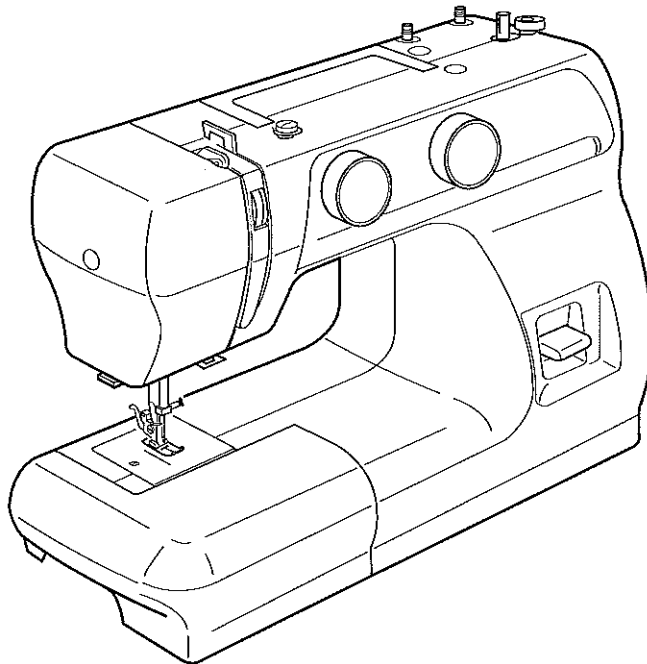


# INSTRUCTION MANUAL



# IMPORTANT SAFETY INSTRUCTIONS

This sewing machine is not a toy. Do not allow children to play with this machine.  
The machine is not intended for use by children or mentally infirm persons without supervision.  
This sewing machine is designed and manufactured for household use only.  
Read all instruction before using this sewing machine.

## **DANGER** — To reduce the risk of electric shock:

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

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

1. Do not allow children to play with the machine. The machine is not intended for use by children or infirme persons without proper supervision.  
Do not allow to be used as a toy. Close attention is necessary when this sewing machine is used by or near children.
2. Use this appliance only for its intended use as described in this owner's manual.  
Use only attachments recommended by the manufacturer as contained in this owner's 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 or damaged, or dropped into water.
4. Never operate the appliance with any air opening blocked. Keep ventilation opening of this sewing machine and foot controller free from accumulation of lint, dust and loosen cloth.
5. Never drop or insert any object into any opening.
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 ("O") position, then remove plug from outlet.
9. Do not unplug by pulling on 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. Switch this sewing machine off ("O") when making any adjustment in the needle area, such as threading the needle, changing the needle, threading the bobbin or changing the presser foot, and the like.
15. Always unplug this sewing machine from the electrical outlet when removing covers, lubricating, or when making any other adjustments mentioned in this owner's manual.

## SAVE THESE INSTRUCTIONS



Please note that on disposal, this product must be safely recycled in accordance with relevant National legislation relating to electrical/electronic products. If in doubt please contact your retailer for guidance. (European Union only.)

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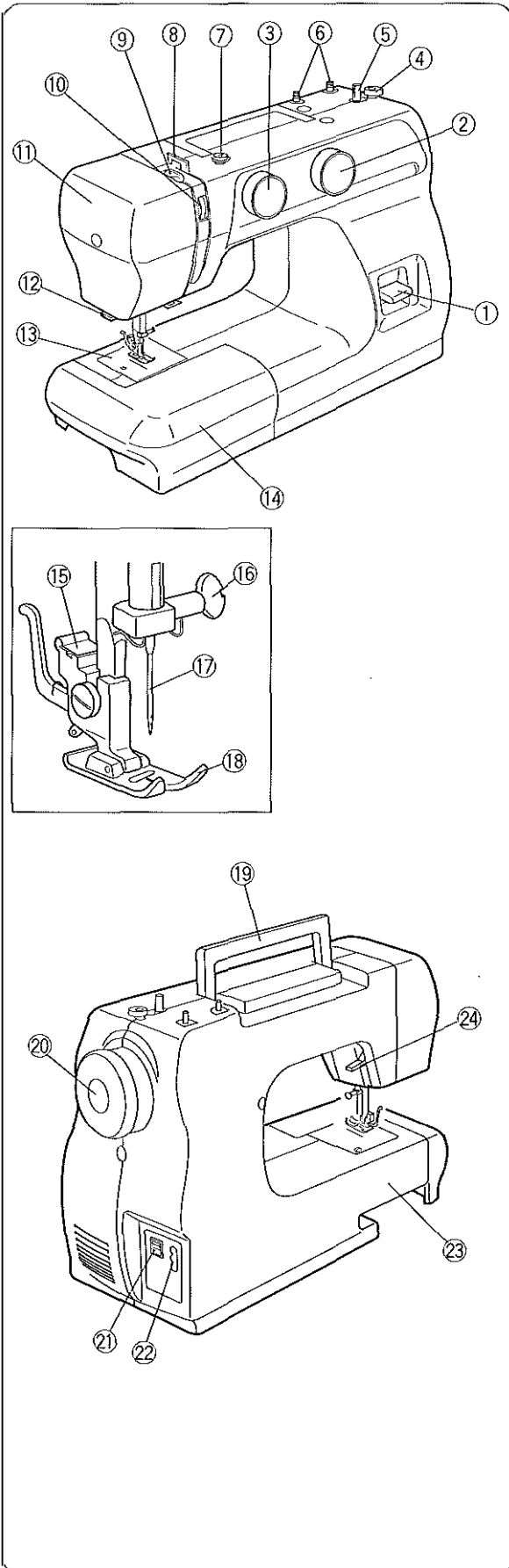
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## SECTION 1. ESSENTIAL PARTS

### Name of Parts

- ① Reverse stitch button
- ② Stitch length dial
- ③ Pattern selector dial
- ④ Bobbin winder stopper
- ⑤ Bobbin winder spindle
- ⑥ Spool pins
- Bobbin winder thread guide
- ⑧ Thread guide
- ⑨ Thread take-up lever
- Thread tension dial
- Face plate
- ⑫ Needle threader
- ⑬ Needle plate
- Extension table
- Presser foot holder
- ⑯ Needle clamp
- ⑰ Needle
- Presser foot
- Carrying handle
- ⑳ Handwheel
- ㉑ Power switch
- ㉒ Machine socket
- ㉓ Free arm
- ㉔ Presser foot lifter



**Note:** The specifications are subject to change without prior notice.

## SECTION 2. GETTING READY TO SEW

### 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.

#### Attaching the table:

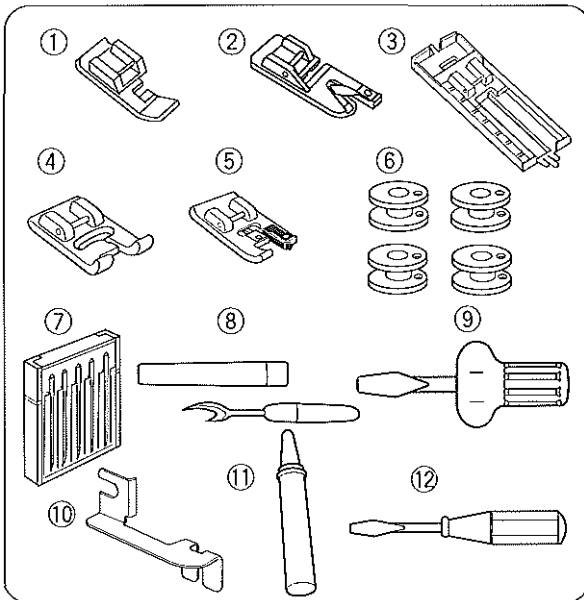
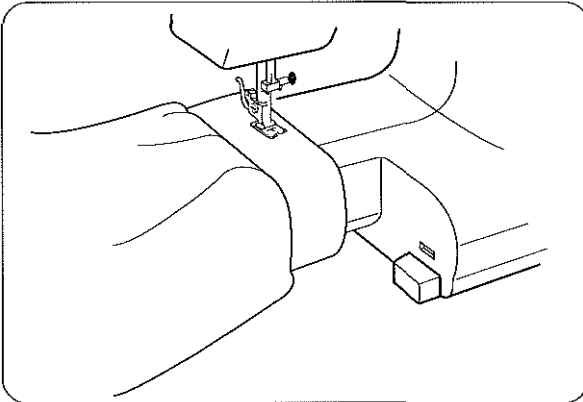
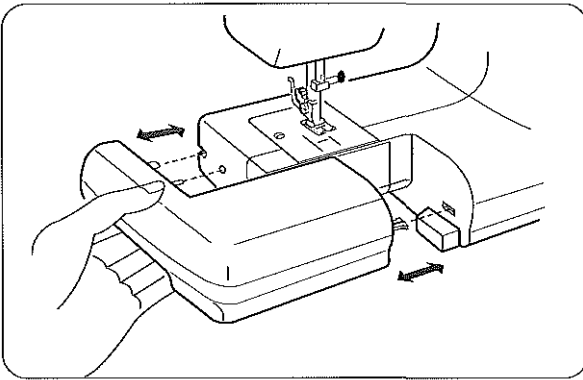
Push the extension table until it snaps into the machine.

### Free arm sewing

Avoid fabric bunching around the needle when bartacking to reinforce pockets, plackets and waistlines.

For stitching sleeves, waistbands, pant legs or any circular garment area.

For darning socks or mending knees, elbows or areas of wear in children's clothes.



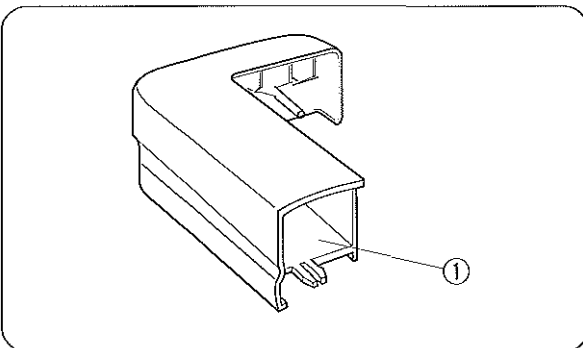
### Standard Accessories

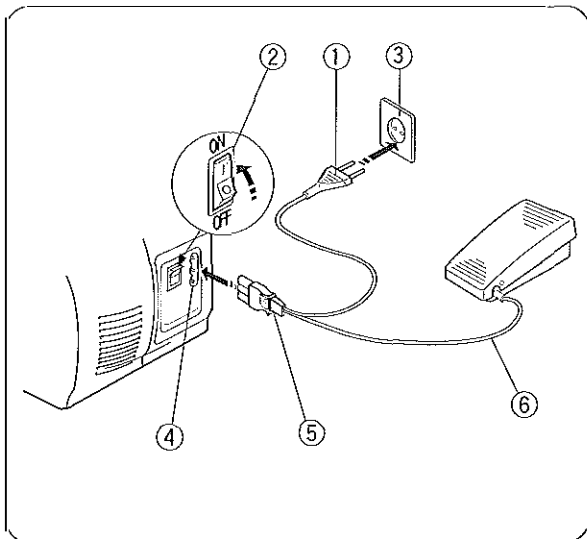
- ① Zipper foot
- ② Hemmer foot
- ③ Sliding buttonhole foot
- ④ Satin stitch foot
- ⑤ Overcasting foot
- Bobbins
- ⑦ Set of needles
- ⑧ Seam ripper
- ⑨ Screwdriver (large)
- Hem guide
- Oil
- ⑫ Screwdriver (small)

### Accessories Storage Box

Sewing accessories are conveniently located in the extension table.

- ① Accessories storage box



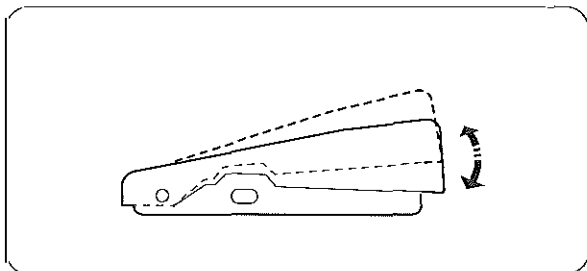


## Connecting the Machine to the Power Supply

- 1 Turn off the power switch.
  - 2 Insert the machine plug into the machine socket.
  - 3 Insert the power supply plug into the outlet .
  - 4 Turn on the power switch to turn on the power and sewing light.
- ① Power supply plug  
 ② Power switch  
 ③ Outlet  
 ④ Machine socket  
 ⑤ Machine plug

### ⚠ CAUTION:

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

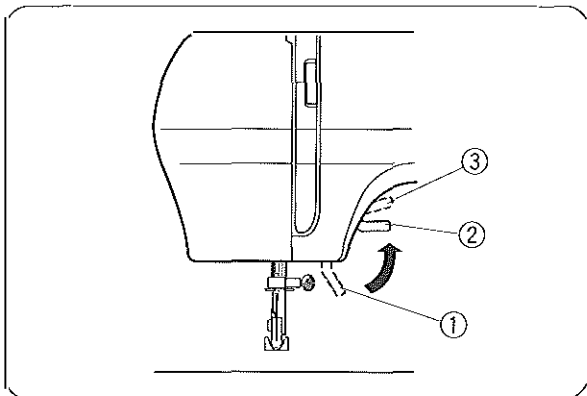


## Foot Control

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

### ⚠ WARNING:

Do not place anything on the foot control, otherwise the machine will run intermittently.



## Operating Instructions:

The symbol "O" of a switch indicates the "off" position of a switch.

## Presser Foot Lifter

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

- ① Lowest position
- ② Normal up position
- ③ Highest position

## To Attach and Remove the Presser Foot To remove

Turn the handwheel toward you to raise the needle to its highest position. Raise the presser foot. Press the lever on the back of the foot holder. The presser foot will drop off.

- ① Lever

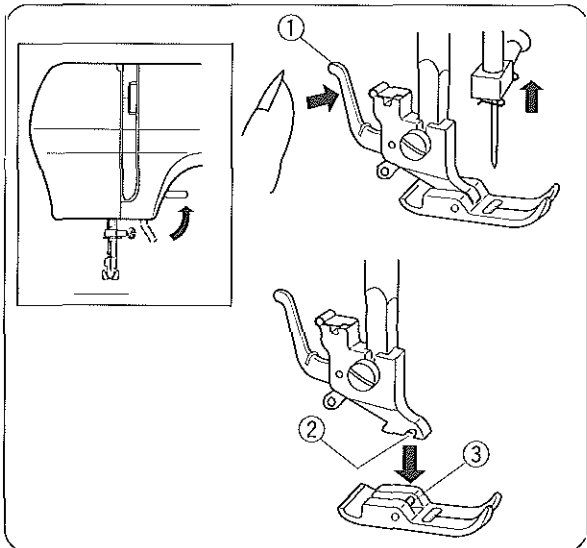
### ⚠ CAUTION:

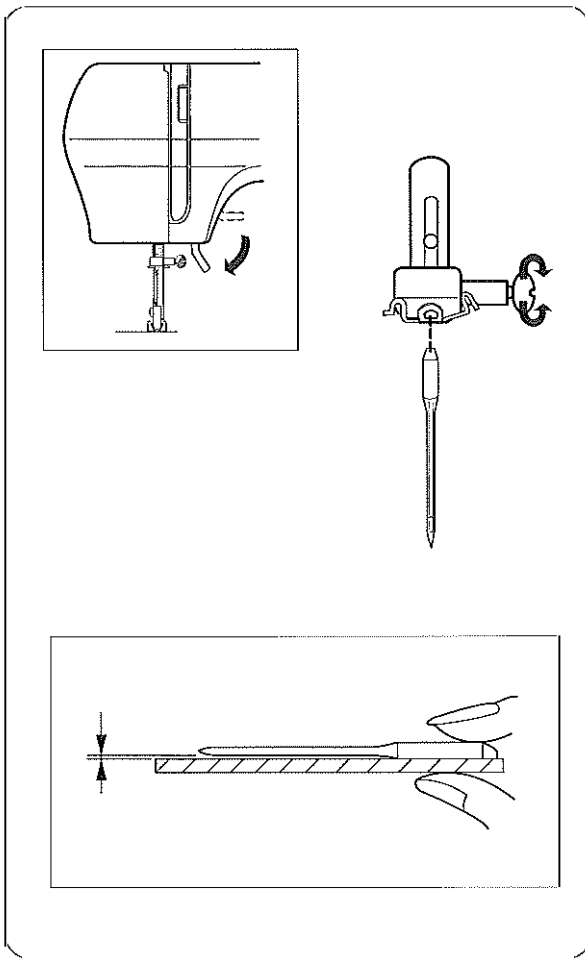
Turn off the power switch when changing a presser foot.

## To attach

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

- ② Groove
- ③ Pin





## Changing Needle

Raise the needle by turning the handwheel toward you and lower the presser foot.

Loosen the needle clamp screw by turning it counterclockwise.

Remove the needle from the clamp.

Insert the new needle into the clamp with the flat side away from you.

When inserting the needle into the clamp, push it up as far as it will go and tighten the clamp screw firmly with the screwdriver.

- \* 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.

## To check the Needle

Place the flat side of the needle on something flat (needle plate, glass etc.). The clearance between the needle and flat surface should be consistent. Never use a bent or blunt needle.

	Fabrics	Thread	Needle Size
<b>Light weight</b>	Crepe de Chine, Voile, Lawn, Organdy, Georgette, Tricot	Fine Silk Fine Cotton Fine Synthetic Fine Cotton Covered Polyester	9 or 11
<b>Medium weight</b>	Linens, Cotton, Pique, Serge, Double Knits, Percale	50 silk 50 to 80 Cotton 50 to 60 Synthetic Cotton Covered Polyester	11 or 14
<b>Heavy weight</b>	Denim, Tweed, Gabardine, Coating, Drapery and Upholstery Fabric	50 silk 40 to 50 Cotton 40 to 50 Synthetic Cotton Covered Polyester	14  16

## Thread and Needle Chart

- \* 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.
- \* When sewing very fine fabrics, sew over a piece of paper to prevent seam puckering.

## Setting Spool Pins

The spool pins are used for holding the spool of thread in order to feed thread to the machine. To use, pull up the spool pin. Push down for storage.

- ① Upper thread
- ② Hole
- ③ Tangle

### Note:

When using thread which has tendency to tangle around spool pin, thread through the hole of spool pin as shown.

The hole should face the thread spool.

## Removing or Inserting the Bobbin Case

Open the hook cover.

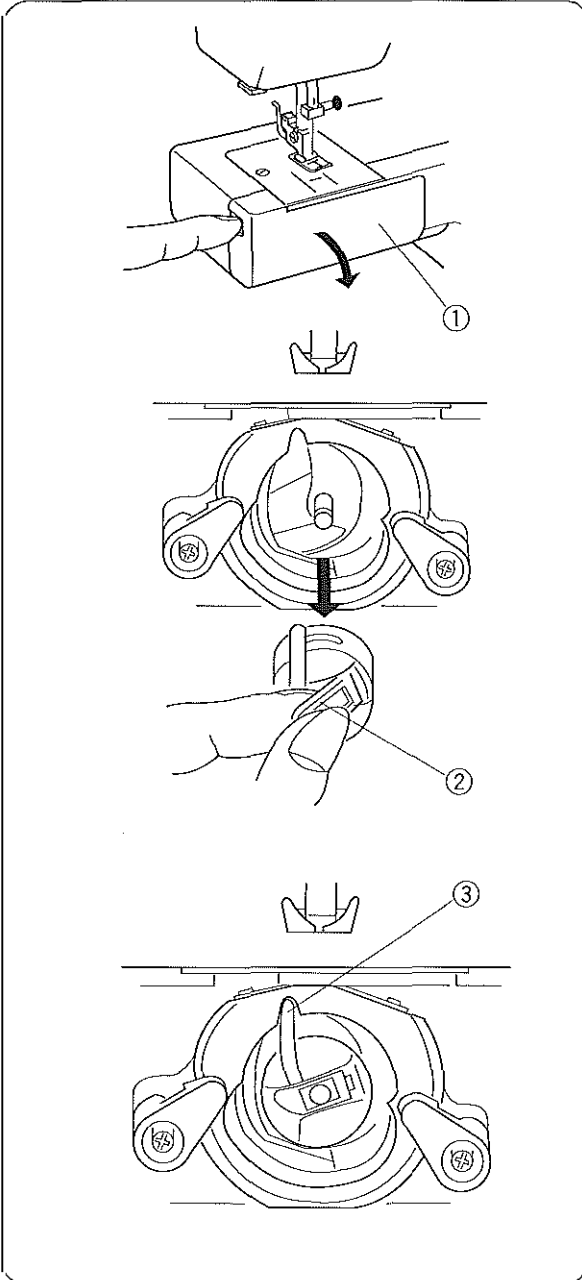
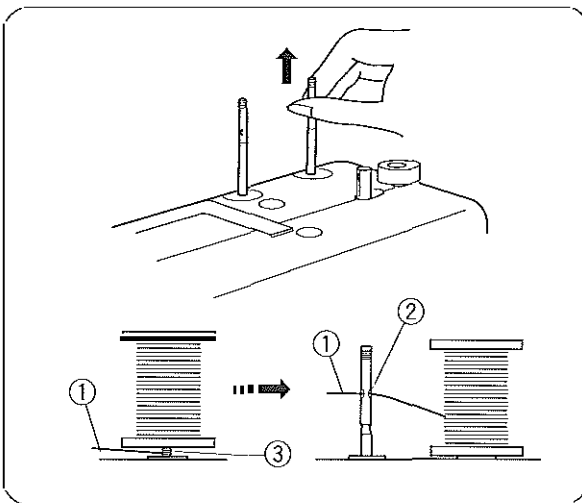
- ① Hook cover

Raise the needle by turning the handwheel toward you. Take out the bobbin case by holding the latch.

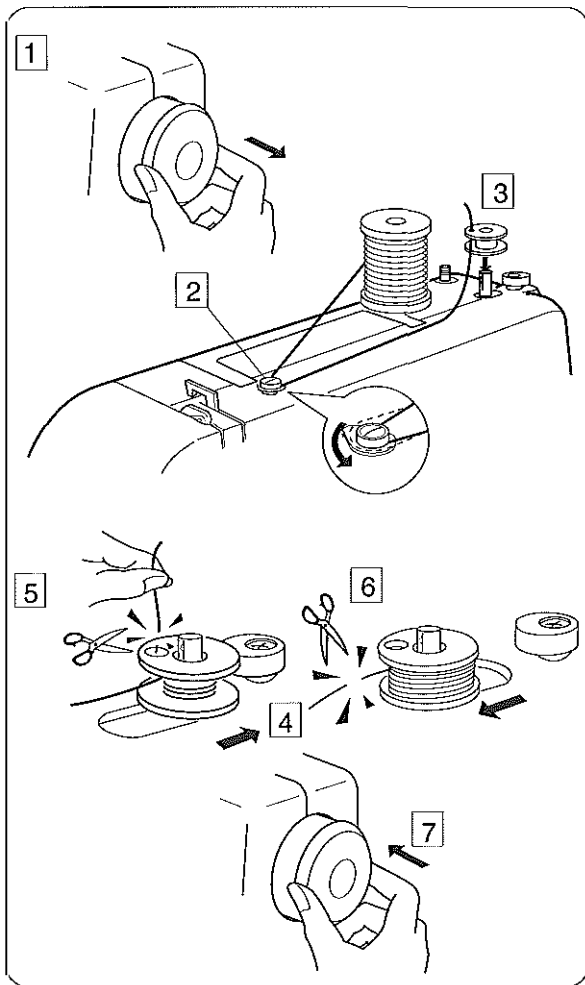
- ② Latch

When inserting the bobbin case, place the horn into the recess of the hook race.

- ③ Horn





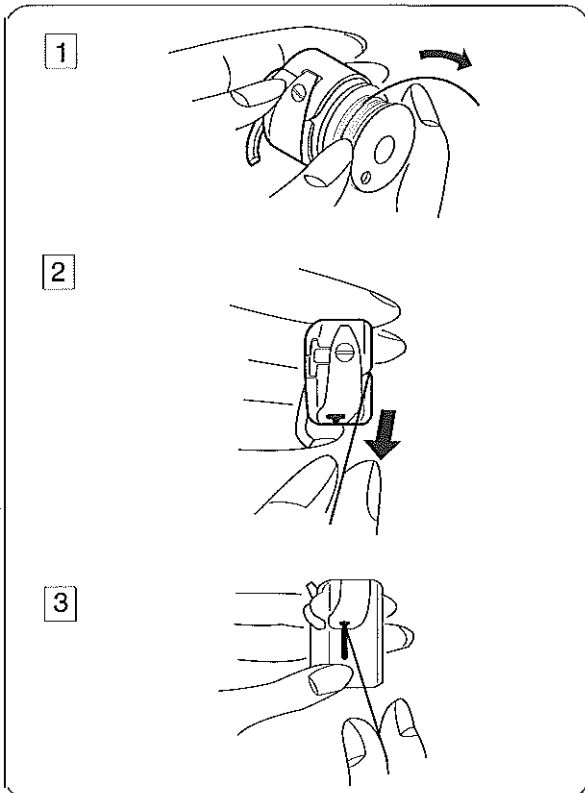


## Winding the Bobbin

- 1 Pull the handwheel out.
- 2 Draw the thread from spool.  
Guide the thread around the bobbin winder thread guide.
- 3 Insert the thread through the hole in the bobbin from the inside to the outside.  
Put the bobbin on the bobbin winder spindle.
- 4 Push it to the right.
- 5 With the 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 hole in the bobbin.
- 6 Depress the foot control again.  
When the bobbin is fully wound, stop the machine.  
Return the bobbin winder spindle to its original position by moving the spindle to the left, and cut the thread.
- 7 Push the handwheel to the left. (original position).

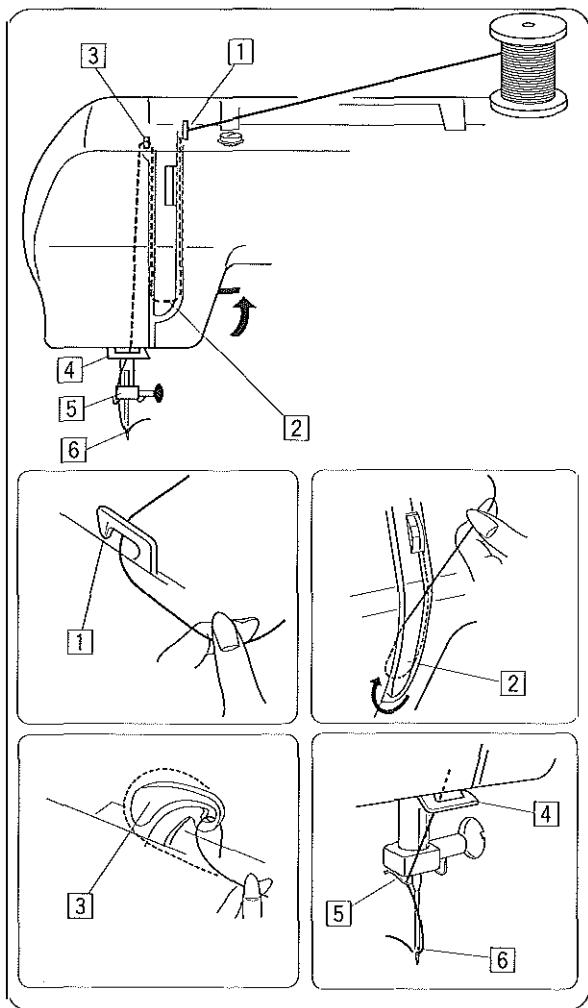
### Note:

Return the bobbin winder spindle when the machine stops.



## Threading Bobbin Case

- 1 Place the bobbin into the bobbin case.  
Make sure the thread unwinds in the direction of arrow.
  - 2 Pull the thread into the bobbin case slot.
  - 3 Draw the thread under the tension spring and into the delivery eye.
- \* Leave about 10 cm (4") of free thread.



## Threading the Machine

Raise the take-up lever to its highest position by turning the handwheel toward you.

Raise the presser foot.

Place a spool on the spool pin as shown, with thread coming from back of the spool.

1 Draw the thread into thread guide using both hands.

2 While holding the thread near spool, draw thread down into the tension area and then around the check spring holder.

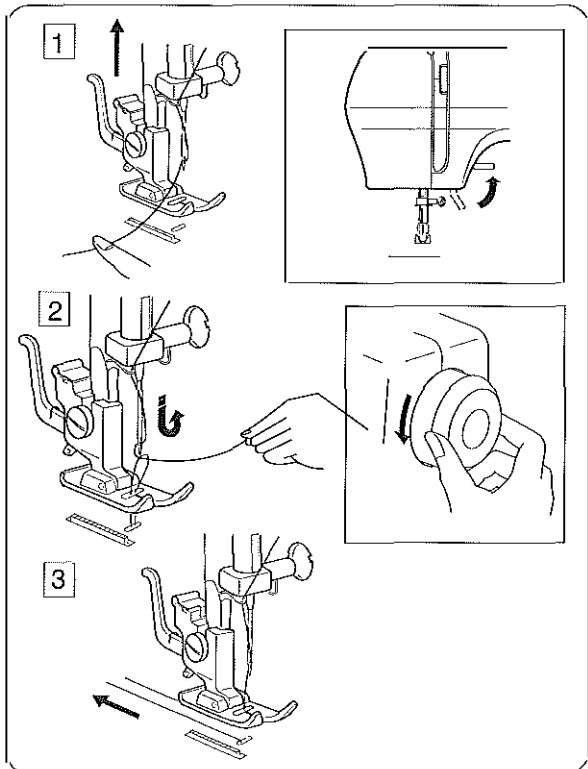
3 Firmly draw the thread up and through the take-up lever from right to left.

4 Then draw the thread down and slip it into the lower thread guide.

5 Draw the thread down and slip it into needle bar thread guide on the left.

6 Thread the needle eye from front to back.

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



## Drawing Up Bobbin Thread

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

2 Turn the handwheel slowly toward you with your right hand until the needle goes down and continue turning the handwheel until the take-up lever is at its highest position. Lightly draw up the needle thread forming a loop of the bobbin thread.

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

## Balancing Needle Thread Tension

### 1 Correct tension

The thread tension is adjusted depending on the sewing materials, layers of fabric and sewing method.

For an ideal zigzag stitch, the bobbin thread does not show on the right side (top side) of the fabric, and the needle thread shows slightly on the wrong side (bottomside) of the fabric.

- ① Needle thread (Top thread)
- ② Bobbin thread (Bottom thread)
- ③ Right side (Top side) of fabric
- ④ Wrong side (Bottom side) of fabric
- ⑤ Thread tension dial
- ⑥ Setting mark

### 2 Needle thread tension is too tight

When the bobbin thread (bottom thread) will appear on the right side (top side) of the fabric, Loosen the needle thread tension by moving the dial to a lower number.

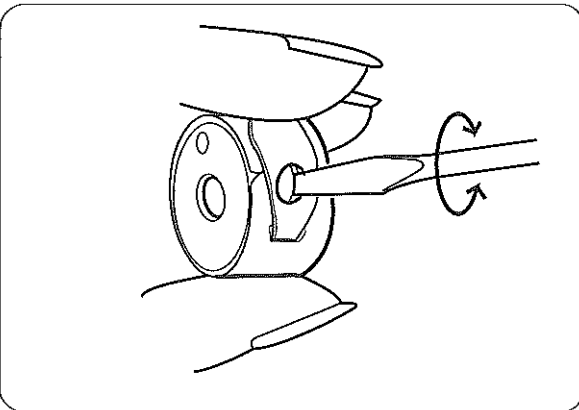
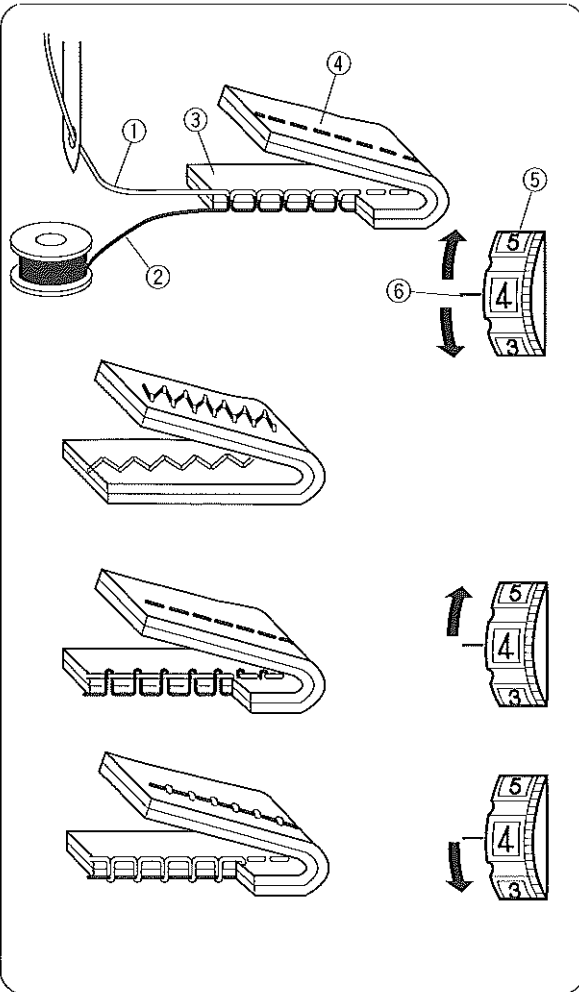
### 3 Needle thread tension is too loose

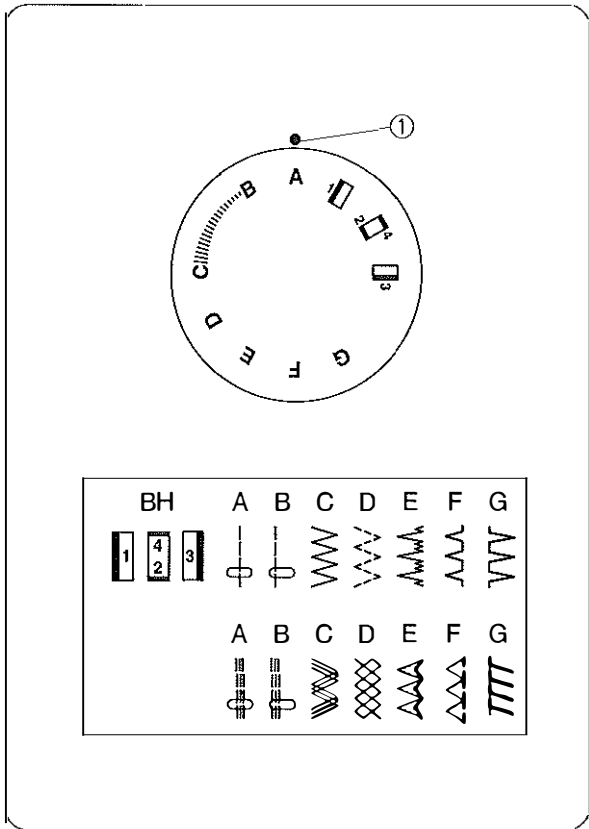
When the needle thread (top thread) will appear on the wrong side (bottom side) of the fabric, tighten the needle thread tension by moving the dial to a higher number.

## Adjusting Bobbin Thread Tension

For general sewing, the bobbin thread tension does not need to adjust. However, you can adjust the bobbin thread tension for a specific sewing need.

Turn the adjusting screw to the right to tighten or, to the left to loosen the tension.





### Pattern Selector Dial

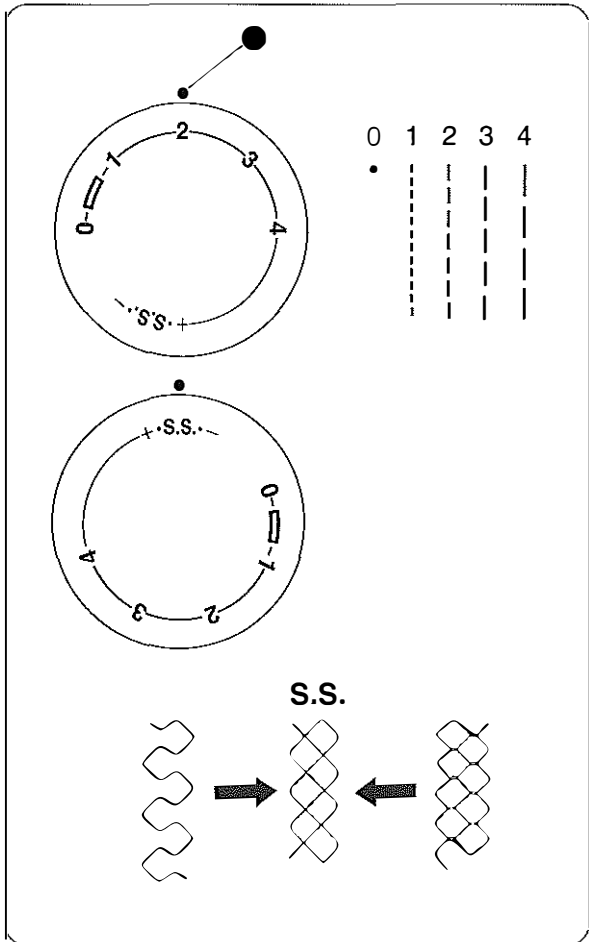
Raise the needle and presser foot.

Turn the stitch selector dial to the desired stitch at the setting mark.

① Setting mark

#### Note:

Raise the needle above the fabric when you turn the pattern selector dial.



### Stitch Length Dial

Turn the stitch length dial to set the desired stitch length at the setting mark.

The higher the number, the longer the stitch length

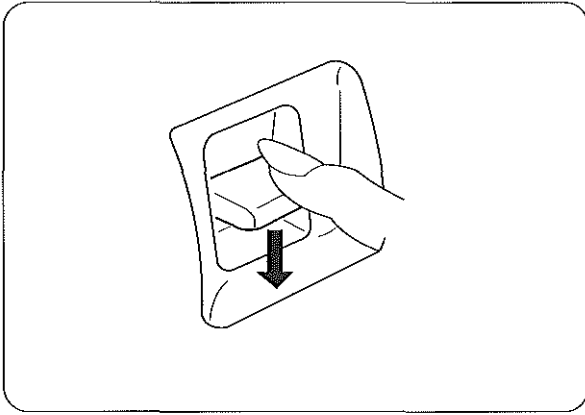
① Setting mark

"" is the recommended setting for buttonhole stitching.

Adjust the dial in the 0.5–4 range when you sew the zigzag stitch.

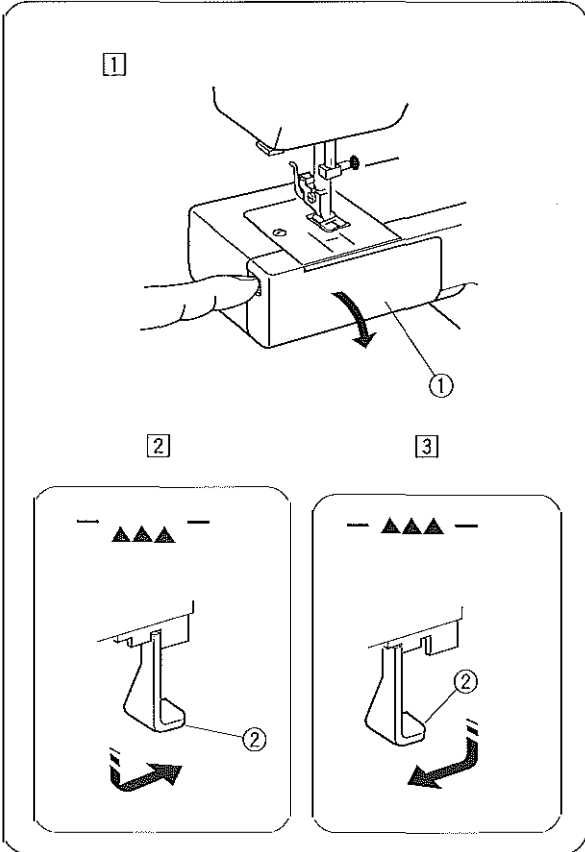
Set the dial at "S.S." to sew the stretch stitch pattern.

If the stretch stitch pattern is not even, turn the stitch length dial toward "-" to compress it, or "+" to expand it.



### Reverse Stitch Button

As long as you keep the reverse stitch button depressed, the machine sews backwards.



### Dropping the Feed Dog

1 Open the hook cover.

① Hook cover

2 To drop the feed dog, pull down the drop lever and move it to the right, as illustrated.

② Drop lever

3 To raise the feed dog, pull down the drop lever and move it to the left, as illustrated.

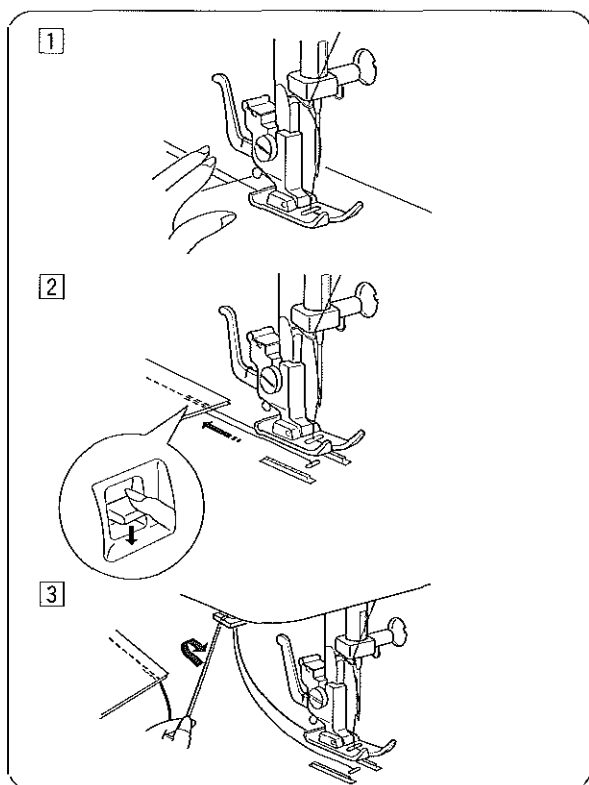
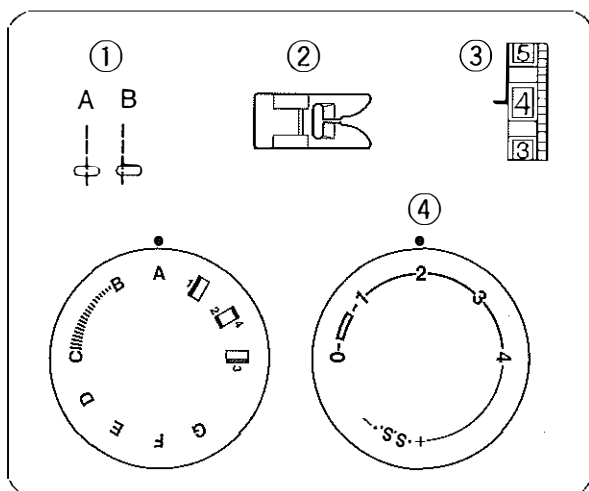
\* The feed dog must be up for normal sewing.

\* The feed dog will return to the up position when the machine starts running.

## SECTION 3. BASIC SEWING

### Straight Stitch Sewing

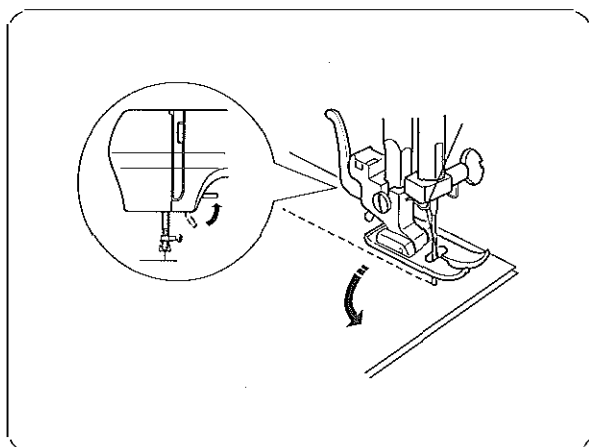
- ① Pattern selector: A, B
- ② Presser foot: Zigzag foot
- ③ Thread tension: 2-6
- ④ Stitch length: 1.5-4



- ① Raise the presser foot and position the fabric with its edge lining up with a seam 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. Gently guide the fabric along the guide line letting the fabric feed by itself.

- ② For fastening the end of seams, press the reverse stitch button and sew several reverse stitches. Raise the presser foot and remove the fabric, drawing the threads to the back.

- ③ Draw the threads up and into the thread cutter. The threads are cut the proper length for starting the next seam.



### To Change Sewing Direction

- Stop the machine and turn the handwheel toward 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.

## Using the Seam Guides on the Needle Plate

The seam guides on the needle plate help you to measure seam width.

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

Numbers on the needle plate	10	15	20	3/8"	4/8"	5/8"	6/8"
Distance in centimeters	1.0	1.5	2.0	1.0	1.3	1.6	1.9

- ① Guide lines
- ② Cornering guide
- ③ Needle plate
- ④ Needle plate hole
- ⑤ Seam width from the center needle position

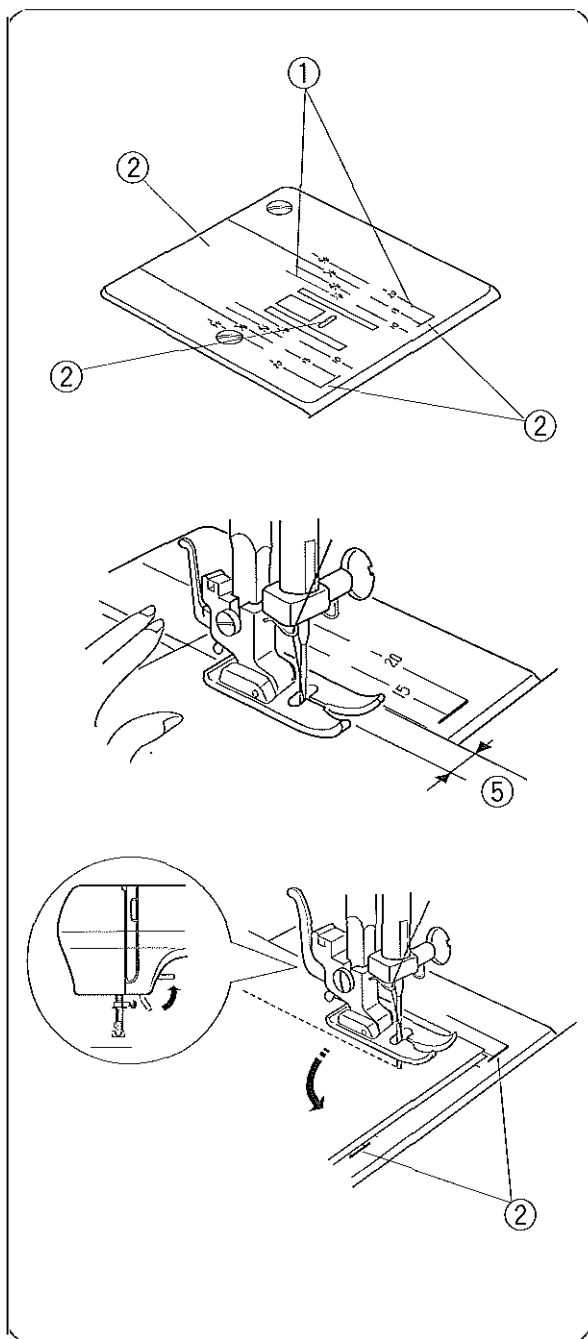
## Turning Square Corners

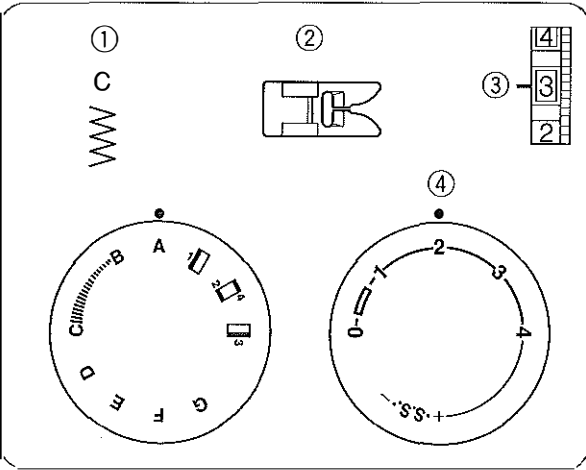
To turn a square corner 1.6 cm (5/8") from the fabric edge.

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.

Raise the presser foot and turn the fabric to line the edge with the 1.6 cm (5/8") seam guide. Lower the presser foot and begin stitching in the new direction.

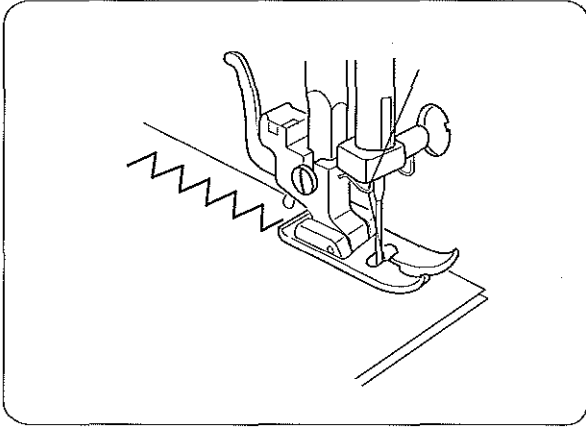
- ② Cornering guide



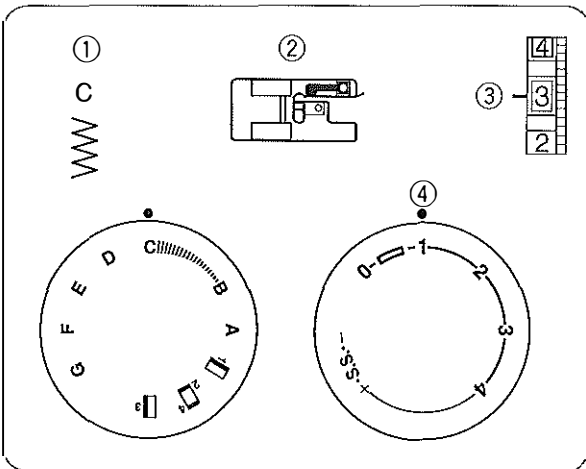


### Zigzag Stitching

- ① Pattern selector: C
- ② Presser foot: Zigzag foot
- ③ Thread tension: 2-5
- ④ Stitch length: 0.5-4



Simple zigzag stitching is widely used for overcasting, sewing on buttons etc.



### SECTION 4. UTILITY STITCHING

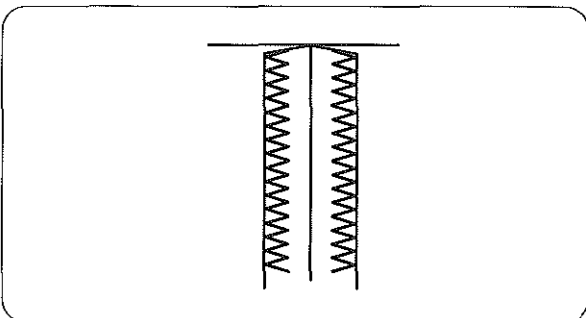
#### Overcasting

- ① Pattern selector: C
- ② Presser foot: Overcasting foot
- ③ Thread tension: 1-4
- ④ Stitch length: 1-2



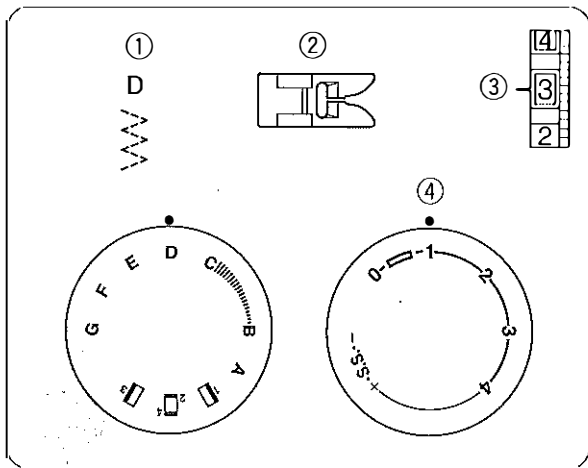
#### CAUTION:

Make sure to set the pattern selector at "C", otherwise the needle may hit the presser foot and break.



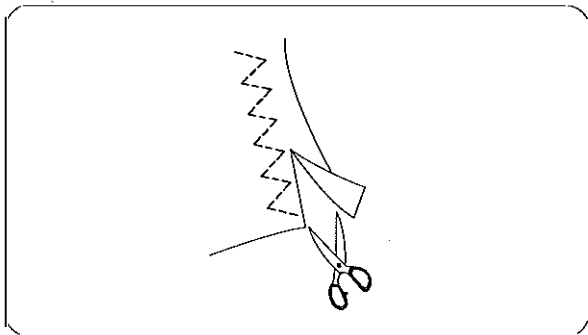
The zigzag stitch is used on the seam allowance to prevent fabric from fraying at raw edges.





### Tricot Stitch

- ① Pattern selector: D
- ② Presser foot: Zigzag foot
- ③ Thread tension: 1-4
- ④ Stitch length: 0.5-4

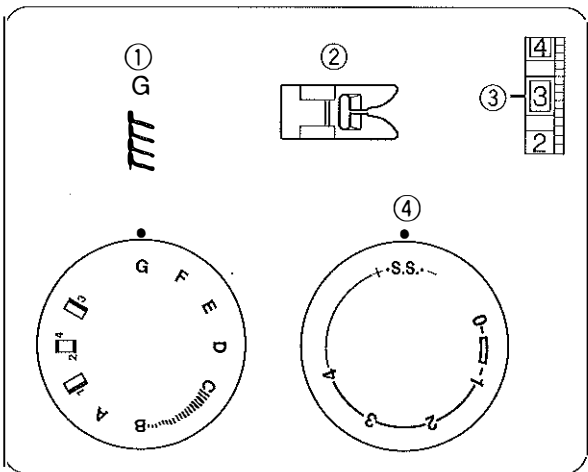


This stitch is used to finish the seam allowance on synthetics and other fabrics that tend to pucker.

Place your fabric to allow a 1.6 cm (5/8") seam. Trim the seam allowance after sewing.

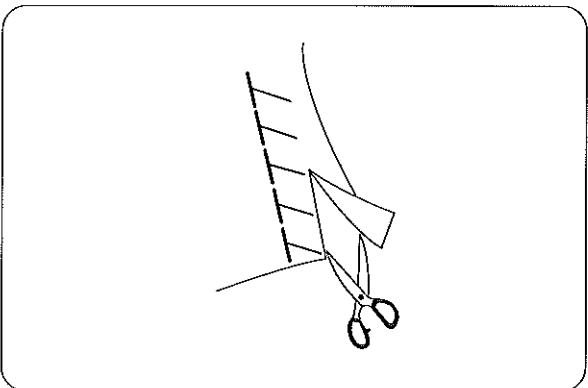
**Note :**  
Be careful not to cut the stitches.

It is also handy for darning and mending tears.



### Knit Stitch

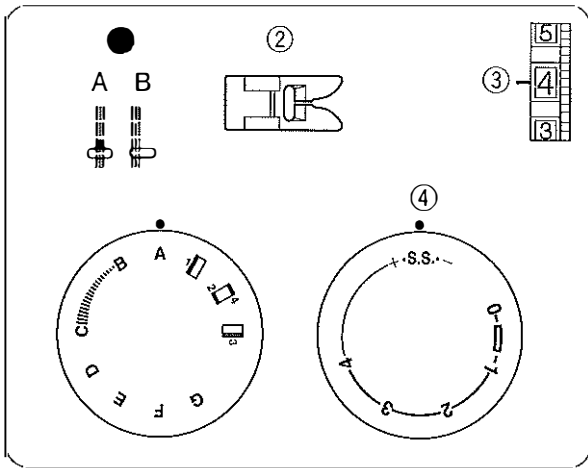
- ① Pattern selector: G
- ② Presser foot: Zigzag foot
- ③ Thread tension: 1-4
- ④ Stitch length: S.S.



This knit stitch is ideal for sewing swimwear and stretch velour because it provides the greatest amount of elasticity and strength.

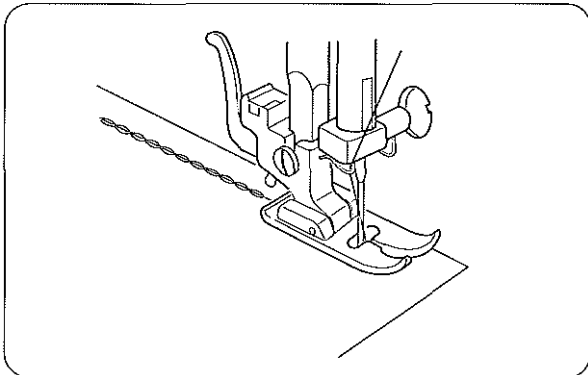
Place your fabric to allow a 1.6 cm (5/8") seam. Trim the seam allowance after sewing.

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



## Straight Stretch Stitch

- Pattern selector: A, B
- ② Presser foot: Zigzag foot
- ③ Thread tension: 2-6
- ④ Stitch length: S.S.

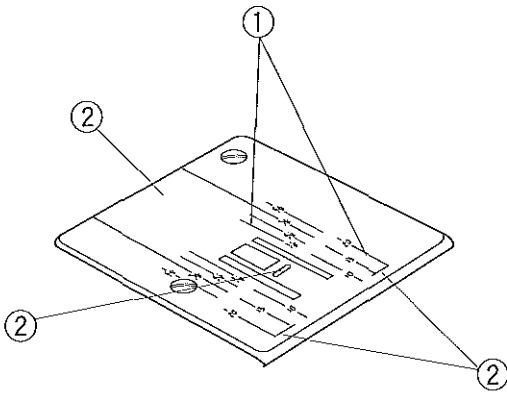


The stitch is sewn with two stitches forward and one stitch backward forming a seam that does not rip easily.

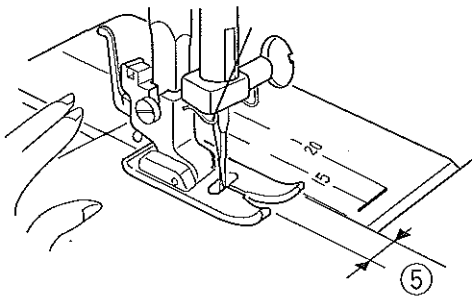
## Using the Seam Guides on the Needle Plate

The seam guides on the needle plate help you to measure seam width.

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



Numbers on the needle plate	10	15	20	3/8"	4/8"	5/8"	6/8"
Distance in centimeters	1.0	1.5	2.0	1.0	1.3	1.6	1.9



- ① Guide lines
- ② Cornering guide
- ③ Needle plate
- ④ Needle plate hole
- ⑤ Seam width from the center needle position

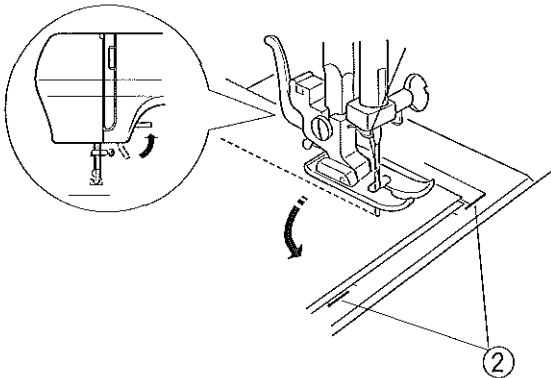
## Turning Square Corners

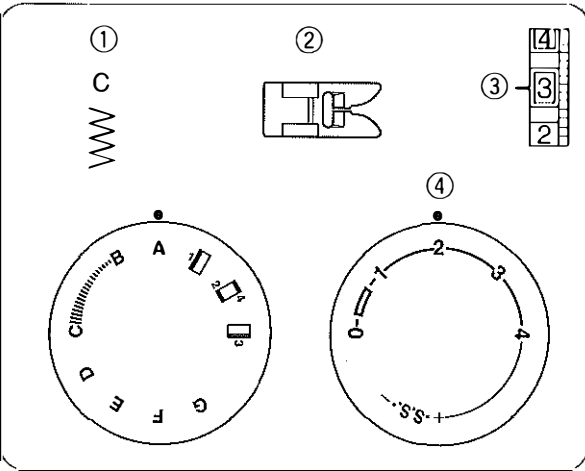
To turn a square corner 1.6 cm (5/8") from the fabric edge.

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.

Raise the presser foot and turn the fabric to line the edge with the 1.6 cm (5/8") seam guide. Lower the presser foot and begin stitching in the new direction.

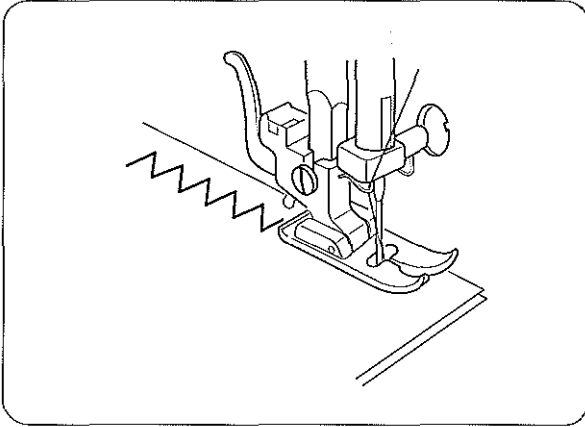
- ② Cornering guide



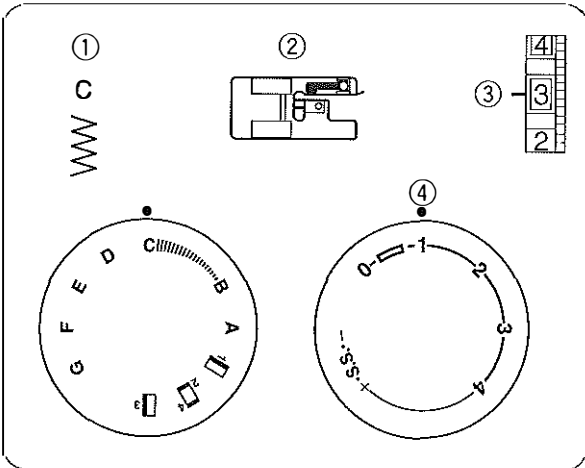


### Zigzag Stitching

- ① Pattern selector: C
- ② Presser foot: Zigzag foot
- ③ Thread tension: 2-5
- ④ Stitch length: 0.5-4



Simple zigzag stitching is widely used for overcasting, sewing on buttons etc.



### SECTION 4. UTILITY STITCHING

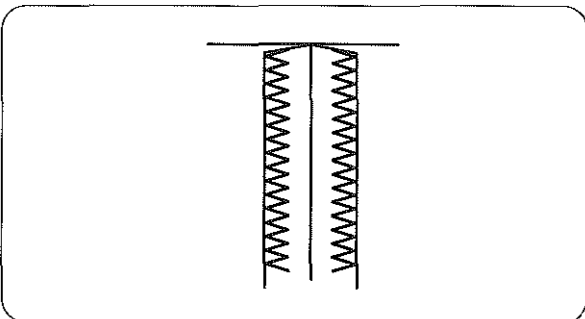
#### Overcasting

- ① Pattern selector: C
- ② Presser foot: Overcasting foot
- ③ Thread tension: 1-4
- ④ Stitch length: 1-2

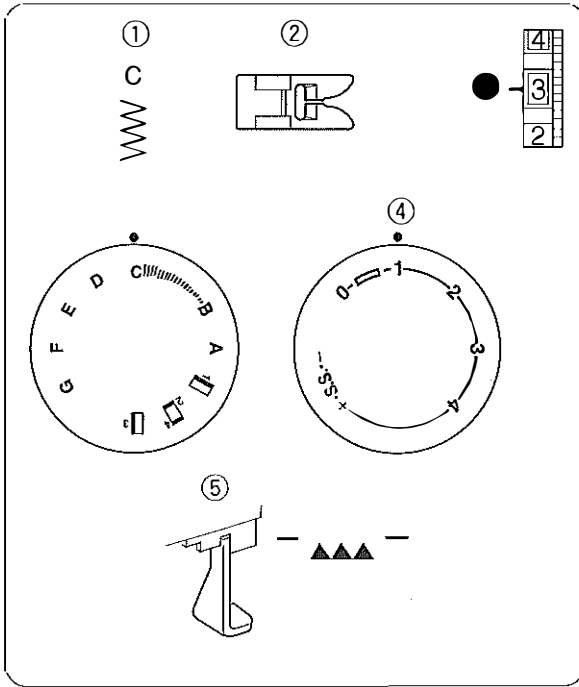


#### CAUTION:

Make sure to set the pattern selector at "C", otherwise the needle may hit the presser foot and break.

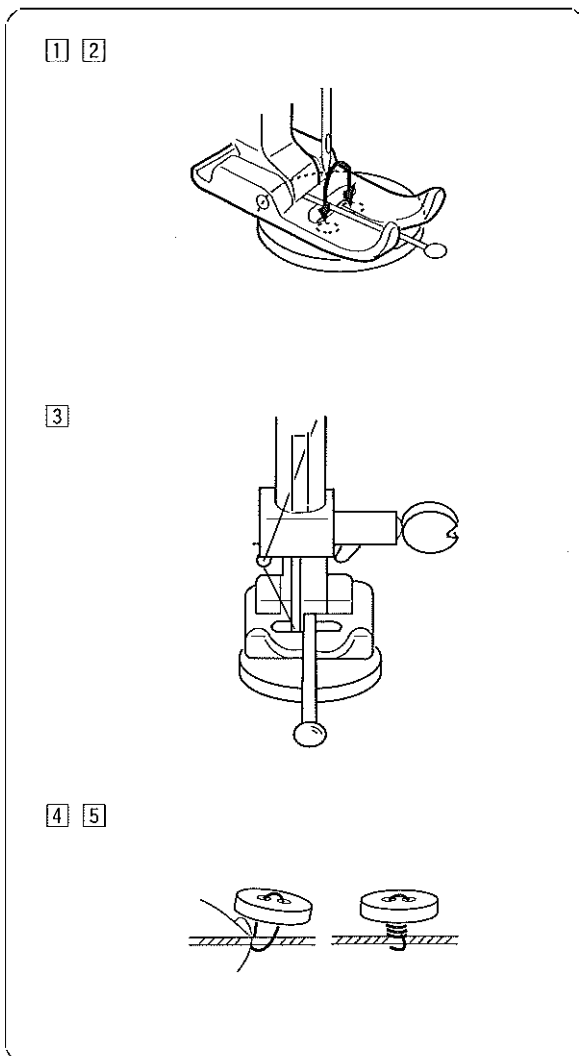


The zigzag stitch is used on the seam allowance to prevent fabric from fraying at raw edges.



## Sewing on Buttons

- ① Pattern selector: C
- ② Presser foot: Zigzag foot
- ③ Thread tension: 1-3
- ④ Stitch length: Any
- ⑤ Feed dog: Dropped



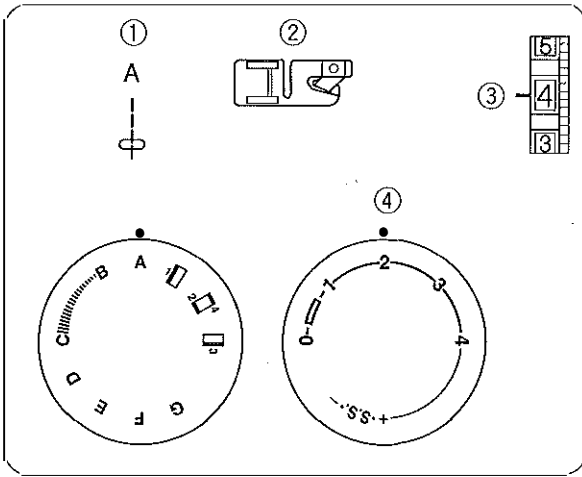
① Adjust the stitch width, and turn the handwheel to check if the needle enters into each hole on the button.

■ Lower the foot to hold the button in place. The holes on the button should align with the slot of the foot.

③ A pin can be placed on the foot to form a shank. Make sure to check if the needle enters into both holes on the button. Sew about 10 stitches and cut the needle and bobbin threads, leaving 20 cm (8") tail.

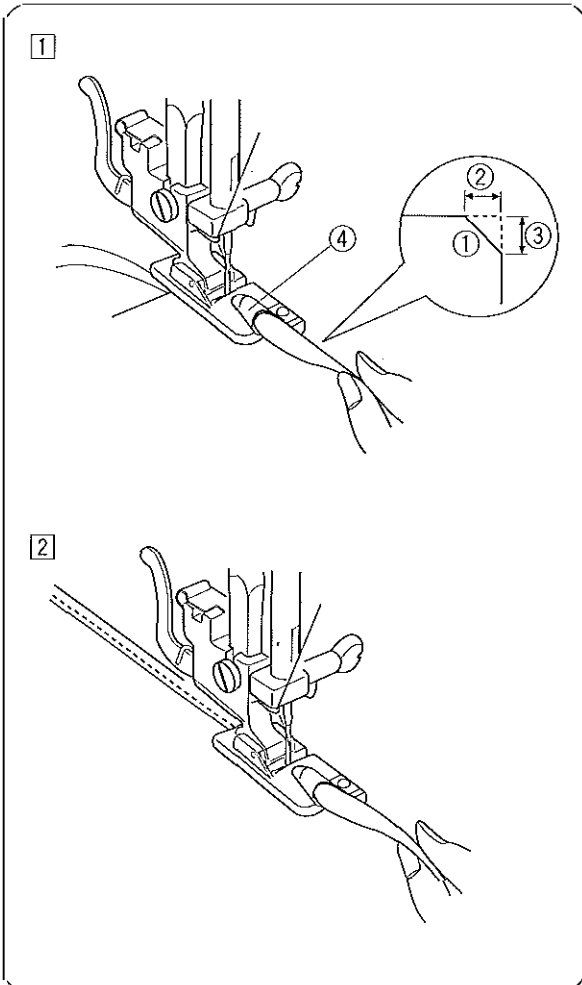
④ Bring the needle thread between the button and fabric through the holes on the button. Pull the needle thread to pick bobbin thread up to the right side of the fabric. Wind the threads to form a shank and tie them together.

⑤ Raise the feed dog after sewing.



## Rolled Hem

- ① Pattern selector: A
- ② Presser foot: Hemmer foot
- ③ Thread tension: 2–6
- ④ Stitch length: 1.5–4



- ① Trim off the corner of the fabric 1.5 cm (3/16") by 0.8 cm (5/16") to avoid a bulkiness of the hem at the corner.

Fold the fabric edge twice 0.3 cm (1/8") wide and 6 cm (2 3/8") long.

- ① Wrong side of the fabric
- ② 0.5 cm
- ③ 0.8 cm
- ④ Curl of the foot

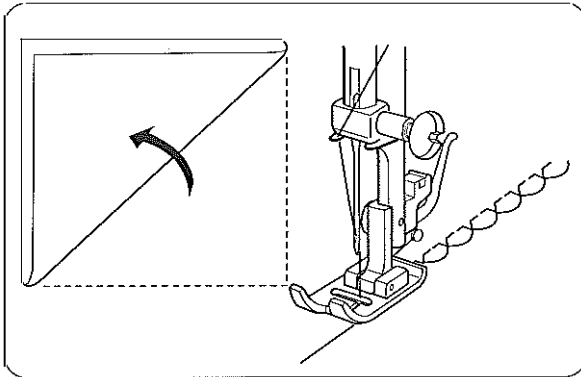
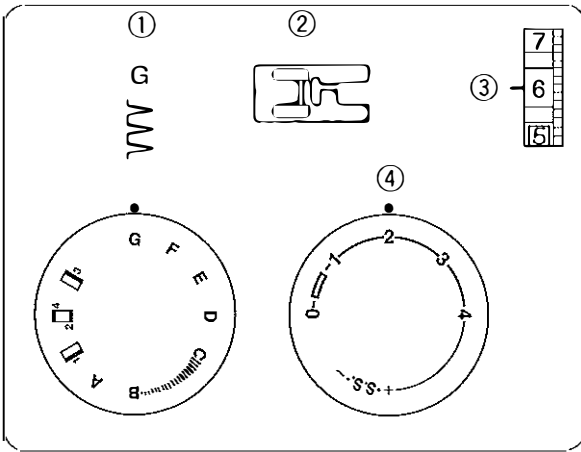
- ② Place the fabric aligning the hem edge with the guide on the foot. Lower the foot and sew several stitches while pulling both threads to the back.

Stop the machine with the needle in the fabric and raise the presser foot. Insert the folded portion of the fabric into the curl of the foot. Lower the foot and sew while lifting up the edge to keep it feeding smoothly and evenly.

## SECTION 5. DECORATIVE STITCHING

### Shell Tuck

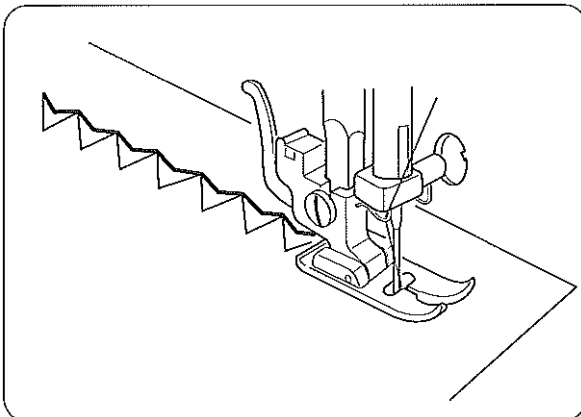
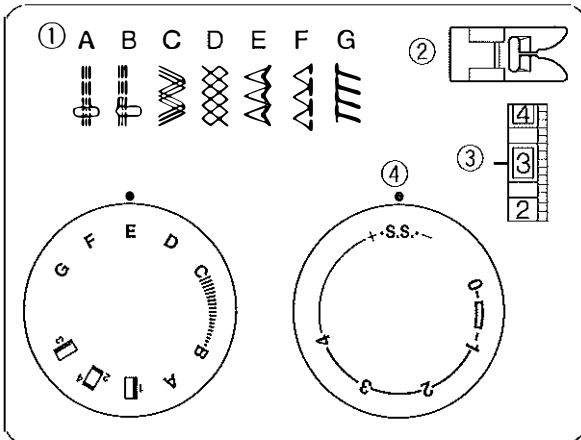
- ① Pattern selector: G
- ② Presser foot: Satin stitch foot
- ③ Thread tension: 6–8
- ④ Stitch length: 2–3



Place the folded edge along the slot of foot.  
The needle should fall off the edge of the fabric on the right forming a tuck.

### Stretch Stitch Patterns

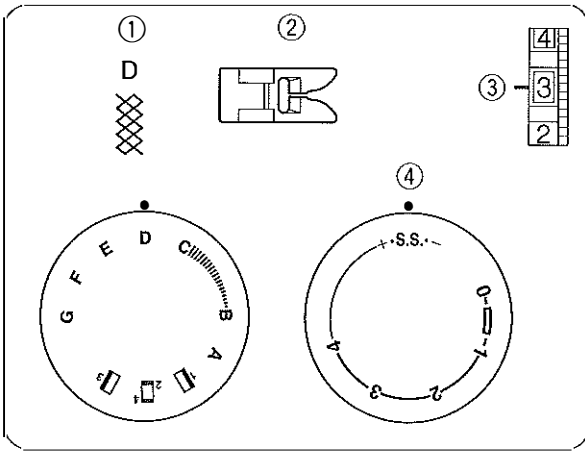
- ① Pattern selector: A–G
- ② Presser foot: Zigzag foot
- ③ Thread tension: 1–4
- ④ Stitch length: S.S.



If forward and reverse feeds become unbalanced due to the type of fabric, adjust the balance by turning the stitch length dial as follows:

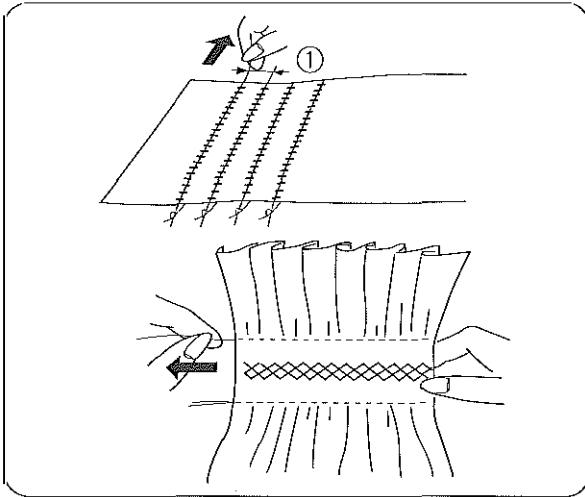
If patterns are compressed, turn the dial toward “+”.

If patterns are drawn, turn the dial toward “-”.  
(See page 10)



## Smocking

- ① Pattern selector: D
- Presser foot: Zigzag foot
- Thread tension: 1-4
- ④ Stitch length: S.S.



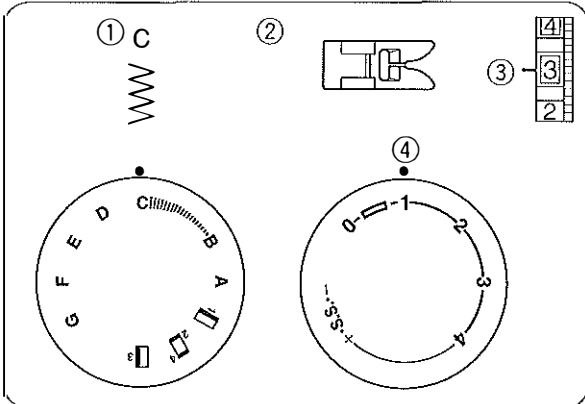
With the stitch length at "4", sew straight stitching lines 1 cm (3/8") apart, across the area to be smocked.

Knot the threads along one edge. Pull the bobbin threads and distribute the gathers evenly. Secure the threads at the other end.

Sew the decorative stitch between the gathering stitches.

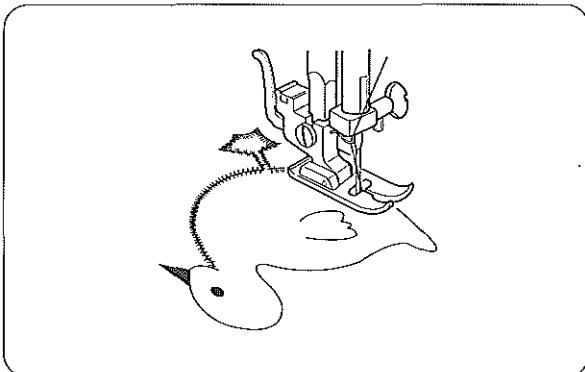
Pull out the gathering stitches.

① 1 cm



## Applique

- ① Pattern selector: C
- Presser foot: Zigzag foot
- Thread tension: 1-4
- ④ Stitch length: 0.5-1



Baste (or fuse with iron-on fabric joiner) applique pieces on the fabric.

Stitch around the applique making sure the needle falls along the outer edge of the applique.

When sewing corners, lower the needle down into the fabric.

Raise the presser foot and pivot the fabric to the right or left.



## SECTION 6. CARE OF YOUR MACHINE

### Cleaning the Bobbin Case and the Hook



#### CAUTION:

Turn off the power switch and/or unplug the machine before cleaning the feed dog.

#### To dismantle shuttle race unit:

Raise the needle to its highest position and open the hook cover.  
Open the hinged latch of bobbin case and take it out of the machine.  
Open the shuttle race ring holders and remove the shuttle race ring.  
Remove the shuttle.

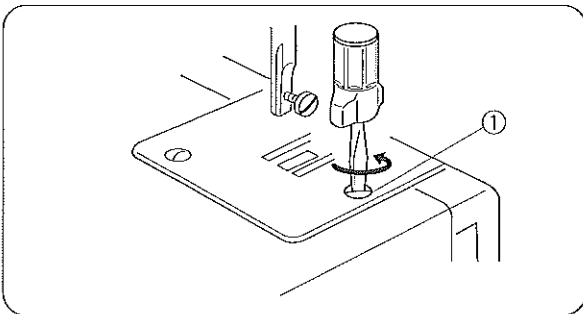
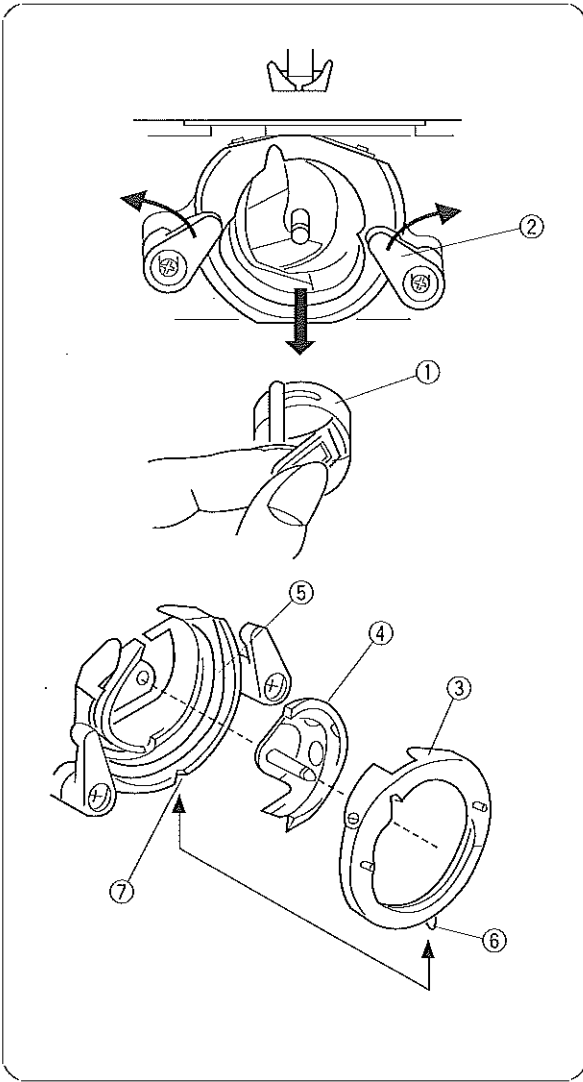
\* Clean the shuttle race with a brush and a soft dry cloth.

- ① Bobbin case
- ② Shuttle race ring holder
- ③ Shuttle race ring
- ④ Shuttle
- ⑤ Shuttle race

#### To assemble shuttle race unit:

Hold the shuttle by the center pin and fit it carefully back into the shuttle race, forming a perfect circle with the shuttle driver.  
Attach the shuttle race ring making sure the bottom pin fits into the notch.  
Lock the shuttle race ring by turning the holders back into position. Insert the bobbin case.

- ⑥ Pin
- Notch



### Cleaning the Feed Dog



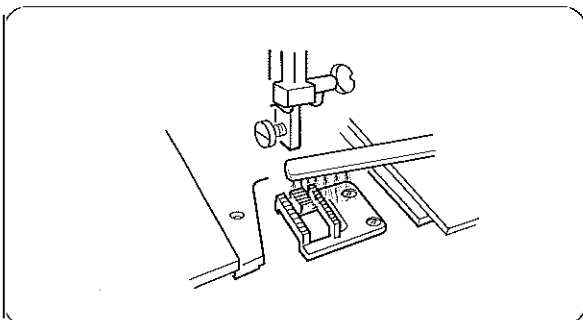
#### CAUTION:

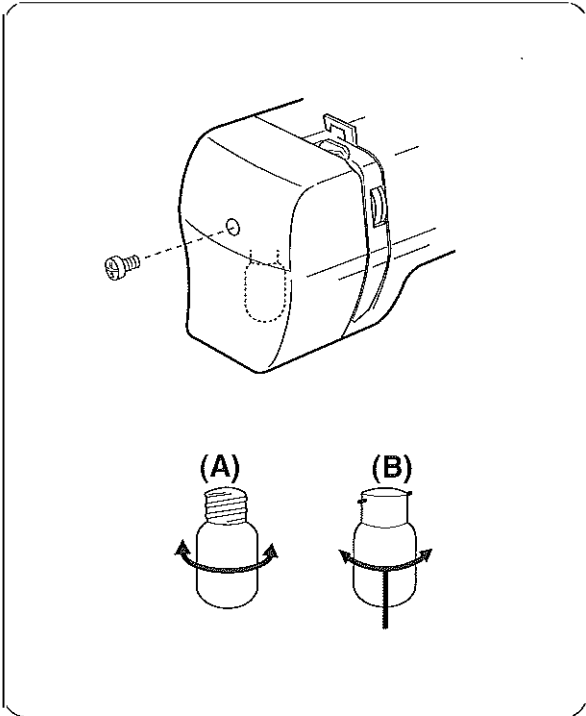
Turn off the power switch and/or unplug the machine before cleaning the feed dog.

Remove the needle and the presser foot.  
Remove the needle plate setscrew and remove the needle plate.

- ① Setscrew

With a brush, clean out dust and lint clogging the feed dog teeth.  
Reset the needle plate.






### Sewing Light

The sewing light is located behind the face plate. To change the bulb, take the face plate off the sewing machine by removing the setscrew.

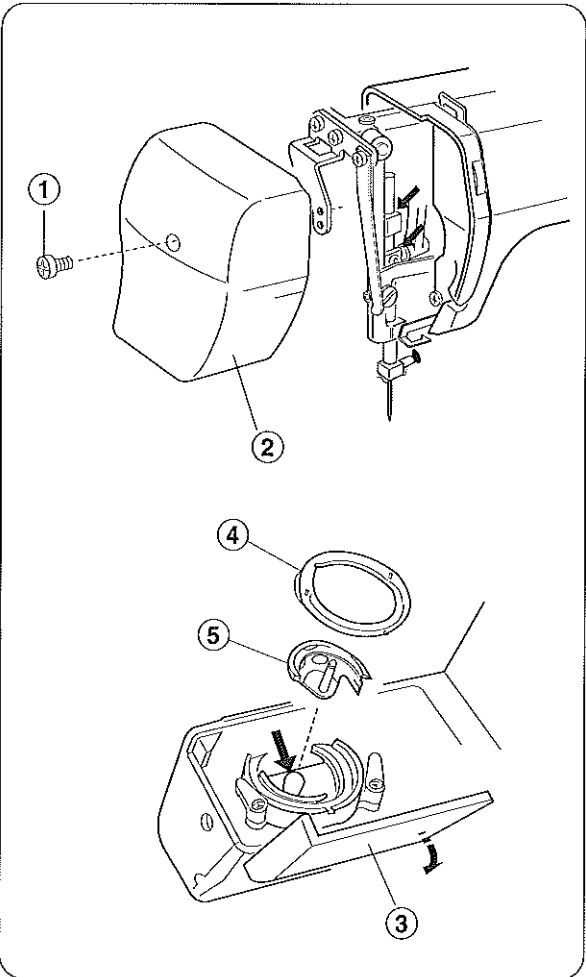
\* Unplug the power supply before changing the bulb.

\* Do not dismantle the machine other than explained in this manual.

- (A) To remove .... Turn to the left.  
To replace .... Turn to the right.
- (B) To remove .... Push and twist to the left.  
To replace .... Push and twist to the right.



**WARNING**  
The bulb could be HOT. Protect your fingers when handle it.



### Oil the Machine

**Note:** Turn off the power switch and/or unplug the machine before oil the machine.

Oil the points as shown at least once a year. Use good quality sewing machine oil. One or two drops of oil is sufficient. Remove excess oil, otherwise it may stain fabric. In case machine is not used for an extended time, oil it before sewing.

#### Oil behind the face plate

Remove the screw and face plate. Oil the point as indicated in the illustration.

- ① Screw
- ② Face plate

#### Oil behind the shuttle hook area

Open the hook cover. Remove the shuttle race ring and shuttle. Oil the point as indicated in the illustration.

- Hook cover
- ④ Shuttle race ring
- ⑤ Shuttle

## 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 fabric is not being drawn to the back when sewing is finished.</li> <li>6. The thread is either too heavy or too fine for the needle.</li> </ol>	<p>See Page 8 See Page 9 See Page 5 See Page 5 See Page 12 See Page 5</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 case.</li> <li>2. Lint has collected in the bobbin case.</li> <li>3. The bobbin is damaged and doesn't turn smoothly.</li> </ol>	<p>See Page 12 Clean the bobbin case. Exchange 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 tension of the needle thread is too tight.</li> <li>5. The fabric is not drawn to the back when sewing is finished.</li> <li>6. The needle is too fine for the fabric being sewn.</li> <li>7. The pattern selector dial had been turned while the needle was in the material.</li> </ol>	<p>See Page 5 See Page 5 See Page 5 See Page 9 See Page 12 See Page 5 See Page 10</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. The needle thread is not threaded properly.</li> </ol>	<p>See Page 5 See Page 5 See Page 5  See Page 8</p>
<b>Seam puckering</b>	<ol style="list-style-type: none"> <li>1. The needle thread tension is too tight.</li> <li>2. The machine is not threaded correctly.</li> <li>3. The needle is too heavy for the fabric being sewn.</li> <li>4. The stitches are too coarse for the fabric being new line sewn.</li> </ol> <p>* When sewing extremely light weight materials, place a sheet of paper underneath the fabric.</p>	<p>See Page 9 See Page 8 See Page 5 Make the stitches denser.</p>
<b>Stitches form loops below the work</b>	<ol style="list-style-type: none"> <li>1. The needle thread tension is too loose.</li> <li>2. The needle is either too heavy or too fine for the thread.</li> </ol>	<p>See Page 9 See Page 5</p>
<b>The cloth is not feeding smoothly.</b>	<ol style="list-style-type: none"> <li>1. The feed dog is packed with lint.</li> <li>2. The stitches are too fine.</li> </ol>	<p>See Page 25 Make the stitches coarser.</p>
<b>The machine does not work.</b>	<ol style="list-style-type: none"> <li>1. The machine is not plugged in.</li> <li>2. Thread is caught in the shuttle race.</li> <li>3. Handwheel has been disengaged for bobbin winding.</li> </ol>	<p>See Page 4 See Page 25 See Page 7</p>
<b>The machine does not run smoothly and is noisy.</b>	<ol style="list-style-type: none"> <li>1. Threads have been caught in hook mechanism.</li> <li>2. The feed dog is packed with lint.</li> </ol>	<p>See page 25 See Page 25</p>





