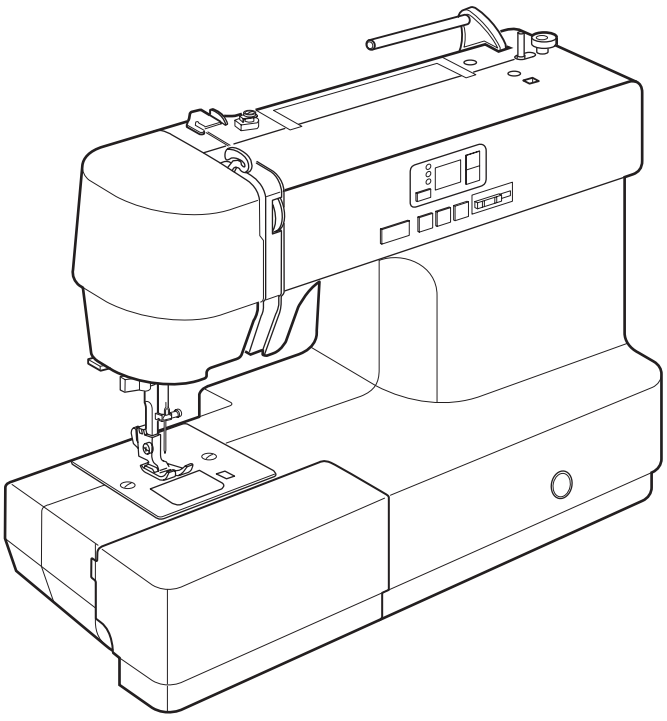
# Instruction Book



# IMPORTANT SAFETY INSTRUCTIONS

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.

**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 and/or cutting blade.
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

**For Europe only:**
This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

**For outside Europe (except U.S.A and Canada):**
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.



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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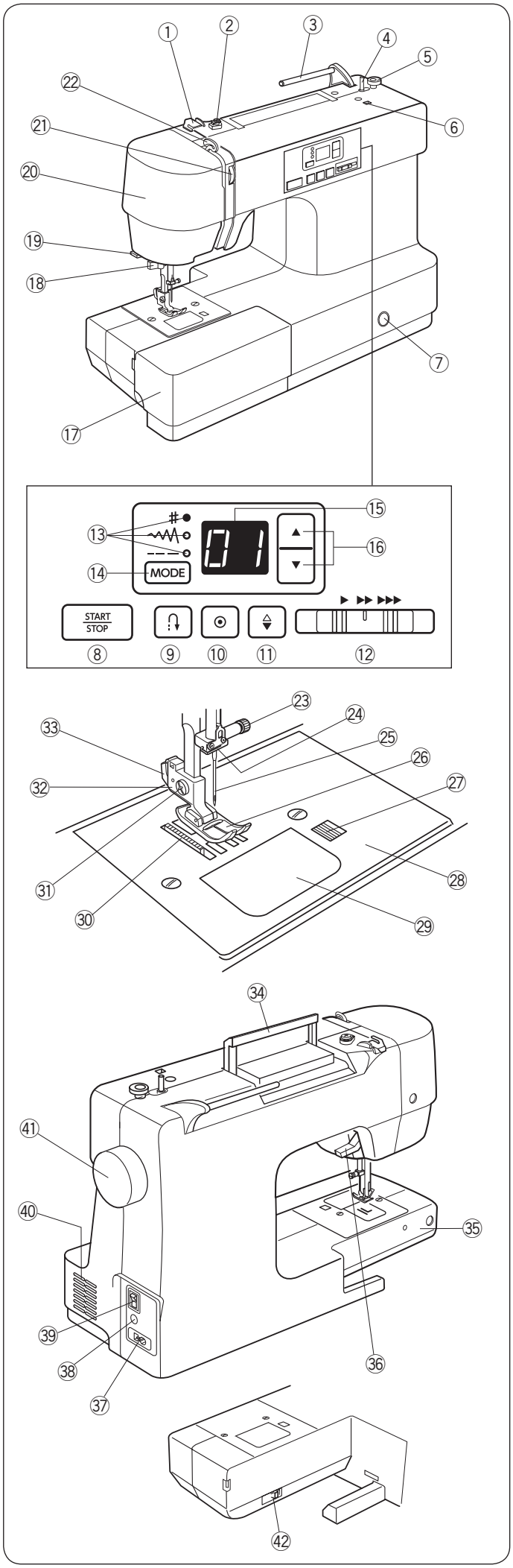
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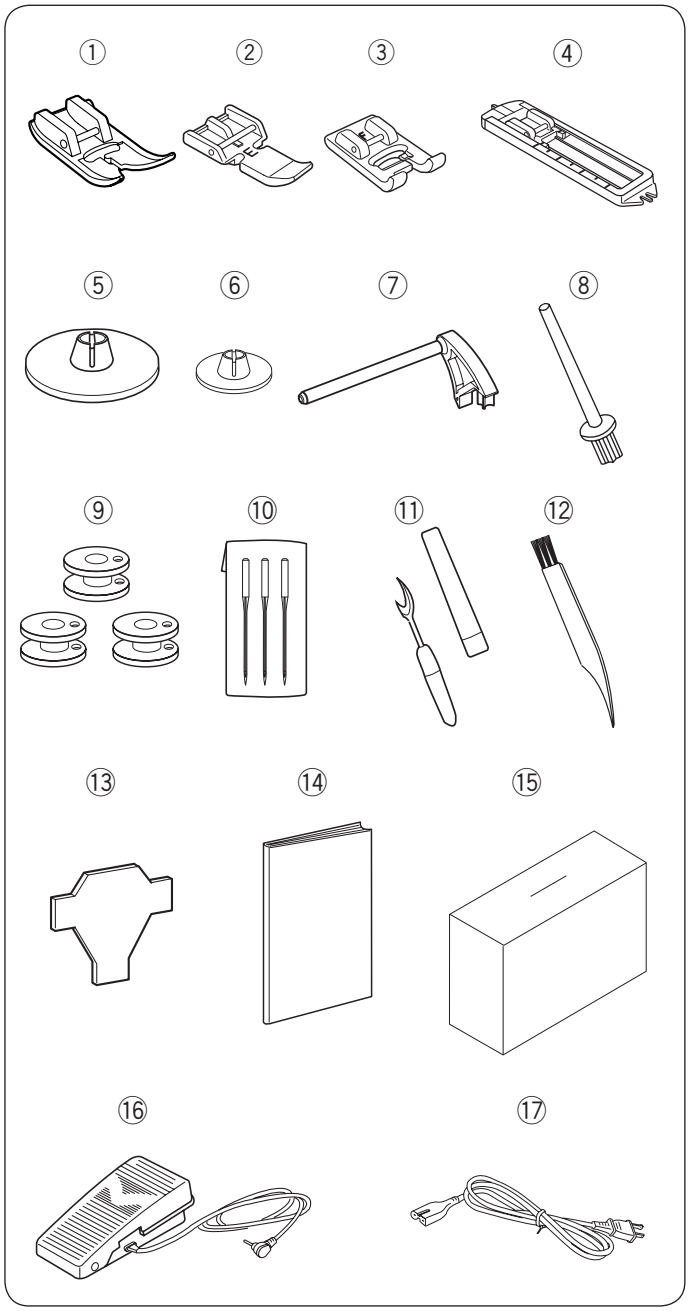

# ESSENTIAL PARTS

## Names of Parts

① Upper thread guide
② Bobbin winder tension disk
③ Spool pin
④ Bobbin winder spindle
⑤ Bobbin winder stopper
⑥ Hole for extra spool pin
⑦ Feed balancing dial (with cap)
⑧ Start/stop button
⑨ Reverse button
⑩ Auto-lock button
⑪ Needle up/down button
⑫ Speed control slider
⑬ Indicator lights
⑭ MODE key
⑮ LCD display
⑯ Value set keys
⑰ Extension table (Accessory storage)
⑱ Needle threader
⑲ Thread cutter
⑳ Face cover
㉑ Thread tension dial
㉒ Thread take-up lever
㉓ Needle clamp screw
㉔ Needle bar thread guide
㉕ Needle
㉖ Presser foot
㉗ Hook cover release button
㉘ Needle plate
㉙ Hook cover plate
㉚ Feed dogs
㉛ Setscrew
㉜ Foot holder
㉝ Lever
㉞ Carrying handle
㉟ Free-arm
㊱ Presser foot lifter
㊲ Power inlet
㊳ Foot control jack
㊴ Power switch
㊵ Ventilation openings
㊶ Handwheel
㊷ Drop feed lever

**NOTE:**
To carry the sewing machine, hold the carrying handle with your hand, and support the sewing machine with the other hand.

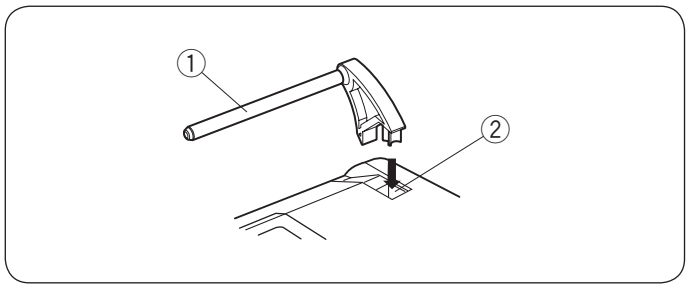
**NOTE:**
Design and specifications are subject to change without prior notice.




## Standard Accessories

| No. | Part Name | | Part No. |
|---|---|---|---|
| 1 | Zigzag foot A (Set on the machine) | | 685502019 |
| 2 | Zipper foot E | | 808852003 |
| 3 | Satin stitch foot F | | 822804118 |
| 4 | Sliding buttonhole foot | | 508803000 |
| 5 | Spool holder (large) | | 822020503 |
| 6 | Spool holder (small) | | 822019509 |
| 7 | Spool pin | | 660005032 |
| 8 | Extra spool pin | | 625031500 |
| 9 | Bobbin X 3 (1 set on the machine) | | 102261000 |
| 10 | Needle set | | 639804000 |
| 11 | Seam ripper (Buttonhole opener) | | 647808009 |
| 12 | Lint brush | | 802424004 |
| 13 | Screwdriver | | 653802002 |
| 14 | Instruction book | | 805800362 |
| 15 | Soft cover | | 743812203 |
| 16 | Foot control | | 808550008 |
| 17 | Power cable* | U.S.A and Canada | 856519004 |
| | | U.K. | 830377008 |
| | | Australia | 830314018 |
| | | Continental Europe | 830335004 |

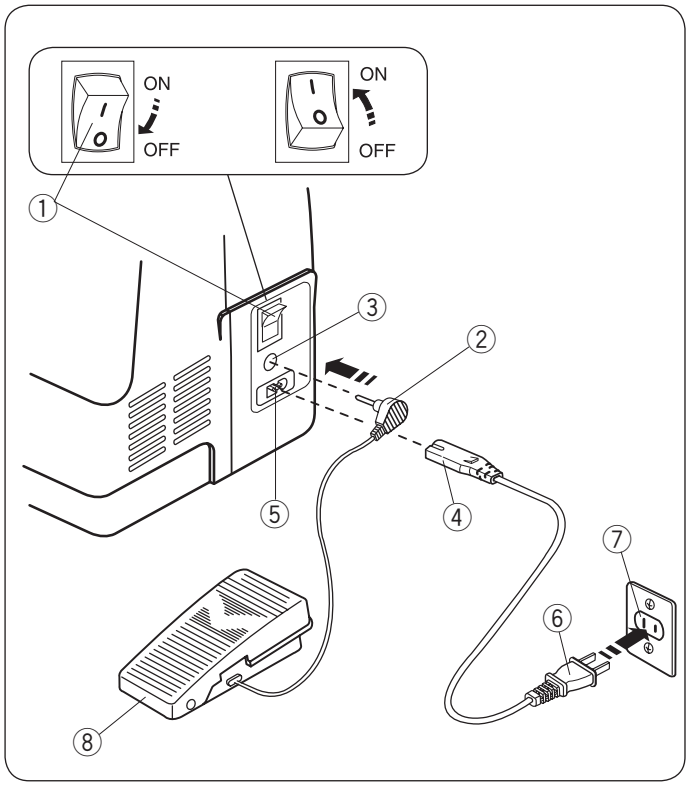
*The power cable included may differ from the illustration.




## Setting the Spool Pin

Insert the spool pin into the hole as shown.

① Spool pin
② Hole




# GETTING READY TO SEW

## Connecting the Power Supply

### Using the foot control

Turn off the power switch.
Insert the pin connector into the jack.
Insert the machine plug into the power inlet.
Insert the power supply plug into the wall outlet.
Turn on the power switch.

① Power switch
② Pin connector
③ Jack
④ Machine plug
⑤ Power inlet
⑥ Power supply plug
⑦ Wall outlet
⑧ Foot control

**NOTE:**
The start/stop button does not work when the foot control is connected.

**⚠ WARNING:**
While in operation, always keep your eyes on the sewing area and 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 wall outlet:
- when leaving the machine unattended.
- when attaching or removing parts.
- when cleaning the machine.

Do not place anything on the foot control.

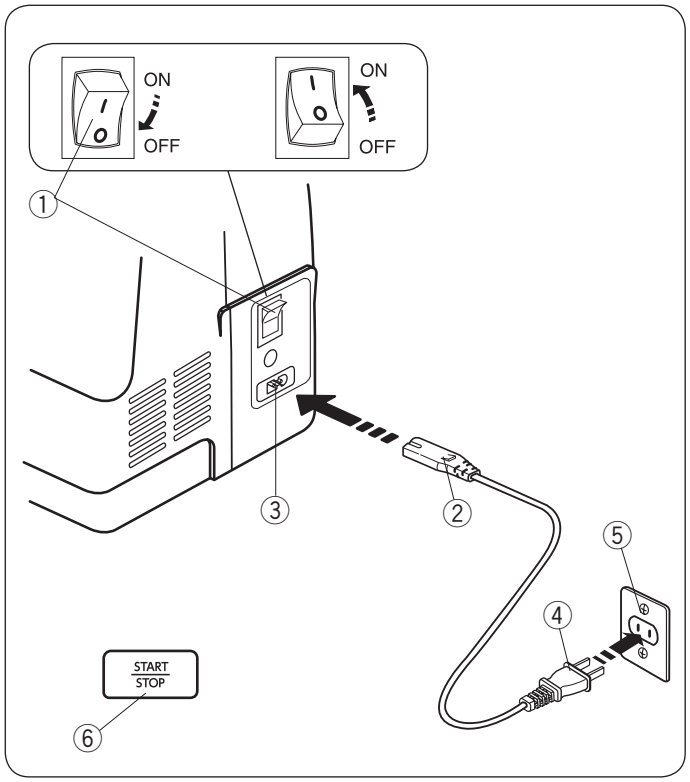
## Before Using Your Sewing Machine

Before using your sewing machine for the first time, place a scrap of fabric under the presser foot and run the machine without thread for a few minutes. Wipe away any oil which may appear.

## Operating Instructions:

The symbol “O” on the switch indicates the “off” position of the switch.
Foot control model 4C-339-JM is used with this sewing machine.

**For the U.S.A and Canada only:**
For appliances with a polarized plug (one blade wider than the other): To reduce the risk of electric shock, this plug is intended to fit in a polarized outlet only one way. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not modify the plug in any way.



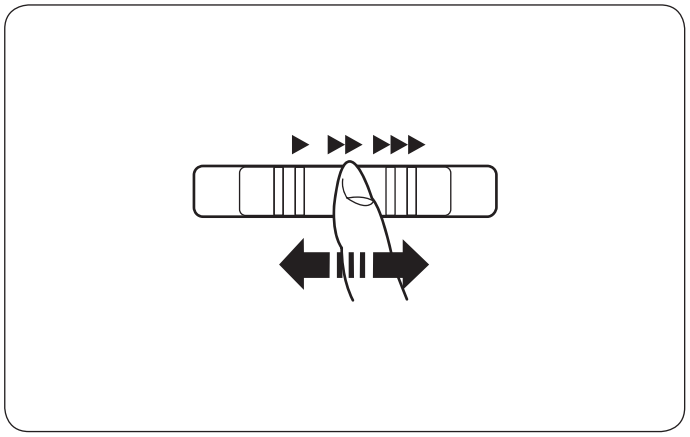

## Connecting the Power Supply

### Using the start/stop button

Turn off the power switch.
Insert the machine plug into the power inlet.
Insert the power supply plug into the wall outlet.
Turn on the power switch.

① Power switch
② Machine plug
③ Power inlet
④ Power supply plug
⑤ Wall outlet
⑥ Start/stop button

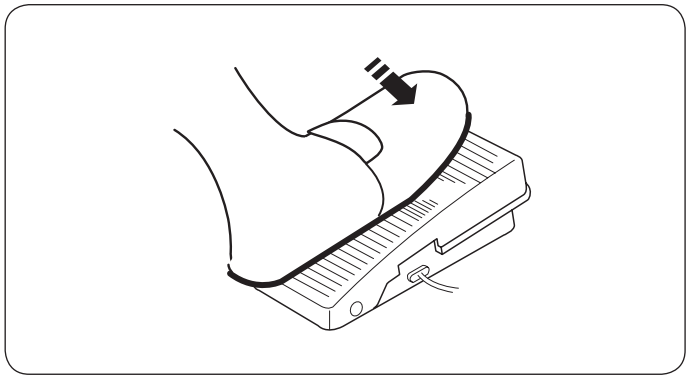
**NOTE:**
The start/stop button does not work when the foot control is connected.



## Controlling Sewing Speed

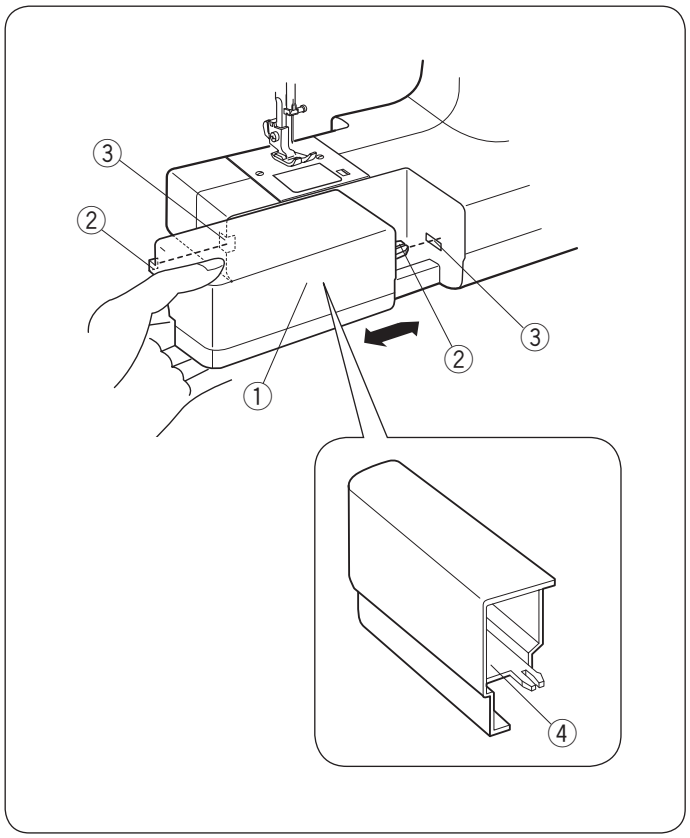
### Speed control slider

Sewing speed can be varied by the speed control slider according to your sewing needs.
To increase sewing speed, move the slider to the right.
To decrease sewing speed, move the slider to the left.



### Foot control

Depress the foot control to start the machine.
The further down you press on the foot control, the faster the machine runs.
The maximum sewing speed can be varied by the speed control slider.




## Extension Table

The extension table provides an extended sewing area and can be easily removed for free-arm sewing.

### Detaching the table

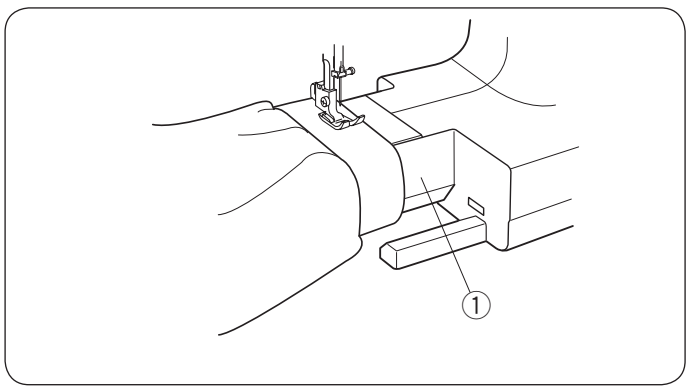
Pull the table away from the machine, as illustrated.
① Extension table

### Attaching the table

Push the extension table, inserting the tabs into the slots until the table snaps into the machine.
② Tab
③ Slot

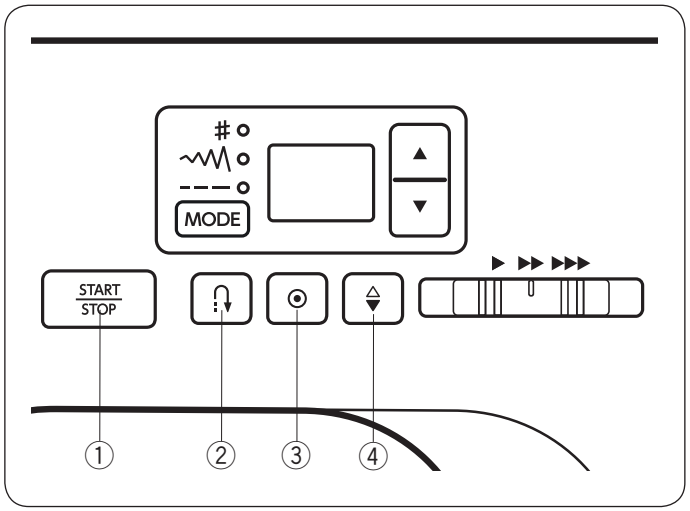
### Accessory storage

Accessories are stored inside the extension table.
④ Accessory storage




## Free-arm Sewing

Free-arm is useful for sewing tubular garments and for darning knee or elbow areas.
① Free-arm




## Machine Operating Buttons

**① Start/Stop button**

Press this button to start or stop the machine.
The machine starts running slowly for the first few stitches, and it then runs at the speed set by the speed control slider.
The machine runs slowly as long as this button is being pressed.

> **NOTE:**
> The start/stop button cannot be used when the foot control is connected to the machine.

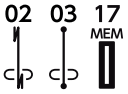
**② Reverse button**

**• When following stitch patterns are selected;**




The machine will sew in reverse as long as the reverse button is pressed. Release the button to sew forward.
When the machine is stopped and foot control is disconnected, the machine will sew in reverse slowly as long as the reverse button is pressed. Release the button to stop the machine.

**• When following stitch patterns are selected;**

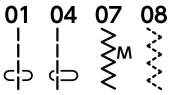



There will be particular functions of the reverse button when patterns shown above are selected. Refer to pages 24, 29 and 30 for instructions.

**• When any other stitches are selected;**
If you press the reverse button when sewing any other patterns, the machine will immediately sew locking stitches and automatically stop.

**③ Auto-lock button**

**• When following stitch patterns are selected;**




Press the auto-lock button to sew a locking stitch immediately. The machine will automatically stop.

**• When any other stitches are selected;**
Press the auto-lock button to sew a locking stitch at the end of current pattern. The machine will automatically stop.

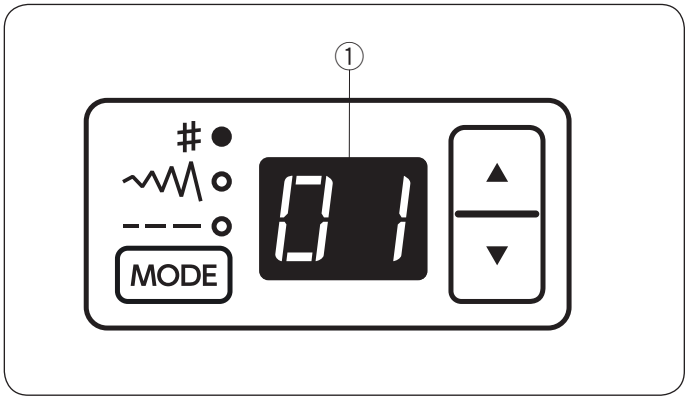
**④ Needle up/down button**

Press the needle up/down button to bring the needle up or down.

**Needle stop position**

When you start the machine with the needle at up position, the needle stops at up position when the machine is stopped.

When you start the machine with the needle at down position, the needle stops at down position when the machine is stopped.

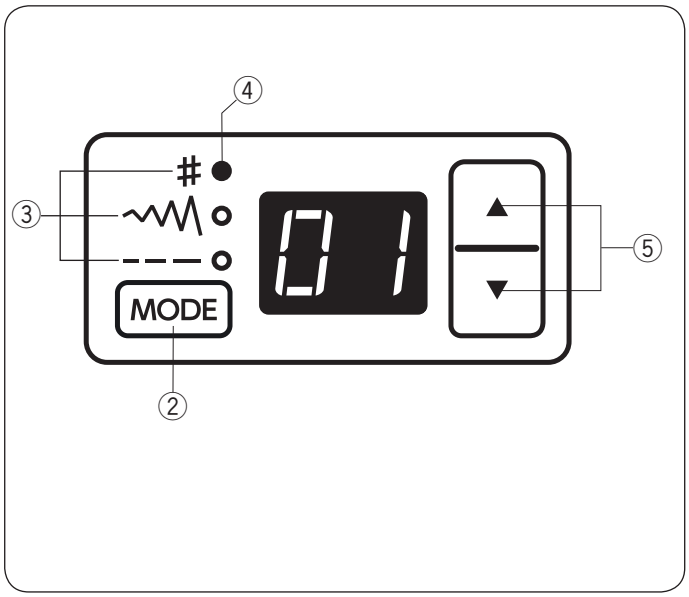



## LCD Display

**NOTE:**
Magnetic or electrostatic interference may cause the LCD display to flicker.
Do not use the machine near appliances that generate a magnetic field or an electrostatic field such as microwave ovens.

The LCD display shows following information when the machine is turned on.

① Stitch pattern number




## Function Keys

### Mode key

When the power switch is turned on, the pattern selection mode is set automatically.
Each time you press the mode key ②, the green light ④ will shift and the mode ③ will change in the following order:

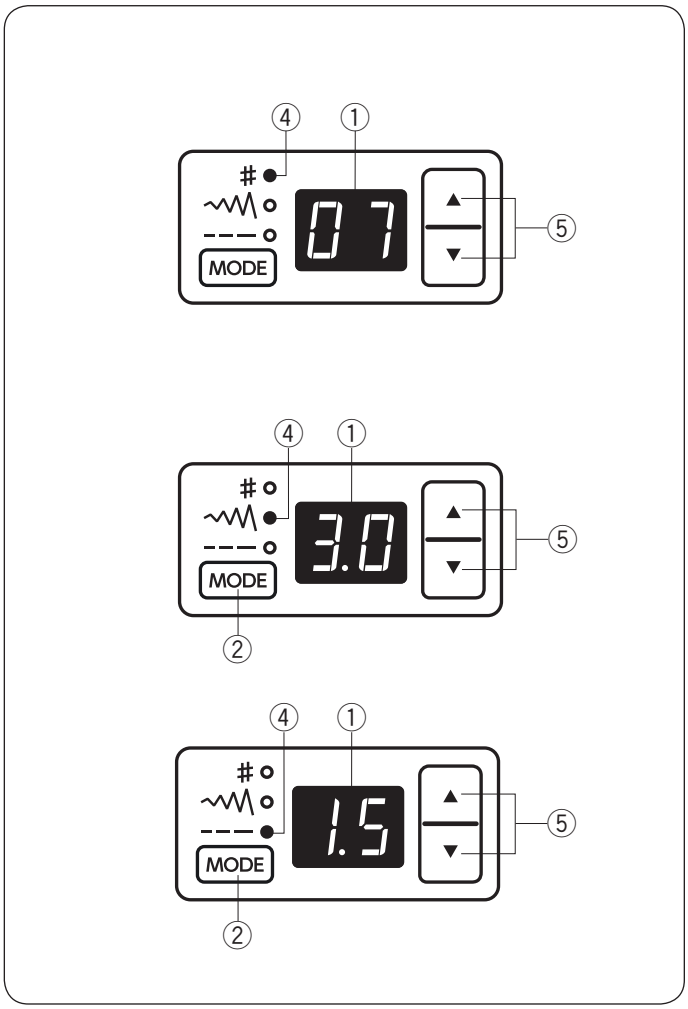
(1) # Pattern selection mode
(2) ∿ Stitch width adjustment mode
(3) --- Stitch length adjustment mode

② Mode key
③ Mode
④ Green light

### Value set key

Press the value set keys ⑤ to alter the value.
Press "▲" to increase the value.
Press "▼" to decrease the value.

⑤ Value set key




## Selecting Stitch Patterns

### (1) Pattern selection mode

The green light ④ is lit at the pattern selection mode.
The stitch pattern number will increase or decrease by 1 each time you press the value set keys ⑤.

To select the desired stitch pattern, press the value set key until the pattern number of the desired stitch is indicated on the LCD display ①.

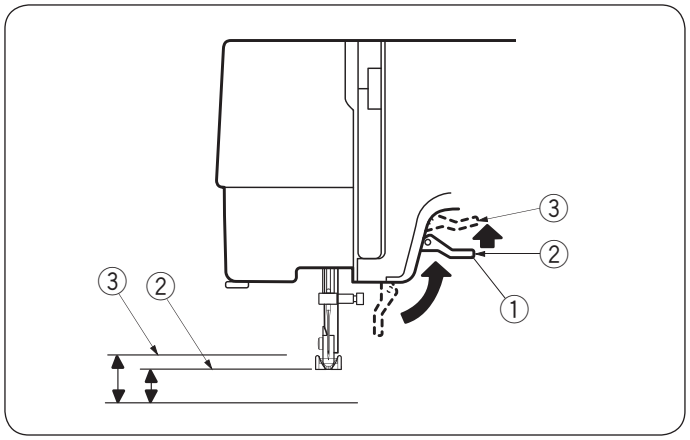
To refer available stitch patterns for this sewing machine, check the stitch chart in this manual on page 48.

### (2) Stitch width adjustment mode

Press the mode key once ②.
The green light ④ is lit at the stitch width adjustment mode. The LCD display ① shows the stitch width or needle drop position, depending on the selected stitch pattern.
Press the value set key ⑤ ( ▲ or ▼ ) to change the stitch width or needle drop position.
Refer to pages 23 and 26.

### (3) Stitch length adjustment mode

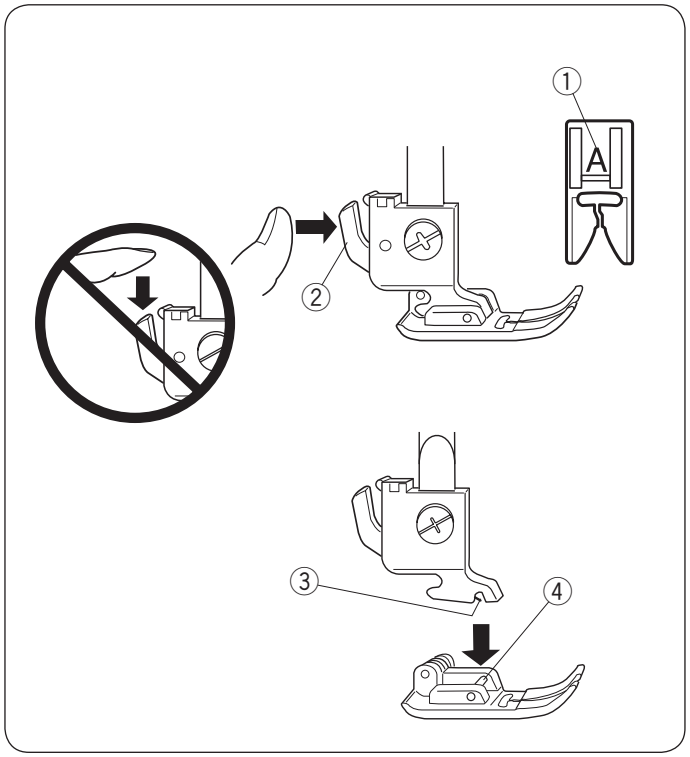
Press the mode key twice ②.
The green light ④ is lit at the stitch length adjustment mode. The LCD display ① shows the stitch length.
Press the value set key ⑤ ( ▲ or ▼ ) to change stitch length.
Refer to pages 23 and 26.
Press the mode key ② to return to the pattern selection mode.




## Presser Foot Lifter

The presser foot lifter raises and lowers the presser foot. You can raise the foot about 1/4″ (0.7 cm) higher than the normal up position for easy removal of the presser foot, or to help you place thick material under the foot.

① Presser foot lifter
② Normal up position
③ Highest position




## Changing the Presser Foot

**⚠ CAUTION:**

- Turn OFF the power switch before changing the foot.
- Always use the proper foot for the selected pattern. The wrong foot can cause the needle to break. Each foot is marked with an identification letter.
  ① Identification letter

### Removing the presser foot

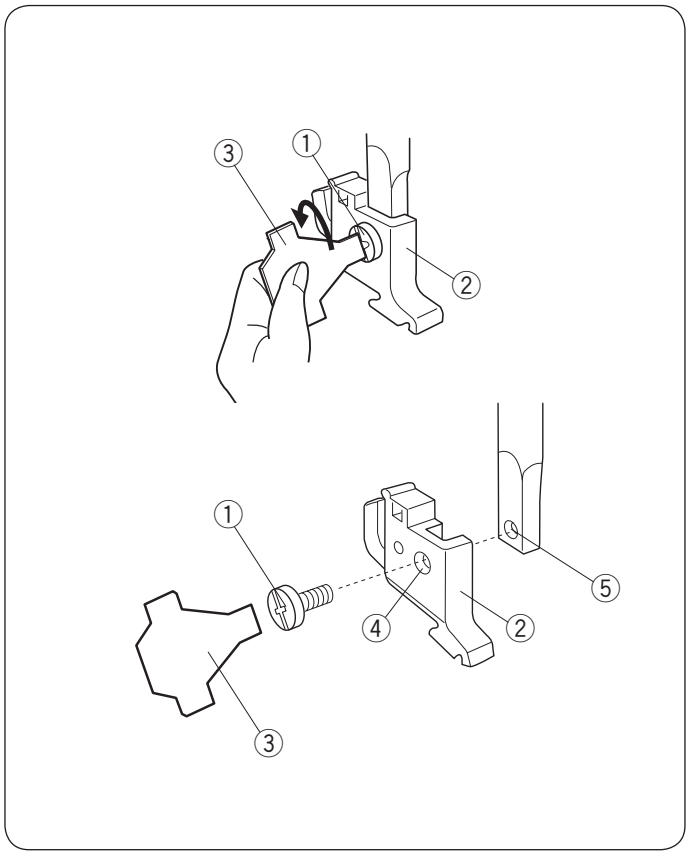
Raise the needle to its highest position by turning the handwheel counterclockwise. Raise the presser foot, and press the lever on the back of the foot holder.

② Lever

### Attaching the presser foot

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

③ Groove
④ Pin




## Removing and Attaching the Foot Holder

**⚠ CAUTION:**

Turn OFF the power switch before detaching or attaching foot holder.

### Removing the foot holder

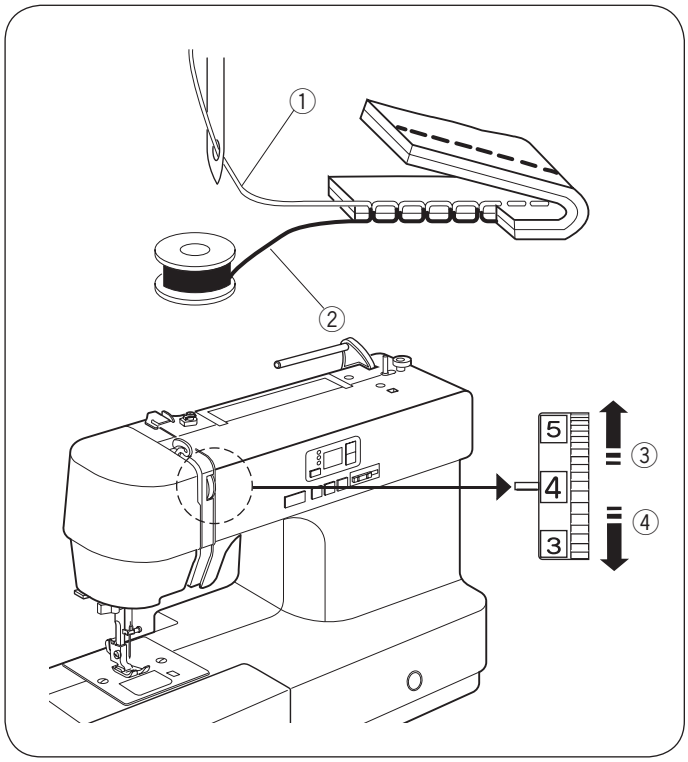
Remove the setscrew by turning it counterclockwise with a screwdriver.

① Setscrew
② Foot holder
③ Screwdriver

### Attaching the foot holder

Align the hole in the foot holder with the threaded hole in the presser bar.
Fit the setscrew into the hole.
Tighten the setscrew by turning it clockwise with the screwdriver.

④ Hole
⑤ Threaded hole



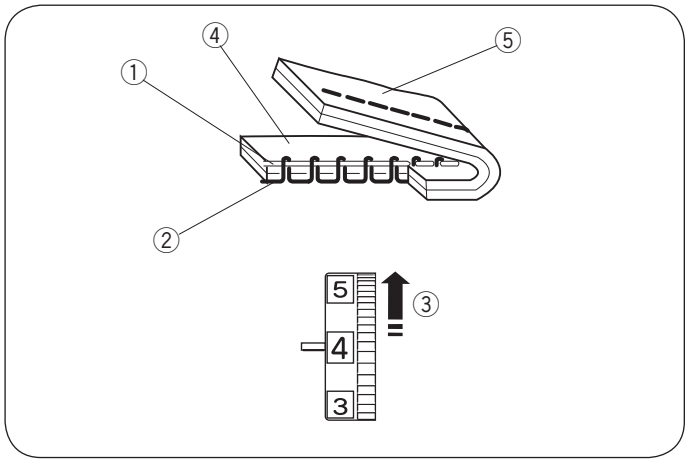

## Adjusting the Needle Thread Tension

### Straight stitch balanced tension

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 the seam, notice that the stitches are evenly balanced.

① Needle thread (top thread)
② Bobbin thread (bottom thread)
③ To loosen
④ To tighten

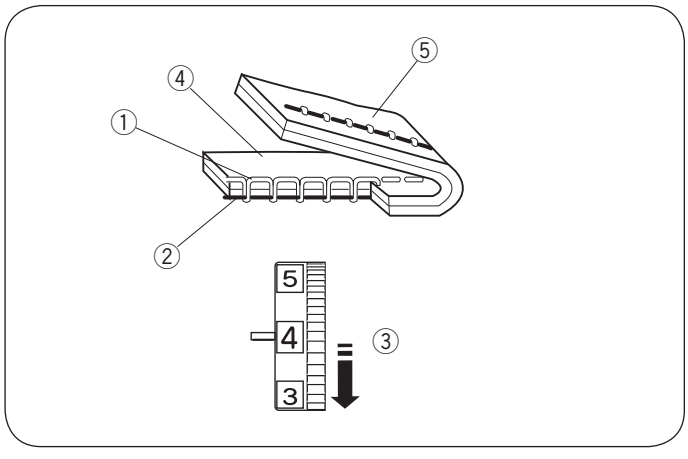
When adjusting the needle thread tension, the higher the number, the tighter the top thread tension.
Results depend on:
- stiffness and thickness of the fabric
- number of fabric layers
- type of stitch




### Tension is too tight

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

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

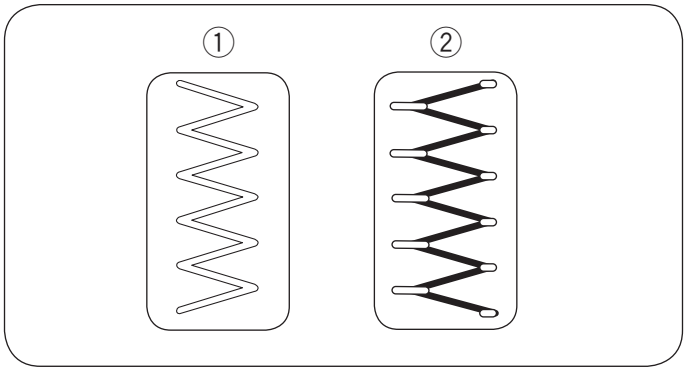



### Tension is too loose

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

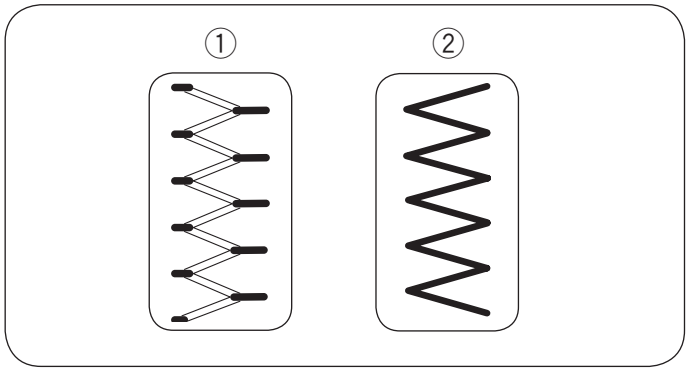
① Needle thread (top thread)
② Bobbin thread (bottom thread)
③ To tighten tension
④ Right side (top side) of fabric
⑤ Wrong side (bottom side) of fabric

**Zigzag stitch balanced tension**
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 as necessary.



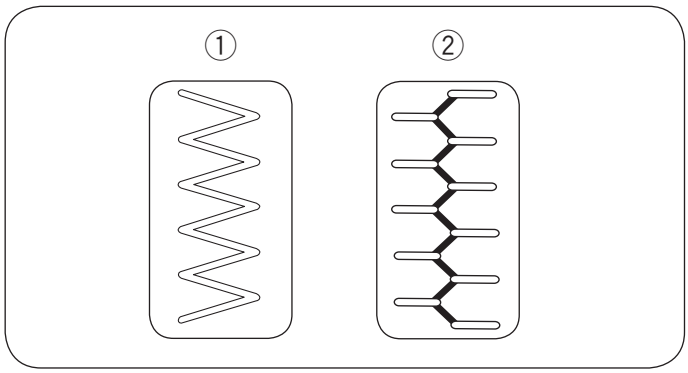

**Balanced tension**

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.
① Right side (top side) of fabric
② Wrong side (bottom side) of fabric



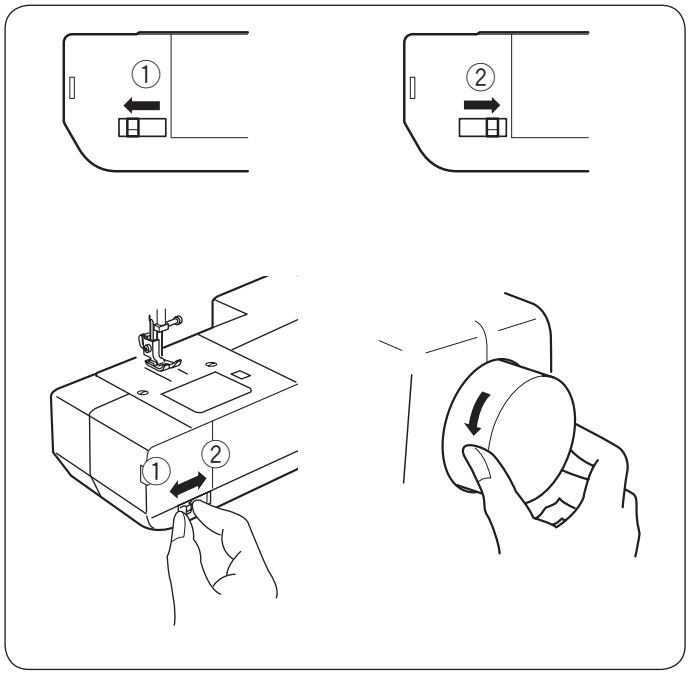

**Tension is too tight**

The corner of each zigzag pulls together on the right side of the fabric
① Right side (top side) of fabric
② Wrong side (bottom side) of fabric




**Tension is too loose**

The corner of each zigzag point pulls together on the wrong side of the fabric.
① Right side (top side) of fabric
② Wrong side (bottom side) of fabric



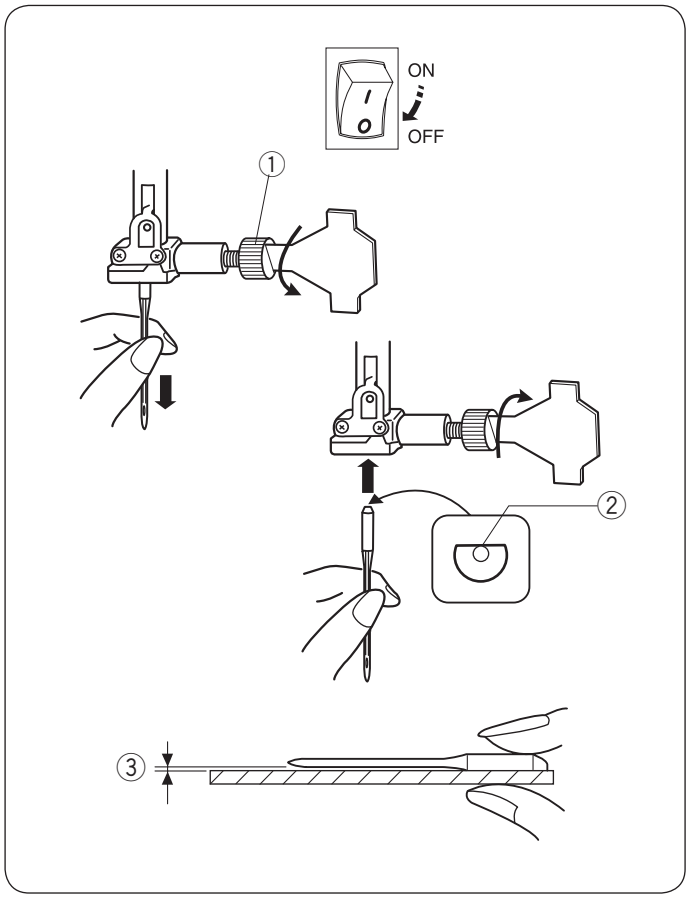

## Dropping or Raising the Feed Dog

The drop feed lever is located lower part of the free arm bed on the front of the machine.

To drop the feed dog, push the lever in the direction of the arrow ①.

To raise the feed dog, push the lever in the direction of the arrow ②, as illustrated, and turn the handwheel toward you.

The feed dog must be up for normal sewing.




## Changing the Needle

**⚠CAUTION:**
Turn OFF the power switch before changing the needle.
Raise the needle to its highest position by turning the handwheel counterclockwise.
A loose needle or a loose screw may cause machine malfunction or needle to break.

Loosen the needle clamp screw by turning it counterclockwise. Remove the needle from the needle clamp.
Insert a new needle into the needle clamp with the flat side to the rear. When inserting the needle into the needle clamp, push it up as far as it will go.
Tighten the needle clamp screw firmly by turning it clockwise.

① Needle clamp screw
② Flat side

To see if the needle is in good condition, 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.

③ Gap

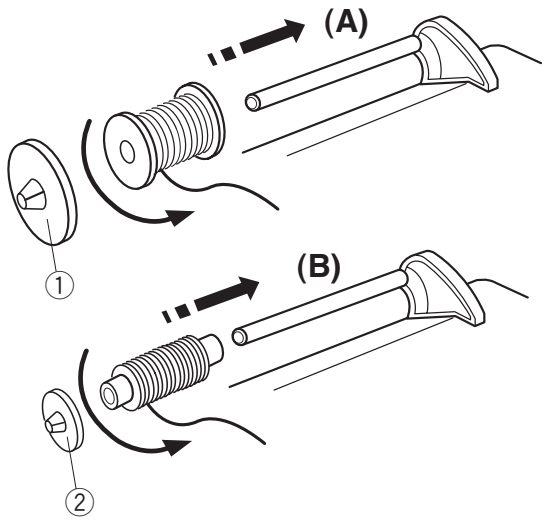
## Fabric, Thread and Needle Chart

- For general sewing, use needle size 11/75 or 14/90.
- 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.
- Always test the needle size on a small scrap of the fabric that will be used for actual sewing.
- In general, use the same thread for the needle and bobbin.

**NOTE:**
When sewing stretch fabrics, very fine fabrics and synthetics, use a blue tip needle (Part No. 990311000, sold separately). The blue tip needle effectively prevents skipped stitches.

| Fabric | | Thread | Needle |
|---|---|---|---|
| Fine | Lawn<br>Georgette<br>Tricot<br>Organza<br>Crepe | Silk #80-100<br>Cotton #80-100<br>Synthetic #80-100 | #9/65-11/75 |
| Medium | Sheeting<br>Jersey<br>Broadcloth<br>Fleece | Silk #50<br>Cotton #50-80<br>Synthetic #50-80 | #11/75-14/90 |
| Heavy weight | Denim<br>Tweed<br>Coating<br>Quilting | Silk #30-50<br>Cotton #40-50<br>Synthetic #40-50 | #14/90-16/100 |

**NOTE:**
3 x #14/90 needles are included in the envelop.
(Part No. 639804000).



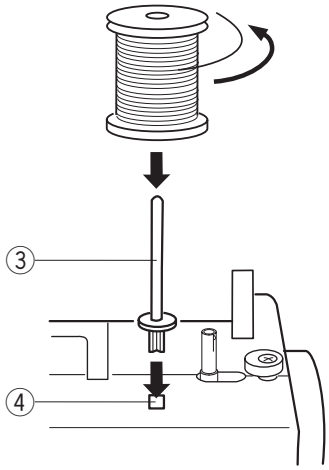

## Setting the Spool of Thread

### Setting the spool

Place a spool of thread on the spool pin with the thread coming off the spool as illustrated.

**A:** Press the large spool holder firmly against the spool of thread.
① Large spool holder

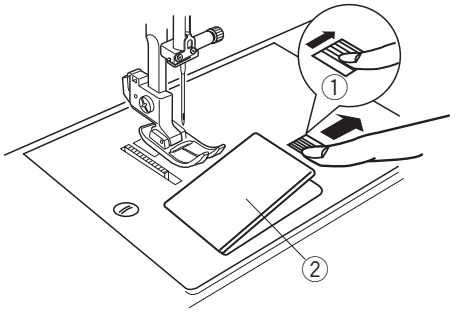
**B:** For a small spool, use the small spool holder.
② Small spool holder

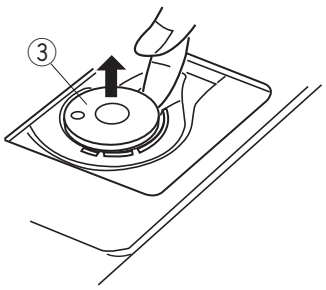



### Extra spool pin

Use the extra spool pin when you need to wind a bobbin without unthreading the machine while working on a sewing project.
Insert the extra spool pin into the hole.
Place a spool of thread on the spool pin with the thread coming off the spool as illustrated.

③ Extra spool pin
④ Hole for extra spool pin



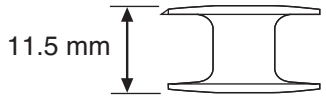

## Bobbin Winding

### Removing the bobbin

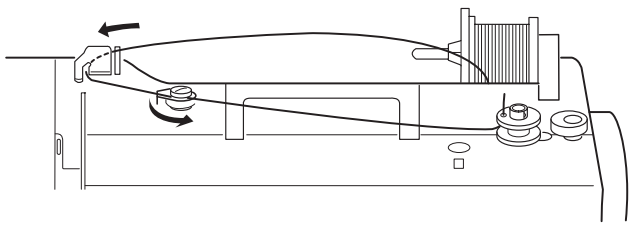
Gently slide the hook cover release button to the right and remove the hook cover plate.
Lift out the bobbin.

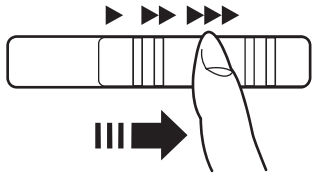
① Hook cover release button
② Hook cover plate
③ Bobbin

**NOTE:**
Use the plastic bobbins that come with the machine (Part #102261000). Using other bobbins, such as pre-wound paper bobbins, may cause stitching problems and/ or damage to the bobbin holder.



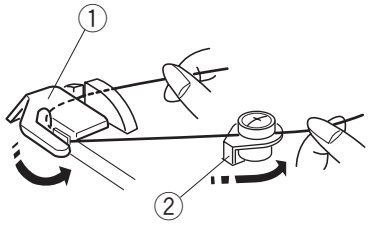
## Winding the bobbin





**NOTE:**
Set the speed control slider at its fastest position for bobbin winding.

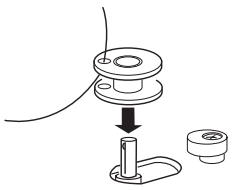
1




1 Hold the thread with both hands and guide the thread from back to front under the upper thread guide.
① Upper thread guide

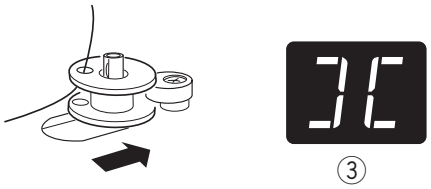
Guide the thread into the bobbin winder tension disk as illustrated.
② Bobbin winder tension disk

2 3



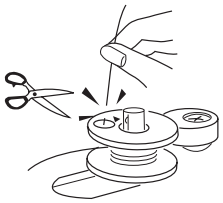
2 Thread through the hole in the bobbin from the inside to the outside.
3 Put the bobbin on the bobbin winder spindle.

4



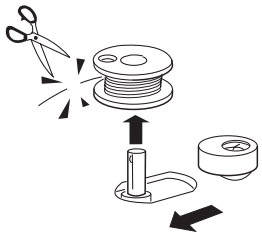

4 Push the bobbin winder spindle to the right.
The bobbin mark appears on the LCD display.
③ Bobbin mark

5



5 With the free end of the thread held in your hand, start the machine. Stop the machine when it has wound a few layers, and then cut the thread close to the hole in the bobbin.

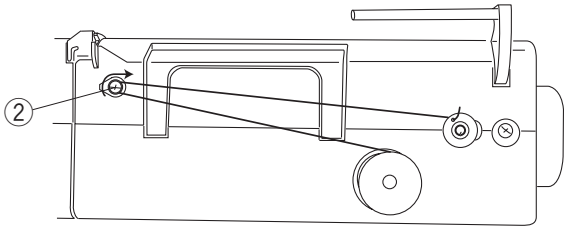
6 7



6 Start the machine. When the bobbin is fully wound, it will stop spinning automatically.
Stop the machine and return the bobbin winder to its original position by moving the spindle to the left.

7 Remove the bobbin. Cut the thread as shown.
Return the speed control slider position.

**NOTE:**
- Do not move the bobbin winder spindle while the machine is running.
- For safety purposes, the machine will automatically stop 90 seconds after starting bobbin winding.

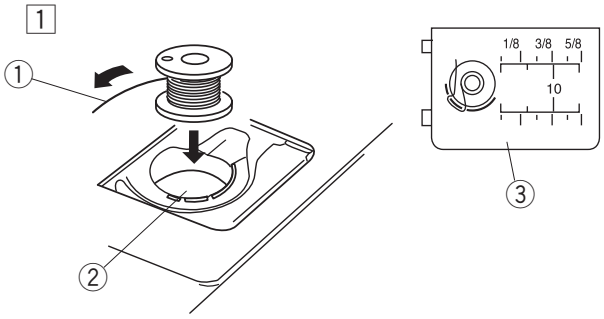



**Bobbin winding with the extra spool pin**
Draw the thread from the spool and pass the thread around the bobbin winding tension disk as shown.
Start the procedure from 2 above.
② Bobbin winder tension disk

## Inserting the bobbin

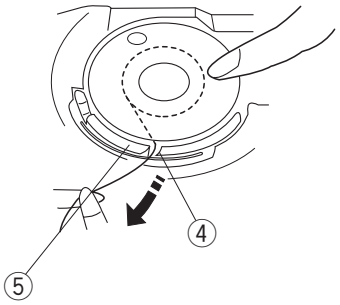
**⚠ CAUTION:**
Turn OFF the power switch before inserting the bobbin and threading the bobbin holder.

1



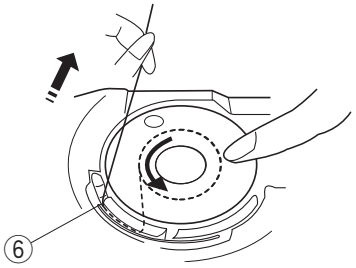

1 Place a bobbin in the bobbin holder with the thread running off counterclockwise as shown on the hook cover plate.
- ① End of thread
- ② Bobbin holder
- ③ Hook cover plate

2




2 Hold the bobbin with your fingertip so it does not rotate.
Guide the thread into the front notch of the bobbin holder. Draw the thread to the left, sliding it between the tension spring blades.
- ④ Front notch
- ⑤ Tension spring blade

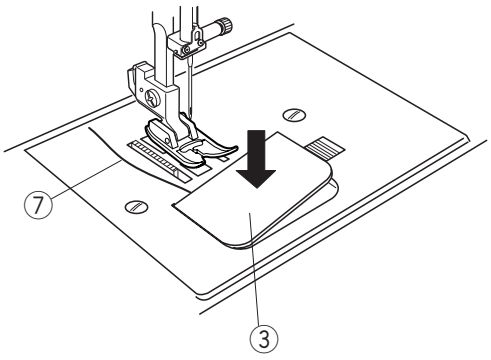
3




3 Continue to draw the thread lightly until the thread slips into the side notch.
- ⑥ Side notch

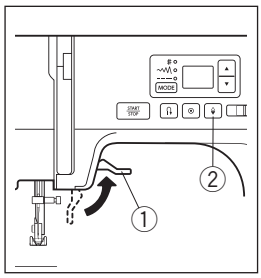
**NOTE:**
If the thread does not come out from the side notch, rethread from step 2.

4




4 Pull out about 4” (10 cm) of thread.
Set the left edge of the hook cover plate into opening. Push down the hook cover plate to fit in place. Check the threading by referring to the chart shown on the hook cover plate.
- ③ Hook cover plate
- ⑦ Thread

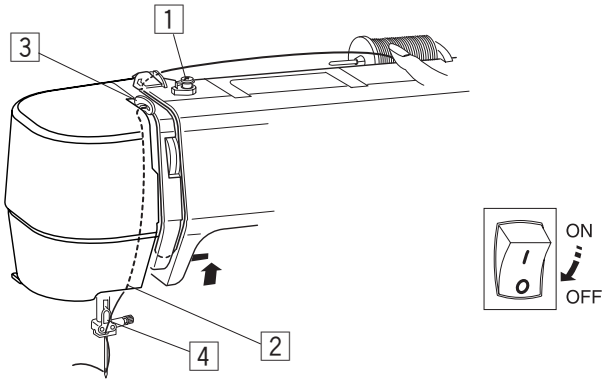
## Threading the Machine



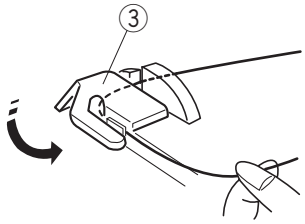

Raise the presser foot lifter.
Turn the power switch ON.
Press the needle up/down button to raise the thread take-up lever to its highest position.
Turn the power switch OFF.

① Presser foot lifter
② Needle up/down button

**⚠ CAUTION:**
Turn OFF the power switch before threading the machine.



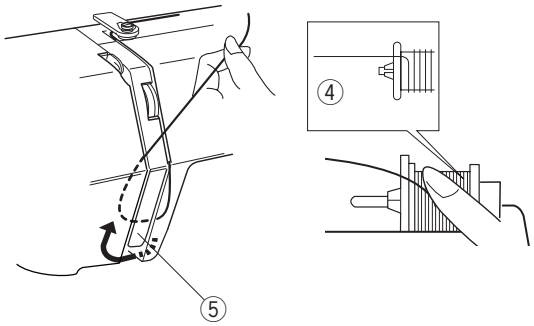

1




1 Draw the thread from the spool and pass it under the upper thread guide.

③ Upper thread guide

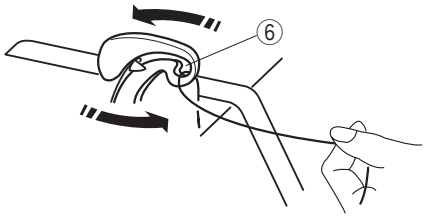
2




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

④ Spool
⑤ Check spring holder

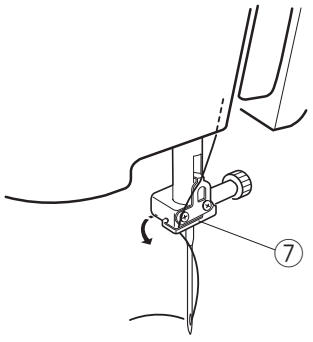
3




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

⑥ Eye of take-up lever

4 5




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

⑦ Needle bar thread guide

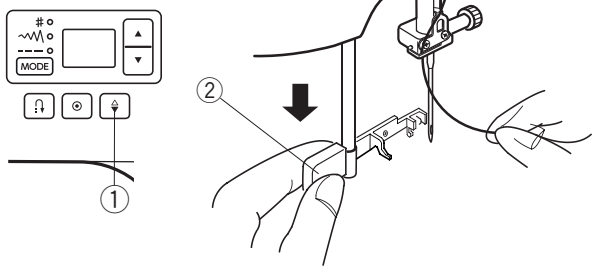
5 Use the needle threader to thread the needle (refer to page 19).

## Built-in Needle Threader

**⚠ CAUTION:**
Turn off the power switch when using the needle threader.

**NOTE:**
The needle threader can be used with a #11 to #16 needle or a blue tip needle. Thread sizes 50 to 90 are recommended.

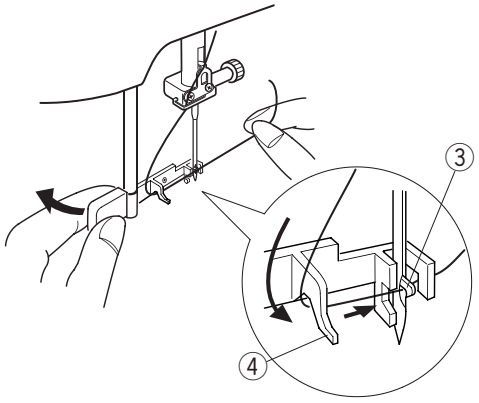
1




1 Press the needle up/down button to raise the needle to its highest position.
Turn the power switch off.

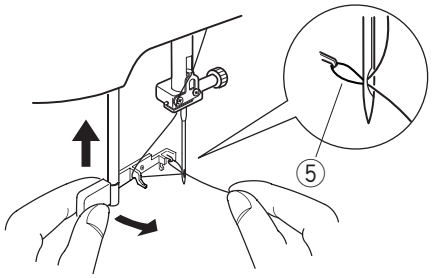
Pull down the needle threader knob as far as it will go.
① Needle up/down button
② Threader knob

2



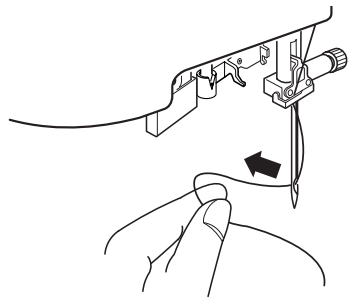

2 Turn the knob in the direction of the arrow in the illustration, then insert the hook into the needle eye.
Lead the thread around the guide and under the hook.
③ Hook
④ Guide

3




3 Turn the knob in the direction of the arrow in the illustration, drawing the thread loop through the needle.
Gently let the needle threader goes up to pull the thread loop up.
⑤ Thread loop

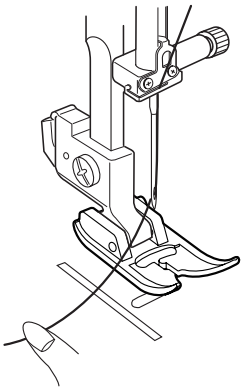
4



4 Pull the thread through the needle eye.

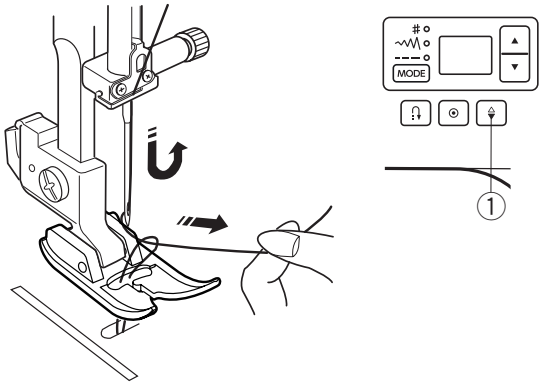
## Drawing up the Bobbin Thread

1



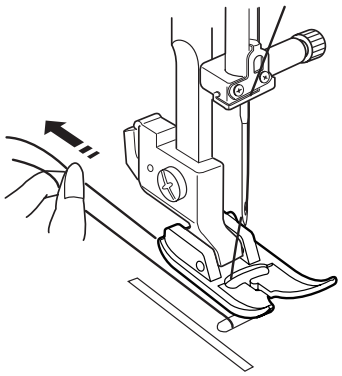
1 Raise the presser foot. Hold the needle thread lightly with your left hand.

2

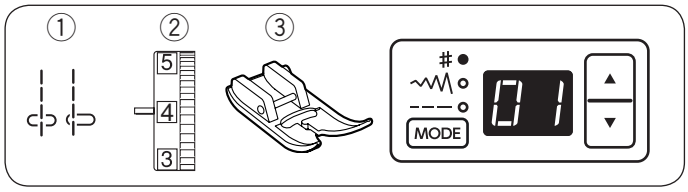



2 Turn the power switch on.
Press the needle up/down button twice to lower and raise the needle to pick up the bobbin thread.
① Needle up/down button

3



3 Pull both threads 4″ to 6″ (10 to 15 cm) under and behind the presser foot.

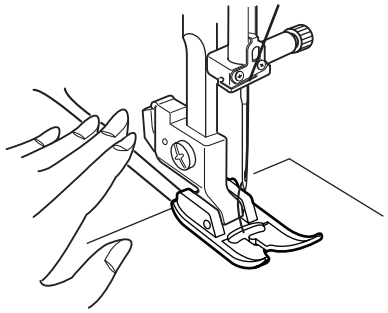



# BASIC SEWING

## Straight Stitch Sewing

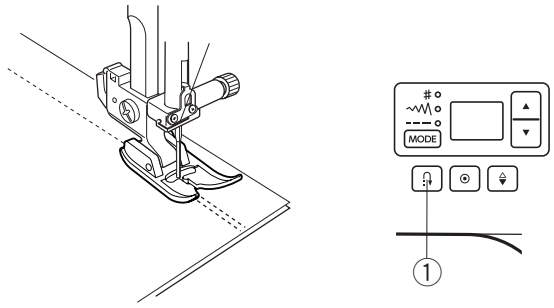
| | | |
|---|---|---|
| ① | Stitch pattern: | 01 or 04 |
| ② | Needle thread tension: | 2 to 6 |
| ③ | Presser foot: | Zigzag foot A |

**NOTE:**
When sewing with the satin stitch foot F or the sliding buttonhole foot, pull the thread to the left to hold the thread.



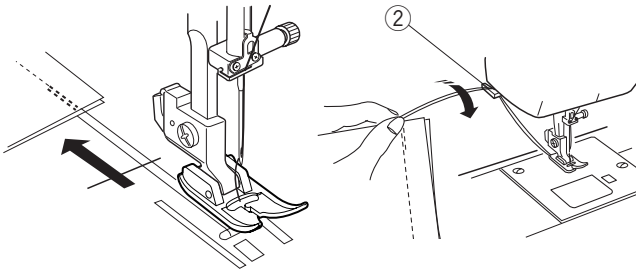
## Starting to Sew

Raise the presser foot and position the fabric next to a seam guide line on the needle plate. Lower the needle to the point where you want to start.
Pull the thread toward the rear and lower the presser foot.
Start sewing.
Gently guide the fabric along a seam guide line letting the fabric feed naturally.



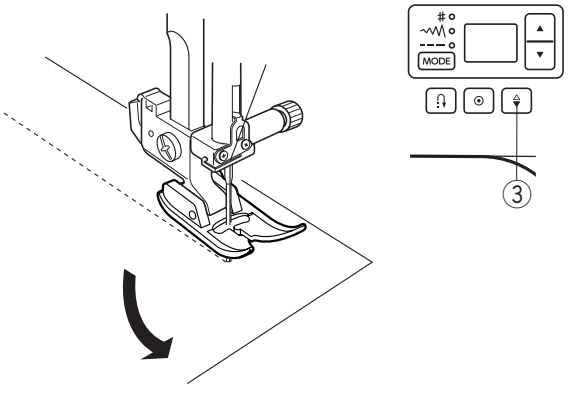

## Securing Seams

For fastening the ends of seams, press the reverse button and sew several reverse stitches.
The machine sews in reverse as long as you press and hold the reverse button.
① Reverse button
Press the reverse button once when sewing the lock-a-matic stitch (pattern 02) or locking stitch (pattern 03) and the machine will lock the stitches off and stop automatically.



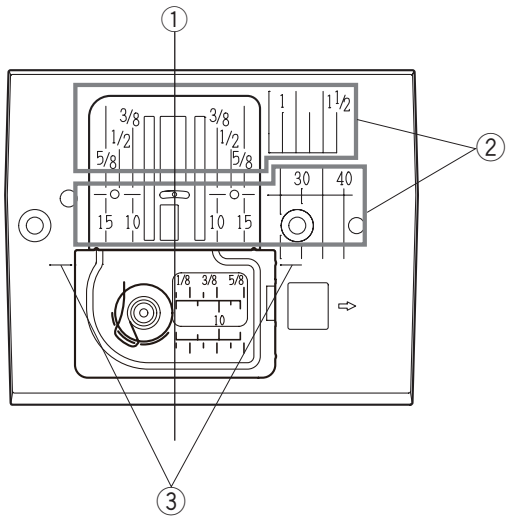

## Cutting Threads

Use the thread cutter on the face cover to cut the threads.
To use the thread cutter on the face cover, remove the fabric and draw it to the back.
Pull the threads up and slip them between the thread cutter and face cover from behind.
Pull the threads toward you to cut.
② Thread cutter




## Changing Sewing Direction

Stop the machine.
Press the needle up/down button to lower the needle into the fabric.
Raise the presser foot.
Pivot the fabric around the needle to change the sewing direction as desired.
Lower the foot and start sewing in a new direction.
③ Needle up/down button

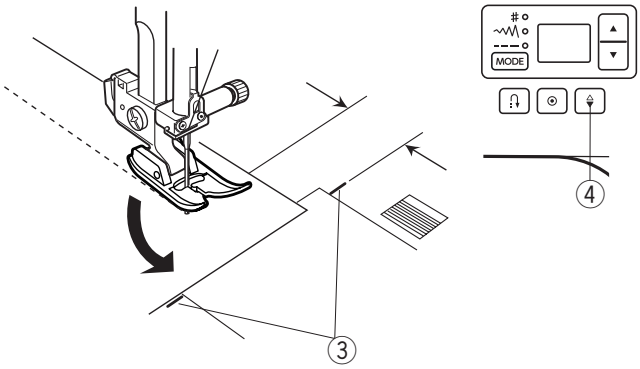



## Using Seam Guides

The seam guides on the needle plate and the hook cover plate help you to measure seam allowance.
The numbers on the needle plate indicate the distance from the center needle position in inches and millimeters.

① Center needle position
② Seam guide
③ Cornering guide

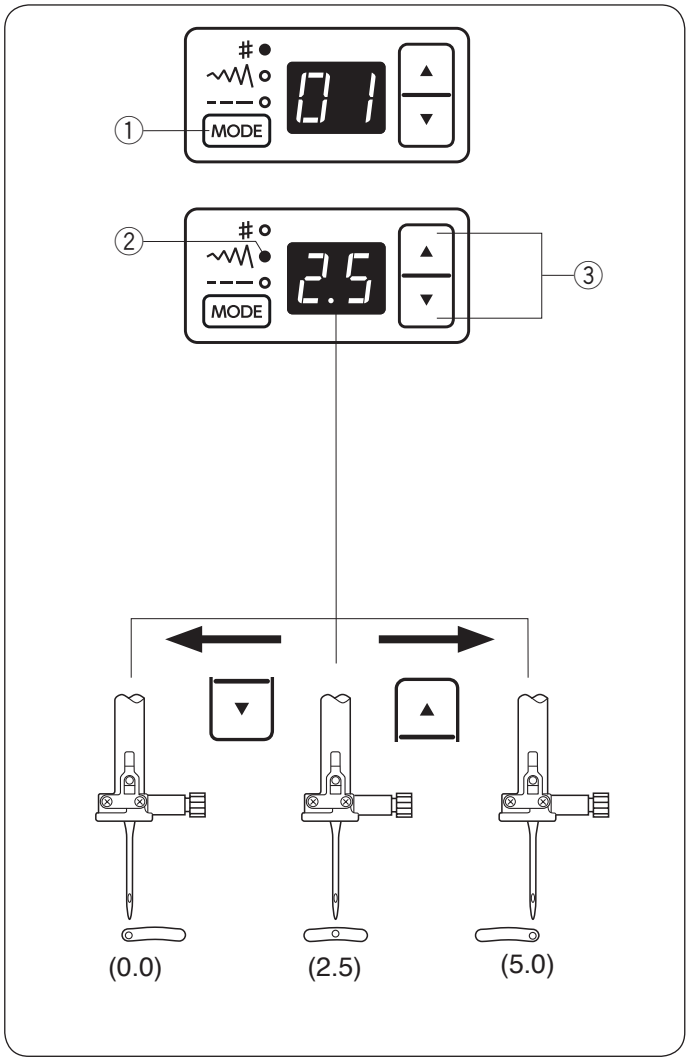
| Numbers | 10 | 15 | 30 | 40 | 3/8 | 1/2 | 5/8 | 1 | 1 1/2 |
|---|---|---|---|---|---|---|---|---|---|
| Distance (cm) | 1 | 1.5 | 3 | 4 | — | — | — | — | — |
| Distance (inch) | — | — | — | — | 3/8 | 1/2 | 5/8 | 1 | 1 1/2 |




## Turning Square Corners

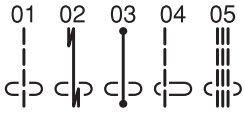
When sewing with fabric edge at 5/8″ seam guide, to turn a square corner so that sewing continues at same distance from edge.
Stop the machine when front edge of fabric reaches the cornering guide lines ③.
Press the needle up/down button to lower the needle into the fabric.
Raise the presser foot and turn the fabric counterclockwise 90°.
Lower the presser foot, and begin stitching in the new direction.

③ Cornering guide
④ Needle up/down button




## Altering the Needle Drop Position

The needle drop position can be altered for straight stitch patterns 01 to 05.



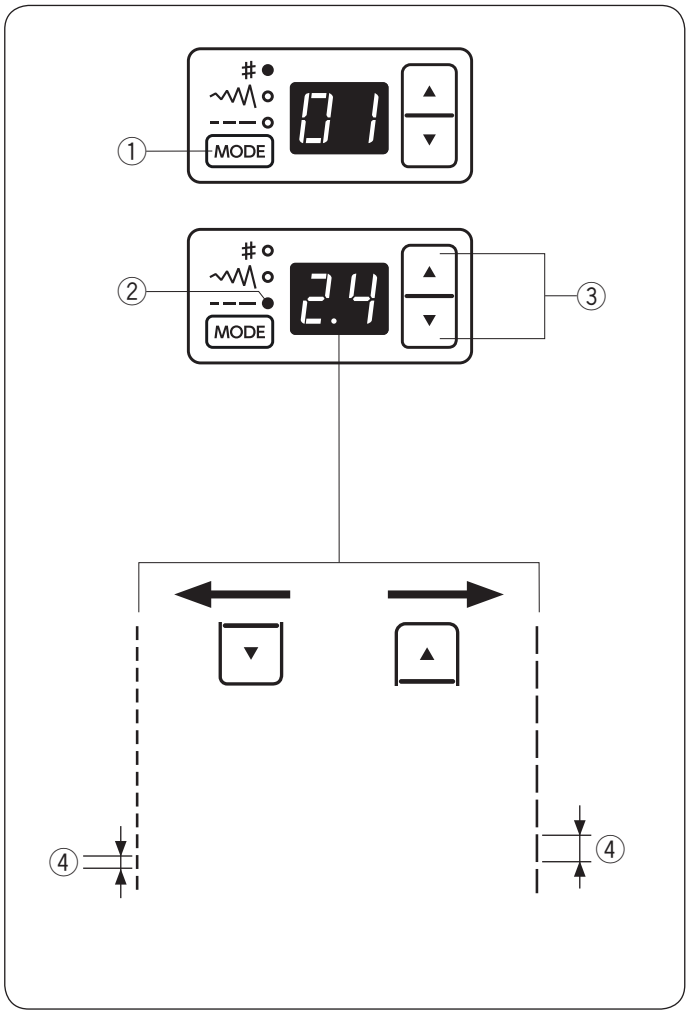

Press the mode key ① once.
The green light ② is lit at the stitch width adjustment mode ( ⁓ ).
The needle drop position value appears.

① Mode key
② Green light

Press the "▼" sign on the value set key ③ to move the needle to the left.

Press the "▲" sign on the value set key ③ to move the needle to the right.

③ Value set key




## Altering the Stitch Length

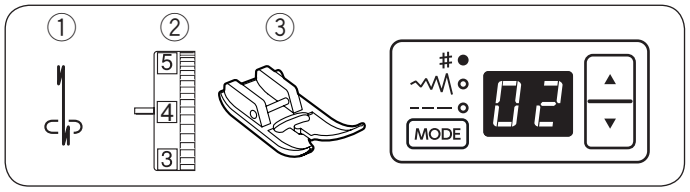
The stitch length can be altered.
Press the mode key ① twice.
The green light ② is lit at the stitch length adjustment mode ( --- ).
The stitch length value appears.

① Mode key
② Green light

Press the "▲" sign on the value set key ③ to increase the stitch length.

Press the "▼" sign on the value set key ③ to decrease the stitch length.

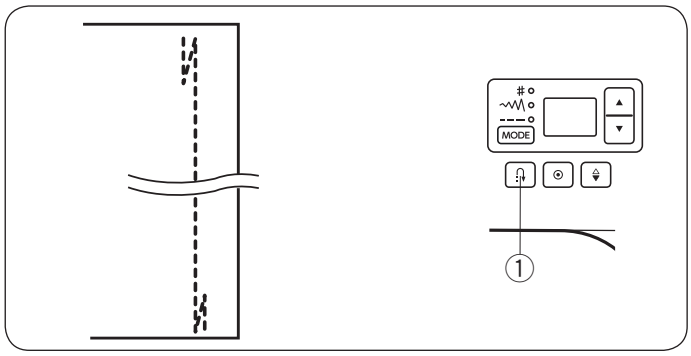
③ Value set key
④ Stitch length




## Variety of Straight Stitches

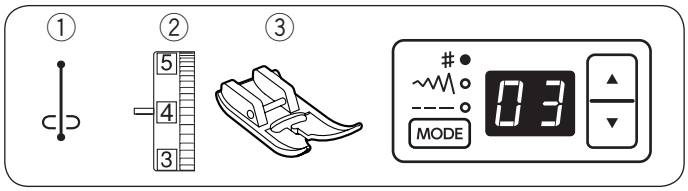
### Lock-a-matic Stitch

① Stitch pattern: 02
② Thread tension dial: 2 to 6
③ Presser foot: Zigzag foot A



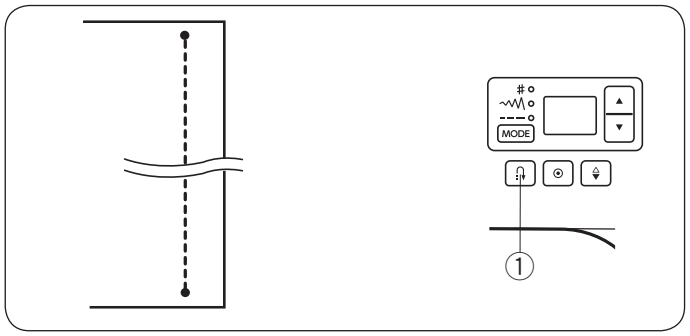

Use this stitch to secure the beginning and the end of a seam with backstitching.
When you reach the end of the seam, press the reverse button once. The machine will sew four reverse stitches, four forward stitches, and then stop sewing automatically.

① Reverse button




### Locking Stitch

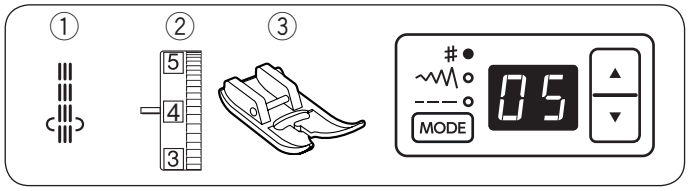
① Stitch pattern: 03
② Thread tension dial: 2 to 6
③ Presser foot: Zigzag foot A




This unique stitch is used where an invisible locking stitch is needed.

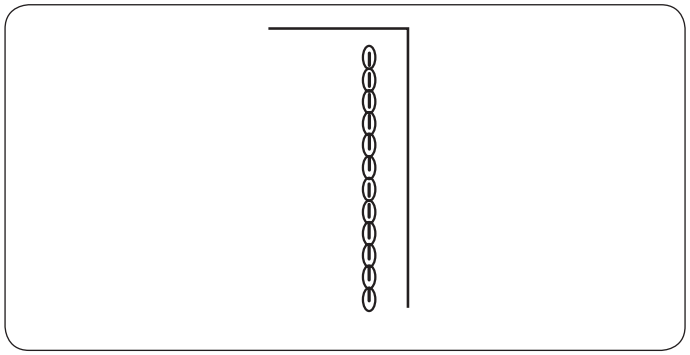
Lower the needle close to the front edge of the fabric. The machine will sew several locking stitches in place and continue sewing forward.
When you press the reverse button at the end of the seam, the machine will sew several locking stitches in place, then stop sewing automatically.

① Reverse button

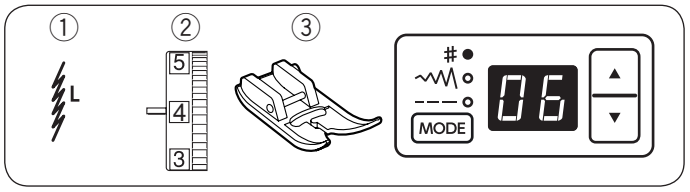


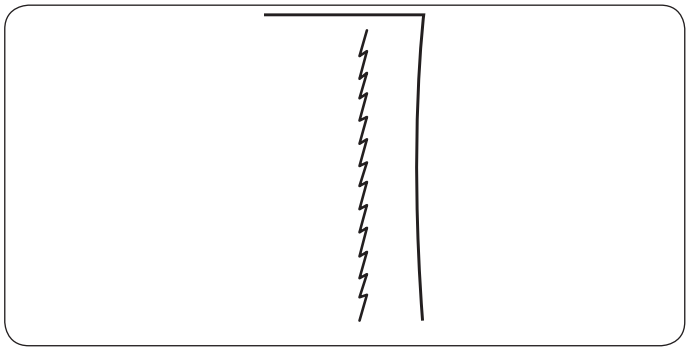

### Triple Stretch Stitch

① Stitch pattern: 05
② Thread tension dial: 2 to 6
③ Presser foot: Zigzag foot A



This strong, durable stitch is recommended when both elasticity and strength are necessary in order to insure comfort and durability. Use it to reinforce areas such as crotch and armhole seams. Also use for extra reinforcement when constructing items such as backpacks.

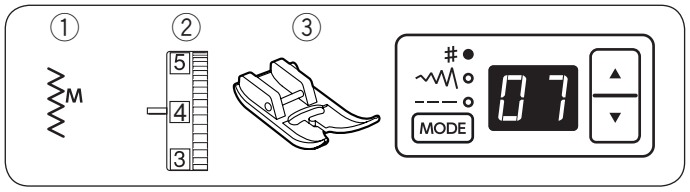


**Stretch Stitch**

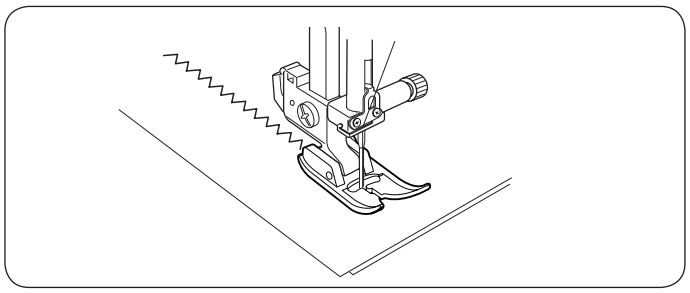
① Stitch pattern: 06
② Thread tension dial: 3 to 6
③ Presser foot: Zigzag foot A

This stitch is a narrow stretch stitch designed to eliminate puckering on knit fabrics and bias seams, while permitting the seam to be pressed completely open flat. Use this stitch for seaming fine fabrics.



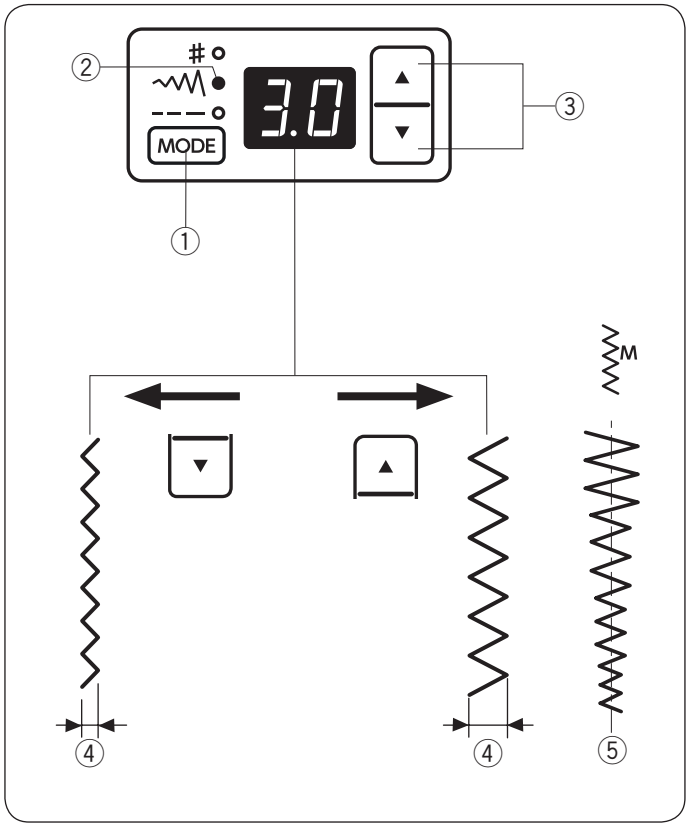

## Zigzag Stitch

① Stitch pattern: 07
② Thread tension dial: 3 to 7
③ Presser foot: Zigzag foot A



The zigzag stitch is one of the most useful and versatile stitches.
It is used for overcasting, mending, appliqué, and also used as a decorative stitch.

**NOTE:**
Use interfacing when sewing on stretch fabrics such as knit, jersey or tricot.




### Altering the stitch width

Press the mode key once ①.
The green light ② is lit at the stitch width adjustment mode ( ∿ ).
The stitch width value (3.0) appears.

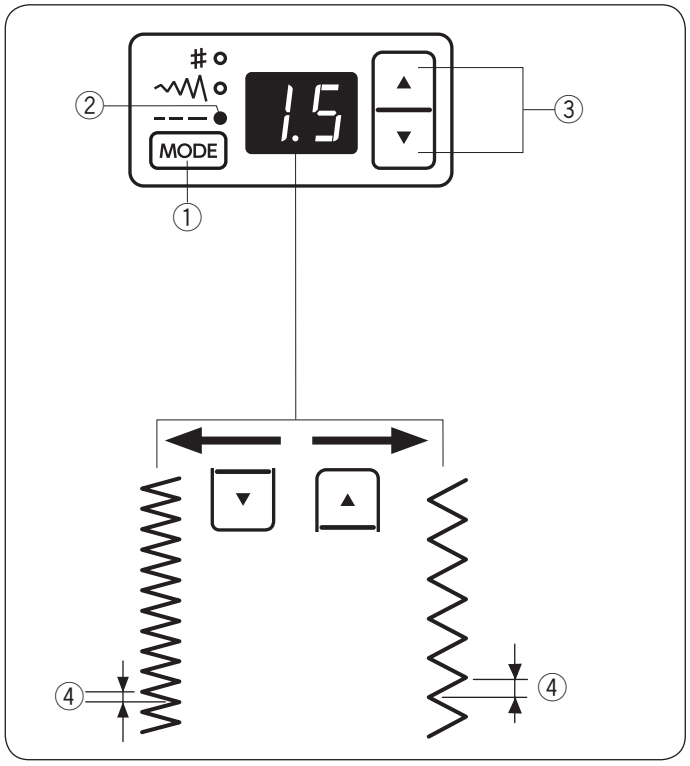
Press the "▲" sign on the value set key ③ to increase the stitch width.

Press the "▼" sign on the value set key ③ to decrease the stitch width.

① Mode key
② Green light
③ Value set key
④ Stitch width

The stitch width of pattern 07 can be changed without changing its center needle position (M) ⑤.

⑤ Center needle position

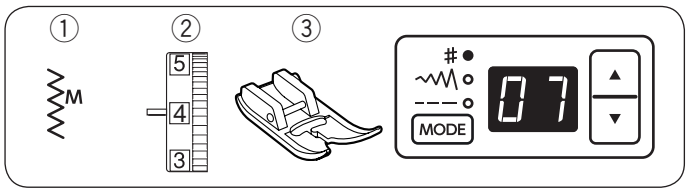



### Altering the stitch length

Press the mode key twice ①.
The green light ② is lit at the stitch length adjustment mode ( --- ).
The stitch length value (1.5) appears.
Press the "▲" sign on the value set key ③ to increase the stitch length.

Press the "▼" sign on the value set key ③ to decrease the stitch length.

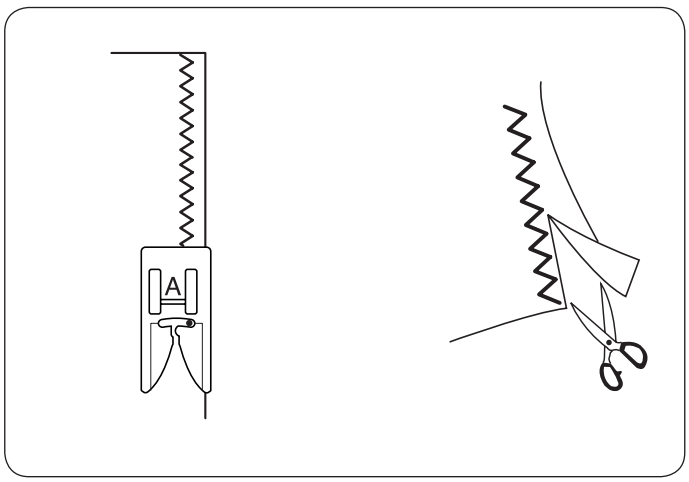
① Mode key
② Green light
③ Value set key
④ Stitch length




## Variety of Overcasting Stitches

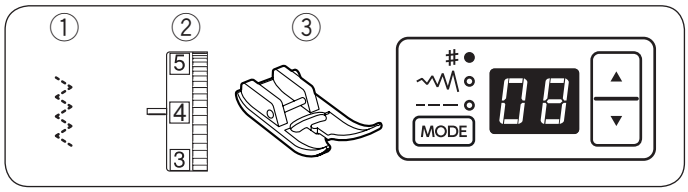
### Overcasting with Zigzag Stitch

① Stitch pattern: 07
② Thread tension dial: 3 to 7
③ Presser foot: Zigzag foot A



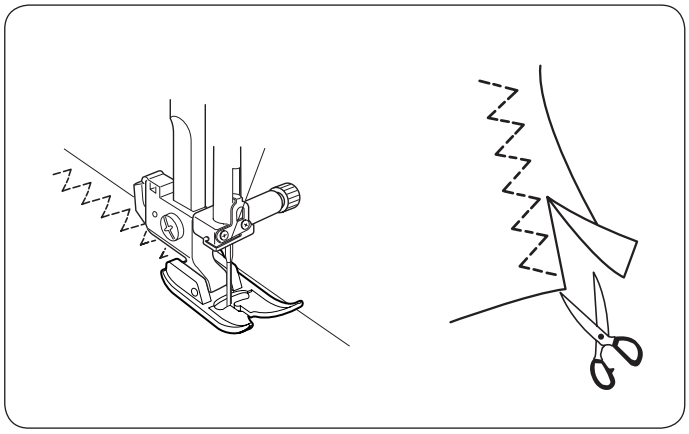

The zigzag stitch is used on the seam allowance to prevent fabric from fraying at raw edges.

Sew along the fabric edge leaving an adequate seam allowance.
After sewing, trim off the seam allowance closer to the stitches.
Be careful not to cut the stitches.




### Multiple Zigzag Stitch

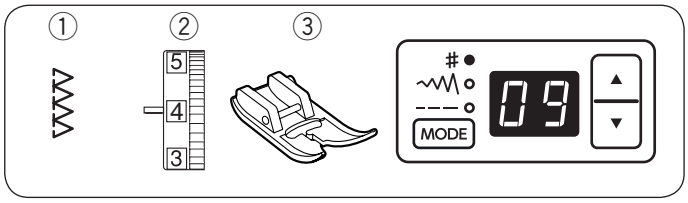
① Stitch pattern: 08
② Thread tension dial: 3 to 6
③ Presser foot: Zigzag foot A



This stitch is used to finish a raw edge of synthetics and other stretch fabrics that tend to pucker.

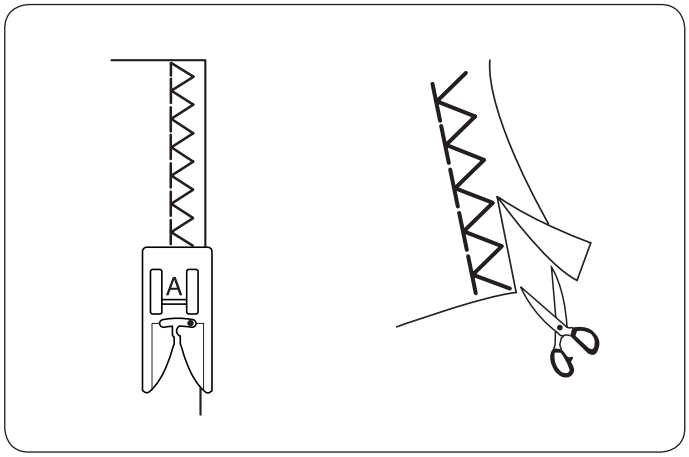
Sew along the fabric edge leaving an adequate seam allowance.
After sewing, trim off the seam allowance closer to the stitches.
Be careful not to cut the stitches.

This stitch is also excellent for darning and mending tears.



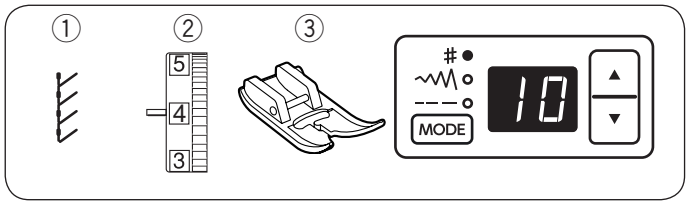

### Overedge Stitch

① Stitch pattern: 09
② Thread tension dial: 3 to 7
③ Presser foot: Zigzag foot A



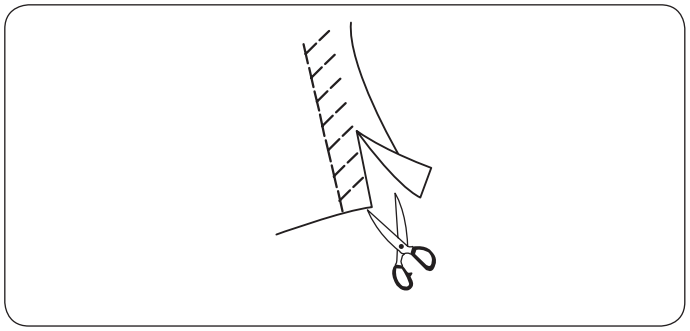

This stitch is used to seam and overcast fabric edges at one time.
Use this stitch when you do not need to open seams flat.

Sew along the fabric edge leaving an adequate seam allowance.
After sewing, trim off the seam allowance closer to the stitches.
Be careful not to cut the stitches.

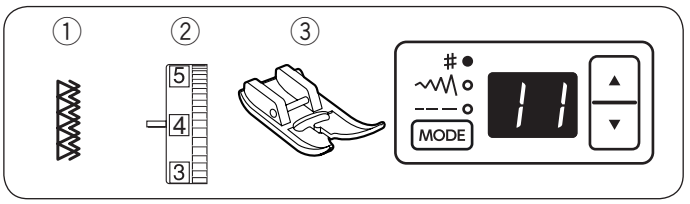



**Knit Stitch**

① Stitch pattern: 10
② Thread tension dial: 3 to 6
③ Presser foot: Zigzag foot A

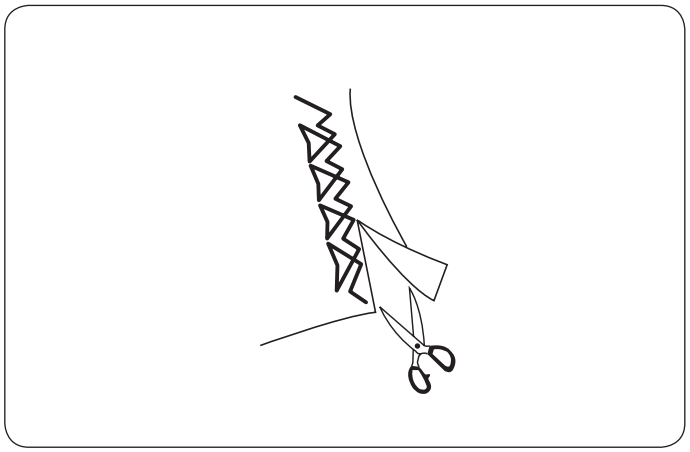


Place your fabric to allow a 5/8″ (1.5 cm) seam. Trim excess close to the stitching. Be careful not to cut the stitches.



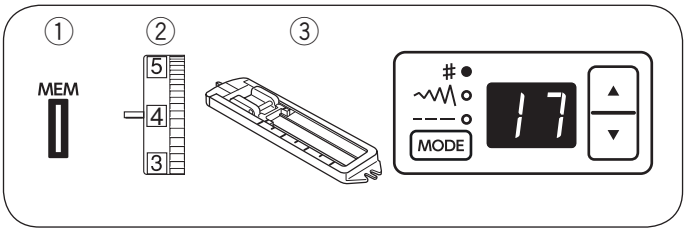

**Overlock Stitch**

① Stitch pattern: 11
② Thread tension dial: 3 to 7
③ Presser foot: Zigzag foot A



This stitch is excellent for sewing fabrics that tend to fray extensively such as linens and gabardines.
Two rows of zigzag stitches are simultaneously sewn over the edge to insure that your seams will not ravel.

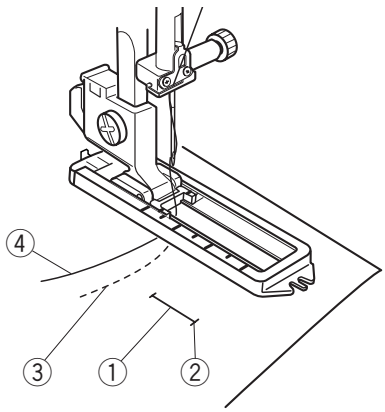
Sew along the fabric edge leaving an adequate stitches. Trim excess close to the stitching. Be careful not to cut the stitches.




## Memory Buttonhole

① Stitch pattern: 17
② Thread tension dial: 1 to 4
③ Presser foot: Sliding buttonhole foot

1

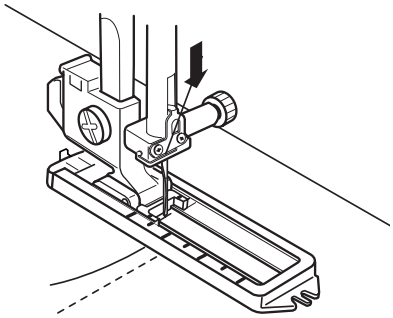



**NOTE:**
Apply an interfacing to stretch or fine fabrics.

1 Mark the buttonhole position on the fabric.
Place the fabric under the foot with the buttonhole mark running toward you.
Draw the needle thread to the left through the hole of the foot.

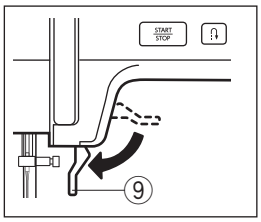
① Buttonhole mark
② Start mark
③ Bobbin thread
④ Needle thread

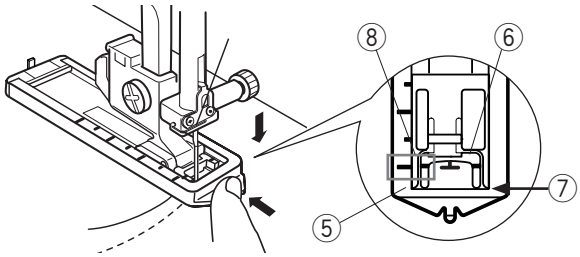
2



2 Turn the handwheel toward you to lower the needle at the start mark.

3



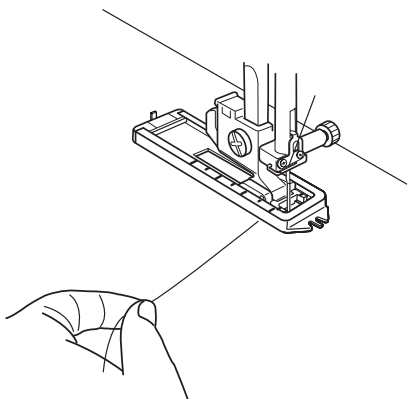




3 Push the buttonhole foot to the rear until it stops.
Make sure there is no gap between the slider and the stopper, aligning marks on the stopper and the slider.
Lower the presser foot lifter.

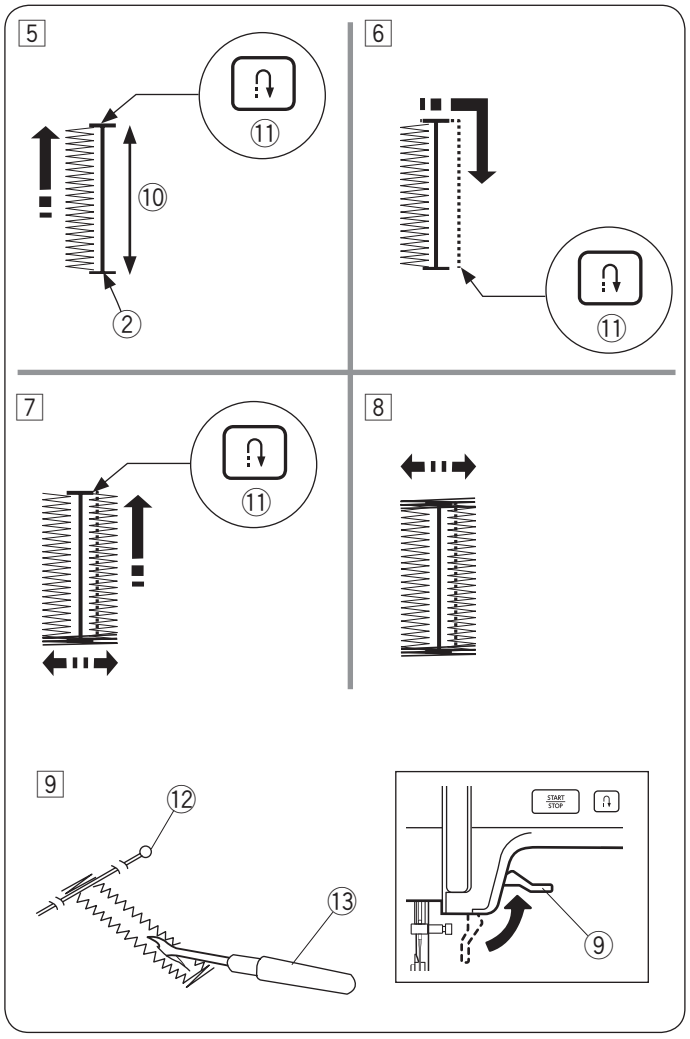
③ Bobbin thread
④ Needle thread
⑤ Stopper
⑥ Slider
⑦ No gap
⑧ Marks
⑨ Presser foot lifter

**NOTE:**
The scale on the buttonhole foot is engraved in 0.5 centimeters.

4



4 Start sewing while pulling the needle thread lightly to the left. After a few stitches, free the thread and continue sewing.




5 Sew the left side up to the required length of the buttonhole.
Stop the machine and press the reverse button.
② Start mark
⑩ Required length
⑪ Reverse button

6 Start the sewing again. The machine will sew back to the starting point.
Stop the machine when you are directly opposite the start point. Press the reverse button.
⑪ Reverse button

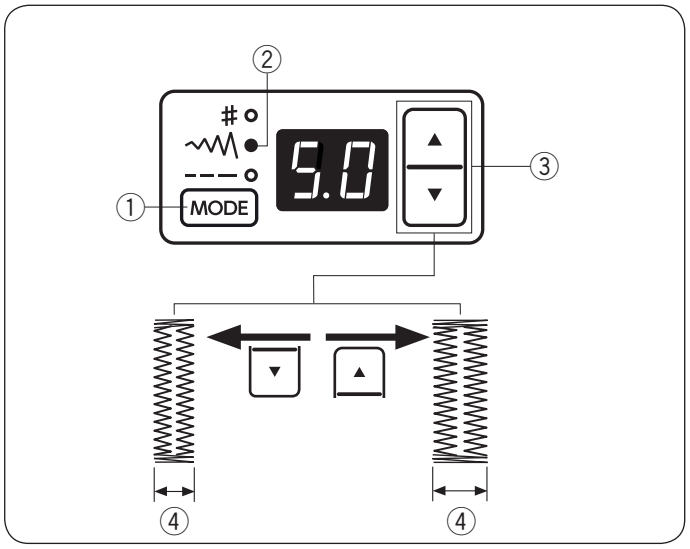
7 Start the sewing again. The machine will sew the front bartack and right side of the buttonhole.
Stop the machine when you reach the ending point. Press the reverse button.

8 Start the sewing again. The machine will sew the rear bartack and locking stitches, and stop automatically.

9 Raise the presser foot lifter. Remove the fabric from the machine and cut the sewing threads. Insert a pin inside the bartack.
Then cut the opening with a seam ripper.
Take care not to cut the stitches.
⑨ Presser foot lifter
⑫ Pin
⑬ Seam ripper

To sew the same size buttonhole, position the fabric and start sewing again. The machine sews another buttonhole identical to the first one then stops automatically.

To sew the different size buttonhole, select the other stitch pattern and select the memory buttonhole (#17) again.



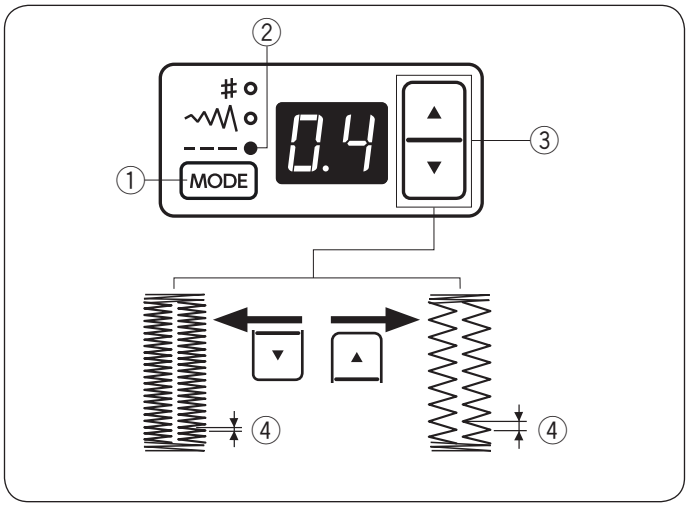

### Altering the buttonhole width

Press the mode key ① once. The green light ② is lit at the stitch width adjustment mode ( ∿∿ ).
Press the "▲" sign on the value set key ③ to increase the buttonhole width.

Press the "▼" sign on the value set key ③ to decrease the buttonhole width.

① Mode key
② Green light
③ Value set key
④ Buttonhole width

**NOTE:**
The buttonhole width can be adjusted from 2.5 to 5.0.



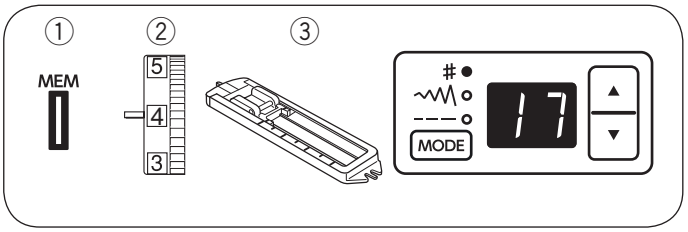

### Altering the buttonhole density

Press the mode key ① twice. The green light ② is lit at the stitch length adjustment mode ( --- ).
Press the "▲" sign on the value set key ③ to decrease the buttonhole density.

Press the "▼" sign on the value set key ③ to increase the buttonhole density.

① Mode key
② Green light
③ Value set key
④ Buttonhole density

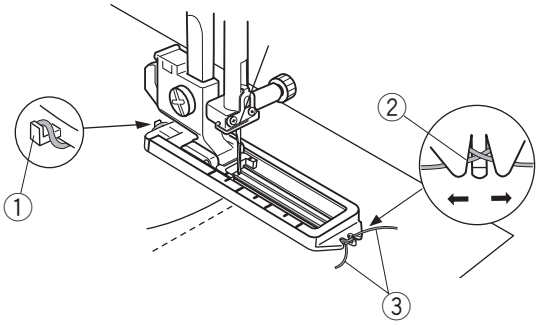
**NOTE:**
The buttonhole density can be adjusted from 0.2 to 0.8.




## Corded Buttonhole

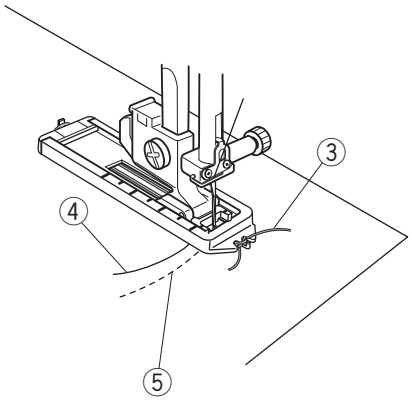
① Stitch pattern: 17
② Thread tension dial: 1 to 4
③ Presser foot: Sliding buttonhole foot

1



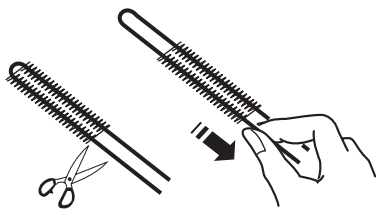

1 Use the same procedure as the memory buttonhole sewing (refer to pages 29-30). Set the stitch width to match the thickness of the cord used.
With the buttonhole foot raised, hook the filler cord on the spur at the back of the buttonhole foot. Bring the ends toward you under the buttonhole foot, clearing the front end.
Hook the filler cord into the forks on the front of the buttonhole foot to hold them tight.
Lower the needle into the garment where the buttonhole will start, and lower the foot.
① Spur
② Forks
③ Cord

2

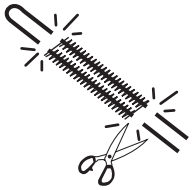



2 Start the machine and sew the buttonhole.
Each side of the buttonhole and the bartacks will be sewn over the cord.
Remove the fabric from the machine, and cut the sewing threads only.
③ Cord
④ Needle thread
⑤ Bobbin thread

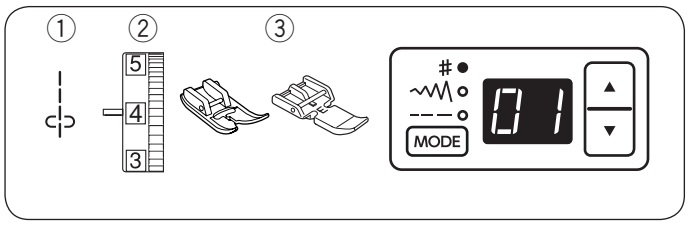
3



3 Pull the left side of loose end of the filler cord to tighten it. Trim the excess filler.

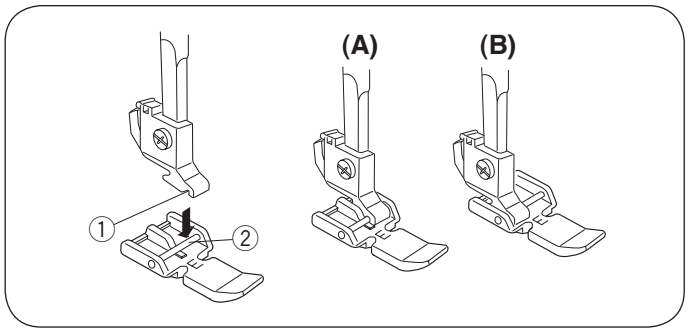


**NOTE:**
Cut the filler cord at both ends, if the filler cord is stitched on the fabric and cannot be pulled.




## Zipper Sewing

① Stitch pattern: 01
② Thread tension dial: 2 to 6
③ Presser foot: Zigzag foot A
Zipper foot E



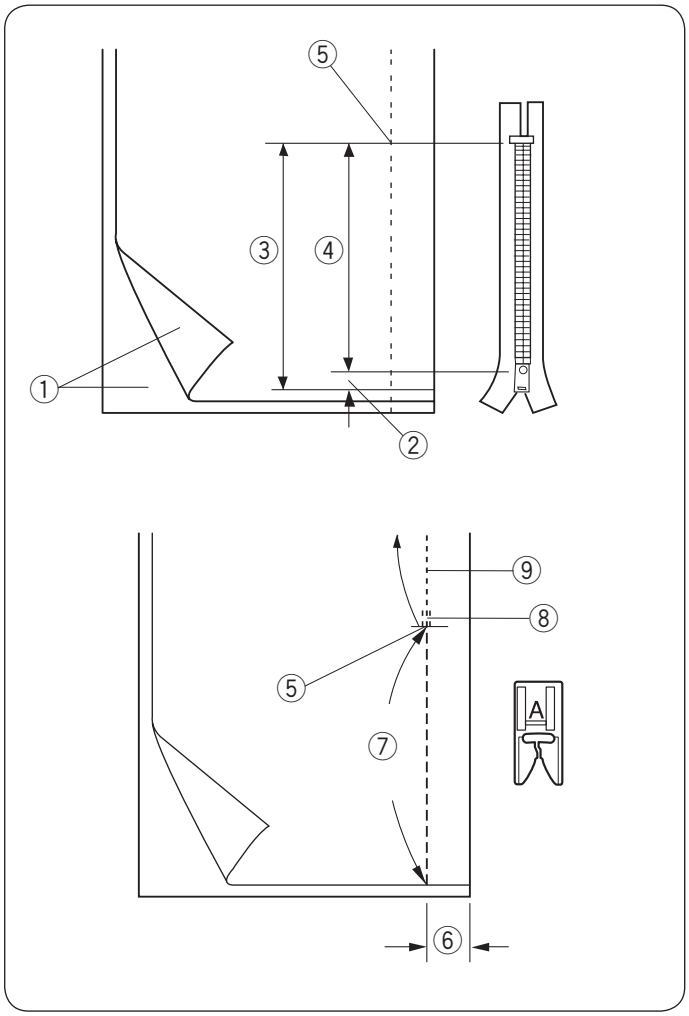

**Attaching the zipper foot**

Fit the pin on zipper foot E to the groove on the foot holder.

① Groove
② Pin

**(A)**: To sew the left side of the zipper, attach the zipper foot with the pin on the right-hand side.

**(B)**: To sew the right side of the zipper, attach the zipper foot with the pin on the left-hand side.




**Fabric preparation**

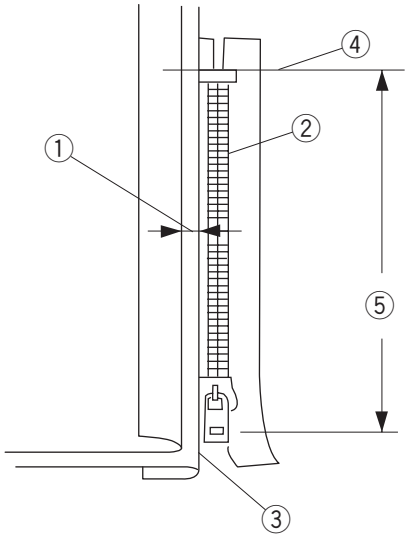
Add 1 cm (3/8″) to the zipper length. This is the overall opening size.

① Right side of the fabric
② 1 cm (3/8″)
③ Opening size
④ Zipper length
⑤ End of the zipper opening

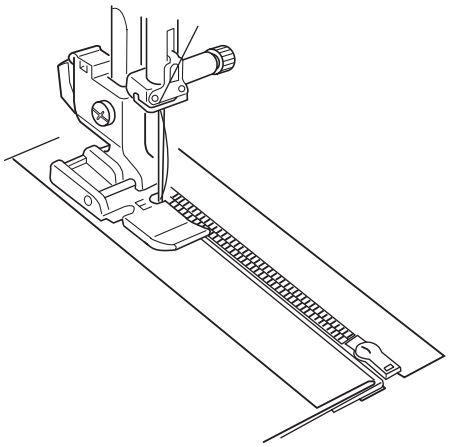
Place the right sides of the fabric together.
Attach the zigzag foot and seam up to the end of the zipper opening, with a 2 cm (13/16″) seam allowance.
Reverse the stitch to fasten the seam.
Manually increase the stitch length to 4.0 and baste the zipper opening with the thread tension loosened to 1-3.

⑤ End of the zipper opening
⑥ 2 cm (13/16″)
⑦ Basting
⑧ Reverse stitches
⑨ Seam stitches

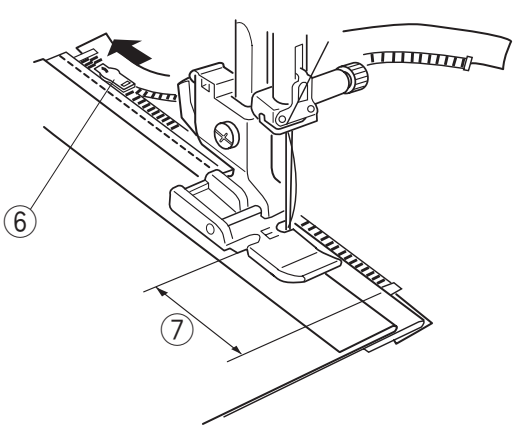
1




2



3




**Start sewing**

1 Fold back the left seam allowance. Turn the right seam allowance under to form a 0.2 to 0.3 cm (1/8″) margin. Place the zipper teeth next to the fold and pin in place. Set the stitch length and thread tension back to the original setting.

① 0.2 to 0.3 cm (1/8″) margin
② Zipper teeth
③ Fold
④ End of the zipper opening
⑤ Opening size

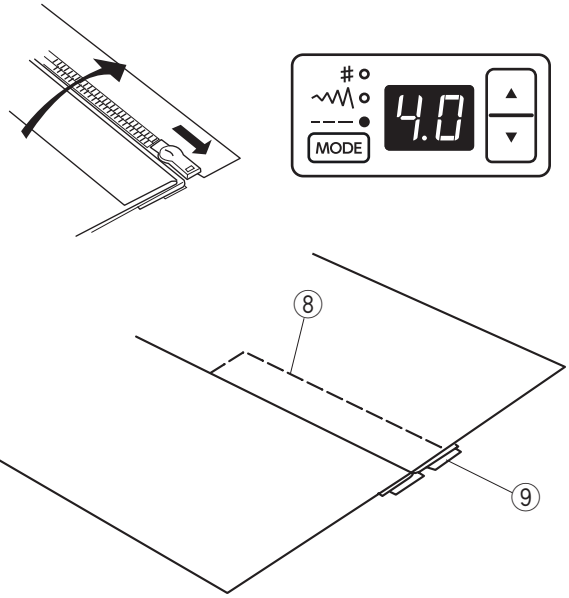
2 Attach the zipper foot E with the pin on the right hand side.
Lower the foot onto the topside at the end of the zipper opening so that the needle pierces the fabric next to the fold and the zipper tape.
Sew along the zipper guiding the zipper teeth along the bottom edge of the foot.

**⚠ CAUTION:**
Be sure that the needle does not strike the presser foot or zipper teeth when the zipper foot is attached.

3 Sew through all layers next to the fold.
Stop the machine 5 cm (2″) before the foot reaches the slider on the zipper tape.
Lower the needle slightly into the fabric.
Raise the foot and open the zipper to clear the slider.
Lower the foot and stitch the remainder of the seam.

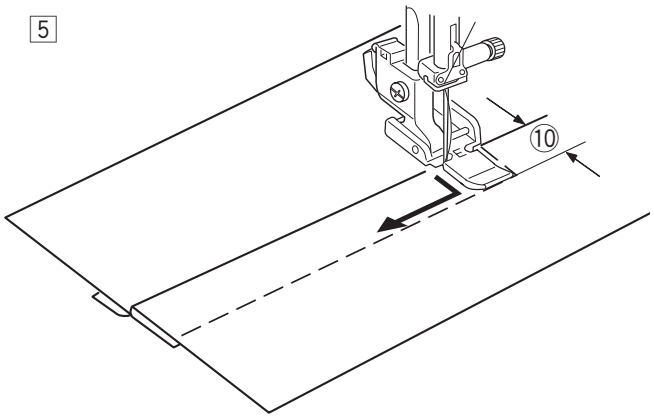
⑥ Slider
⑦ 5 cm (2″)

4




4 Close the zipper and spread the fabric open flat with the right side facing up.
Attach the Zigzag foot A.
Adjust the stitch length to 4.0, stitch width to 2.5 (default value) and the thread tension dial to 1-3.
Baste the opened fabric and zipper tape together.
⑧ Basting stitch
⑨ Zipper tape

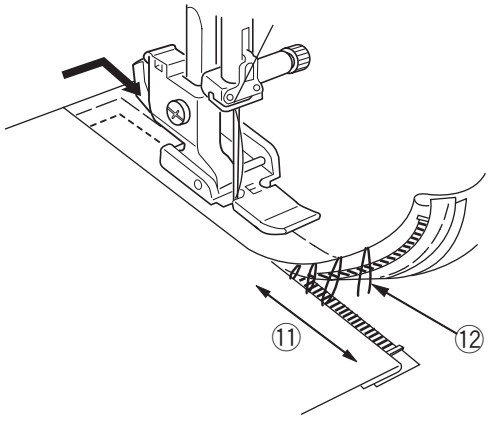
5




5 Attach the zipper foot E with the left pin.
Adjust the stitch length and the stitch width to default value, and thread tension dial to “4”.
Backstitch across the end of the opening 0.7-1 cm (3/8″) and turn the fabric 90 degrees.
⑩ 0.7-1 cm (3/8″)

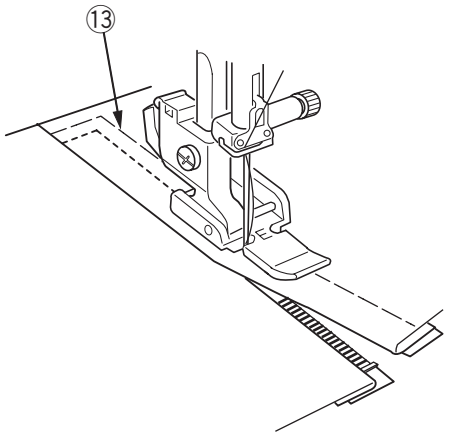
**⚠ CAUTION:**
Be sure that the needle does not strike the presser foot or zipper teeth when the zipper foot is attached.

6

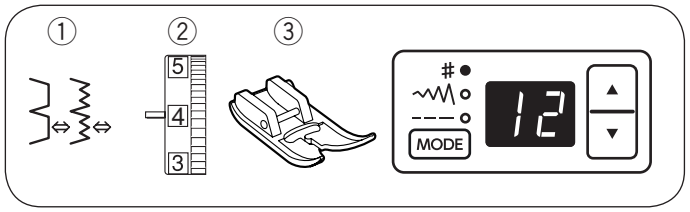



6 Stitch through the garment and zipper tape, guiding the zipper teeth along the side edge of the foot.
Stop the machine 5 cm (2″) before the foot reaches the slider on the zipper tape. Lower the needle into the fabric, and raise the foot. Remove the basting stitches.
⑪ 5 cm (2″)
⑫ Basting stitches

7

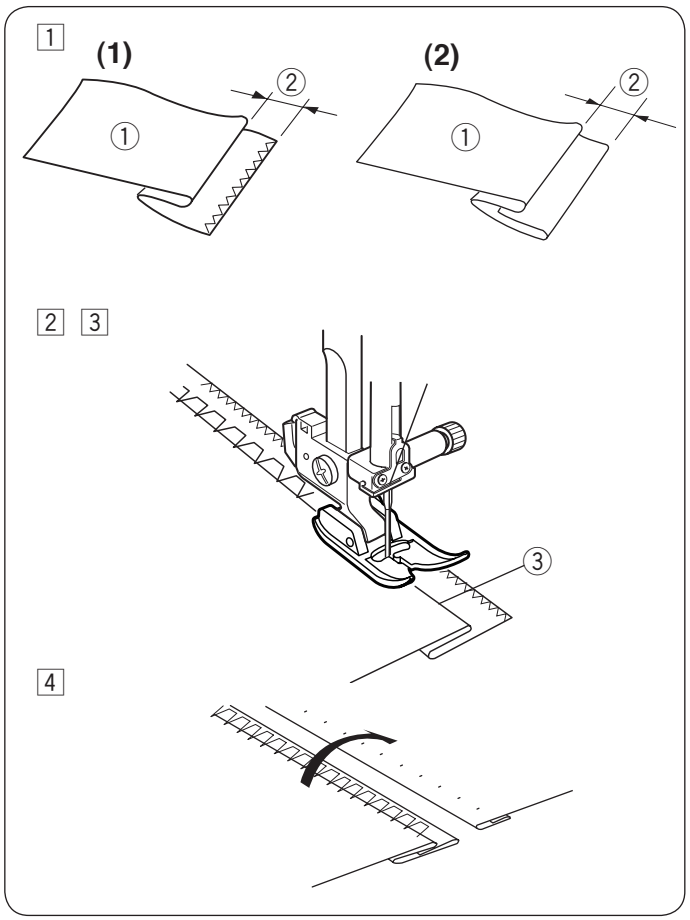



7 Open the zipper, then lower the foot and stitch the remainder of the seam.
After sewing is finished, remove the basting stitches on the upper fabric.
⑬ Basting stitches on upper fabric




## Blind Hemming

① Stitch pattern: 12 or 13
② Thread tension dial: 1 to 4 (pattern 12)
3 to 6 (pattern 13)
③ Presser foot: Zigzag foot A



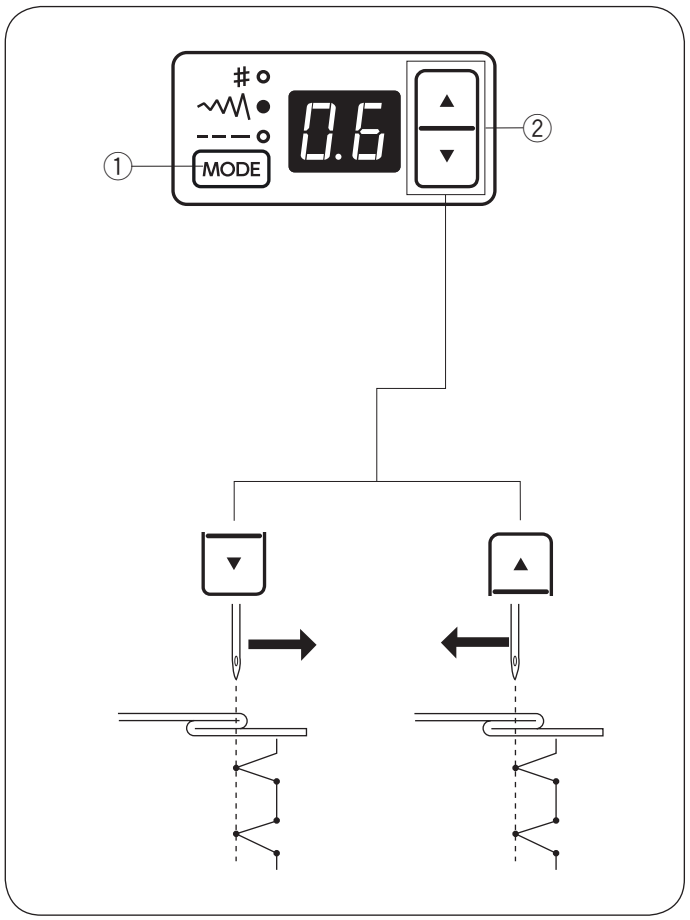

1 Fold a hem with the wrong side of the fabric up to form a 1/4″ (0.5 cm) allowance.
① Wrong side of fabric
② 1/4″ (0.5 cm)
(1) On heavyweight fabrics that tend to ravel, the raw edge should be overcast first.
(2) Fold the hem under the fabric for lightweight fabrics.

2 Place the fabric so that the needle just pierces the folded edge when the needle comes over the extreme left side.
Lower the presser foot.
Adjust the needle drop position if necessary.

3 Sew slowly while guiding the folded edge.
③ Folded edge

4 Open the fabric after sewing is finished.

**NOTE:**
If the needle pierces too far left, the stitch will show through on the right side of the fabric.

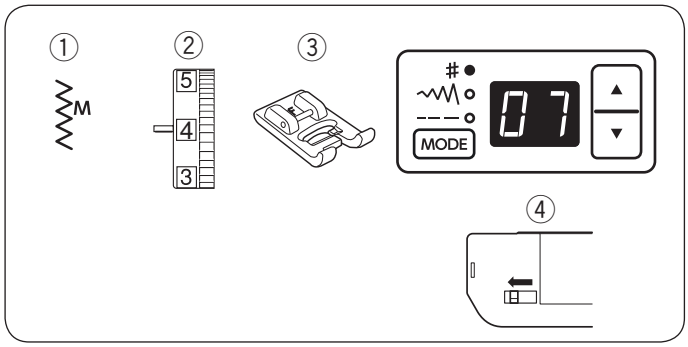



**Adjusting the needle drop position**

Adjust the needle drop position as follows:
Press the mode key ① to select the stitch width adjustment mode ( ⁓ ).
Press the "▼" sign on the value set key ② to move the needle to the right.
Press the "▲" sign on the value set key ② to move the needle to the left.
① Mode key
② Value set key

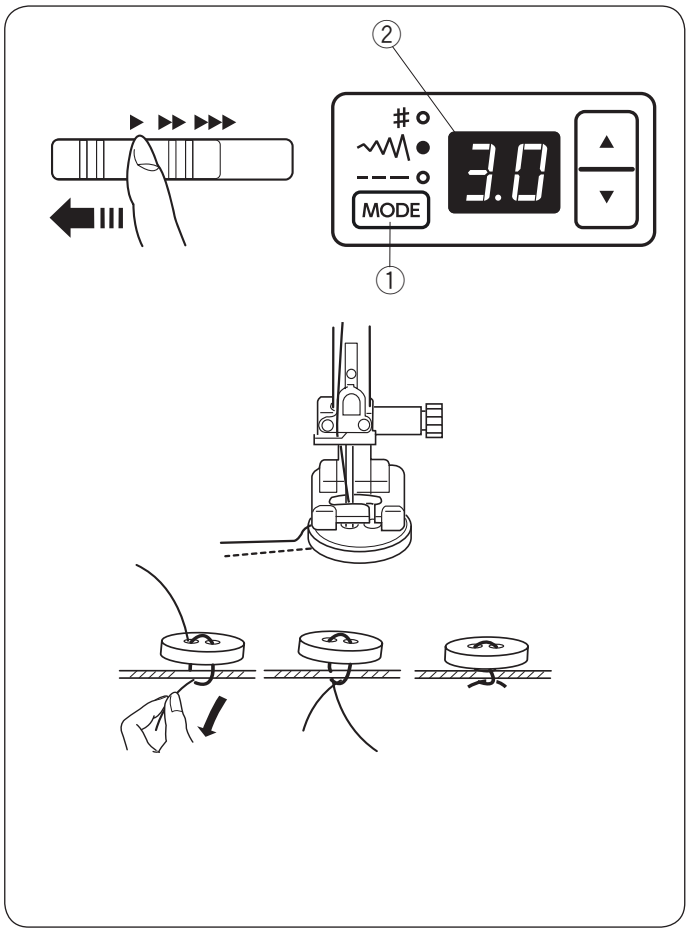
The needle drop position can be varied from 0.0 to 1.2.

**NOTE:**
The needle drop position can be moved, but the stitch width will remain the same.




## Button Sewing

① Stitch pattern: 07
② Thread tension dial: 3 to 7
③ Presser foot: Satin stitch foot F
④ Feed dog: Lowered




Lower the feed dog (refer to page 13).
Set the speed control slider at a slower speed.

Match the holes of button to the horizontal slot of the presser foot and lower the foot to hold the button in place.

Press the mode key ① to select the stitch width adjustment mode ( ).
Adjust the stitch width so the needle will enter the left hole of the button.
Turn the handwheel so that the needle will enter the right hole of the button. Readjust the stitch width if necessary.

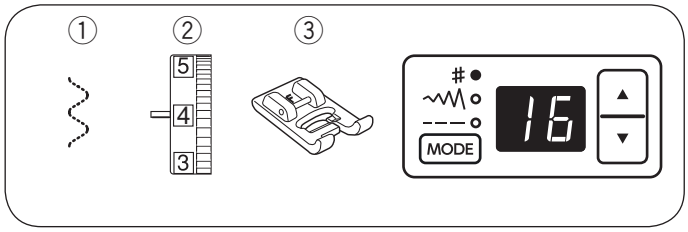
① Mode key
② Stitch width (adjust to span of holes)

Stitch several times.

After you finish sewing, cut the thread but leave 4″ (10 cm) of threads at the end.

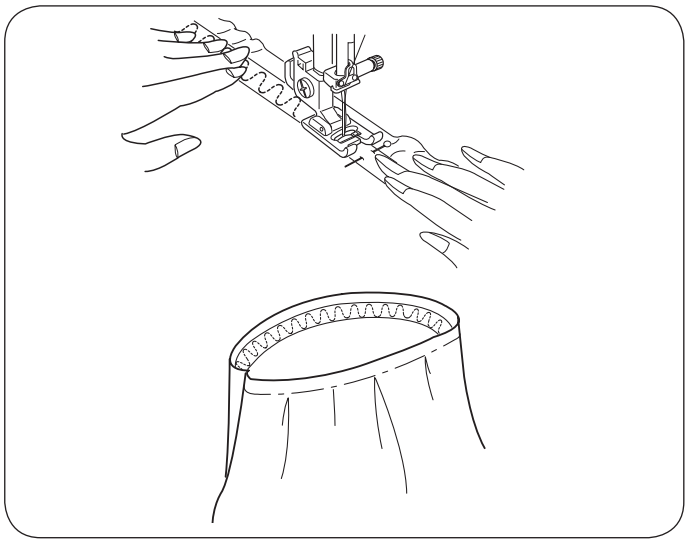
Pull the bobbin thread to draw the top thread to the reverse side of the fabric and knot the threads.

After the button sewing is completed, raise the feed dogs for normal sewing.
Return the speed control slider position.

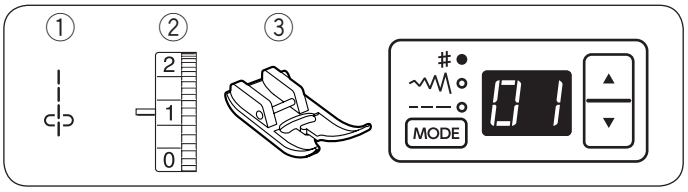



## Attaching Elastic

① Stitch pattern: 16
② Thread tension dial: 1 to 4
③ Presser foot: Satin stitch foot F



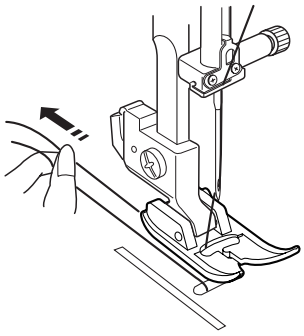
Mark the elastic into quarters. Match those to the center front, center back and side seams, and pin the elastic to the fabric.
Place the elastic under the foot and stitch into place while stretch the elastic evenly.




## Gathering

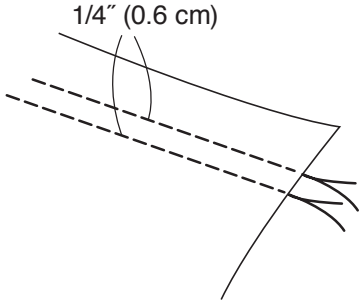
① Stitch pattern: 01
② Thread tension dial: 1 to 4
③ Presser foot: Zigzag foot A

1



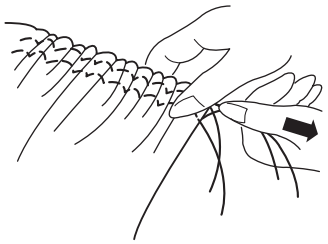
1 Loosen the thread tension to “1” and increase the stitch length to 4.0.
Pull both threads 4″ (10 cm) under and behind the presser foot (refer to page 20).

2



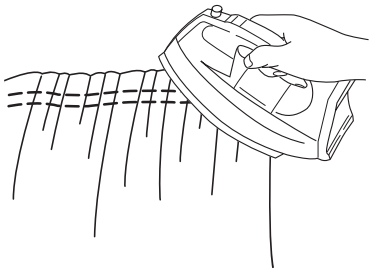

2 Sew two rows of straight stitches 1/4″ (0.6 cm) apart.
Knot the threads at the beginning.

3



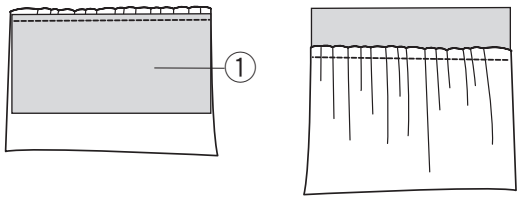
3 Pull the bobbin threads at the end to gather the fabric.

4



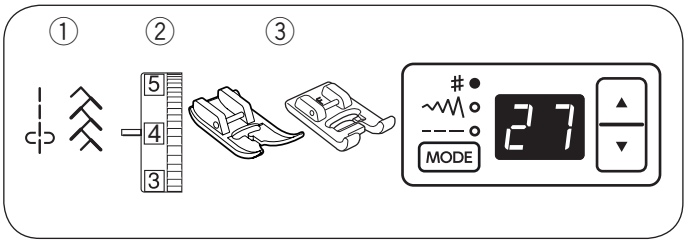
4 Knot the threads at the end and distribute the gathers evenly.

5




5 Prepare the fabric to attach the gathering.
Tighten the thread tension to “4” and decrease the stitch length to “2.4” (default settings).
Place the wrong side of the fabric ① under the gathering.
Sew the straight stitch between the two gathering rows.
Remove the two rows of straight stitches.

**NOTE:**
You may sew the straight stitch under the two gathering rows to cover the remains of gathering rows.

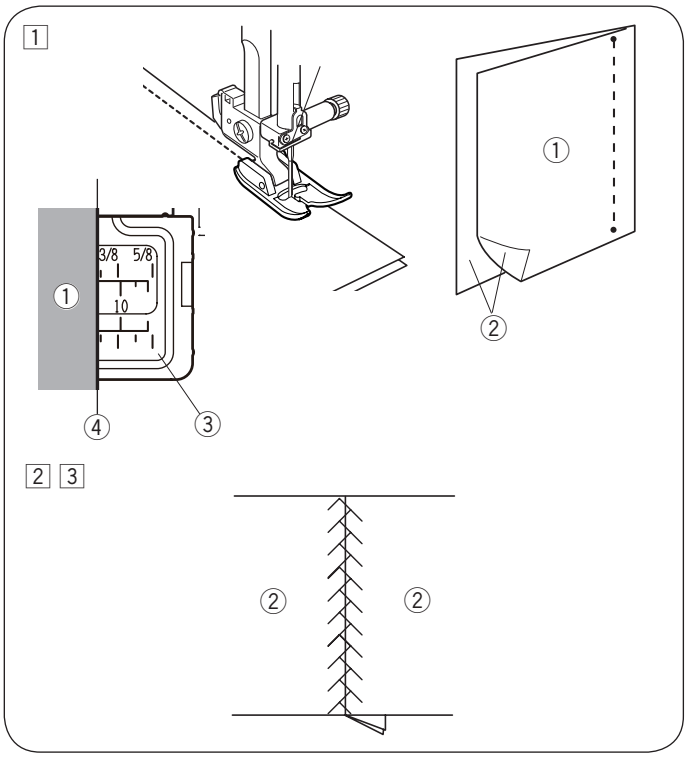



# DECORATIVE STITCHES

## Patchwork

① Stitch pattern: 01 and 27
② Thread tension dial: 2 to 6
③ Presser foot: Zigzag foot A
Satin stitch foot F

* The stitch patterns 14 and 26 can also be used.

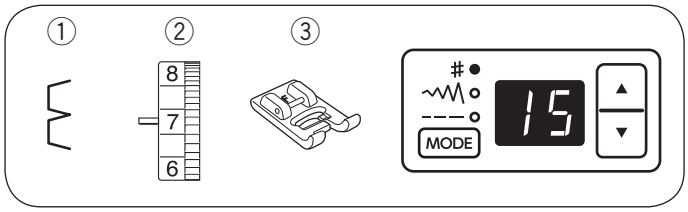



1 Attach the zigzag foot A.
Place the patchwork pieces right sides together.
Select stitch pattern 01. Sew while guiding the edge of the fabric to keep a precise 1/4″ seam allowance.

① Wrong side of fabric
② Right side of fabric
③ Hook cover plate
④ 1/4″ seam guide

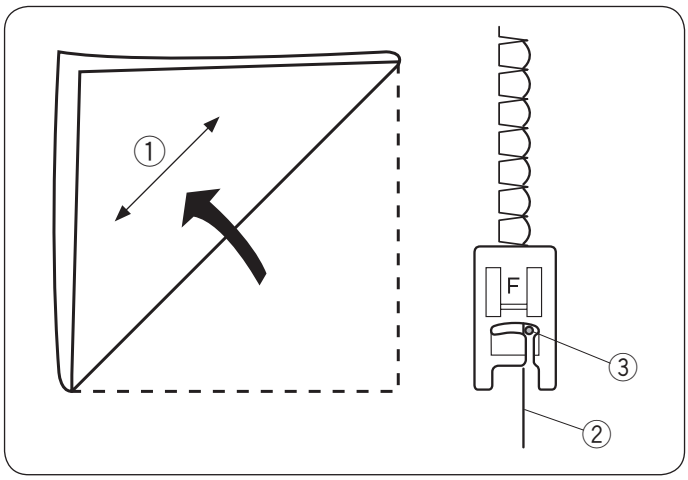
2 Replace the presser foot with satin stitch foot F.
Select the patchwork pattern 27.

3 Press the seam allowance to open. Sew the stitch pattern on the right side of the garment centering over the seam line.




## Shell Tuck

① Stitch pattern: 15
② Thread tension dial: 6 to 8
③ Presser foot: Satin stitch foot F

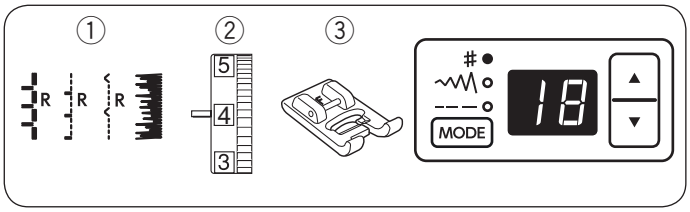



Use a lightweight fabric (tricot, for example).
Fold the fabric in bias as shown and stitch on the fold.

Allow the needle to barely clear the folded edge to create a shelled edge.

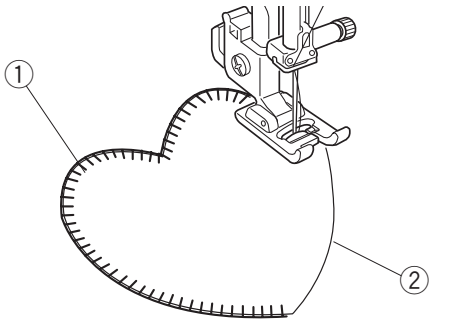
① Bias
② Folded edge
③ Right needle drop position

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




## Applique

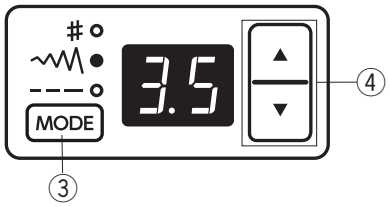
① Stitch pattern: 18
② Thread tension dial: 1 to 4
③ Presser foot: Satin stitch foot F
* The stitch patterns 19 to 21 can also be used.




Place an applique on the fabric and baste or pin it in place.
Lower the needle at the outer edge of the applique.
Sew while guiding the fabric so the needle falls along the outer edge of the applique.

① Applique
② Outer edge

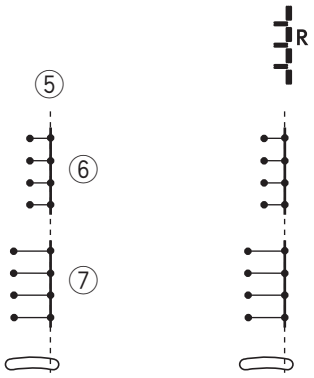
When turning a sharp corner, stop the machine and lower the needle with the needle at the outer edge of the applique.
Raise the foot and pivot the fabric around the needle to change the sewing direction.




**• Adjusting the stitch width**

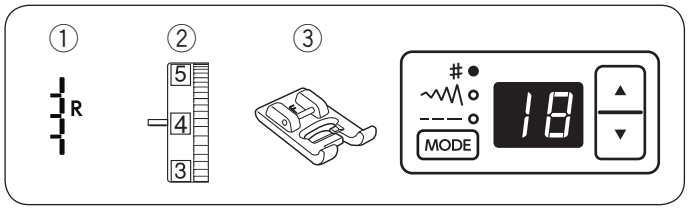
Select pattern 18.
Press the mode key ③ to select the stitch width adjustment mode ( ).
Press the "▼" sign on the value set key ④ to decrease the stitch width ⑥.
Press the "▲" sign on the value set key ④ to increase the stitch width ⑦.

③ Mode key
④ Value set key



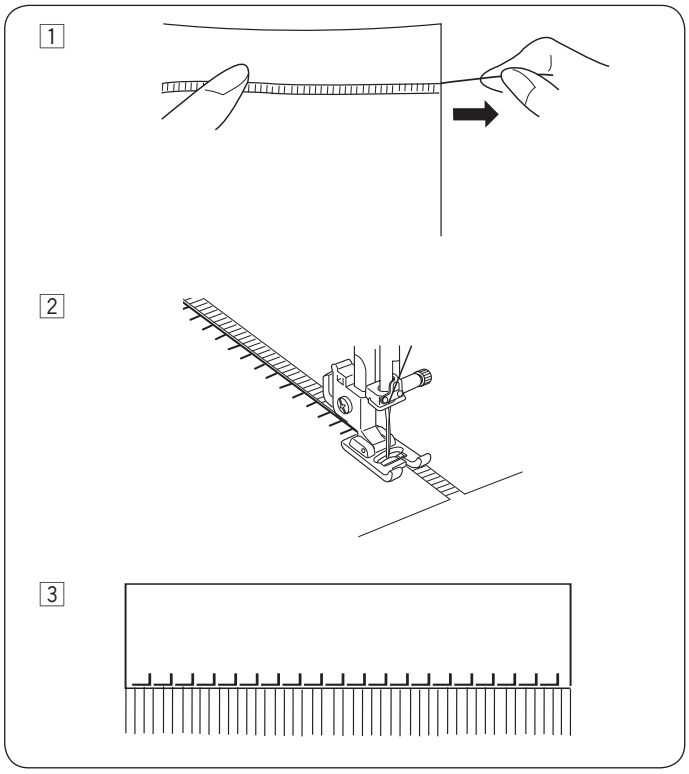

The stitch width will be varied based on the right needle drop position ⑤.

The stitch patterns 18-20 have a fixed right needle drop position. When you change the stitch width, the left needle drop position will change.




## Fringing

① Stitch pattern: 18
② Thread tension dial: 1 to 4
③ Presser foot: Satin stitch foot F

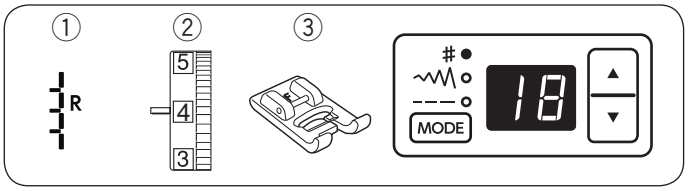



Fringing adds a special touch on table linens and shawls. Choose a firm, woven fabric like linen where threads can be removed easily.

1 Carefully cut the fabric on the grain. Remove a single strand of yarn or thread where the fringing is to begin.

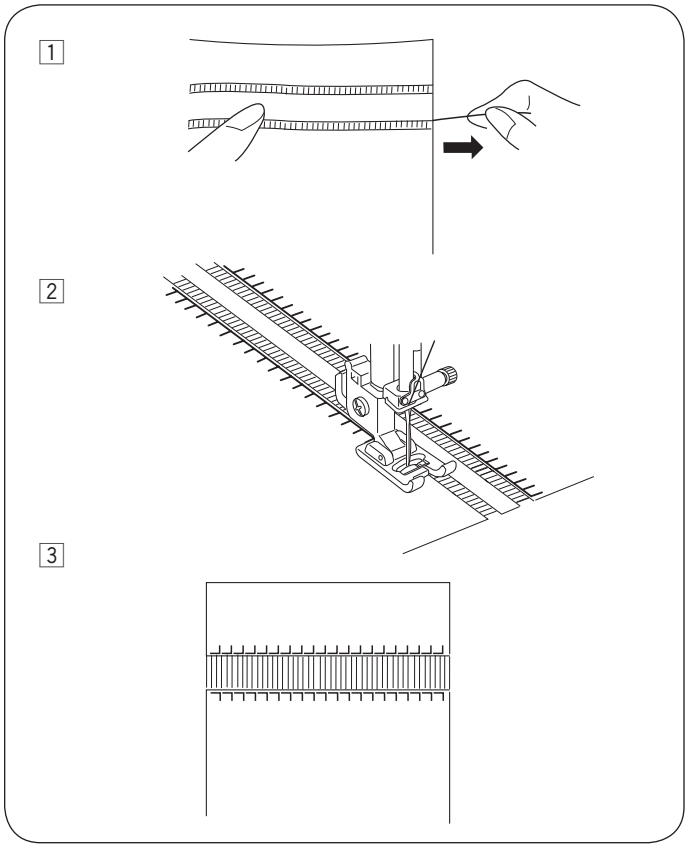
2 Sew down the left side so the right hand stitches fall in the open space.

3 Remove all excess yarn located to the right of the stitching and create a fringe.




## Drawn Work

① Stitch pattern: 18
② Thread tension dial: 1 to 4
③ Presser foot: Satin stitch foot F

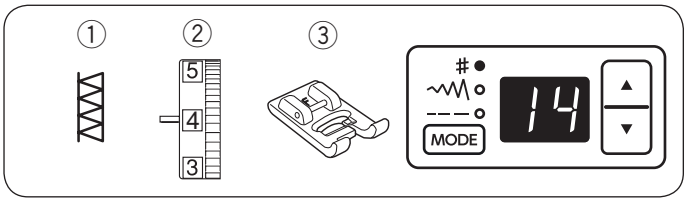



Drawn work uses the same method as fringing. Choose a firm, woven fabric like linen where threads can be removed easily.

1 Carefully cut the fabric on the grain. Determine the width of the drawn work and remove one strand of yarn or fabric thread at each end.

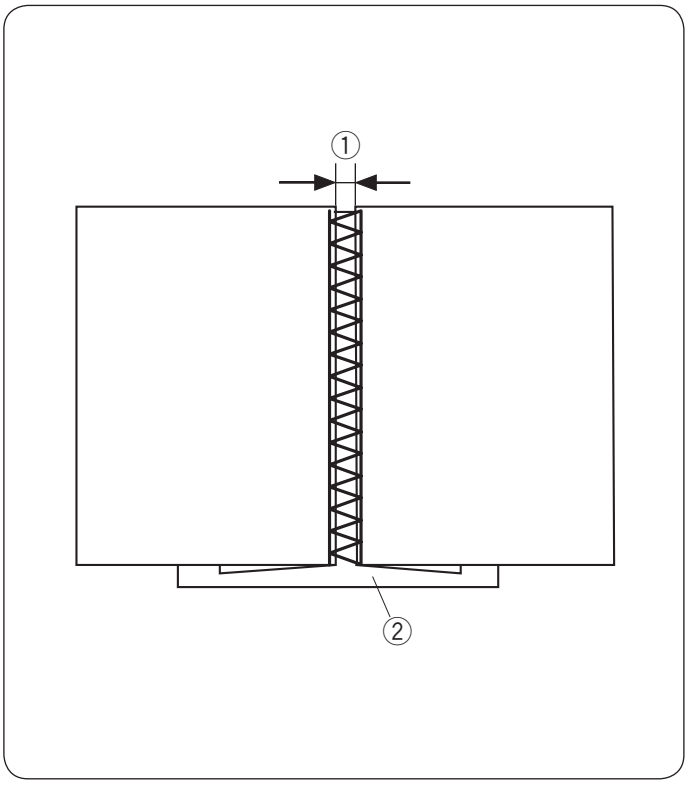
2 Sew down the left side, guiding the fabric so the right hand stitches fall in open space. After finishing the left side, turn the fabric around 180°. Sew down the other side.

3 Remove the yarn or fabric threads between the stitching.




## Fagoting

① Stitch pattern: 14
② Thread tension dial: 3 to 6
③ Presser foot: Satin stitch foot F

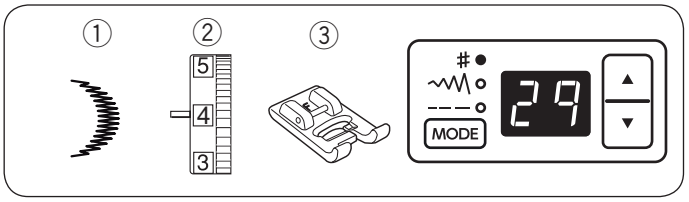



Use these stitches to join two pieces of fabric to create an open work appearance and add design interest.

Fold under each fabric edge 1.5 cm (5/8″) and press. Pin the two edges to paper or tear backing 0.3–0.4 cm (1/8″) apart.

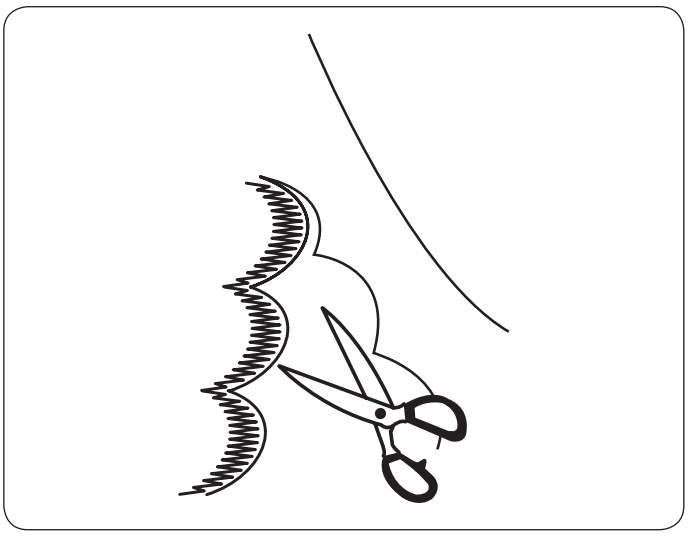
Sew slowly, guiding the fabric so the needle catches the folded edge on each side.
After sewing is finished, tear away the paper.

① 0.3–0.4 cm (1/8″)
② Paper



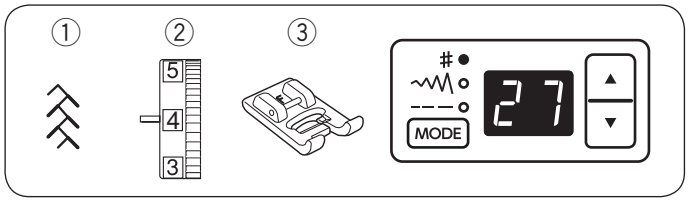

## Scallop Stitch

① Stitch pattern: 29
② Thread tension dial: 1 to 4
③ Presser foot: Satin stitch foot F



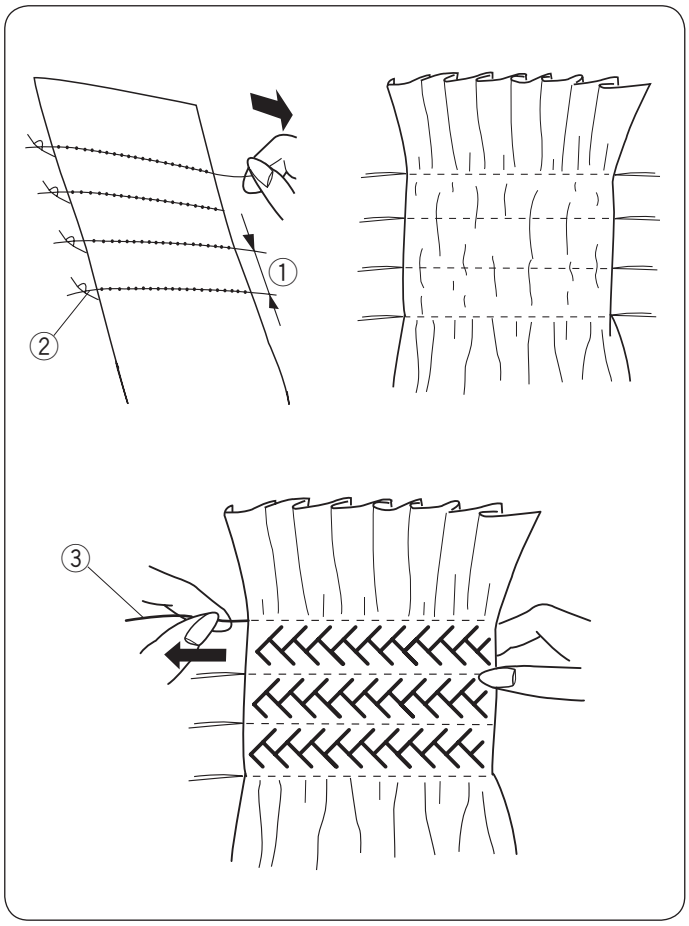
Sew the stitches approximately 1 cm (3/8″) inside the fabric edge.

Trim the outside of the stitches as shown. Make sure not to cut the thread.




## Smocking

① Stitch pattern: 27
② Thread tension dial: 3 to 6
③ Presser foot: Satin stitch foot F
* The stitch pattern 22 can also be used.




Smocking is a delicate decorative treatment used on children's clothes or women's blouses.

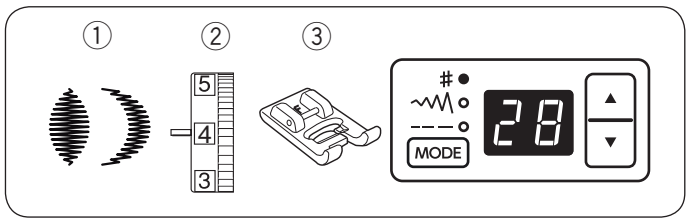
Use a soft and lightweight fabric such as batiste, gingham or challis.
Cut the fabric three times wider than the projected width.

Select straight stitch, set stitch length at "4.0" and loosen the thread tension.
Sew rows of straight stitches 1 cm (3/8″) apart across the area to be smocked. Knot the threads along one edge.

**NOTE:**
Pull up the needle and bobbin threads and draw a 4″(10 cm) thread tail to the back before starting to sew.

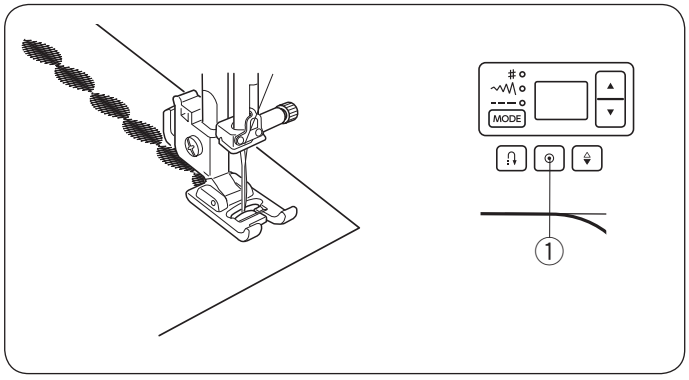
From the other edge, pull the bobbin threads to distribute the gathers evenly.
① 1 cm (3/8″)
② Knotted thread

Set the thread tension to 3–6 and select a smocking stitch pattern.
Sew the smocking stitch pattern between the rows of straight stitches.
Remove the straight stitches by pulling them out.
③ Straight stitch

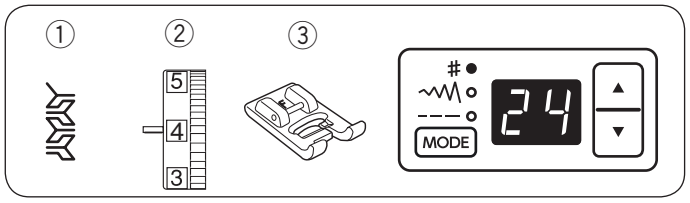


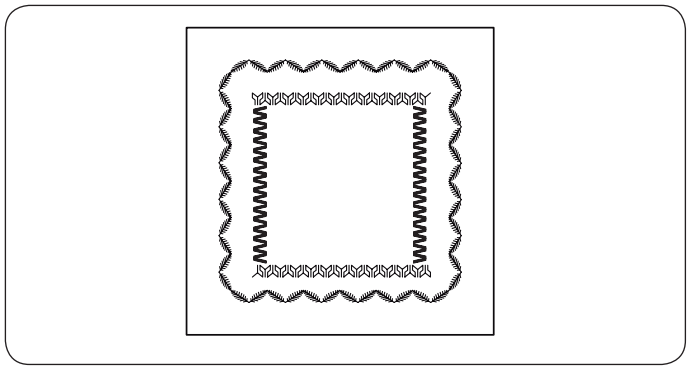

## Satin Stitches

① Stitch pattern: 28
② Thread tension dial: 1 to 4
③ Presser foot: Satin stitch foot F
* The stitch pattern 29 can also be used.




For better sewing results, interfacing should be used on the wrong side of the fabric when you use stretch or elastic fabrics.
Press the auto-lock button to finish the end of the pattern.
① Auto-lock button



**Decorative Stitches**

① Stitch pattern: 24
② Thread tension dial: 3 to 6
③ Presser foot: Satin stitch foot F
* Stitch patterns 21-30 can also be used.

For the best sewing results, carefully align and guide the fabric when you sew with decorative stitches.
Use a tear-way backing if necessary.

# CARE OF YOUR MACHINE

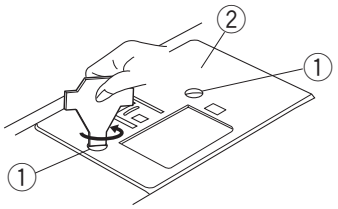
## Cleaning the Hook Race and Feed Dog

**⚠WARNING:**
Turn the power switch off and unplug the machine before cleaning.
Do not dismantle the machine other than as explained in this section.

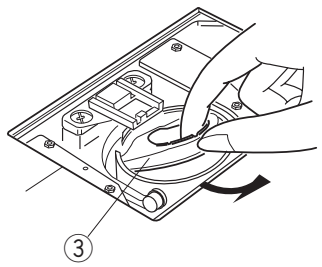
**⚠ CAUTION:**
Do not store the machine in a high-humidity area, near a heat radiator, or in direct sunlight. Store the machine in cool dry place.

**NOTE:**
Clean the outside of the machine with a soft cloth and neutral soap.

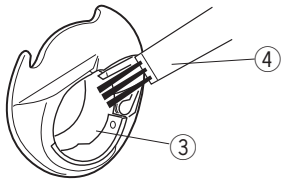
Press the needle up/down button to raise the needle, turn the power switch off, then unplug the sewing machine.
Remove the needle and presser foot.
Remove the hook cover plate by sliding the hook cover plate release button to the right. Take out the bobbin.
Brush out dust and lint. (You may also use a vacuum cleaner.)

1 

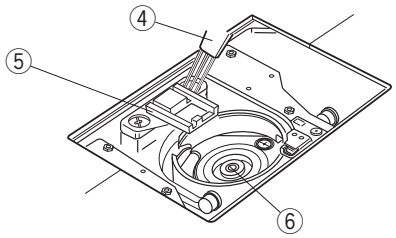

1 Remove the setscrews on the needle plate with the screwdriver supplied with the machine. Remove the needle plate.
① Setscrew
② Needle plate

2 

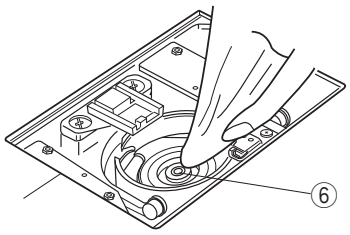

2 Lift up the bobbin holder and remove it.
③ Bobbin holder

3 


3 Clean the bobbin holder with a lint brush.
④ Lint brush

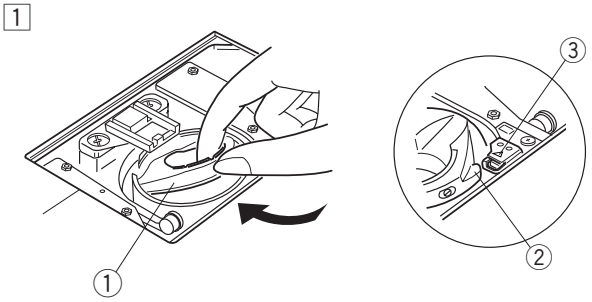
4 


4 Clean the feed dog and hook race with the lint brush.
⑤ Feed dog
⑥ Hook race

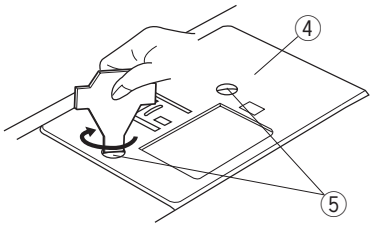
5 


5 Clean the inside of the hook race with a dry cloth. You may also use a vacuum cleaner.

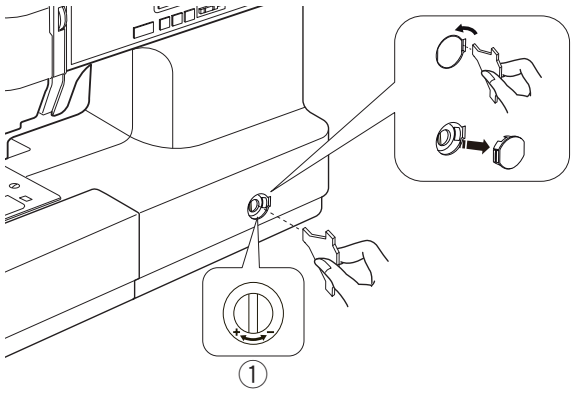
## Installing the Bobbin Holder

1 

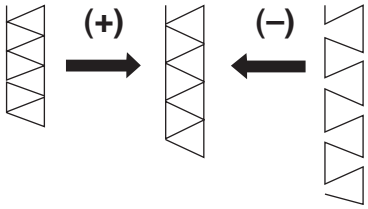

1 Insert the bobbin holder so that the knob fits next to the stopper in the hook race.
① Bobbin holder
② Knob
③ Stopper

2 


2 Attach the needle plate with the setscrews.
After cleaning the machine, make sure the needle and presser foot are attached.
④ Needle plate
⑤ Setscrew




**(Stitch pattern 14)**




## Correcting Deformed Stitch Patterns

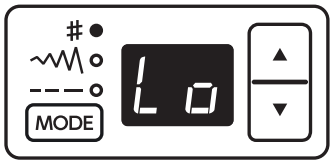
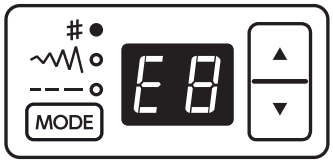
The sewing results of stretch stitch patterns may vary depending on sewing conditions, such as sewing speed, fabric type, number of layers etc.
If stretch stitch patterns are deformed, correct them by turning the feed balancing dial with the screwdriver.
Remove the cap with the screwdriver.

If the pattern is compressed, turn the dial in the direction of "+".
If the pattern is drawn out, turn the dial in the direction of "–".

① Feed balancing dial

## Problems and Warning Signals

If a buzzer sounds and the LCD display shows a warning sign, follow the guidance below.

| Warning Sign | Cause | Try this |
|---|---|---|
|   | The machine is started after halting due to overload. | Wait for at least 15 seconds to restart.<br>Turn the power switch OFF. Remove tangled threads around take-up lever, hook race. |
|   | The machine does not work properly due to a problem in the control circuit. | Contact the service center or the store from whom the machine was purchased. |

| Audible Signal | The Buzzer sounds when: |
|---|---|
| pip | Normal operation. |
| pip-pip-pip | Invalid operation or malfunction. |
| peep | E8 error occurred. |
| pip-pip-peep | Buttonhole is completed. |

It is not abnormal that a faint humming sound comes out from inside the machine.
LCD display may get warm when the machine has been used for hours.

## Troubleshooting

| Condition | Cause | Reference |
|---|---|---|
| The needle thread breaks | 1. The needle thread is not threaded properly.<br>2. The needle thread tension is too tight.<br>3. The needle is bent or blunt.<br>4. The needle is incorrectly inserted.<br>5. The needle thread and bobbin thread are not set under the presser foot when start sewing.<br>6. The thread is either too heavy or too fine for the needle. | Page 18<br>Pages 11-12<br>Replace the needle.<br>Page 13<br>Page 20<br><br>Page 14 |
| The bobbin thread breaks | 1. The bobbin thread is not threaded properly in the bobbin holder.<br>2. Lint has collected in the bobbin holder.<br>3. The bobbin is damaged and does not turn smoothly.<br>4. The thread is wound loosely on the bobbin. | Page 17<br>Page 45<br>Change the bobbin.<br>Page 16 |
| The needle breaks | 1. The needle is incorrectly inserted.<br>2. The needle clamp screw is loose.<br>3. The threads were not drawn to the rear after sewing.<br>4. The needle is too fine for the fabric being used.<br>5. An inappropriate presser foot is used. | Page 13<br>Page 13<br>Page 21<br>Page 14<br>Use the correct foot. |
| Skipped stitches | 1. The needle is incorrectly inserted, bent or blunt.<br>2. The needle and/or threads are not suitable for the work being sewn.<br>3. A blue tip needle is not being used for sewing stretch, very fine fabrics and synthetics.<br>4. The needle thread is not threaded properly.<br>5. A poor quality needle is used. | Page 13<br>Page 14<br>Use the stretch stitch needle.<br>Page 18<br>Change the needle. |
| Seam puckering | 1. The needle thread tension is too tight.<br>2. The needle thread is not threaded properly.<br>3. The needle is too heavy for the fabric being sewn.<br>4. The stitch length is too long for the fabric.<br>5. A stabilizer is not used when sewing very fine fabrics. | Pages 11-12<br>Page 18<br>Page 14<br>Make stitch shorter.<br>Apply a stabilizer. |
| The fabric is not feeding smoothly | 1. The feed dog is packed with lint.<br>2. The stitches are too fine.<br>3. The feed dog is not raised after “drop feed” sewing. | Page 45<br>Make stitch longer.<br>Page 13 |
| Loops on the seams | 1. The needle thread tension is too loose.<br>2. The needle is too thick or too fine for the fabric. | Pages 11-12<br>Page 14 |
| The machine does not work | 1. The machine is not plugged in.<br>2. Thread has been caught in the hook race.<br>3. The start/stop button is used when the foot control is with the foot control plugged in.<br>4. The bobbin winder spindle is not returned to the left after bobbin winding. | Pages 5-6<br>Page 45<br>Page 8<br><br>Page 16 |
| Buttonhole sewing is not sewn properly | 1. The stitch density is not suitable for the fabric being sewn.<br>2. The interfacing has not been used for the stretch or synthetic fabric. | Page 31<br>Apply an interfacing. |
| The machine is noisy | 1. Thread has been caught in the hook race.<br>2. Lint has built up in the hook race or bobbin holder. | Page 45<br>Page 45 |

## Stitch Chart

