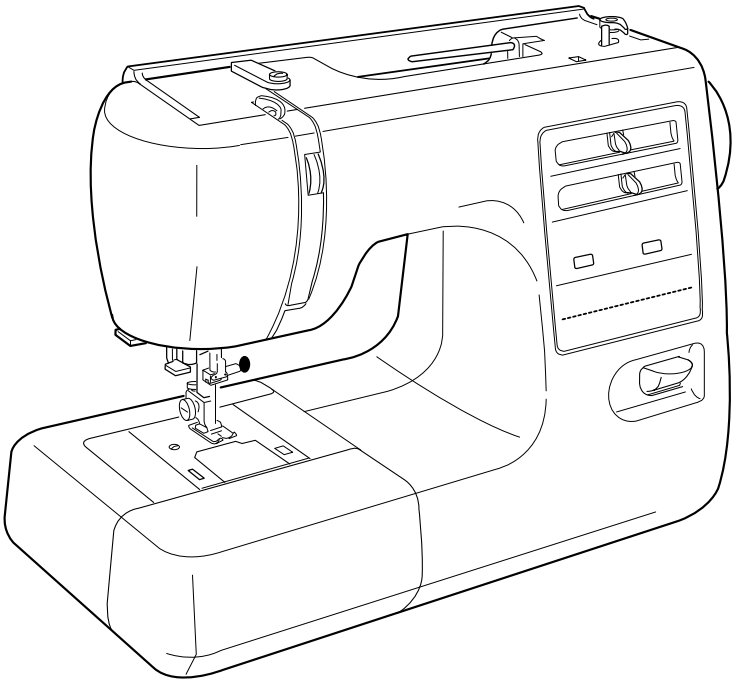
Instruction Book



IMPORTANT SAFETY INSTRUCTIONS

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
Children should be supervised to ensure that they do not play with the appliance.

When using an electrical appliance, basic safety precautions should always be followed, including the following:

This sewing machine is designed and manufactured for household use only.

Read all instructions 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.

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

1. 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.
   Return this sewing machine to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
4. Never operate the appliance with any air opening blocked. Keep ventilation openings of this sewing machine and foot controller free from accumulation of lint, dust and loose 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)

TABLE OF CONTENTS

SECTION I. NAME OF PARTS
Names of Parts 2
Standard Accessories 3

SECTION II. GETTING READY TO SEW
Connecting Machine to Power Supply 4
Before Using Your Sewing Machine 4
For Your Safety 4
Controlling Sewing Speed 4
Operating Instructions:..... 4
Pressure Adjusting Lever 5
Presser Foot Lifter 5
Thread Cutter 5
Extension Table 5
• Detaching the table 5
• Attaching the table 5
• Accessory box 5
Changing Needle 6
To Remove and Attach the Foot Holder 6
• To remove 6
• To attach 6
Changing Presser Foot 6
• To remove 6
• To attach 6
Presser Foot Types 7
• A: Zigzag foot 7
• T: Button sewing foot 7
• R: Automatic buttonhole foot 7
• E: Zipper foot 7
• G: Blind hem stitch foot 7
• F: Satin stitch foot 8
• C: Overedge foot 8
• Quilter 8
Selecting Needle and Fabric 9
Bobbin Winding 10-11
• Horizontal spool pin 10
• Additional spool pin 10
• Bobbin winding 11
• Removing the hook cover plate 12
• Inserting the bobbin 12
Threading the Machine 13-14
• Threading the machine 13
• Needle threader 13
• Drawing up bobbin thread 14
Adjust the Needle Thread Tension for a Straight Stitch .. 14-15
• Correct tension 14
• Tension is too tight 14
• Tension is too loose 15
Adjust the Needle Thread Tension for a Zigzag Stitch 15
• Correct tension 15
• Tension is too tight 15
• Tension is too loose 15
Stitch Selector 16
Stitch Length Zones 16
Stitch Width Control 17
Stitch Length Control 17
Adjusting Stretch Stitch Balance 18
Reverse Stitch Control 18

SECTION III. STRAIGHT STITCH SEWING
Straight Stitch 19
• Starting to sew 19
• Finishing sewing 19
Use the Seam Guides 19
Turn a Square Corner 19
Topstitching 20
Quilting 20
Zipper Sewing 21-22
• To snap on the zipper foot 21
• Fabric preparation 21
• To sew 21-22
To Drop or Raise the Feed Dogs 23
Darning 23

SECTION IV. ZIGZAG STITCH SEWING
Basic Zigzag 24
Satin Stitching 24
Monogramming 25
Applique 25
Bar Tacking 26
Embroidery 26
Button Sewing 27
Overcasting 27

SECTION V. UTILITY AND DECORATIVE STITCHES
Blind Hem Stitch 28
• To sew 28
Lace Work 29
Multiple Zigzag Stitch 29
• Seam finishing 29
• Mending 29
Shell Stitch 30
Box Stitch 30
Fagoting Stitch 31
Two-point Shell Stitch 31
Two-point Box Stitch 31
Overedge Stitch 32
Decorative Stitch Patterns 32

SECTION VI. STRETCH STITCHES
Straight Stretch 33
Rick-rack Stretch 33
Overcast Stretch Stitching 34
• To sew 34
Smocking 34
• To sew 34
Serging 35
Elastic Stretch Stitch 35
Stretch Patching 35
Herring Bone Stretch 36
Decorative Stretch Patterns 36

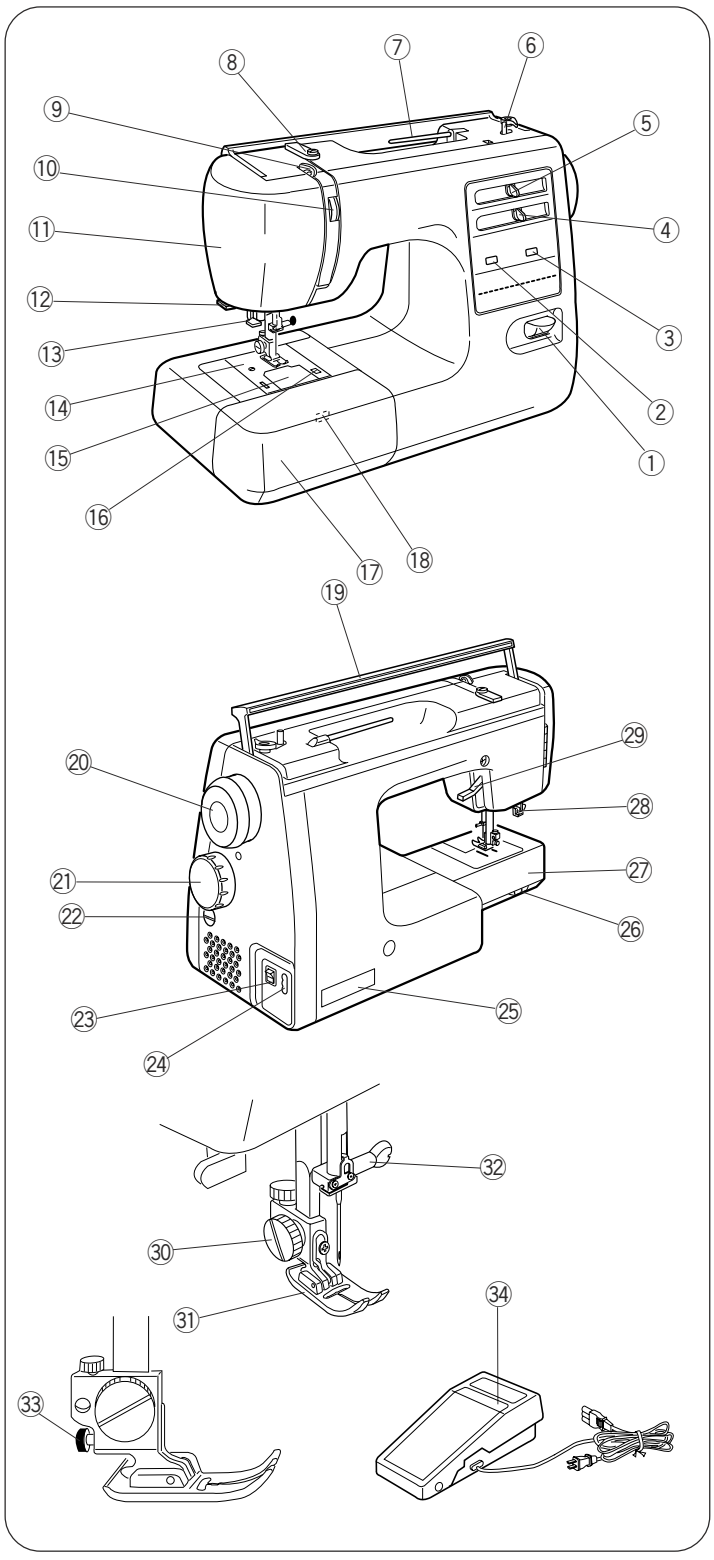
SECTION VII. BUTTONHOLE
Automatic Buttonhole 37-39
• Preparation for sewing 37
• To sew 37-39
• How to adjust buttonhole stitch density 39
Corded Buttonhole 40

SECTION VIII. CARE OF YOUR MACHINE
Replacing the Light Bulb 41
Cleaning the Bobbin Holder 41
Cleaning the Shuttle Race and Feed Dogs 42
Oiling the Machine 42
Troubleshooting 43

SECTION I. NAME OF PARTS

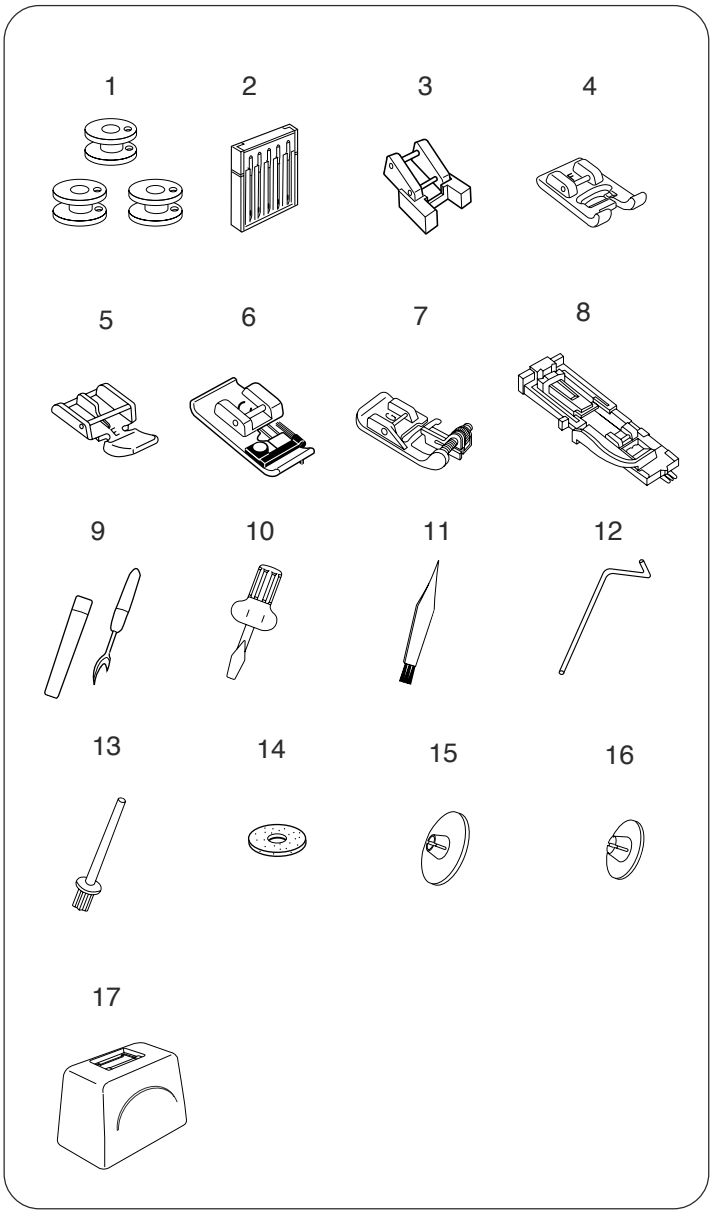
Names of Parts

① Reverse stitch control
② Stitch width setting display
③ Stitch length setting display
④ Stitch length control
⑤ Stitch width control
⑥ Bobbin winder spindle
⑦ Spool pin
⑧ Upper thread guide
⑨ Thread take-up lever
⑩ Thread tension dial
⑪ Face cover
⑫ Thread cutter
⑬ Needle threader
⑭ Needle plate
⑮ Hook cover plate
⑯ Hook cover plate release button
⑰ Extension table (Accessory box)
⑱ Buttonhole pitch balance adjusting lever
⑲ Carrying handle
⑳ Handwheel
㉑ Stitch pattern selector
㉒ Feed balancing dial
㉓ Power switch
㉔ Machine socket
㉕ Nomenclature plate
㉖ Drop feed dog lever
㉗ Free-arm
㉘ Buttonhole lever
㉙ Presser foot lifter
㉚ Thumb screw
㉛ Presser foot
㉜ Needle clamp screw
㉝ Snap-on button
㉞ Foot control



Standard Accessories

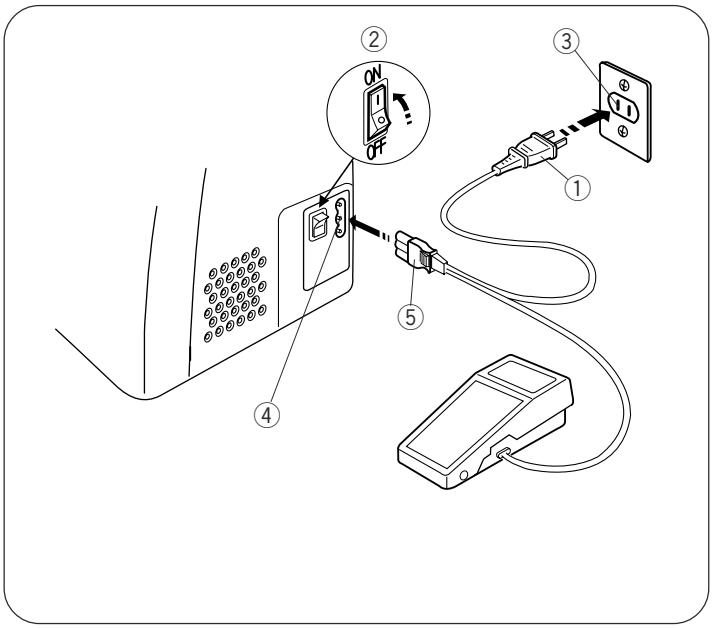
1 Bobbins
2 Assorted needle set
3 T:Button sewing foot
4 F:Satin stitch foot
5 E:Zipper foot
6 C:Overcasting foot
7 G:Blind hem foot
8 R:Automatic buttonhole foot
9 Seam ripper / Buttonhole opener
10 Screwdriver
11 Lint brush
12 Quilter bar
13 Additional spool pin
14 Spool pin felt
15 Spool holder (large)
16 Spool holder (small)
17 Carrying case (hard cover)



SECTION II. GETTING READY TO SEW

Connecting Machine to Power Supply

① Power supply plug
② Power switch
③ Outlet
④ Machine socket
⑤ Machine plug



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

1. Turn off the power switch ②.
2. Insert the machine plug ⑤ into the machine socket ④.
3. Insert the power supply plug ① into the outlet ③.
4. Turn the power switch ② to turn on the power.

Before Using Your Sewing Machine

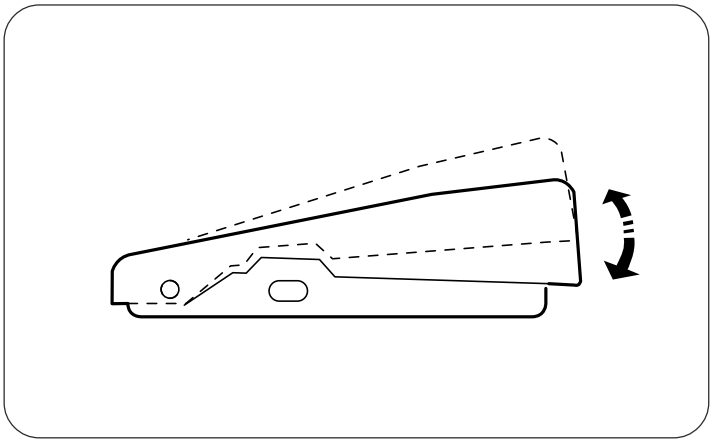
Before using your sewing machine for the first time, place a waste fabric under the presser foot and run the machine with thread for a few minutes. Wipe away any oil which may appear.

For Your Safety

* While in operation, always keep your eyes on the sewing area. Do not touch any moving parts such as the thread take-up lever, handwheel or needle.
* Always turn off the power switch and unplug from the power supply:
  - When leaving the machine unattended.
  - When attaching or removing any parts.
  - When cleaning the machine.
* Do not place anything on the foot control, when not sewing.

Controlling Sewing Speed

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



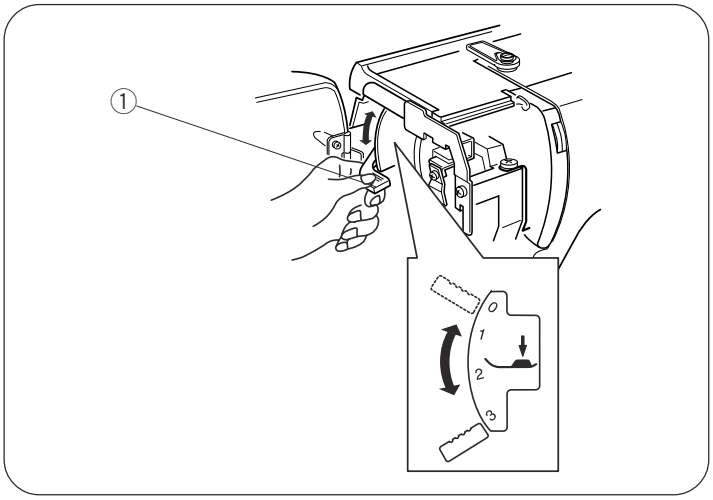
Operating Instructions:

This appliance has 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 in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet.
Do not modify the plug in any way.
Foot Controller Model YC-482J-EC or TJC-150 is used with this sewing machine.

Pressure Adjusting Lever

① Pressure adjusting lever

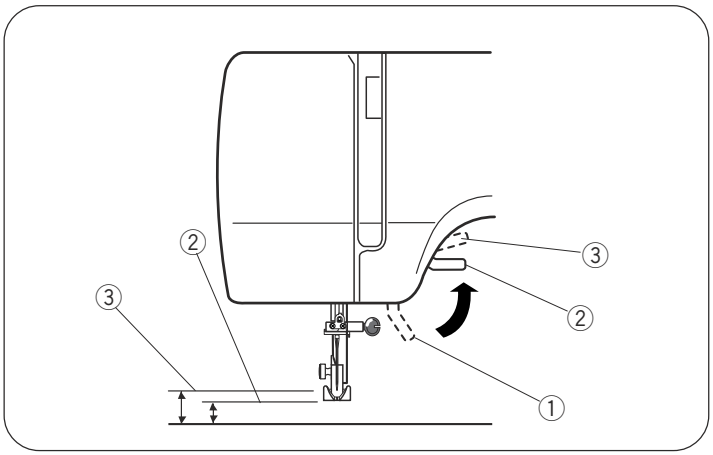
The pressure adjusting lever should be set at “3” for regular sewing.
Reduce the pressure to “2” for applique, cut work, draw work and basting.
Set the pressure at “1” when sewing chiffon, lace, organdy and other fine fabrics. Velour and knits with a lot of stretch may also require the pressure at “1”.



Presser Foot Lifter

① Presser foot lifter
② Normal up position
③ Highest position

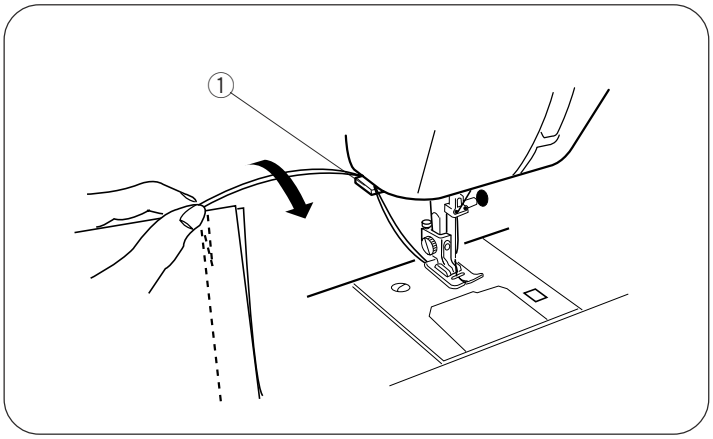
The presser foot lifter raises and lowers the presser foot. You can raise it about 1/4" (0.6 cm) higher than the normal up position for easy removal of the presser foot, or to help you place heavy fabric under the foot.



Thread Cutter

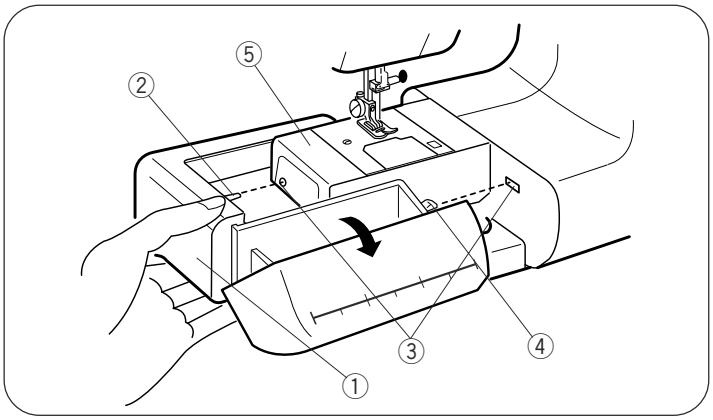
① Thread cutter

You do not need a pair of scissors to cut the thread after sewing. Simply use the built-in thread cutter.



Extension Table

- **Detaching the table**
  Pull the table away from the machine, as illustrated, for “free-arm” sewing of cuffs and sleeves.
- **Attaching the table**
  Push the extension table until it snaps into the machine.
  ① Extension table
  ② Pin
  ③ Holes
  ④ Tab
  ⑤ Free-arm
- **Accessory box**
  Open the cover of the accessory box toward you. The sewing accessories are conveniently located in the box.



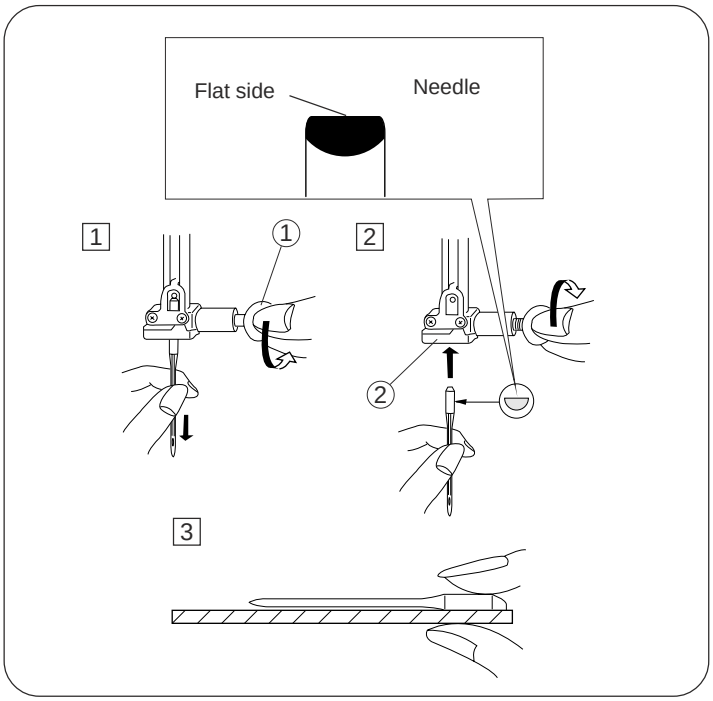
Changing Needle

① Needle clamp screw
② Needle clamp

1 Turn off the power switch.
Raise the needle to its highest position by turning the handwheel counterclockwise, toward you, and lowering the presser foot. Loosen the needle clamp screw ① by turning it counterclockwise. Remove the needle from the needle clamp ②.

2 Insert a new needle into the needle clamp ② with the flat side to the rear. When inserting the needle into the needle clamp ②, push it up as far as it goes. Tighten the needle clamp screw ① firmly by turning it clockwise.

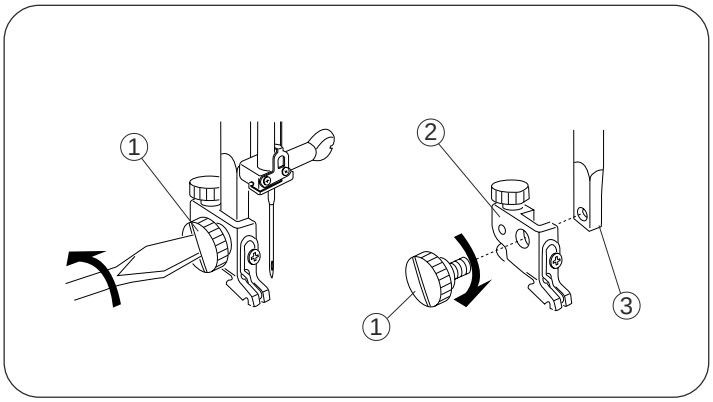
3 To see if the needle is good, place the flat side of the needle onto something flat (needle plate, glass, etc.). The gap between the needle and the flat surface should be consistent. Never use a bent or blunt needle.
A damaged needle can cause permanent snags or runs in knits, fine silks and silk-like fabrics.



To Remove and Attach the Foot Holder

① Thumb screw
② Foot holder
③ Presser bar

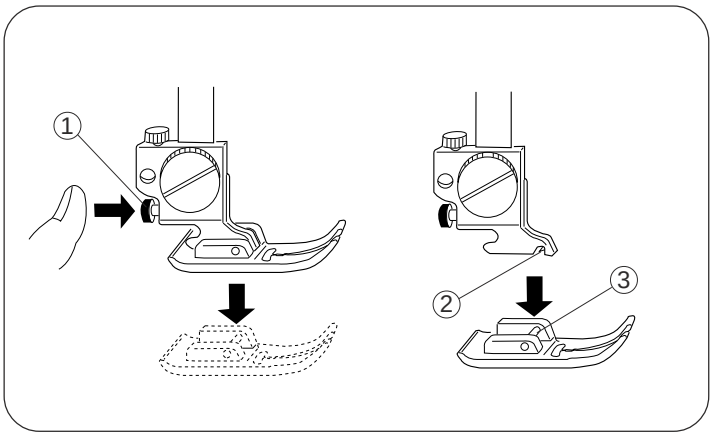
- **To remove**
Remove the thumb screw ① by turning it counterclockwise with a screwdriver.
- **To attach**
Match the hole in the foot holder ② with the threaded hole in the presser bar ③. Fit the thumb screw ① into the hole. Tighten the screw ① by turning it clockwise with a screwdriver.



Changing Presser Foot

① Snap-on button (red button)
② Groove
③ Pin

- **To remove**
Raise the needle to its highest position by turning the handwheel counterclockwise. Raise the presser foot, and press the red button ① on the back of the foot holder.
- **To attach**
Place the selected presser foot, so that the pin ② on the foot lies just under the groove ③ on the foot holder. Lower the presser bar to lock the foot into place.



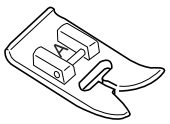
Presser Foot Types

• **Zigzag foot (Foot A)**

Use this foot for both straight and zigzag stitching.

For: Straight stitch (page 19)
Topstitching (page 20)
Quilting (page 20)
Darning (page 23)
Basic zigzag (page 24)
Bar tacking (page 26)
Overcasting (page 27)
Lace work (page 29)
Multiple zigzag stitch (page 29)
Box stitch (page 30)
Fagoting stitch (page 31)
Two-point shell stitch (page 31)
Two-point box stitch (page 31)
Overedge stitch (page 32)
Decorative stitch patterns (page 32)
Straight stretch (page 33)
Rick-rack stretch (page 33)
Overcast stretch stitching (page 34)
Smocking (page 34)
Serging (page 35)
Elastic stretch stitch (page 35)
Stretch patching (page 35)
Herring bone stretch (page 36)
Decorative stretch patterns (page 36)

Foot A:

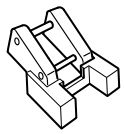


• **Button sewing foot (Foot T)**

Use this foot for button sewing.

For: Button sewing (page 27)

Foot T:

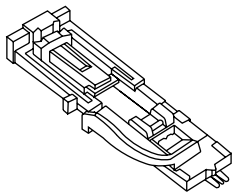


• **Automatic buttonhole foot (Foot R)**

Use this foot for one step automatic buttonholing. Simply set a button on the guide of this foot and depress the foot control. You can sew exactly the same length of the buttonhole as the button.

For: Automatic buttonhole (page 37)

Foot R:

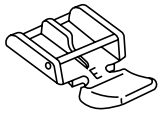


• **Zipper foot (Foot E)**

This foot can be set to sew on each side of the zipper. The edges of the foot guide the zipper and keep the seam straight.

For: Zipper sewing (page 21)

Foot E:

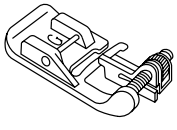


• **Blind hem stitch foot (Foot G)**

Use this foot for perfect blind hemming and topstitching. The foot has ridges on the bottom to keep the fabric from slipping, and a screw on top to guide the folded edge of your hem.

For: Blind hem stitch (page 28)

Foot G:



Presser Foot Types (continued)

• Satin stitch foot (Foot F)

Use this foot for satin stitch and outlining applique.

For:

	Darning	(page 23)
	Satin stitch	(page 24)
	Monograming	(page 25)
	Applique	(page 25)
	Shell stitch	(page 30)
	Decorative stitch patterns	(page 32)
	Smocking	(page 34)

Foot F:



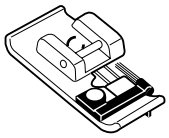
• Overedge foot (Foot C)

This foot is specially constructed for stitching and/or overcasting seams. The small brush and wire guides help control the fabric, hold the raw edge in place and keep it from puckering, especially when sewing on knit fabrics.

For:

	Overcasting	(Page 27)
	Overedge stitch	(Page 32)
	Serging	(Page 35)
	Herring bone stretch	(Page 36)

Foot C:



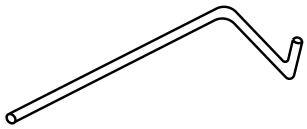
• Quilter

The quilter helps keep the stitching lines straight.

For:

	Quilting	(page 20)

Quilter:



Selecting Needle and Fabric

For general sewing, use needle sizes 11 or 14. A fine thread and needle should be used for sewing lightweight fabrics, so the fabric will not be marred. Heavy fabrics require a needle large enough to pierce the fabric without fraying the needle thread. In the needle set, there is one each of sizes 11, 14, 16, and 18, and a blue needle. Use the blue needle to eliminate skipped stitches when sewing knits and synthetic fabrics.

Special needles should be used on certain fabrics. A denim needle with a sharp tip effectively pierces dense fabrics such as denim and canvas. For topstitching, a special topstitching needle with a larger eye, accommodates heavier weight thread. Leather needles punch small holes in leather and suede, allowing the thread to follow through the hole.

Check your needles frequently for rough or blunt tips. Snags and runs in knits, fine silks and silk-like fabrics are permanent, and are often caused by damaged needles.

Always purchase a good quality thread. It should be strong, smooth and consistent in thickness.

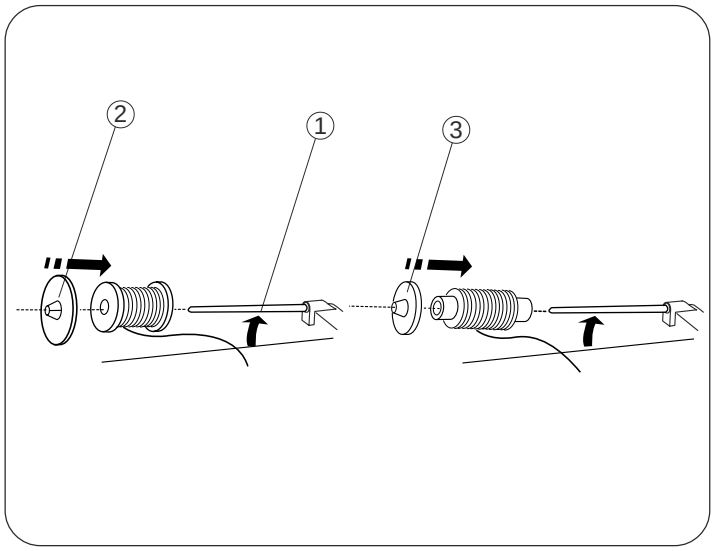
WEIGHT	FABRIC	TYPE OF NEEDLE	NEEDLE SIZE
Very Light	Chiffon, Georgette, Fine Lace, Organdy, Organdy Net, Tulle	Universal Ball Point	9 (65) 9 (65)
Light	Batiste, Voile, Lawn, Pure Silk, Crepe de Chine, Sheer Crepe, Chambray, Handkerchief Linen, Gingham, Challis, Percale, Wool Crepe, Peau de Soie, Taffeta, Satin, Silk Surah, Satin-backed Crepe, Qiana	Universal Blue	11 (75) 11 (75) 12 (80)
	Single Knits, Jersey, Swimwear, Tricot	Blue Ball Point	11 (75) 11 (75)
	Leather, Suede	Wedge Point Leather	11 (75)
Medium	Flannel, Velour, Velvet, Muslin, Velveteen, Poplin, Corduroy, Broadcloth, Linen, Chintz, Gabardine, Felt, Terry, Burlap, Quilted Fabrics	Universal	14 (90)
	Double Knits, (synthetic and natural) Stretch Velour, Stretch Terry, Sweater Knits	Ball Point	14 (90)
	Leather, Vinyl, Suede	Wedge Point Leather	14 (90)
Heavy	Denim, Sailcloth, Ticking	Denim	16 (100)
	Double Faced Wool, Heavy Coating, Fake Fur, Drapery Fabrics	Universal	16 (100)
	Leather, Suede	Wedge Point Leather	16 (100)
	Canvas, Duck, Upholstery Fabrics	Universal	18 (110)
All	Topstitching for Special Finish	Topstitching	11 (75) 14 (90)

Bobbin Winding

• Horizontal spool pin

① Spool pin
② Large spool holder
③ Small spool holder

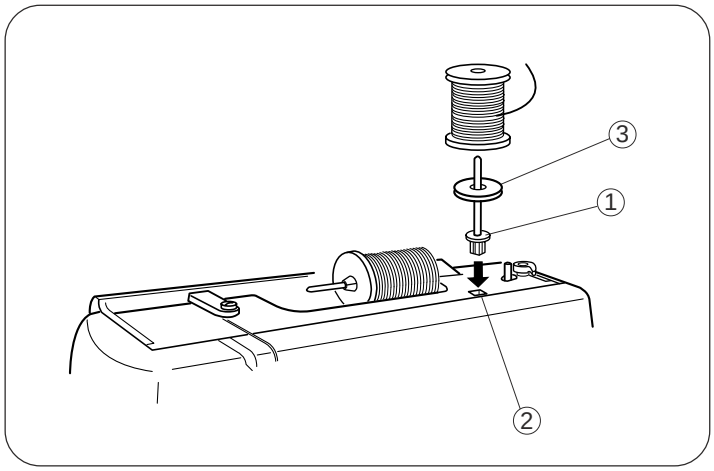
Lift up the spool pin ①. Place a spool of thread on the spool pin with the thread coming off the spool as shown. Attach the large spool holder ②, and press it firmly against the spool of thread.
The small spool holder ③ is used with narrow or small spools of thread.



• Additional spool pin

① Additional spool pin
② Spool pin hole
③ Spool pin felt

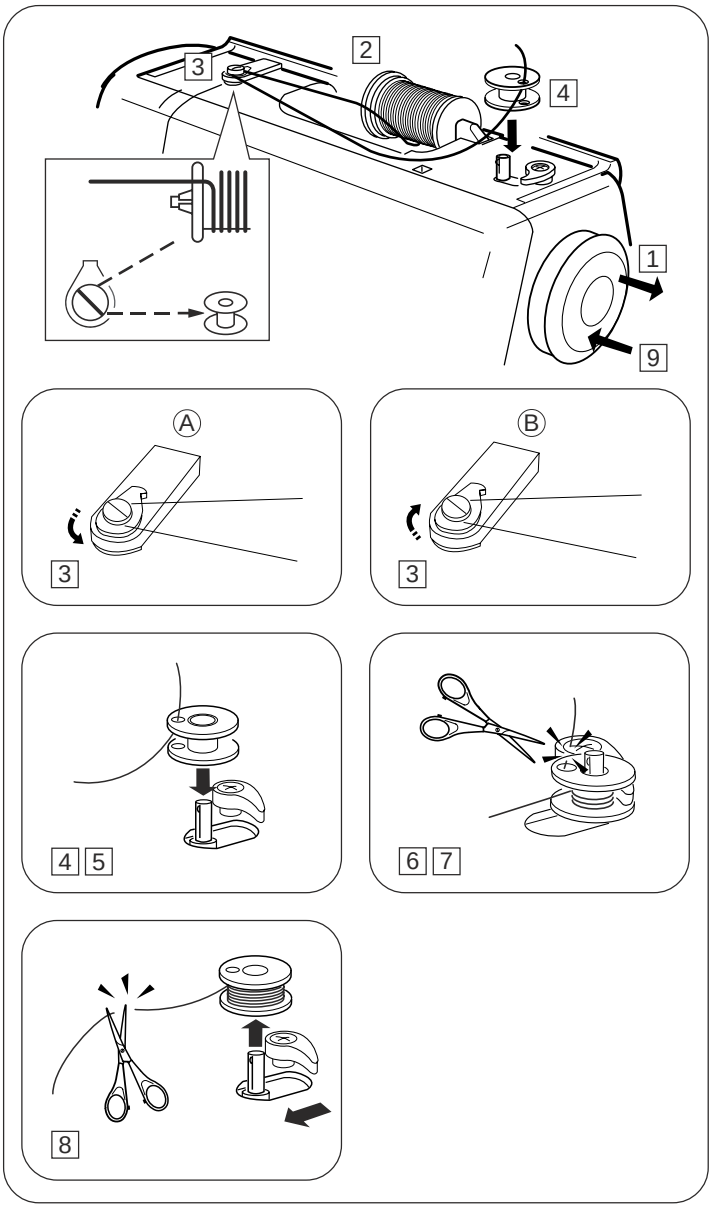
The additional spool pin ① is for bobbin winding, without unthreading the machine, and for twin needle sewing.
Insert the additional spool pin ① into the hole ②.
Place the felt ③ and a spool on the pin.



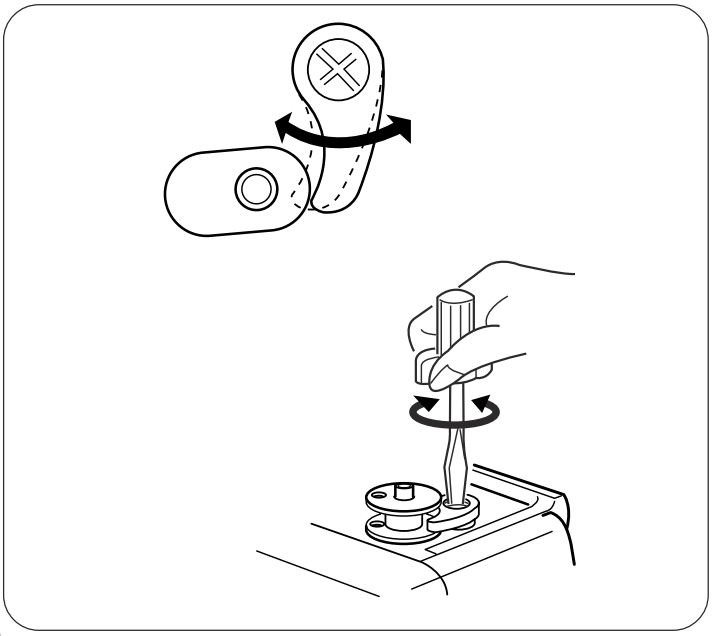
• **Bobbin winding**

1 Pull the handwheel out to the right.
2 Draw the thread from the spool.
3 Guide the thread around the thread guide.
   Ⓐ For the horizontal spool pin
   Ⓑ For the additional spool pin
4 Thread through the hole in the bobbin from the inside to the outside.
5 Put the bobbin on the bobbin winder spindle.
6 Push the bobbin to the right.
7 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 then cut the thread close to the hole in the bobbin.
8 Depress the foot control again. When the bobbin is fully wound, it stops automatically. Return the bobbin winder to its original position by moving the spindle to the left, and cut the thread as shown.

9 Push the handwheel in. The machine will not sew until the clutch is engaged.



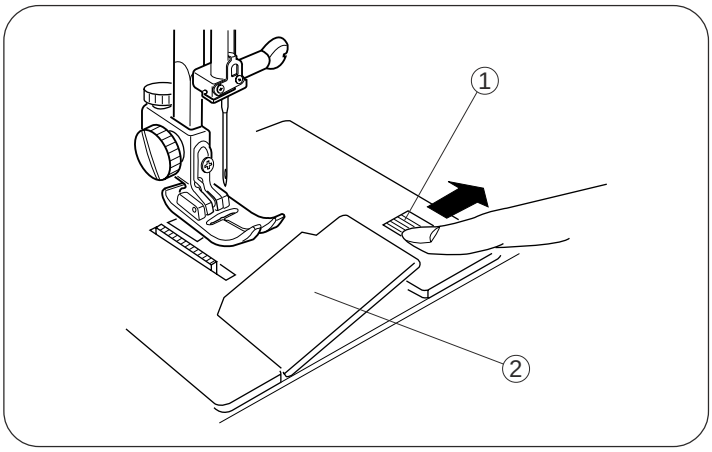
NOTE:
The position of the bobbin winder stopper is adjustable depending on the required amount of thread on the bobbin (example: 1/2 full or full). Using a screwdriver, loosen the screw one turn or less, so that you can adjust the position of the bobbin winder stopper. Do not take the screw all the way out. Retighten the screw to fix the stopper at the desired position.



• Removing the hook cover plate

① Hook cover plate release button
② Hook cover plate

Slide the hook cover plate release button ① to the right, and remove the cover plate ②.

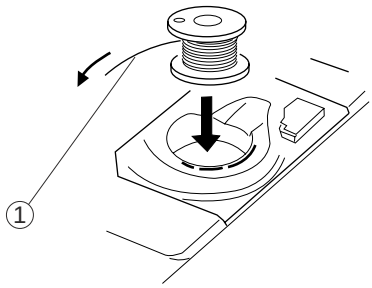


• Inserting the bobbin

① End of thread
② Notch
③ Notch
④ Threading diagram

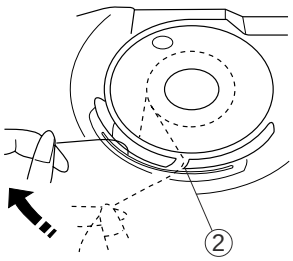
1 Place a bobbin in the bobbin holder with the thread running off counterclockwise.

1



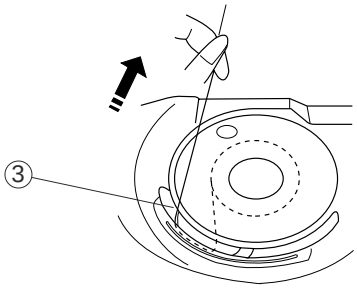
2 Guide the thread into notch ② on the front side of the bobbin holder. Draw the thread to the left, sliding it between the tension spring blades.

2



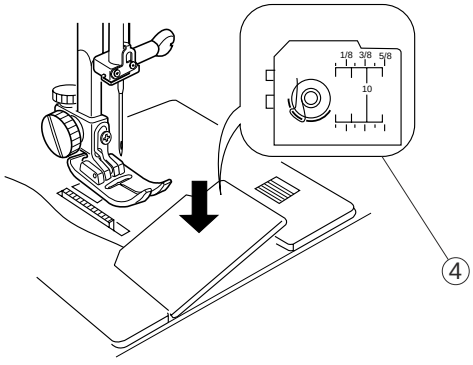
3 Continue to draw the thread lightly until the thread slips into notch ③. Pull out about 6" (15.0 cm) of thread.

3



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

4



Threading the Machine

• Threading the machine

* Raise the thread take-up lever to its highest position by turning the handwheel counterclockwise.
* Raise the presser foot lifter.
* Place a spool on the spool pin, with the thread coming off as shown.

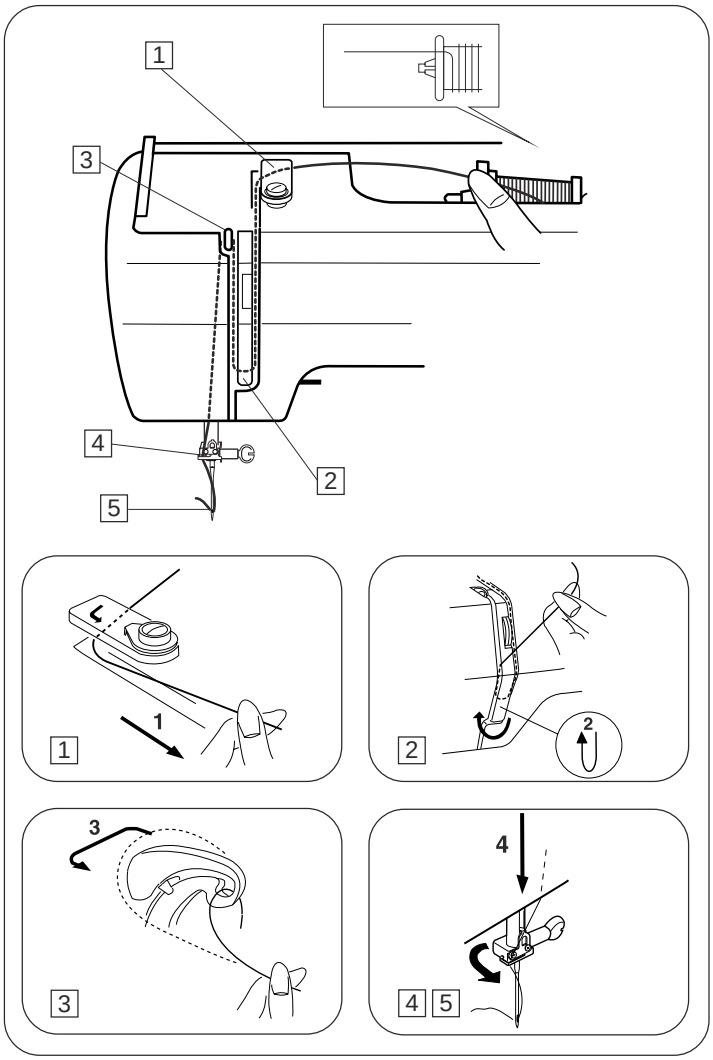
1 Draw the end of the thread around the upper thread guide.

2 While holding the thread near the spool, draw the end of the thread down around the check spring holder.

3 Firmly draw the thread up from right to left over the take-up lever, and down into the take-up lever eye.

4 Slide the thread behind the needle bar thread guide on the left.

5 Thread the needle from front to back, or use a needle threader.



• Needle threader

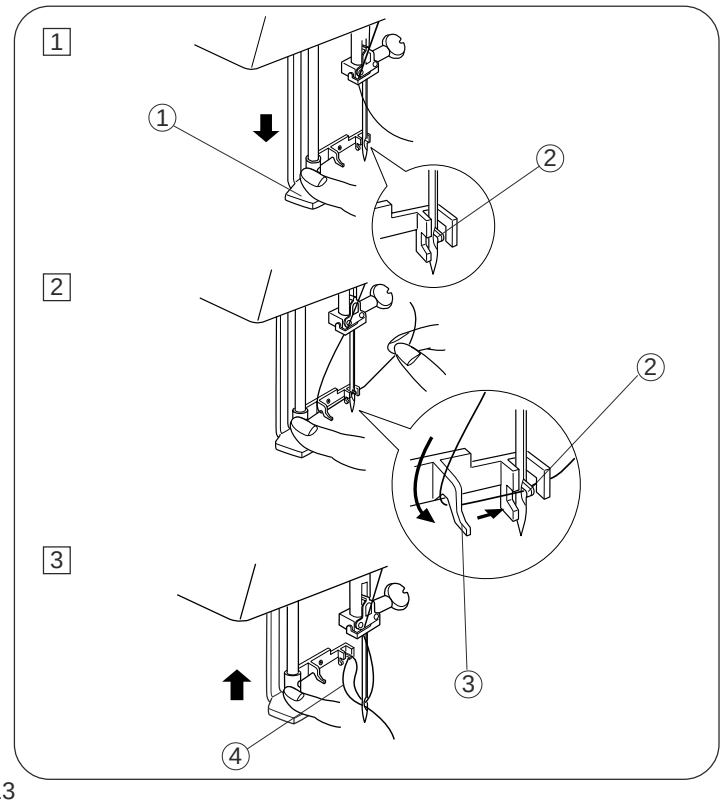
① Knob
② Hook
③ Guide
④ Thread end

1 Raise the needle to its highest position. Push down the needle threader knob ① as far as it will go.
The hook comes out through the needle eye from behind.

2 Paying close attention to the needle point, draw the thread around the guide ③ and under the hook ②.

3 Release the knob slowly while holding the thread end ④ with your hand. A loop of the thread is pulled up through the needle eye.

NOTE:
The needle threader can be used with a #11 to #16 needle, or a #11 Blue needle.
Thread size 50 to 90 is recommended.

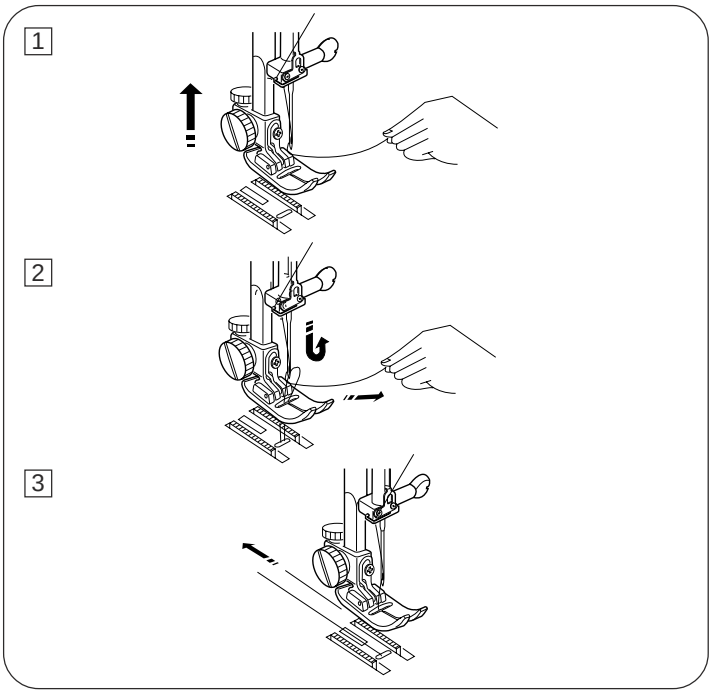


• **Drawing up bobbin thread**

1 Raise the presser foot. Hold the needle thread lightly with your left hand and rotate the handwheel counterclockwise for one complete turn.

2 Bring the bobbin thread up by pulling the needle thread up.

3 Pull both threads 4" to 6" (10.0 to 15.0 cm) under and behind the presser foot.



Adjust the Needle Thread Tension for a Straight Stitch

• **Correct tension**

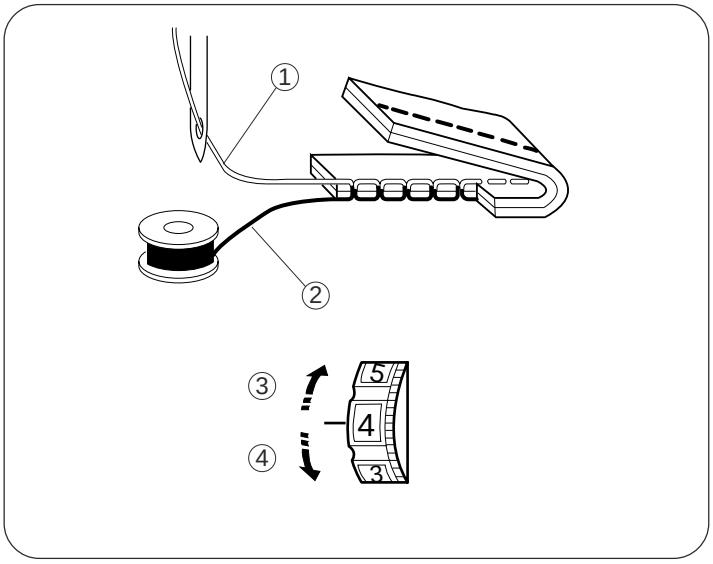
① Needle thread (Top thread)
② Bobbin thread (Bottom thread)
③ To loosen
④ To tighten

The ideal straight stitch has threads locked between two layers of fabric, as illustrated (magnified to show detail).

If you look at the top and bottom of a seam, notice that the stitches are evenly balanced.

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

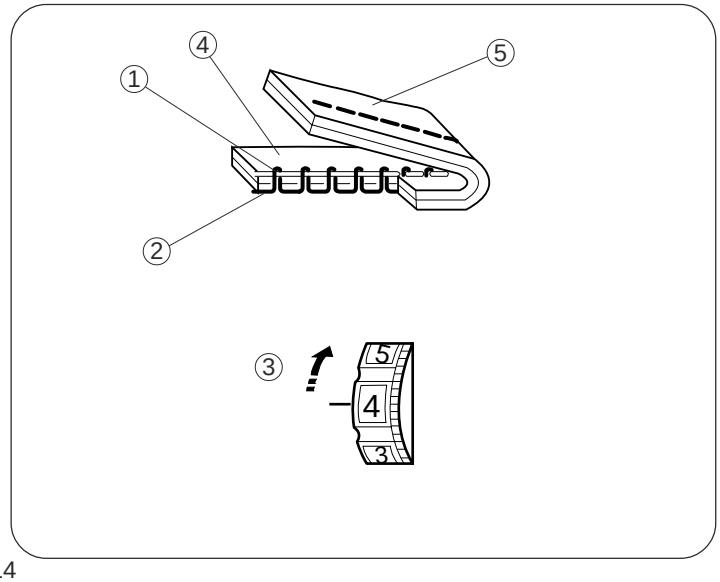
Results depend on:
- stiffness and thickness of the fabric
- number of fabric layers
- type of stitch



•**Tension is too tight**

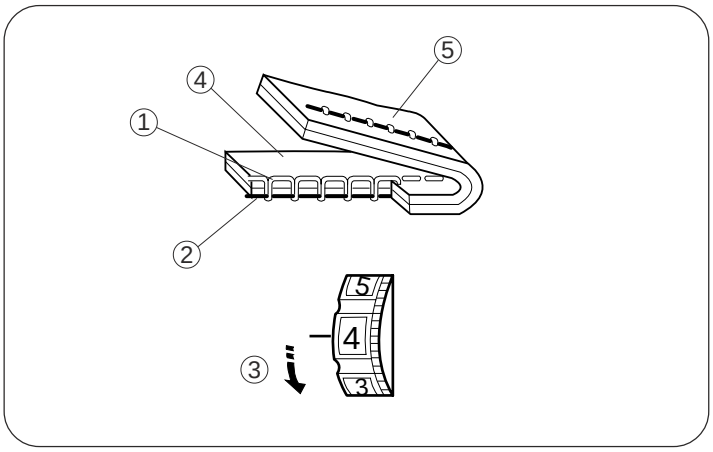
① Needle thread (Top thread)
② Bobbin thread (Bottom thread)
③ To loosen tension
④ Right side (Top side) of fabric
⑤ Wrong side (Bottom side) of fabric

The bobbin thread shows through on the wrong side of the fabric, and the stitch feels bumpy. Turn the dial to a lower tension setting number to loosen the needle thread tension.



• **Tension is too loose**
① Needle thread (Top thread)
② Bobbin thread (Bottom thread)
③ To tighten tension
④ Right side (Top side) of fabric
⑤ Wrong side (Bottom side) of fabric

The needle thread shows through on the wrong side of the fabric, and the stitch feels bumpy. Turn the dial to a higher tension setting number to tighten the needle thread tension.

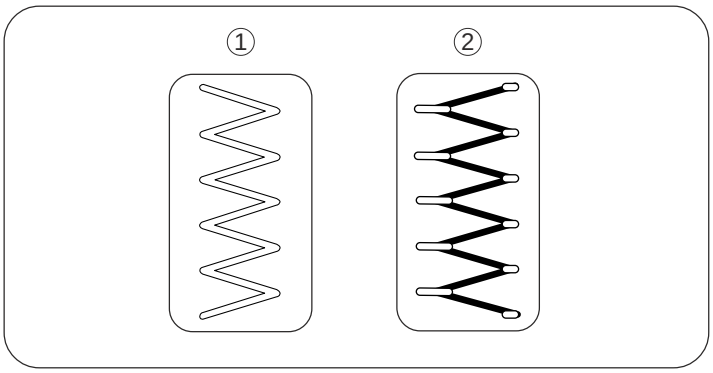


Adjust the Needle Thread Tension for a Zigzag Stitch

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 (Bottom side) of the fabric.
See the illustrations for the correct appearance.
To match this appearance, adjust the needle tension.

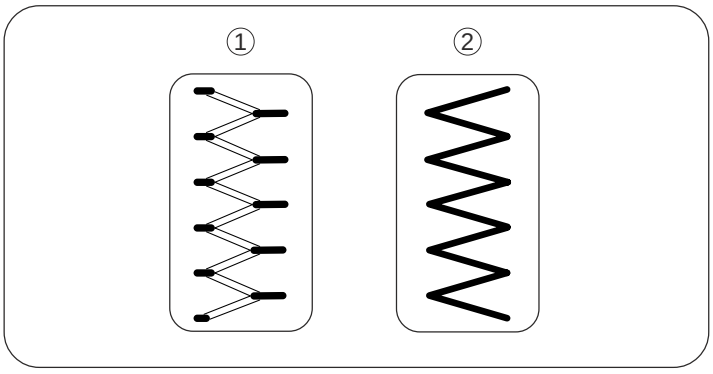
• **Correct tension**
① Right side (Top side) of fabric
② Wrong side (Bottom side) of fabric

Minimize the amount of needle thread visible on the wrong side (Bottom side) of the fabric without causing excessive puckering, or causing the bobbin thread to show on the right side (Top side) of the fabric.
Results vary with fabric, thread and sewing conditions.



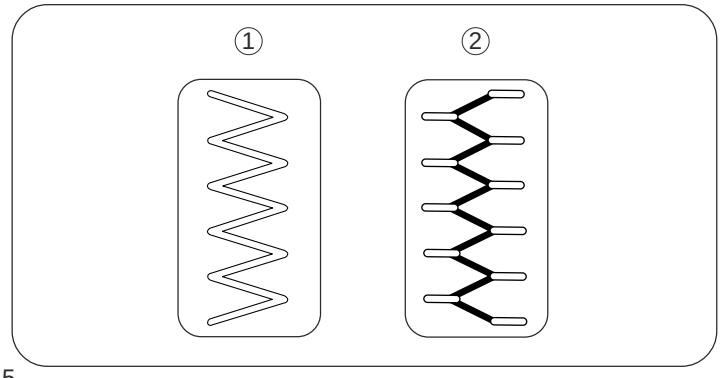
• **Tension is too tight**
① Right side (Top side) of fabric
② Wrong side (Bottom side) of fabric

The corner of each zigzag pulls together on the right side of the fabric.



• **Tension is too loose**
① Right side (Top side) of fabric
② Wrong side (Bottom side) of fabric

The corner of each zigzag pulls together on the wrong side of the fabric.



Stitch Selector (how to select stitches)

① Sewing guide display
② Red indicator
③ Stitch selector

Turn the stitch selector until the red indicator reaches the desired stitch.
The bottom row of stitches on the pattern indicating panel is selected when the stitch length control is set at the stretch stitch position.
Recommended stitch width, stitch length are shown in the sewing guide display.
When you turn the stitch selector, the information in the display changes automatically.
Use the color in the sewing guide display which corresponds to the color of the selected stitch.

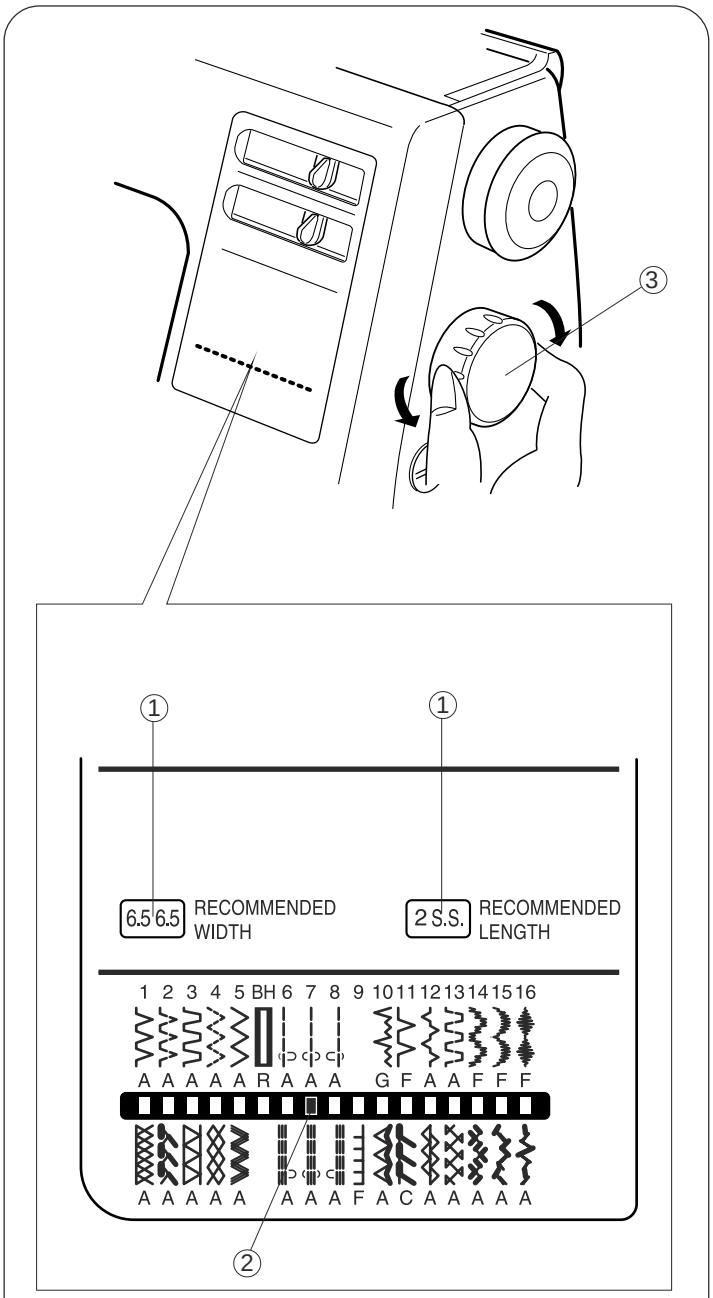
NOTE:
To avoid needle or fabric damage, make sure the needle is up and out of the fabric while selecting a stitch.

Stitch patterns are color-coded to a recommended setting zone at the stitch length control.

Stitch Length Zones:

Red:	Straight, Zigzag and Utility stitches
Green:	Geometric decorative stitches
Blue:	Built-in buttonhole
Gold:	Stretch stitches

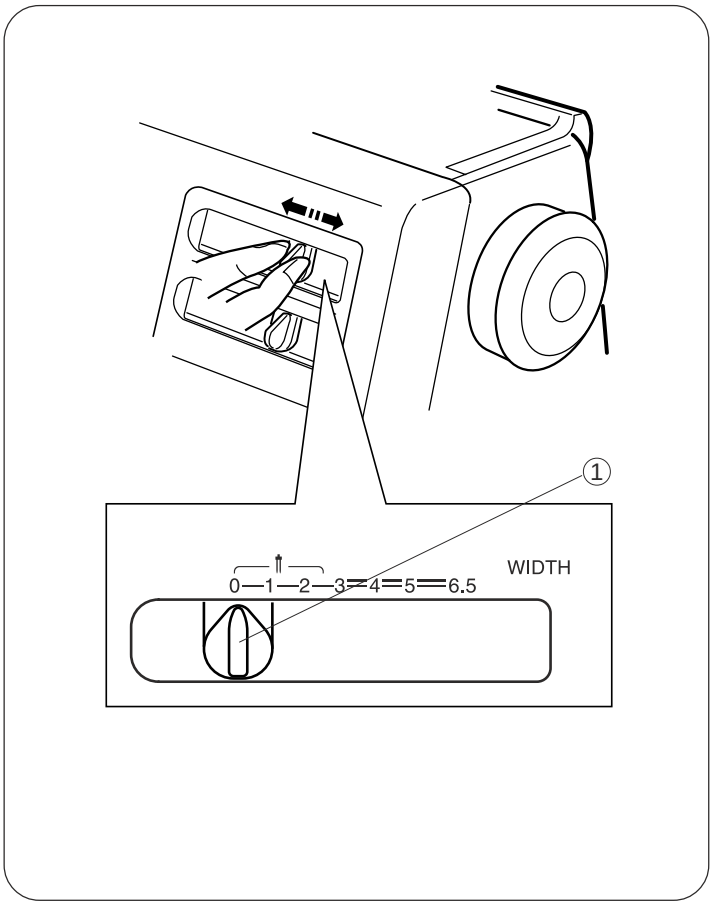
NOTE:
Only the stretch stitch is available in pattern #9. Set the stitch width control at S.S..



Stitch Width Control
(how to adjust the stitch width)

Slide the stitch width control to the desired stitch width number.
The higher the number, the greater the stitch width. The mark shows the adjustment range when using the twin needle. The blue zone is the appropriate adjustment range for buttonhole sewing.

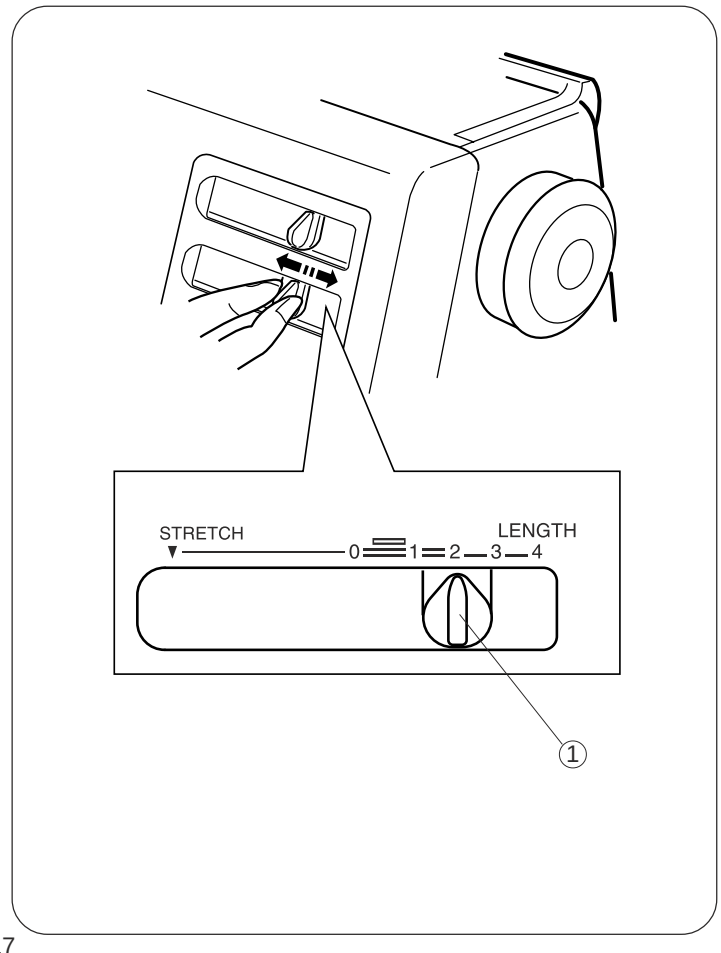
* Before sliding the stitch width control, be sure to raise the needle above the fabric.
  ① Stitch width control



Stitch Length Control
(how to adjust the stitch length)

Slide the stitch length control to the desired stitch length number.
Set the stitch length control at S.S. when using a stretch stitch. The higher the number, the greater the stitch length. The mark shows the adjustment range when sewing the buttonhole.

* Raise the presser foot before sliding the stitch length control.
  ① Stitch length control



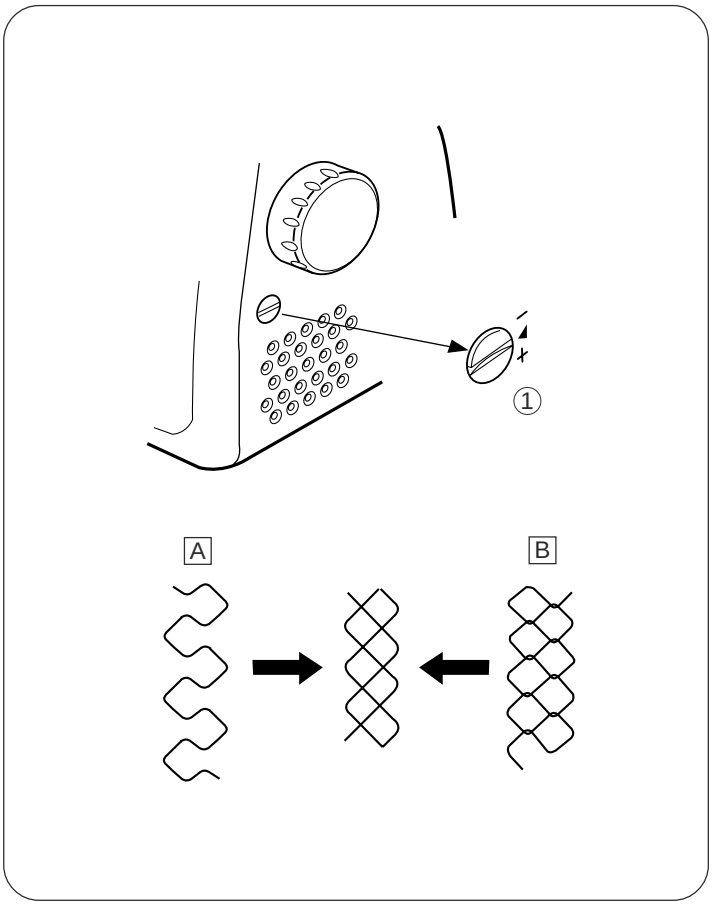
Adjusting Stretch Stitch Balance

①Feed balancing dial

If the stretch stitch patterns are uneven when you sew on a particular fabric, adjust them with the feed balancing dial①. To adjust the distorted patterns:

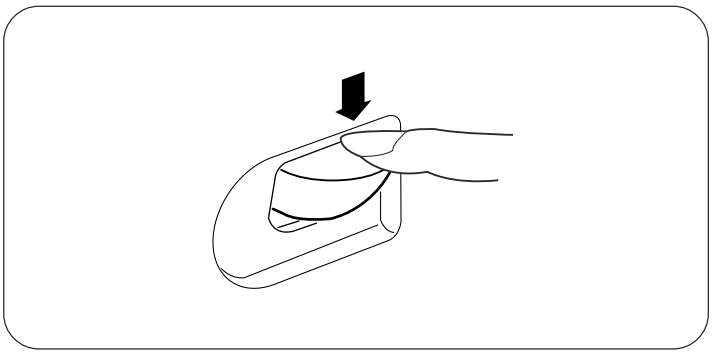
A If the patterns are drawn out, correct them by turning the dial in the "–" direction.

B If the patterns are compressed, correct them by turning the dial in the "+" direction.



Reverse Stitch Control

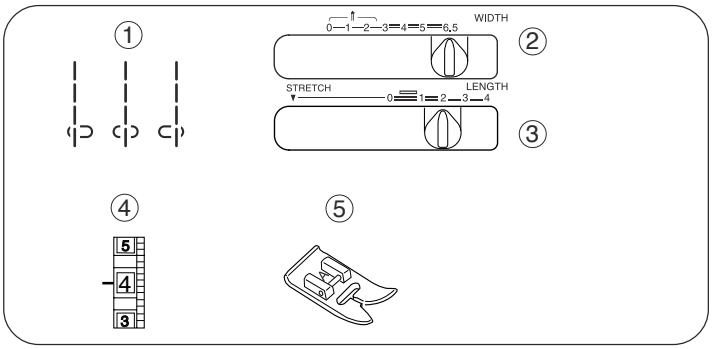
Press the stitch control to sew in reverse.



SECTION III. STRAIGHT STITCH SEWING

Straight Stitch

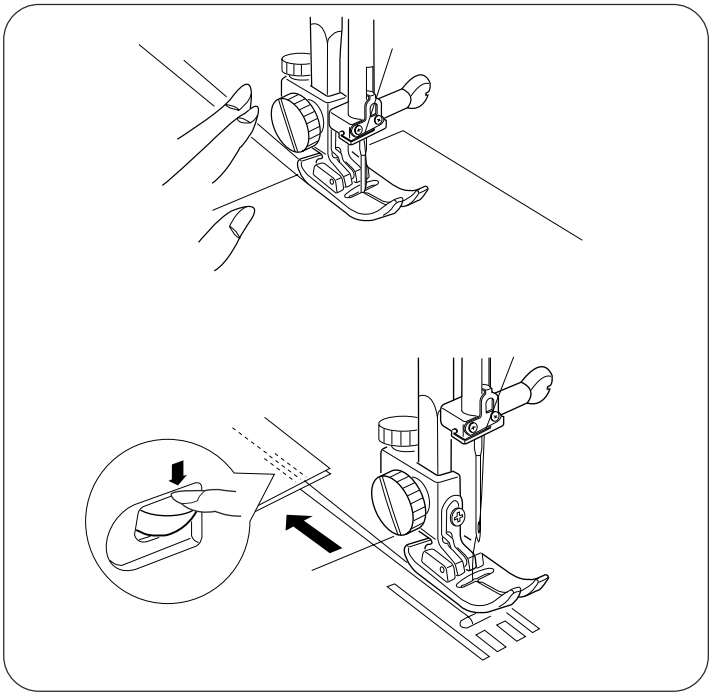
① Stitch selector: 6 to 8
② Stitch width: 6.5
③ Stitch length: Red zone
④ Needle thread tension: 2 to 6
⑤ Presser foot A: Zigzag foot



- **Starting to sew**
  Raise the presser foot and position the fabric next to a seam guide line on the needle plate (5/8" (1.6 cm) is most common). Lower the needle to the point where you want to start. Lower the presser foot and pull the threads toward the back. Depress the foot control. Gently guide the fabric along a seam guide line letting the fabric feed naturally.

WARNING: Do not place fingers near to the presser foot when guiding fabric, or the needle clamp screw may strike and injure your fingers.

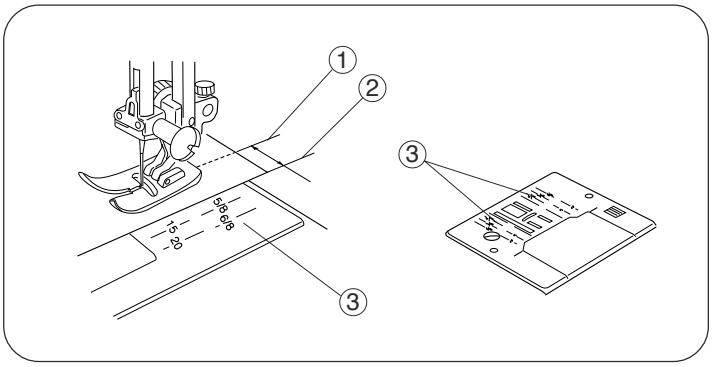
- **Finishing sewing**
  To fasten the ends of a seam, press the reverse stitch control and sew several reverse stitches. Raise the presser foot. Remove the fabric, draw the threads to the back and cut them with the thread cutter. The threads are now the proper length to begin sewing the next seam.



Use the Seam Guides

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

The seam guides on the needle plate are there to help you measure seam width. The numbers on the needle plate indicate the distance between the center needle position and the edge of the fabric. The lines are 1/8" (0.3 cm) apart, and are engraved at 3/8", 4/8", 5/8", and 6/8". The lines in millimeters are 5 mm apart, and are engraved at 10 mm, 15 mm and 20 mm.

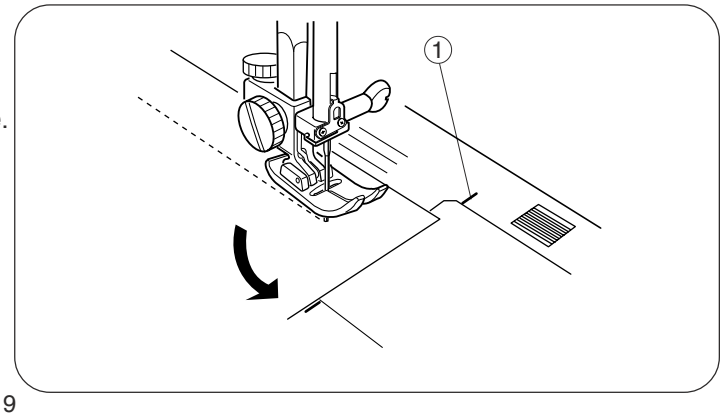


Turn a Square Corner

① Cornering guide

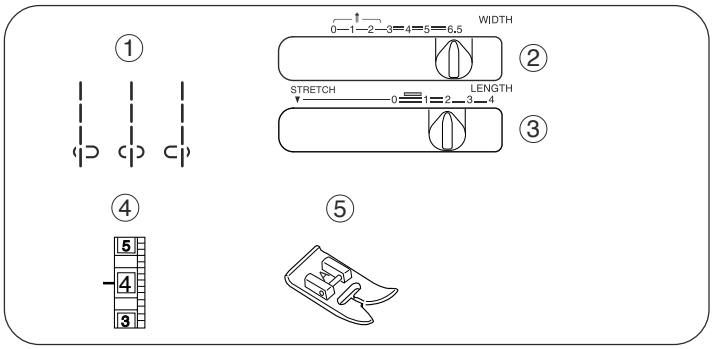
When sewing with fabric edge at 5/8" seam guide, to turn a square so that sewing continues at same distance from edge.

1. Stop stitching when front edge of fabric reaches the cornering guide lines.
2. Lower the needle by turning the hand wheel counterclockwise.
3. Raise the presser foot and turn the fabric counterclockwise 90°.
4. Lower the presser foot, and begin stitching in the new direction.

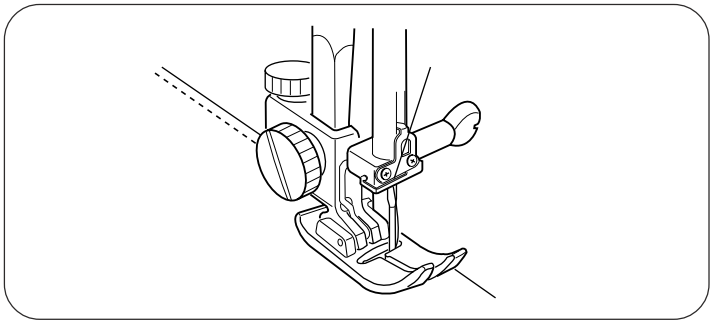


Topstitching

① Stitch selector: 6 to 8
② Stitch width: 6.5
③ Stitch length: Red zone
④ Needle thread tension: 2 to 6
⑤ Presser foot A: Zigzag foot

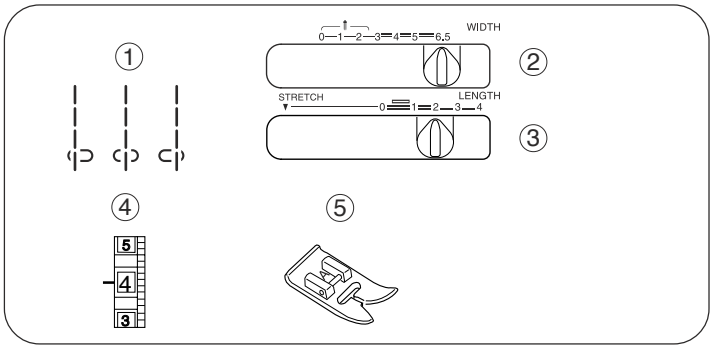


Topstitching emphasizes lines of garments and keeps seams and edges flat and crisp. Accent suits or blouses with one or two rows of topstitching around the outer edges of cuffs, lapels or collars. Lower the presser foot and keep the edge of the fabric next to the right edge of the presser foot.
Evenly guide the fabric along the edge to produce an even row of topstitching 3/8" (1.0 cm) from the edge.



Quilting

① Stitch selector: 6 to 8
② Stitch width: 6.5
③ Stitch length: Red zone
④ Needle thread tension: 2 to 6
⑤ Presser foot A: Zigzag foot

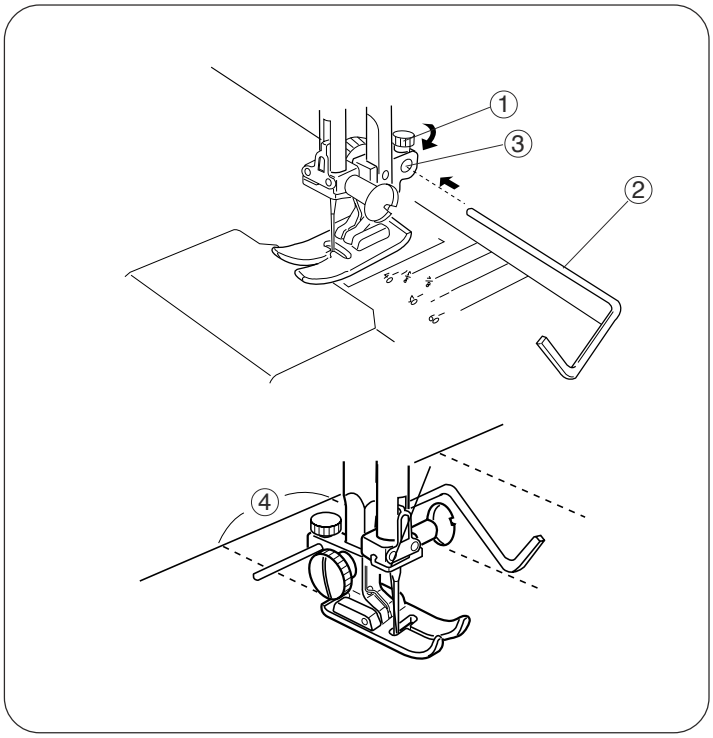


Use the seam guide lines on the needle plate, and the free-arm, to help determine the distance between quilting stitches. The quilter will help keep the stitching line straight.

1 Loosen the quilter holding screw.
Slide the quilter in the hole to the desired width and tighten the screw.

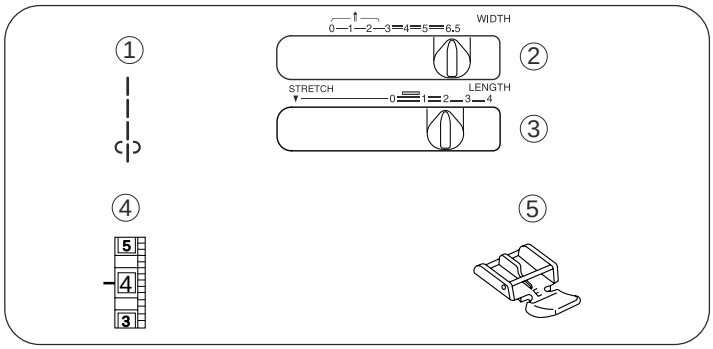
2 Sew, guiding the quilter over the previous row of stitching.

① Quilter holding screw
② Quilter
③ Hole
④ Distance



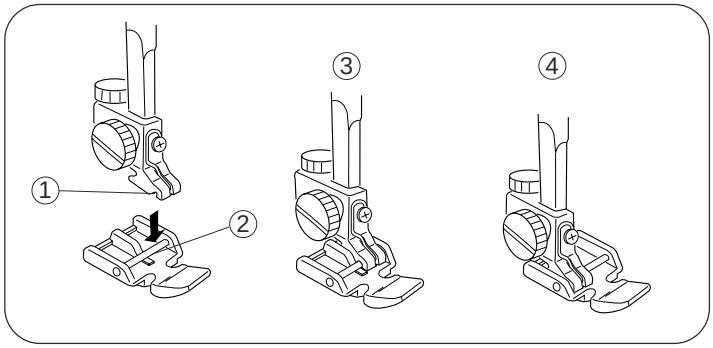
Zipper Sewing

① Stitch selector: 7
② Stitch width: 6.5
③ Stitch length: 2
④ Needle thread tension: 2 to 6
⑤ Presser foot E: Zipper foot



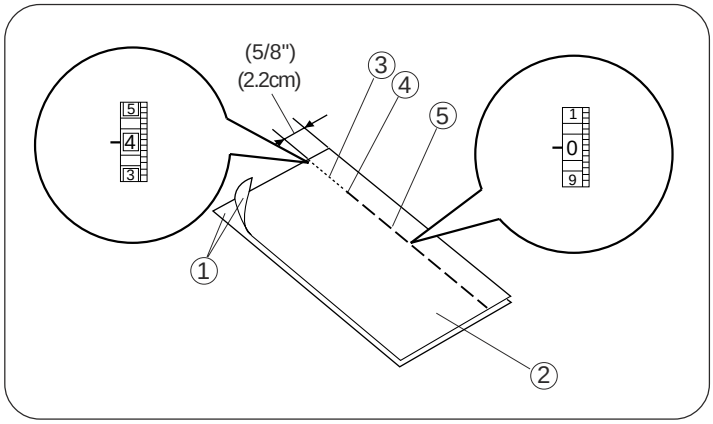
- **To snap on the zipper foot**
  ① Groove
  ② Pin
  ③ To sew left side
  ④ To sew right side

  Fit the pin on the zipper foot into the groove on the foot holder.
  * To sew the left side of the zipper, attach zipper foot on the right-hand side of pin.
  * To sew the right side of zipper, attach the zipper foot on the left-hand side of pin.



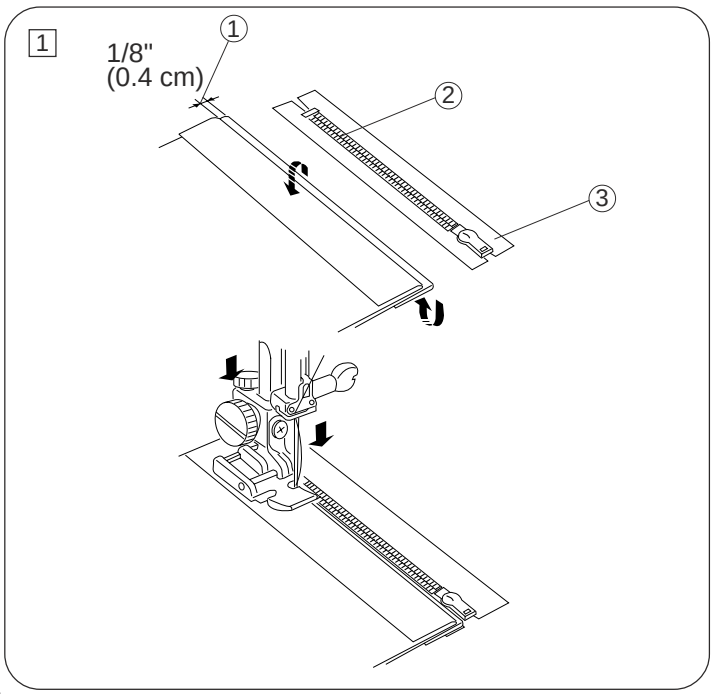
- **Fabric preparation**
  ① Right (top) side of fabric
  ② Wrong (bottom) side of fabric
  ③ Bottom seam
  ④ Zipper bottom stop position
  ⑤ Basting stitch

  Place the right (top) sides of the fabric ① together. Sew a bottom seam ③ 5/8" (2.2 cm) from the right edge to the estimated zipper bottom stop position ④. Sew in reverse a few stitches to lock.
  Increase the stitch length to 4, set needle thread tension to 0, and sew basting stitch ⑤ the entire length of the zipper sewing.



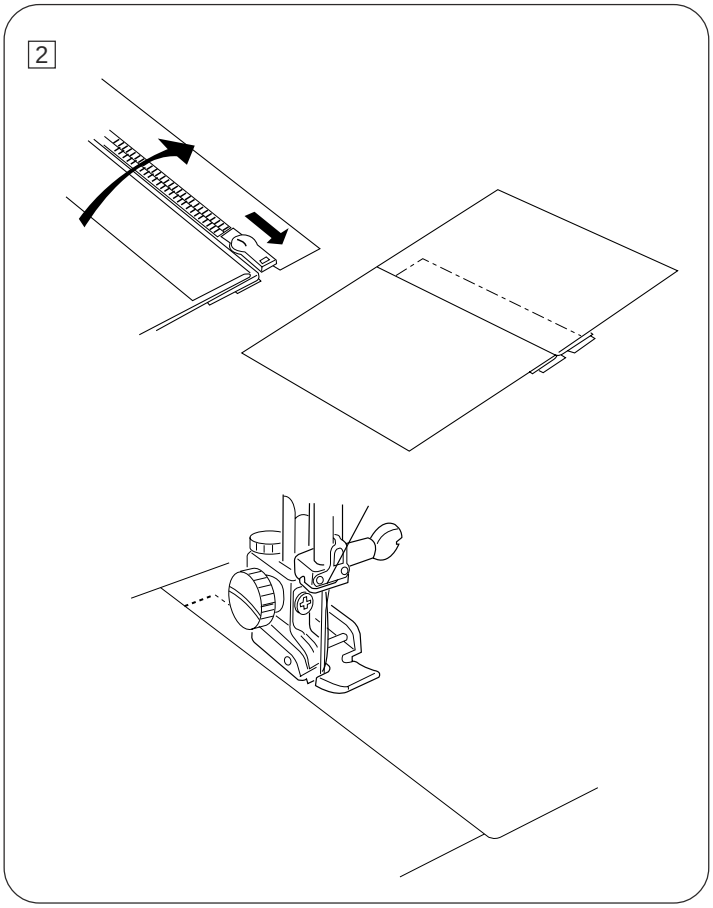
- **To sew**
  ① 1/8" (0.4cm) fabric margin
  ② Zipper teeth
  ③ Zipper tape

1 Attach zipper foot on right-side of pin.
  Fold back the upper layer seam allowance. Fold back the lower layer seam allowance to leave a 1/8" (0.4 cm) margin of fabric ①.
  Place zipper teeth next to margin edge and pin margin to zipper tape.
  Align zipper foot with margin edge. Return thread tension and stitch length to original settings. Sew a seam the entire length of zipper tape, removing pins as you go.
  Before reaching pull-tab, stop the machine with needle in the fabric and raise the foot, then unzip a few inches to clear a path for the stitch.
  Remove fabric and close zipper.



Zipper Sewing (Continued)

2 Raise and release foot, and re-attach it on left-hand side of pin. Take the upper fabric layer and lay it flat over the zipper. Starting just below zipper bottom stop, sew across fabric to about 3/8" to 1/2" distance from the basting stitch line. Turn fabric 90° and sew a seam the entire length of zipper tape. Before reaching pull-tab, stop the machine with needle in fabric and raise the foot. Use seam ripper to open a few inches of basting stitch, then unzip a few inches to clear a path for the stitch. At end of seam, sew in reverse a few stitches to lock. Once both sides of zipper are sewn, use seam ripper to open the basting stitch.

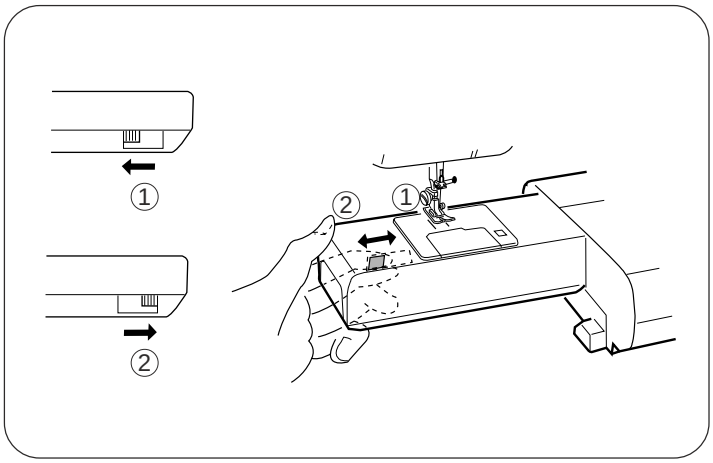


To Drop or Raise the Feed Dogs

The drop feed dogs lever is located underneath the free arm bed on the back side of the machine.

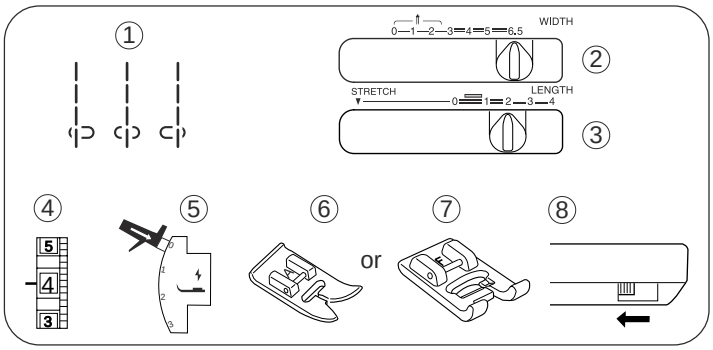
① To drop the feed dogs, push the lever in the direction of the arrow, as illustrated.

② To raise the feed dogs, push the lever in the direction of the arrow, as illustrated, and turn the handwheel toward you. Feed dogs must be up for normal sewing.



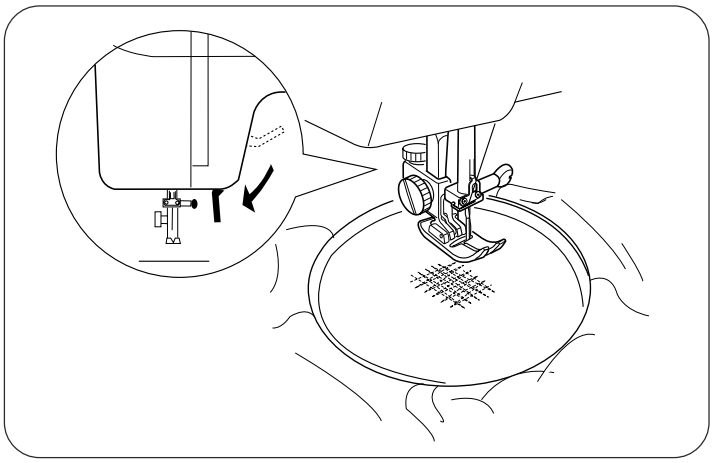
Darning

① Stitch selector:	6 to 8
② Stitch width:	6.5
③ Stitch length:	Any
④ Needle thread tension:	2 to 6
⑤ Pressure adjusting lever:	0
⑥ Presser foot A:	Zigzag foot
⑦ Presser foot F:	Satin stitch foot
⑧ Feed dogs:	Dropped



Drop the feed dogs. Center the hole in the fabric on an embroidery hoop, as shown.
Lower the presser foot F and sew at a slow speed.
Move the fabric back and forth slowly until the darning area is covered. Turn the fabric 1/4 turn (90°), and sew another layer of stitching over the first layer. After darning is completed, return the pressure adjusting lever to 3 for normal sewing.

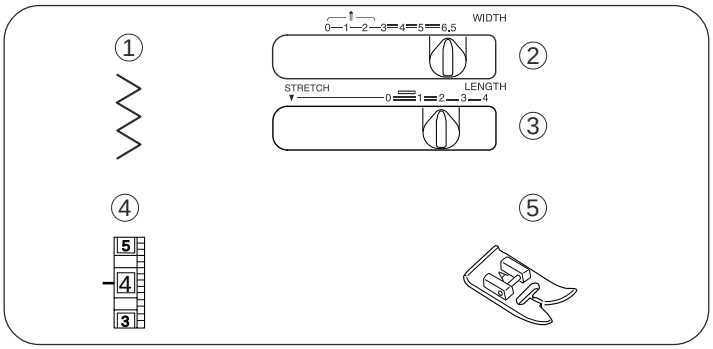
NOTE:
If the fabric is thin or badly damaged, use a separate piece of fabric under the hole to reinforce it.



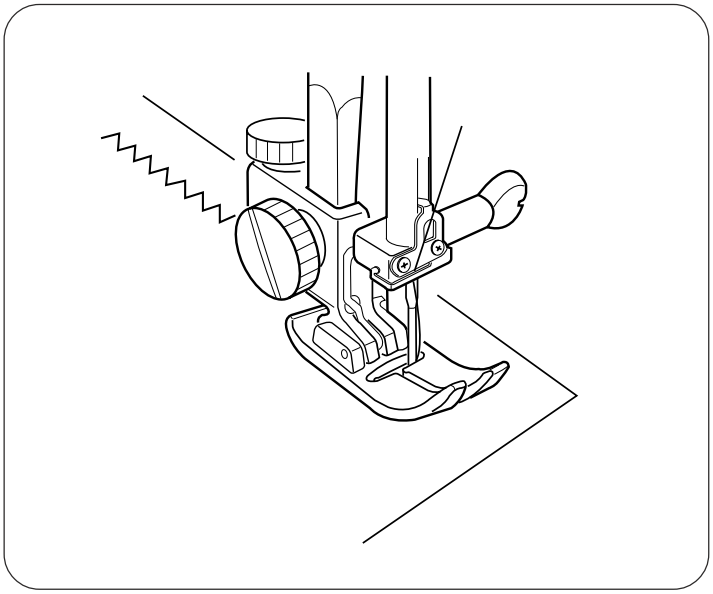
SECTION IV. ZIGZAG STITCH SEWING

Basic Zigzag

① Stitch selector: 5
② Stitch width: 1 to 6.5
③ Stitch length: Red zone
④ Needle thread tension: 3 to 5
⑤ Presser foot A: Zigzag foot

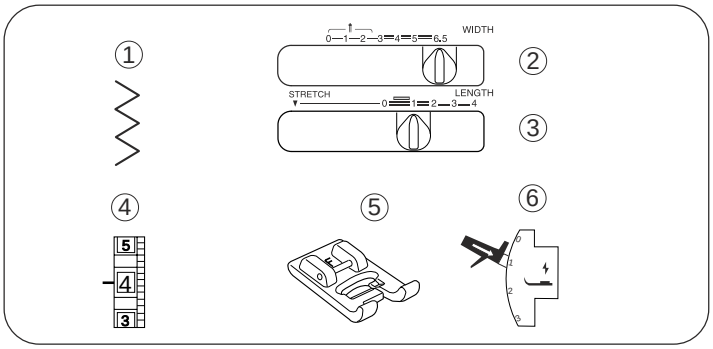


The zigzag stitch is one of the most common and versatile stitches. It can be a utility stitch for button sewing, buttonhole making, hemming, overcasting, mending and darning.
It can also be used to decorate with trims, appliques and cut work or as a decorative stitch.

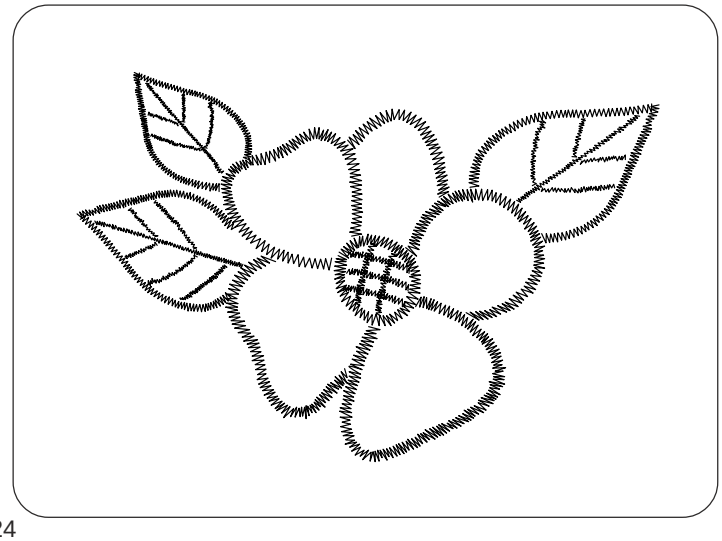


Satin Stitching

① Stitch selector: 5
② Stitch Width: 2 to 6.5
③ Stitch length: 0.5 to 1
④ Needle thread tension: 3 to 8
⑤ Presser foot F: Satin stitch foot
⑥ Pressure adjusting lever: 1 to 2

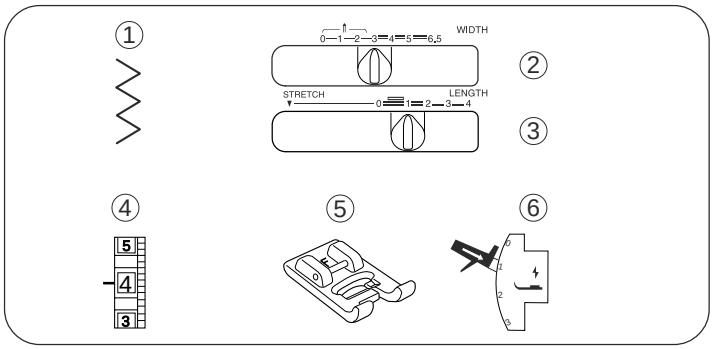


The satin stitch is often used to decorate and overcast the raw edge on blankets, linens, tablecloths, and napkins. It is also attractive in applique.
For best results, test the stitch on the fabric being used. A tight satin stitch may pucker some lightweight fabrics.

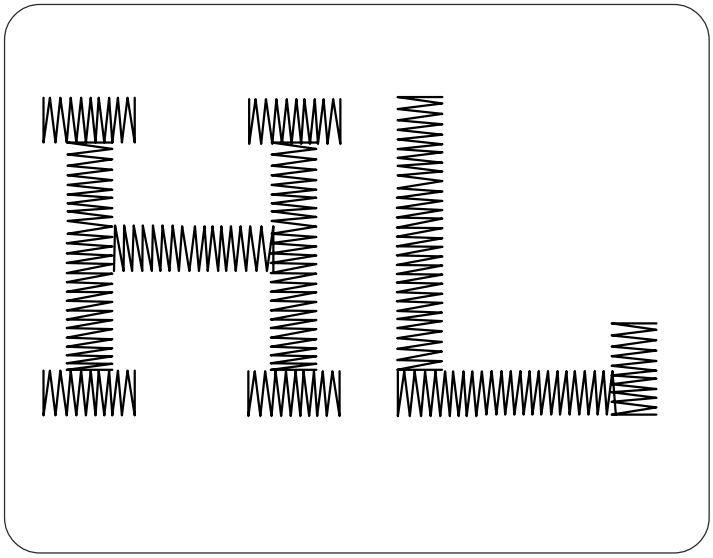


Monogramming

① Stitch selector: 5
② Stitch width: 3
③ Stitch length: 0.5 to 1
④ Needle thread tension: 1 to 4
⑤ Presser foot F: Satin stitch foot
⑥ Pressure adjusting lever: 1 or 2

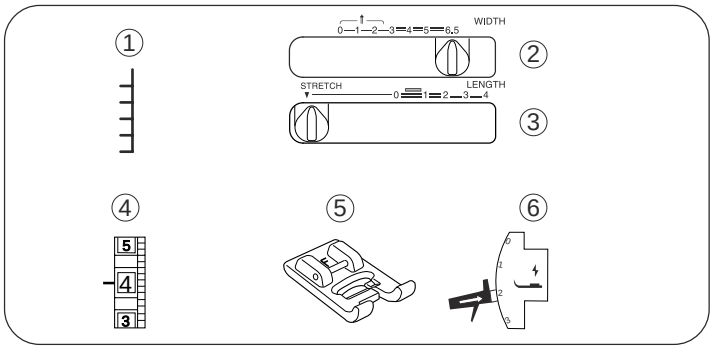


Attach a piece of stabilizer on the wrong side (Bottom side) of the fabric.
Draw letters on the fabric with tailor's chalk. Form each pattern with a satin stitch, adjusting the stitch width.



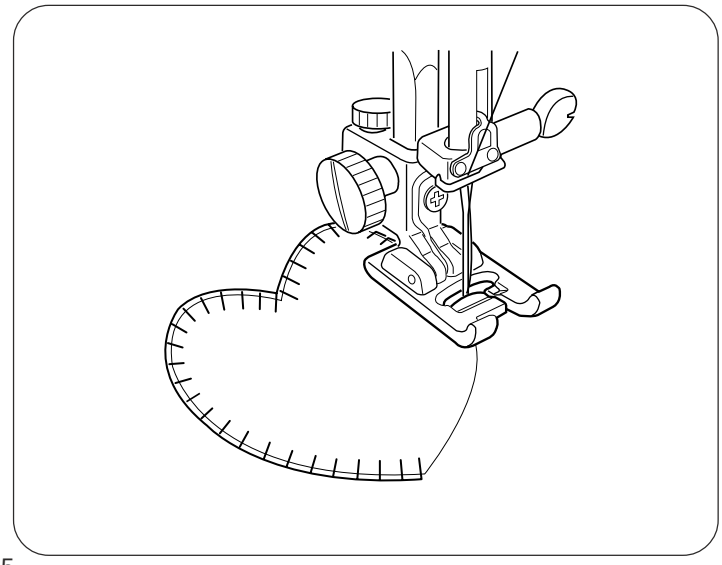
Applique

① Stitch selector: 9
② Stitch width: 6.5
③ Stitch length: Gold stretch stitch position
④ Needle thread tension: 2 to 6
⑤ Presser foot F: Satin stitch foot
⑥ Pressure adjusting lever: 2



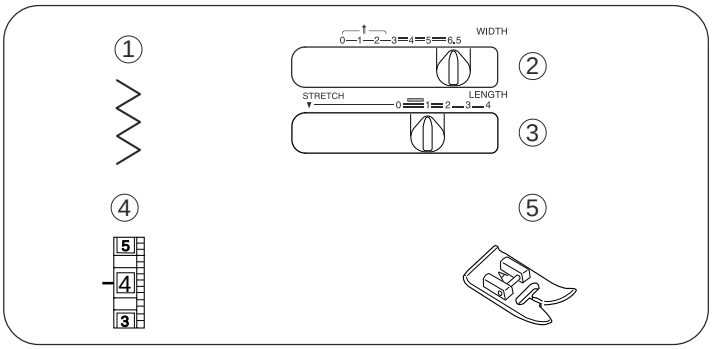
Baste applique pieces on the fabric, or fuse the applique pieces with an iron-on fabric joiner. Stitch around the applique, making sure the needle falls along the raw edge of the applique.

NOTE:
Maximum stitch width for pattern #9 is 1.4″ (3.5 mm) when setting the stitch width control at 6.5.

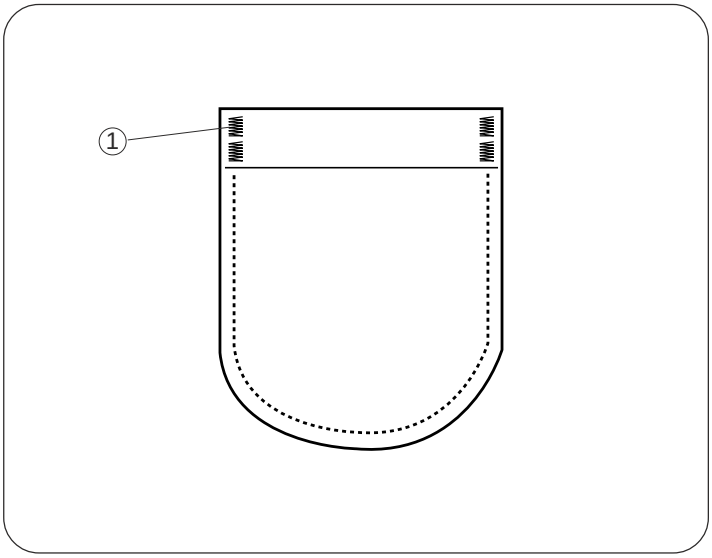


Bar Tacking

① Stitch selector:	5
② Stitch width:	2 to 6.5
③ Stitch length:	0.5 to 1
④ Needle thread tension:	2 to 6
⑤ Presser foot A:	Zigzag foot

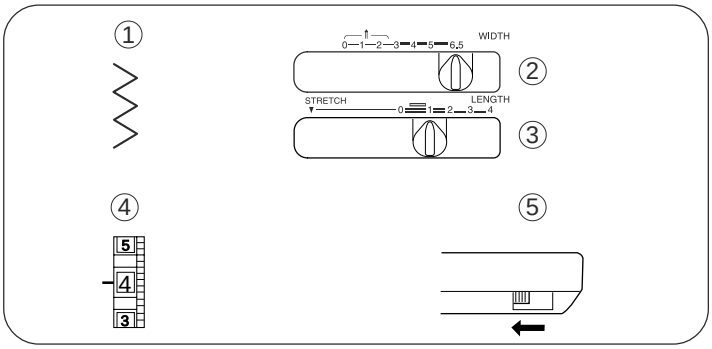


This is similar to a very short satin stitch, and is used to reinforce points of strain such as corners, pockets and straps of lingerie.
Sew four (4) to six (6) stitches.
① Bar tack

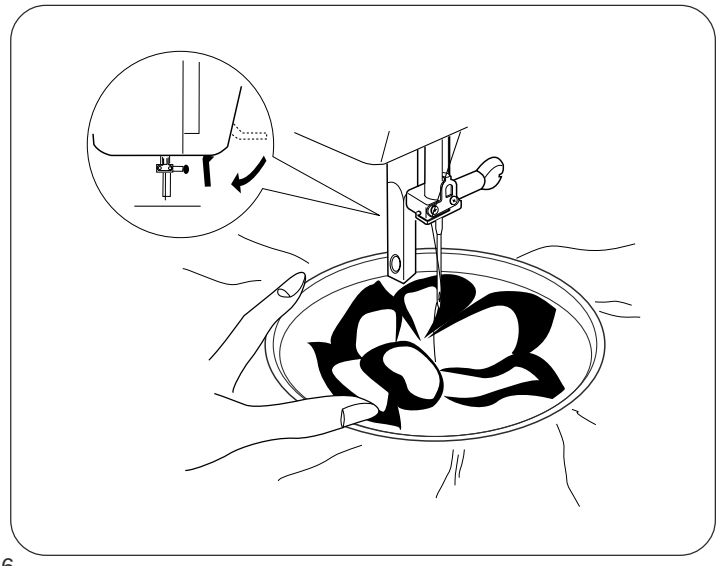


Embroidery

① Stitch selector:	5
② Stitch width:	1 to 6.5
③ Stitch length:	Any
④ Needle thread tension:	2 to 6
⑤ Feed dogs:	Dropped
* Presser foot:	Remove

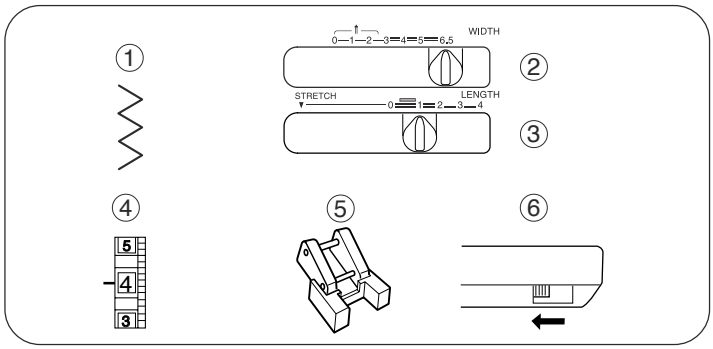


Drop the feed dogs, and then remove the foot holder. Adjust stitch width as desired. Draw a design onto the fabric with tailor's chalk. Stretch the fabric between embroidery hoops, and then place the fabric under the needle.
Lower the presser foot lifter to engage the needle thread tension. Holding the needle thread in your left hand, rotate the handwheel counterclockwise for one complete turn. Pull the needle thread to draw the bobbin thread to the right (top) side of the fabric. At medium speed, stitch along the marked outline, guiding the fabric carefully by hand. After embroidery is completed, raise the feed dogs for normal sewing.

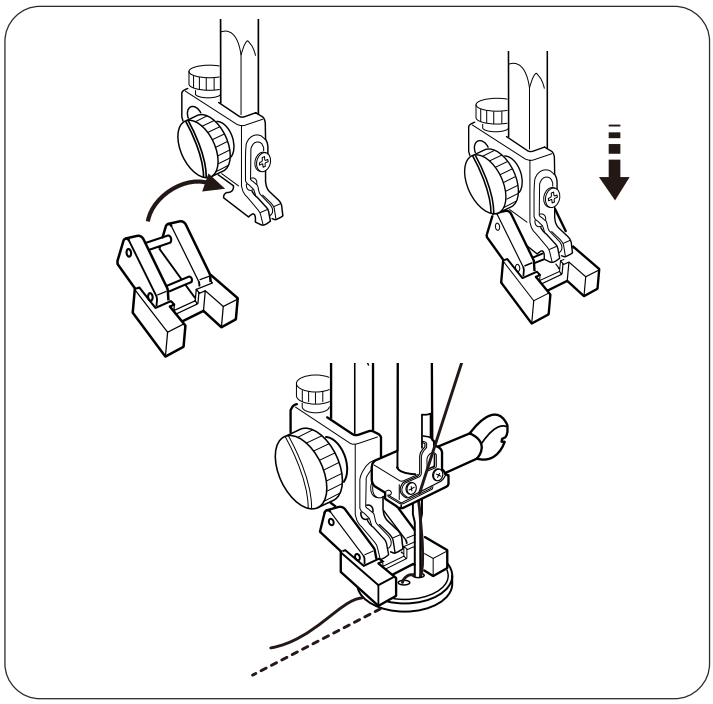


Button Sewing

① Stitch selector: 5
② Stitch width: 2 to 6.5
③ Stitch length: Any
④ Needle thread tension: 2 to 6
⑤ Presser foot T: Button sewing foot
⑥ Feed dogs: Dropped



1. Insert the rear pin on the foot into the groove of the holder. Gently lower the presser foot lifter while holding the foot with your finger.
2. Place a button on the fabric and lower the needle by turning the handwheel with your hand, so that the needle enters through the left hole in the button.
3. Turn the handwheel toward you to bring the needle up to the highest position. Adjust the stitch width, so that the zigzag width matches the span of holes in the button.
4. Start sewing and sew about 10 stitches.
5. Cut the needle thread at the beginning.
6. Pull the bobbin thread to pull the needle thread to the wrong side off the fabric.
7. Tie both threads together.



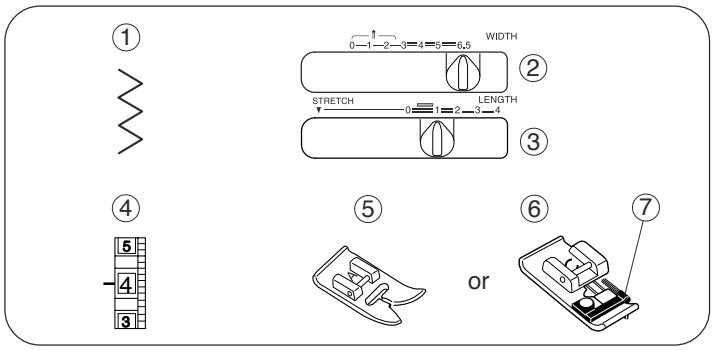
Overcasting

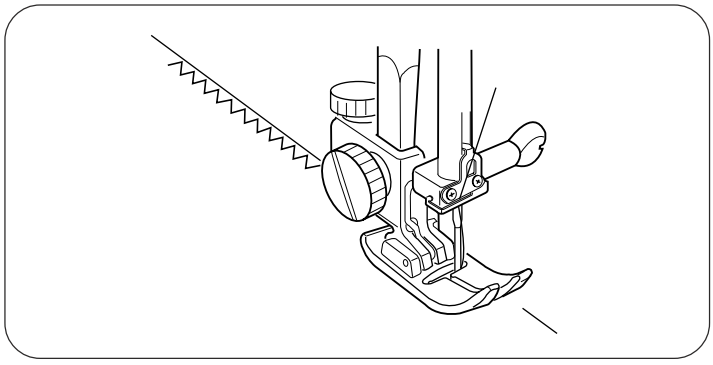
① Stitch selector: 5
② Stitch width: 5 to 6.5
③ Stitch length: Red zone
④ Needle thread tension: 3 to 8
⑤ Presser foot A: Zigzag foot
⑥ Presser foot C: Overedge foot
⑦ Brush holder seam guide

This stitch is useful in garment construction, and in finishing raw edges of any sewing project.

If using the zigzag foot, start overcasting with the leftmost needle position about 1/8" (0.3 cm) from the raw edge of a seam. The right tip of the stitch should just clear the seam edge.

For lightweight fabrics, use the overedge foot. To sew, line the fabric edge up with the inner side of the brush holder seam guide⑦ .



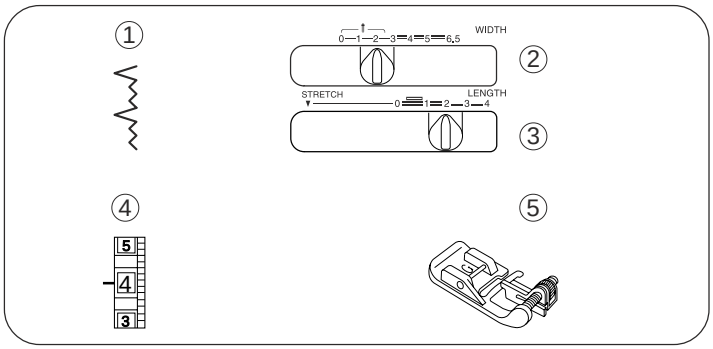


CAUTION: Do not set the stitch width at less than 5, otherwise the needle may hit the wire of presser foot C and could possibly break.

SECTION V. UTILITY AND DECORATIVE STITCHES

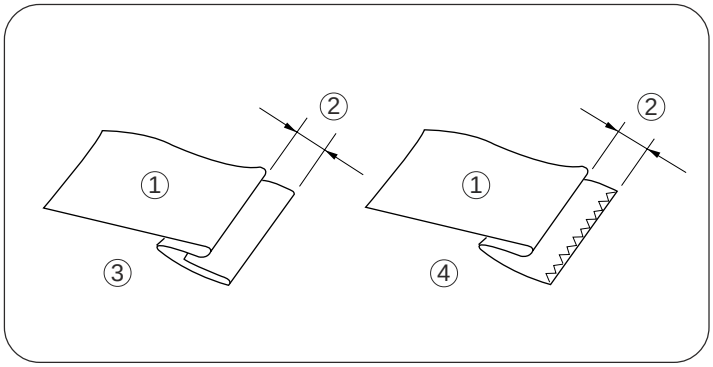
Blind Hem Stitch

① Stitch selector:	10
② Stitch width:	2 to 3
③ Stitch length:	Red zone
④ Needle thread tension:	2 to 6
⑤ Presser foot G:	Blind hem foot



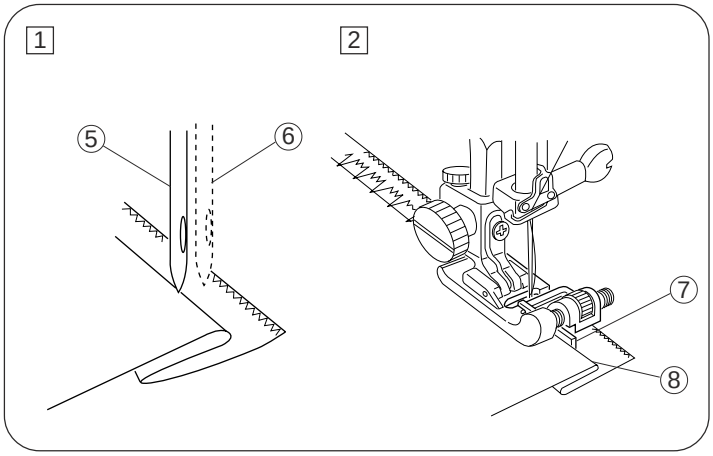
Use the same color thread as the fabric.
On heavy weight fabrics that ravel, the raw edge should be overcast first.
Fold the hem, as illustrated.

① Wrong side (Bottom side) of fabric
② 1/4"-7/16" (0.4-0.7 cm)
③ Light weight fabric
④ Heavy weight fabric



- **To sew**

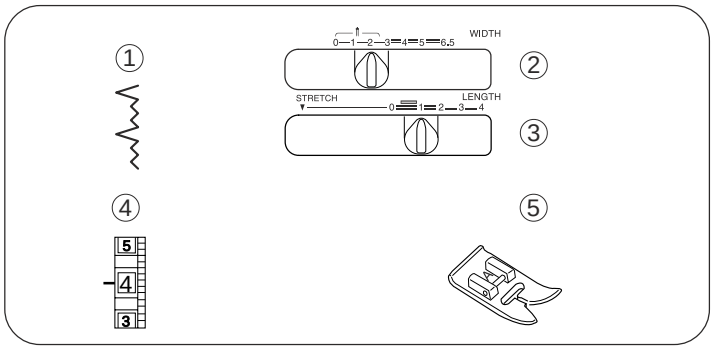
⑤ When the needle comes to the left
⑥ When the needle comes to the right
⑦ Guide
⑧ Folded edge



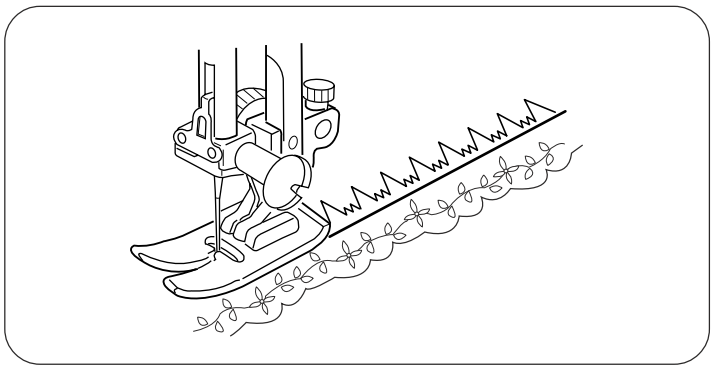
There is a sliding guide screw on the blind hem foot that allows you to precisely control where the needle pierces the edge of the fabric fold. Adjust the screw so that at the leftmost position of the stitch, the needle just pierces the edge of the fold. If the needle pierces too far left, the stitches will show on the right side of the fabric. Lower the presser foot. Sew, guiding the folded edge along the guide in the foot ⑦. As you sew, the right side of the stitch forms a chain stitch to the right of the fabric fold.

Lace Work

① Stitch selector: 10
② Stitch width: 2 to 3
③ Stitch length: 1
④ Needle thread tension: 1 to 4
⑤ Presser foot A: Zigzag foot

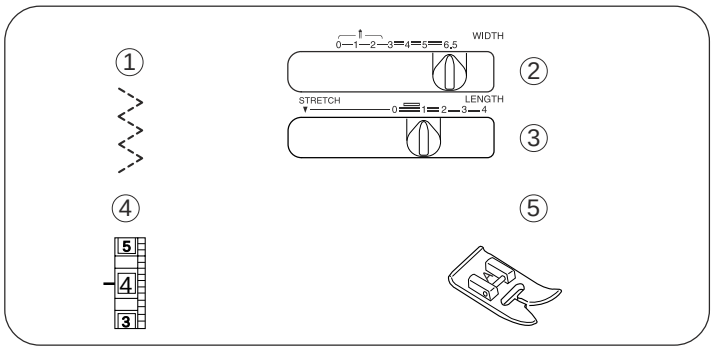


Lace adds a fanciful, feminine touch to blouses and lingerie. Table linens and pillows become more elegant when trimmed with lace.
Fold the raw edge of the fabric at least 5/8" (1.5 cm). Place lace underneath and topstitch with blind hem stitch. Trim excess fabric close to stitching.

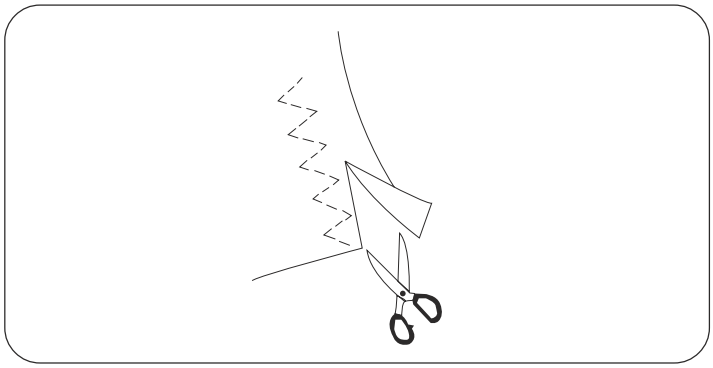


Multiple Zigzag Stitch

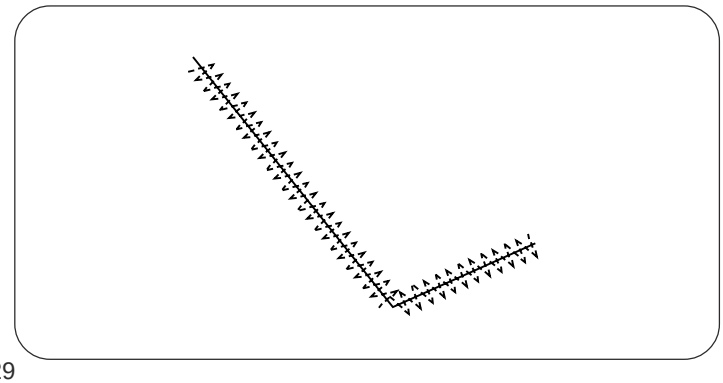
① Stitch selector: 4
② Stitch width: 5 to 6.5
③ Stitch length: 0.5 to 1
④ Needle thread tension: 2 to 6
⑤ Presser foot A: Zigzag foot



- **Seam finishing**
  This stitch is used to finish the seam allowance on synthetics and other fabrics that tend to pucker. The stitch is also excellent for darning and mending tears.
  Place your fabric to allow a 5/8" (1.5 cm) seam. Trim excess close to stitching. Be careful not to cut the stitches.

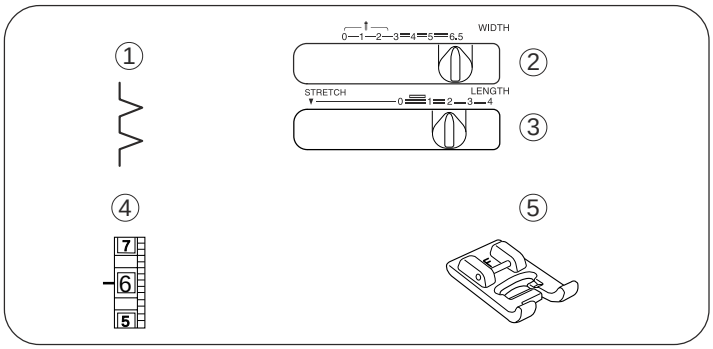


- **Mending**
  Position the tear under the needle so that the stitch catches both sides.



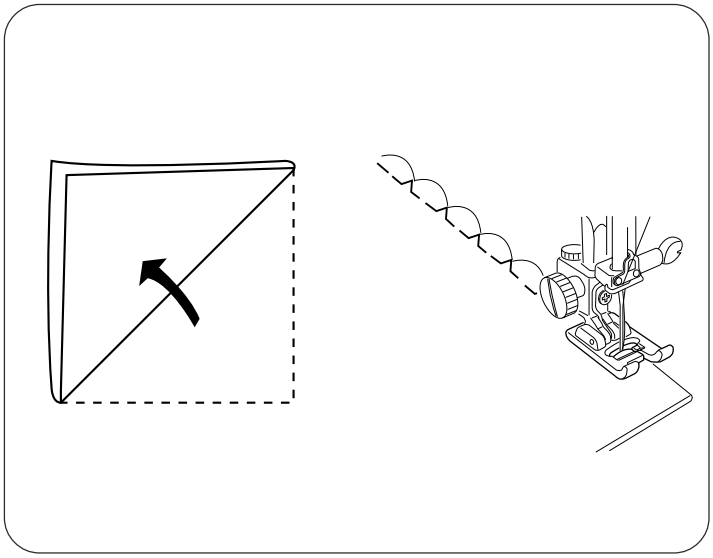
Shell Stitch

① Stitch selector: 11
② Stitch width: 3 to 6.5
③ Stitch length: Red zone
④ Needle thread tension: 4 to 9
⑤ Presser foot F: Satin stitch foot



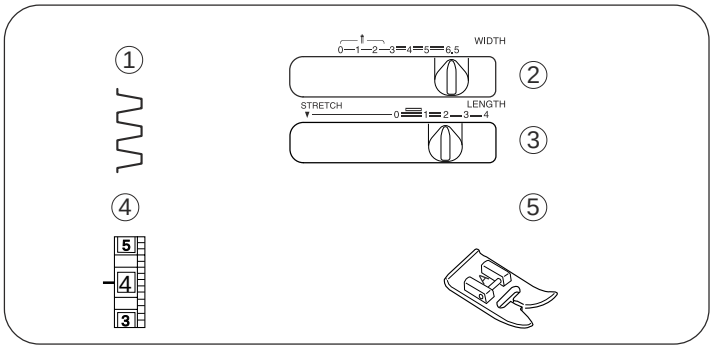
Use a lightweight fabric (tricot, for example). Fold the fabric in bias and stitch on the fold. Allow the needle to just clear the folded edge to create a shelled edge. You may need to increase the needle thread tension slightly.

If you sew rows of shell stitches, space the rows at least 5/8" (1.5 cm) apart. You can also sew shell stitches on knits or soft silky woven fabrics, in any direction.

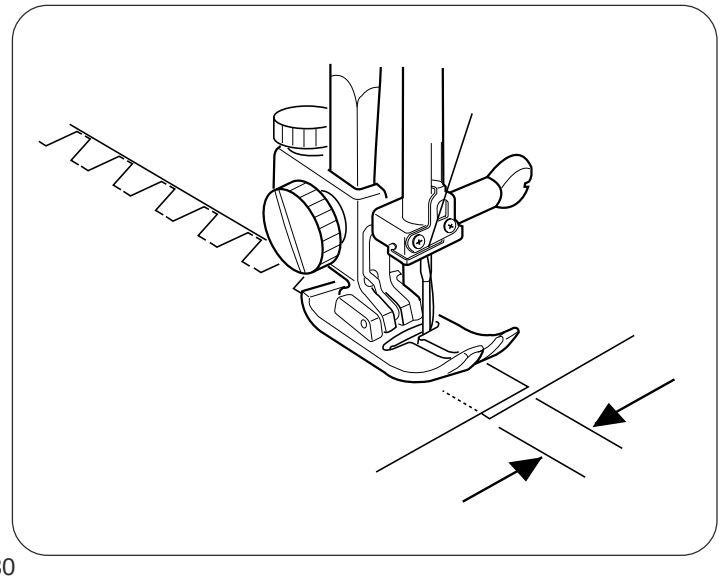


Box Stitch

① Stitch selector: 3
② Stitch width: 3 to 6.5
③ Stitch length: Red zone
④ Needle thread tension: 3 to 8
⑤ Presser foot A: Zigzag foot

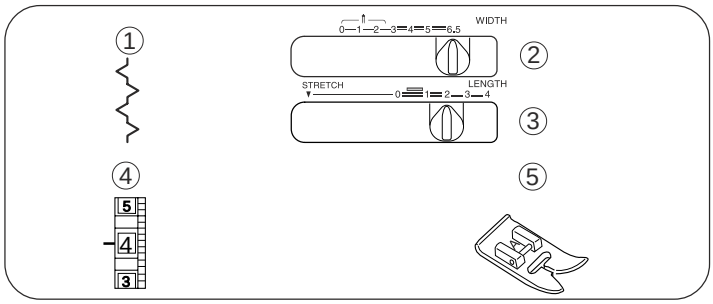


Overlap two raw edges of heavy weight interlining, and use this stitch to join them.



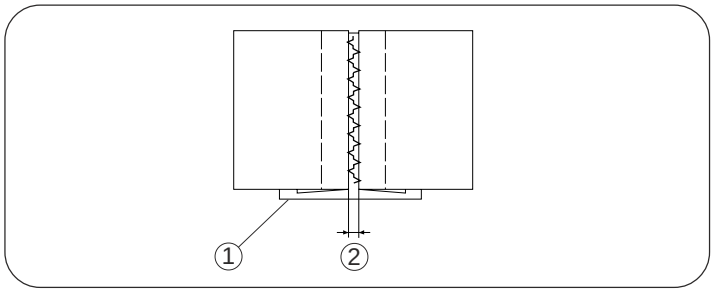
Fagoting Stitch

① Stitch selector: 12
② Stitch width: 5 to 6.5
③ Stitch length: 0.5 to 2
④ Needle thread tension: 2 to 6
⑤ Presser foot A: Zigzag foot



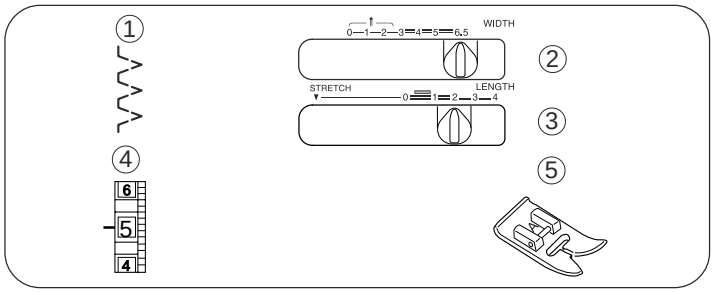
① Paper or tear-away backing
② 1/8"(0.3cm)

Use this stitch to join two pieces of fabric to create an open work appearance, and add design interest. Fold under each fabric edge 1/2" (1.3 cm) and press. Pin the two edges to paper or tear-away backing 1/8" (0.3 cm) apart. Sew slowly, guiding the fabric so the needle catches the folded edge on each side.

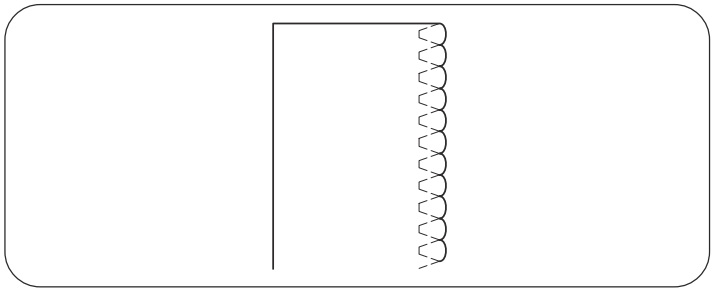


Two-point Shell Stitch

① Stitch selector 2
② Stitch width: 3 to 6.5
③ Stitch length: Red zone
④ Needle thread tension: 3 to 8
⑤ Presser foot A: Zigzag foot

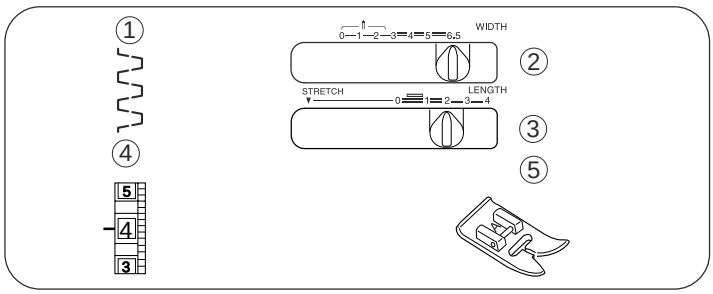


This stitch is often used as a single overlock stitch.

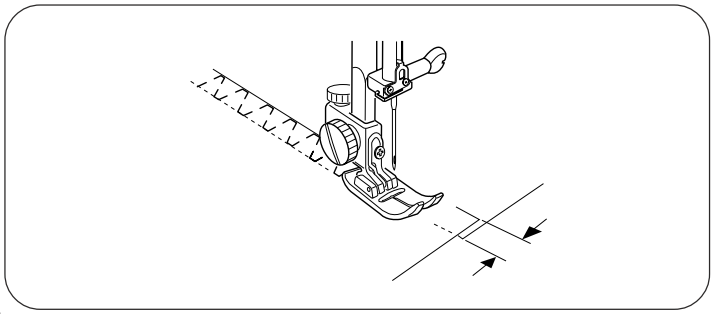


Two-point Box Stitch

① Stitch selector 13
② Stitch width: 3 to 6.5
③ Stitch length: 1 to 2
④ Needle thread tension: 2 to 6
⑤ Presser foot A: Zigzag foot



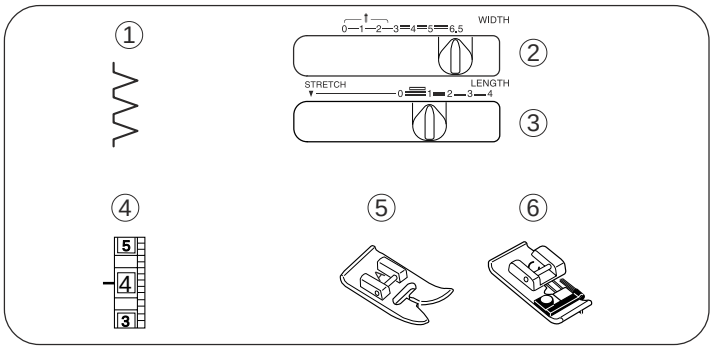
This stitch is useful to join elastic fabrics.



Overedge Stitch

① Stitch selector: 1
② Stitch width: 3 to 6.5
③ Stitch length: 1 to 3
④ Needle thread tension: 2 to 6
⑤ Presser foot A: Zigzag foot
⑥ Presser foot C: Overedge foot

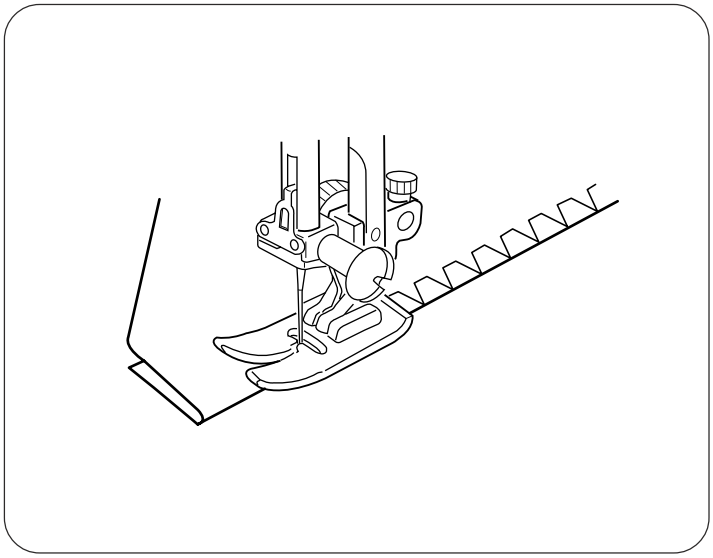
* When using an Overedge foot, make sure to set the stitch width at 5 or more, otherwise the needle may hit the overedge foot.



This stitch is often used as a seam finish to prevent fraying.

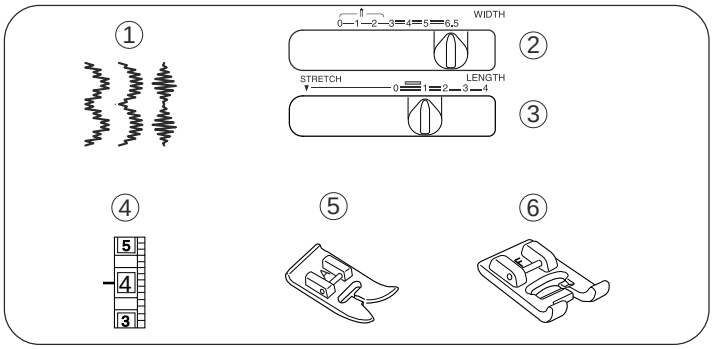
If using a zigzag foot, start overedging with the leftmost needle position about 1/8" (0.3 cm) from the raw edge of a seam. The right tip of the stitch should just clear the seam edge.

For lightweight fabrics, use the overedge foot. To sew, line the fabric edge up with the inner side of the brush holder seam guide.

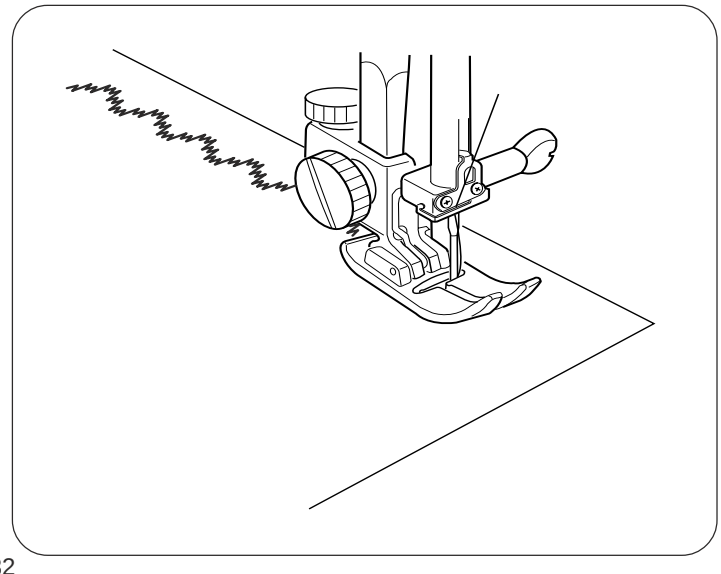


Decorative Stitch Patterns

① Stitch selector: 14 to 16
② Stitch width: 3 to 6.5
③ Stitch length: Green zone
④ Needle thread tension: 2 to 6
⑤ Presser foot A: Zigzag foot
⑥ Presser foot F: Satin stitch foot



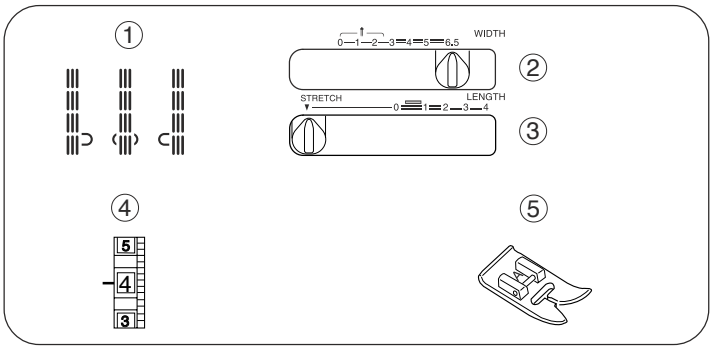
For a delicate appearance on fabric such as chiffon, use a single layer with a tear-away backing, if necessary.



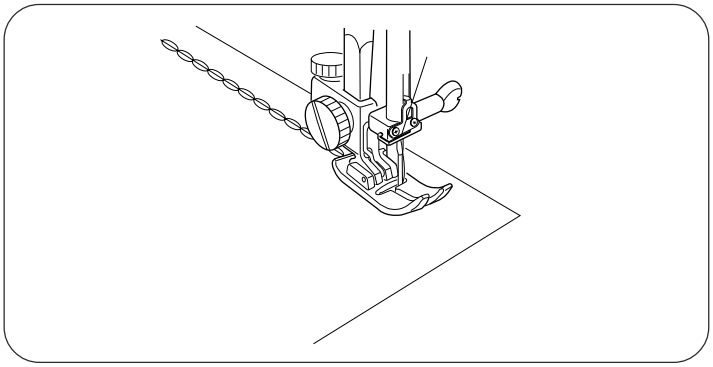
SECTION VI. STRETCH STITCHES

Straight Stretch

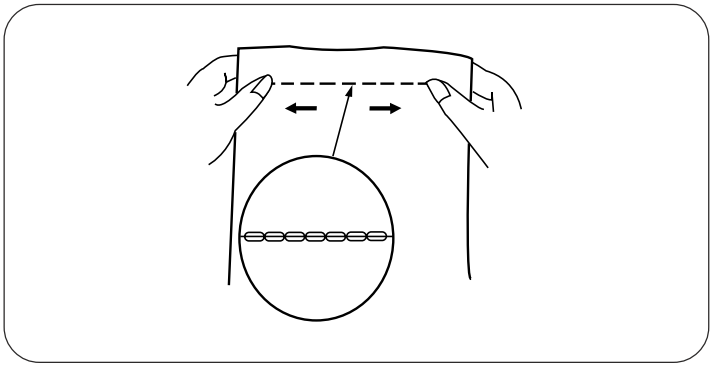
① Stitch selector: 6 to 8
② Stitch width: 6.5
③ Stitch length: Gold stretch stitch position
④ Needle thread tension: 2 to 6
⑤ Presser foot A: Zigzag foot



This strong, durable stitch is recommended where both elasticity and strength are necessary in order to insure comfort and durability.

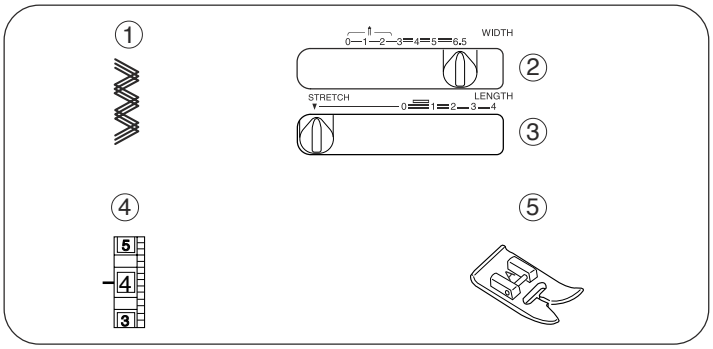


Use it to reinforce areas such as crotch and armhole seams as well as to eliminate puckering on knits and stretch fabrics. Also, use when constructing items requiring extra strength such as backpacks.

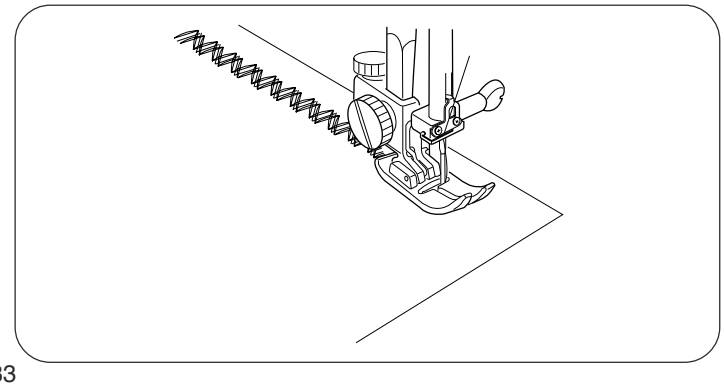


Rick-rack Stretch

① Stitch selector: 5
② Stitch width: 2 to 6.5
③ Stitch length: Gold stretch stitch position
④ Needle thread tension: 2 to 6
⑤ Presser foot A: Zigzag foot

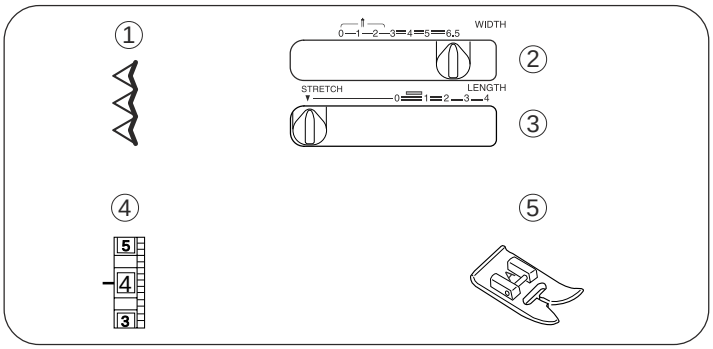


Sew on stretch fabrics in any area that you might use a zigzag stitch. This stitch is used as a decorative topstitch as well.



Overcast Stretch Stitching

① Stitch selector: 10
② Stitch width: 3 to 6.5
③ Stitch length: Gold stretch stitch position
④ Needle thread tension: 2 to 6
⑤ Presser foot A: Zigzag foot

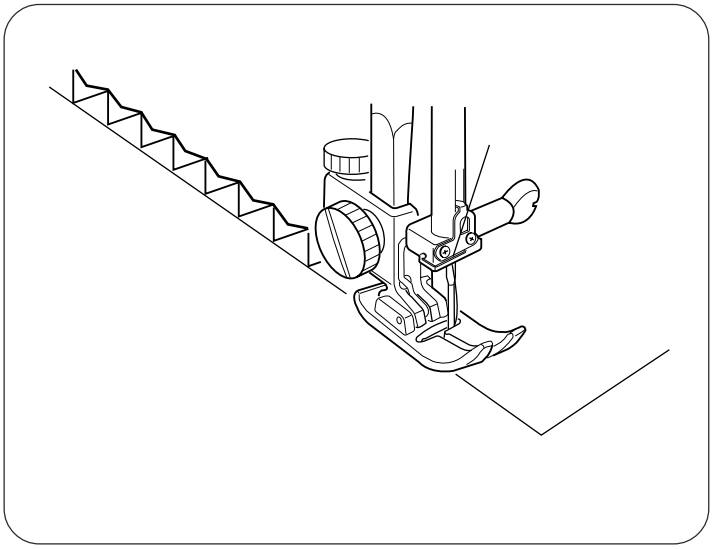


This stitch is for sewing a seam with an overcast finish. It is used when making swim wear, ski pants and other garments which require stretch.

- **To sew**

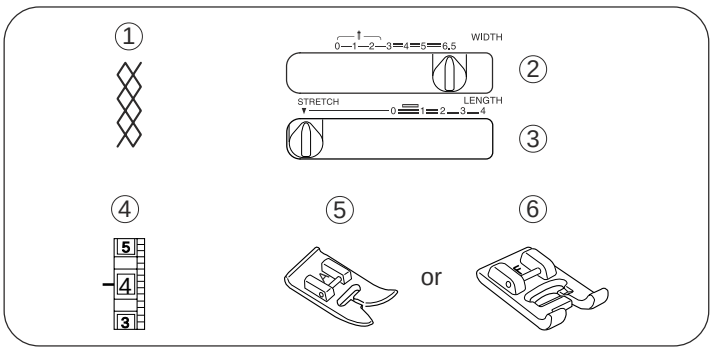
  Place raw edges of fabric to the “left” of the needle as shown. Sew in a manner so that the needle pierces the fabric very close to the outside edge. Or place the fabric to allow a 5/8" (1.6 cm) seam, then trim the seam allowance. Raw or worn edges of older garments can be overcast to prevent further raveling.

NOTE: Use a #11 blue stretch needle, which effectively prevents skipped stitching.



Smocking

① Stitch selector: 4
② Stitch width: 3 to 6.5
③ Stitch length: Gold stretch stitch position
④ Needle thread tension: 2 to 6
⑤ Presser foot A: Zigzag foot
⑥ Presser foot F: Satin stitch foot

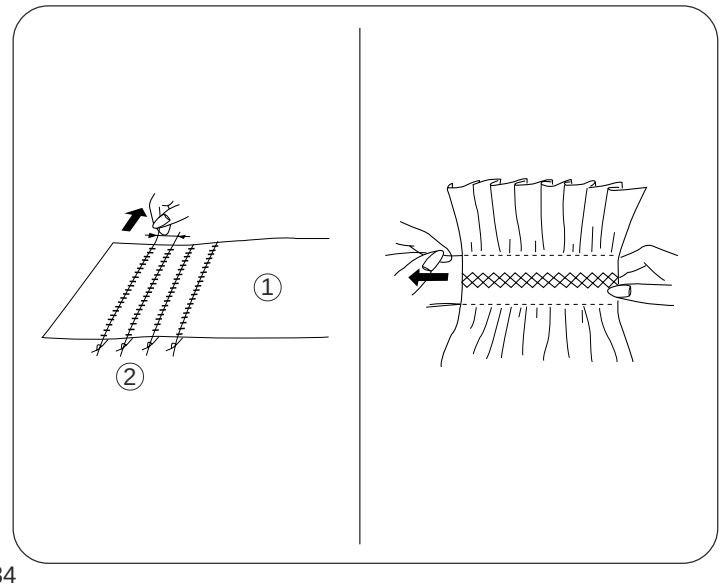


NOTE: Loosen the needle thread tension to make gathering easier.

- **To sew**

  ① Wrong side (Bottom side) of fabric
  ② Knotted edge

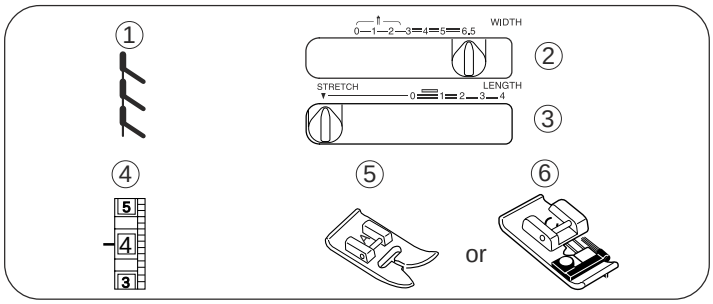
  Smocking is a delicate decorative treatment used on children’s clothes or women’s blouses.
  Choose a soft and lightweight fabric such as batiste, gingham or challis. Cut the fabric three times wider than the projected width. Set stitch length at “4” and sew rows of straight stitches 3/8" (1.0 cm) apart across the area to be smocked.
  Knot the threads along one edge ②. From the other edge, pull the bobbin threads (bottom threads) to distribute the gathers evenly and secure the threads.
  Sew the smocking stitches between the gathered rows.
  Remove the straight stitches by pulling them out.



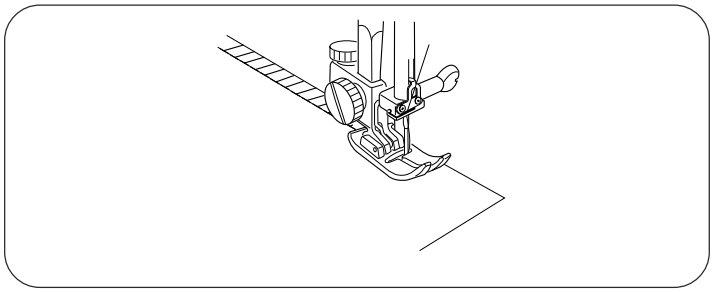
Serging

① Stitch selector: 11
② Stitch width: 3 to 6.5
③ Stitch length: Gold stretch stitch position
④ Needle thread tension: 2 to 6
⑤ Presser foot A: Zigzag foot
⑥ Presser foot C: Overedge foot

* When using Overedge foot, make sure to set the stitch width at 5 or more; otherwise the needle may hit the overedge foot.

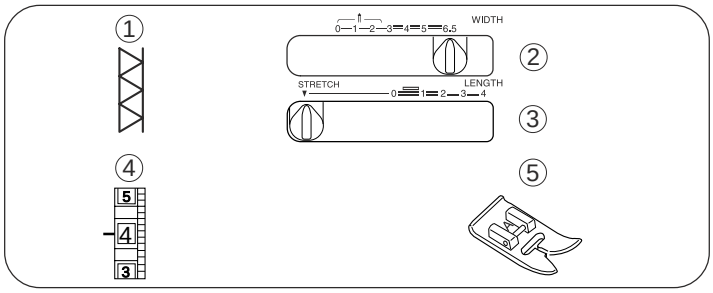


This stitch is ideal for 1/4” (0.6 cm) seams on knits or on medium to heavy weight woven fabrics where you want a narrow seam. It is also great for sewing spandex swim wear. Place the fabric under the presser foot [A] so that the stitches are made over the raw edge.

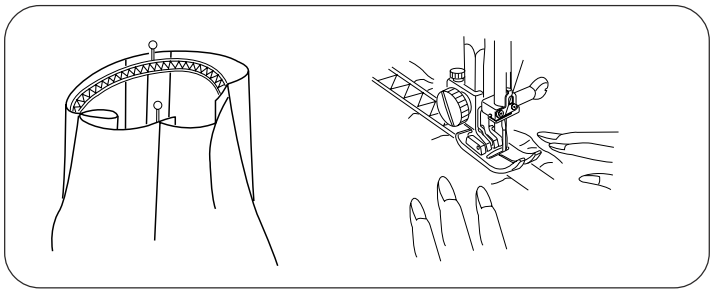


Elastic Stretch Stitch

① Stitch selector: 3
② Stitch width: 3 to 6.5
③ Stitch length: Gold stretch stitch position
④ Needle thread tension: 2 to 6
⑤ Presser foot A: Zigzag foot

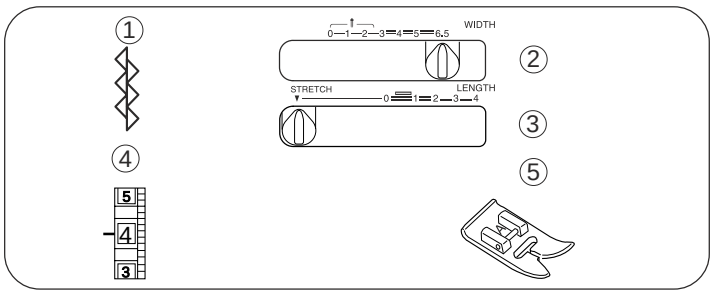


Choose this stitch to attach elastic to garments. Mark elastic into quarters and match these to the center front, center back and side seams.
Place the middle of the elastic under the center of the presser foot [A] and stitch into place, making sure the elastic is evenly distributed.

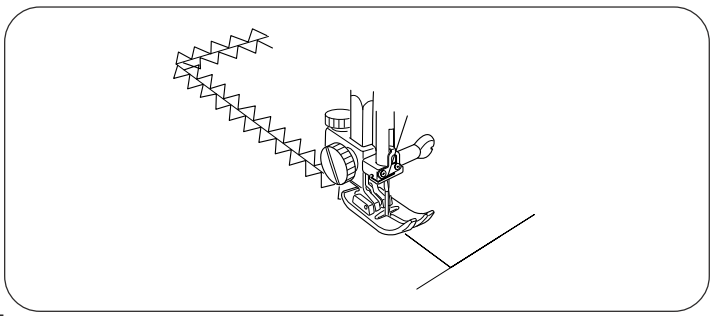


Stretch Patching

① Stitch selector: 12
② Stitch width: 5 to 6.5
③ Stitch length: Gold stretch stitch position
④ Needle thread tension: 2 to 6
⑤ Presser foot A: Zigzag foot



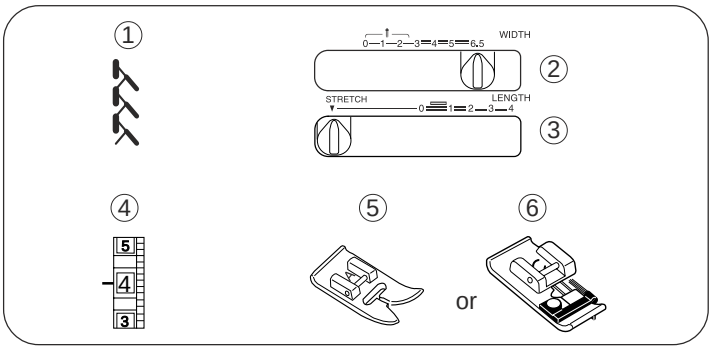
This stitch is for patching worn out garment elbows or knees and for patchwork quilting.



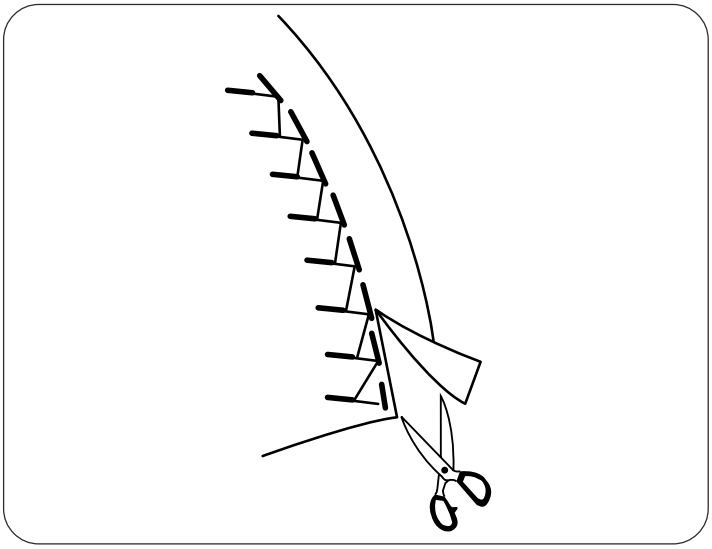
Herring Bone Stretch

①Stitch selector:	2
②Stitch width:	3 to 6.5
③Stitch length:	Gold stretch stitch position
④Needle thread tension:	2 to 6
⑤Presser foot A:	Zigzag foot
⑥Presser foot C:	Overedge foot

* When using an Overedge foot, make sure to set the stitch width at 5 or more, otherwise the needle may hit the overedge foot.

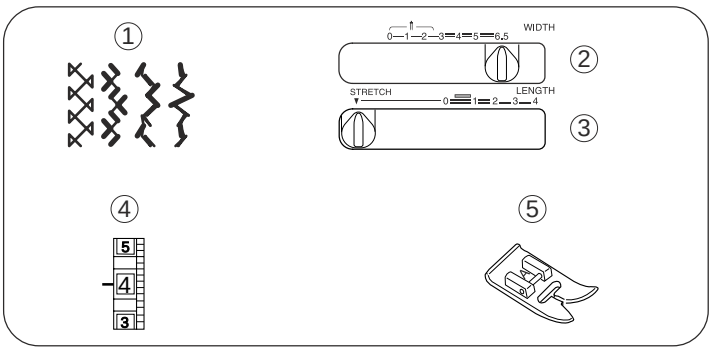


Use as a hemming stitch for blankets, tablecloths and draperies.
Place the fabric right side up, and sew so that the rightmost needle position is 3/8" (1.0 cm) from the edge. Then trim close to stitching. Be careful not to cut the stitches.

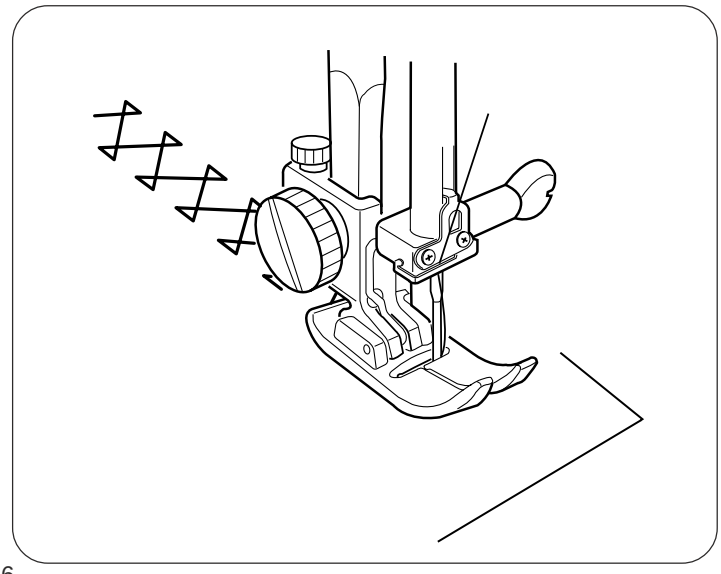


Decorative Stretch Patterns

① Stitch selector:	13 to 16
② Stitch width:	3 to 6.5
③ Stitch length:	Gold stretch stitch position
④ Needle thread tension:	2 to 6
⑤ Presser foot A:	Zigzag foot



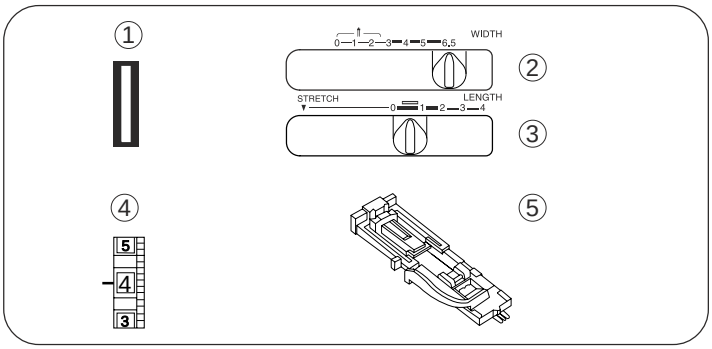
Decorative stretch patterns are used for adding a creative and personalized touch to items. You can decorate children's clothes, women's blouses, curtains, etc.



SECTION VII. BUTTONHOLE

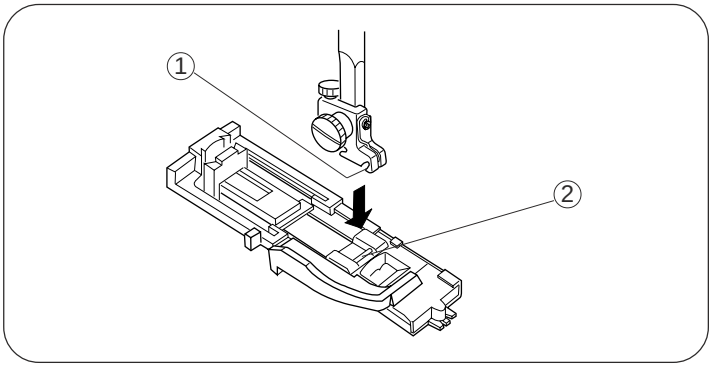
Automatic Buttonhole

① Stitch selector: ▯ (BH)
② Stitch width: 3 to 6.5
③ Stitch length: 0.25 to 1.0
④ Needle thread tension: 2 to 6
⑤ Presser foot R: Automatic buttonhole foot



- **Preparation for sewing**
  ① Groove
  ② Pin

  Attach the automatic buttonhole foot R. Make sure the groove on the foot holder catches the pin on the foot when lowering the presser foot.

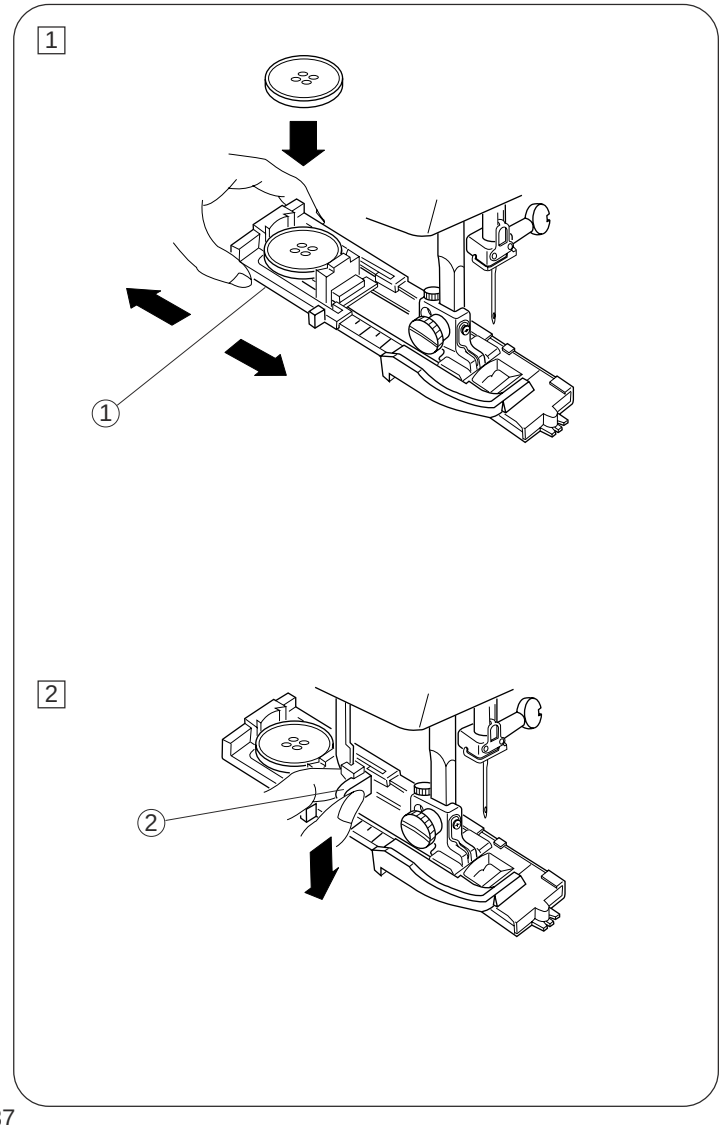


- **To sew**
  ① Button holder
  ② Buttonhole lever

  The buttonhole size is automatically set by placing the button in the rear of the automatic buttonhole foot.
  The button holder on the foot takes a button up to 1.0" (2.5 cm) in diameter.
  Make a test buttonhole on an extra piece of the fabric to check your settings.
  Use interfacing on stretch fabrics.

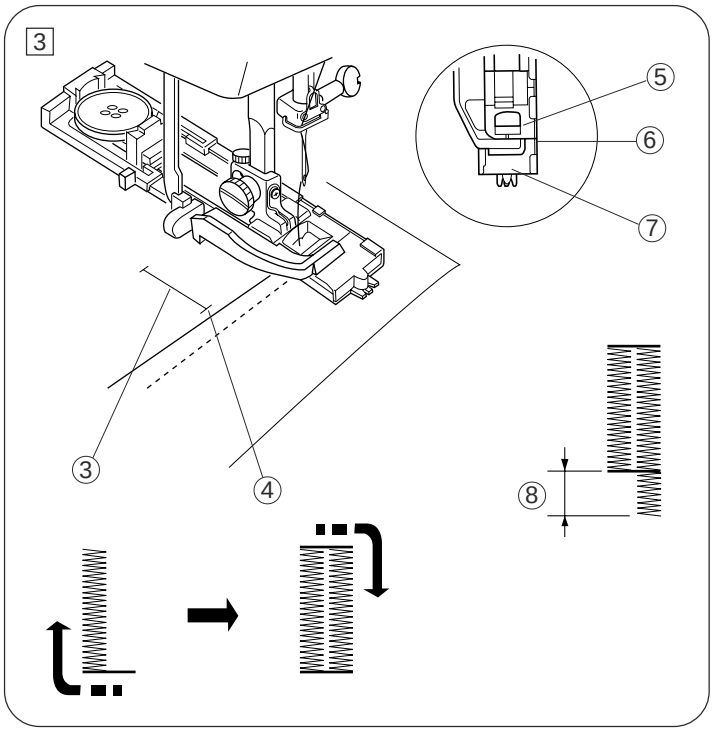
  1 Pull the button holder ① to the back, and place the button in it. Push it forward tightly against the button.

  2 Pull the buttonhole lever ② down as far as it will go.

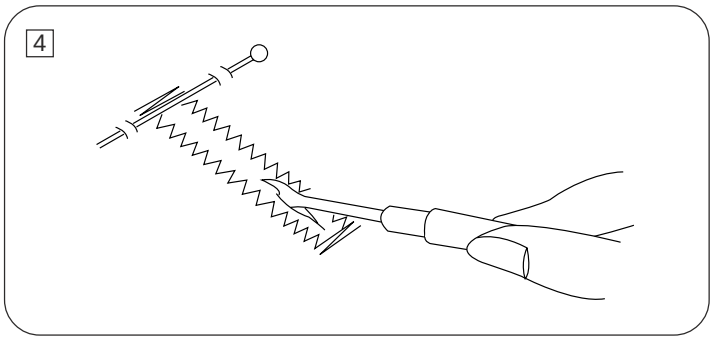


③ Mark for placement of buttonhole
④ Starting point
⑤ Slider
⑥ There should be no gap.
⑦ Spring holder
⑧ Difference

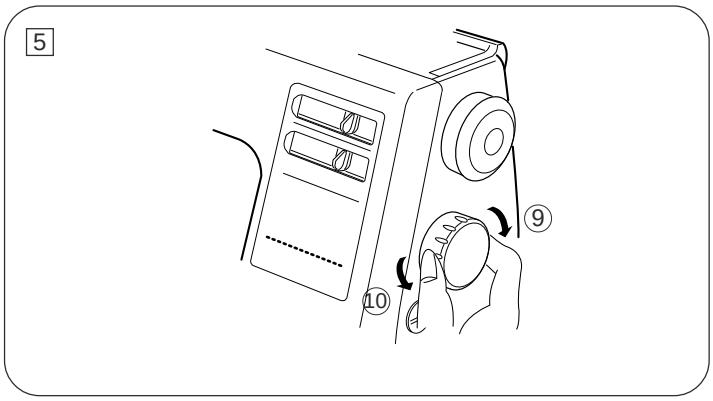
3 Draw both threads to the left under the foot.
Insert the garment under the foot, and lower the needle into the fabric to the starting point.
Then lower the automatic buttonhole foot.
Sew slowly and stop the machine at the starting point when the buttonhole is completed.



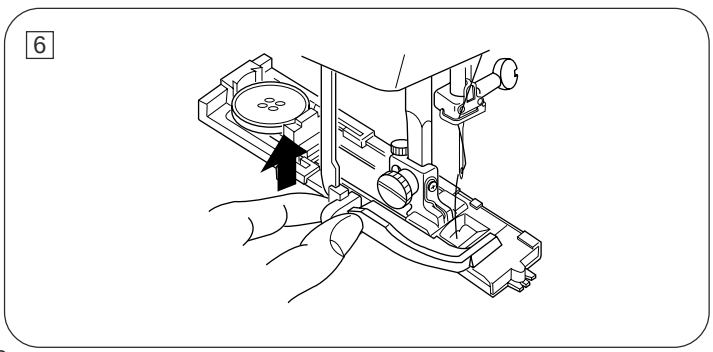
4 Remove the fabric and place a pin just before the bartack at each end, to prevent cutting bartacks. Cut the opening with the buttonhole opener.



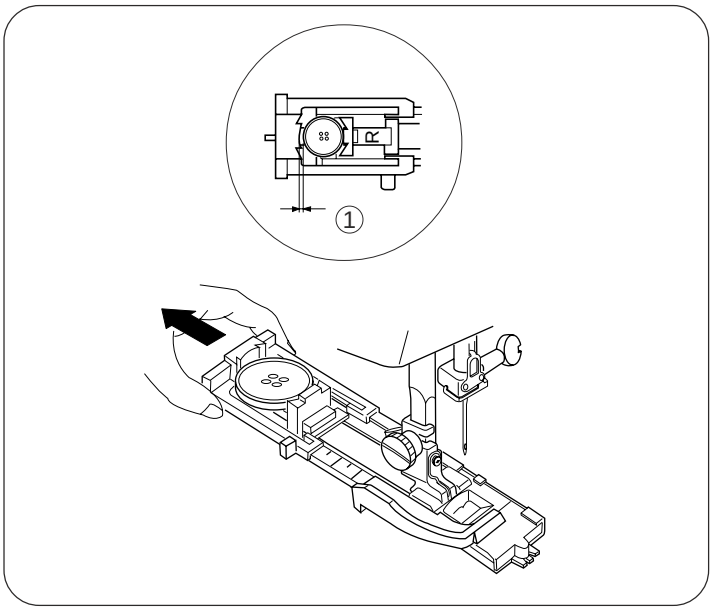
5 To sew another buttonhole, you must reset the machine. Reset by shifting the stitch selector in either direction, ⑨ or ⑩, to the next setting. Then shift the selector back to the buttonhole setting "▯".



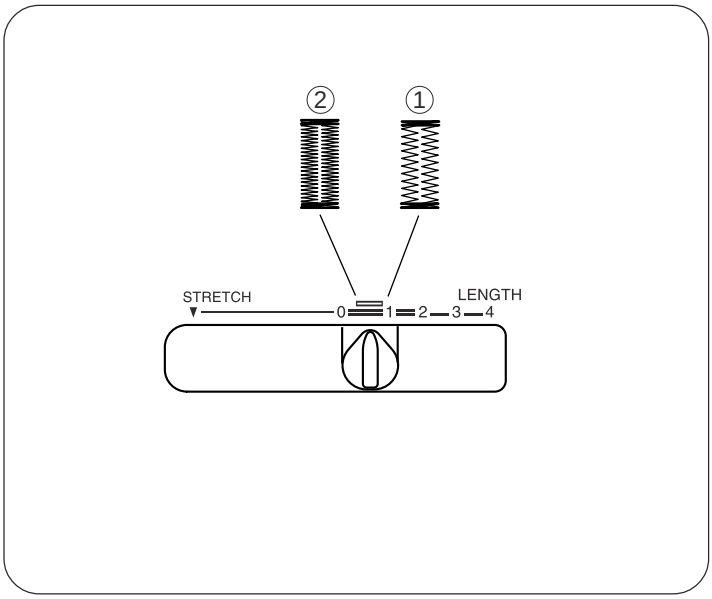
6 When finished, push the buttonhole lever up as far as it will go.



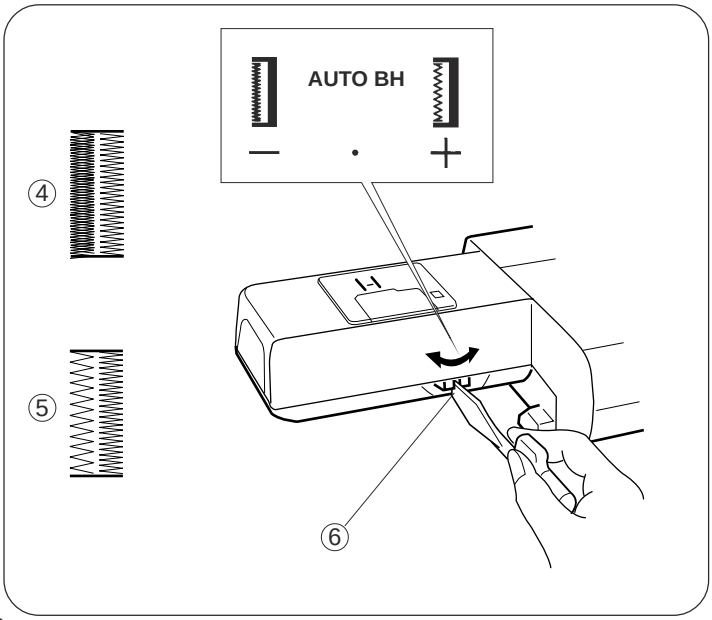
If the button is extremely thick, make a test buttonhole.
If it is difficult to fit the button through the test buttonhole, lengthen the buttonhole by pulling the button holder back to create a gap ① .
① Gap



- **How to adjust buttonhole stitch density**
  Slide the stitch length control to adjust stitch density.
  Slide the stitch length control to 1 for a looser density ① .
  Slide the stitch length control to 0.25 for a tighter density ② .



If the sides of the buttonhole are not balanced, do the following:
- If the buttonhole looks like ④, use the screwdriver to move the lever to the right (+) to make the left side of the buttonhole less dense (see illustration).
- If the buttonhole looks like ⑤, use the screwdriver to move the lever to the left (–) to make the left side of the buttonhole denser.
  ⑥ Buttonhole pitch balance adjusting lever



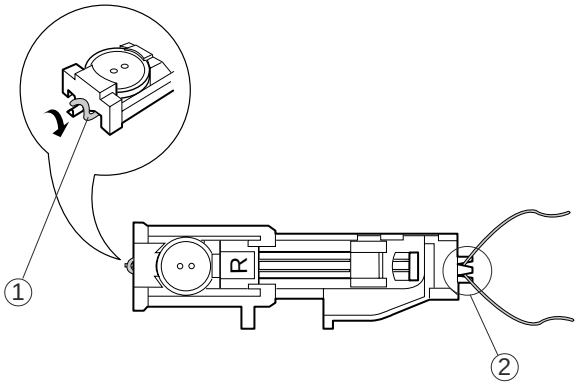
Corded Buttonhole

1 Use the same procedure as the automatic buttonhole procedure.

* Set the stitch width to match the thickness of the cord used.

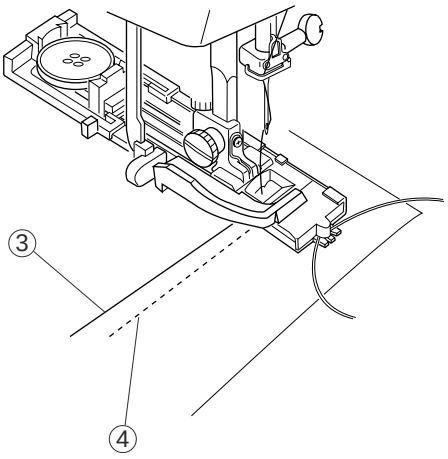
With the buttonhole foot raised, hook the filler cord on the spur at the back of the buttonhole foot.
Bring the ends toward you under the buttonhole foot, clearing the front end.
Hook the filler cord into the forks ② on the front of the automatic buttonhole foot [R] to hold them tight.
Lower the needle into the garment where the buttonhole will start, and lower the foot.
① Spur
② Forks

1



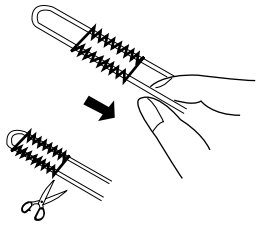
2 Depress the foot control gently, and sew the buttonhole.
Each side of the buttonhole and the bartacks will be sewn over the cord.
Remove the fabric from the machine, and cut the sewing threads only.
③ Needle thread (Top thread)
④ Bobbin thread (Bottom thread)

2



3 Pull the loose ends of the filler cord to tighten it.
Tie the ends in a knot, or thread them through a hand-sewing needle. Draw them to the wrong side of the fabric and knot.

3



SECTION VIII. CARE OF YOUR MACHINE

NOTE:
* Unplug the machine.
* Do not dismantle the machine other than as explained in this section.
* Do not store the machine in a high-humidity area, near a heat radiator, or in direct su nlight.
* Clean the outside of the machine with a soft cloth and mild soap.

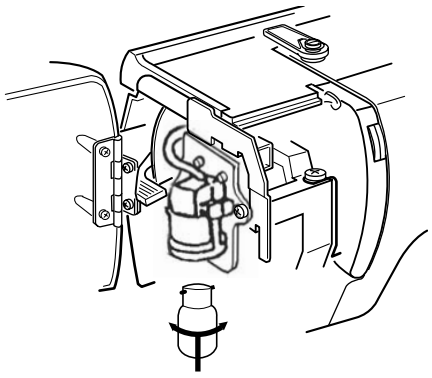
Replacing the Light Bulb

WARNING:
As the light bulb could be **HOT**, protect your fingers when you handle it.

Unplug the machine and open the face cover.

- To remove ..... Push and twist to the left
- To replace ..... Push and twist to the right

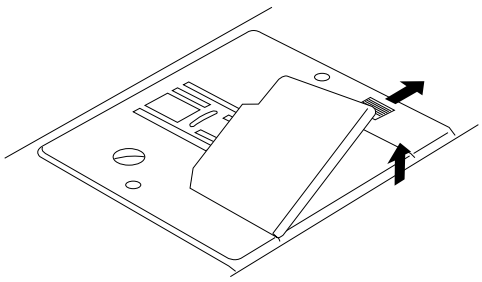
Close the face cover.



Cleaning the Bobbin Holder

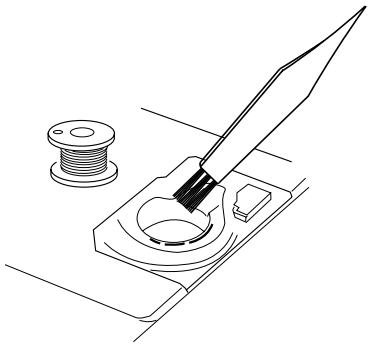
1 To insure that the machine operates at its best, you need to keep the bobbin area clean at all times.
Turn off the power switch and unplug the machine.
Remove the hook cover plate by sliding the hook cover plate release button to the right.

1



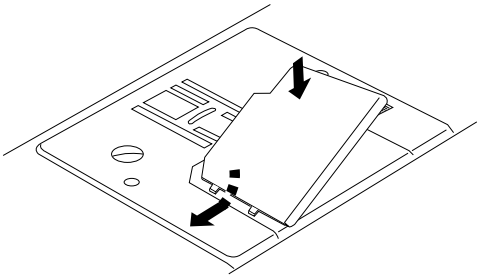
2 Take out the bobbin. Brush out dust and lint with a lint brush or a vacuum cleaner.

2



3 Insert the bobbin and attach the hook cover plate.

3



Cleaning the Shuttle Race and Feed Dogs

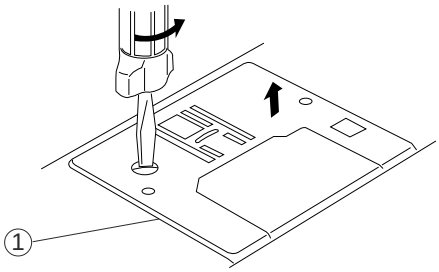
1 Unplug the machine and remove the presser foot and needle. Open the face cover to allow room to remove the needle plate screw with a screwdriver. Remove the needle plate ① and take out the bobbin.
① Needle plate

2 Lift up the bobbin holder ② and remove it.
② Bobbin holder

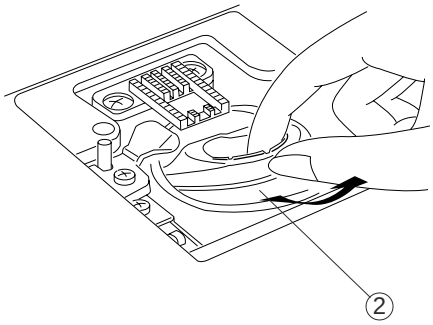
3 Brush out dust and lint inside the bobbin holder. Clean the feed dogs ③ and hook race ④ with a lint brush. Wipe out gently with a soft, dry cloth.
③ Feed dogs
④ Hook race

4 Line up the triangle marks ⑤ and position the bobbin holder, so that the notch fits next to the stopper ⑥ in the hook race.
⑤ Line up the triangle marks.
⑥ The notch fits next to the stopper.

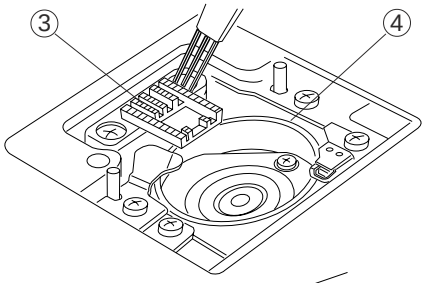
1



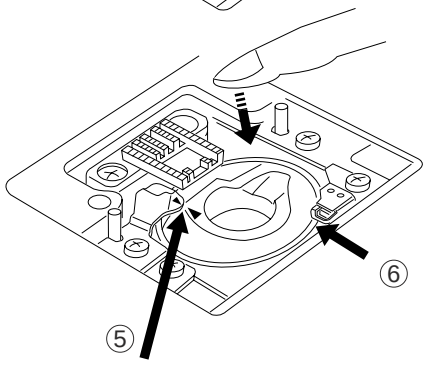
2



3

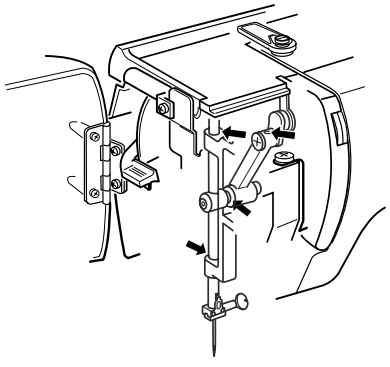


4



Oiling the Machine

Unplug the machine. Open the face cover and oil the two points, as shown, at least once a year. One or two drops of oil is sufficient. Remove excess oil, otherwise it may stain the fabric. In case the machine has not been used for a long period, oil it before sewing. Use quality sewing machine oil.



Troubleshooting

Condition	Cause	Reference
The needle thread breaks.	1. The needle thread is not threaded properly. 2. The needle thread tension is too tight. 3. The needle is bent or blunt. 4. The needle is incorrectly inserted. 5. The needle thread and the bobbin thread are not set properly under the presser foot at the start of sewing. 6. The threads were not drawn to the rear after the previous use. 7. The thread is too heavy or too fine for the needle.	Page 13 Pages 14, 15 Page 6 Page 6 Page 19 Page 19 Page 9
The bobbin thread breaks.	1. The bobbin thread is not threaded properly in the bobbin holder. 2. Lint has collected in the bobbin holder. 3. The bobbin is damaged and doesn't turn smoothly.	Page 12 Page 41 Change the bobbin
The needle breaks.	1. The needle is incorrectly inserted. 2. The needle is bent or blunt. 3. The needle clamp screw is loose. 4. The needle thread tension is too tight. 5. The threads were not drawn to the rear after the previous use. 6. The needle is too fine for the fabric being sewn.	Page 6 Page 6 Page 6 Pages 14, 15 Page 19 Page 9
Skipped stitches	1. The needle is incorrectly inserted. 2. The needle is bent or blunt. 3. The needle and/or threads are not suitable for the work being sewn. 4. A blue needle is not being used for sewing stretch, very fine fabrics and synthetics. 5. The needle thread is not threaded properly. 6. The wrong needle is used.	Page 6 Page 6 Page 9 Page 9 Page 13 Page 6
Seam puckering	1. The needle thread tension is too tight. 2. The needle thread is not threaded properly. 3. The needle is too heavy for the fabric being sewn. 4. The stitch length is too long for the fabric.	Pages 14, 15 Page 13 Page 9 Page 17
The cloth is not feeding smoothly.	1. The stitches are too fine. 2. The feed dog is not raised after “drop feed” sewing. 3. The feed dog is packed with lint.	Pages 14, 15 Page 23 Page 42
The machine doesn't work.	1. The machine is not plugged in. 2. A thread is caught in the shuttle race. 3. The push-clutch is disengaged.	Page 4 Page 42 Page 11
Patterns are distorted.	1. The stitch is not balanced.	Page 18
Noisy operation	1. There is thread caught in the hook race. 2. Lint has built up in the shuttle or the shuttle race.	Page 42 Page 42

505-800-248 (E)
Printed in Taiwan