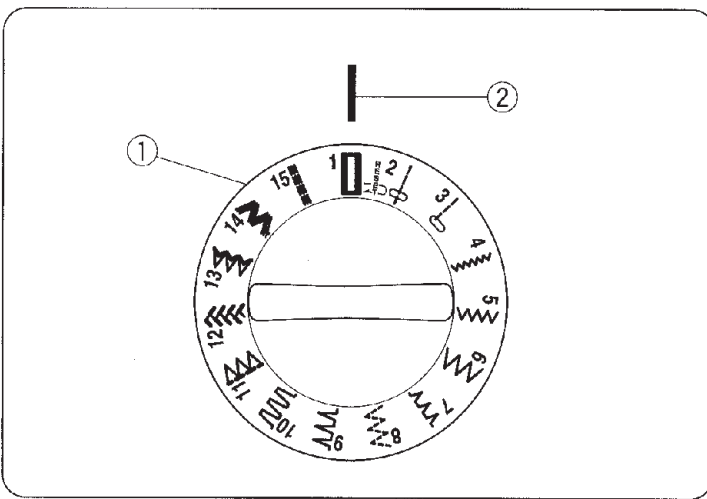


## Pattern Selector Dial

Turn the pattern selector dial to select a stitch pattern. Set the desired pattern to the indication mark.

**NOTE:** Raise the needle above the fabric and presser foot when you turn the pattern selector dial.

- ① Pattern selector dial
- ② Indication mark

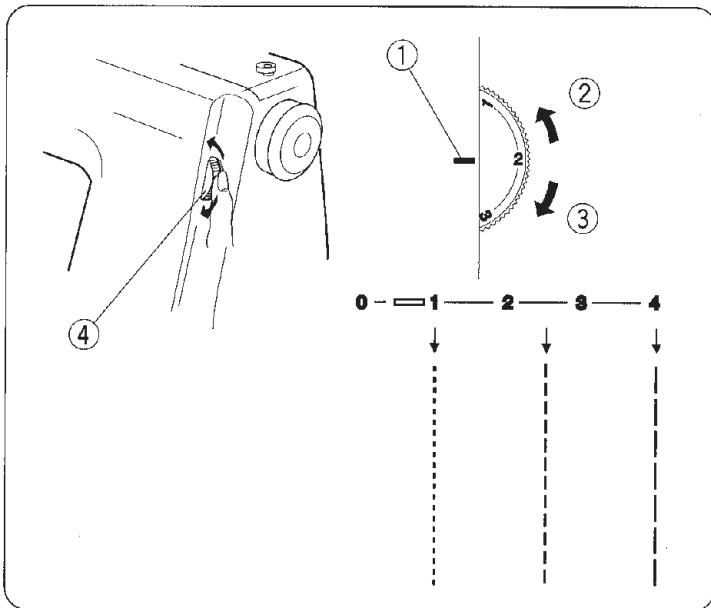


## Stitch Length Dial

The higher the number, the longer the stitch length. You can select the suitable stitch length for fabrics that you plan to sew.

**NOTE:** Stitch length is automatically set for stretch stitch patterns (pattern numbers 11 to 15).

- ① Indication mark
- ② To lengthen stitch length
- ③ To shorten stitch length
- ④ Stitch length dial



## Adjusting Stretch Stitch Balance

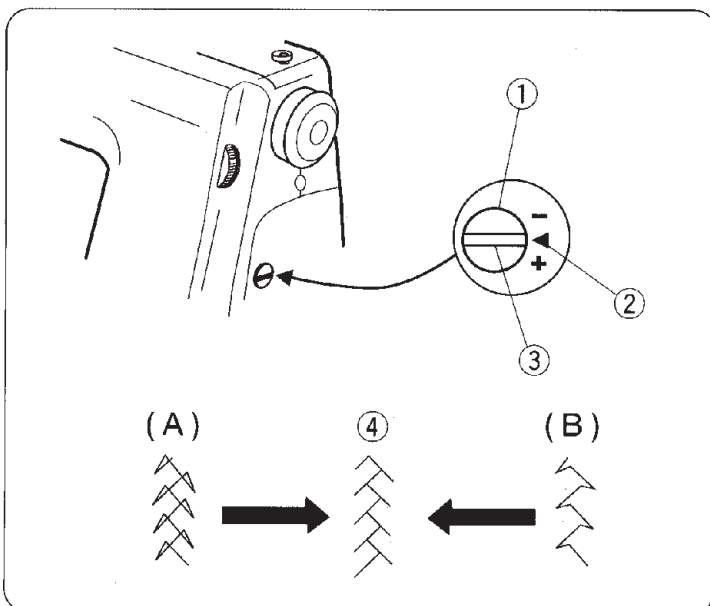
If stretch stitch patterns are uneven when sewn on a particular fabric, adjust them with the feed balancing dial.

- ① Feed balancing dial
- ② Standard setting mark
- ③ Indication line
- ④ Example: Pattern #12, correct setting

### • To adjust distorted patterns

(A) If patterns are compressed, correct by turning the dial in the direction of “+”.

(B) If patterns are drawn out, correct by turning the dial in the direction of “-”.



## SECTION III BASIC SEWING

### Straight Stitch Sewing

#### • Machine setting

- ① Stitch selector: 2 or 3
- ② Presser foot: Zigzag foot A
- ③ Thread tension dial: 2 – 6
- ④ Stitch length dial: 1.5 – 4

#### • Starting to sew

Raise the presser foot and position the fabric next to a stitching guide line on the needle plate.

Lower the needle into the fabric.

Lower the presser foot and smooth the threads toward the back.

Depress the foot control.

To fasten the beginning of the seam, press the reverse stitch lever and sew several reverse stitches.

Gently guide the fabric along the guide line letting the fabric feed naturally.

- ⑤ Reverse stitch lever

#### • Changing sewing direction

Stop the machine and turn the handwheel towards you to bring the needle down into the fabric.

Raise the presser foot.

Pivot the fabric around the needle to change sewing direction as desired. Lower the presser foot and continue sewing.

- ⑥ Presser foot lifter

#### • Finishing sewing

① To fasten the end of the seam, press the reverse stitch lever and sew several reverse stitches.

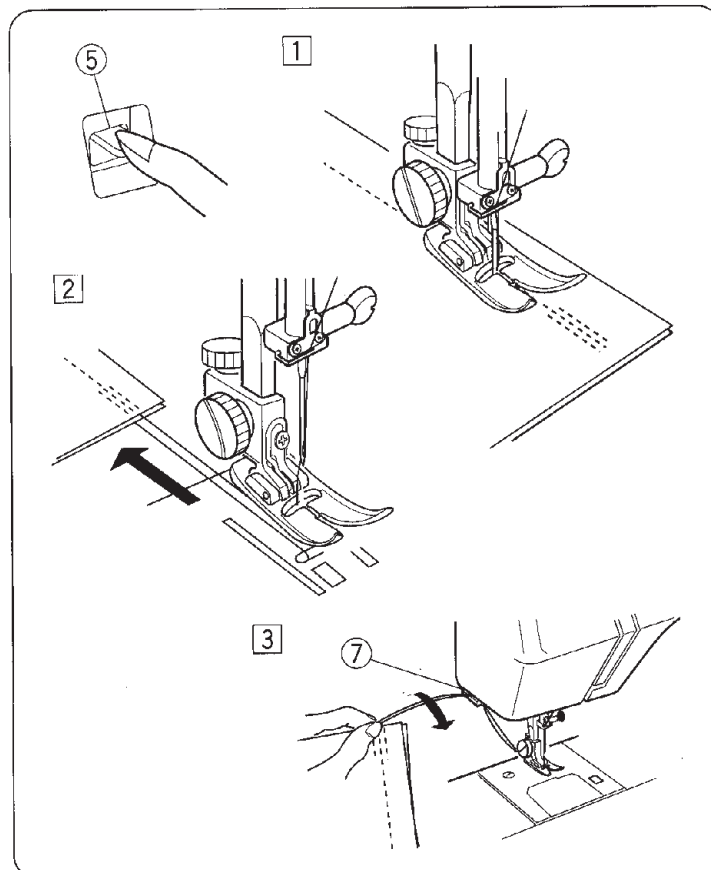
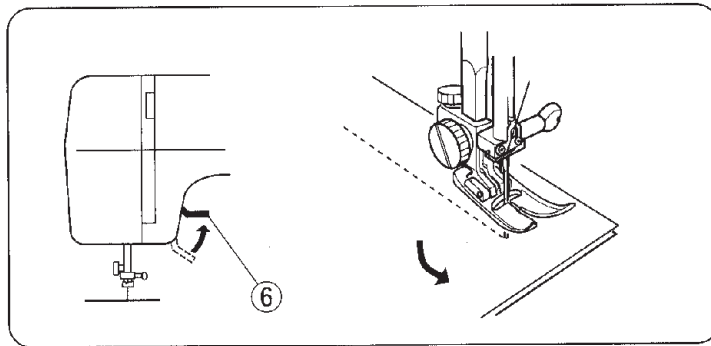
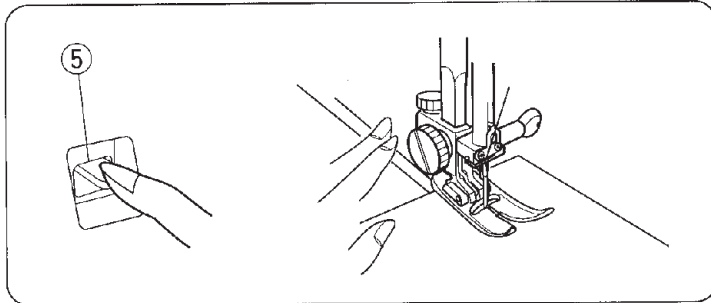
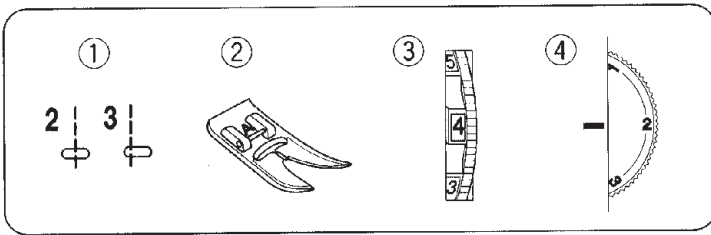
- ⑤ Reverse stitch lever

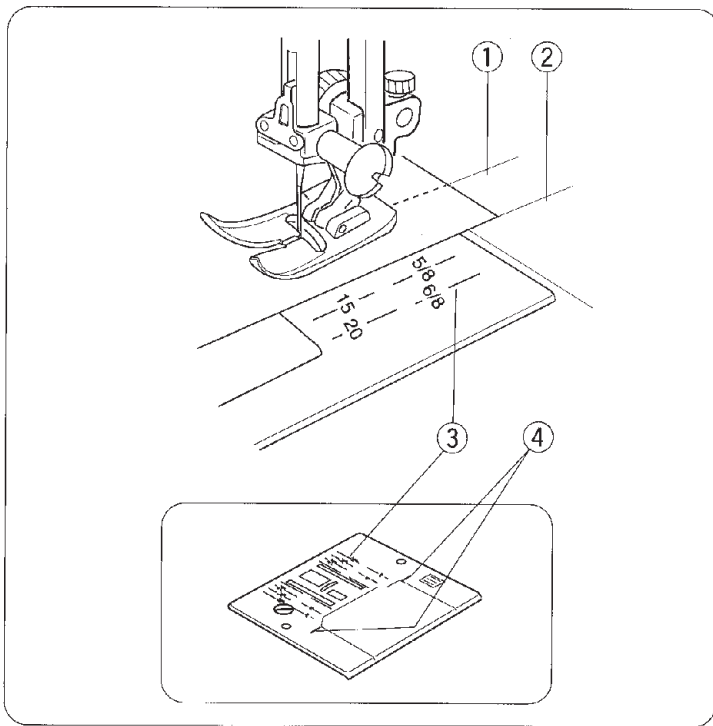
② Raise the presser foot. Remove the fabric, draw the threads to the back.

③ Cut both threads using the thread cutter.

\* The threads are cut the proper length for starting the next seam.

- ⑦ Thread cutter





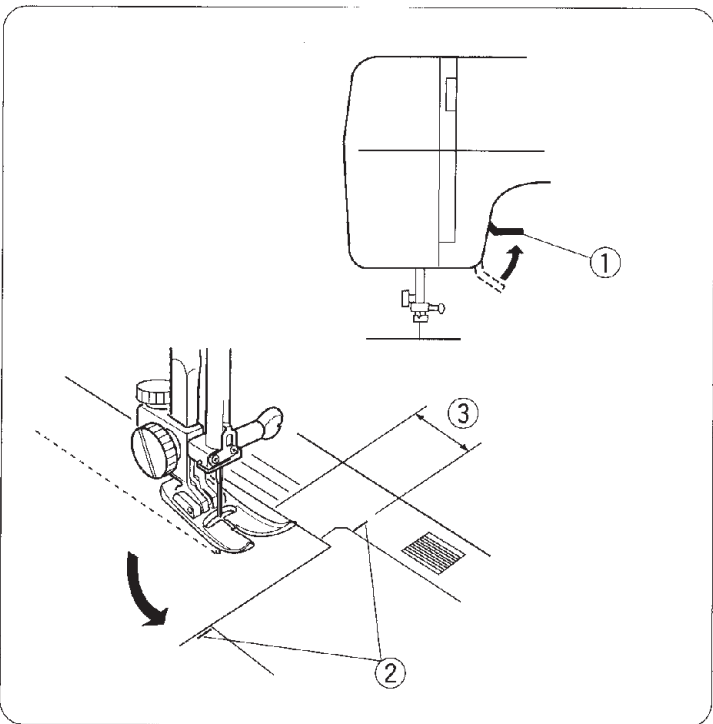
## Using the Seam Guides on the Needle Plate

The seam guides on the needle plate and hook cover plate help you measure seam width.

\* The numbers indicate the distance between the center needle position and the guide line.

Numbers on needle plate	15	20	4/8"	5/8"	6/8"
Distance in centimeters	1.5	2.0	1.3	1.6	1.9

- ① Center needle position
- ② Edge of fabric
- ③ Needle plate guide lines
- ④ Cornering guide



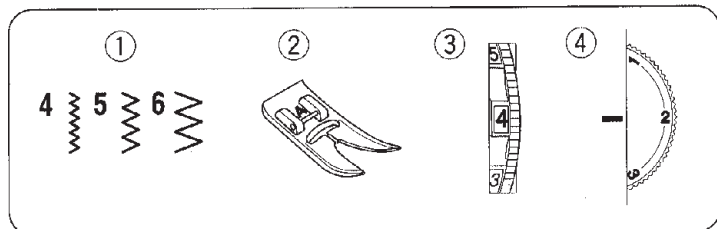
## Turning Square Corners

To turn a square corner 1.6 cm (5/8") from the fabric edge.

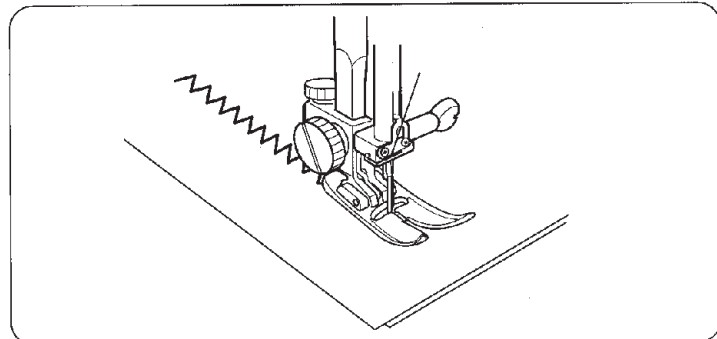
- 1 When the fabric edge facing you lines up with the cornering guide as illustrated, stop stitching and lower the needle by turning the handwheel towards you.
  - 2 Raise the presser foot and turn the fabric to line the edge with the 1.6 cm (5/8") seam guide.
  - 3 Lower the presser foot and begin stitching in the new direction.
- ① Presser foot lifter
  - ② Cornering guides
  - ③ 1.6 cm (5/8")

## SECTION IV UTILITY STITCHES

### Zigzag Stitching

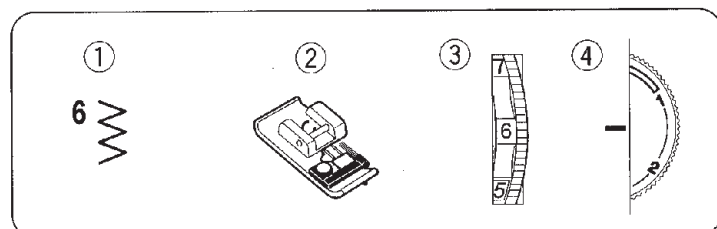


- ① Stitch selector: 4, 5 or 6
- ② Presser foot: Zigzag foot A
- ③ Thread tension dial: 2 – 5
- ④ Stitch length dial: 0.5 – 4



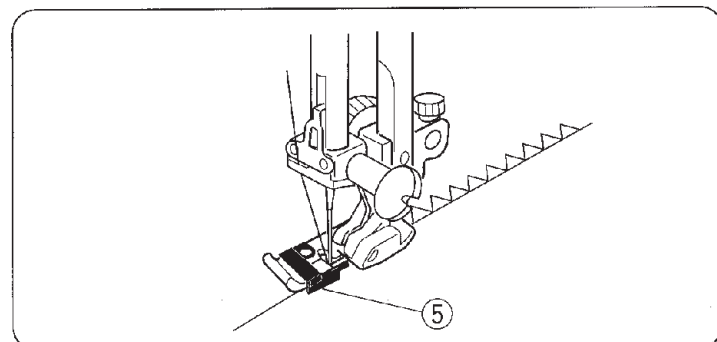
The zigzag stitch is one of the most versatile stitches on your machine. It can be a utility stitch for sewing on buttons, buttonholing, hemming, overcasting, mending and darning.

It can also be used to decorate with trims, appliques and cut-out work or as a decorative stitch.



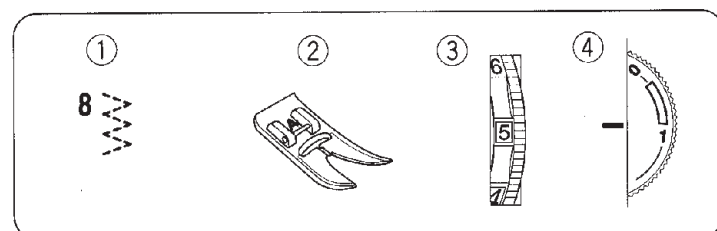
### Overcasting

- ① Stitch selector: 6
- ② Presser foot: Overedge foot C
- ③ Thread tension dial: 4 – 7
- ④ Stitch length dial: 1 – 2



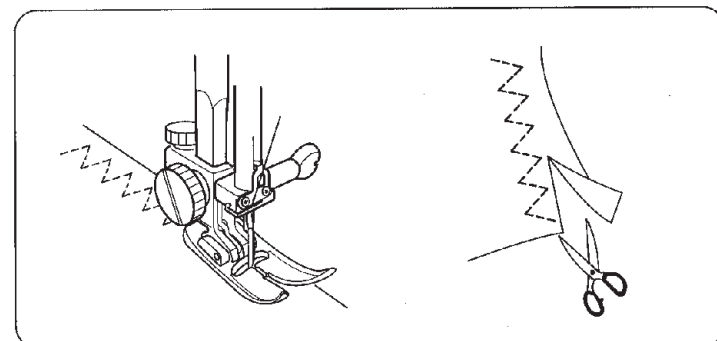
This type of stitch is used on the seam allowance to prevent fabrics from fraying at raw edges. It can be used to finish a hem edge. Place the edge of the fabric next to the black ridge of foot C.

- ⑤ Guiding ridge



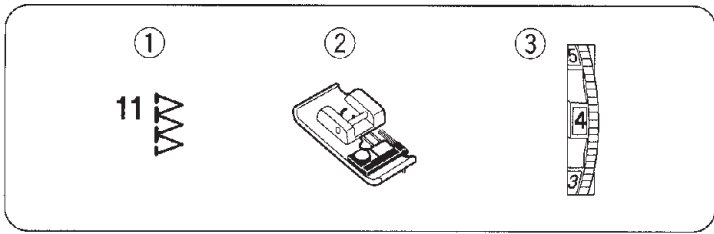
### Tricot Stitch

- ① Stitch selector: 8
- ② Presser foot: Zigzag foot A
- ③ Thread tension dial: 4 – 6
- ④ Stitch length dial: 0.5 – 1.5



This stitch is used to finish the seam allowance on synthetics and other fabrics that tend to pucker. The stitch is excellent for darning and mending tears. Place your fabric to allow a 1.6 cm (5/8") seam. Trim the extra seam allowance edge after sewing as illustrated.

**NOTE:** Be careful not to cut the stitches.



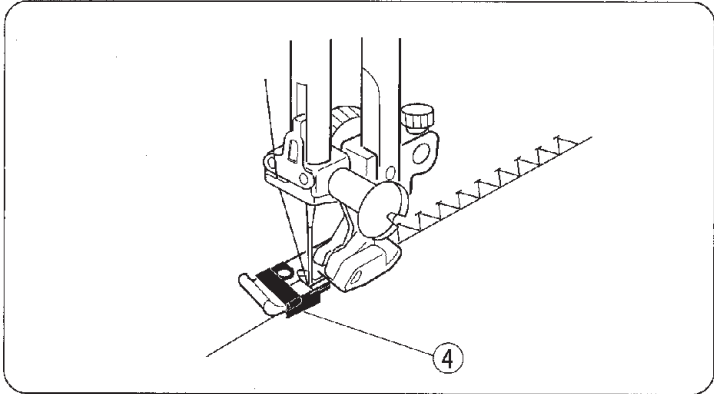
## Overedge Sewing

- ① Stitch selector: 11
- ② Presser foot: Overedge foot C
- ③ Thread tension dial: 3 – 7

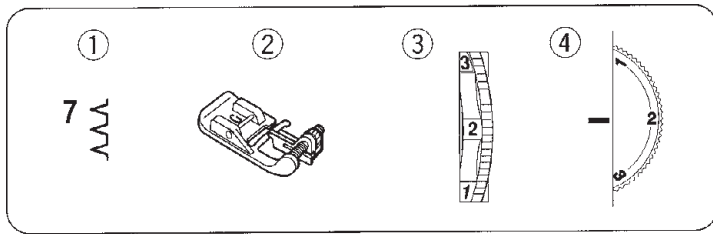
\* It is not necessary to adjust the stitch length on stitch pattern 11.

Place the edge of the fabric next to the black ridge on the foot.

The wires on this foot prevent light weight fabric from rolling and puckering. The black ridge guides your sewing so the needle falls off the fabric wrapping the threads around the edge to stop raveling.



- ④ Guiding ridge



## Blind Stitch Hemming

- ① Stitch selector: 7
- ② Presser foot: Blind stitch hem foot G
- ③ Thread tension dial: 1 – 4
- ④ Stitch length dial: 1 – 3

### • How to fold the fabric

① On heavy weight fabrics that ravel, the raw edge should be overcast first. Then fold the hem as illustrated.

- ① Light weight fabric
- ② Heavy weight fabric
- ③ 0.4 – 0.6 cm (5/32" – 1/4")
- ④ Overcast raw edge
- ⑤ Wrong side of fabric

### • How to sew

② Position the fabric on the machine so that the needle just pierces the folded part of the fabric when the needle comes over to the extreme left side. Lower the presser foot.

- ⑥ When the needle comes to left side
- ⑦ When the needle comes to right side
- ⑧ Folded edge

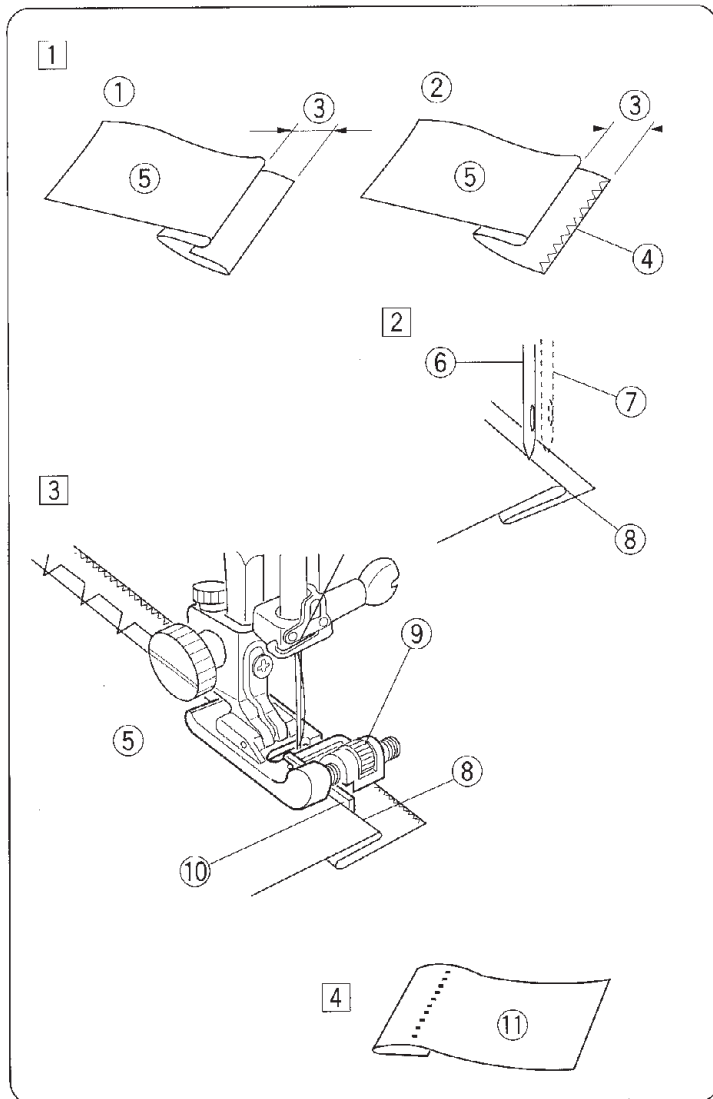
③ Sew, guiding the folded edge along the sliding guide.

**NOTE:** For a professional looking hem, fold the fabric reducing the width to about 0.3 cm (1/8"). As you sew, the right hand stitch will fall off the fabric edge forming a chain stitch.

- ⑤ Wrong side of fabric
- ⑧ Folded edge
- ⑨ Guide screw
- ⑩ Sliding guide

④ If the needle drops on the left side too far, the stitches appear on the right side of the fabric.

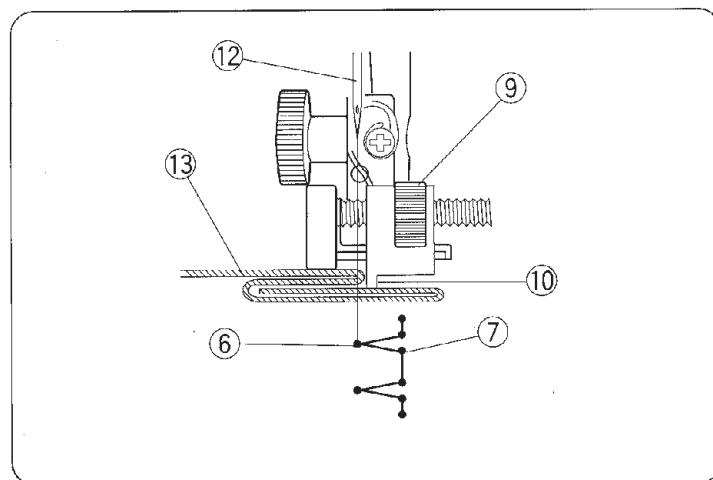
- ⑪ Right side of fabric



### • Adjusting the blind stitch hem foot fabric guide

Turn the guide screw so that the sliding guide ridge is very close 0.1 cm (1/16") to the left side of the blind stitch hem foot.

- ⑥ When the needle comes to left side
- ⑦ When the needle comes to right side
- ⑨ Guide screw
- ⑩ Sliding guide
- ⑫ Needle
- ⑬ Fabric

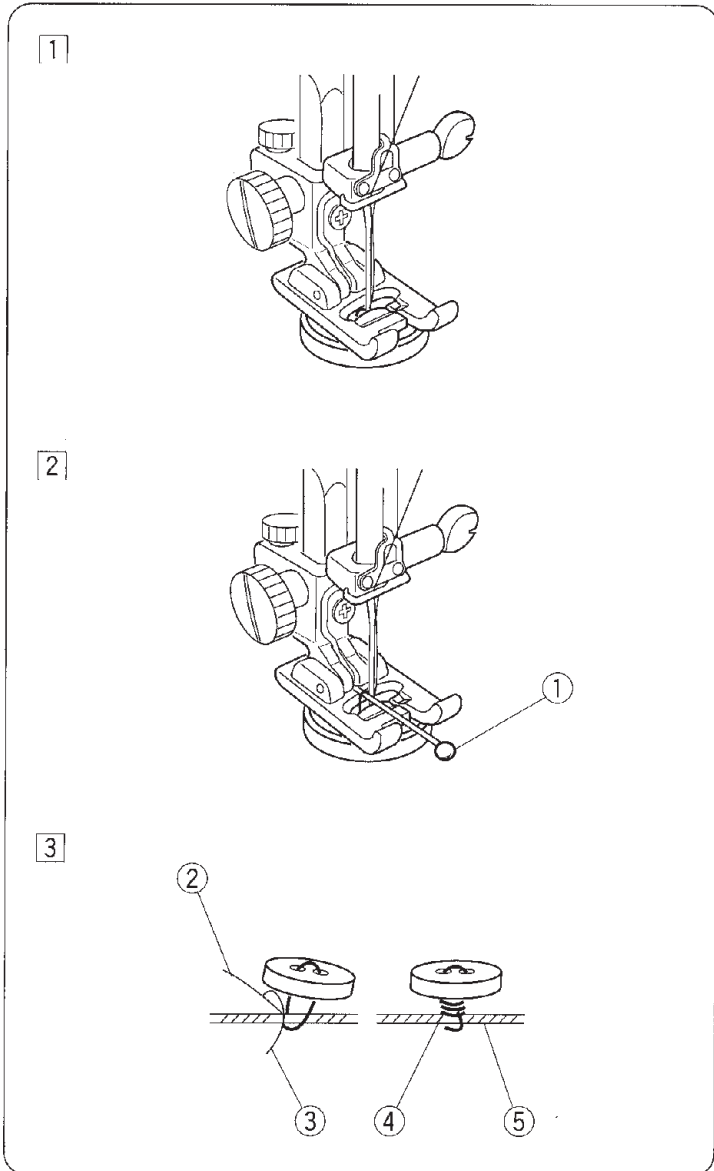
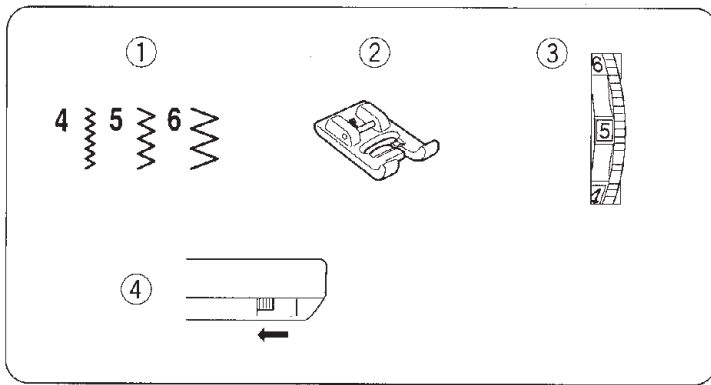




## Sewing Buttons

- ① Stitch selector: 4, 5 or 6
- ② Presser foot: Satin stitch foot F
- ③ Thread tension dial: 3 – 7
- ④ Feed dogs: Down

\* It is not necessary to adjust the stitch length.



① Lower the feed dogs. Tape the button over the placement mark. Turn the handwheel by hand and select the stitch pattern (4, 5 or 6) to test the needle swing making sure the needle drops in the left hole of the button and the right hole of the button. Lower the presser foot to hold the button in place.

② Place a pin on top of the foot to form a shank and stitch ten times. After you finish sewing, cut the thread but leave approximately 20 cm (8") of both the needle and bobbin thread loose.

① Pin

③ Pull the needle thread down through the hole in the button (so it is between the button and fabric). Now, pull the needle thread firmly to draw the bobbin thread up through the fabric. Wind one thread clockwise around the shank, the other counterclockwise.

Finally, tie the 2 threads together.

② Upper thread

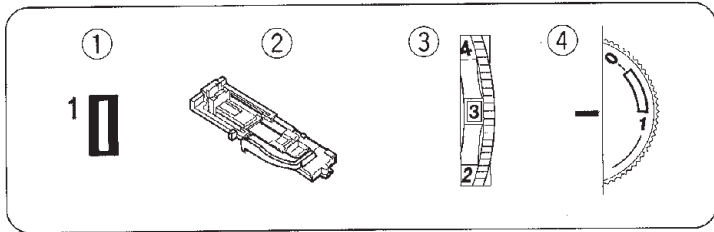
③ Lower thread

④ Shank

⑤ Fabric


### Note:

- \* When sewing on the button is completed, raise the feed dogs.
- \* The feed dogs must always be up for normal sewing.



## Automatic Buttonhole

### • Sewing preparation

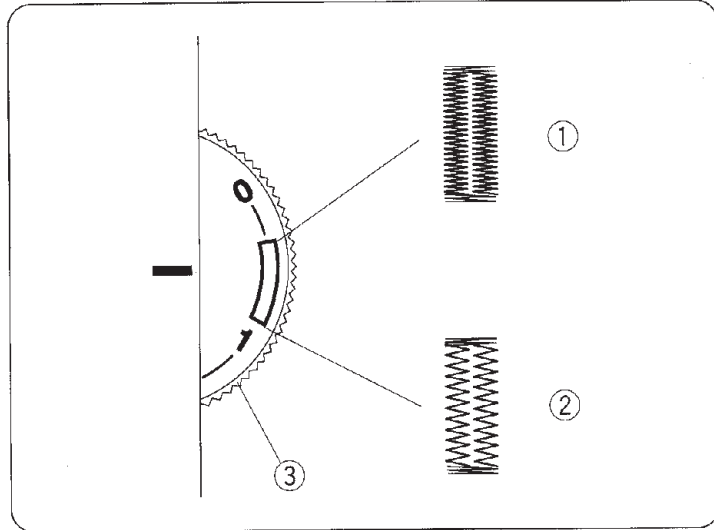
- ① Stitch selector: 1
- ② Presser foot: Automatic buttonhole foot R
- ③ Thread tension dial: 1 – 5
- ④ Stitch length dial: 0.3 – 1 (  )

- \* The size of buttonhole is automatically set by placing the button in the automatic buttonhole foot R.
- \* The button holder of the foot takes a maximum button size of up to 2.5 cm (1") in diameter.
- \* Before you sew the actual buttonholes on the actual garment, make several practice buttonholes on a fabric sample duplicating the interfacing and seams of the actual garment.
- \* Use interfacing on stretch fabrics.

### • Adjusting buttonhole stitch density

Set the stitch length dial between 0.3 and 1.0 to adjust the buttonhole stitch density.

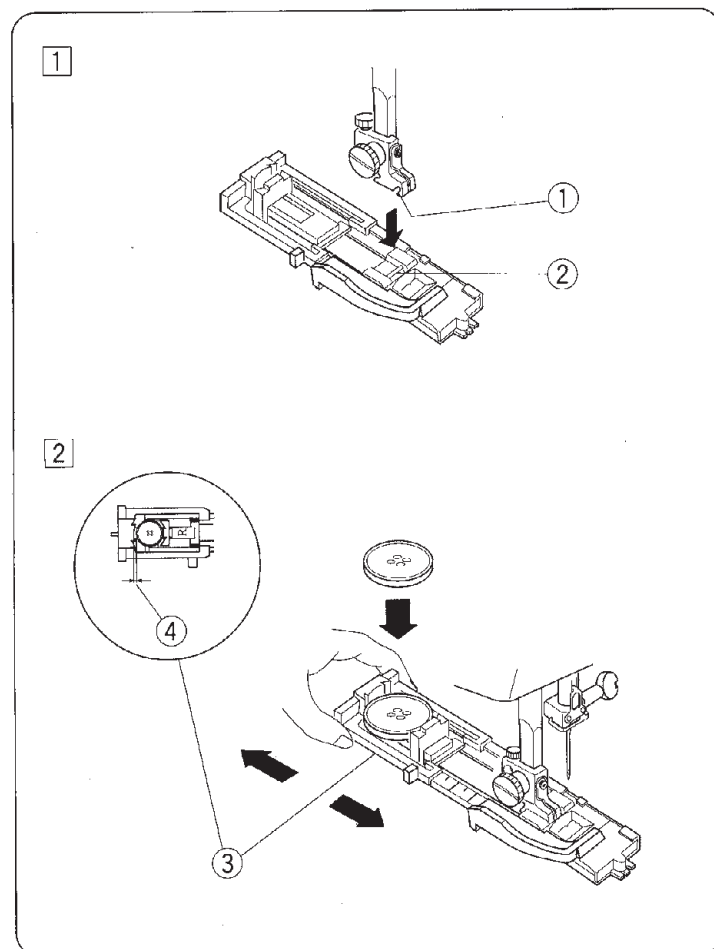
- ① Denser stitch
- ② Coarser stitch
- ③ Stitch length dial



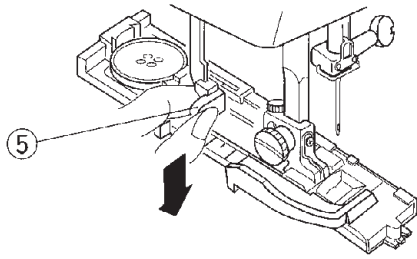
### • Automatic buttonhole sewing steps 1 - 7

- ① Attach the automatic buttonhole foot R. Make sure the groove on the holder catches the pin on the foot when lowering the presser foot.
  - ① Groove
  - ② Pin
- ② Pull the button holder to the back, and place the button in it. Push it together tightly on the button.
  - ③ Button holder
  - ④ Gap

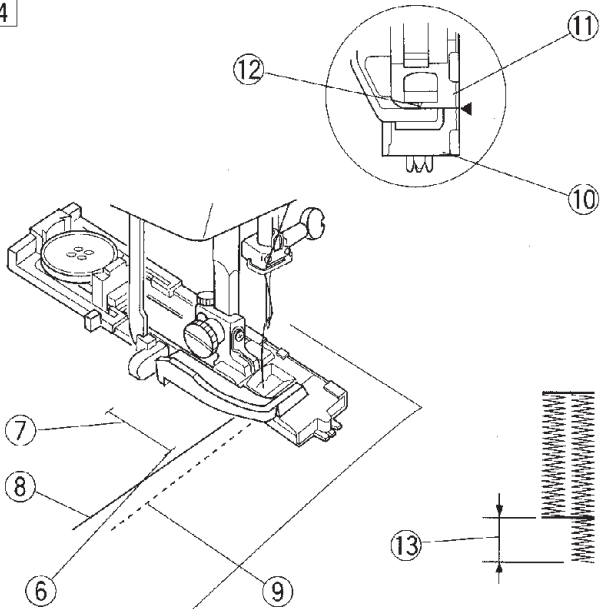
**Note:** If the button is extremely thick, make a test buttonhole. If it is difficult to fit the button through the test buttonhole, lengthen the size by pulling back the button holder which will increase the buttonhole length.



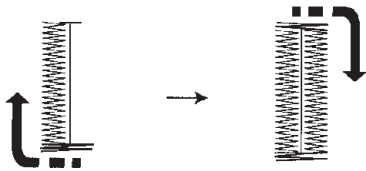
3



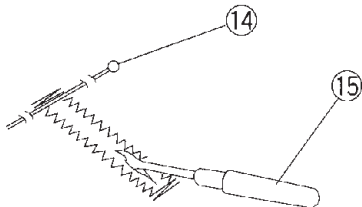
4



5



6



3 Pull the buttonhole lever down as far as it will go.

5 Buttonhole lever

4 Draw both threads to the left under the foot.

Insert the garment under the foot, and lower the needle at the starting point. Then lower the automatic buttonhole foot.

\* Make sure there is no gap 12 between the slider 11 and the spring holder 10. If there is a gap, the length of the rows will be different, as shown in 13.

6 Starting point

7 Mark for placement of buttonhole

8 Top thread

9 Bobbin thread

10 Spring holder

11 Slider

12 There should be no gap.

13 Difference

5 Sew slowly and stop the machine at the starting point when a buttonhole is completed.

\* Sewing steps:

Step 1 – First, the front bartack and left row will be sewn.

Step 2 – Next, the back bartack and right row will be sewn.

6 Cut both needle and bobbin threads leaving approximately 10 cm (4") of thread ends loose.

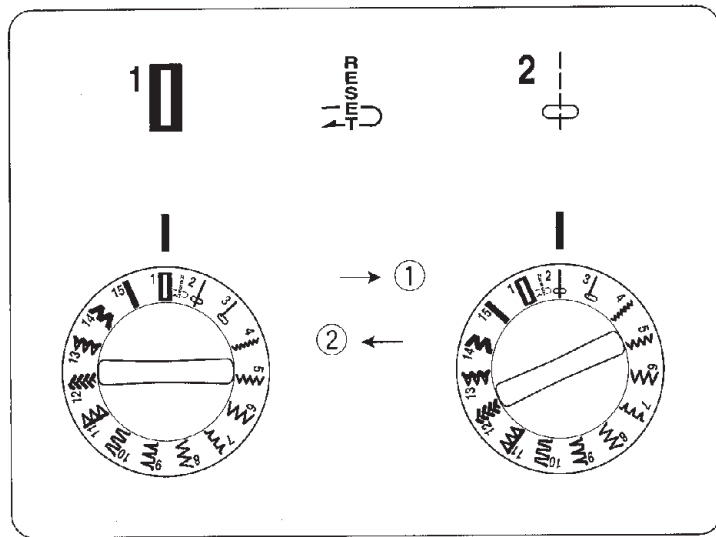
Draw the needle thread to the wrong side of the fabric by pulling the bobbin thread.

Then, knot the threads.

Place a pin on the rear side of the bartack position so that you don't need to worry about cutting the end of the buttonhole stitch. Then cut the opening with your seam ripper.

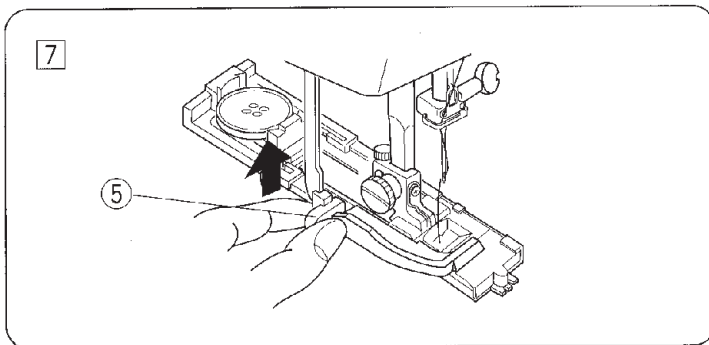
14 Pin

15 Seam ripper



• **Continuing buttonhole sewing**


To reset the buttonhole sewing function, select a different stitch pattern with the pattern selector dial ①, then return the pattern selector dial ② to the buttonhole selection.



7 When finished, push the buttonhole lever up as far as it will go.

5 Buttonhole lever

## Corded Buttonholes

- ① Stitch selector: 1
- ② Presser foot: Automatic buttonhole foot R
- ③ Thread tension dial: 1 – 5
- ④ Stitch length dial: 0.3 – 1 (  )

1 Use the same procedures as listed in automatic buttonhole sewing steps.

- ① Cord
- ② Spur
- ③ Buttonhole foot front forks

\* With the buttonhole foot raised, hook the filler cord on the spur at the back of the buttonhole foot.

Bring the ends toward you under the buttonhole foot, clearing the front end.

Hook the filler cord into the forks on the front of automatic buttonhole foot R to hold them tight.

Lower the needle into the garment where the buttonhole will start and lower the foot.

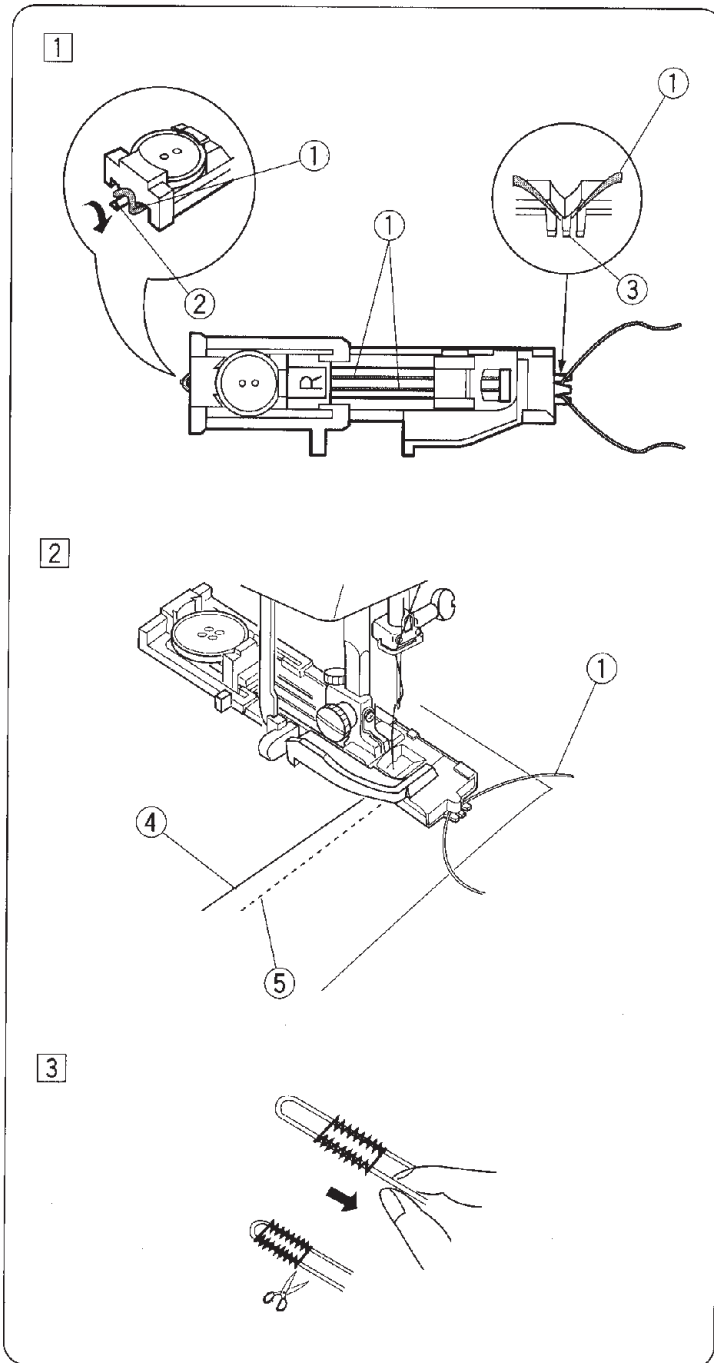
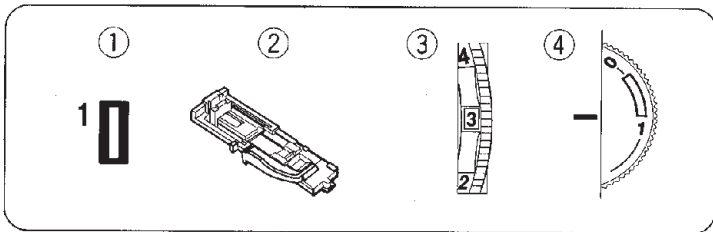
Sew the buttonhole according to the buttonhole sewing instructions on pages 20 and 21.

2 Depress the foot control gently and sew the buttonhole. Each side of the buttonhole and the bartacks will be sewn over the cord. Remove the fabric from the machine and cut the sewing threads only.

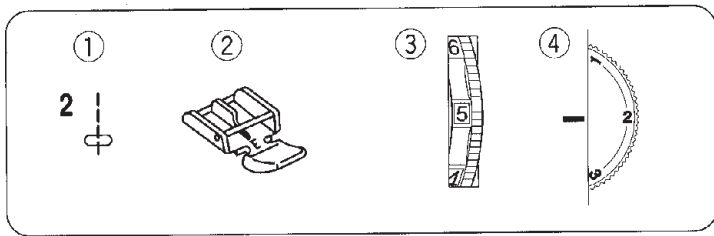
- ④ Needle thread
- ⑤ Bobbin thread

3 Pull the left end of the filler cord to tighten it. Thread the end of the cord through a darning needle, draw to the wrong side of the fabric and cut.

\* To cut the buttonhole opening, refer to the instructions on page 21.

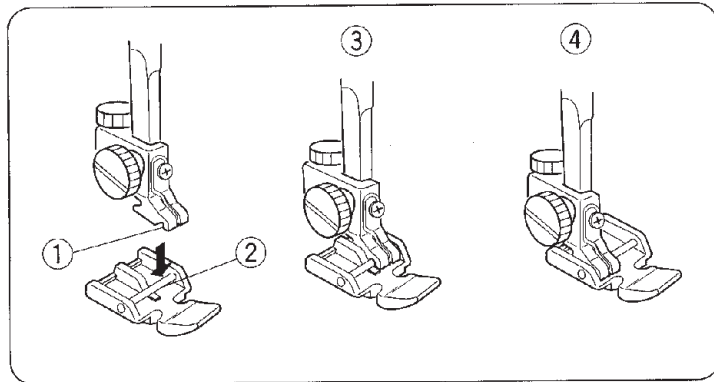


## Zipper Sewing



- ① Stitch selector: 2
- ② Presser foot: Zipper foot E
- ③ Thread tension dial: 4 – 6
- ④ Stitch length dial: 1.5 – 4

### • Attaching the zipper foot



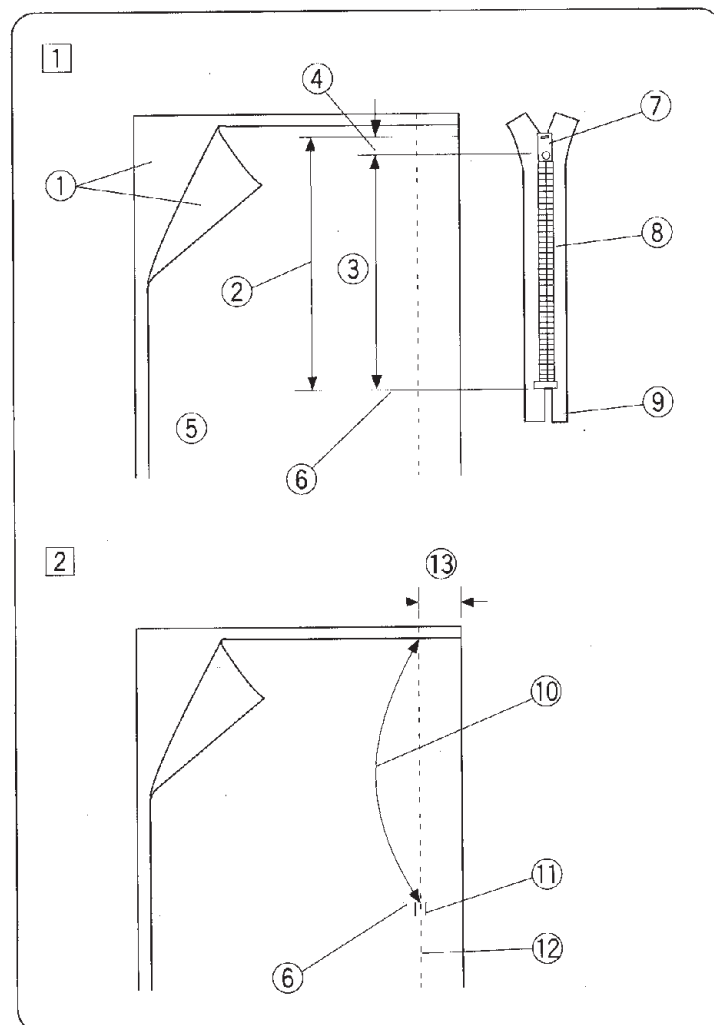
Fit the pin on the zipper foot into the groove on the foot holder.

\* To sew the left side of the zipper, attach the zipper foot on the right-hand side.

\* To sew the right side of the zipper, attach the zipper foot on the left-hand side.

- ① Groove
- ② Pin
- ③ When the left side is sewn.
- ④ When the right side is sewn

### • Fabric preparation



① Add 1 cm (3/8") to the zipper size. This is the overall opening size.

- ① Right side of fabric
- ② Opening size
- ③ Zipper size
- ④ 1 cm (3/8")
- ⑤ Wrong side of fabric
- ⑥ End of opening
- ⑦ Slider
- ⑧ Zipper teeth
- ⑨ Zipper tape

② Place right sides of fabric together and sew to the end of the zipper opening. Reverse stitch to lock the stitches.

Manually increase the stitch length to 4 and sew the zipper opening.

- ⑩ Basting stitch (stitch length 4)
- ⑪ Reverse stitch
- ⑫ Straight stitch
- ⑬ 2 cm (3/4")



• **How to sew**

1 Fold back the left seam allowance. Turn under the right seam allowance to form a 0.2 to 0.3 cm (1/8") fold. Place the zipper teeth next to this fold and pin in place.

- ① Folded edge
- ② 0.3 cm (1/8")
- ③ Stitch line
- ④ End of opening
- ⑤ Opening size
- ⑥ Lower fabric
- ⑦ Wrong side of fabric

2 Attach the foot holder to the right pin on the zipper foot.

Lower the zipper foot on the top side at the bottom of the zipper so that the needle pierces the fabric next to the fold and the zipper tape.

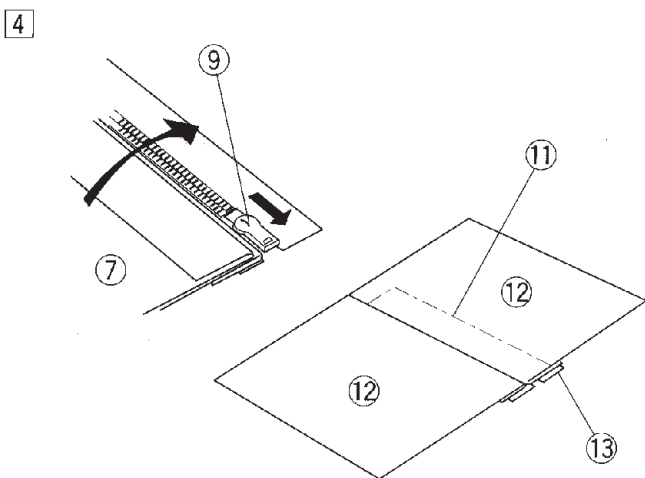
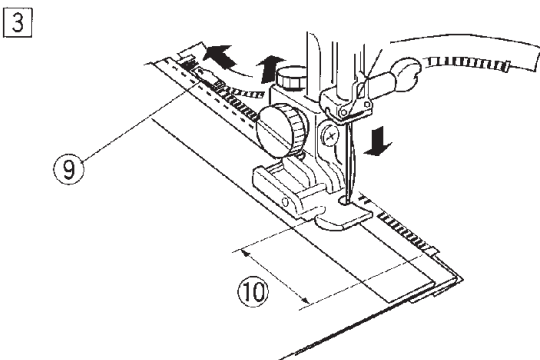
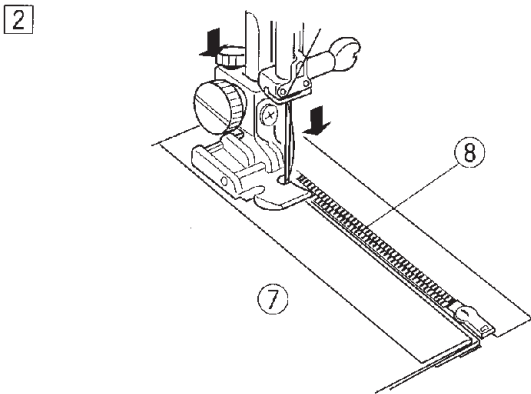
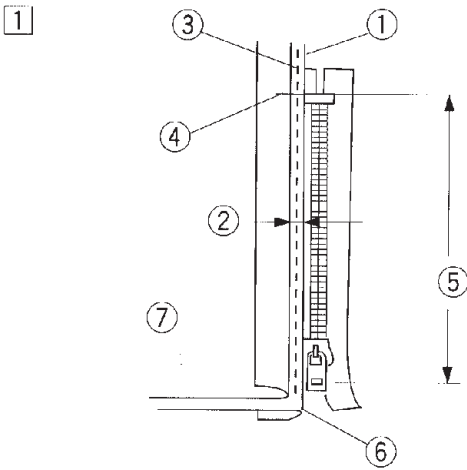
- ⑧ Zipper teeth

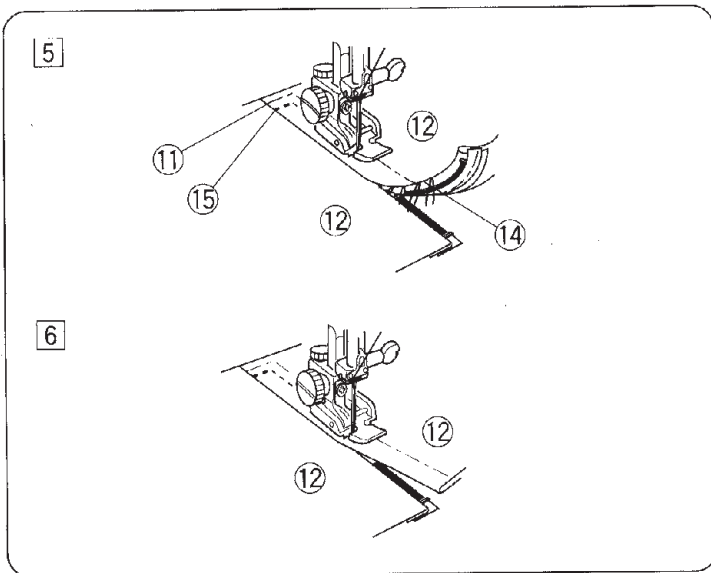
3 Sew through all layers next to the fold. Stop just before the zipper foot reaches the slider on the zipper tape. Lower the needle slightly into the fabric. Raise the zipper foot and open the zipper. Lower the foot and stitch the remainder of the seam.

- ⑨ Slider
- ⑩ 5 cm (2")

4 Close the zipper and spread the fabric flat with the right side facing up. Baste the opened fabric and zipper tape together.

- ⑪ Basting stitch
- ⑫ Right side of fabric
- ⑬ Zipper tape





- 5 Remove the zipper foot and reattach the foot holder to the left pin on the zipper foot. Guide the edge of the foot along the zipper teeth and stitch through the garment and zipper tape. Stop about 5 cm (2") from the top of the zipper.
- 11 Basting stitch
  - 12 Right side of fabric
- 6 Lower the needle slightly into the fabric, raise the foot, remove the basting stitches and open the zipper. Lower the foot and stitch the remainder of the seam, making sure the fold is even.
- 14 Remove the basting stitches.
  - 15 End of the stitch

## SECTION V DECORATIVE STITCHING

### Shell Tuck

The shell stitch is formed by sewing a blind hem over folded fabric.

Several rows of shell stitching are called shell tucks. Shell stitching can be used to finish hems, sleeve and neck openings.

Shell tucking can be used to create scalloped tucks on blouses and lingerie.

- ① Stitch selector: 9
- ② Presser foot: Satin stitch foot F
- ③ Thread tension dial: 3 – 9
- ④ Stitch length dial: 2 – 3

Use a lightweight fabric such as tricot.

Set the stitch length as you desire.

① Fold and stitch on the bias.

② When the needle swings to the right, allow the needle to just clear the folded edge of the fabric when it zigzags.

After stitching, open the fabric and iron to press the tucks flat to one side.

\* If thread tension is too loose, tuck will not be formed. Therefore, increase the tension and set it between 5 to 9.

\* If you sew rows of shell stitches, space the rows 1.6 cm (5/8") apart.

\* You can sew shell stitches on knits or soft silky wovens in any direction.

① Folded edge

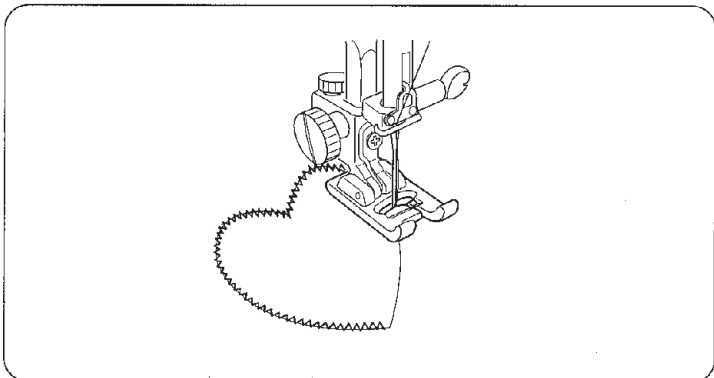
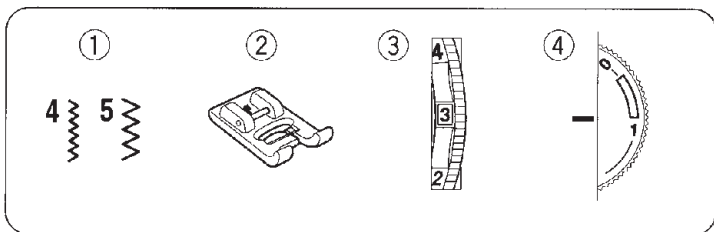
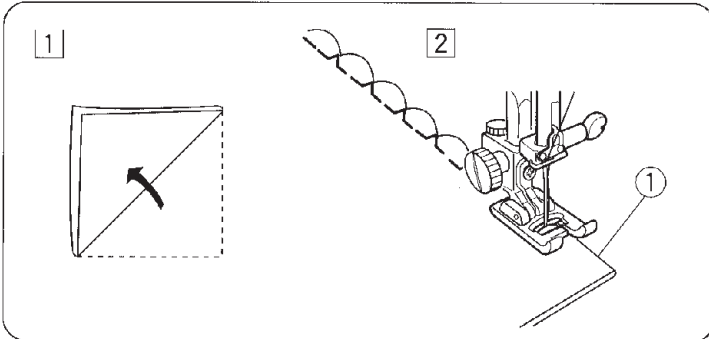
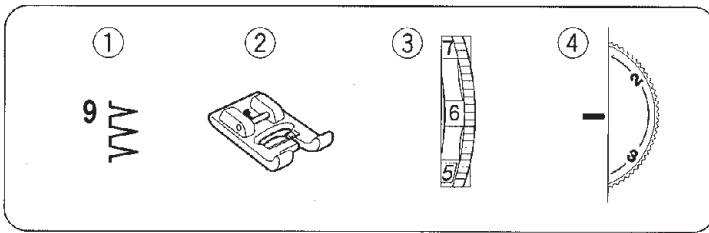
### Applique

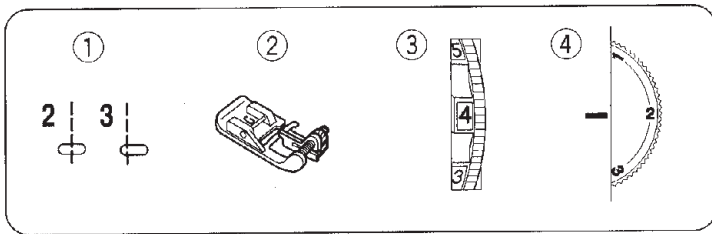
- ① Stitch selector: 4 or 5
- ② Presser foot: Satin stitch foot F
- ③ Thread tension dial: 1 – 4
- ④ Stitch length dial: 0.5 – 1

Applique, a technique for stitching fabric shapes onto another fabric, opens limitless design possibilities. Dimension and texture can be added by lightly stuffing all or part of a design. In this type of applique, raw edges are folded under. To finish the raw edge, cut the applique design out of cardboard. Fuse a lightweight interfacing (an iron-on fabric joiner) to the wrong side of the fabric then cut the fabric slightly larger than the cardboard.

Fold the fabric around the cardboard and press to form a perfectly shaped design. Remove the cardboard. Tape, or baste the applique pieces in place onto the fabric and sew, guiding the slit on foot F next to the finished edge of the applique making sure the needle falls along the outer edge of the applique.

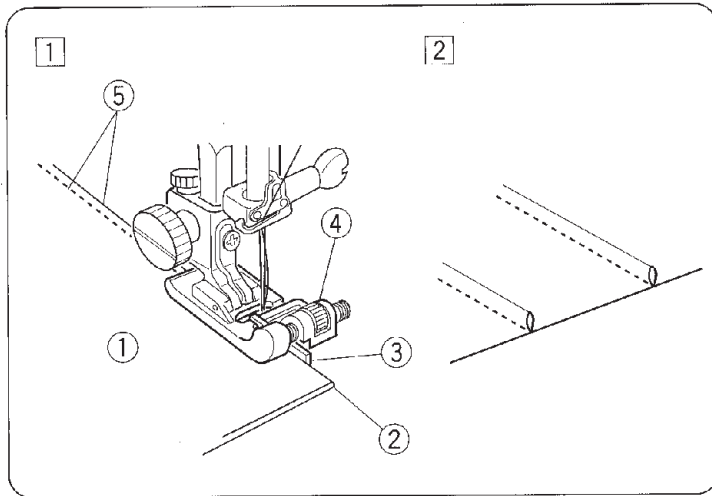
**NOTE:** When turning corners, lower the needle in the right needle position into the fabric, not into the applique. Raise the presser foot and pivot the fabric to the right or to the left.





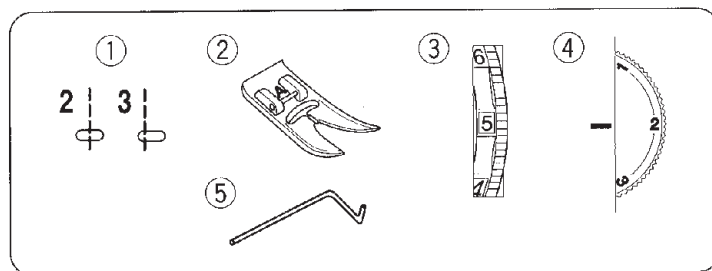
## Pintucking

- ① Stitch selector: 2 or 3
- ② Presser foot: Blind stitch hem foot G
- ③ Thread tension dial: 2 – 6
- ④ Stitch length dial: 1.5 – 3



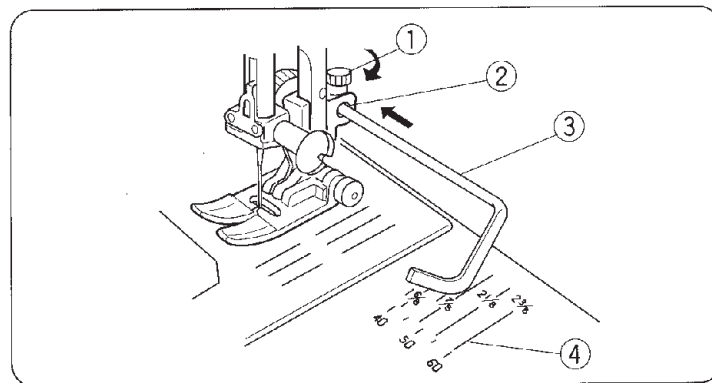
- 1 Fold the fabric with wrong sides together on the fold line.  
Position the fabric so that the needle pierces 0.1 to 0.2 cm (1/16") inside the folded part's edge and lower the presser foot.  
Turn the guide screw and move the sliding guide next to the folded edge.  
Sew guiding the folded edge along the sliding guide.

- 2 Press the pintucks to one side.
  - ① Right side of fabric
  - ② Folded edge
  - ③ Sliding guide
  - ④ Guide screw
  - ⑤ 0.1 – 0.2 cm (1/16")



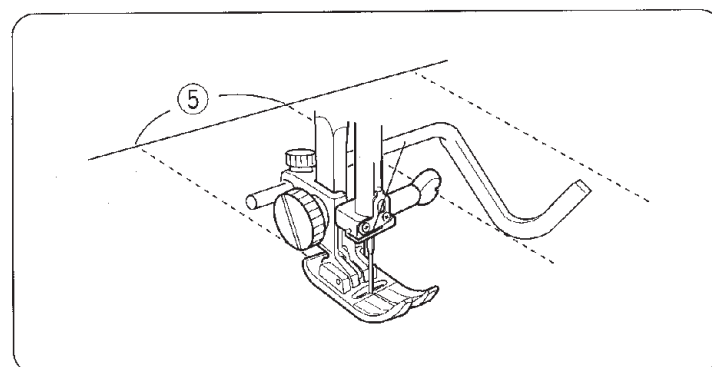
## Quilting

- ① Stitch selector: 2 or 3
- ② Presser foot: Zigzag foot A
- ③ Thread tension dial: 3 – 6
- ④ Stitch length dial: 1.5 – 4



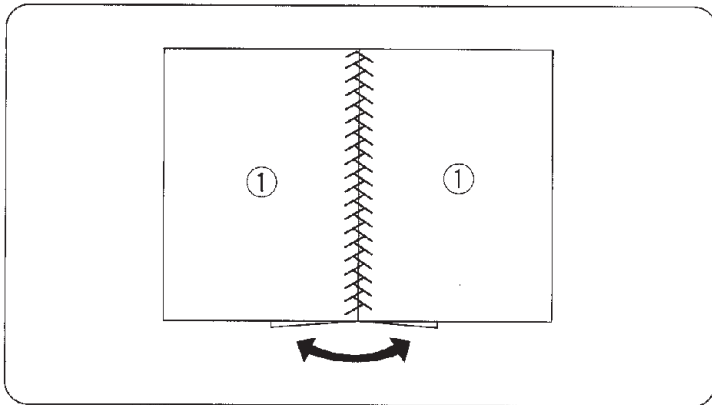
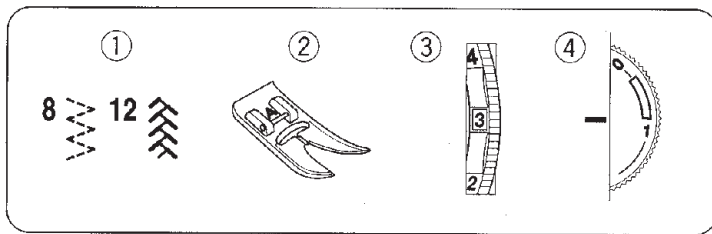
The quilting guide will help to keep the stitching lines straight. Loosen the set screw. Slide the quilting bar into the opening to the desired width and tighten the screw.

Quilting guide markings							
Markings on freearm	40	50	60	1 5/8	1 7/8	2 1/8	2 3/8
Distance in centimeters	4.0	5.0	6.0	4.1	4.8	5.4	6.0



Sew other rows, guiding the quilting bar over the previous row of stitching.

- ① Set screw
- ② Hole
- ③ Quilting bar
- ④ Quilting guide
- ⑤ Stitch interval



## Patch Work

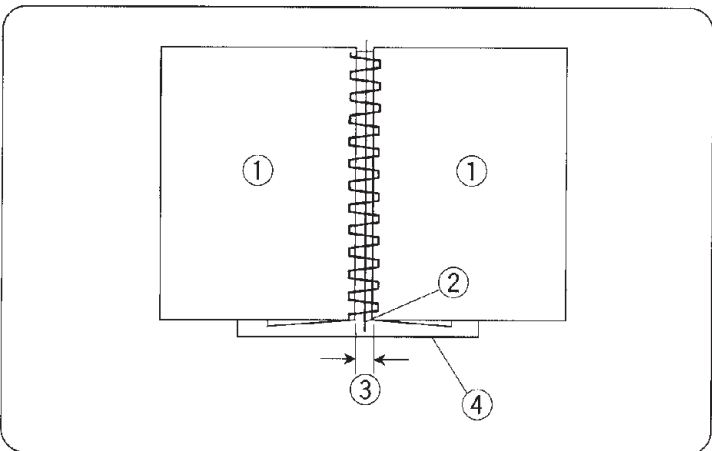
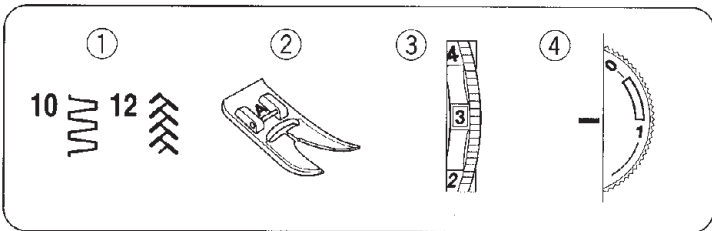
- ① Stitch selector: 8 or 12
- ② Presser foot: Zigzag foot A
- ③ Thread tension dial: 1 – 4
- ④ Stitch length dial: 0.5 – 1.5

\* It is not necessary to adjust the stitch length on stitch pattern 12.

Sew seam with straight stitch and press seam allowance open.

Sew pattern stitch on right side of garment centering over the seam line.

- ① Right side of fabric



## Fagoting

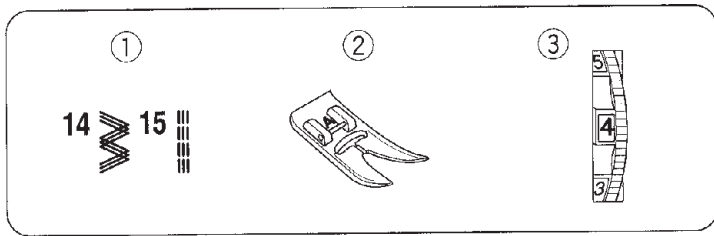
- ① Stitch selector: 10 or 12
- ② Presser foot: Zigzag foot A
- ③ Thread tension dial: 1 – 4
- ④ Stitch length dial: 0.5 – 1.5

Fold under 1.3 cm (1/2") on each fabric edge and press.

Pin the two edges to paper 0.3 cm (1/8") apart.

Sew slowly guiding the fabric so the needle catches the folded edge on each side.

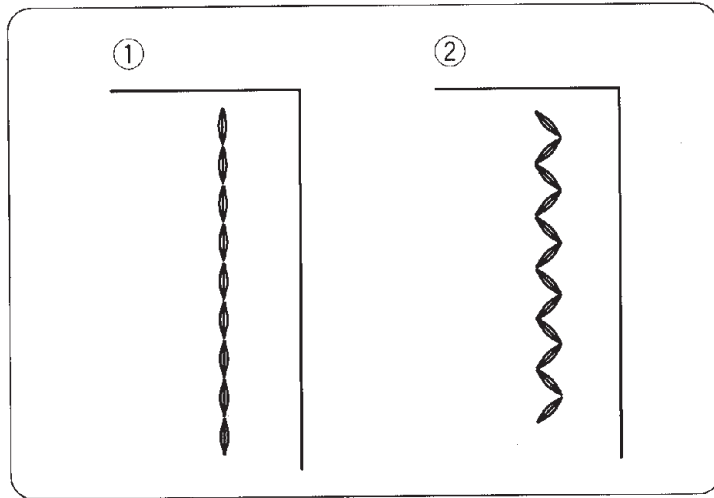
- ① Right side of fabric
- ② Center
- ③ 0.3 cm (1/8")
- ④ Paper



## Triple Strength Stitch

- ① Stitch selector: 14 or 15
- ② Presser foot: Zigzag foot A
- ③ Thread tension dial: 2 – 6

\* It is not necessary to adjust the stitch length.



These strong, durable stitches are recommended where both elasticity and strength are needed to insure comfort and durability.

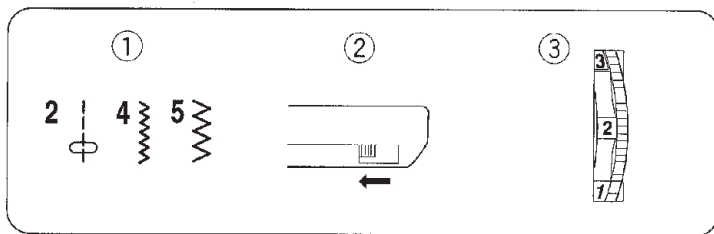
Use it to reinforce areas such as crotch and armhole seams.

Also use when constructing items such as backpacks for extra strength.

The stitch is sewn with two stitches forward and one stitch backward, forming a seam that does not rip easily.

Garments should be basted for fitting before seaming.

- ① Straight triple strength stitch
- ② Zigzag triple strength stitch  
(used as a decorative stitch)



## Embroidery

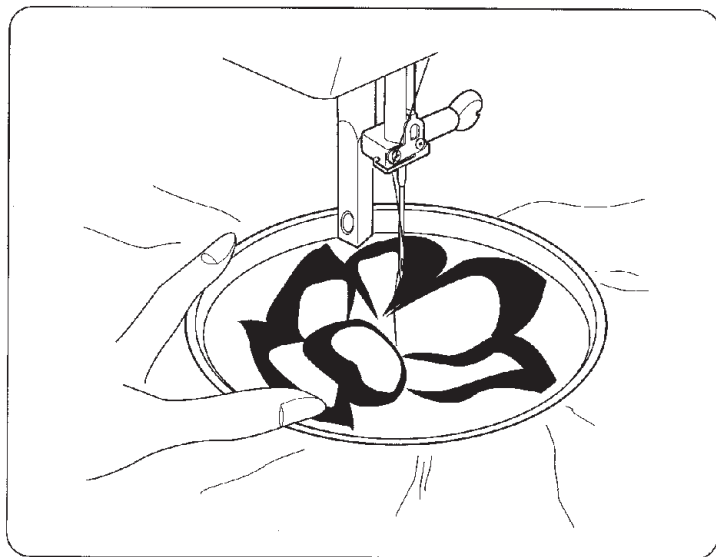
- ① Stitch selector: 2, 4 or 5
- ② Presser foot: Remove the presser foot and foot holder
- ③ Feed dogs: Down
- ④ Thread tension dial: 0 – 4

- \* It is not necessary to adjust the stitch length.
- \* Hoop is not included as a standard accessory.

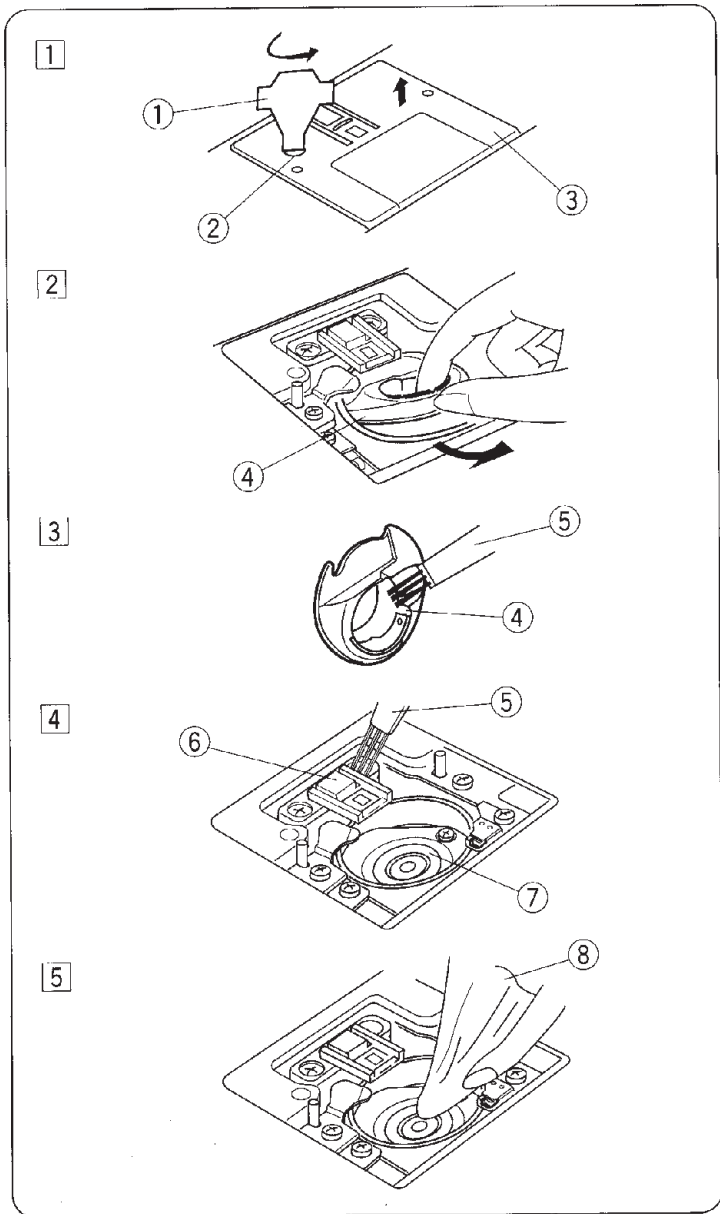
- 1 Draw your desired design on the fabric with a pencil, tailor's chalk or washable fabric marker. Stretch and set the fabric in an embroidery hoop.
- 2 While moving the embroidery hoop slowly with your left hand, follow the design on the fabric.
- 3 Stop sewing and rotate the pattern selector dial to change your stitch selection.

- \* Do not rotate the pattern selector dial while the machine is running or while the needle is in the material.
- \* When putting the embroidery hoop under the needle, raise the needle to its highest position and lift the presser bar lifter up further than its ordinarily raised position. While holding it in that position, slide the embroidery hoop under the needle.
- \* The presser bar lifter must be lowered when sewing.

- Note:** To prevent the fabric from puckering and to help reinforce light weight fabrics, a stabilizing material is used when embroidering. Stabilizer material is available in an adhesive iron-on-type (used for stretch fabrics, knits and thin or shrinkable fabrics) and also available in a non-adhesive type (used for firm fabrics and fabrics or sections which cannot be ironed). It should be attached to the wrong side of the fabric and more than one layer may be required.
- For both types, cut the stabilizer larger than the embroidery hoop and set it in the hoop so that the entire piece is fastened with the frame to prevent looseness of the fabric.
- \* Ironing temperature varies with different kinds of adhesive stabilizer.



## SECTION VI CARE OF YOUR MACHINE



### Caution:

Before performing any of the following, make sure that the sewing machine is unplugged from the power source.

- \* Turn the handwheel towards you to raise the needle before cleaning.
- \* Do not dismantle the machine other than explained on this page.
- \* Do not store the machine in a high-humidity area, near a heat radiator or in direct sunlight.
- \* Clean the outside of the machine with a soft cloth and neutral soap.

### Cleaning the Hook Race and Feed Dogs

- 1 Remove the presser foot and needle. Remove the screw on the left side of the needle plate with the screwdriver supplied with the machine. Remove the needle plate and take out the bobbin.
  - 2 Lift up the bobbin holder and remove it.
  - 3 Brush out dust and lint.
  - 4 Clean the feed dogs and hook race with the lint brush.
  - 5 Wipe out gently with soft, dry cloth.
- \* You may also use a vacuum cleaner.

- 1 Screwdriver
- 2 Screw
- 3 Needle plate
- 4 Bobbin holder
- 5 Brush
- 6 Feed dogs
- 7 Hook race
- 8 Dry cloth

### Replacing the Bobbin Holder

- 1 Insert the bobbin holder so that the knob fits next to the stopper in the hook race.
- 2 Insert the bobbin.
- 3 Replace the needle plate, inserting the two needle plate guide pins into the holes in the needle plate. Replace the screw.

- 9 Stopper
- 10 Knob
- 11 Guide holes
- 12 Needle plate guide pins

After cleaning, be sure to replace the needle and presser foot.



## TROUBLESHOOTING

Condition	Cause	Reference
<b>The needle thread breaks.</b>	<ol style="list-style-type: none"> <li>1. The needle thread is not threaded properly.</li> <li>2. The needle thread tension is too tight.</li> <li>3. The needle is bent or blunt.</li> <li>4. The needle is incorrectly inserted.</li> <li>5. The needle thread and the bobbin thread are not set properly under (drawn to the rear of) the presser foot when sewing is started.</li> <li>6. The fabric is not drawn to the rear when sewing is finished.</li> <li>7. The thread is too heavy or too fine for the needle.</li> </ol>	<p>Refer to page 10 Refer to page 12 Refer to page 7 Refer to page 7</p> <p>Refer to page 14 Refer to page 14 Refer to page 7</p>
<b>The bobbin thread breaks.</b>	<ol style="list-style-type: none"> <li>1. The bobbin thread is not threaded properly in the bobbin holder.</li> <li>2. Lint has collected in the bobbin holder.</li> <li>3. The bobbin is damaged and doesn't turn smoothly.</li> </ol>	<p>Refer to page 8 Refer to page 32 Change the bobbin.</p>
<b>The needle breaks.</b>	<ol style="list-style-type: none"> <li>1. The needle is incorrectly inserted.</li> <li>2. The needle is bent or blunt.</li> <li>3. The needle clamp screw is loose.</li> <li>4. The needle thread tension is too tight.</li> <li>5. The fabric is not drawn to the rear when sewing is finished.</li> <li>6. The needle is too fine for the fabric being sewn.</li> <li>7. The pattern selector dial has been turned while the needle was in the material.</li> </ol>	<p>Refer to page 7 Refer to page 7 Refer to page 7 Refer to page 12 Refer to page 14 Refer to page 7</p> <p>Refer to page 13</p>
<b>Skipped stitches</b>	<ol style="list-style-type: none"> <li>1. The needle is incorrectly inserted.</li> <li>2. The needle is bent or blunt.</li> <li>3. The needle and /or threads are not suitable for the work being sewn.</li> <li>4. A blue tipped needle is not being used for sewing stretch, very fine fabrics or synthetics.</li> <li>5. The needle thread is not threaded properly.</li> <li>6. The wrong needle is being used.</li> </ol>	<p>Refer to page 7 Refer to page 7</p> <p>Refer to page 7</p> <p>Refer to page 7 Refer to page 10 Change the needle.</p>
<b>Seam puckering</b>	<ol style="list-style-type: none"> <li>1. The needle thread tension is too tight.</li> <li>2. The needle thread is not threaded properly.</li> <li>3. The needle thread is too heavy for the fabric being sewn.</li> <li>4. The stitch length is too long for the fabric.</li> </ol>	<p>Refer to page 12 Refer to page 10 Refer to page 7 Make stitch denser.</p>
<b>The fabric is not feeding smoothly.</b>	<ol style="list-style-type: none"> <li>1. The feed dogs are packed with lint.</li> <li>2. The stitches are too fine.</li> <li>3. The feed dogs were not raised after being lowered.</li> </ol>	<p>Refer to page 32 Make stitch coarser. Refer to page 6</p>
<b>Noisy operation</b>	<ol style="list-style-type: none"> <li>1. There is thread caught in the hook race.</li> <li>2. Lint has built up in the bobbin holder or hook race.</li> <li>3. The feed dogs are packed with lint.</li> </ol>	<p>Refer to page 32 Refer to page 32 Refer to page 32</p>