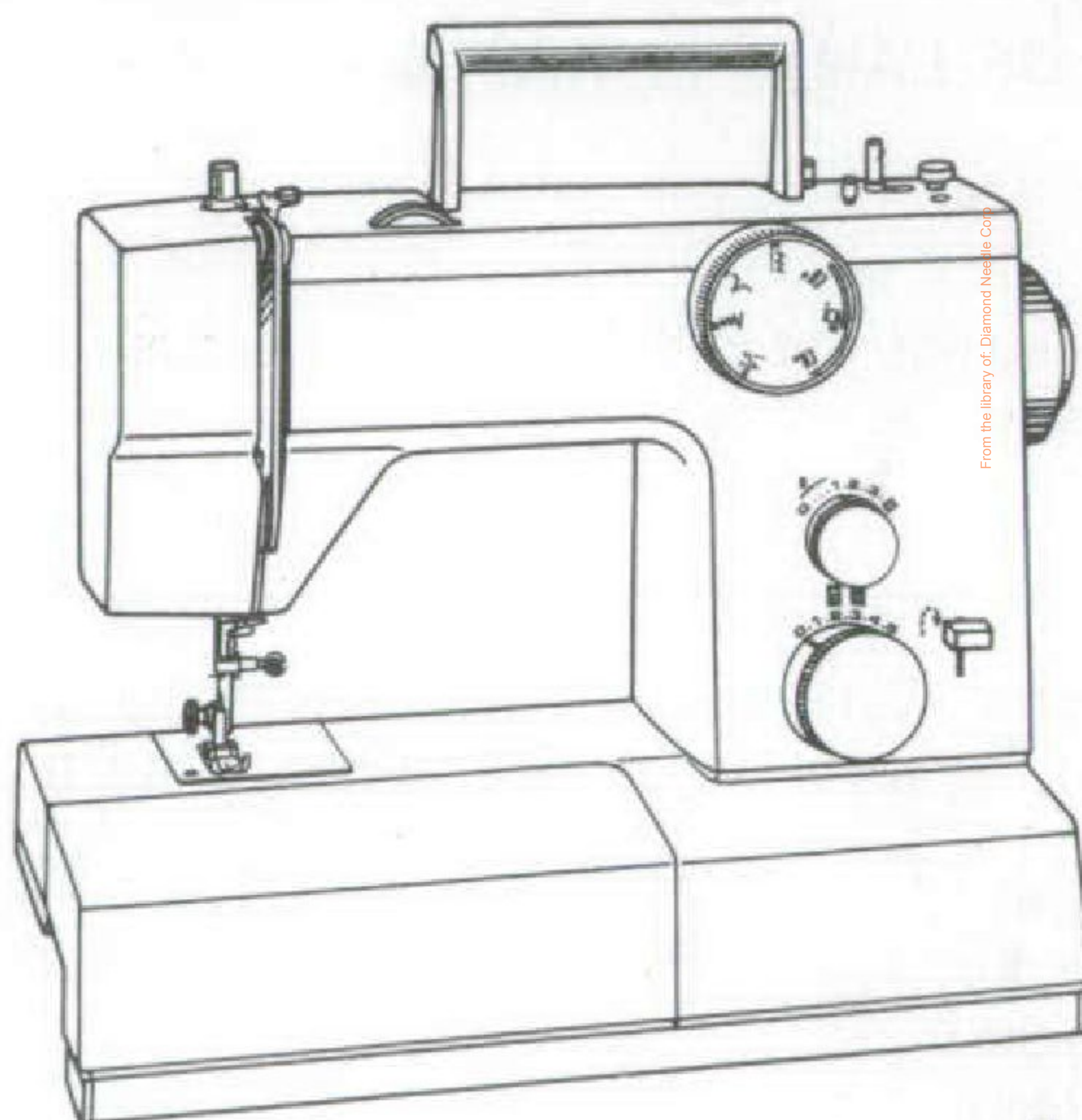




"TOYOTA" Sewing & Knitting Machines by
AISIN, a Member of The TOYOTA Group.

INSTRUCTION Book

EC-1 SERIES EC-1B SERIES



LU

A STITCH AHEAD OF THE TIMES

TOYOTA
sewing machines

IMPORTANT PLEASE READ CAREFULLY

The wires in this mains lead are coloured
in accordance with the following code:

BLUE-NEUTRAL BROWN-LIVE (OR ACTIVE)

As the colours of the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug — PROCEED AS FOLLOWS: The earth plug pin is unnecessary. As the Machine is designed under double insulation structure, the earth wire is removed from the machine. The wire coloured BROWN must be connected to the terminal marked L or A or coloured RED.

The wire coloured BLUE must be connected to the terminal marked N or coloured BLACK. Neither core is to be connected to the earth terminal of a three-pin plug.

When leaving the machine or when servicing or changing mechanical parts or accessories, the machine must be disconnected from the supply by removing the plug from the socket outlet.

MAXIMUM INPUT OF LAMP: 15 WATTS

Please retain the packagings not to damage your machine in transit for the possible return of repairs in the future.

N.B

(1) If you have purchased EC-1B, your machine has the following additional features in comparison with the specifications mentioned in this instruction book.

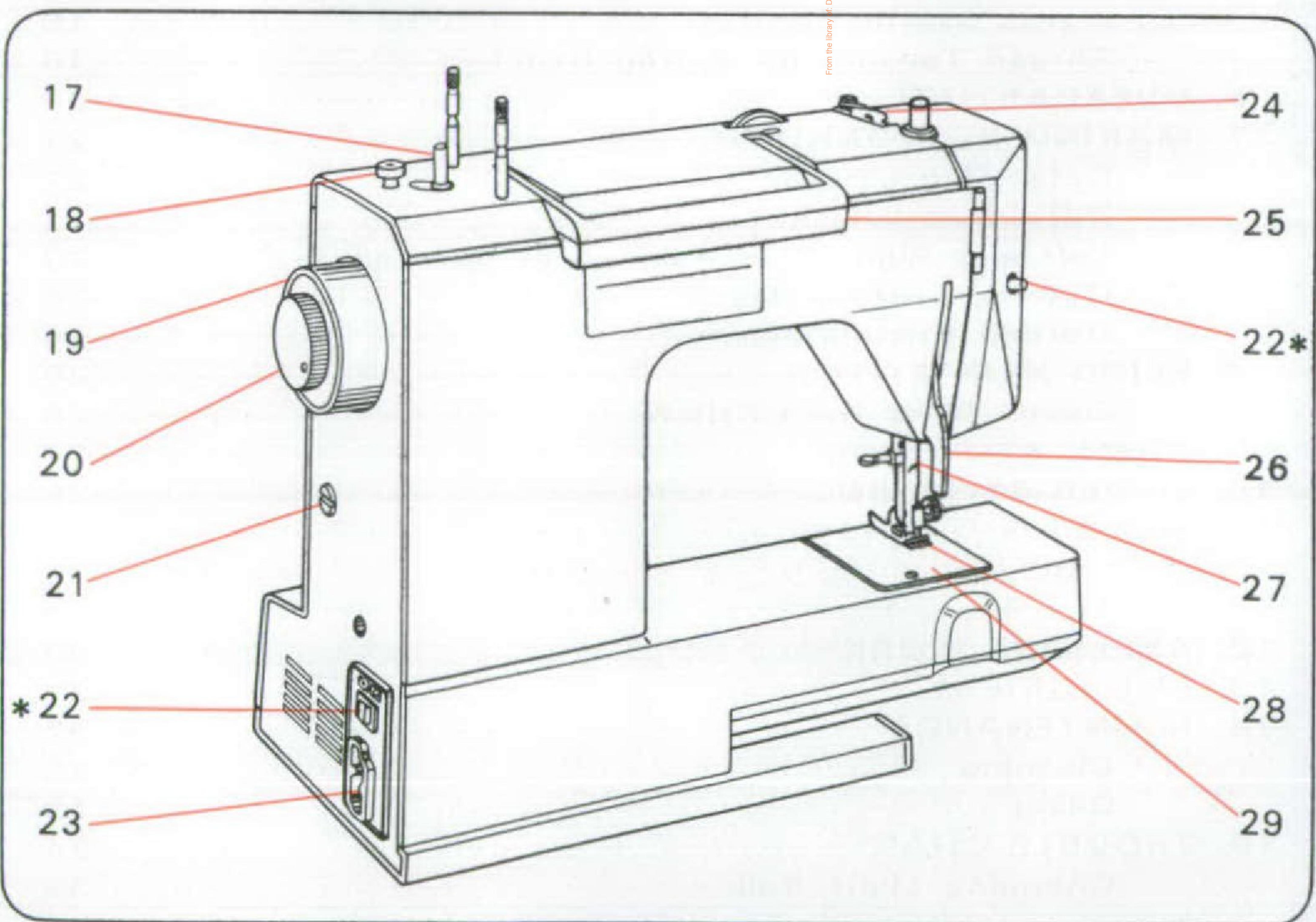
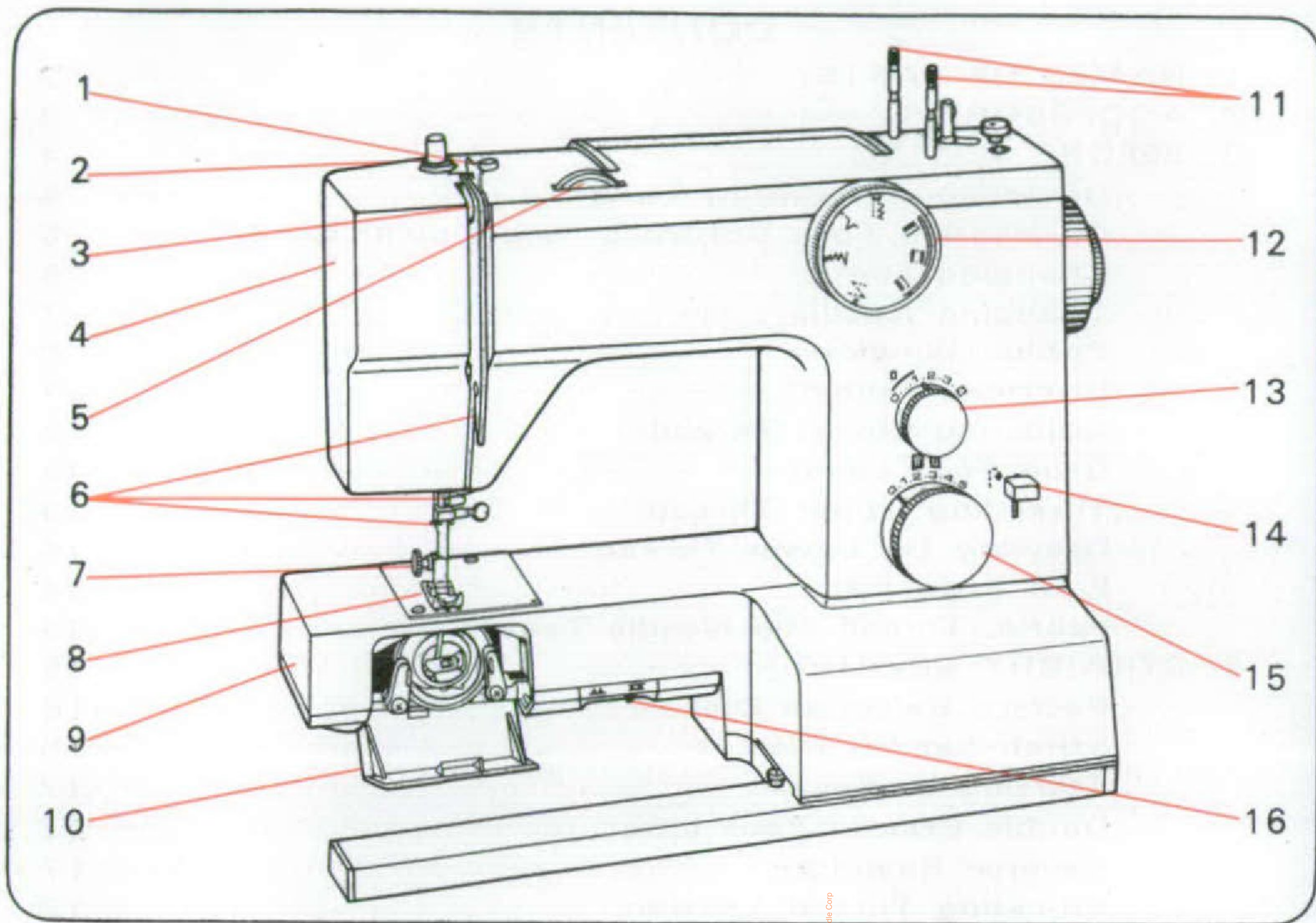
1. Clip on Feet *
2. Thread Cutter
3. Carry Handle *
4. Safety Clutch

* For some models, these specifications are already mentioned in the book.

(2) Accessories shown in this book in some cases are optional.

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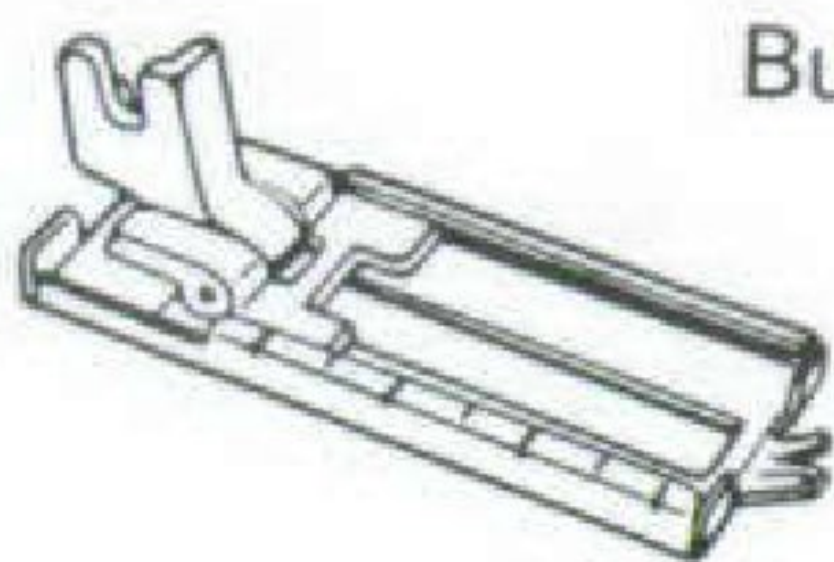
1. NAMES OF PARTS

1. Thread guide for bobbin winding
2. Pressure regulator
3. Take-up lever
4. Face cover
5. Upper thread tension dial
6. Thread guide for upper threading
7. Presser foot thumb screw
8. Presser foot
9. Free arm
10. Shuttle cover
11. Spool pins
12. Pattern selection dial
13. Stitch length dial
14. Reverse sewing lever
15. Zigzag width control
16. Drop feed lever

17. Bobbin winding spindle
18. Bobbin winding stopper
19. Handwheel
20. Stop motion knob
21. Special buttonhole adjustment
22. switch *
23. Socket
24. Thread guide for upper threading
25. Handle
26. Presser foot lifter
27. Thread cutter
28. Feed dog
29. Needle plate

* Specifications vary from country to country.

2. ACCESSORIES



Buttonhole foot



Needles



Zipper foot



Oiler



Felts. (2 pcs.)



Buttonhole cutter



Bobbins
(3 pcs.)

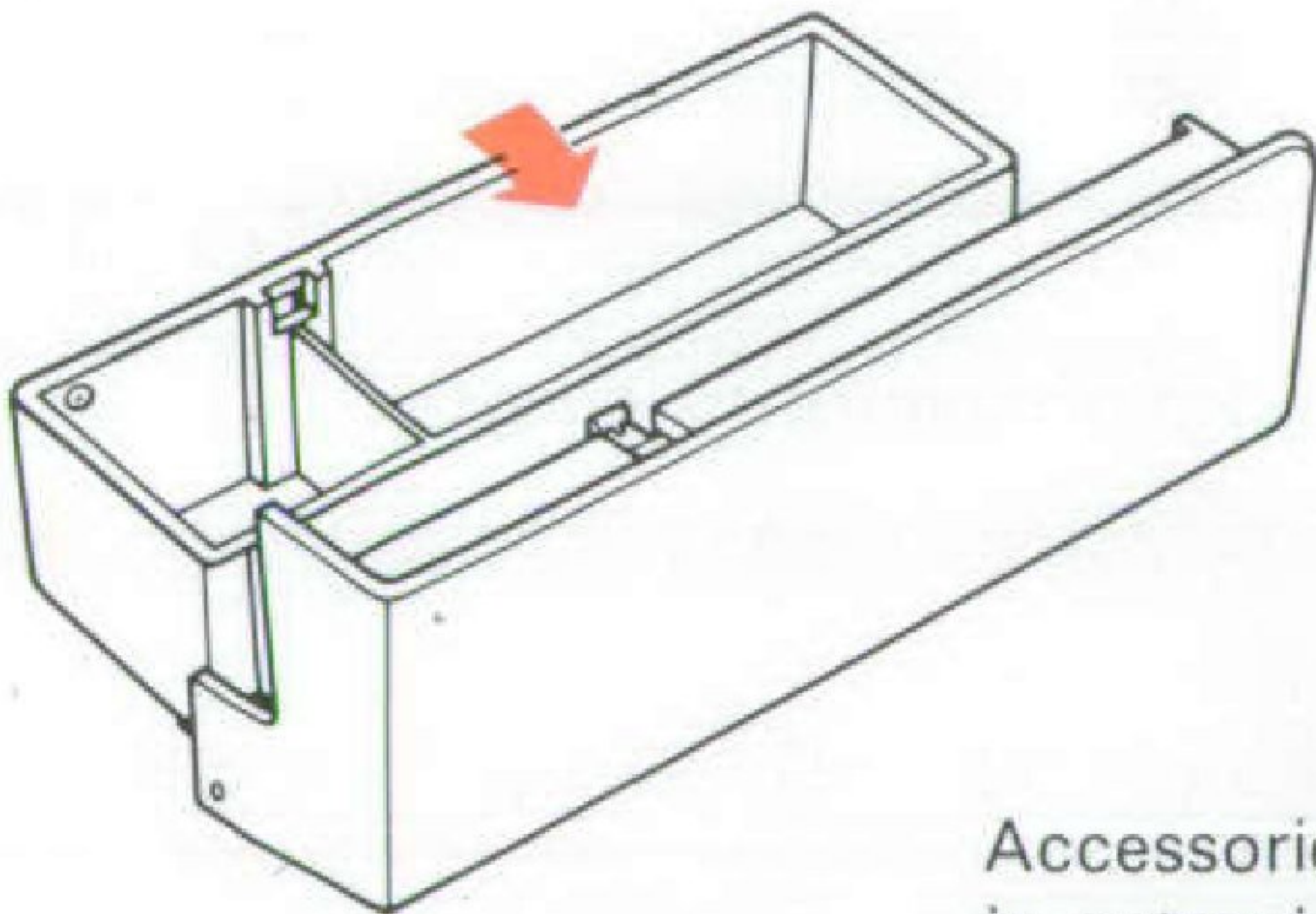


(small)

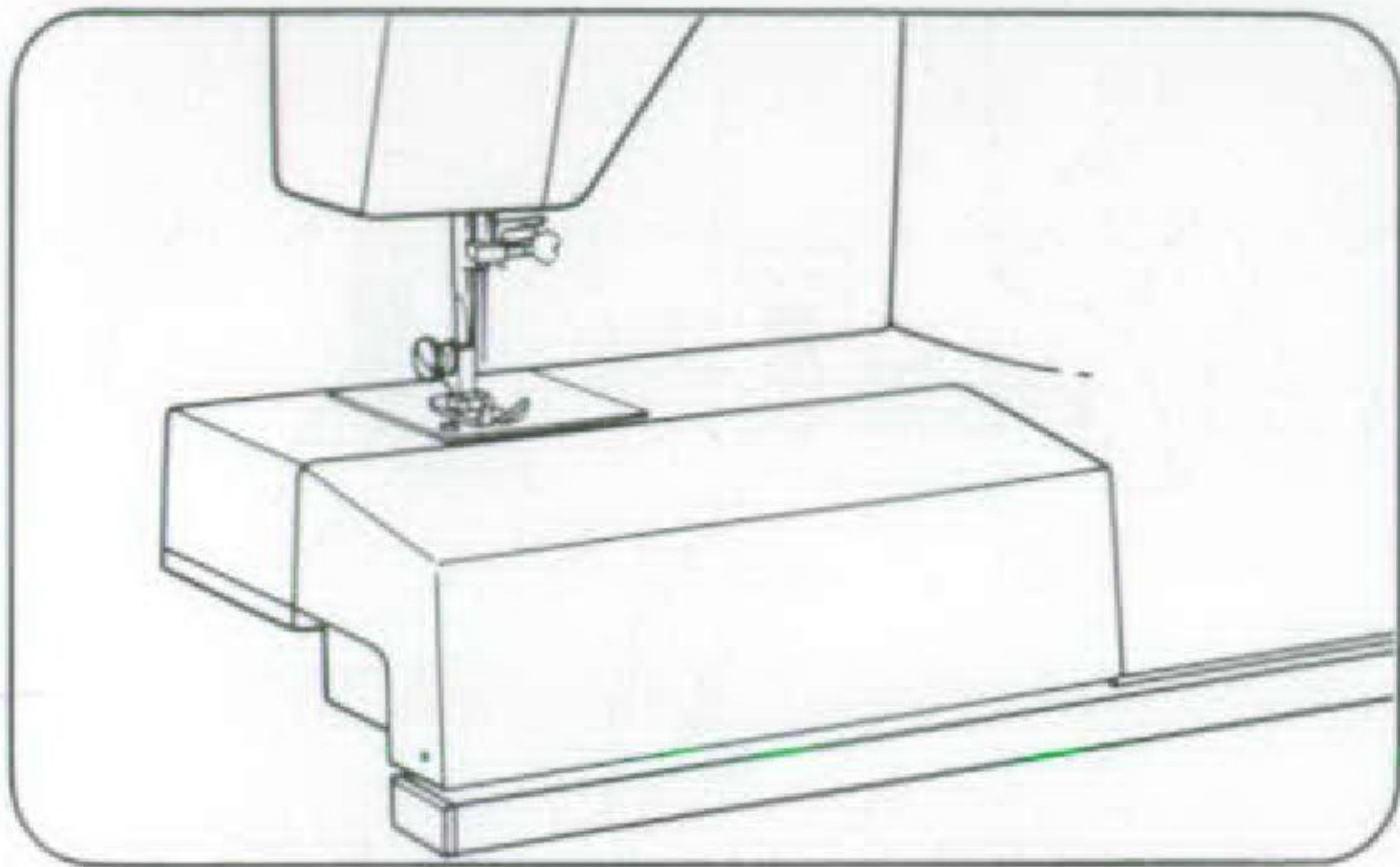


(large)

Screw drivers

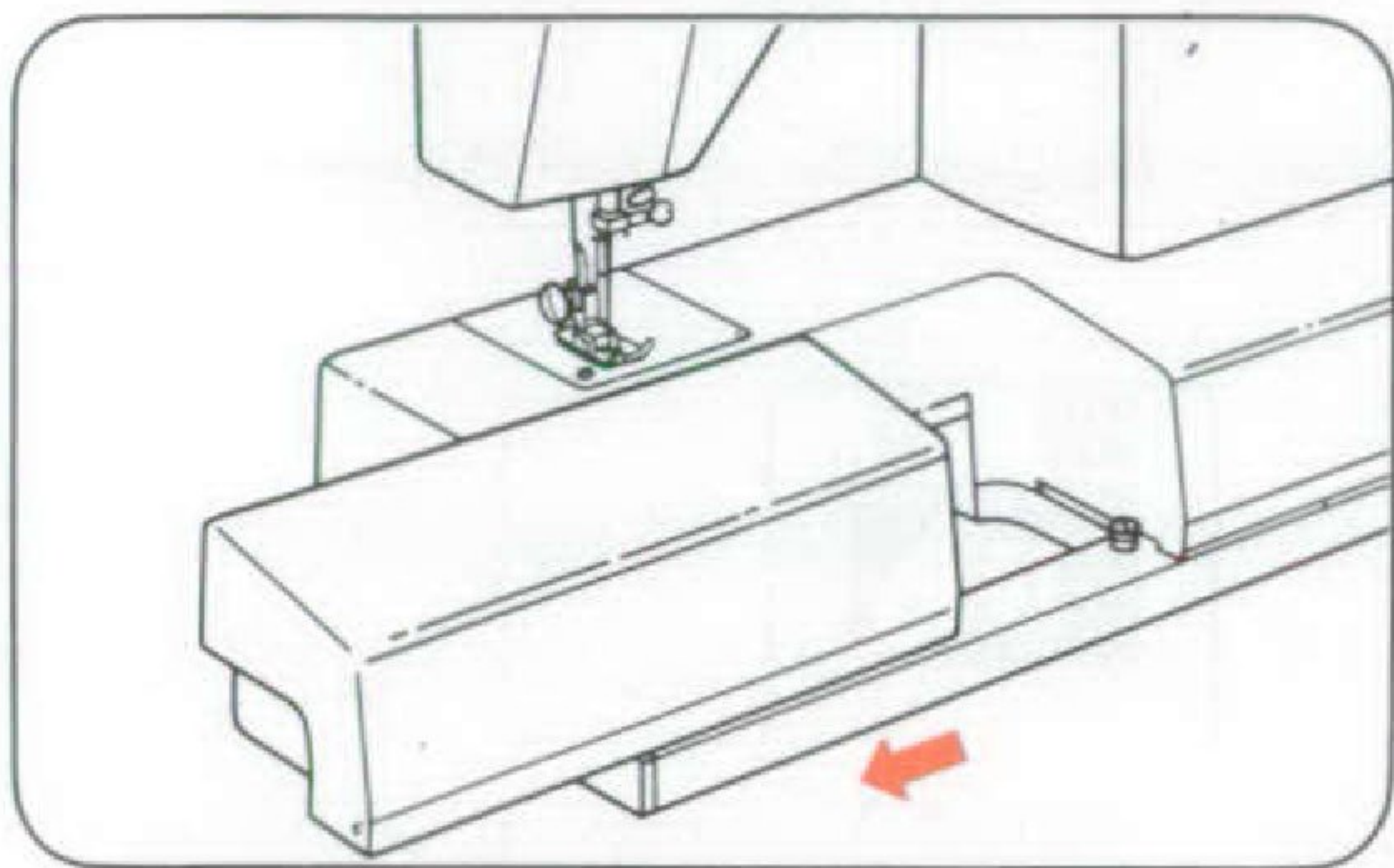


Accessories are stored
in extension table.



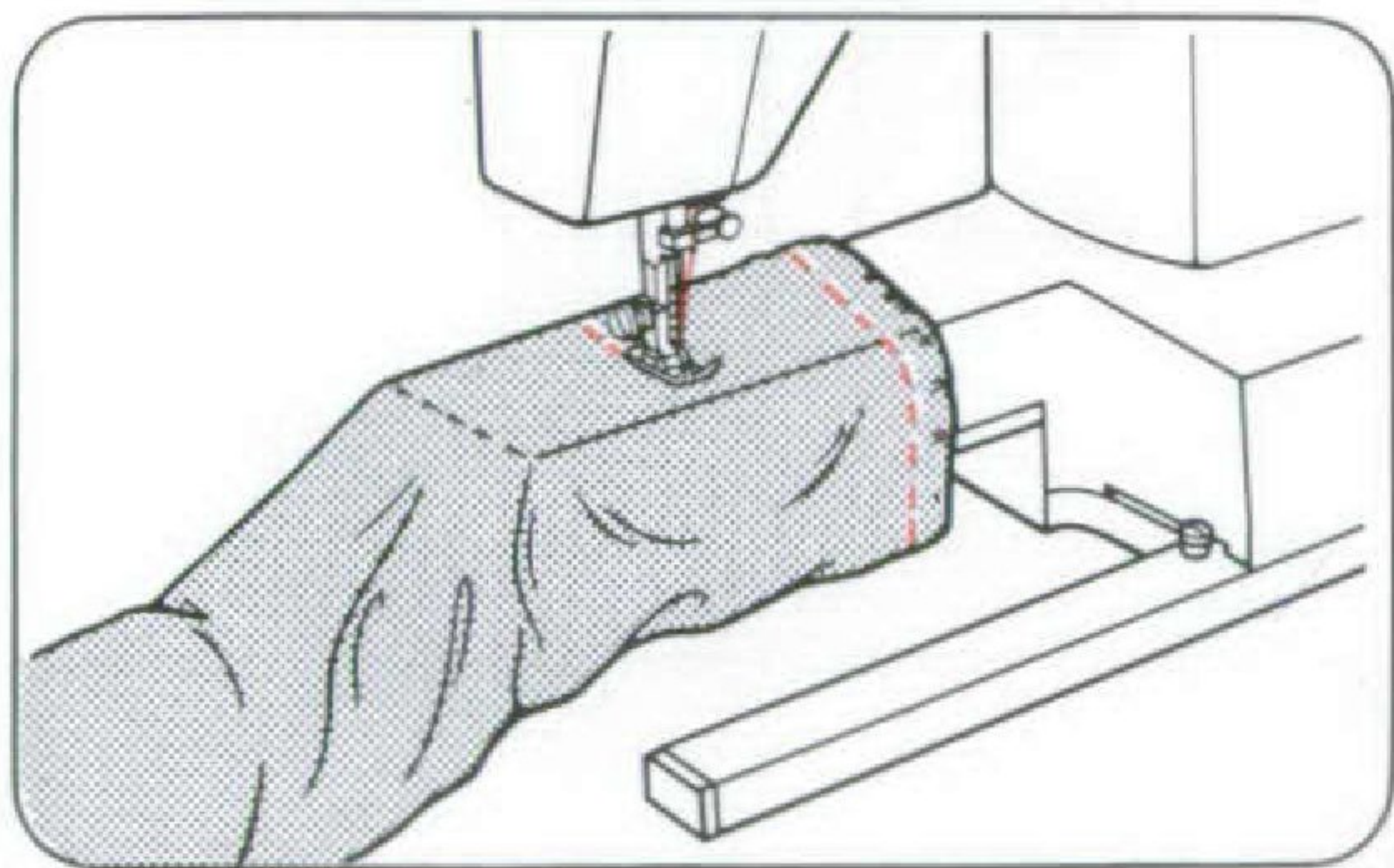
3. BEFORE SEWING

Machine is stored in flat-bed style which makes your work easier in ordinary sewing.



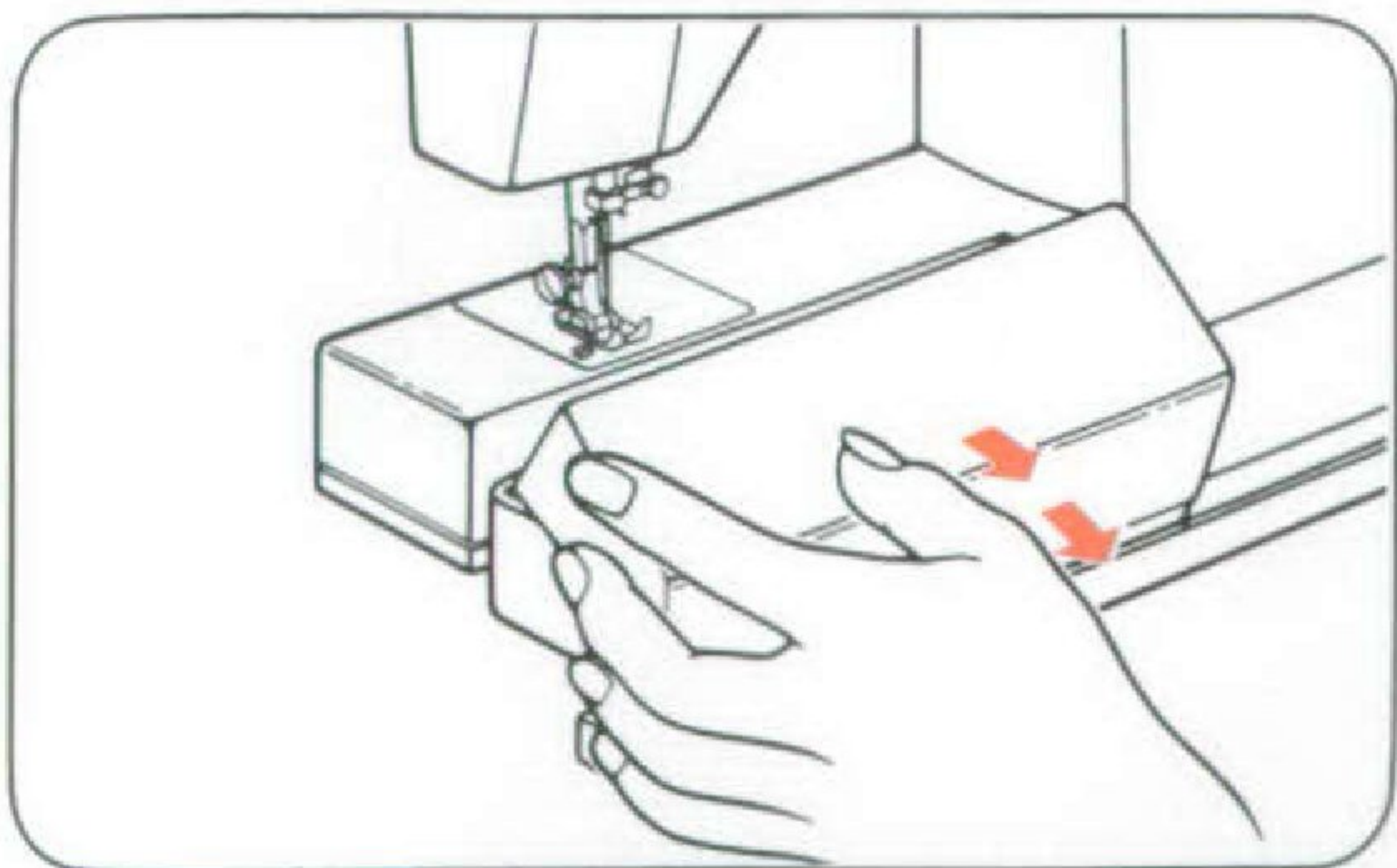
Detachable Extension Table

Slide table off and the machine is used as a free-arm model.



Free-arm is convenient to sew or embroider; trousers, sleeves, cuffs of T-shirts, blouses, etc.

Do vice-versa of above steps to attach extension table.

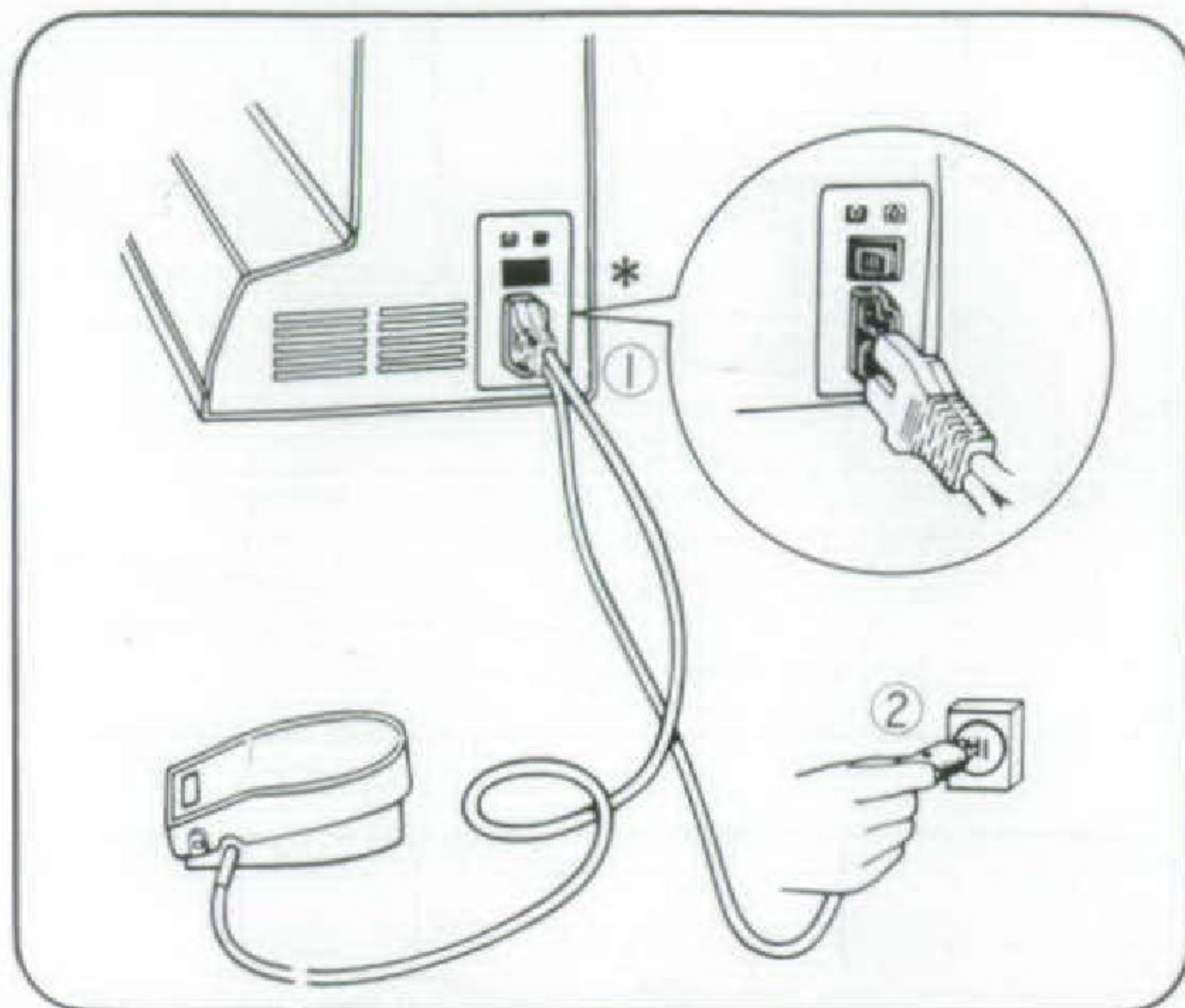


To open lid of accessory box, push it open, as illustrated.

Connecting foot controller and power cord

Connect foot controller and power cord ① ②.

Before plugging in your machine, be sure that voltage is same as that of your machine. (written on a plate at back of machine)

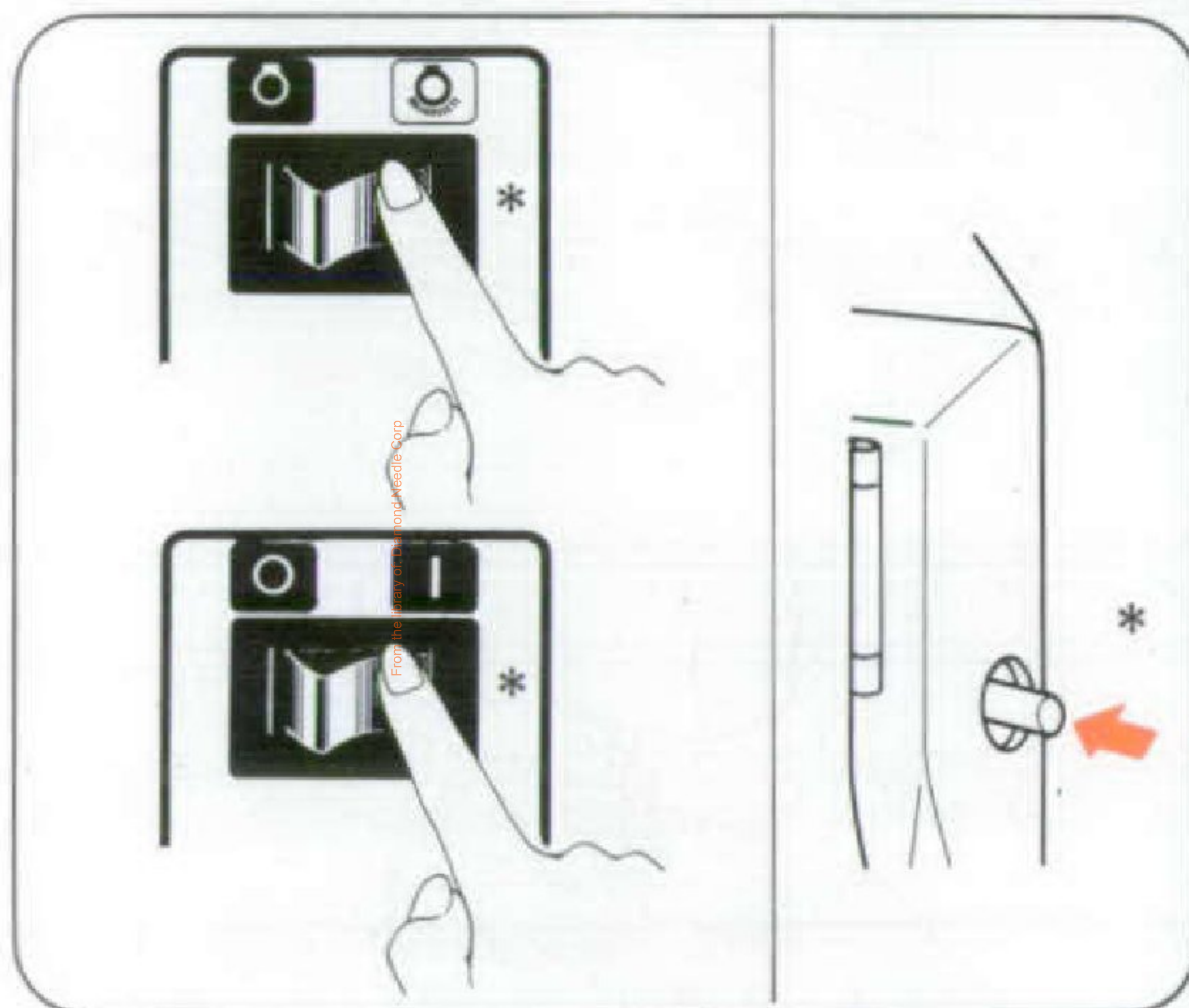


Switch on, put power on the machine and turn on the sewing light.

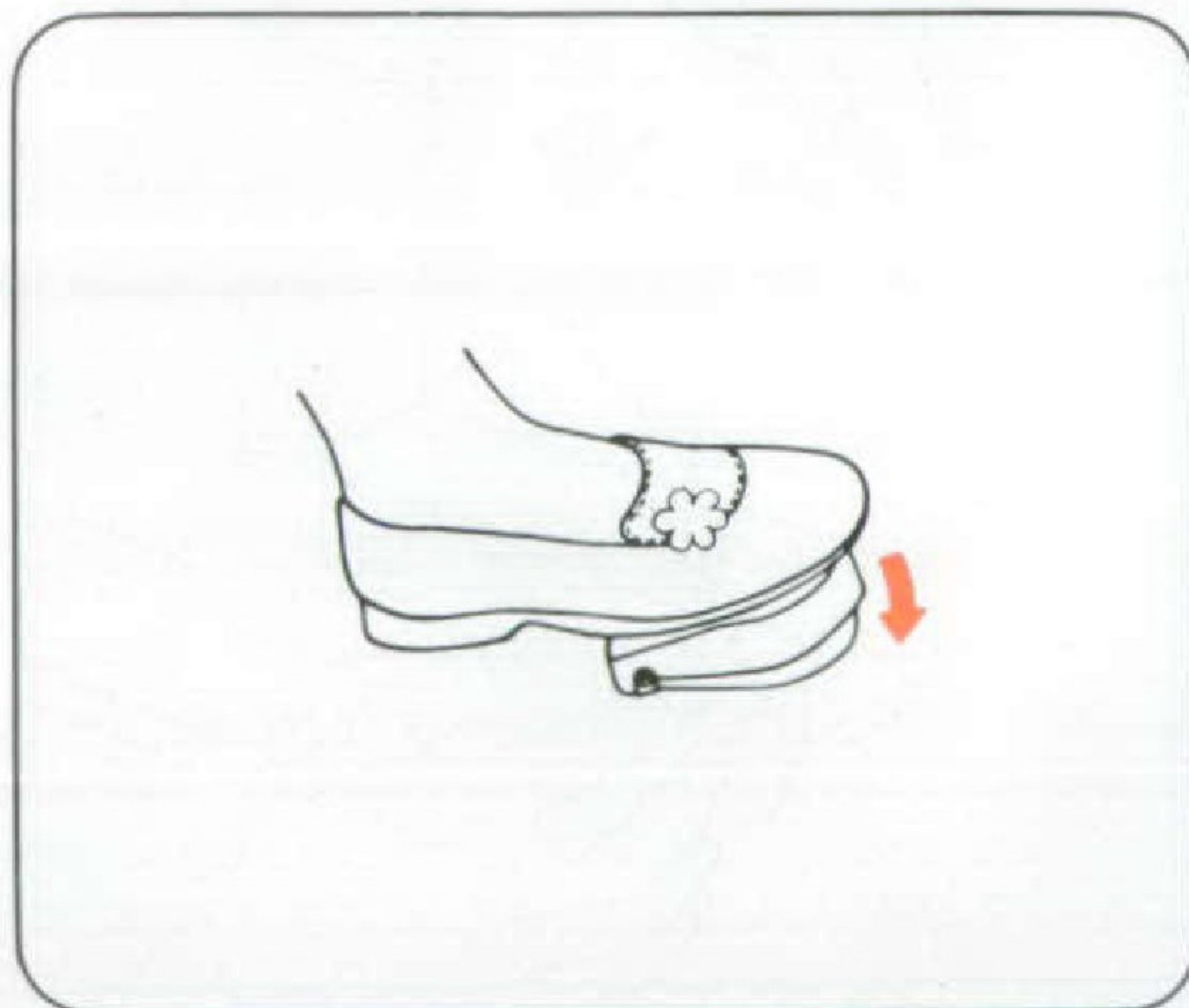
Push button to turn sewing light on and off.

Always switch off or unplug machine when not in use.

*Specifications vary from country to country.



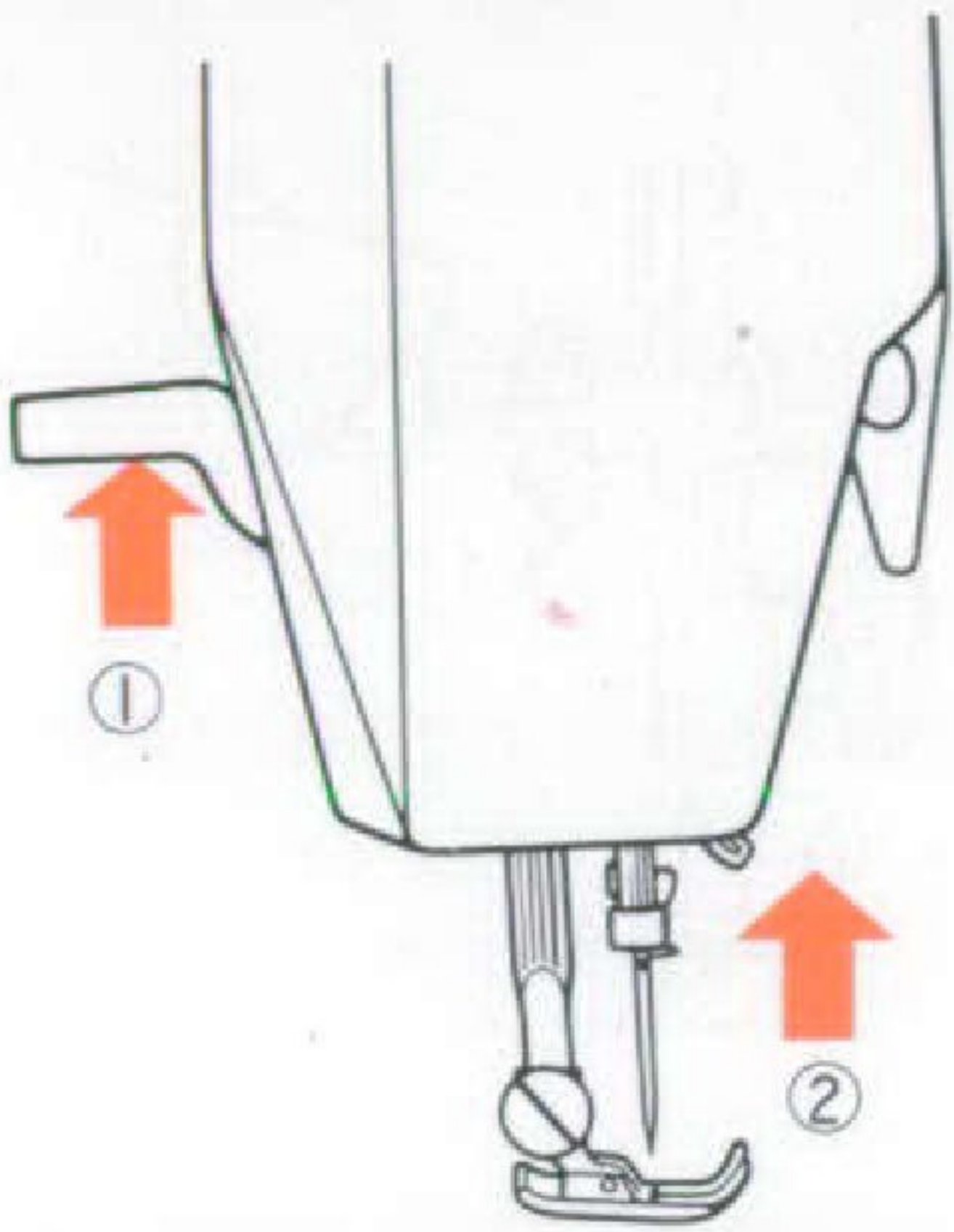
The more you press foot controller, the faster the machine runs.



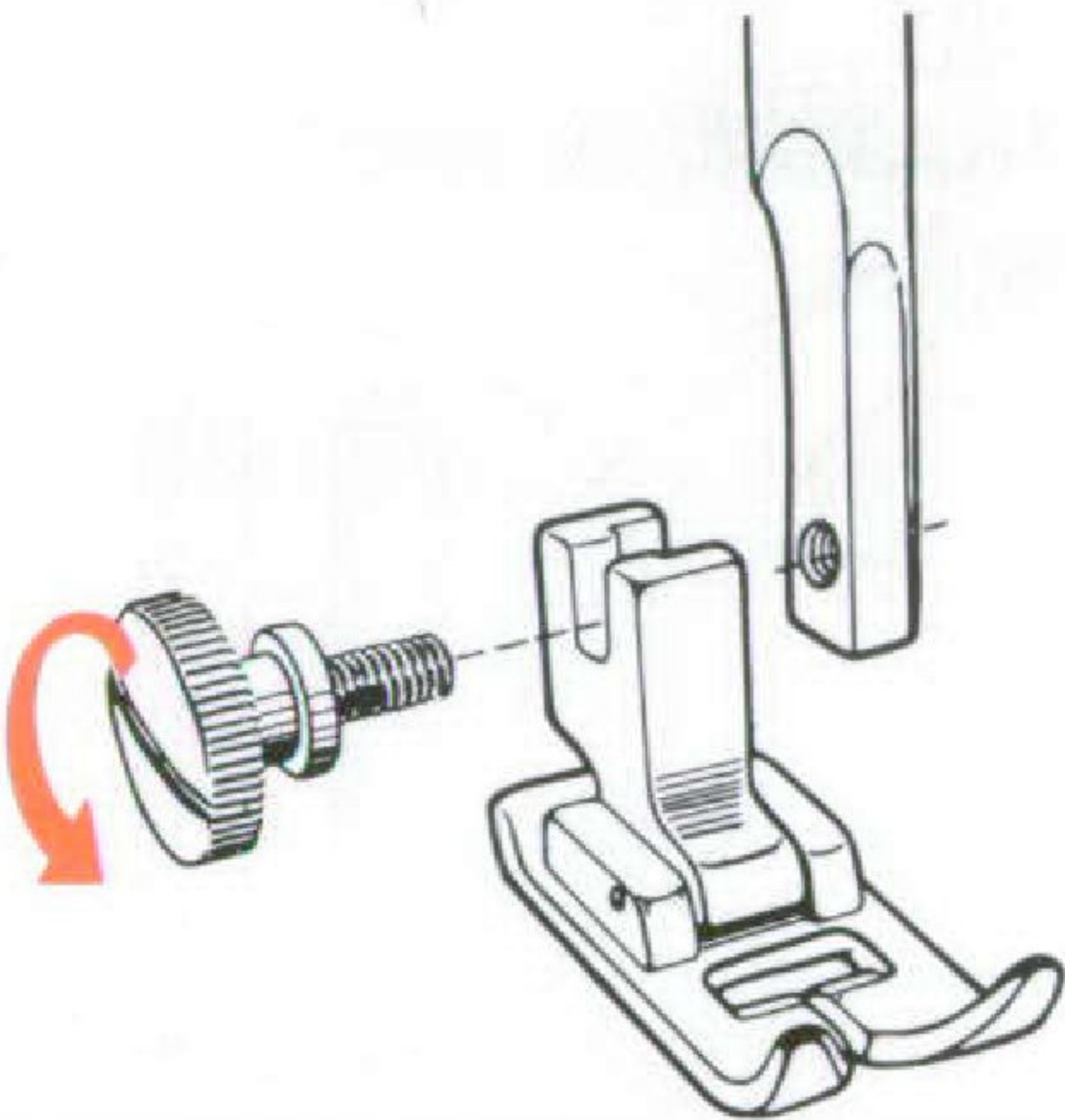
Changing Foot

Raise presser foot lifter ①.

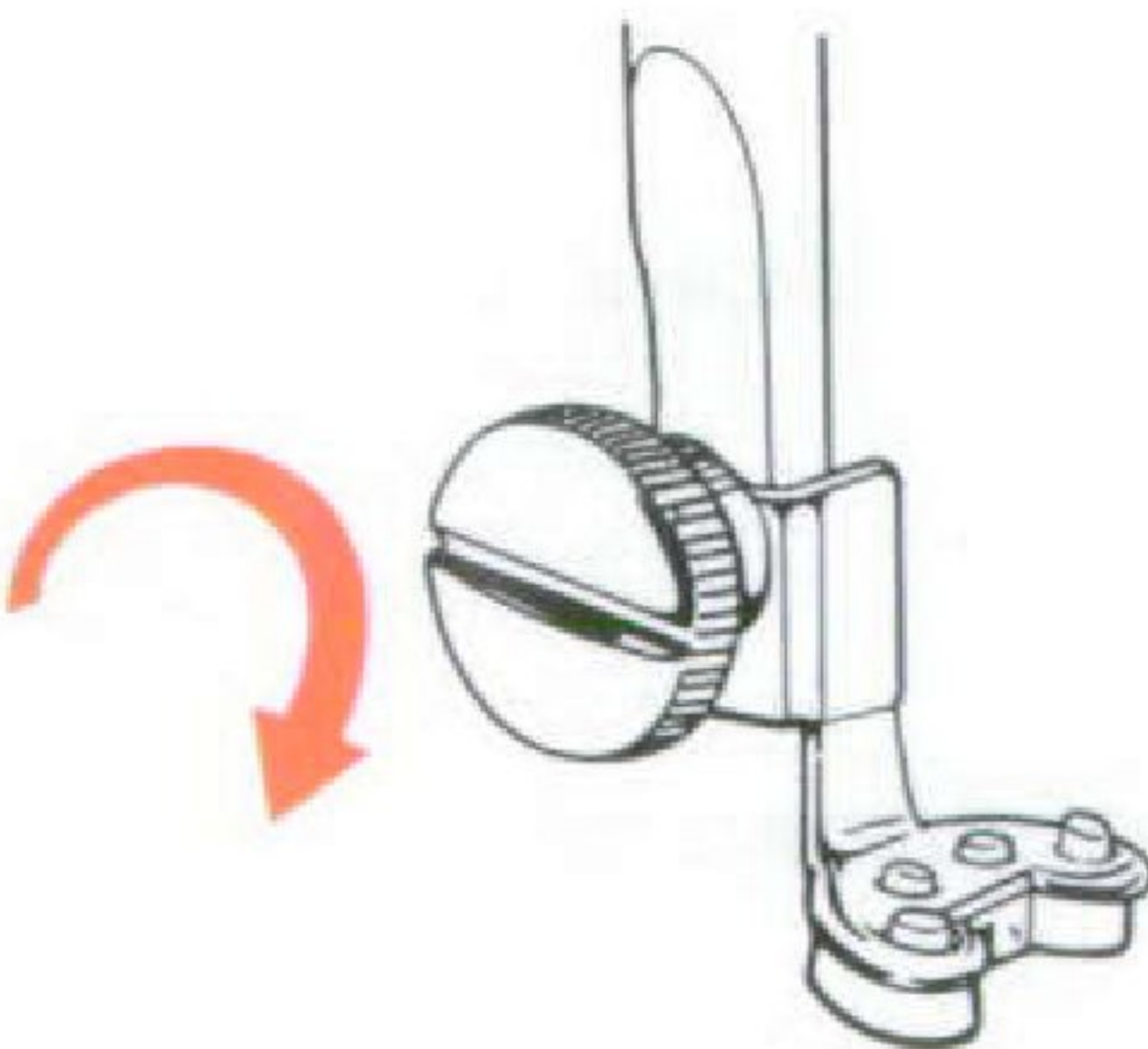
Set needle in the highest position by turning handwheel towards you ②.



Remove foot holder by loosening screw with screwdriver.



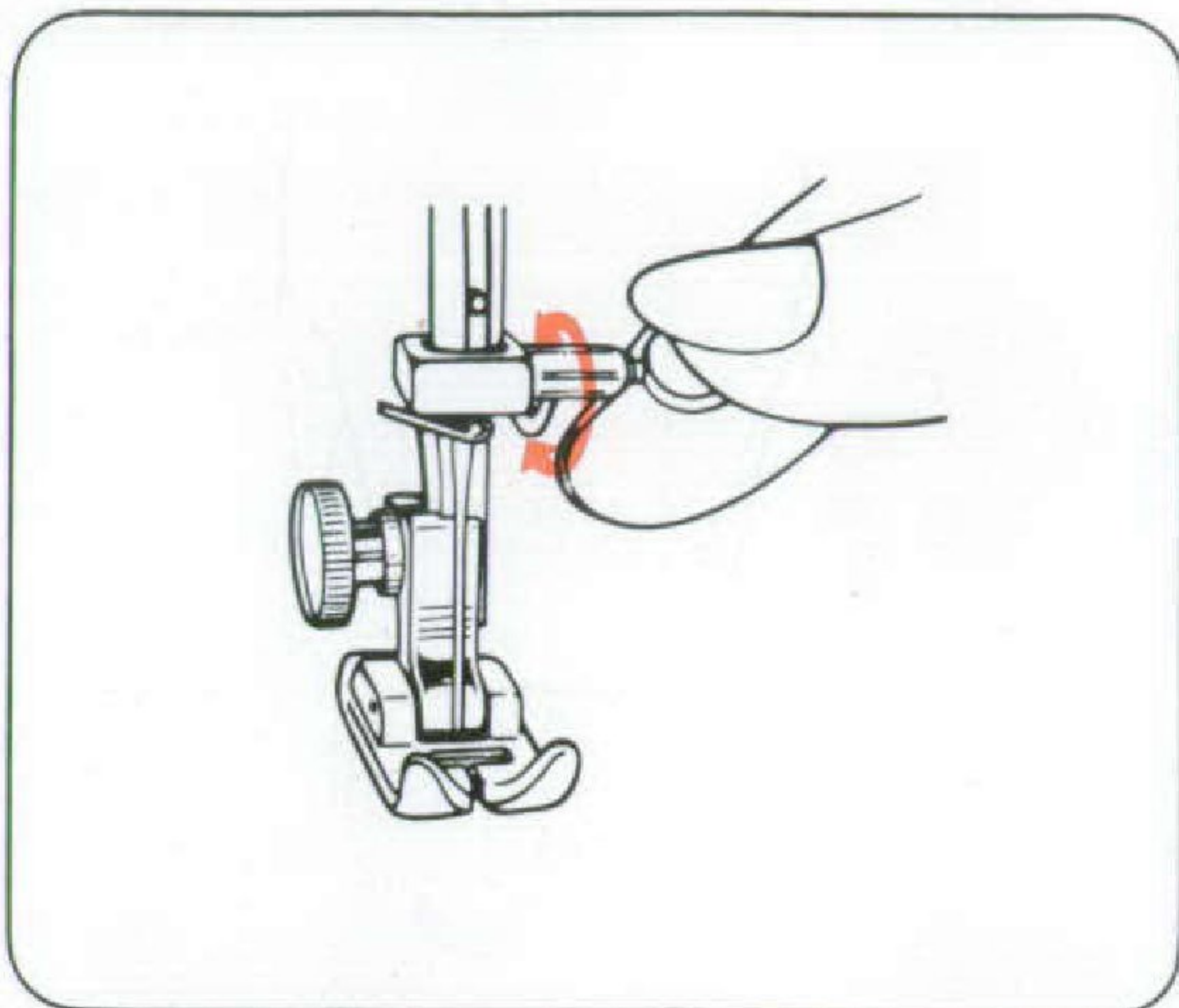
Replace screw-snap type presser foot and tighten screw.



Changing Needle

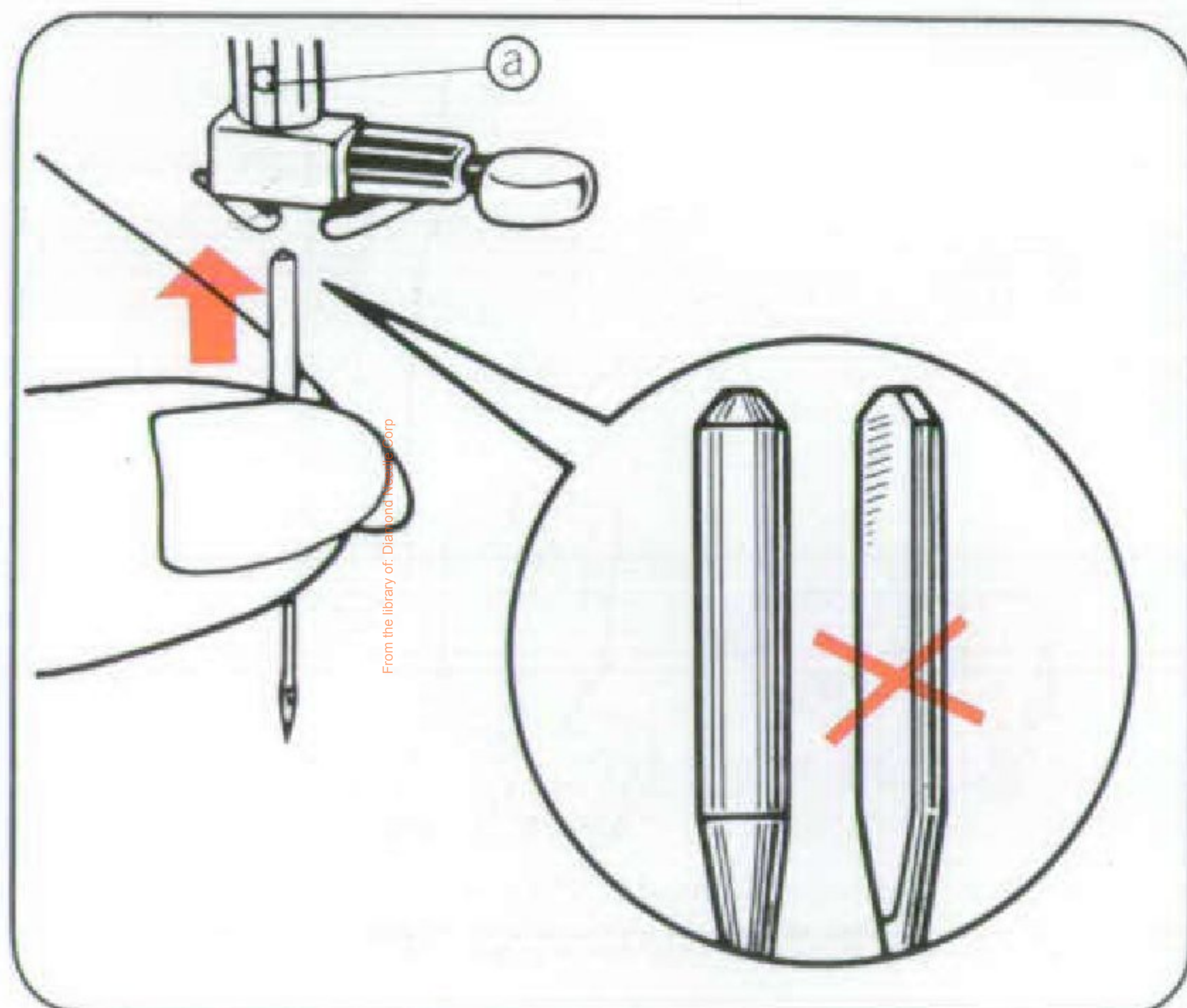
Set needle in the highest position by turning handwheel towards you.

Loosen needle clamp screw and remove needle.



With flat face away from you, insert a new needle into groove of needle bar.

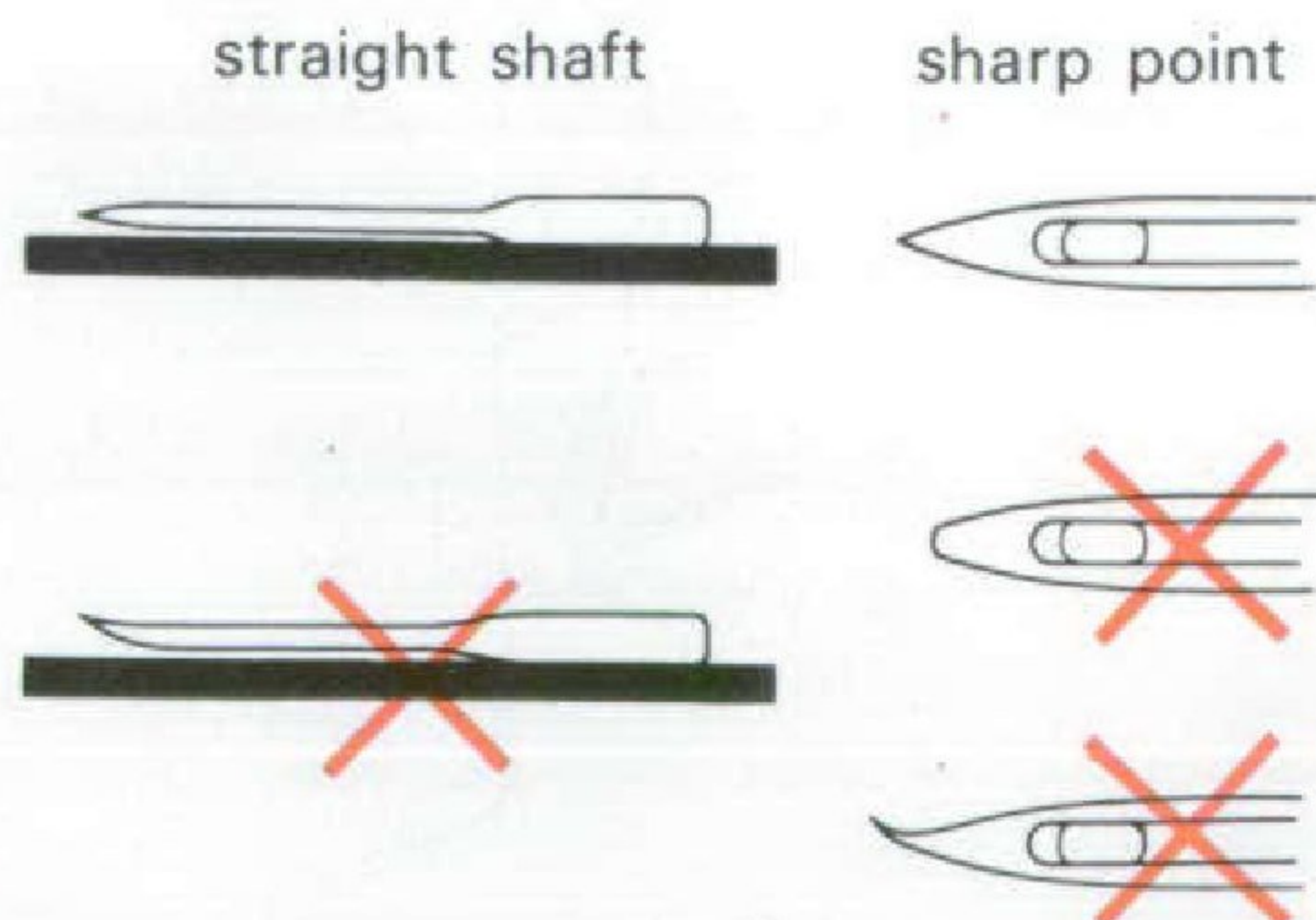
Push needle until it reaches stopper (a) and tighten needle clamp screw firmly.



Always use a straight needle with a sharp point.

Using defective or worn needles not only causes stitch skipping, breakage of needles or snapping of thread; it also can damage hook and needle plate.

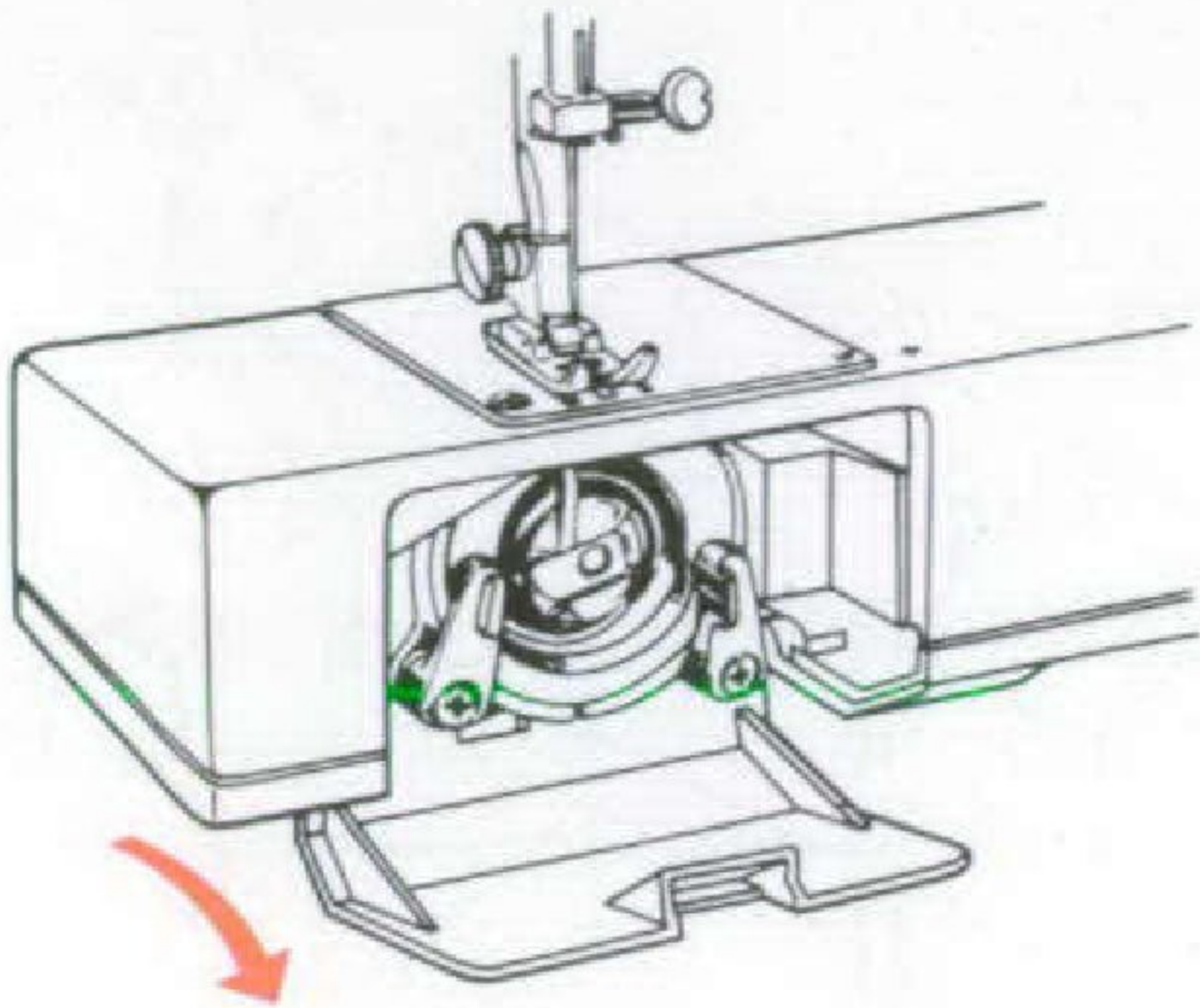
Proper needle



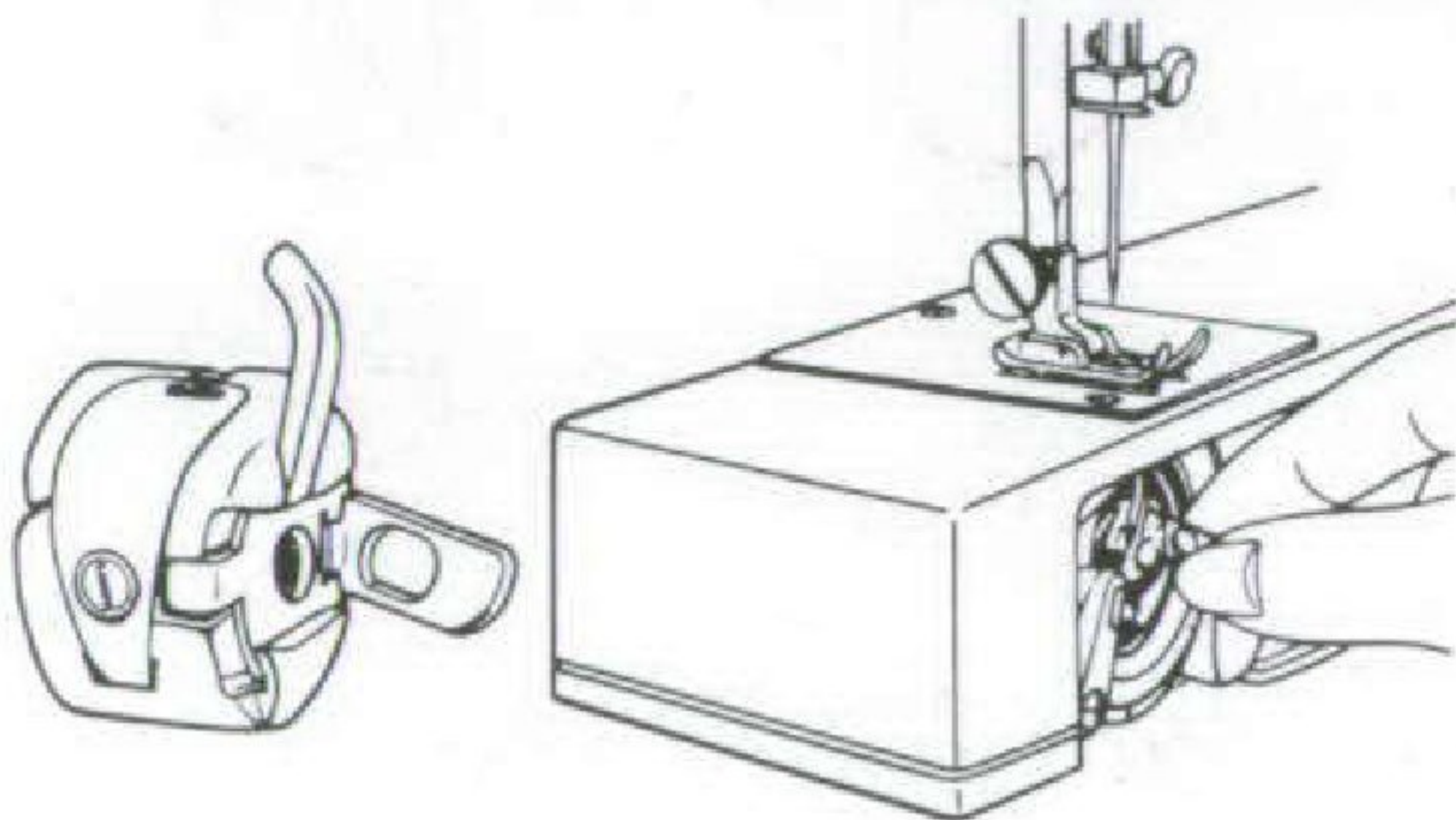
Bobbin Winding

Set needle in the highest position by turning handwheel towards you.

Open shuttle cover.



Open latch of bobbin case and take it out.

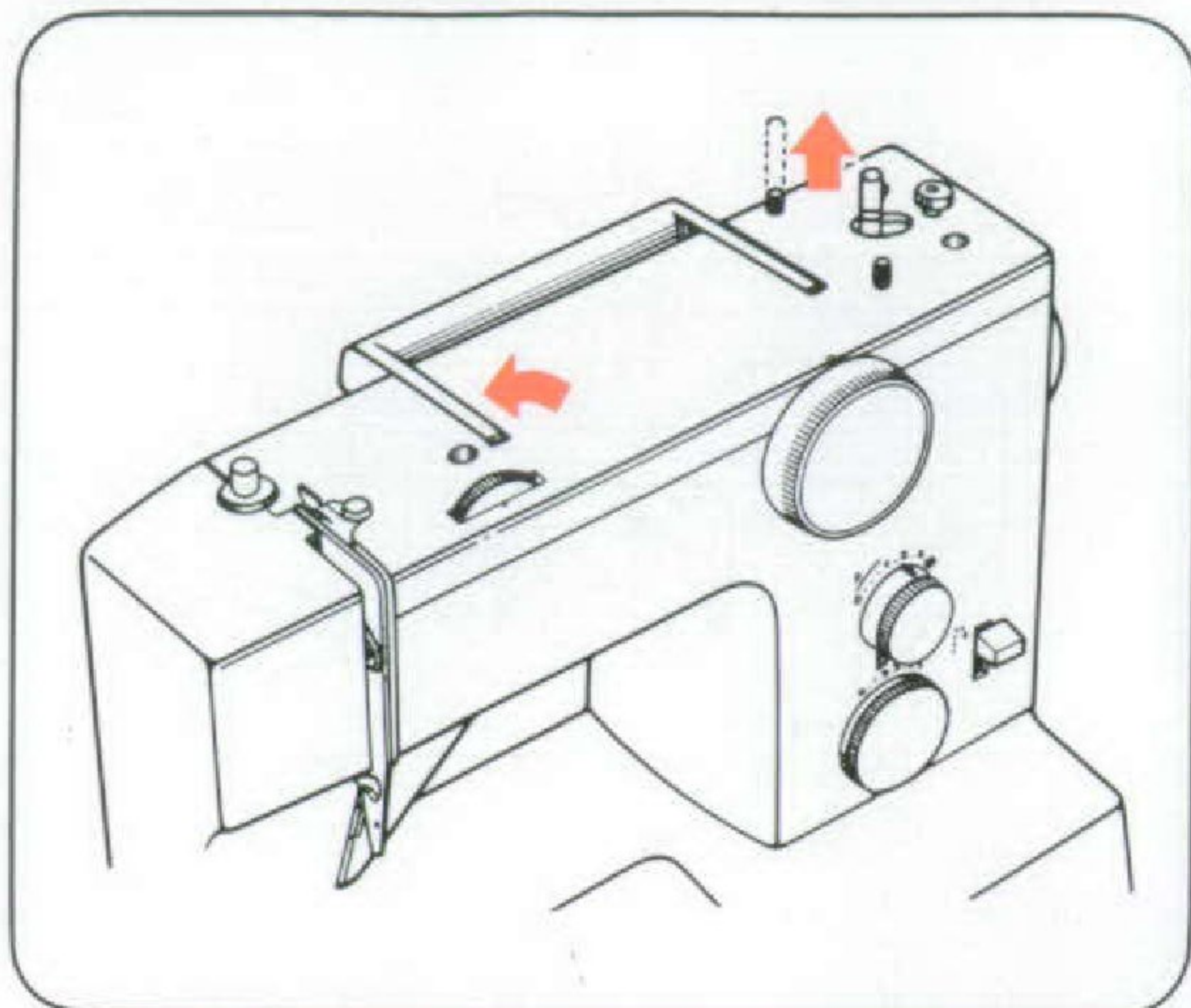


Close latch of bobbin case and bobbin comes out easily.

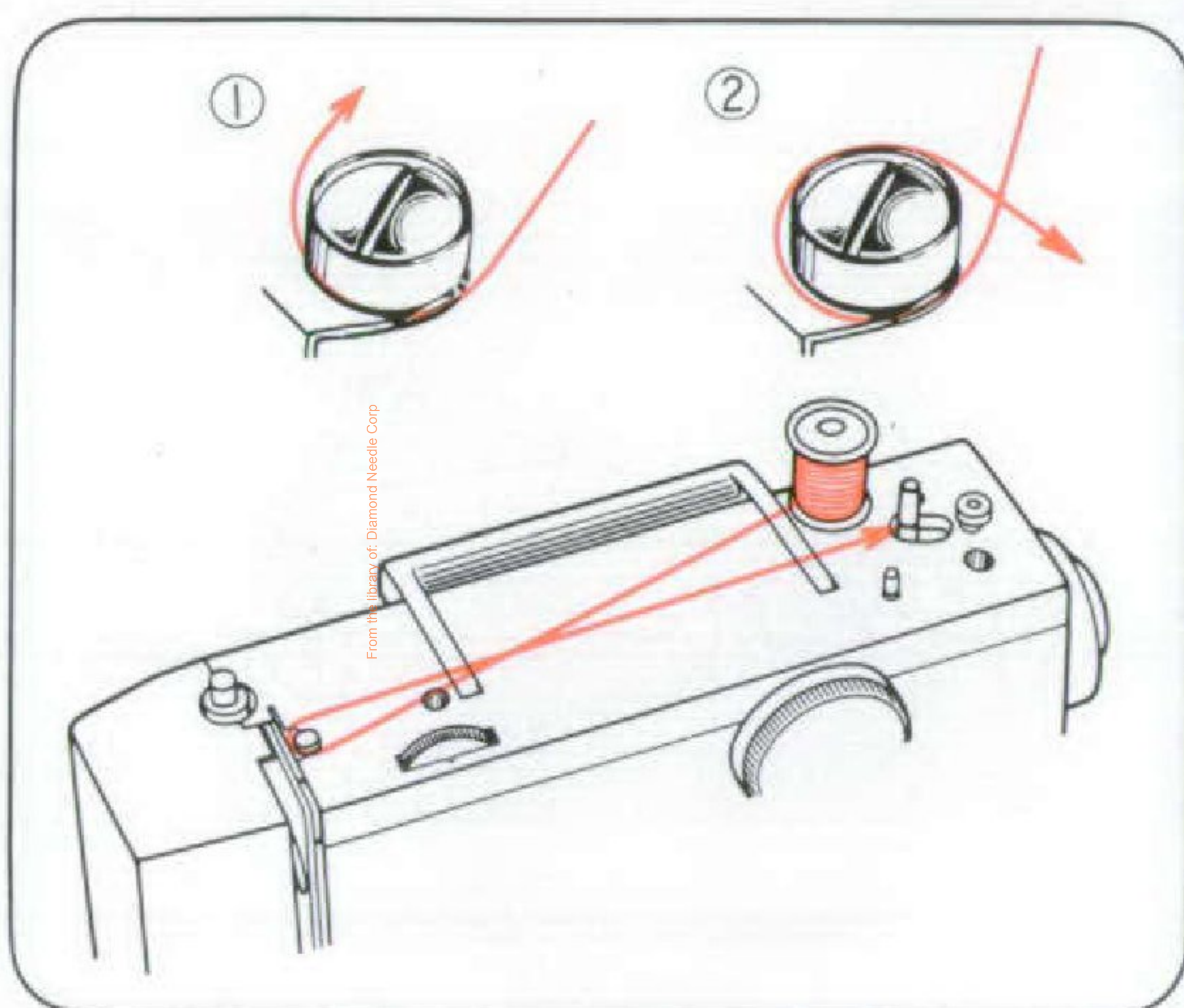


From the library of Diamond Needle Corp

Push back to fold handle.
Pull out spool pin.

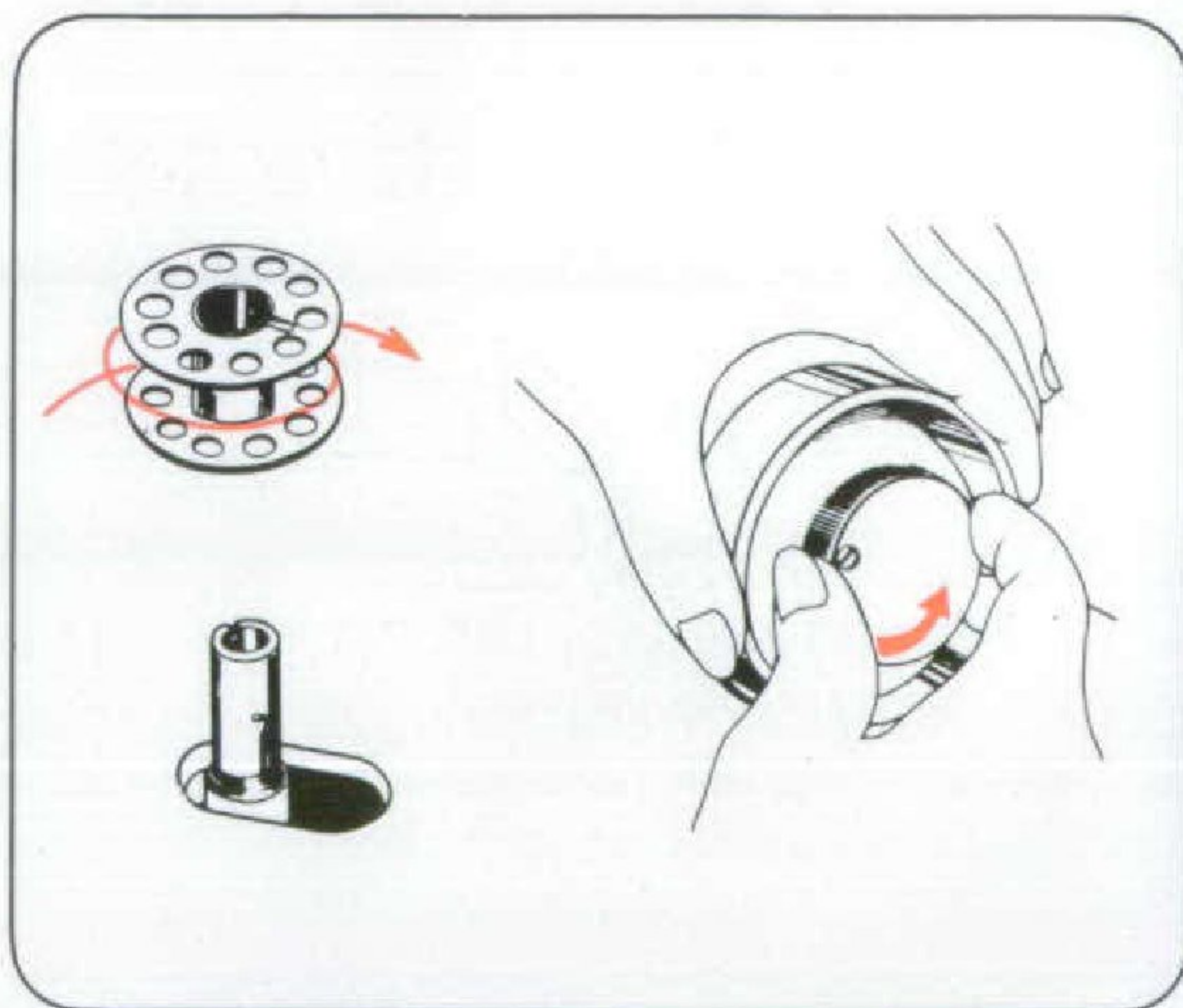


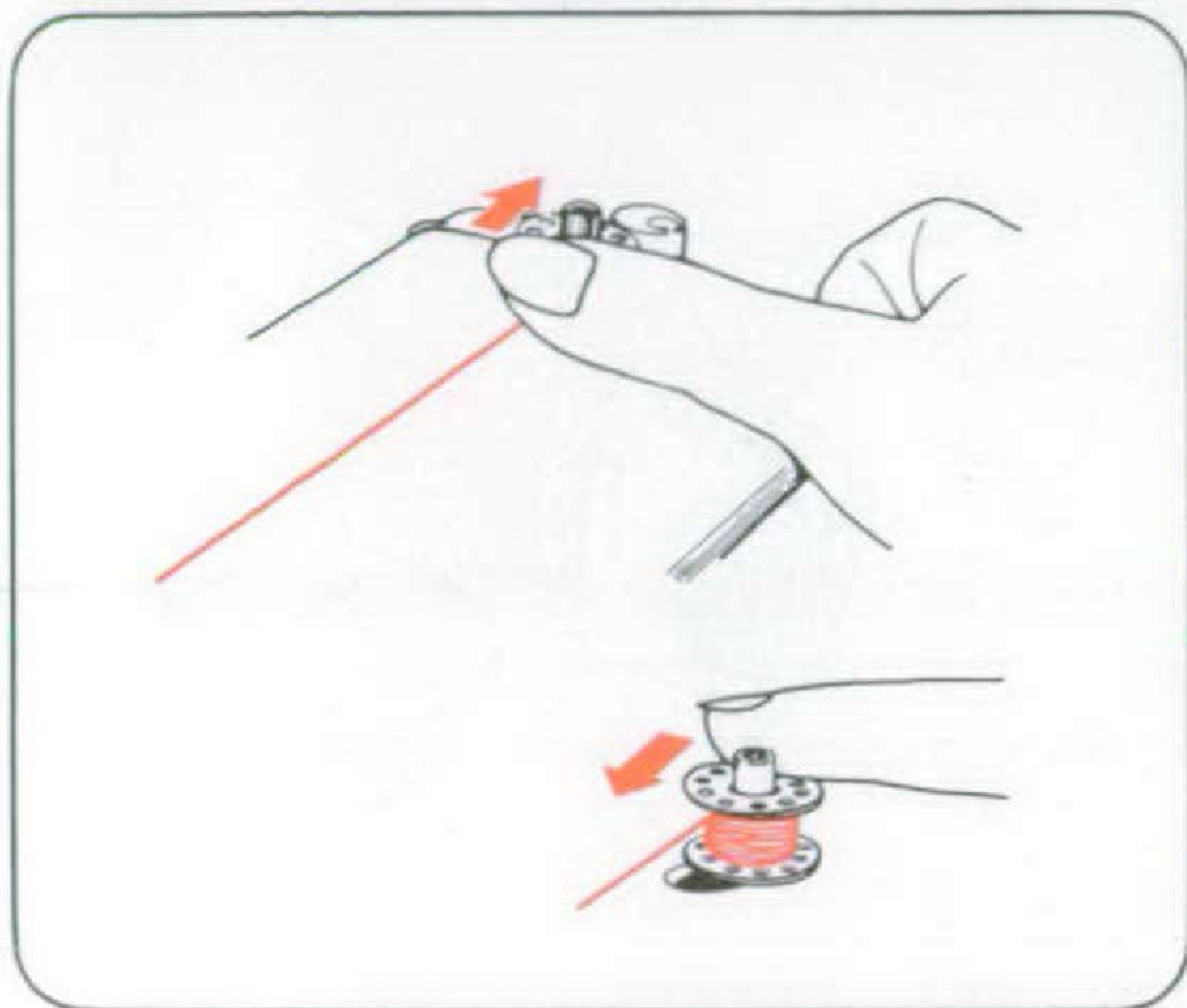
Put a spool on spool pin.
Draw thread from spool pin through thread guide and pre-tension device, following numbers ① and ②.



Wind thread clockwise around bobbin several times.
Push bobbin on to spindle.

Holding handwheel with your left hand disengage handwheel by unscrewing stop motion knob.

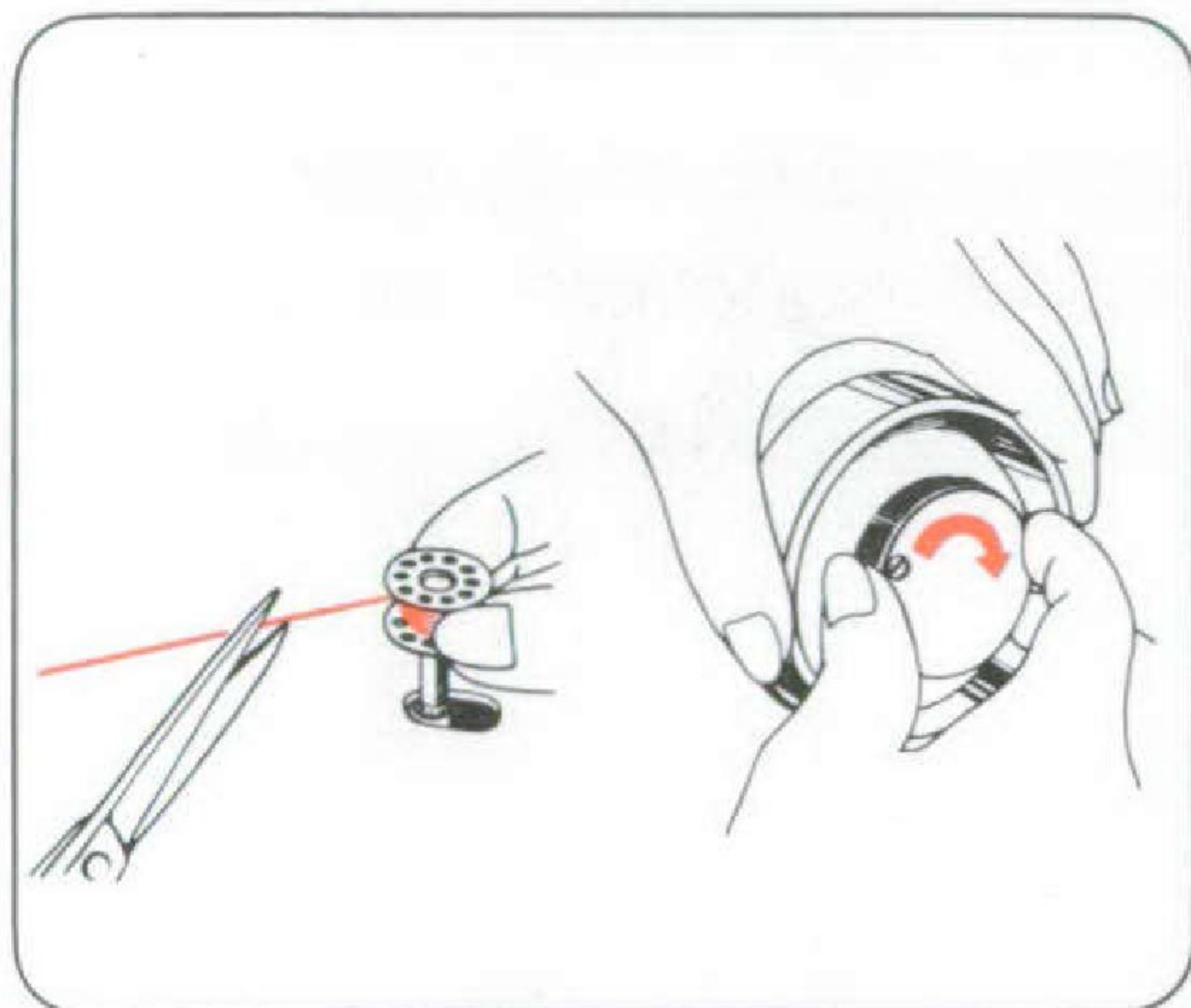




Push bobbin to right and press down foot controller.

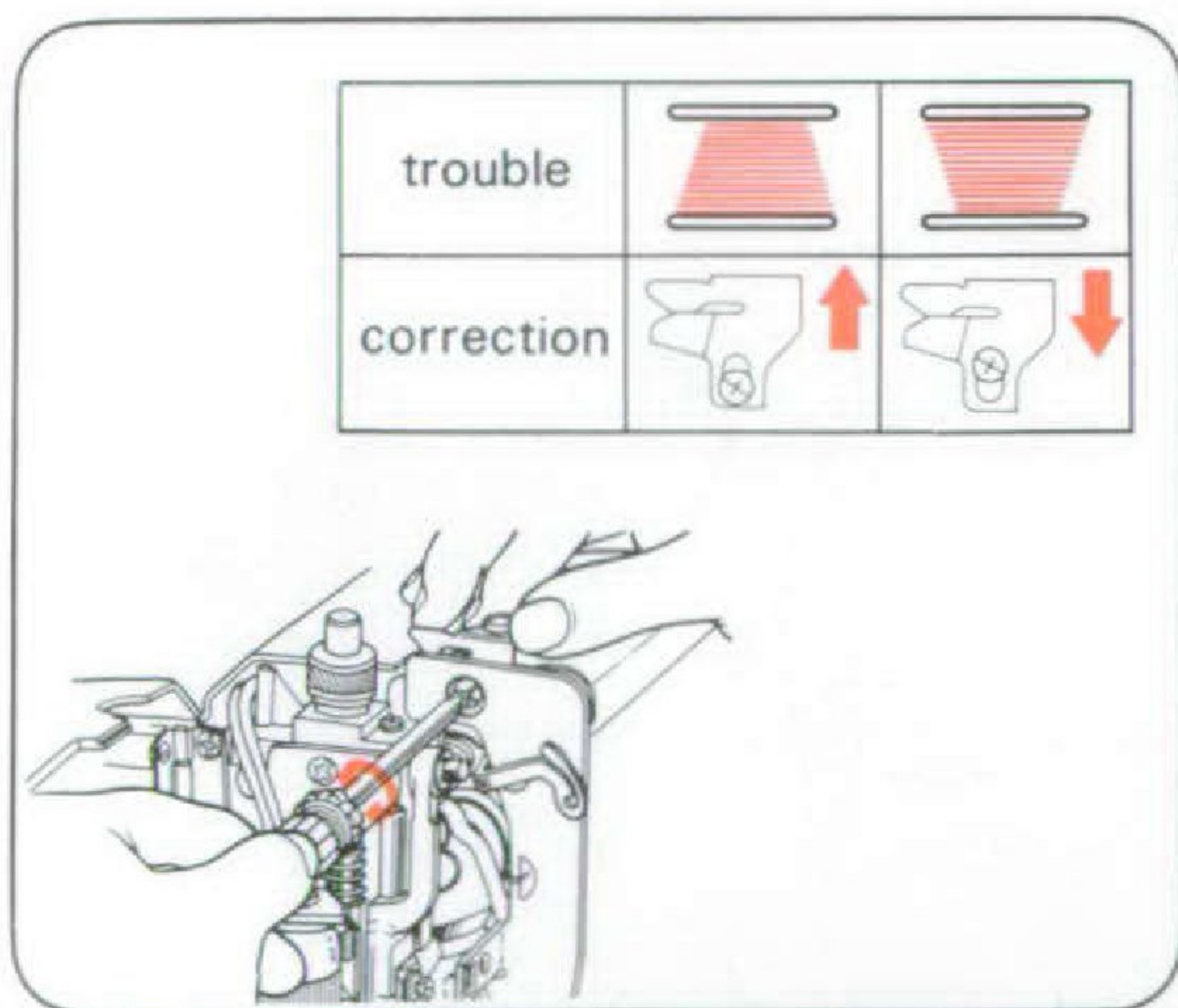
Machine stops automatically when bobbin is full.

Push bobbin to left, to disengage from wheel.



Take off bobbin from spindle and cut thread.

Retighten stop motion knob.

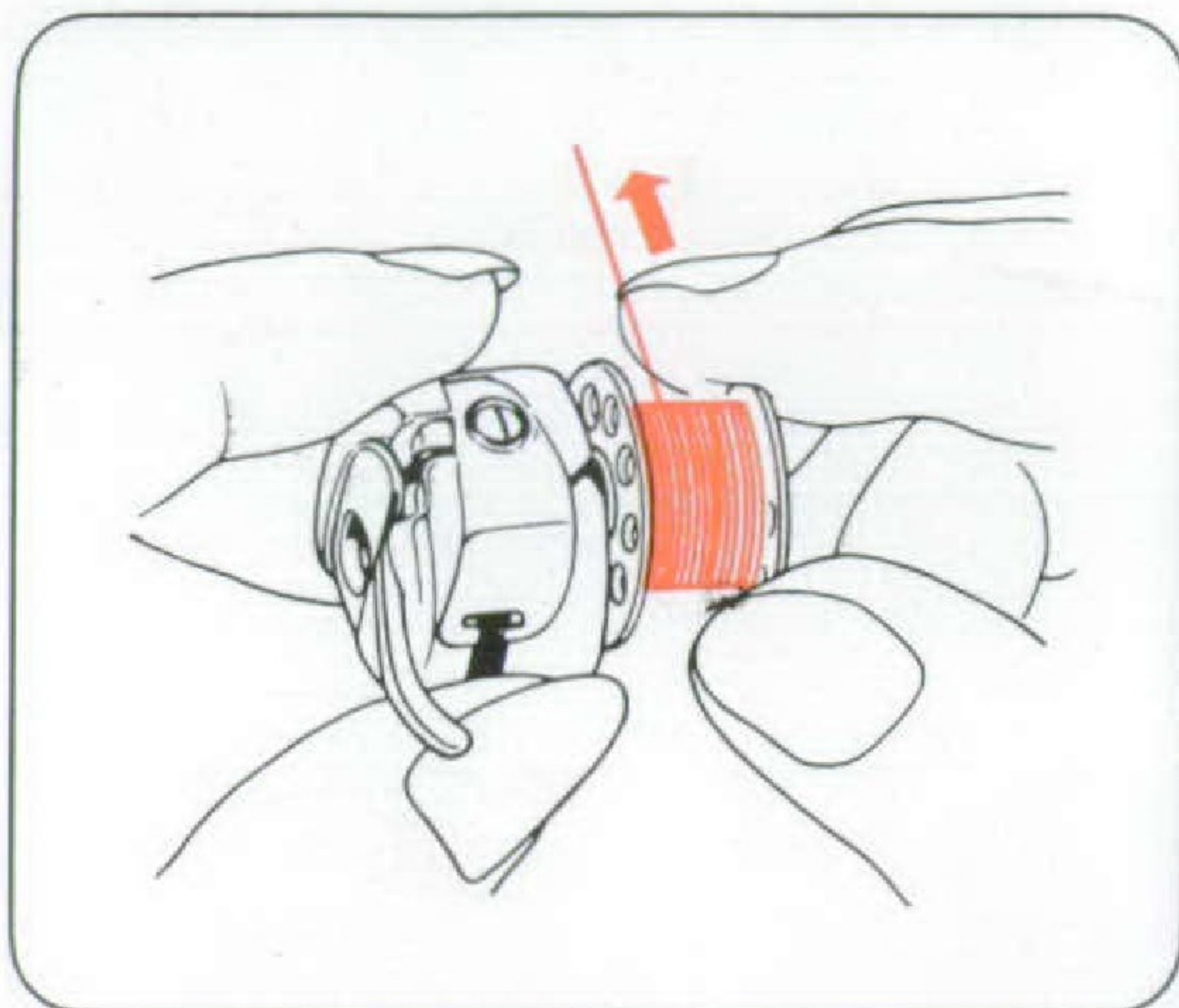


If bobbin is wound unevenly as shown, open face cover and loosen set-screw of the guide for bobbin winding: Use screw driver to adjust height.

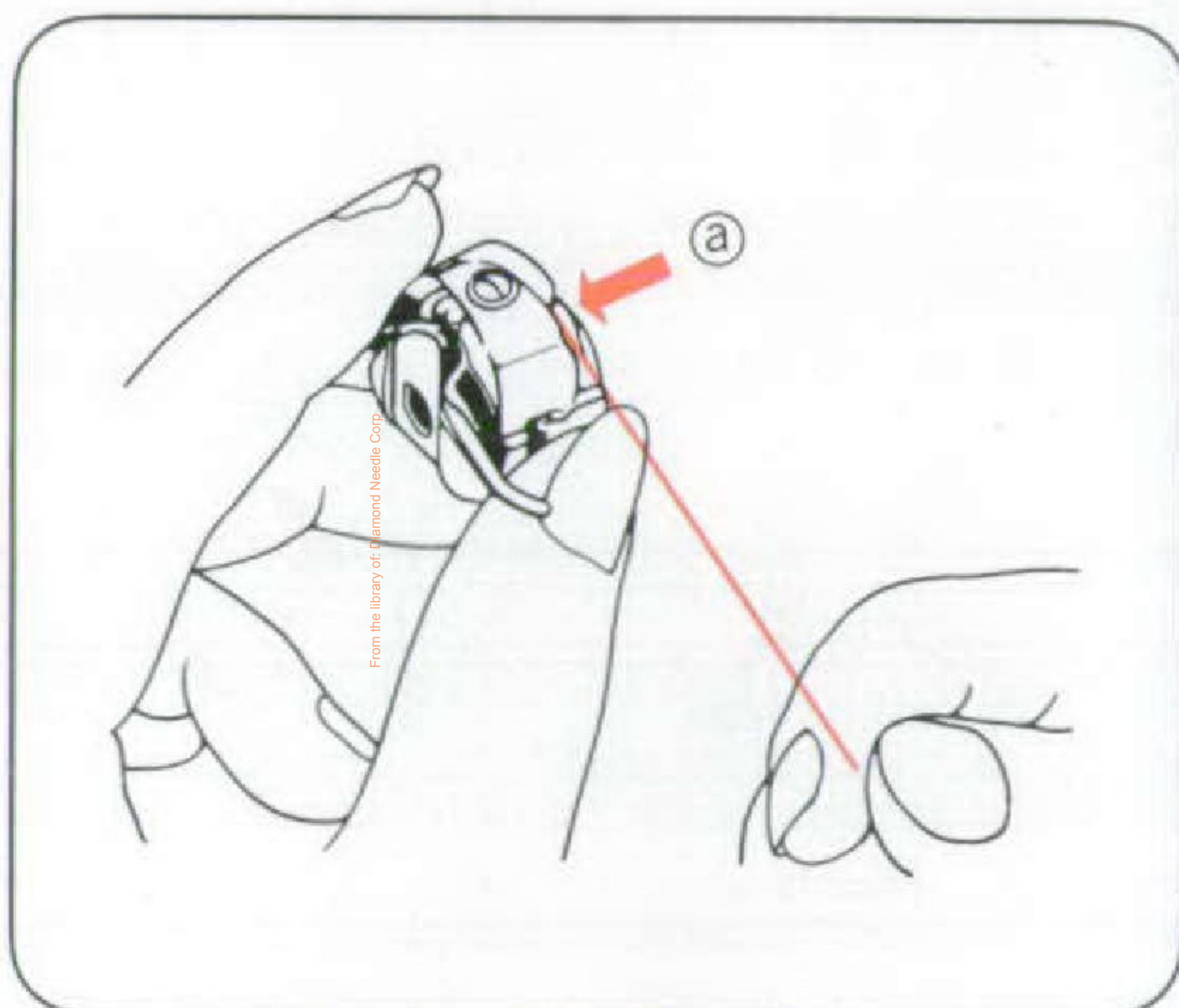
From the library of Diamond Needle Corp

Inserting Bobbin

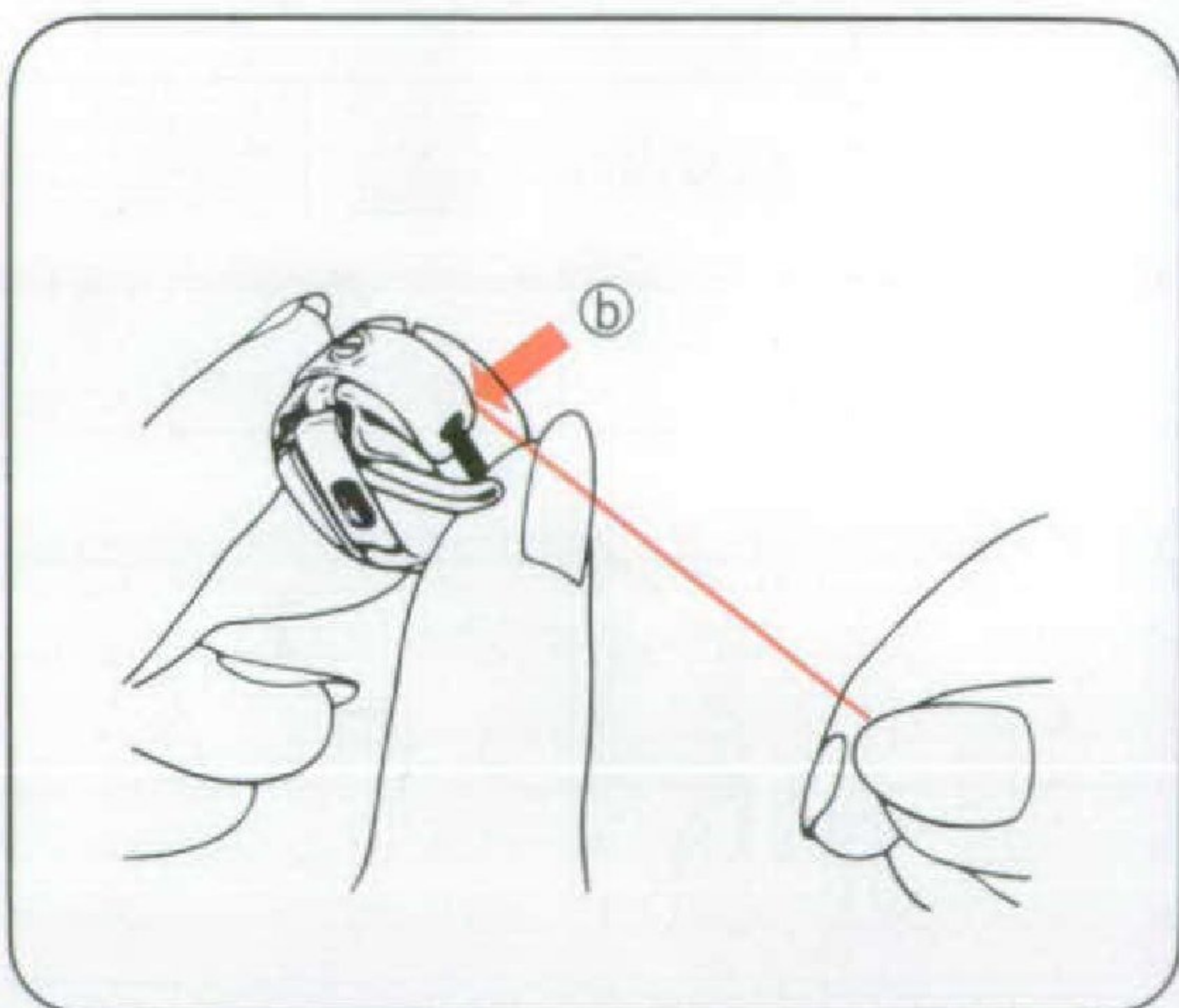
Place bobbin in its case with thread running in direction of arrow.

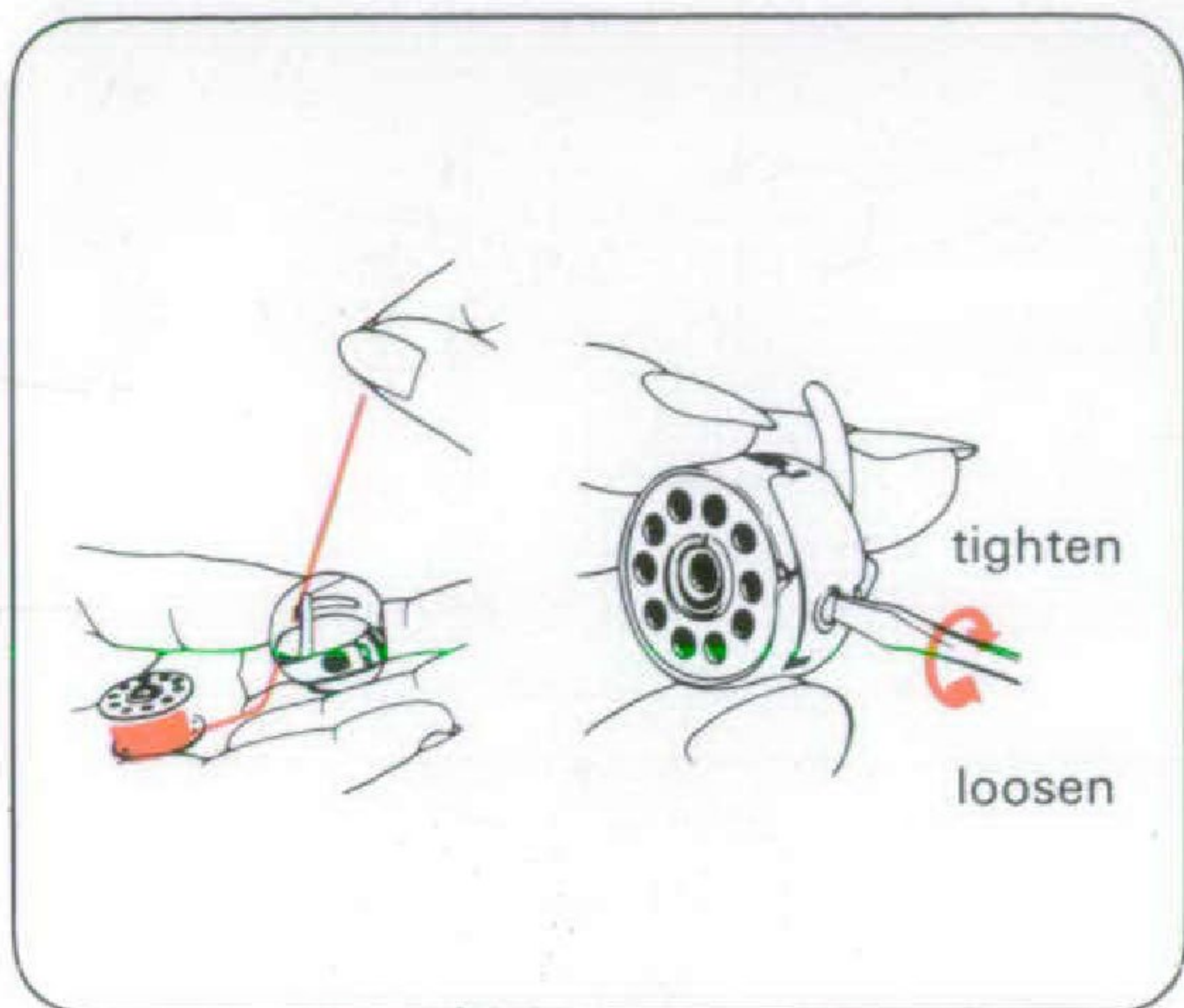


Guide thread into slot (a) of bobbin case.



Pulling thread to left, bring it under tension spring then to delivery eye (b).



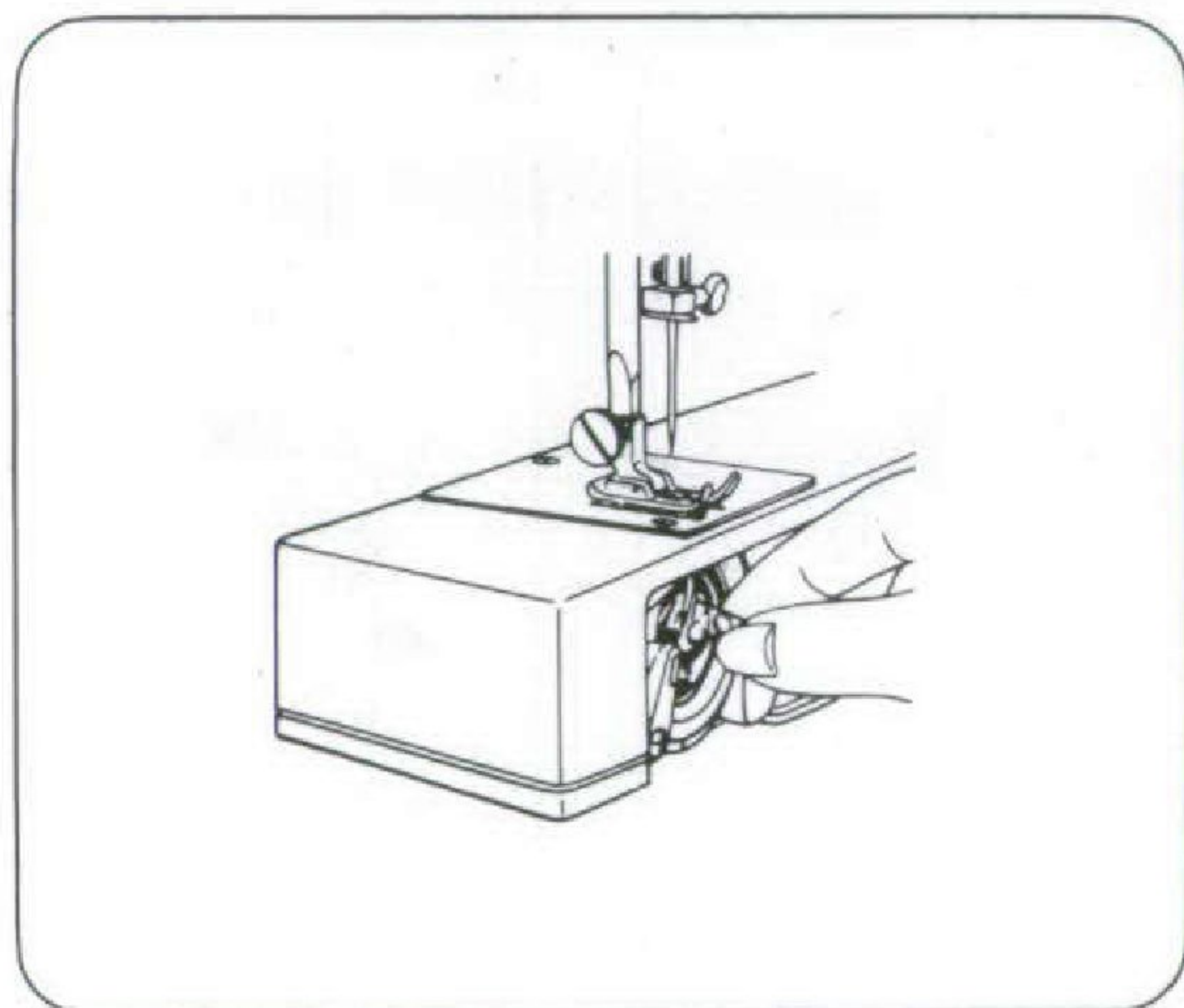


Adjusting Lower Tension

To test bobbin tension, hang and shake bobbin case as shown.

At proper tension bobbin case will gradually drop a small amount.

To adjust tension, turn adjusting screw with small screwdriver.

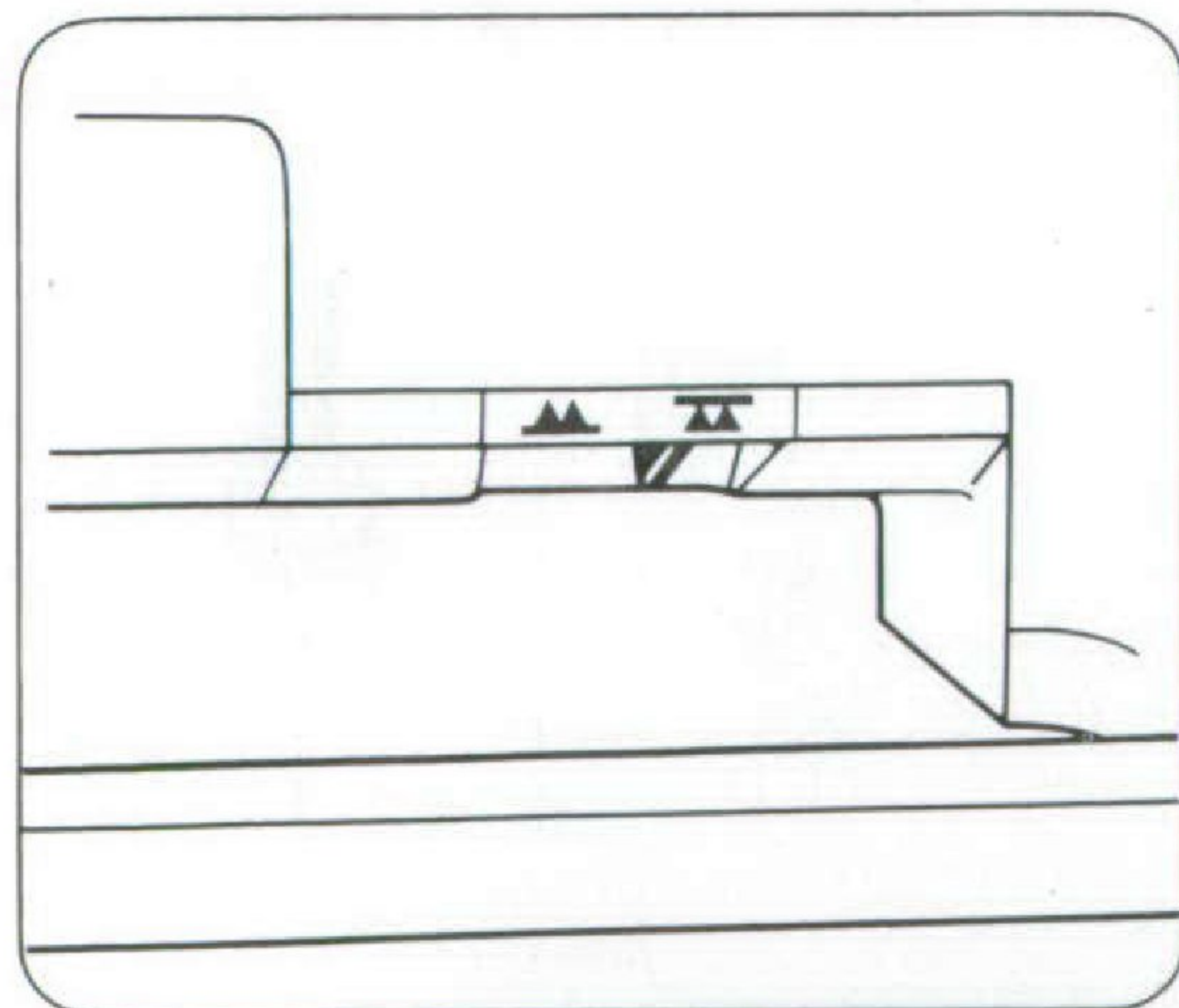


Raise needle in the highest position.


Leave end of thread of about 10 cm (4'') from bobbin case.


Take hold of latch and push bobbin case into shuttle

Release latch when bobbin case is fully inserted.



DROP FEED LEVER

The lever is in the right side of shuttle cover. For normal sewing, move the lever to  position.

To lower feed dog, move the lever to  position.

This position is used for button sewing, darning and embroidery.

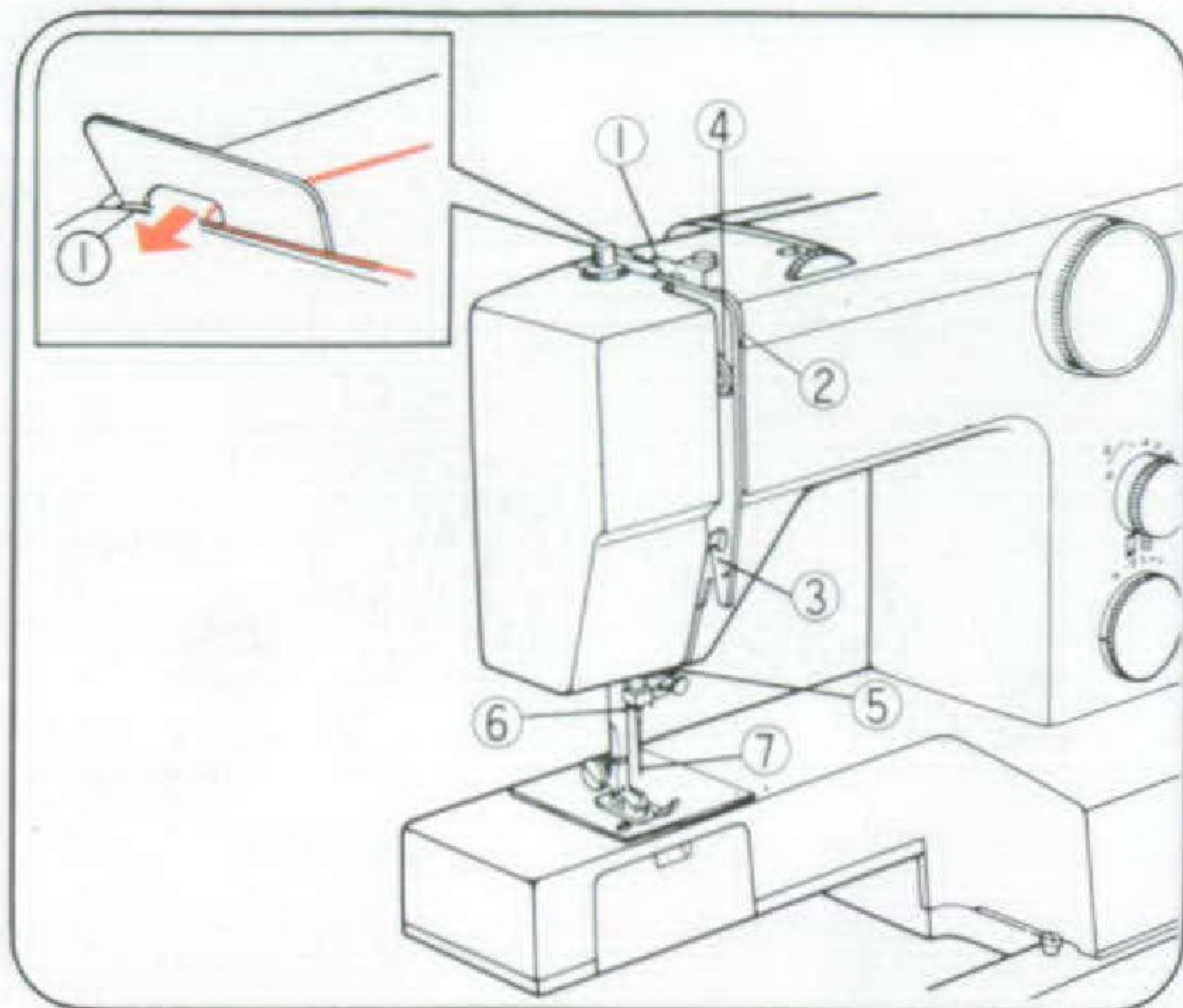
Threading Upper Thread

Raise presser foot lifter.

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

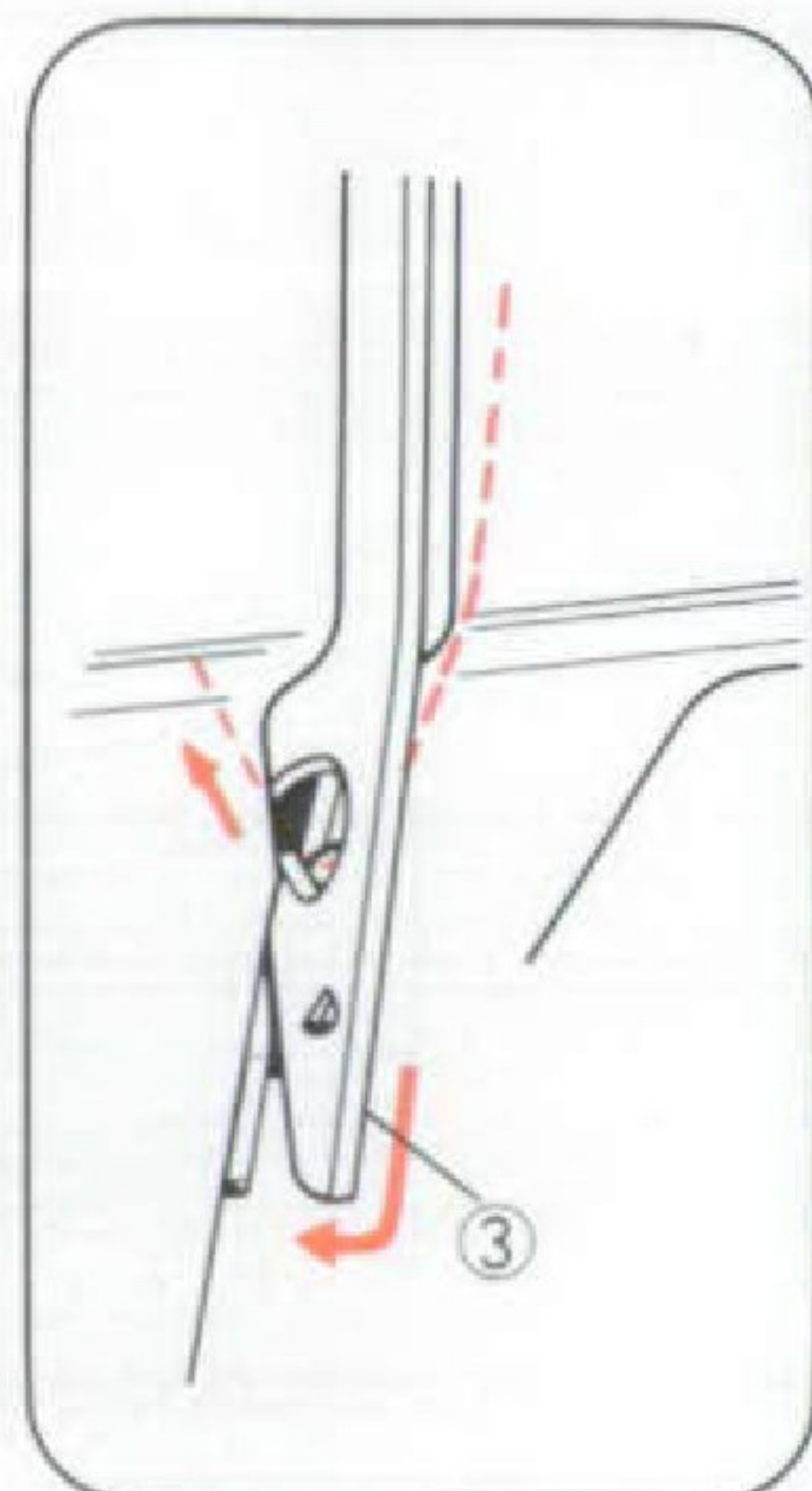
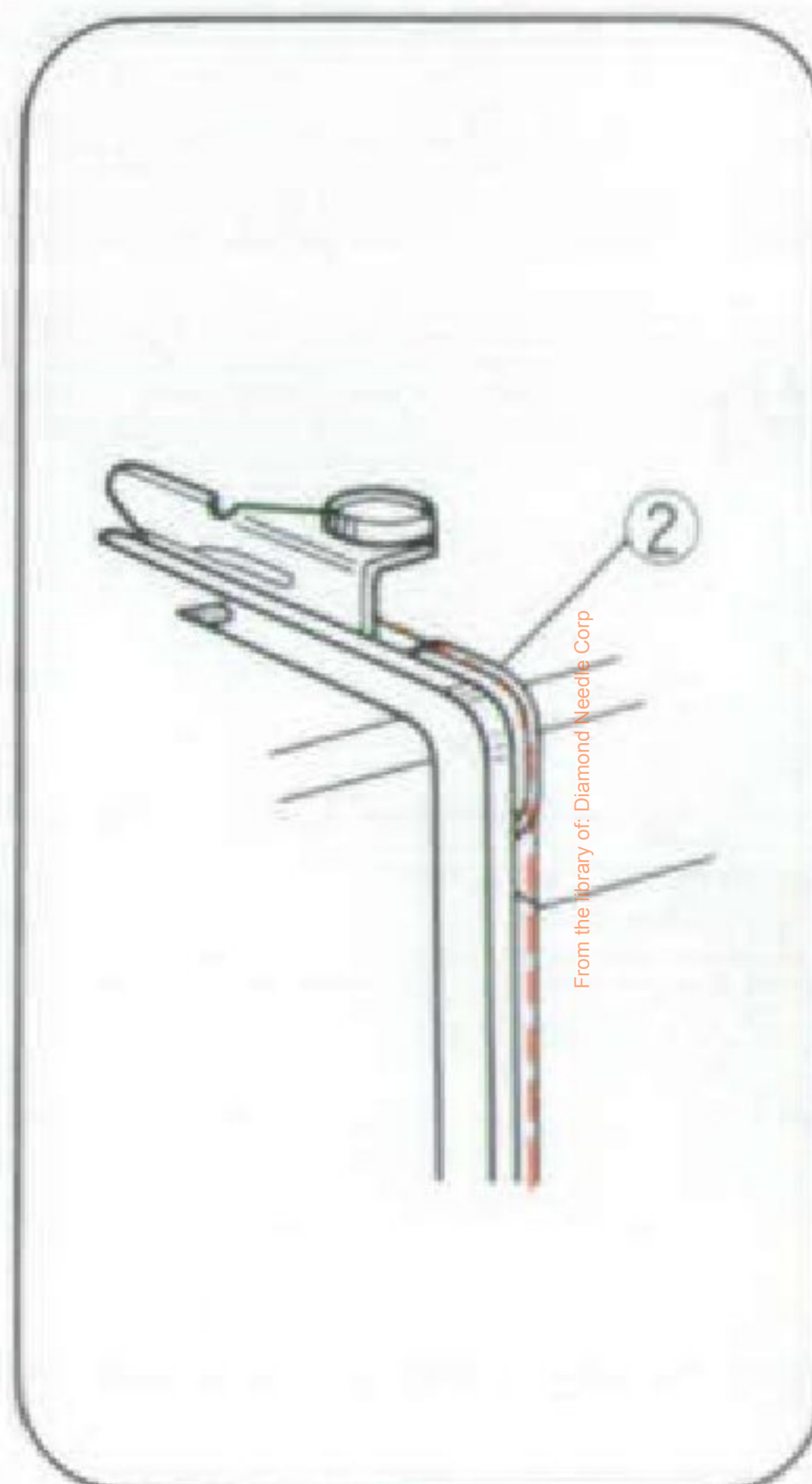
Thread following numbers ①-⑦.

Pass thread through guide ①.



Lead thread either side of tension disc ②.

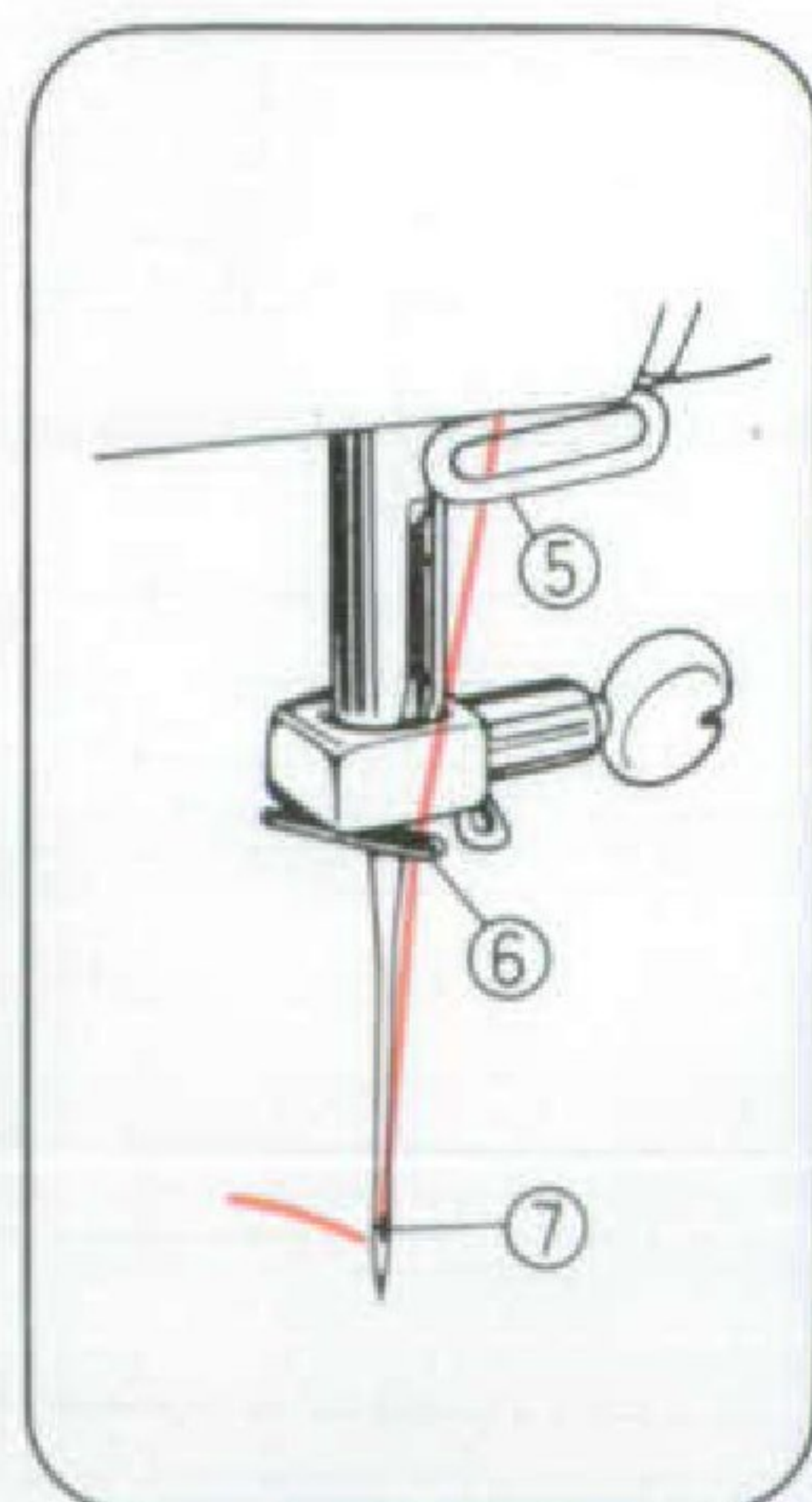
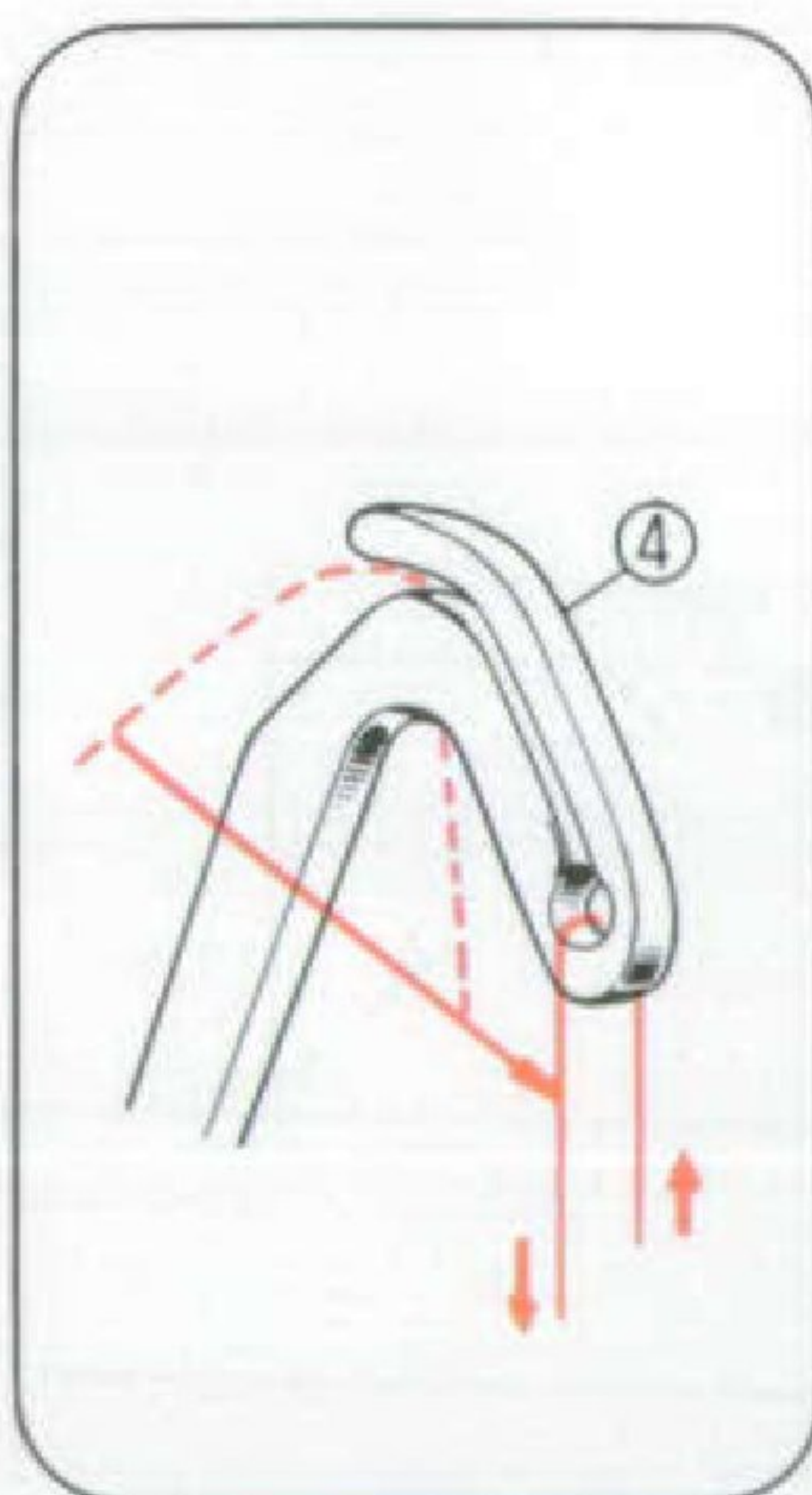
Hook it to guide ③ from down to upwards.

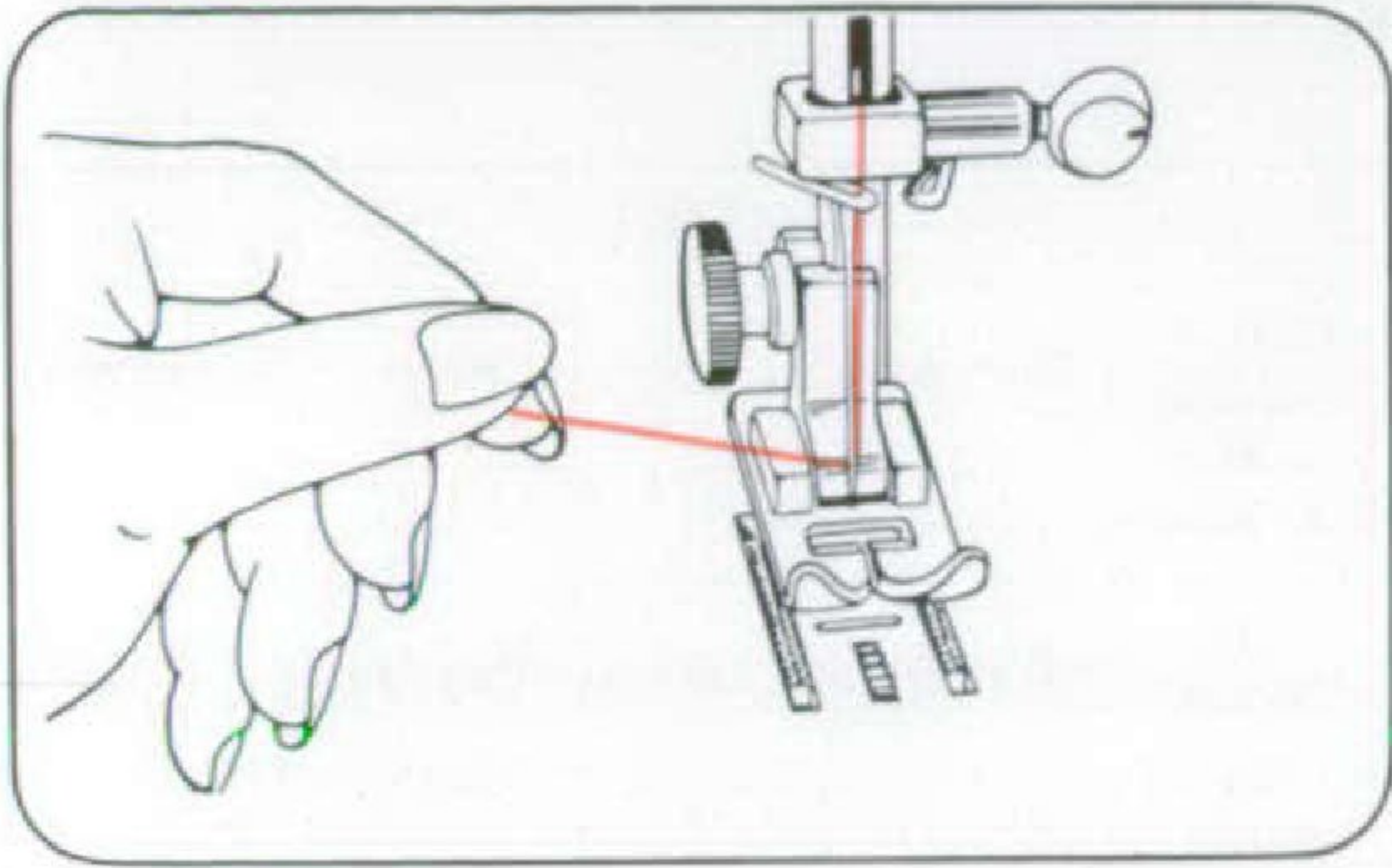


Thread take-up lever ④.

Pass thread to guide ⑤ from right to left, and guide ⑥ (left one) then needle eye ⑦.

Leave end of thread of about 15 cm (6'').

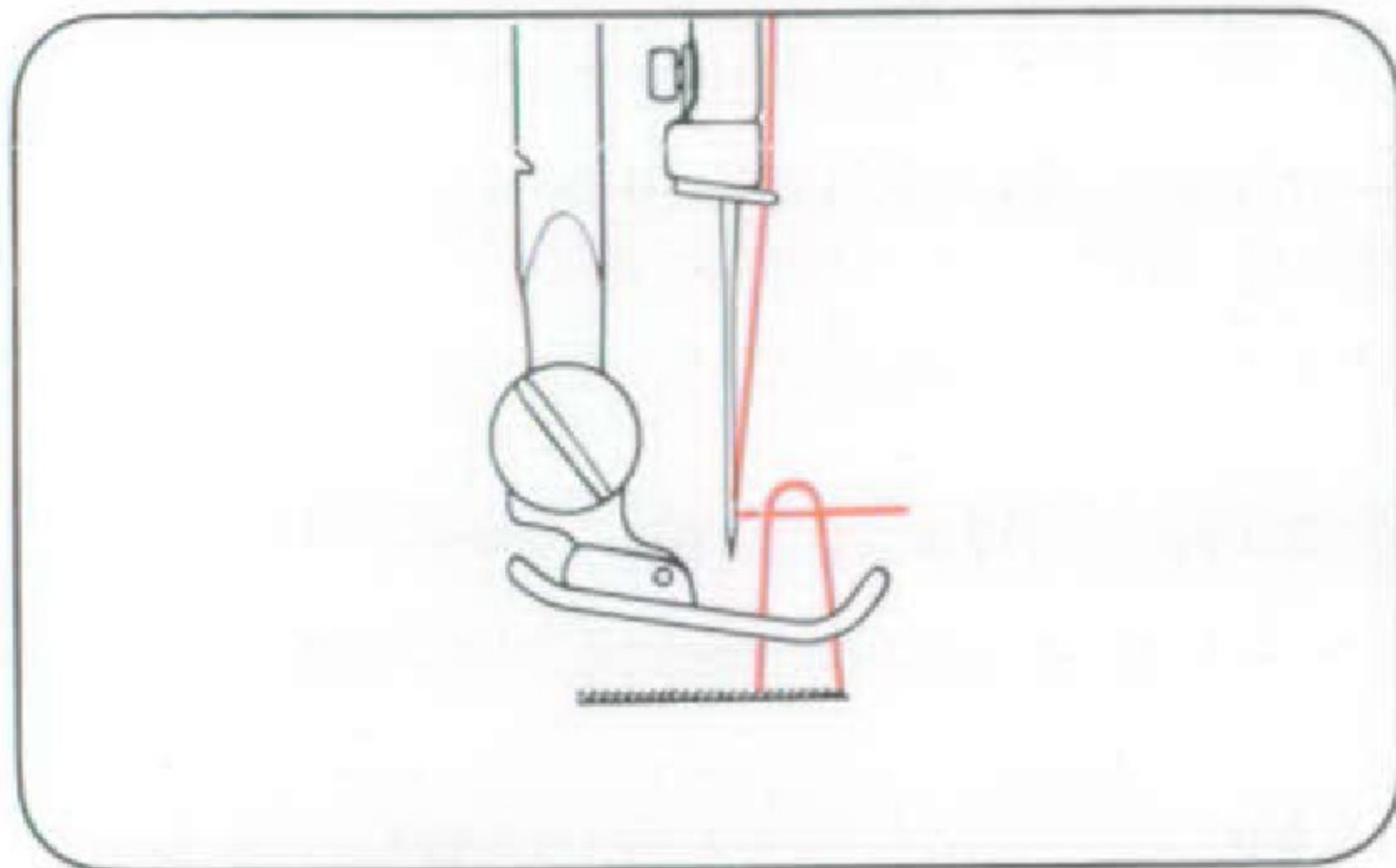




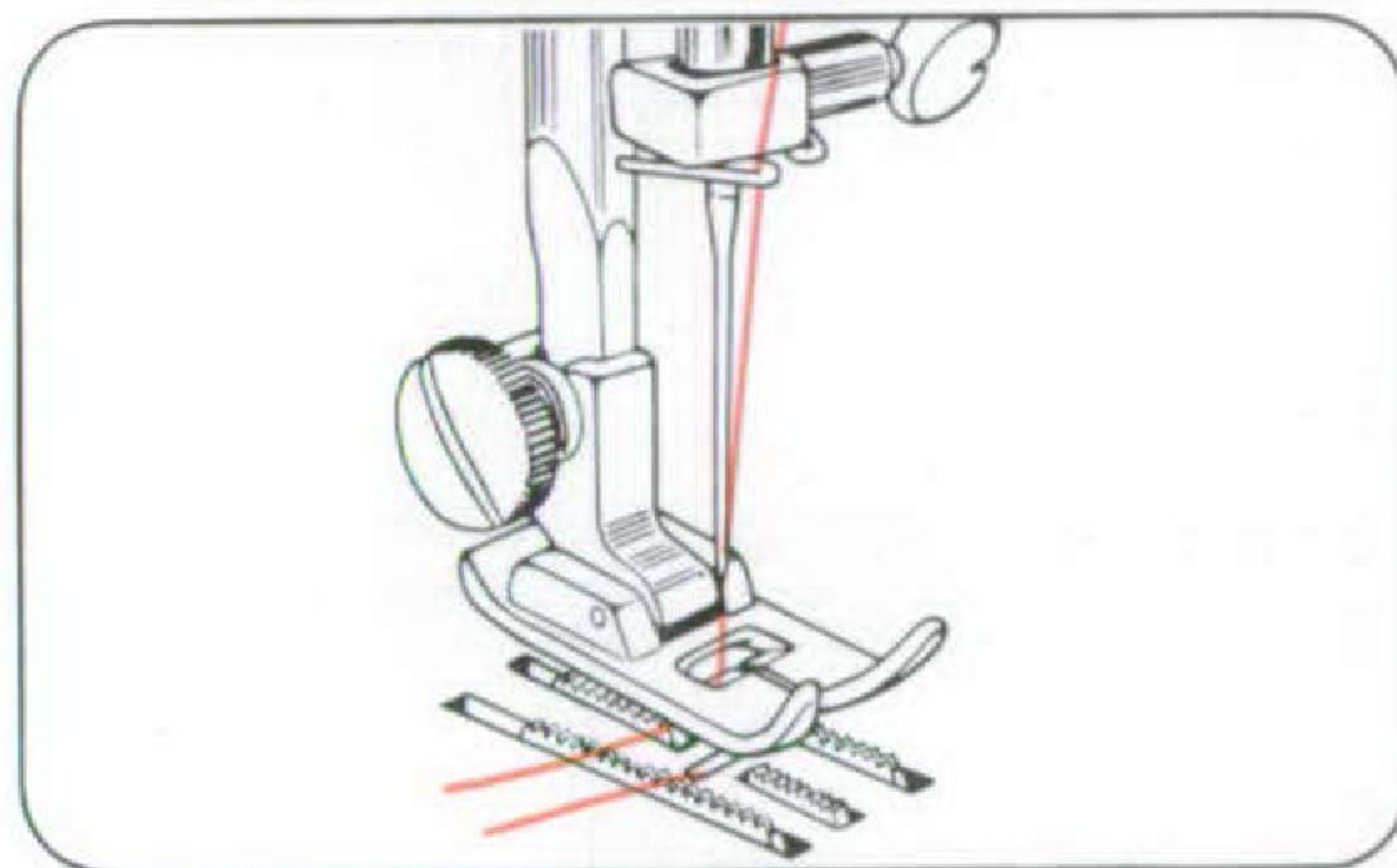
Drawing Up Lower Thread

Hold end of upper thread with left hand.

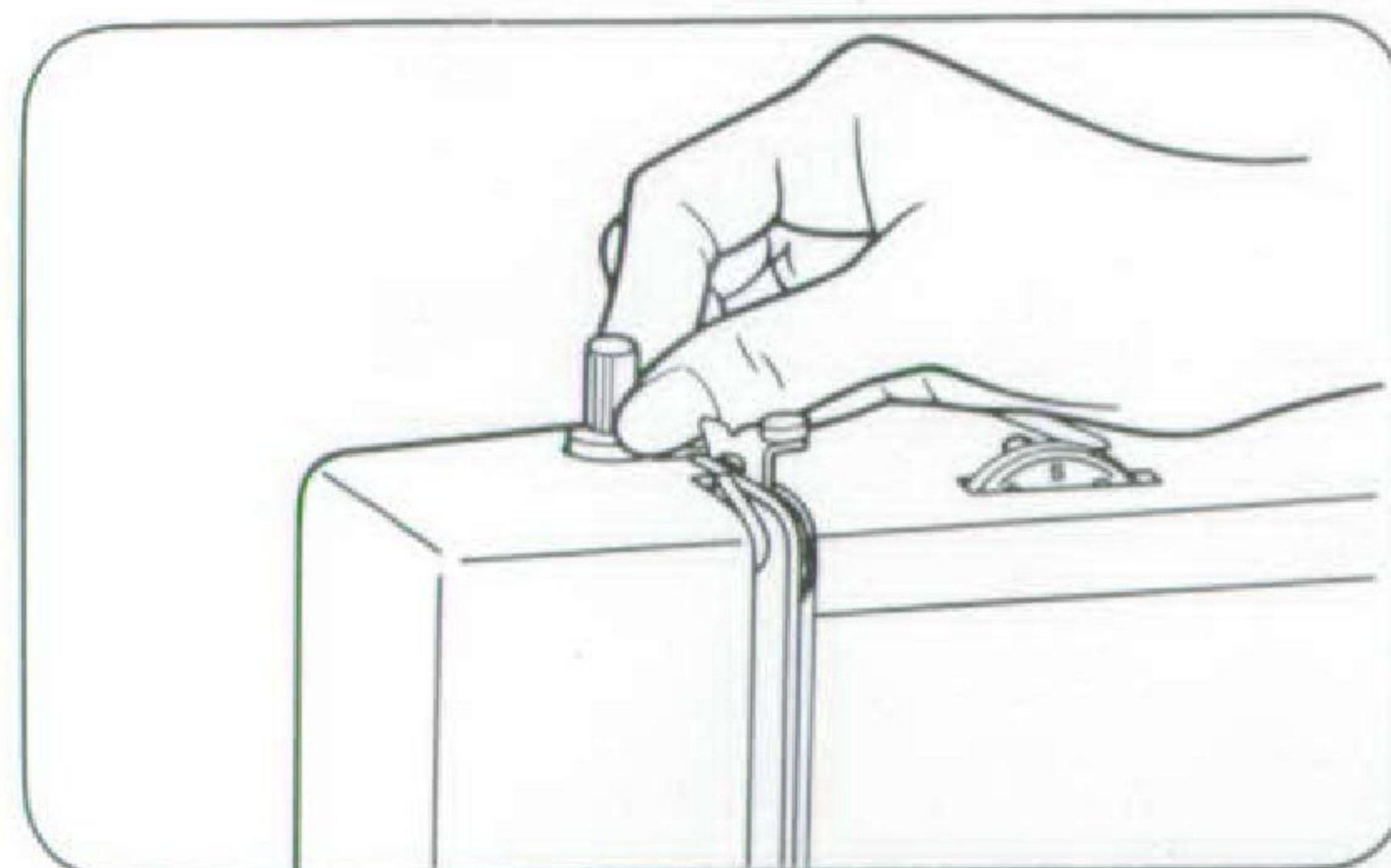
Turn handwheel slowly towards you until needle moves down and up again.



Pull upper thread slowly and lower thread will be brought up in a loop.



Pull out both threads to about 15 cm (6") and place them together under presser foot on left.



Foot Pressure

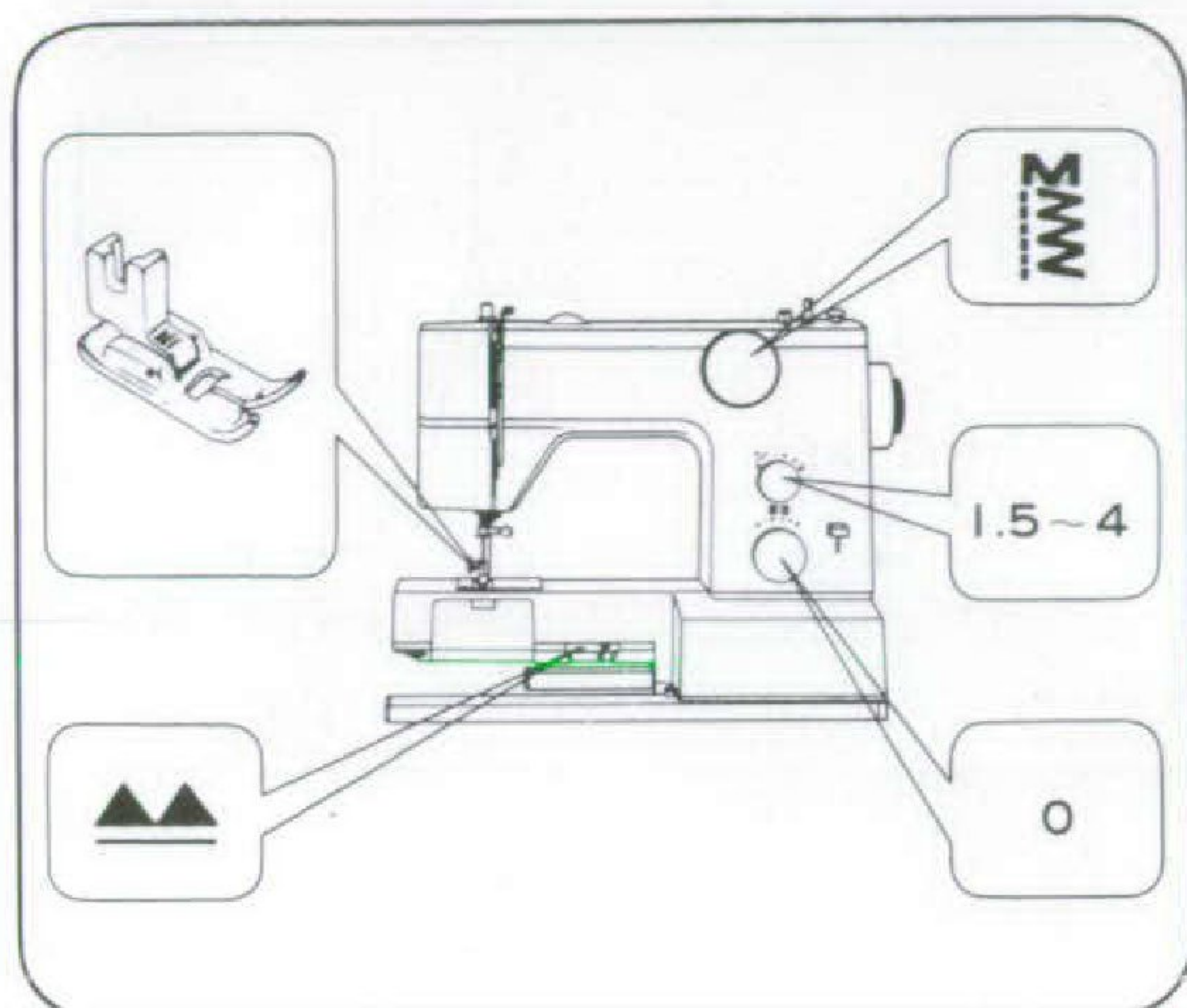
Push down the outer ring of the pressure regulator. This will release the pressure on the presser foot. To increase the pressure, push down inner pin until suitable pressure is obtained.

Insufficient pressure may cause poor feeding of the fabric, skipped stitches, or difficulty in guiding the fabric. If feed dogs or presser foot marks appear on the fabric, reduce the pressure.

When sewing multiple thickness or heavy fabric, reduce the pressure. Increase pressure when sewing lighter weight fabrics.

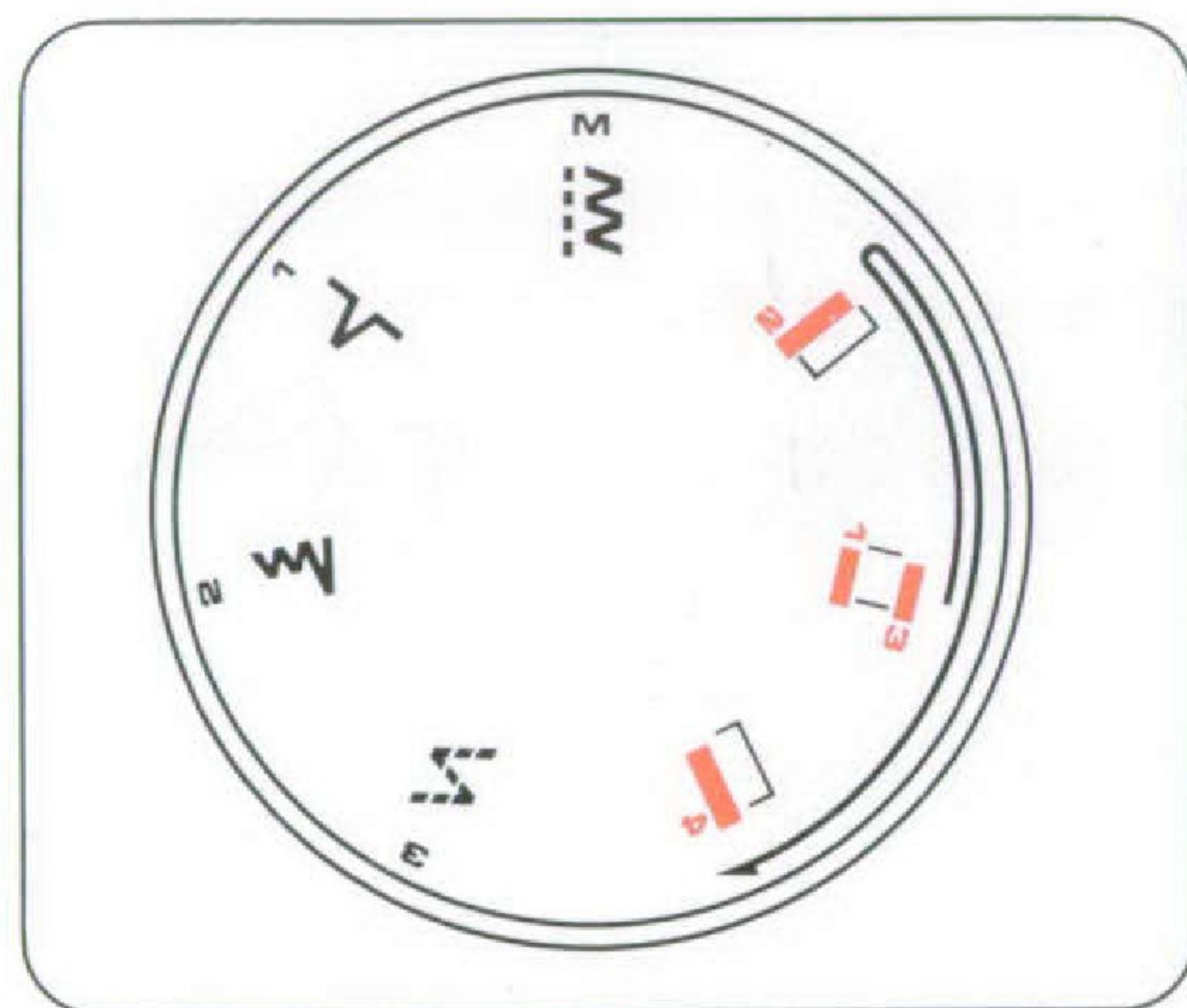
Fabric, thread and needle table

FABRIC	THREAD			NEEDLE			REMARKS
	European Cotton	Mercerized Cotton	Cotton Covered Polyester, Silk, Nylon	European 705	U.S. Size 15x1	Point Style	
VERY SHEER; Lace, Voile, Chiffon, Net	70	60	Silk Nylon	65-70	9	Regular	Loosen up- per tension one or two points
SHEER; Blouse Crepe, Lawn, Organdy, Taffeta	50-70	60	Silk Nylon	65-70	9	"	
LIGHT-WEIGHT; Crepe, Wool, Brocade, Velvet	30	50	Silk	75-80	11	"	
MEDIUM; Wool, Silk, Linen, Velvetten, Cotton Faille, Terry cloth	30	50	Silk	80-90	11-14	"	
HEAVY; Denim, Duck, Sailcloth	30	Heavy Duty	C.C.Poly.	100	16	"	
EXTRA HEAVY; Upholstery, Canvas, Awning	30	Heavy Duty	C.C.Poly.	120	19	"	
[KNITS]							
LIGHT-WEIGHT; Tricot Power net	50-70	60	Silk Nylon	70	9	Light Ball	
MEDIUM-WEIGHT; Jersey, Double Knit, Power Net	30	50	Silk Nylon C.C.Poly.	70-80	9-10	Light to Medium Ball	
HEAVY-WEIGHT; Double knit, Power Net	30	50	Silk Nylon C.C.Poly.	80-90	11-14	Medium to Heavy Ball	
FAKE-FURS, VELOURS	30	Heavy Duty	C.C.Poly.	90-100	14-16	Ball or Sharp	
[LEATHER]							
VINYLS FILMS	30	50	C.C.Poly.	90	14	Wedge	
LIGHT-TO-MEDIUM- WEIGHT	30	50	C.C.Poly.	90-100	14-16	Wedge	
HEAVY LEATHER	30	Heavy Duty	C.C.Poly.	100-110	16-18	Wedge	
[DECORATIVE TOUCHES]							
TOP STITCHING	Silk twist			100-110	16-18	Regular	
MACHINE EMBROIDERY	Size 50-70			65-80	9-11	Regular	



4. STRAIGHT SEWING

Set machine as shown.

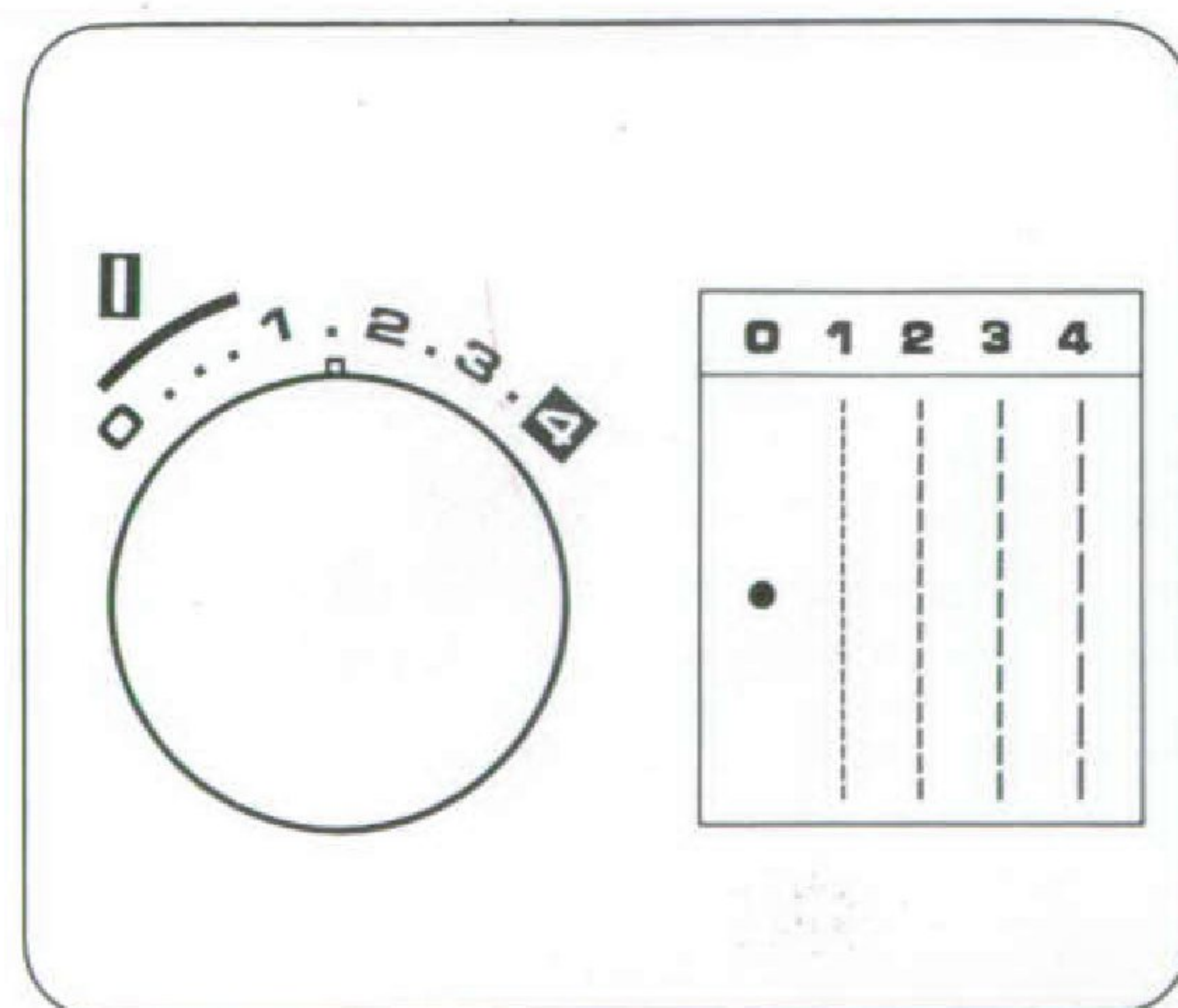


Pattern Selection Dial

Turn dial to choose pattern.
Dial can be turned either to right or to left.

- M Straight & Zigzag Stitch
- 1 Blind Hem Stitch
- 2 Elastic Blind Hem Stitch
- 3 Multiple Zigzag
- 4 Buttonhole

* Always make sure needle is in the highest position when operating dial.



Stitch length dial

For a longer stitch, turn dial in clockwise. For a shorter stitch, turn it in counter-clockwise.

For normal sewing it is set between 2 and 3.

Starting to Sew

Place fabric under foot about 1 cm (0.4'') inside the edge.

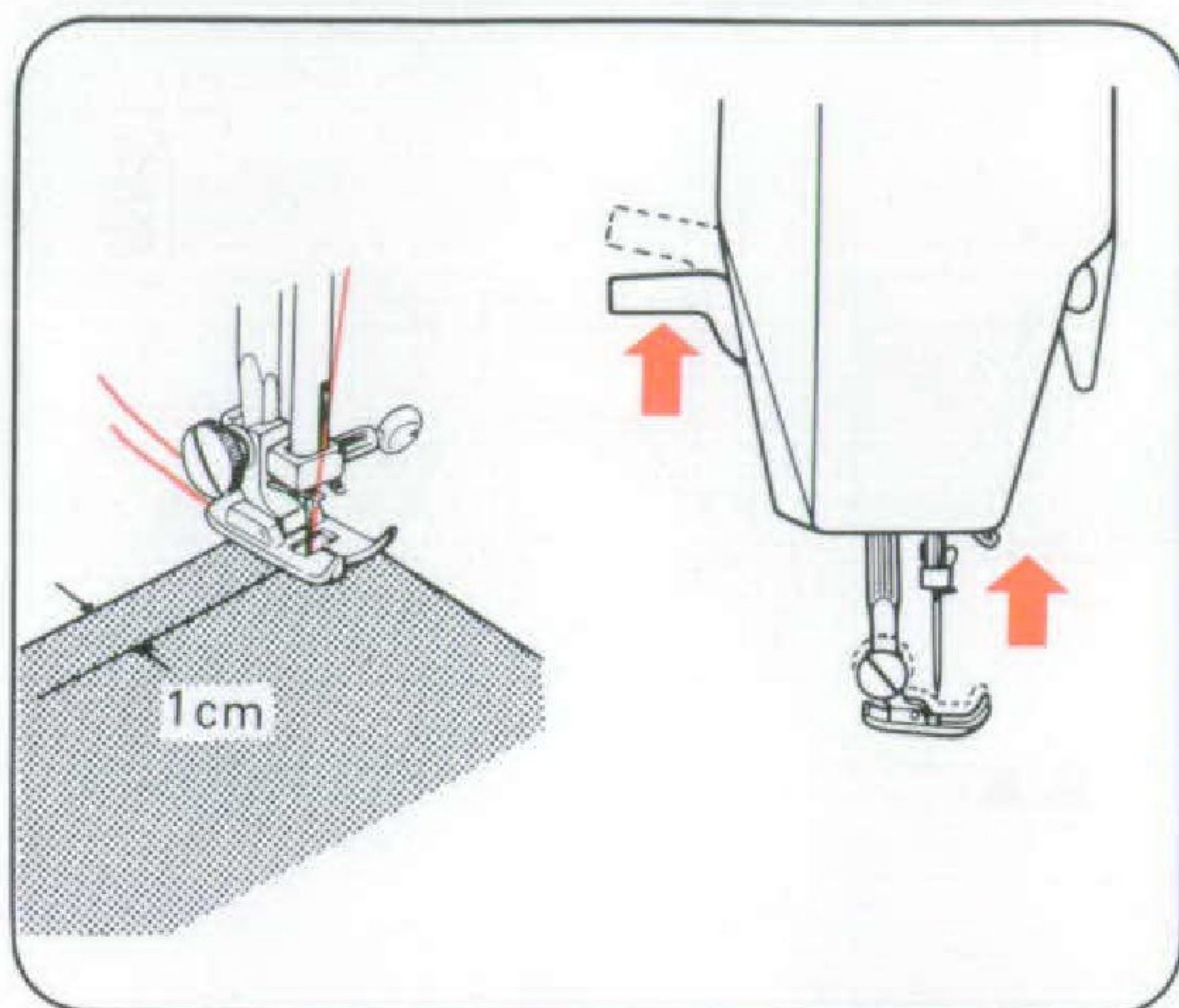
Lower presser foot lifter.

Important:

Hold on both threads during the sewing of the first 3~4 stitches of the seam.

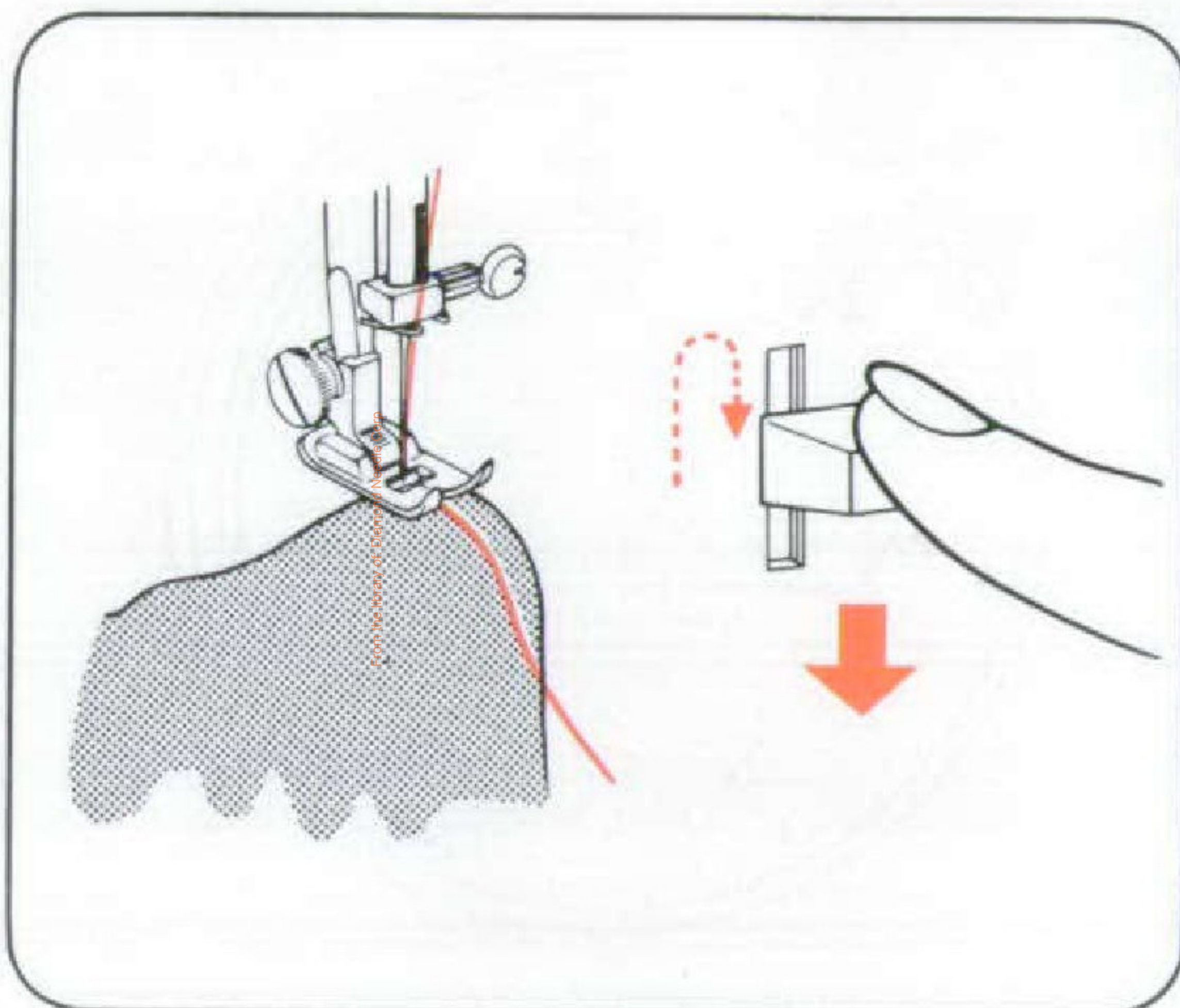
Double Presser Foot Lifter

In order to obtain wider gap when using very thick materials, firmly push presser foot lifter up as far as it will go.



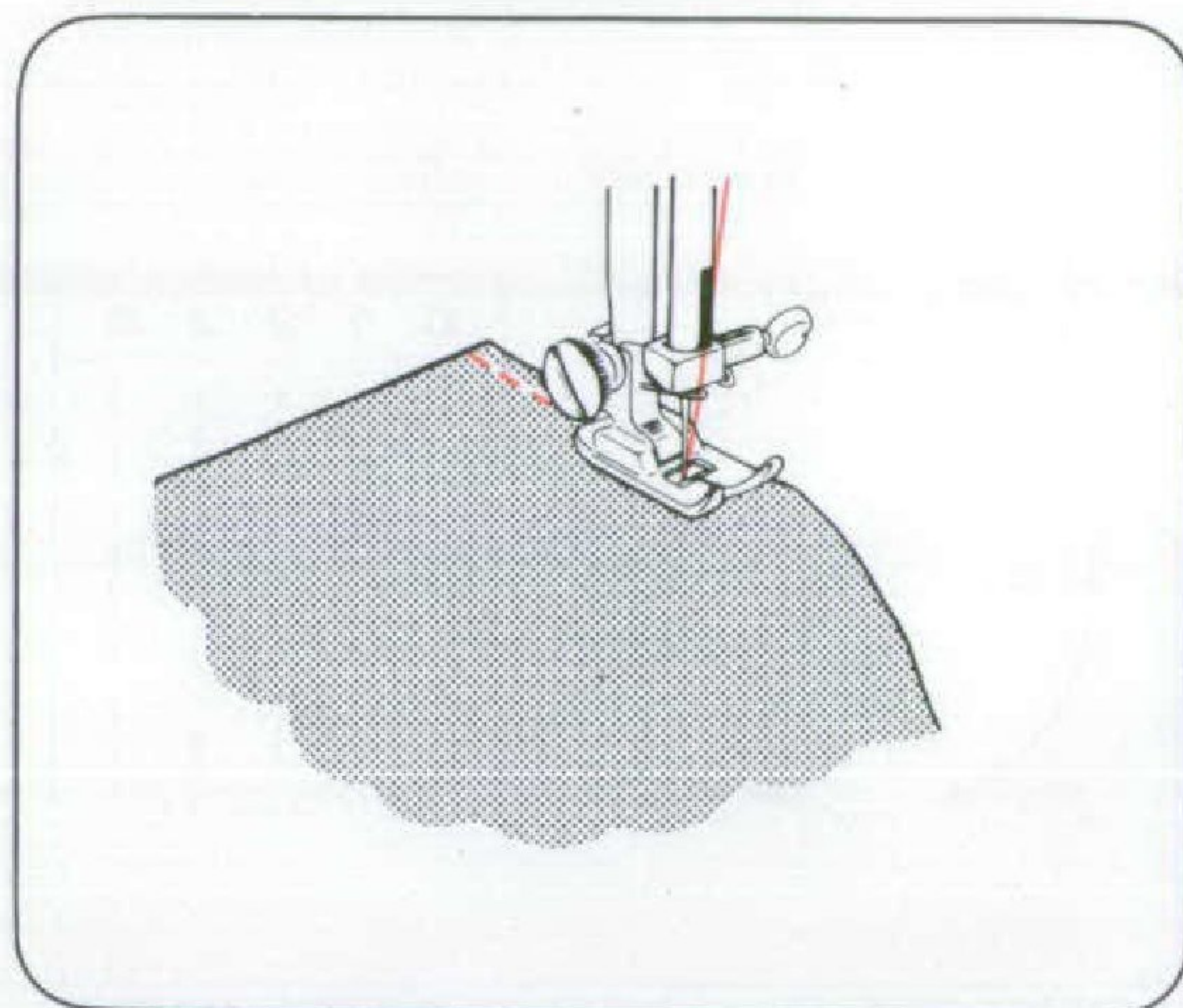
Reverse Sewing

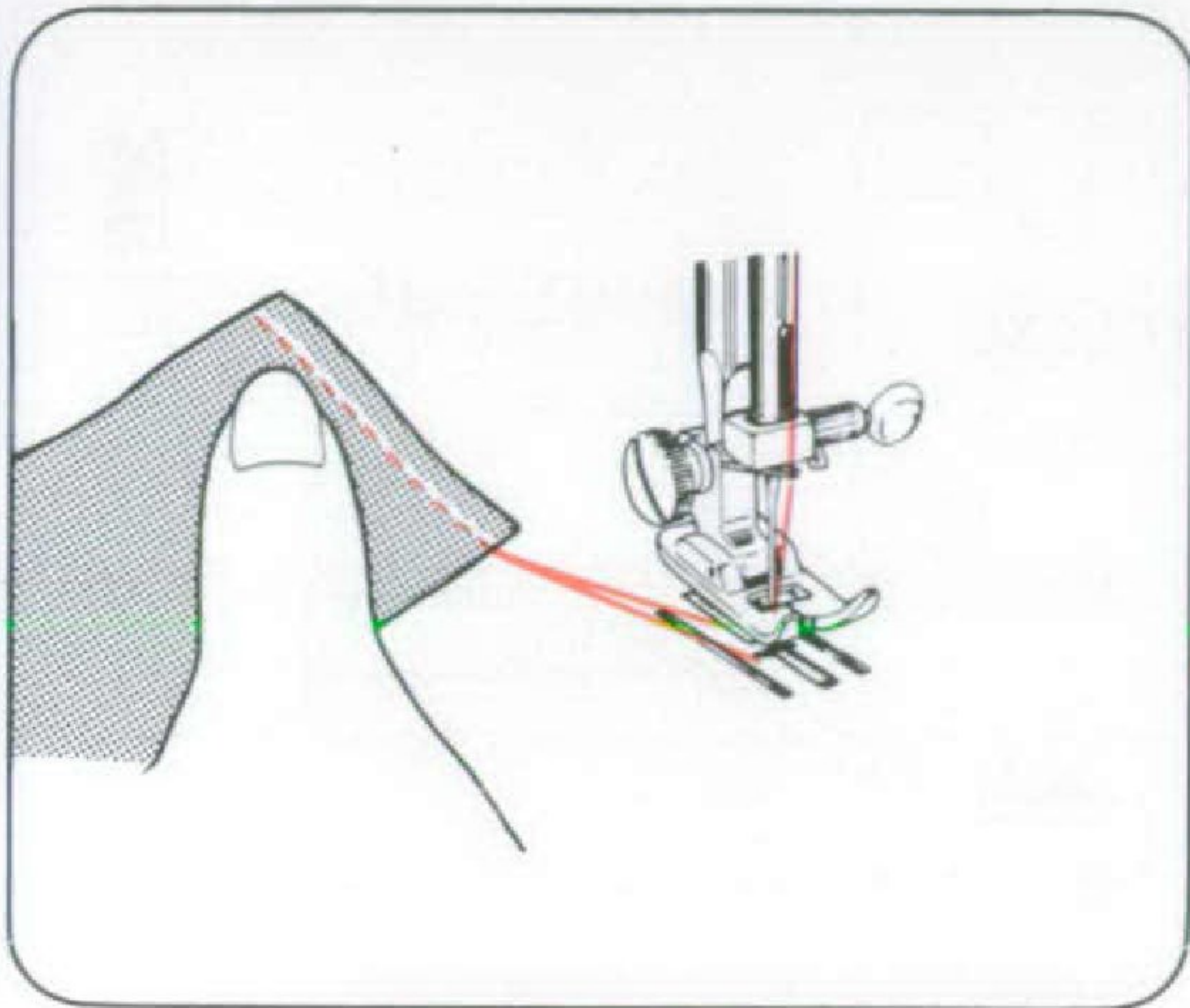
To reinforce seam, sew backwards to the edge of fabric by pushing down reverse sewing lever.



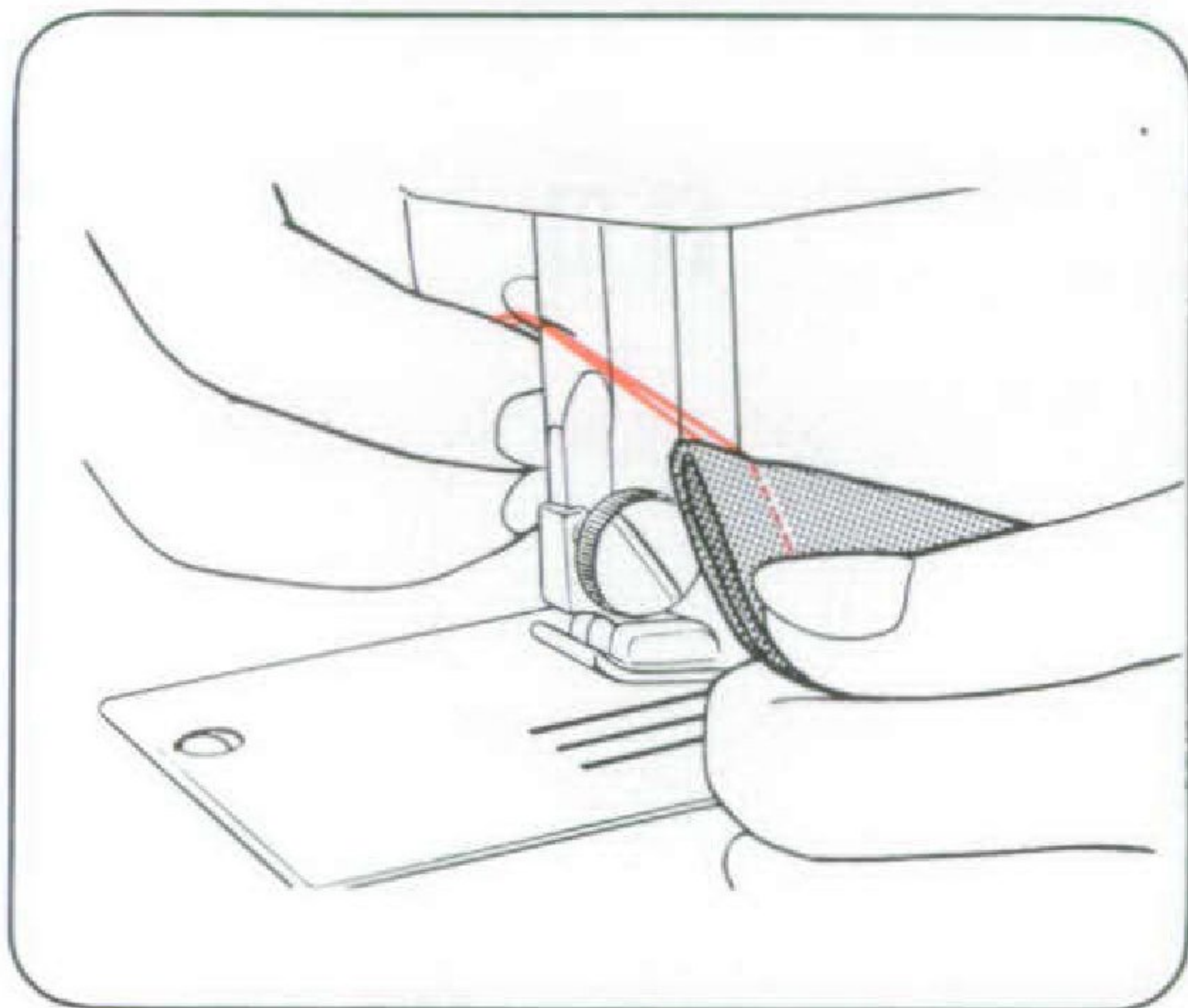
Release lever and commence forward sewing guiding fabric by hand as it is fed.

Never pull material.

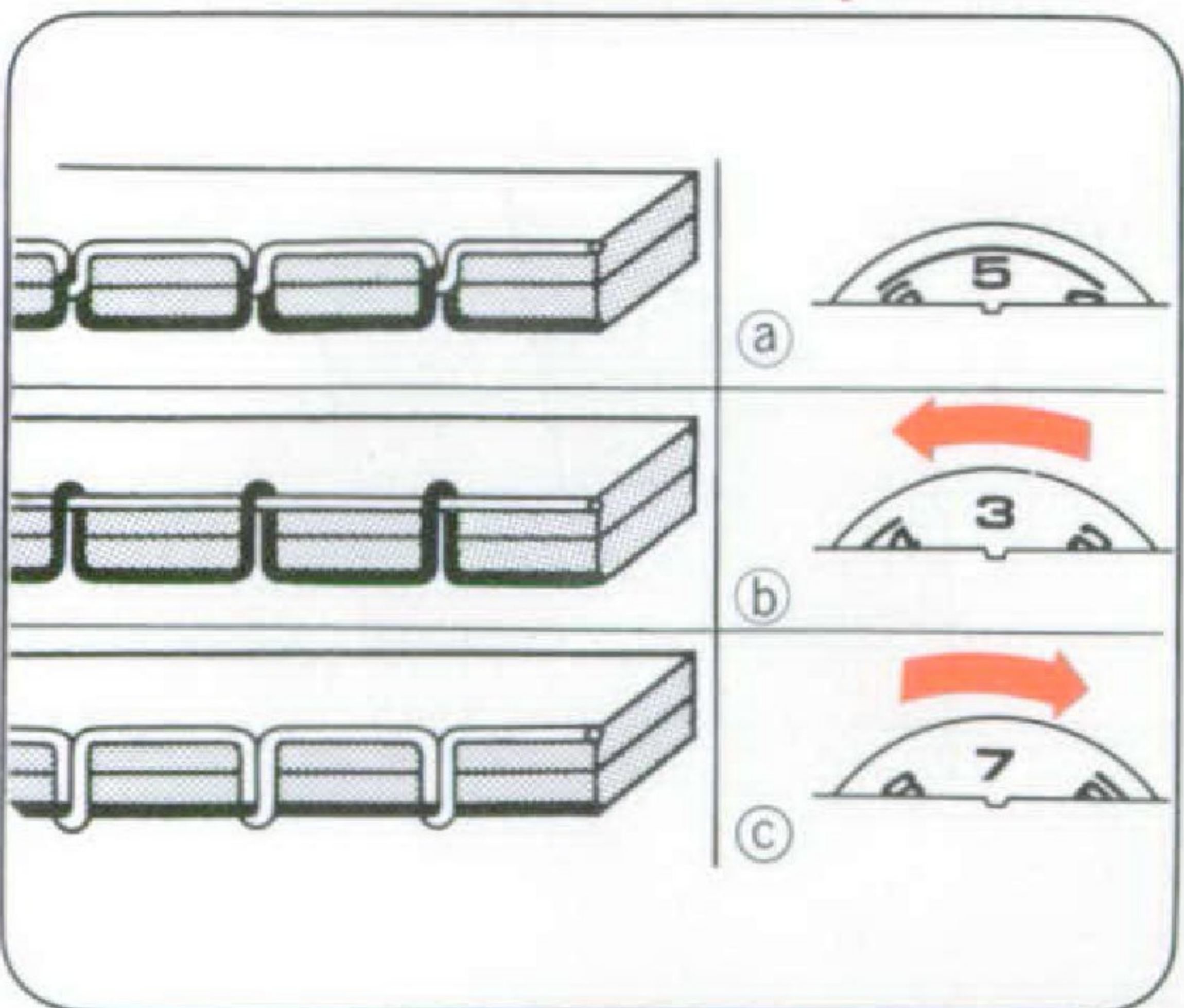




Sew reverse stitches for reinforcement at end of seam.
Draw fabric to left when sewing is finished.



Cut threads with thread cutter behind presser bar.



Adjusting Thread Tension

Test stitch performance on a scrap of material you are going to use.

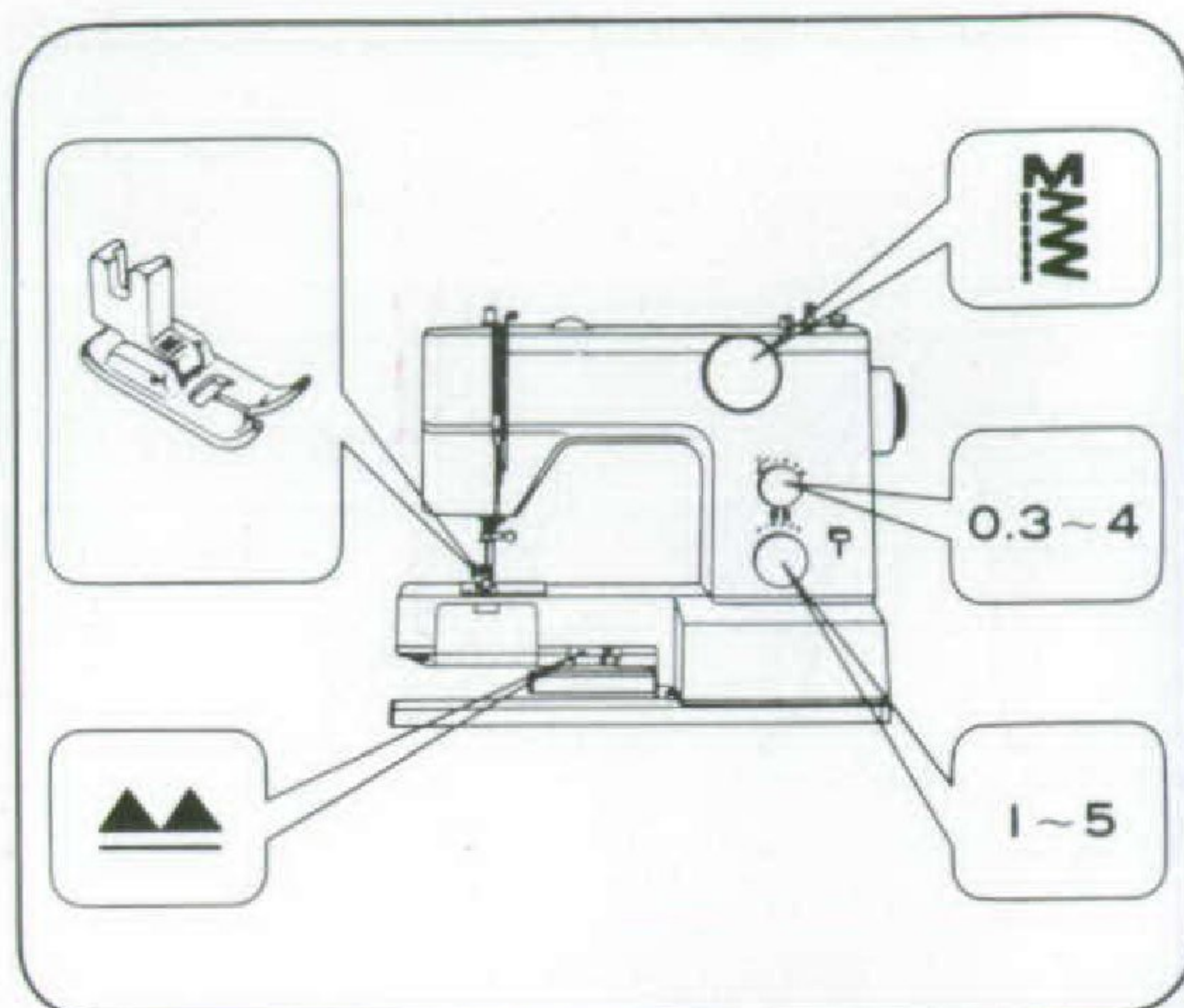
With correct tension (a), upper and lower threads tension is equal and strong enough to lock both threads in center.

If upper tension is too tight (loose), upper (lower) thread lies straight along upper (lower) surface of fabric (b). (c). Correct by turning tension dial.

5. ZIGZAG SEWING

Set machine as shown.

To prevent seam ends unravelling, set machine for straight stitch and sew in reverse at beginning and ending of seam.



Zigzag width control

Set control at required number. Larger the number, wider the stitch.

Set it at 0 for straight sewing.

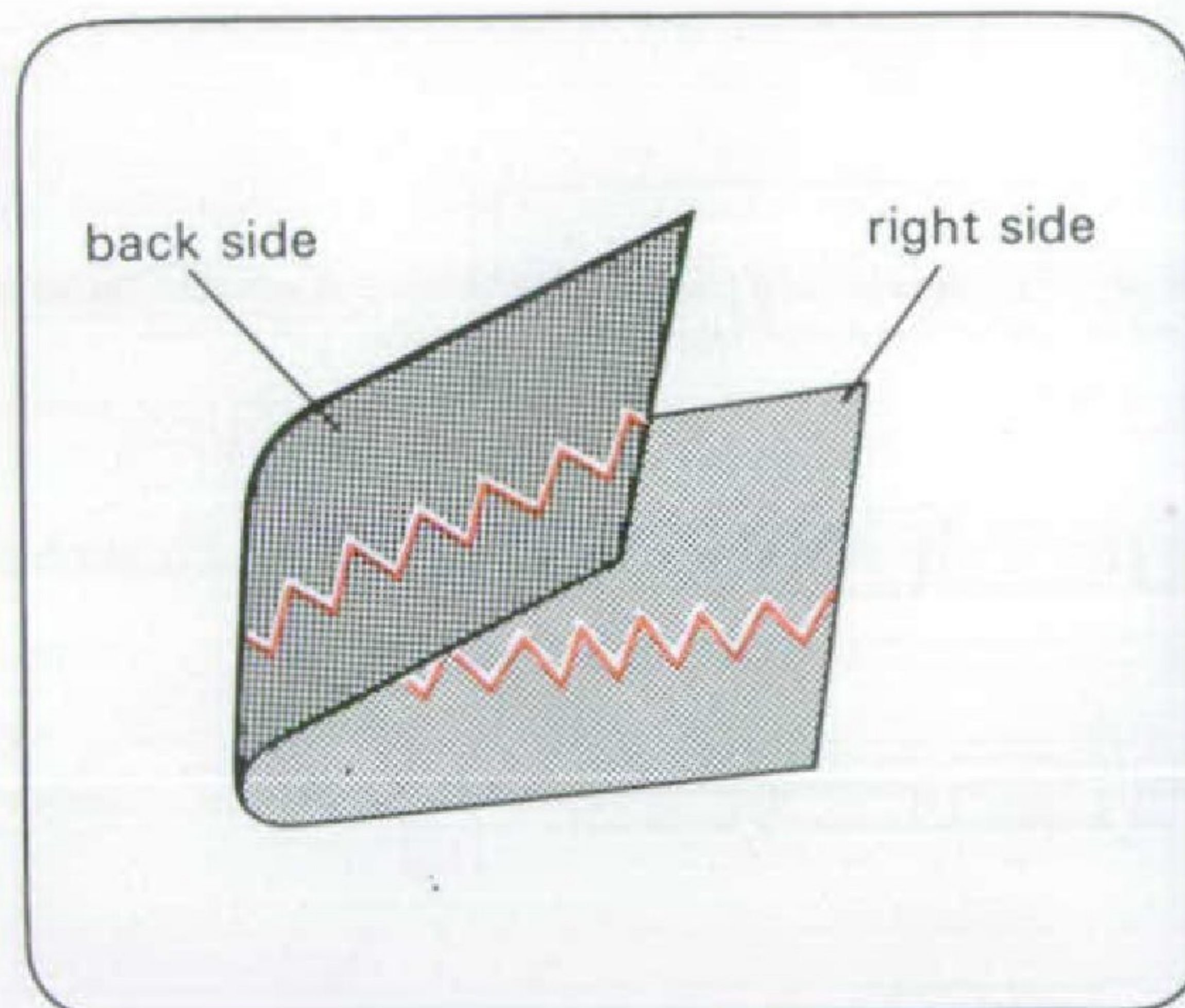
Make sure needle is in upper position when you set control.



Thread Tension for Zigzag Stitch

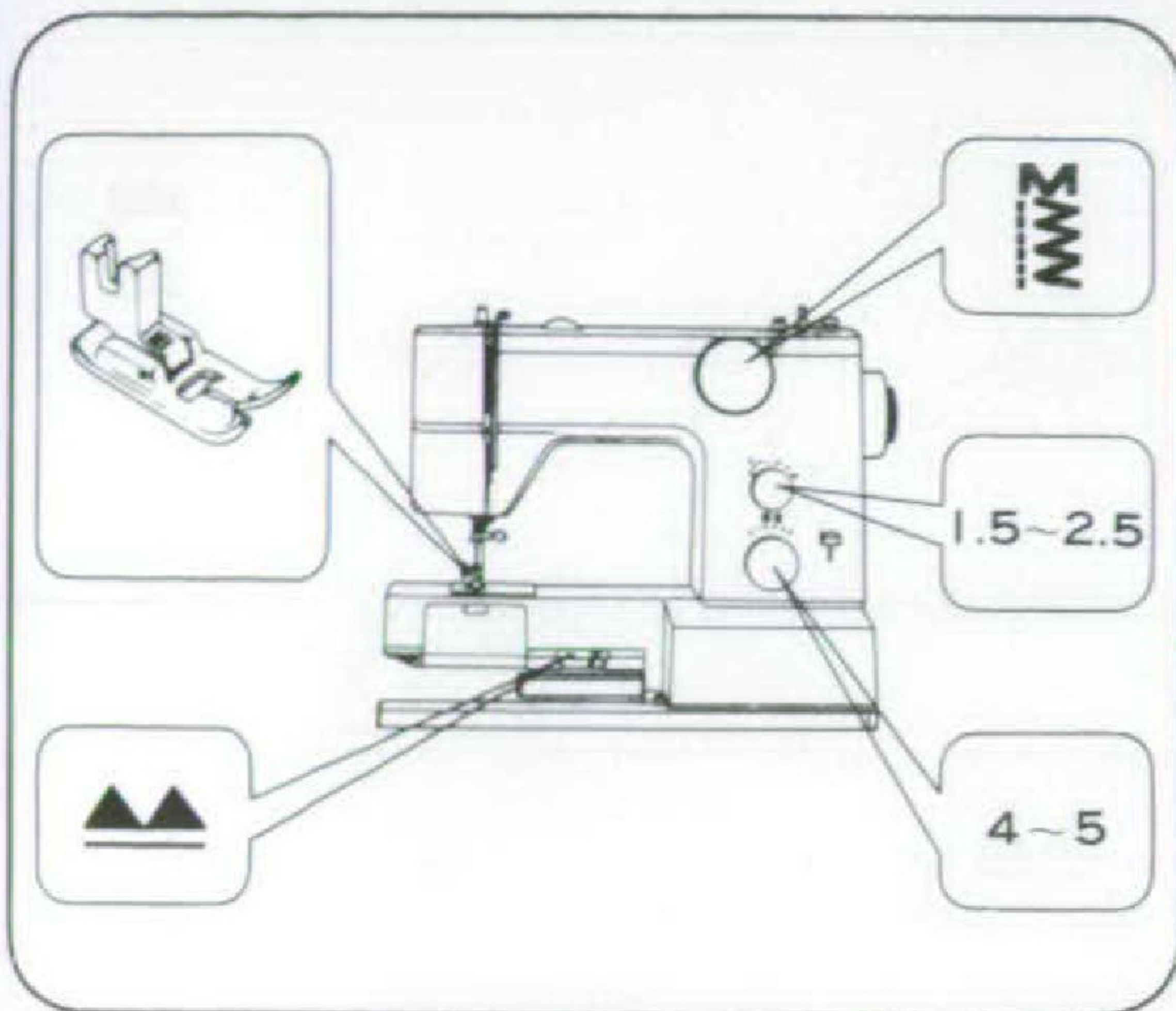
Better-looking zigzag stitching requires less upper tension than straight stitching.

Loosen upper tension slightly.

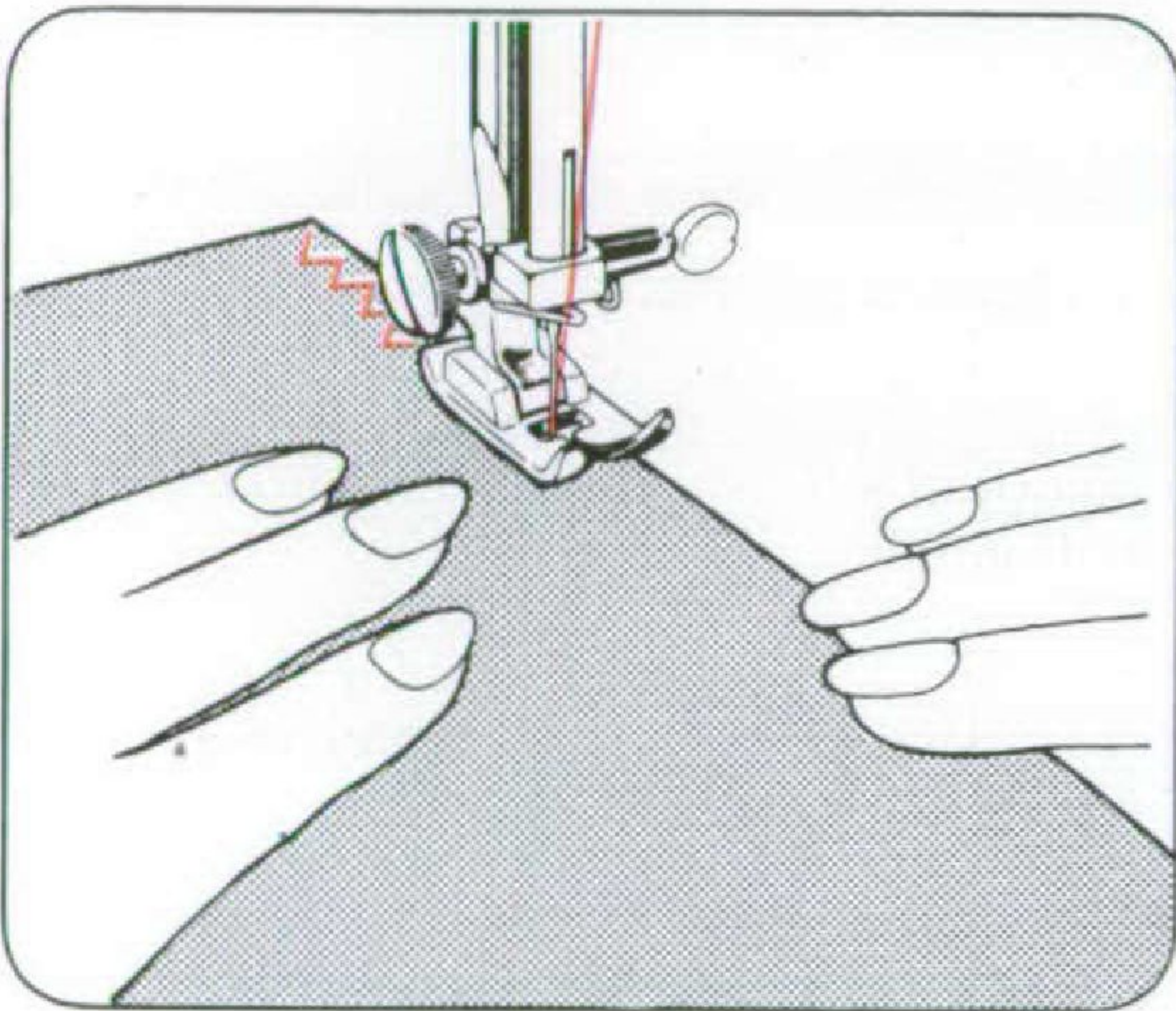


6. OVERCASTING

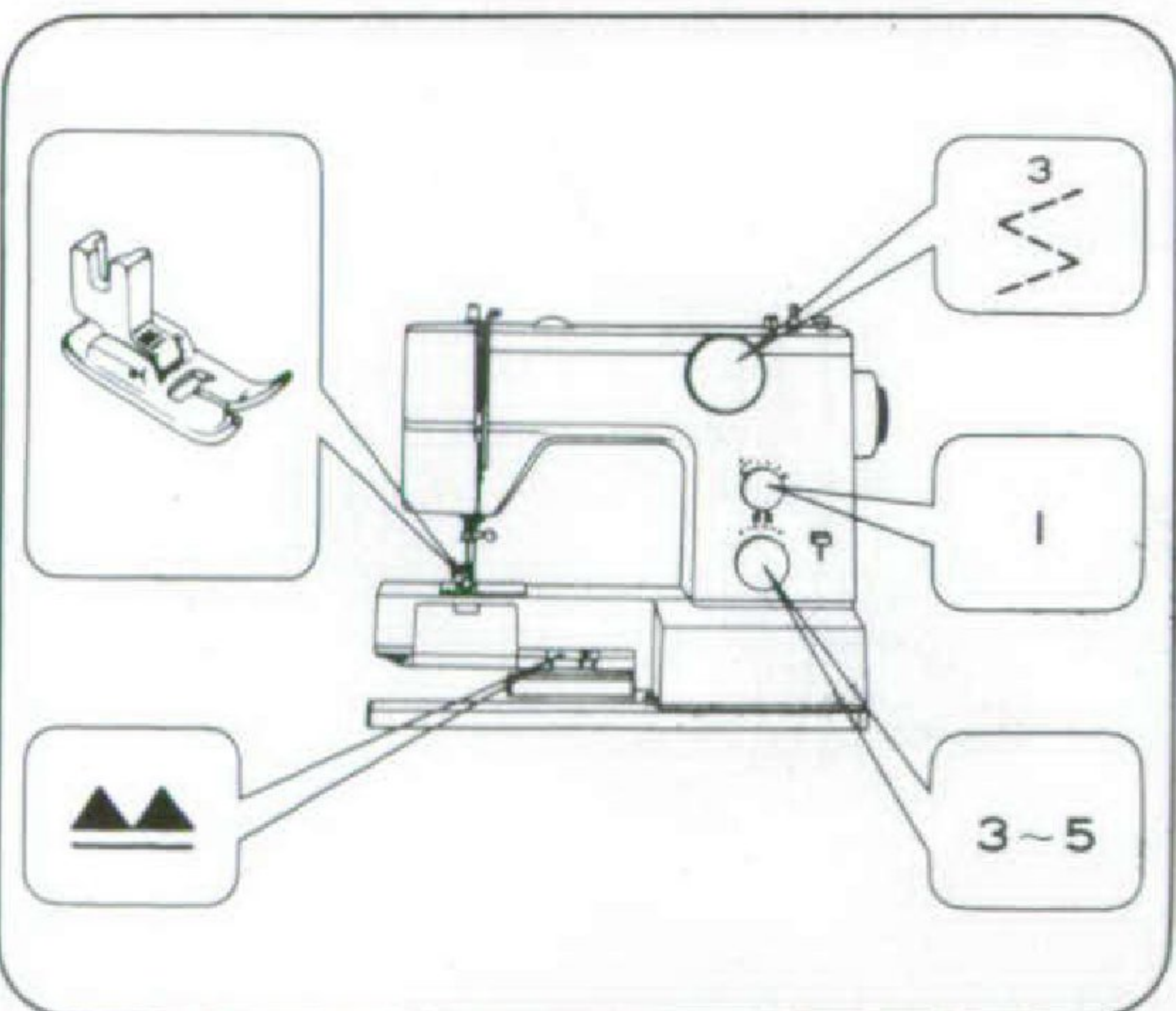
For light weight material:
Set machine as shown.



Sew carefully so that all stitches
on right side are flush with edge
of fabric.

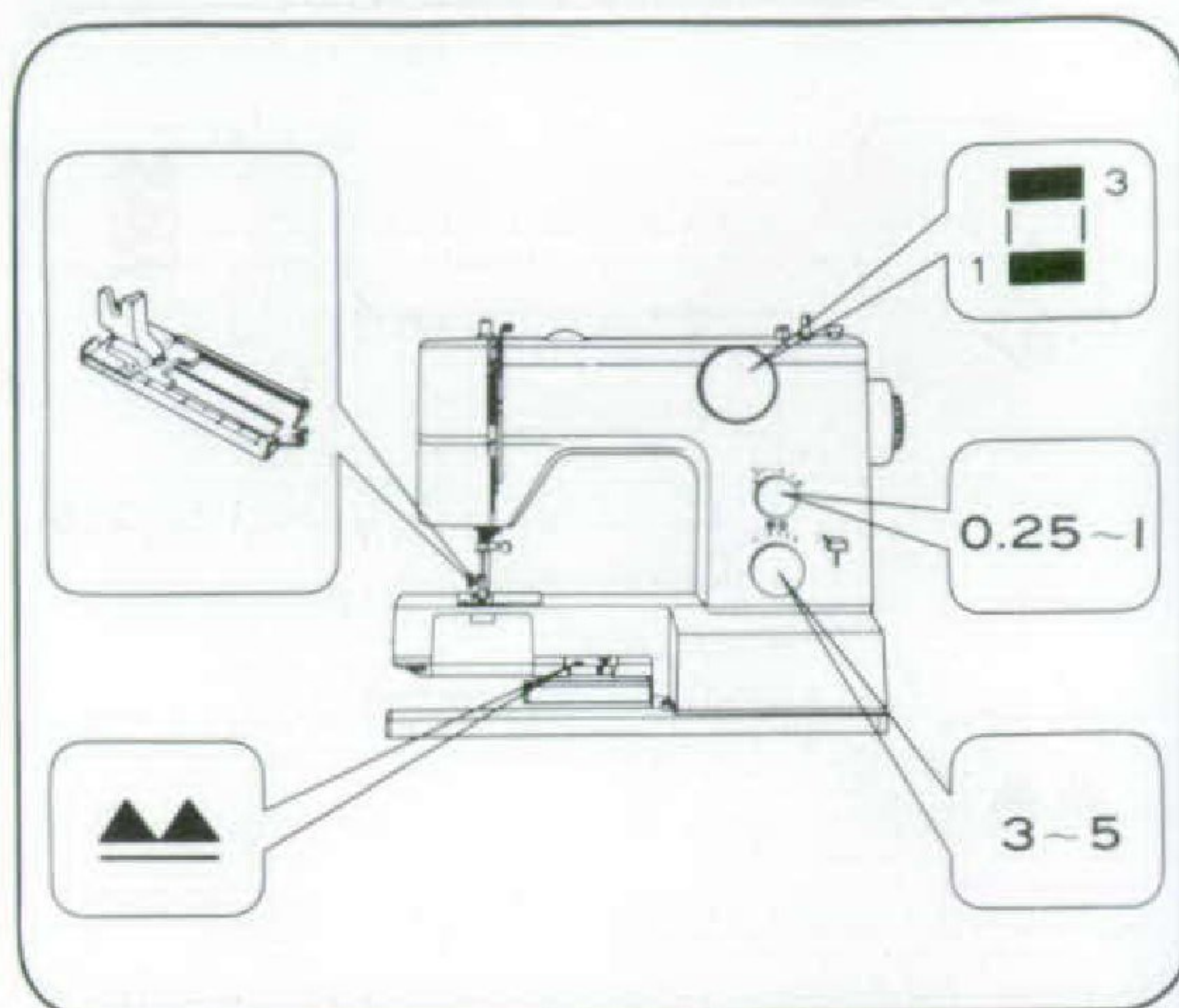


For thick and elastic material:
Set machine as shown.
Sew in the same way above



7 MAKING BUTTONHOLES

Set machine as shown.



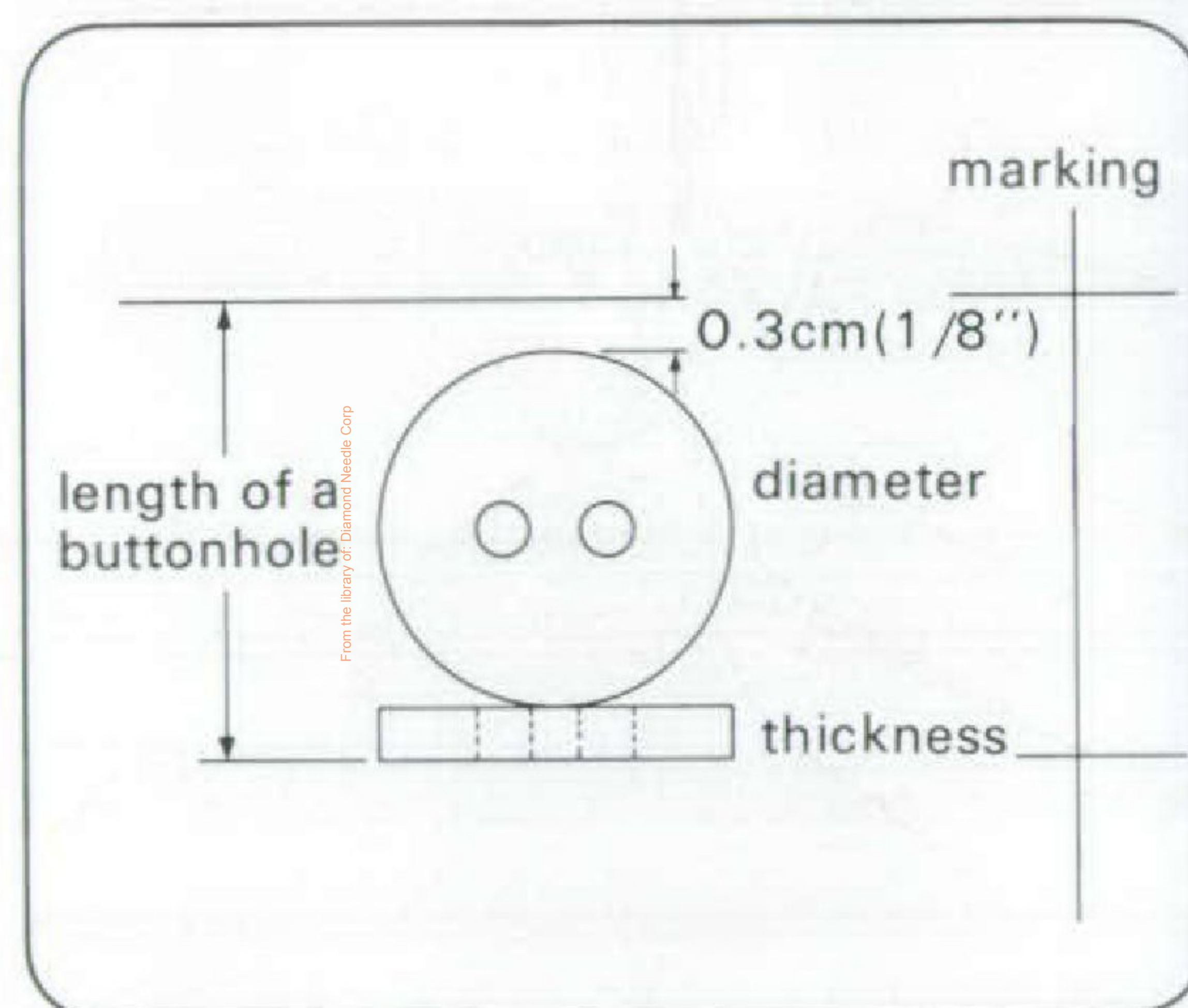
Determine Length

Measure diameter and thickness of button and add 0.3cm (1/8") for bar tacks.

Mark buttonhole size on material.

Determine Width

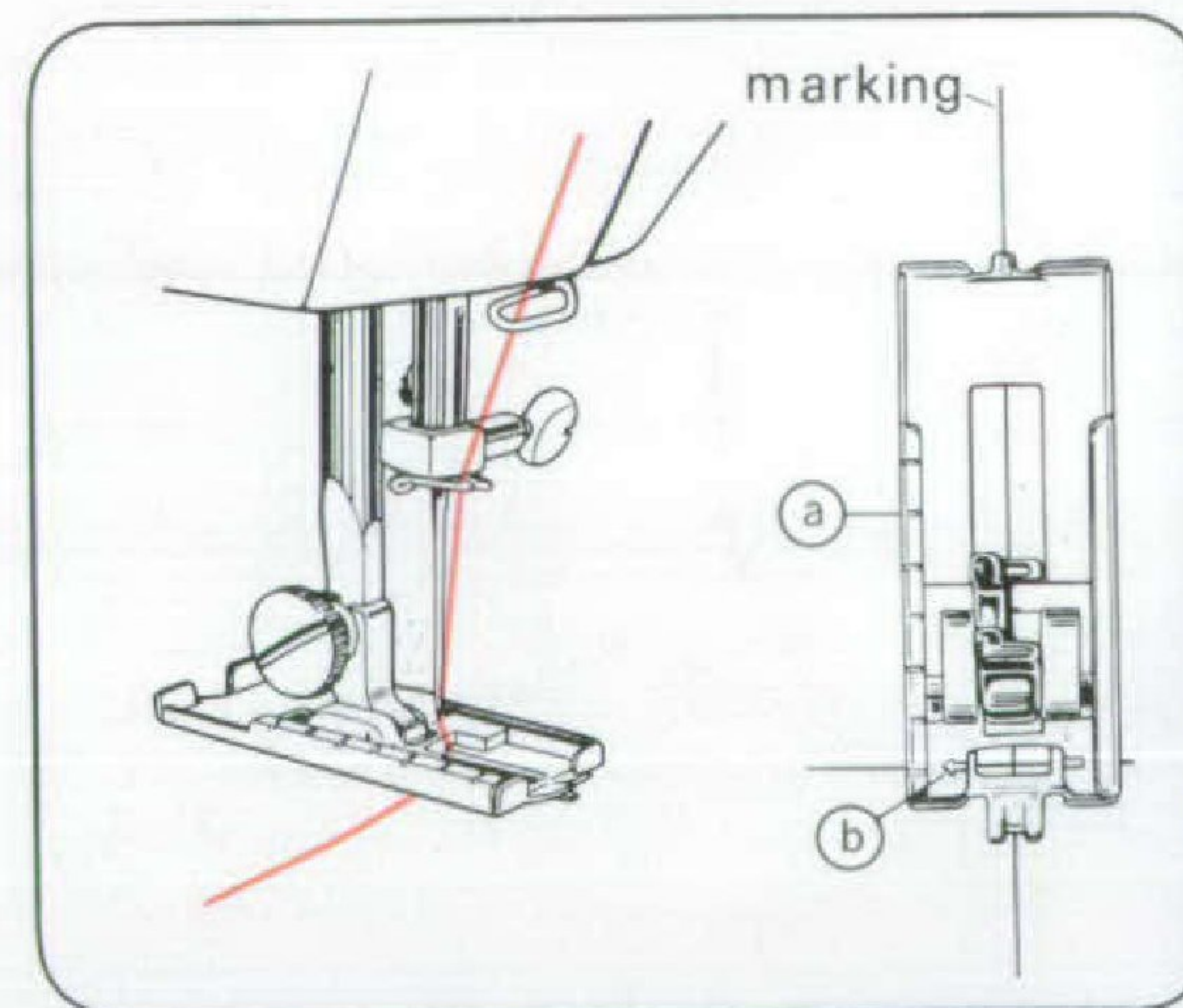
Determine width according to diameter of button, its thickness, and kind of material.

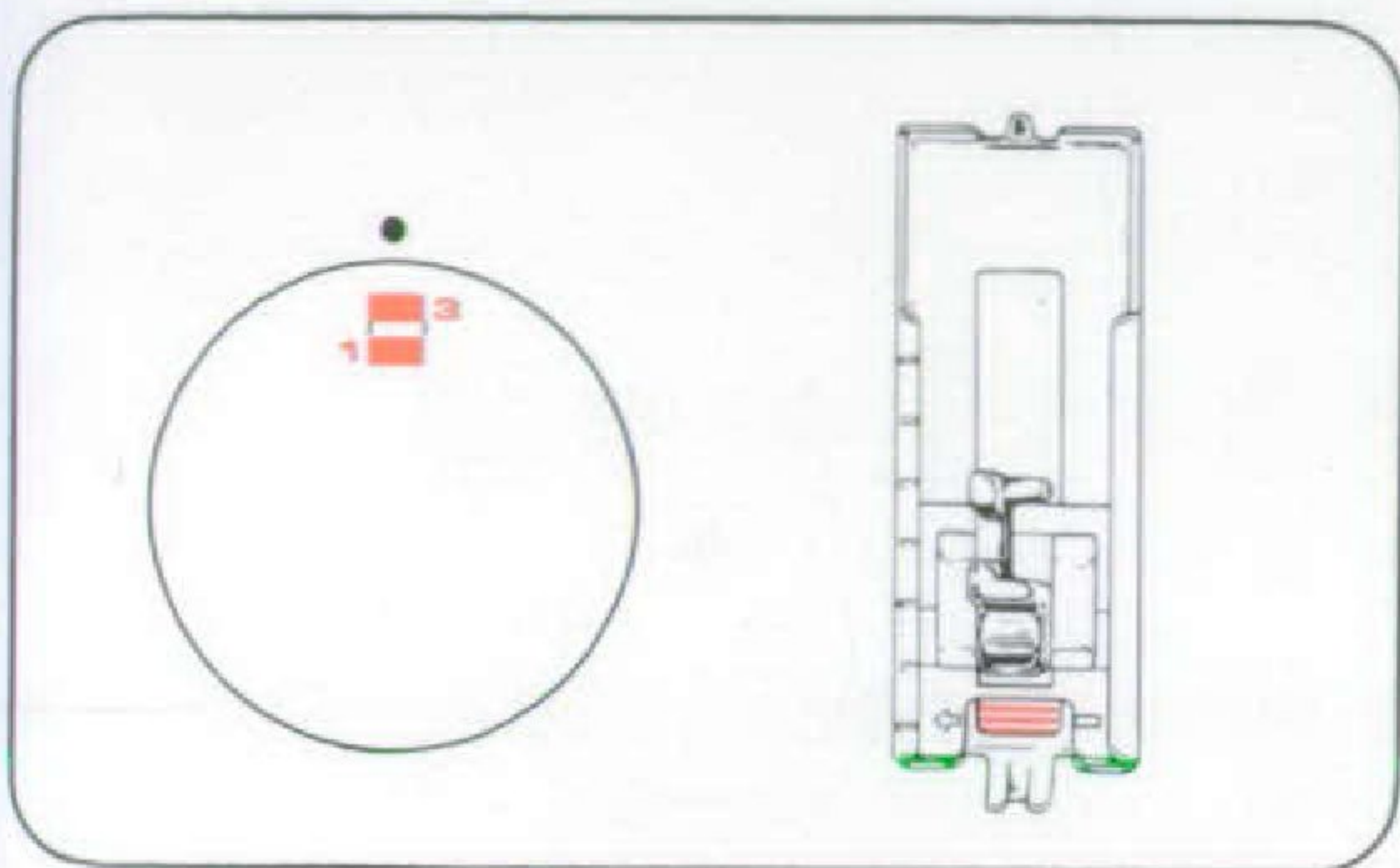


Attach buttonhole foot.

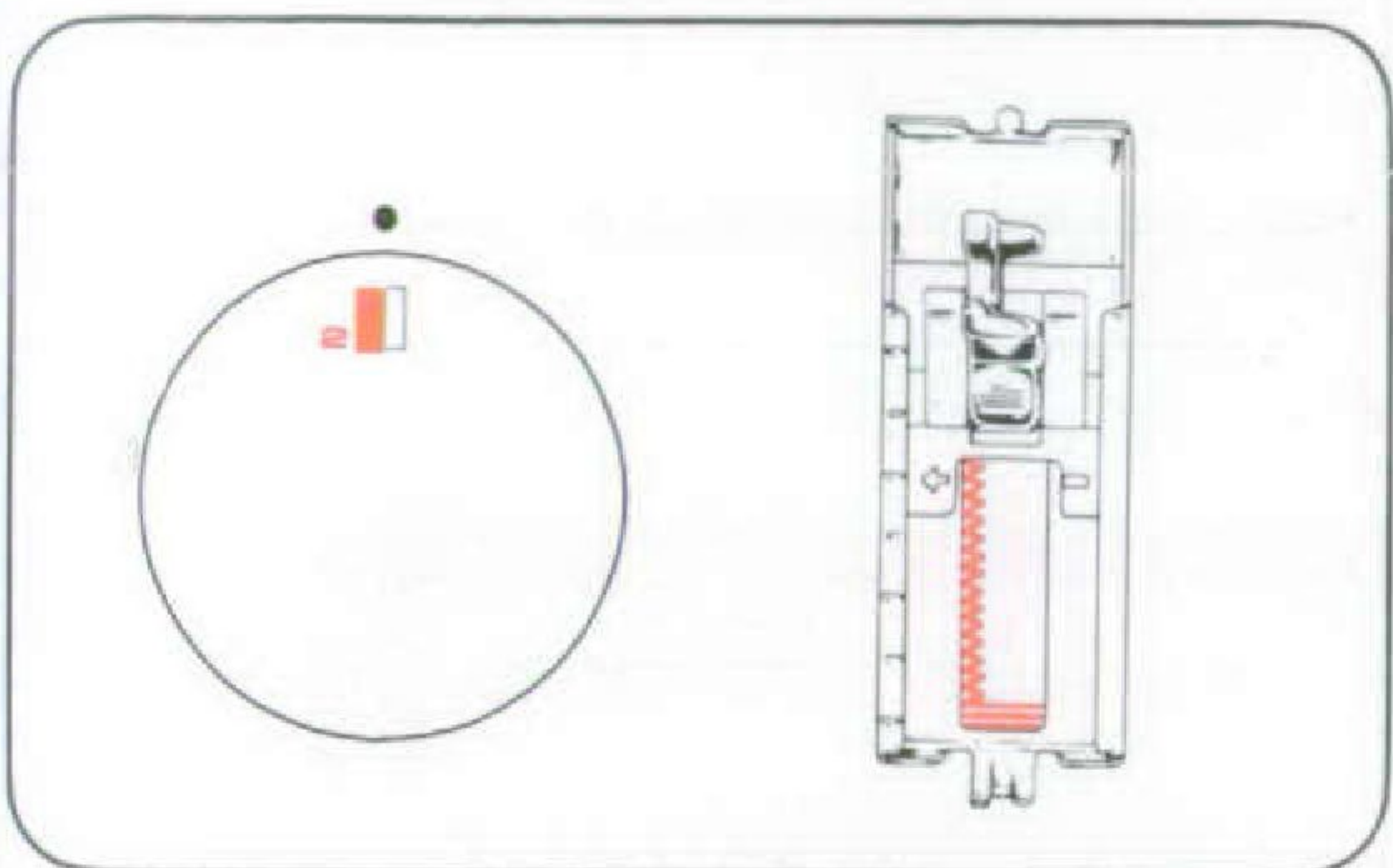
Completely push back sliding part (a) of buttonhole foot.

Place material under foot so that marking of buttonhole passes through center of foot and arrow (b) of foot indicates beginning line of marking.



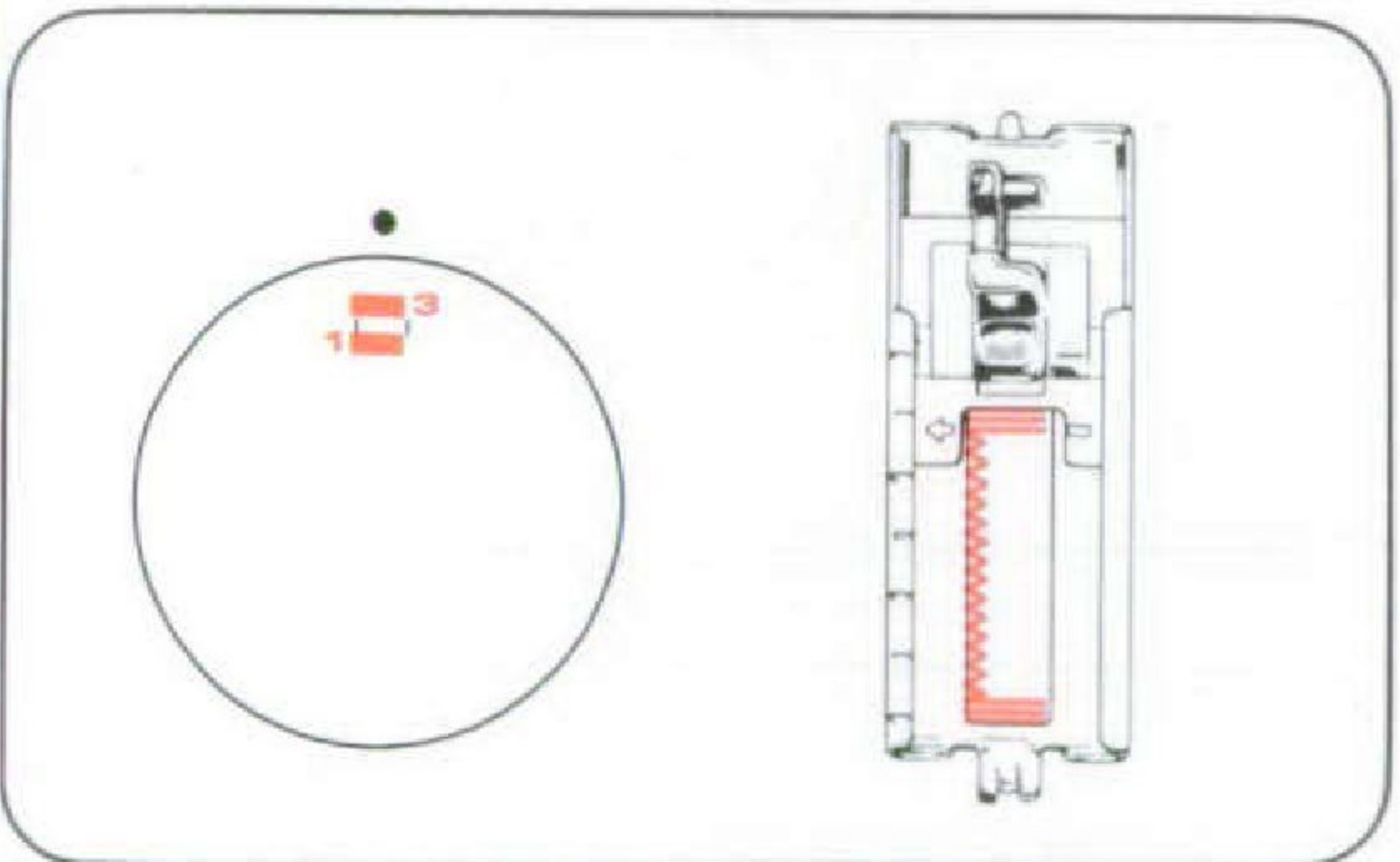


Bar tacking: Set pattern selection dial to 1 (1 ■³) and sew 5-6 stitches.

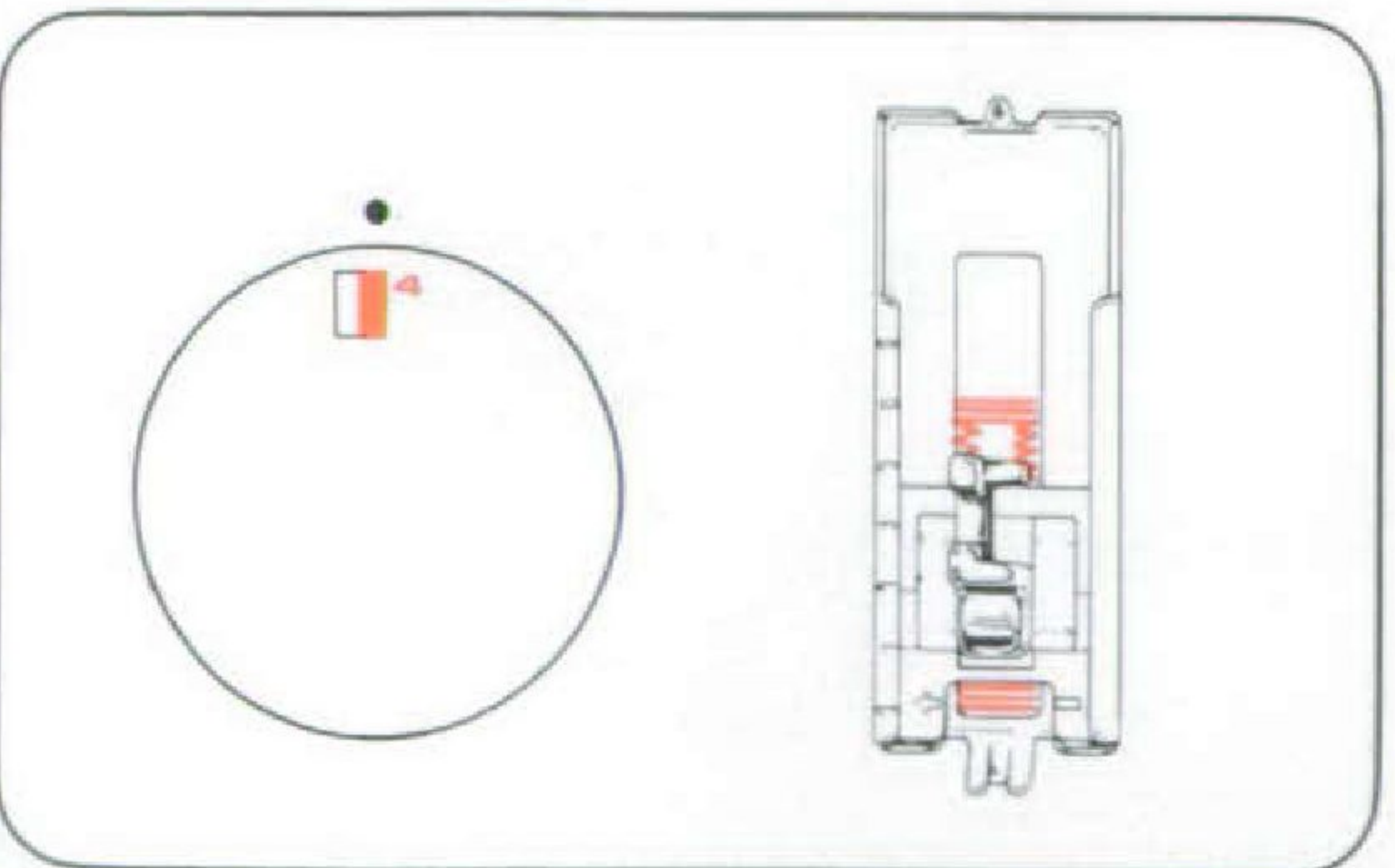


Left side: Change pattern to 2 (2 ■). Sew left side from front to back until it reaches end line.

Remember the point where arrow shows so that it is not necessary to mark end lines for all buttonholes.



Bar tacking: Change pattern to 3 (■³) and sew 5-6 stitches.



Right side: Change pattern to 4 ([■⁴]) and sew right side until it catches first bar tack.

Quick finish: To prevent unstitching, set zigzag width at 0 and proceed for a few stitches.

Left and Right Side Balance of Buttonhole

Stitch density on right and left sides of buttonhole can be adjusted by buttonhole balance control dial.

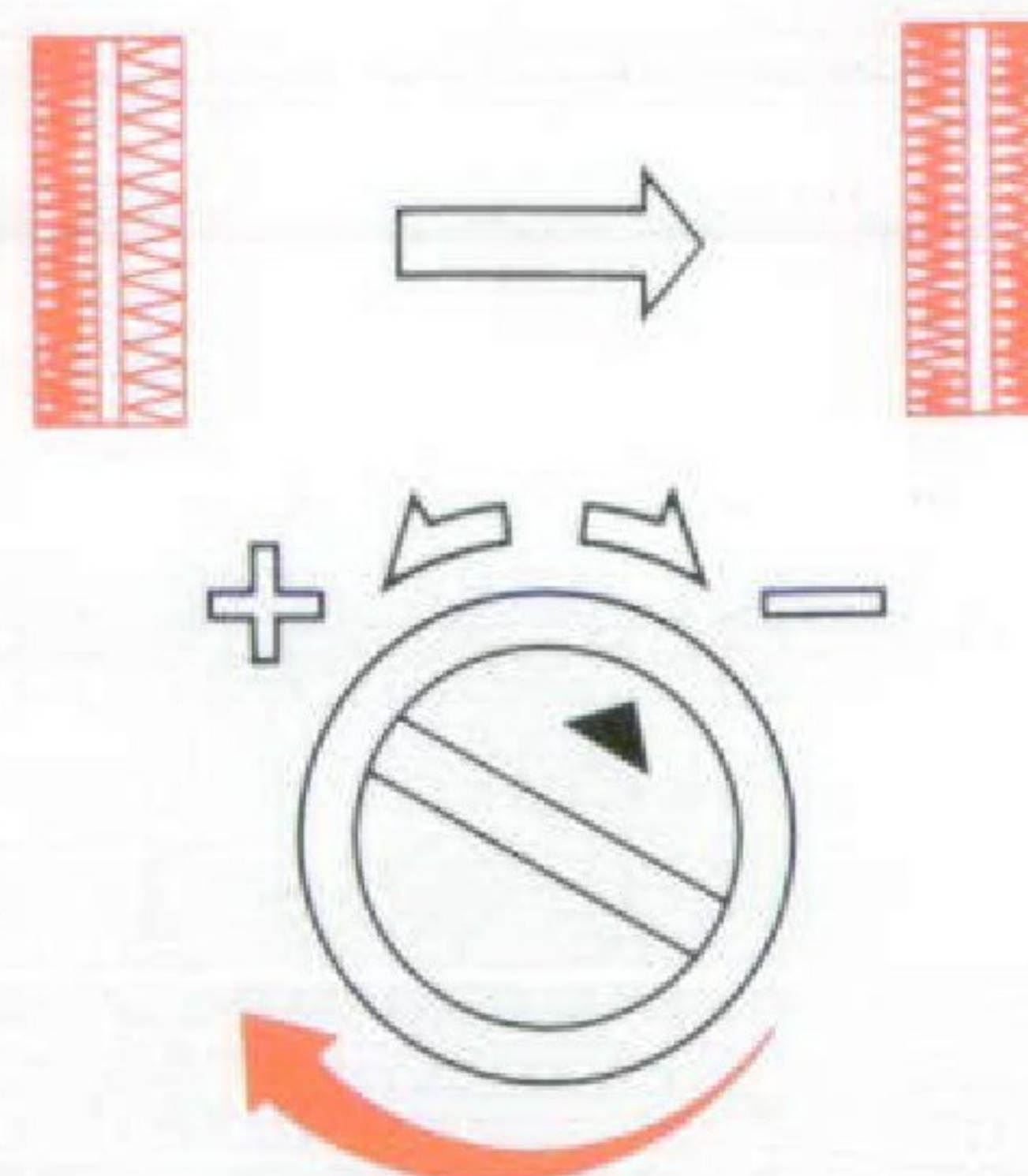
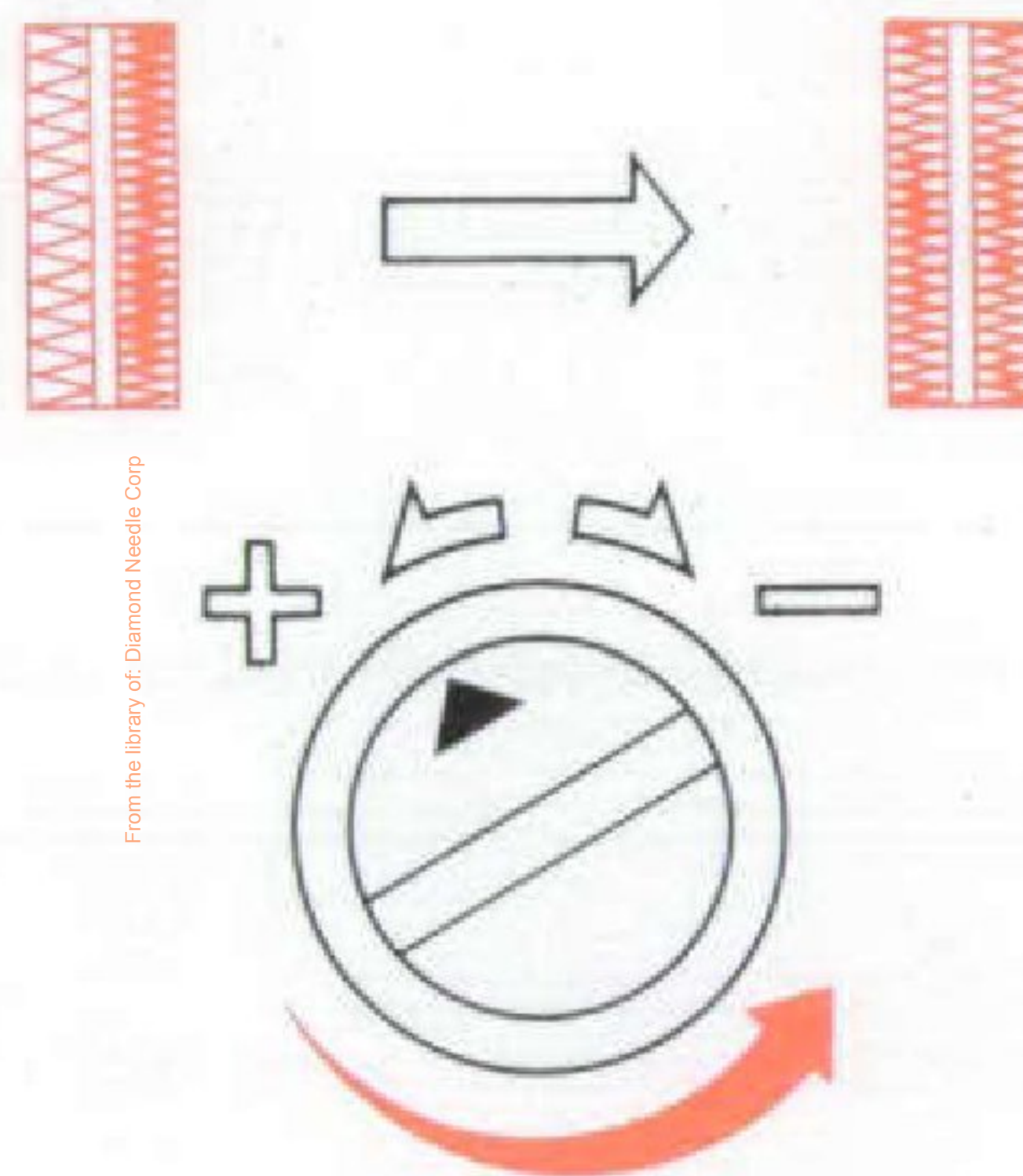
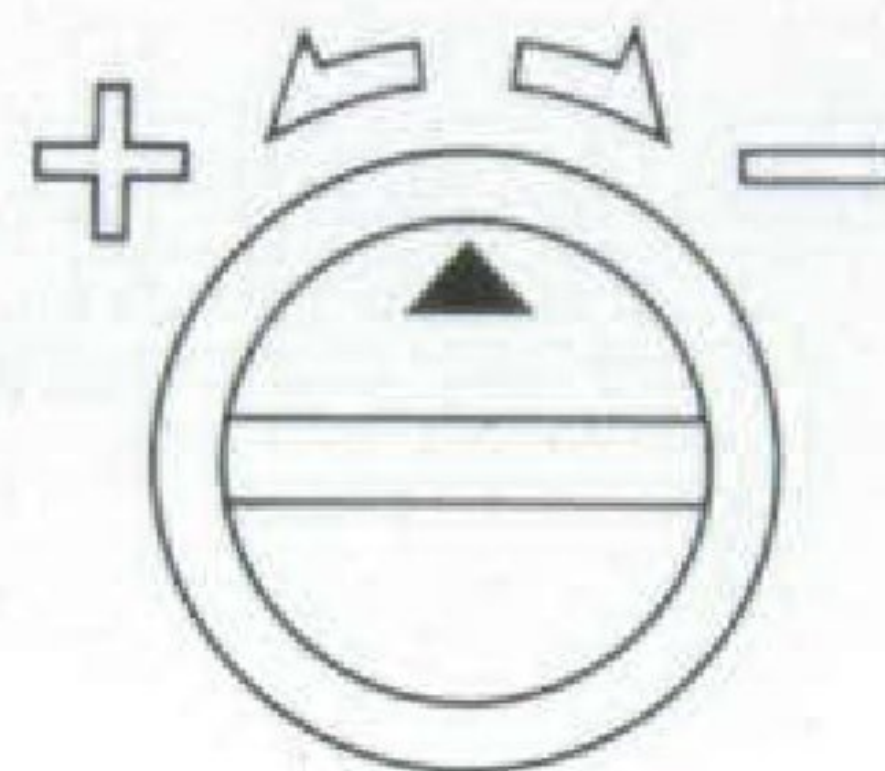
This dial should usually be in a neutral position (between "+" and "-")

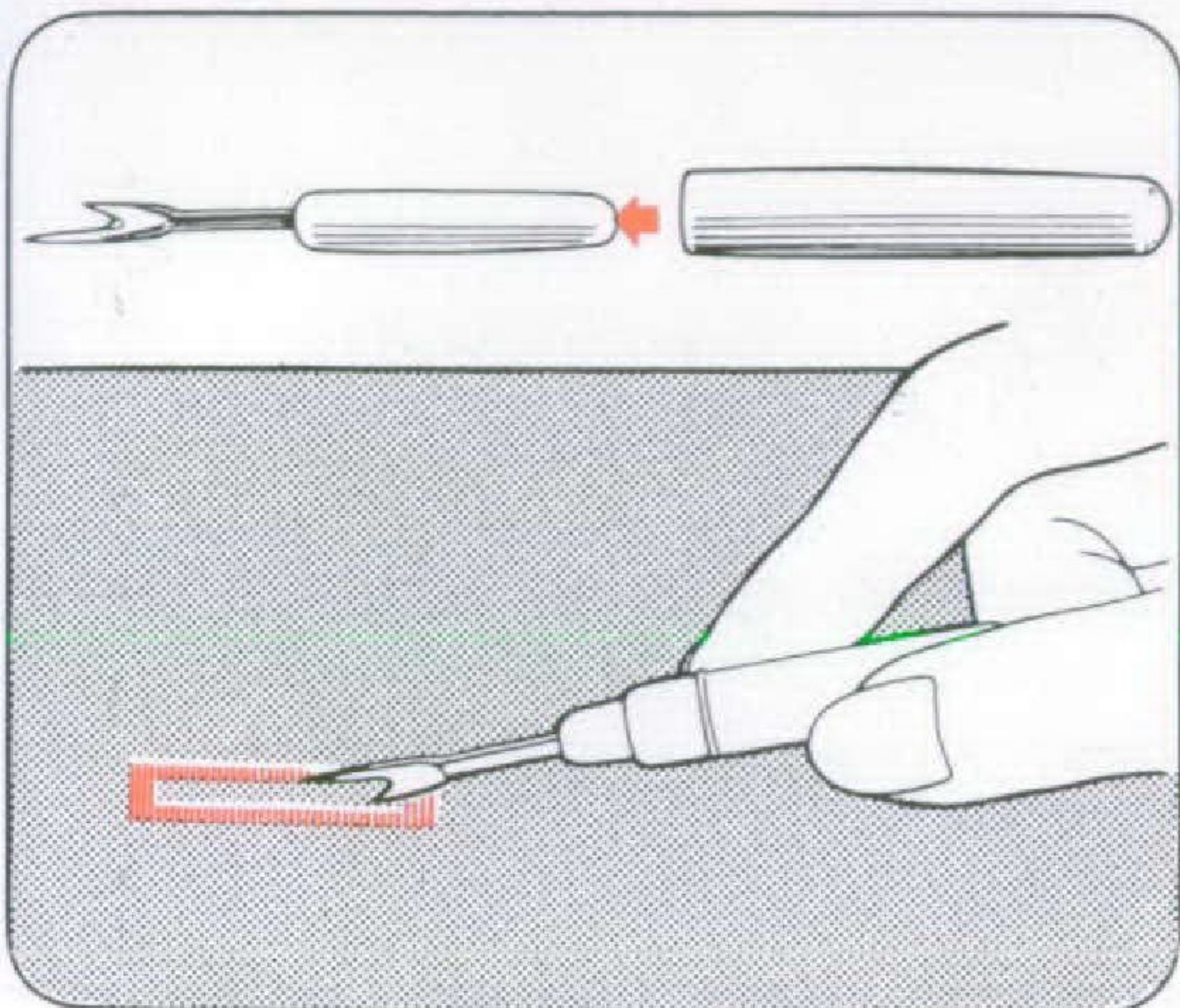
If the stitches on the right side of the buttonhole are too close together, turn the dial to the left (+).

*Turning dial to left opens right side and closes left side.

If the stitches on the right side of the buttonhole are too open, turn the dial to the right (-).

*Turning dial to right closes right side and opens left side.

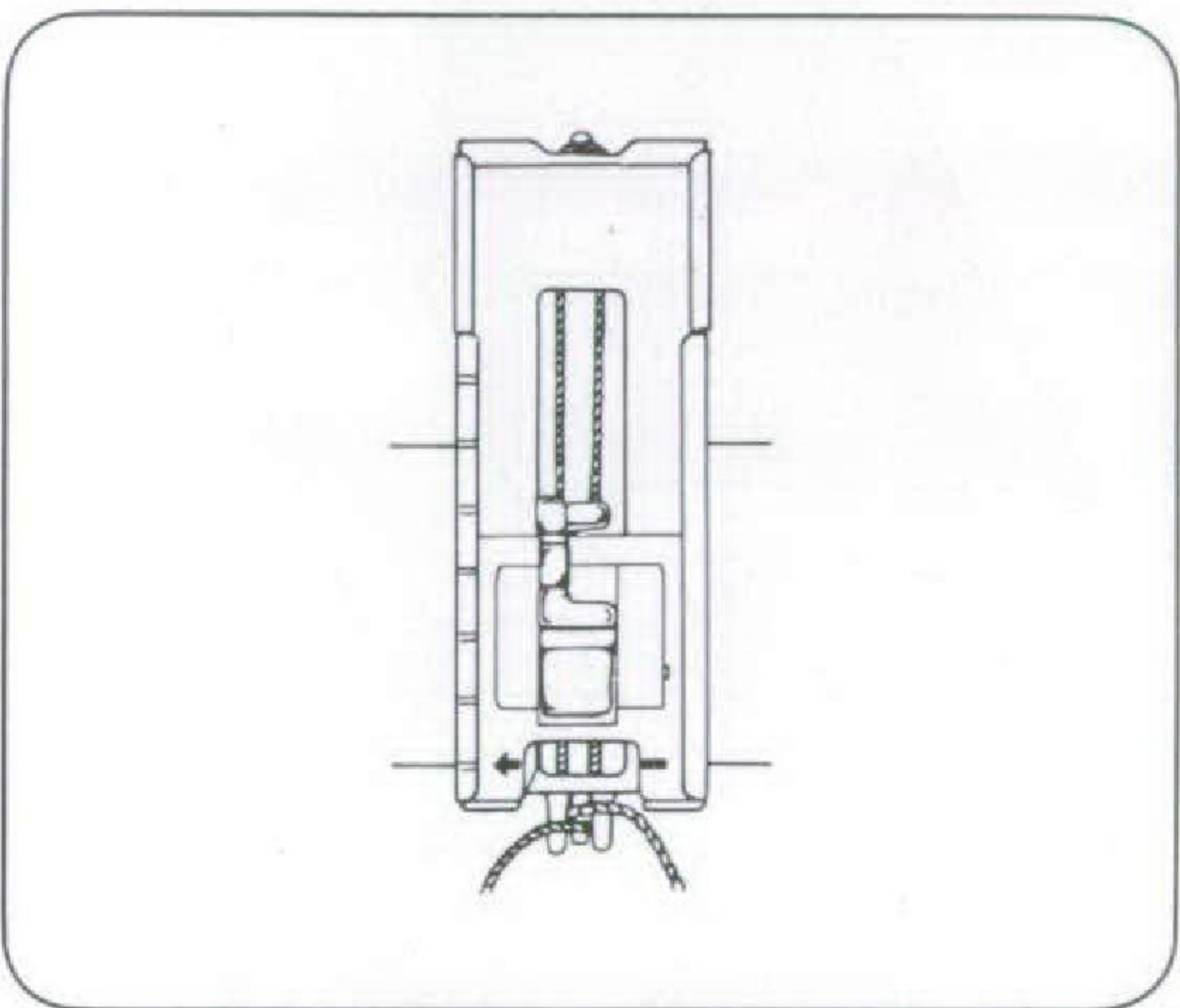




Cutting Buttonholes

Stick a needle through bar tacks to prevent over-cutting.

Cut buttonhole along center with buttonhole cutter.

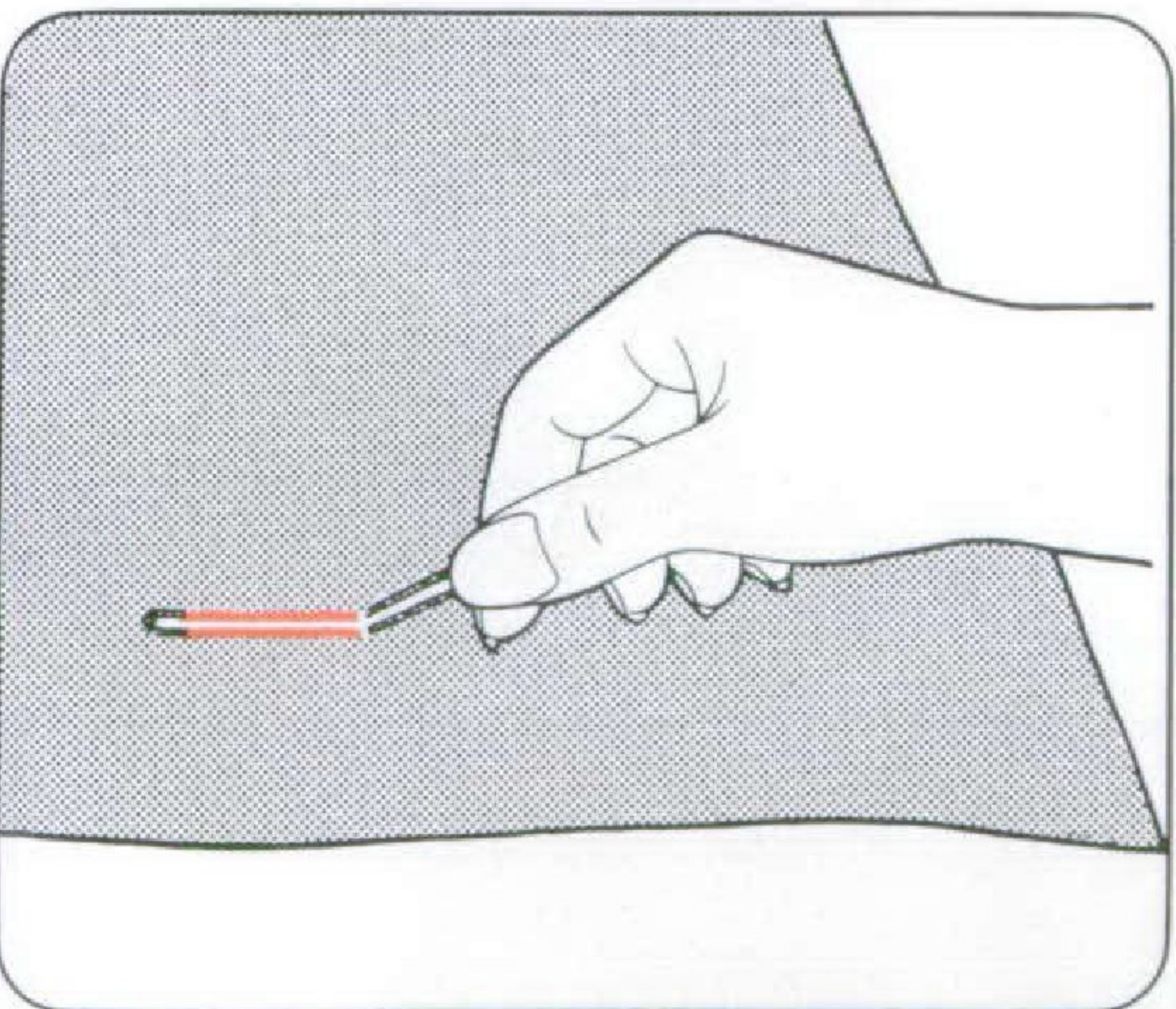


Corded Buttonholes

For stretch fabrics such as knits, a corded buttonhole is effective to keep finished buttonhole in shape.

Hook filler cord on top spur and lead ends of cord under foot, pull taut, and hook them to bottom notches as shown.

Proceed with stitching as for regular buttonholes.

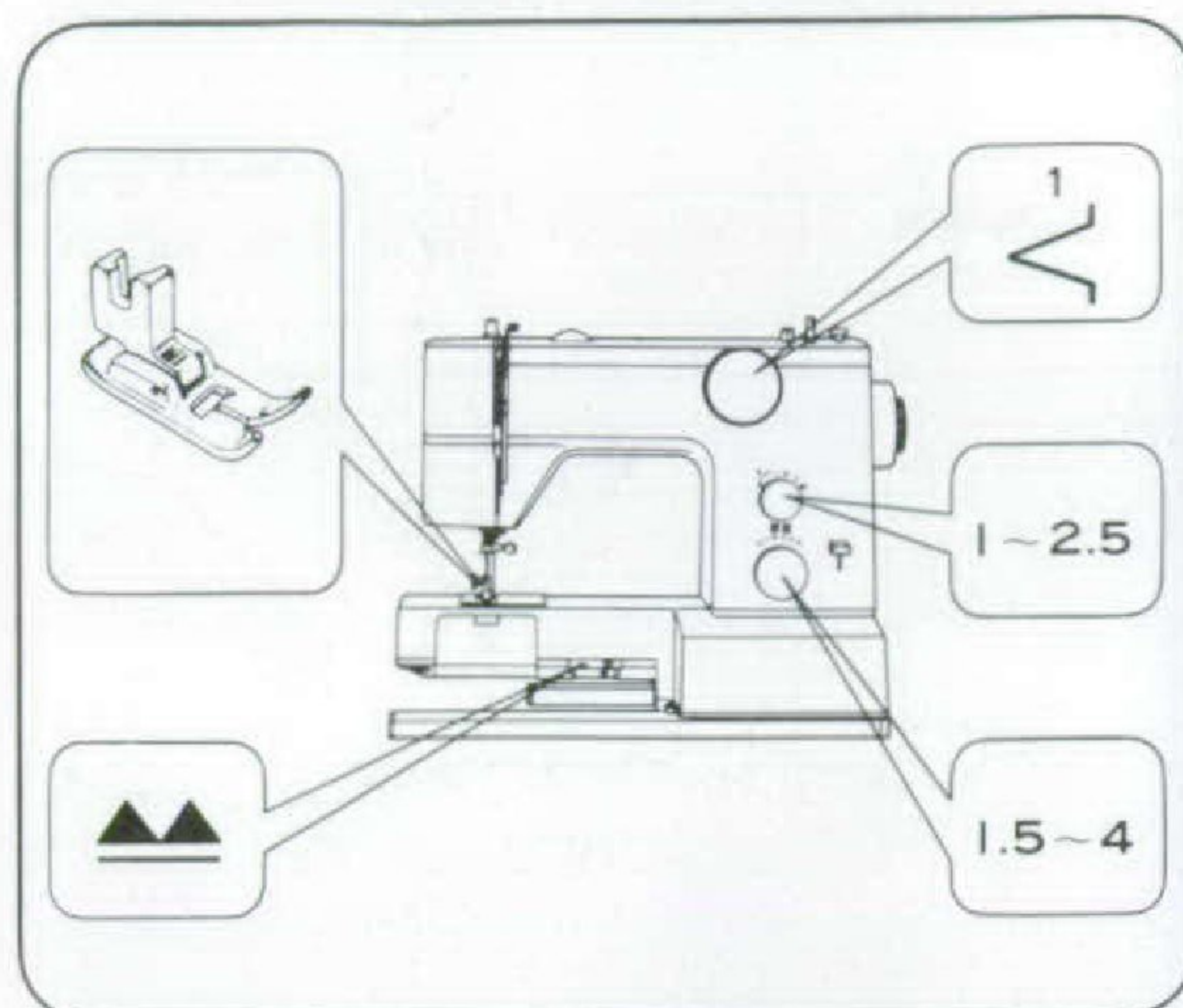


When buttonhole is completed, pull filler cord ends so that loop on the other end disappears into buttonhole stitching.

Thread ends of cord to reverse side and tie, or cut both ends of cord.

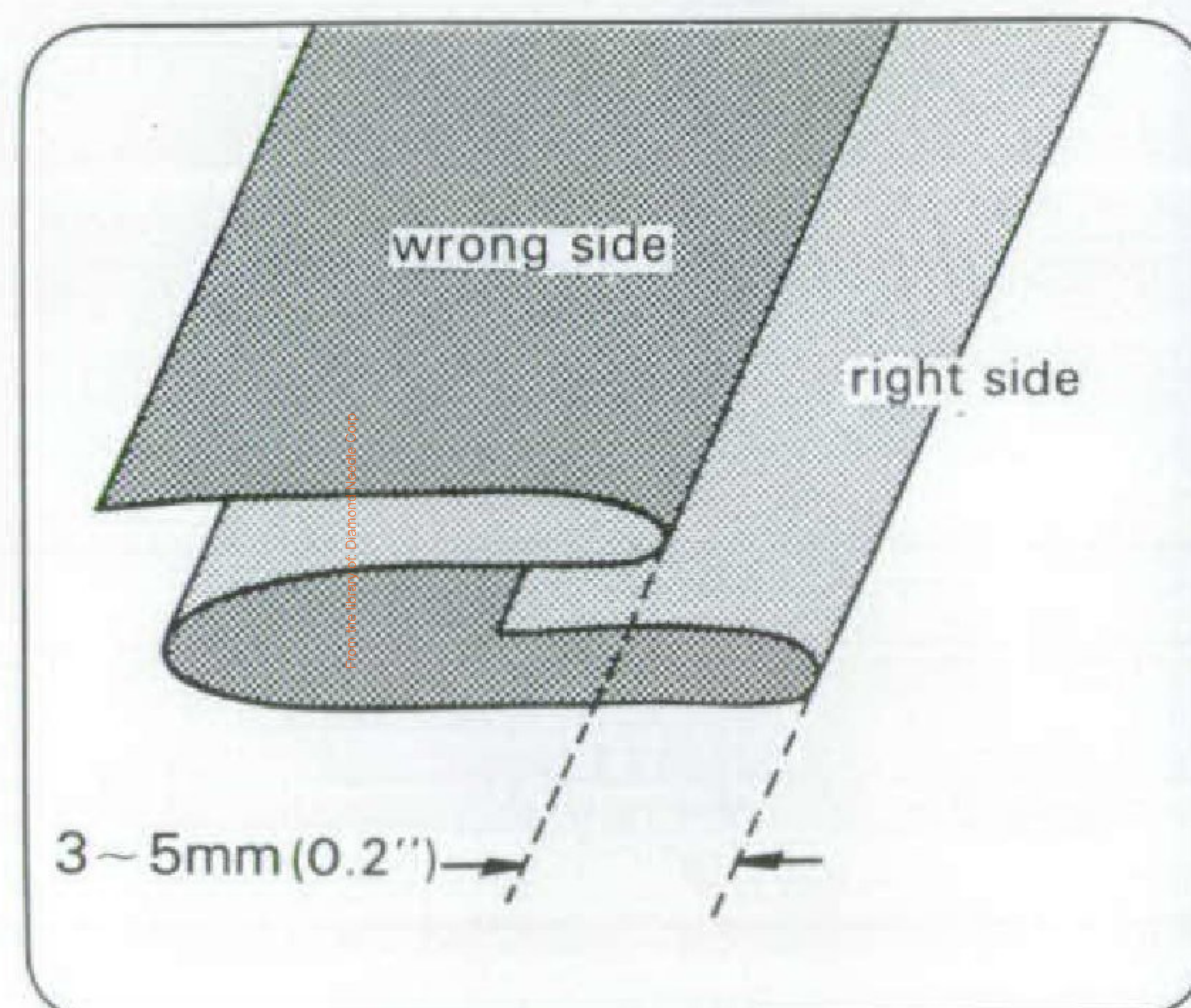
8. BLIND HEM STITCH

Set machine as shown.

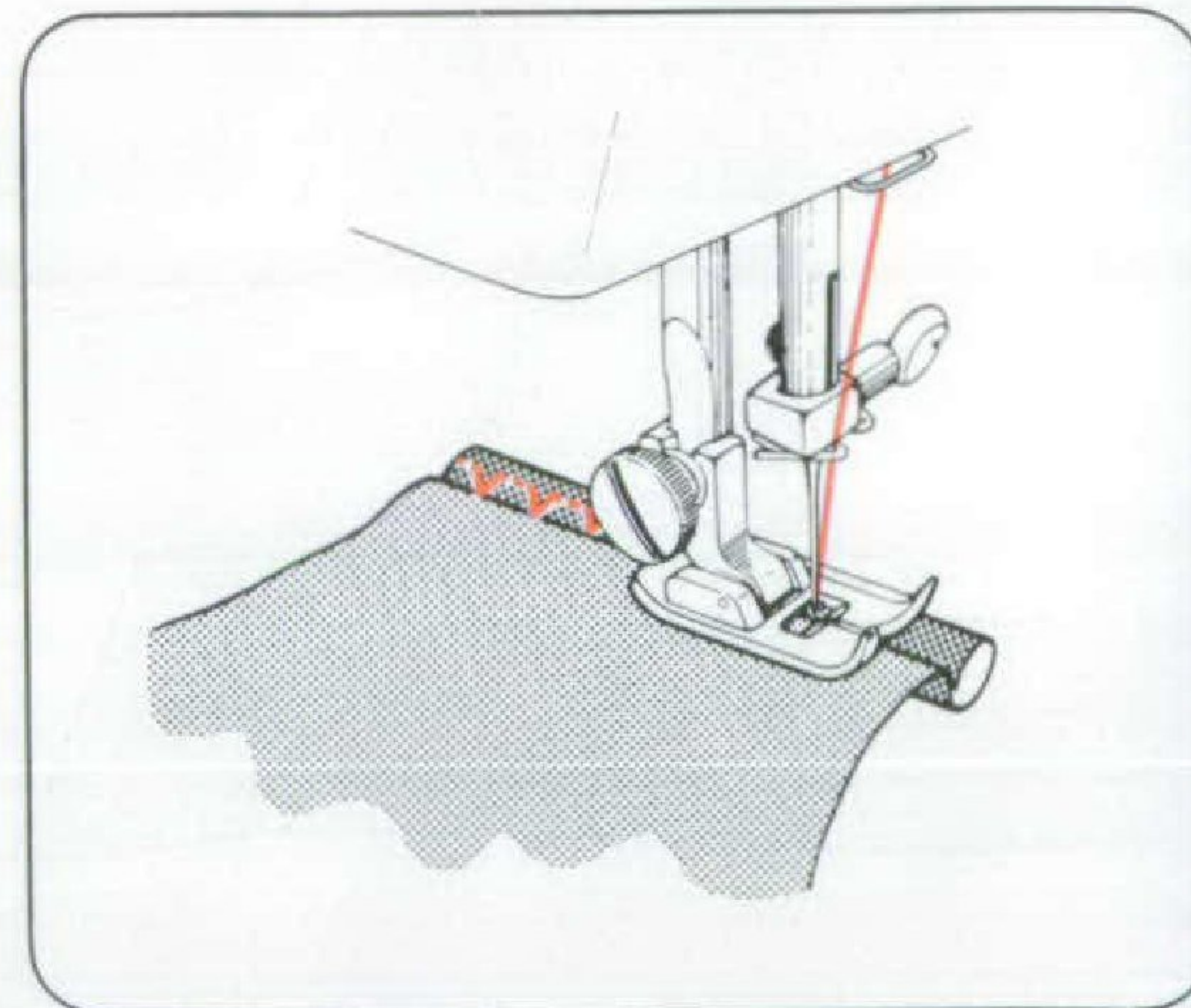


Fold material as shown and place it under foot.

For a neater finish, it is preferable to baste or iron hem beforehand.



Sew carefully, so that straight stitches are made on hem edge, and slanting stitches pierce only one or two threads of fold.

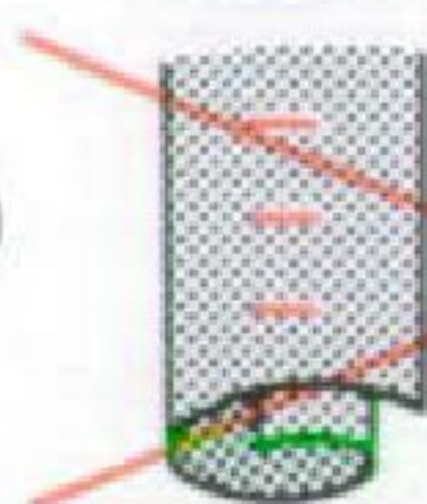


right side wrong side

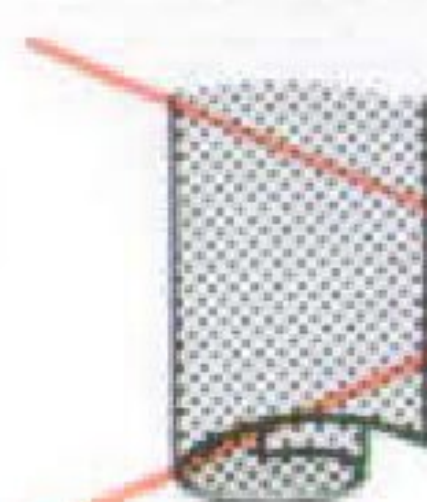
(a)



(b)



(c)



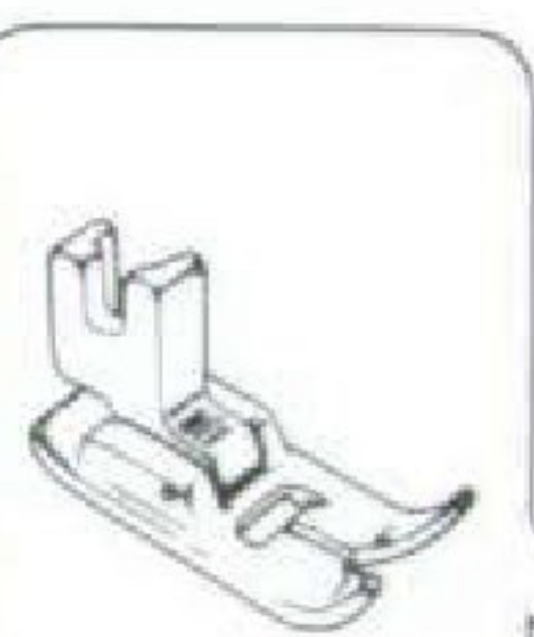
(a) Correct seam.

(b) Needle is catching edge of fold too much.

(c) Needle is not catching edge of fold at all.

Elastic Blind Hem Stitch

For elastic materials, set machine as shown and sew in the same way as for normal blind hem stitch.



2

1 ~ 2

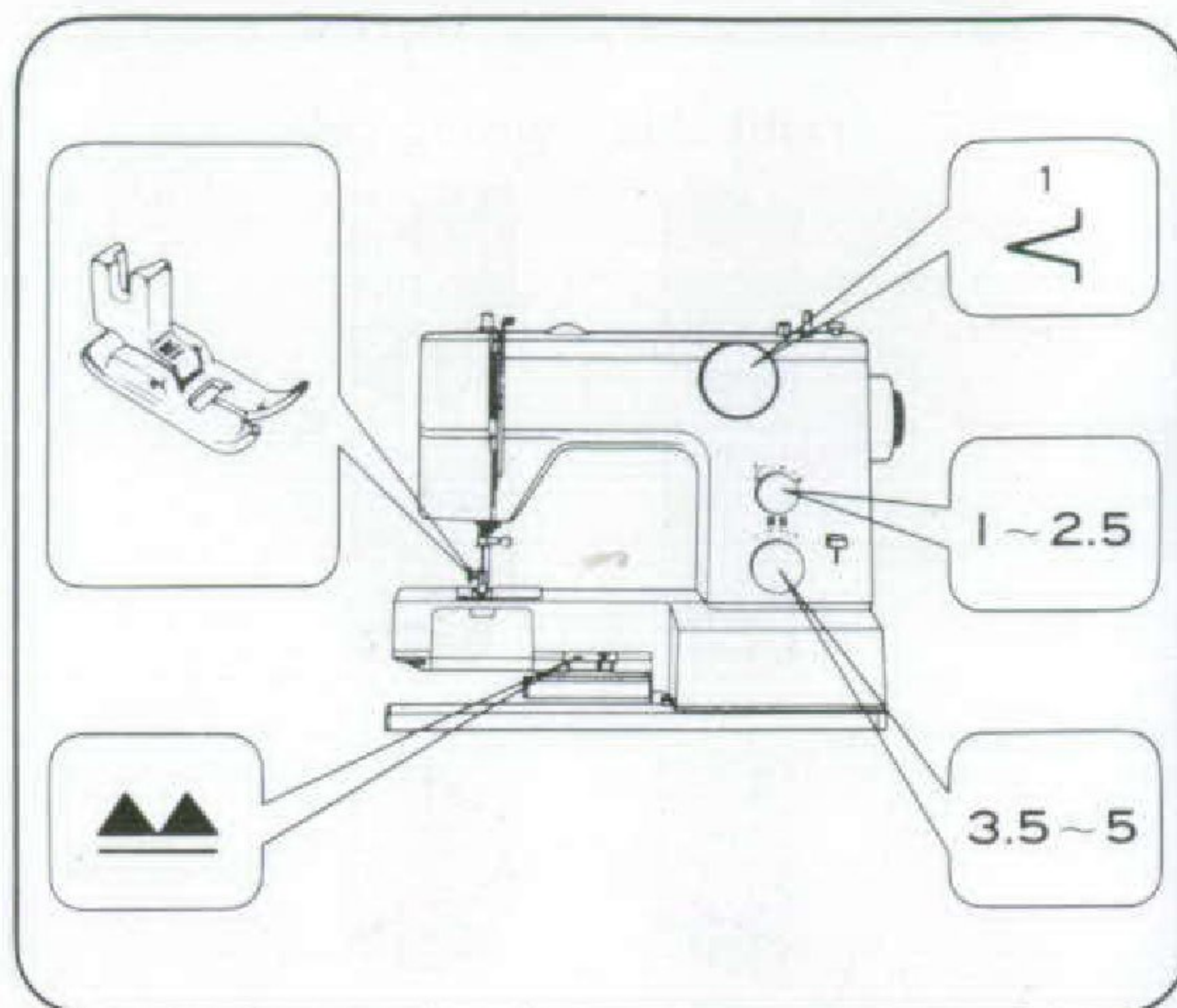
3 ~ 5



9. SHELL STITCHING

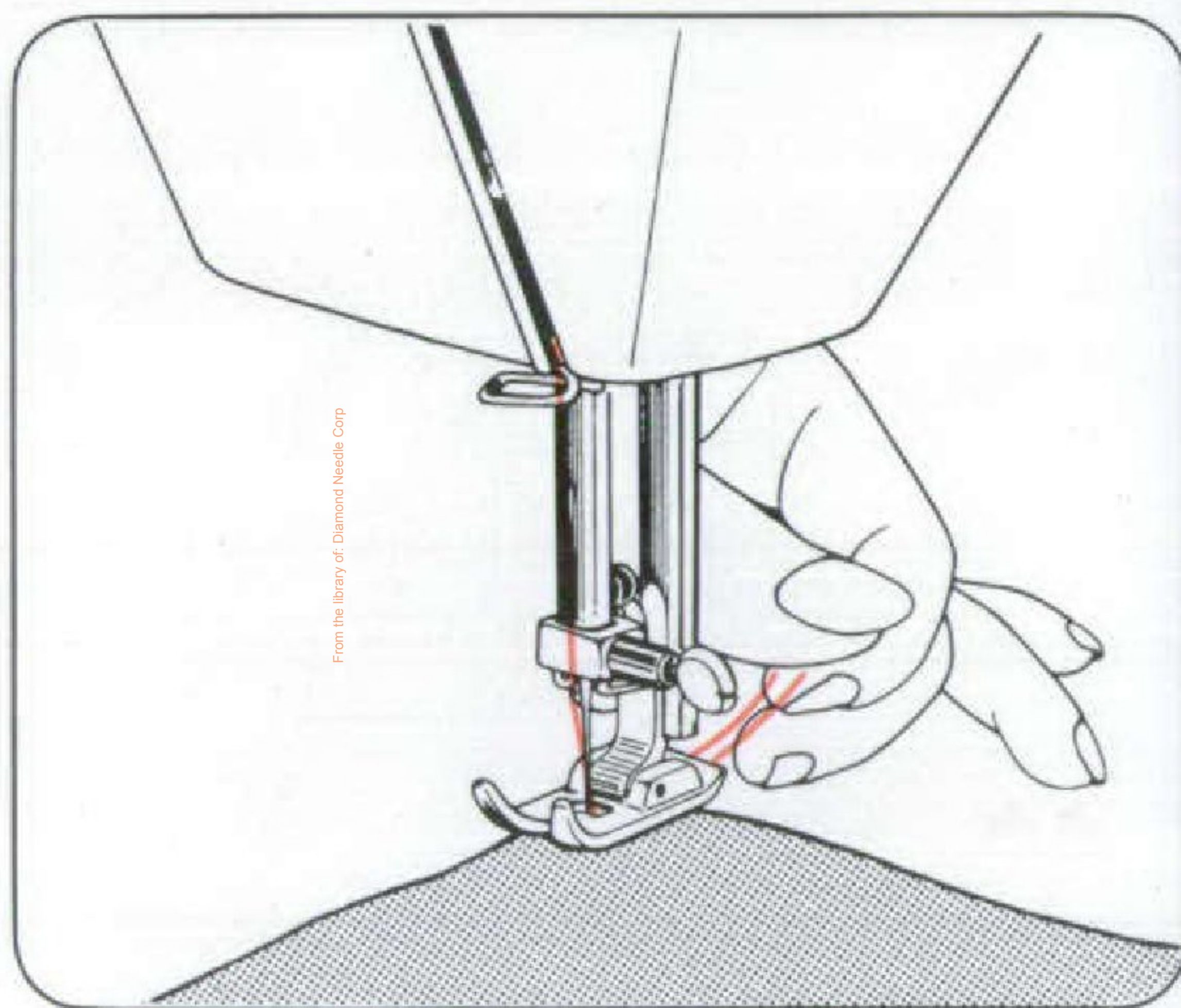
Silk, nylon organdy or similar sheer fabrics are suitable.

Set machine as shown.

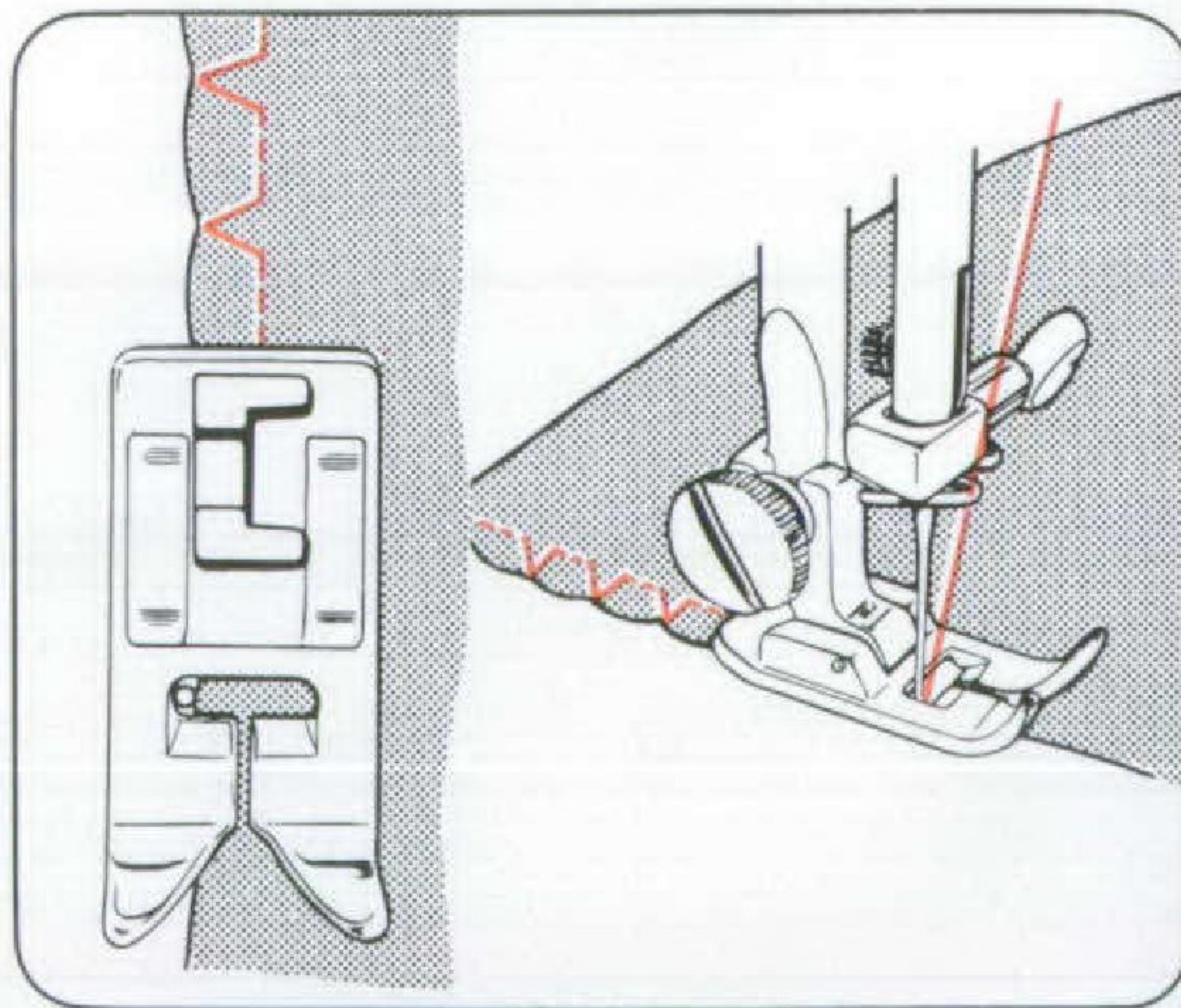


Fold edge of material. With folded edge to left, place it under presser foot.

Pull thread ends towards back when starting sewing.



Make sure needle misses raw edge of fold when it moves side ways.



10. ZIPPER SEWING

Set machine as shown.

By using special zipper foot with sliding adjuster, zipper sewing can be easily done without turning fabric.

Loosen screw (a) and set foot so that needle comes into position (b). Tighten screw.

Sew right side of zipper guiding fabric carefully so that right side teeth of zipper are parallel with left edge of foot.

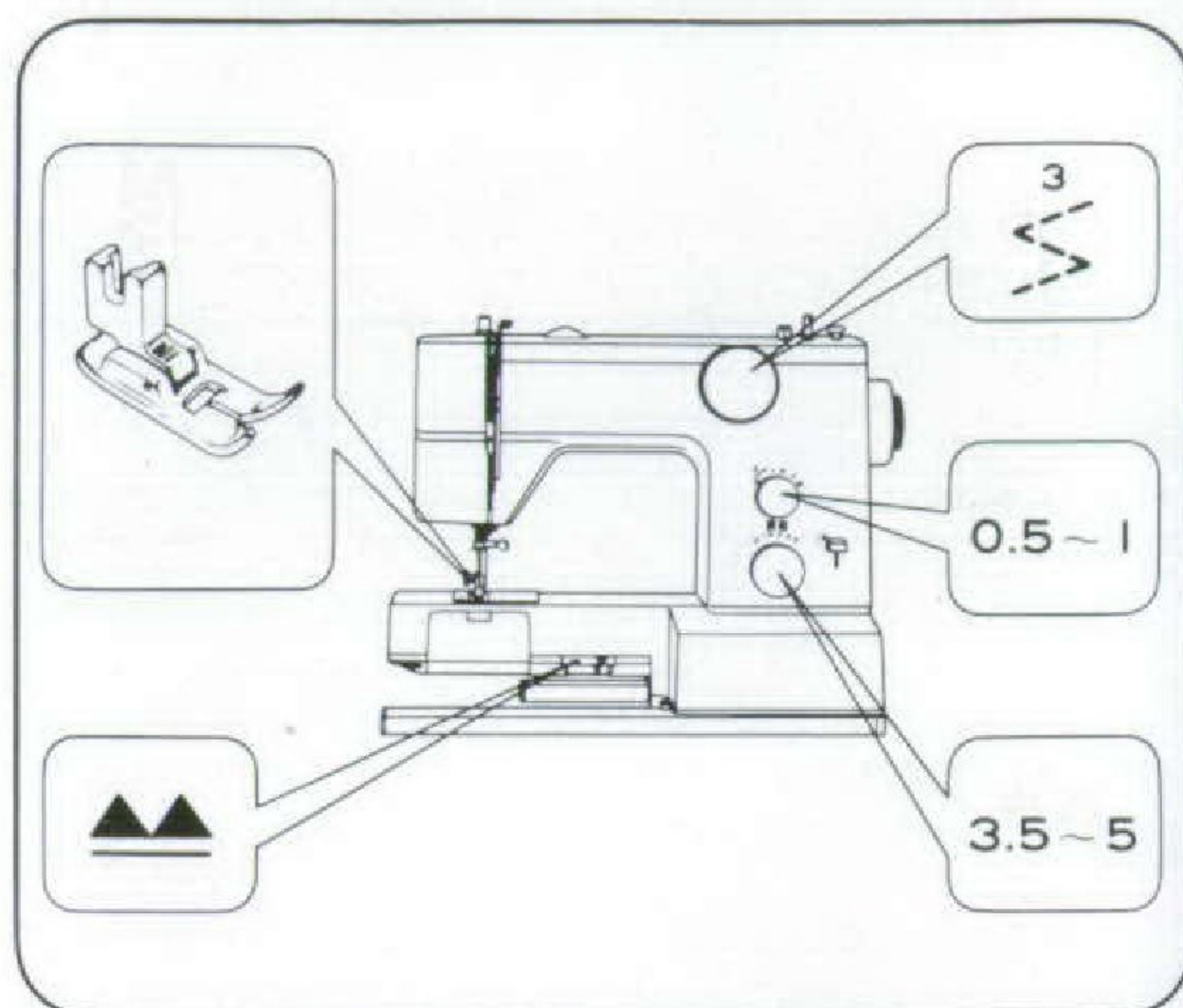
Re-set foot so that needle comes into position (c).

Sew left side of zipper in the same way.

11. MENDING

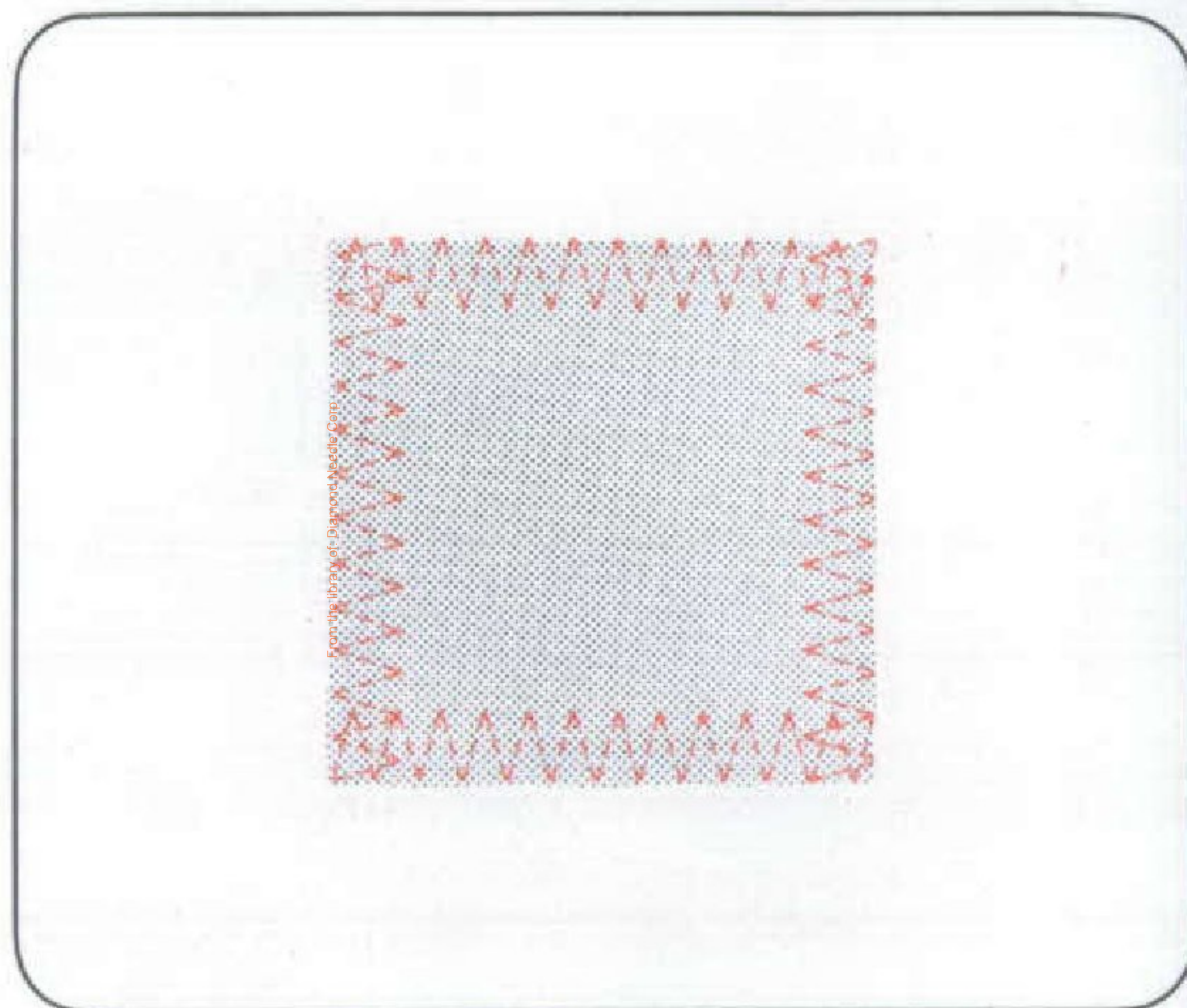
Patching

Set machine as shown.



Place the patch over the worn part.

Sew along the edge of the patch on the right side. Trim away the worn part close to the seam on back side.



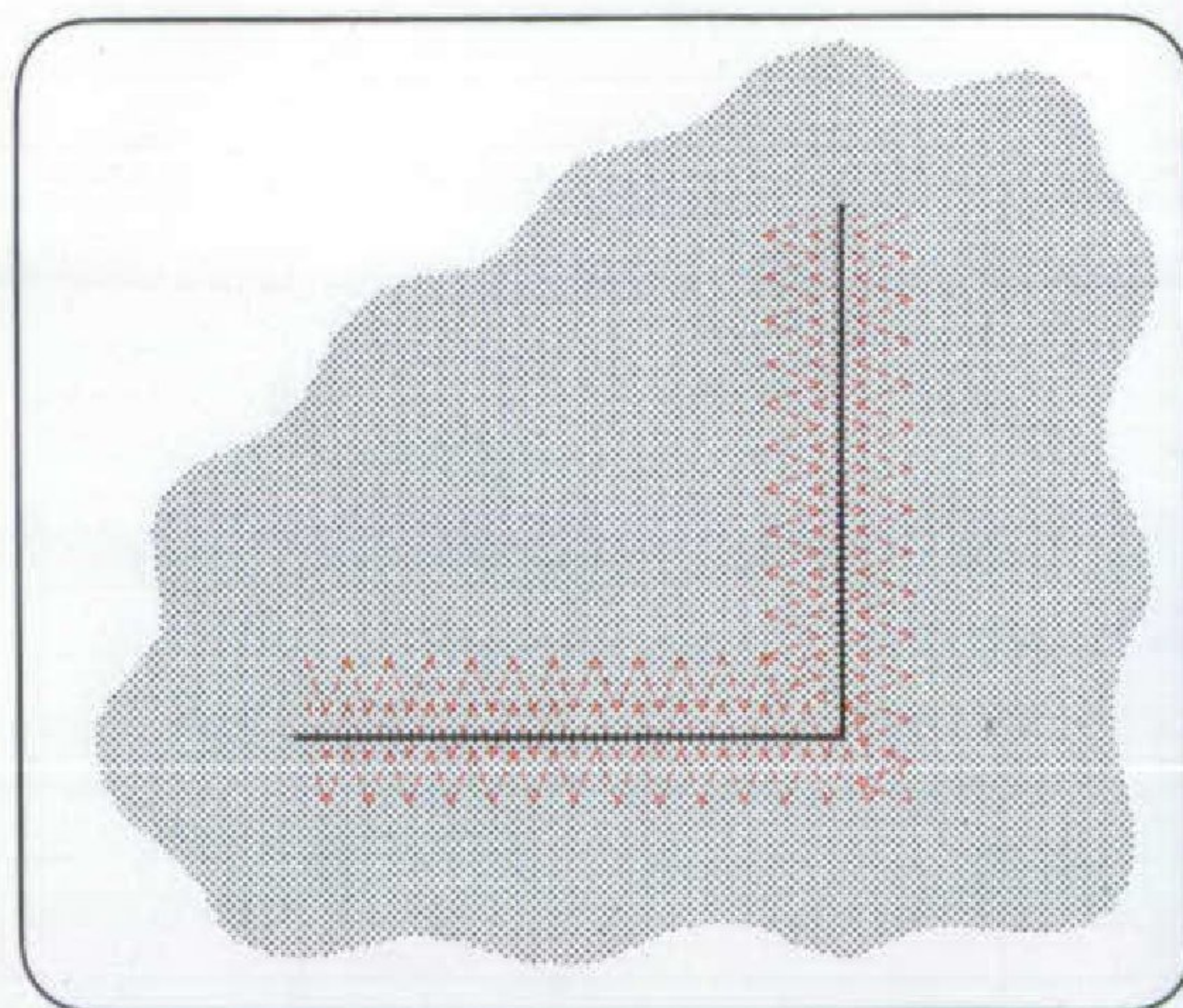
Mending a Rip

Set machine in the same way as for patching.

Sew the edges of tear together first.

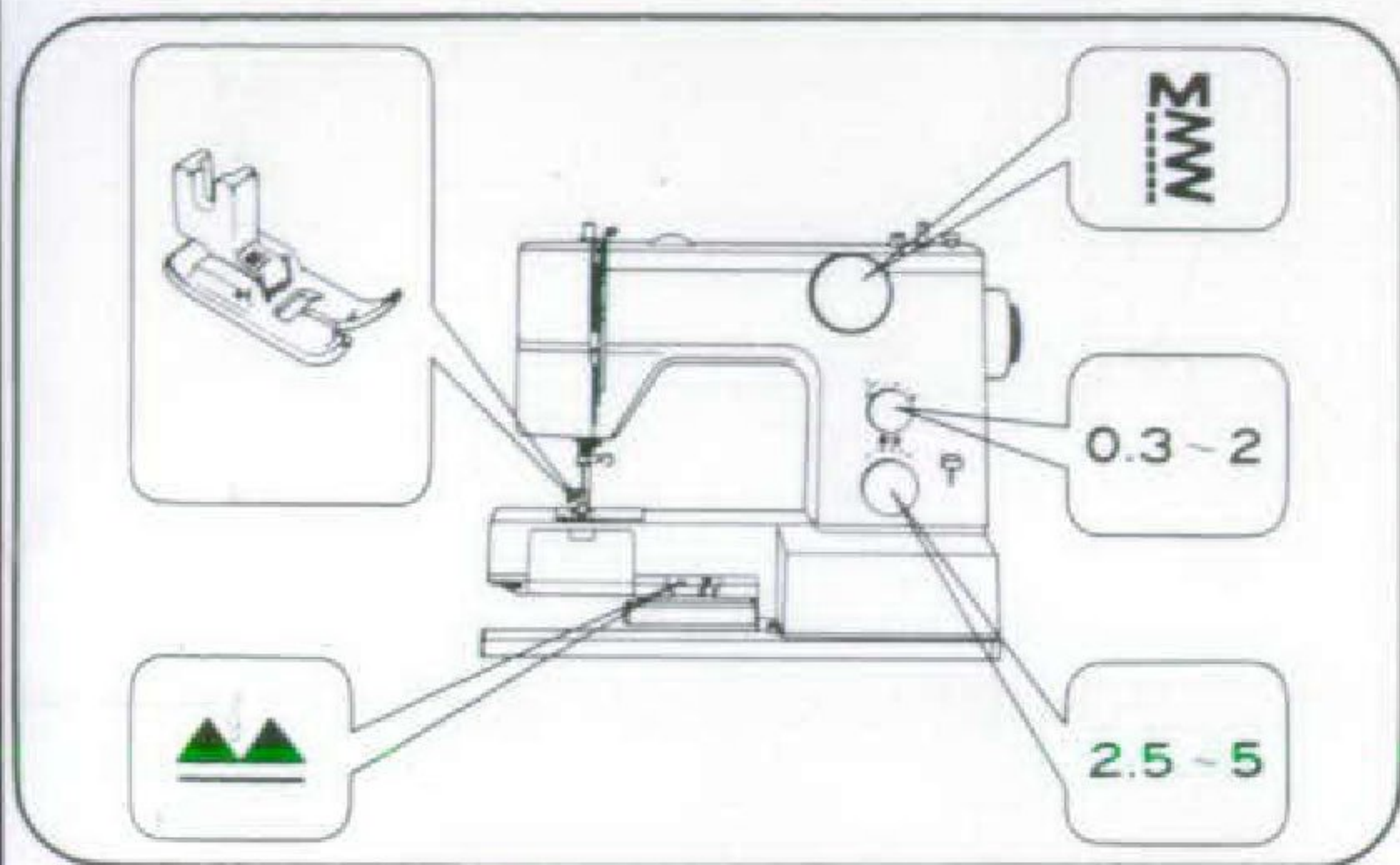
Then sew two more seams on either side.

A piece of gauze can be placed underneath to reinforce the rip.

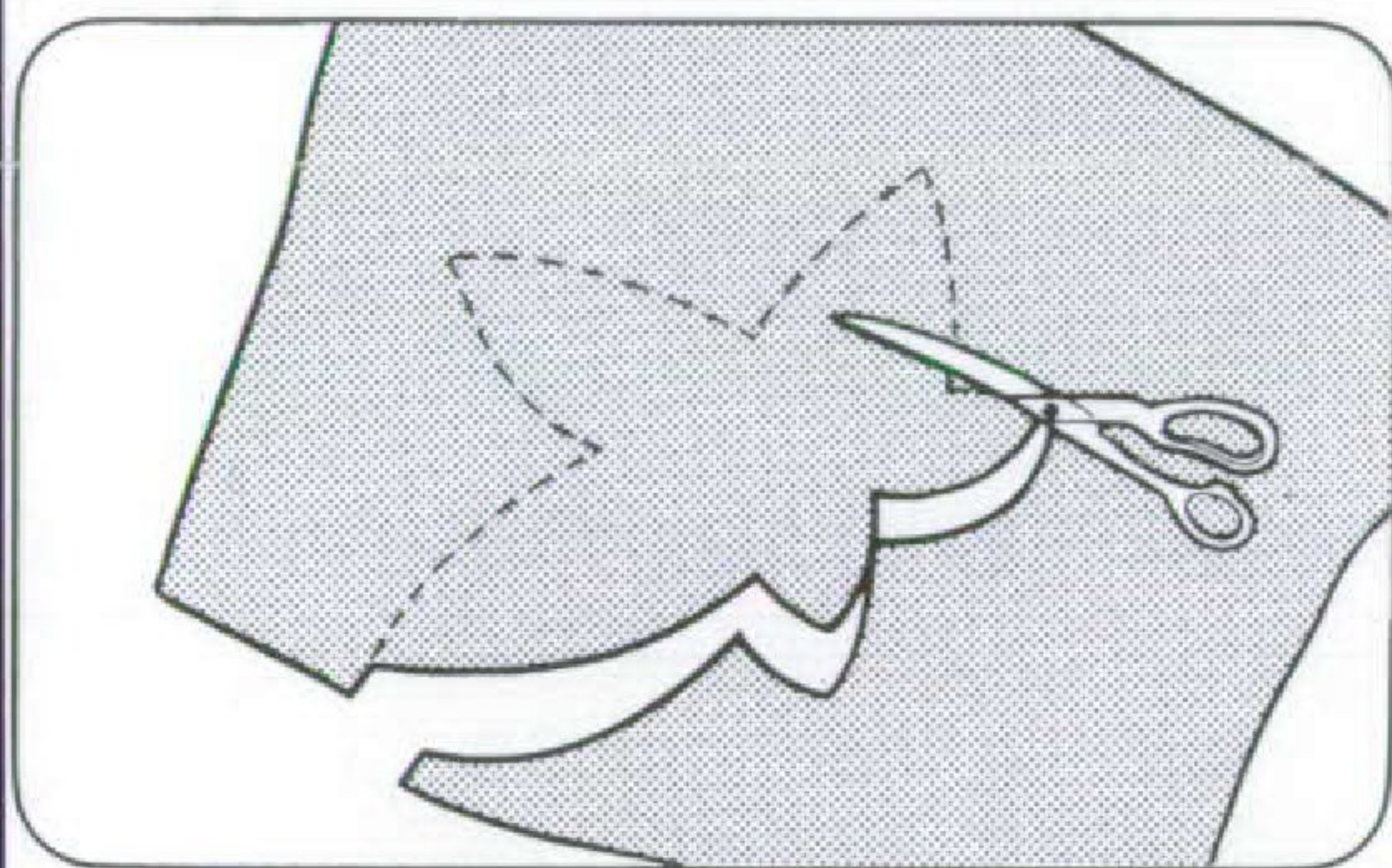


12. APPLIQUE WORK

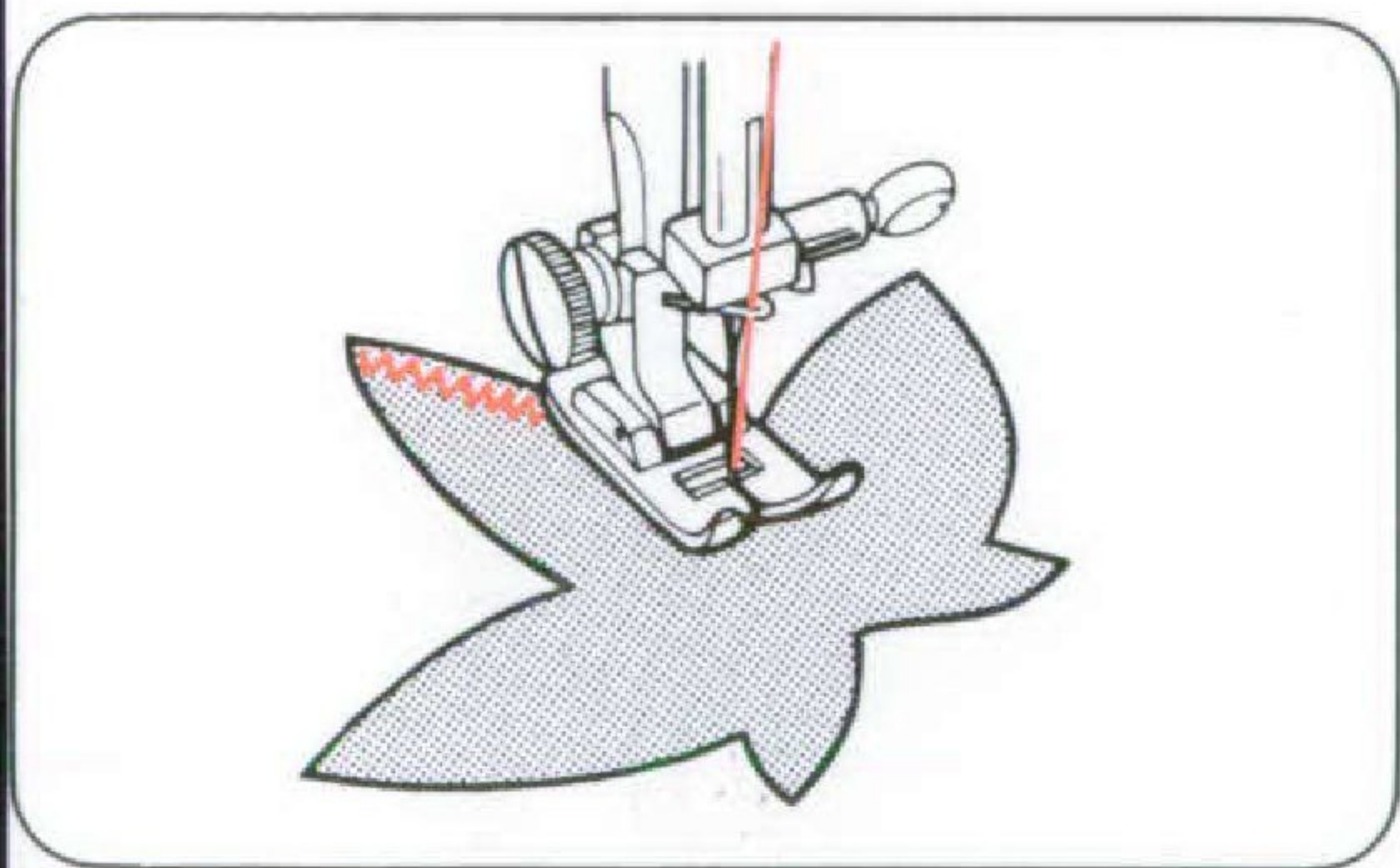
Set machine as shown.



Draw design on material to be used as an applique and cut it out. Place cut-out on base material and baste it.



Sew around outline with zigzag stitch adjusting stitch length and width according to shape and size of cut-out and type of base material.



To change direction at corners, or to sew very small circles, stop machine, positioning needle just away from edge of cut-out, lift presser foot and turn material. Lower presser foot and continue sewing.



Sew a few stitches at end with zigzag width at 0. This is to prevent unstitching.

13. EMBROIDERY

Set machine as shown.

Remove foot, and holder screw.

To avoid lower thread being pulled up, reduce upper thread tension.

For good embroidery, it is important to use correct needles and thread.

Use thin embroidery silk for upper thread and a thinner silk of same kind and color for lower thread.

Trace your design on material and center it in embroidery hoop. Make sure material is taut.

Pull out lower thread by turning handwheel towards you while holding upper thread lightly.

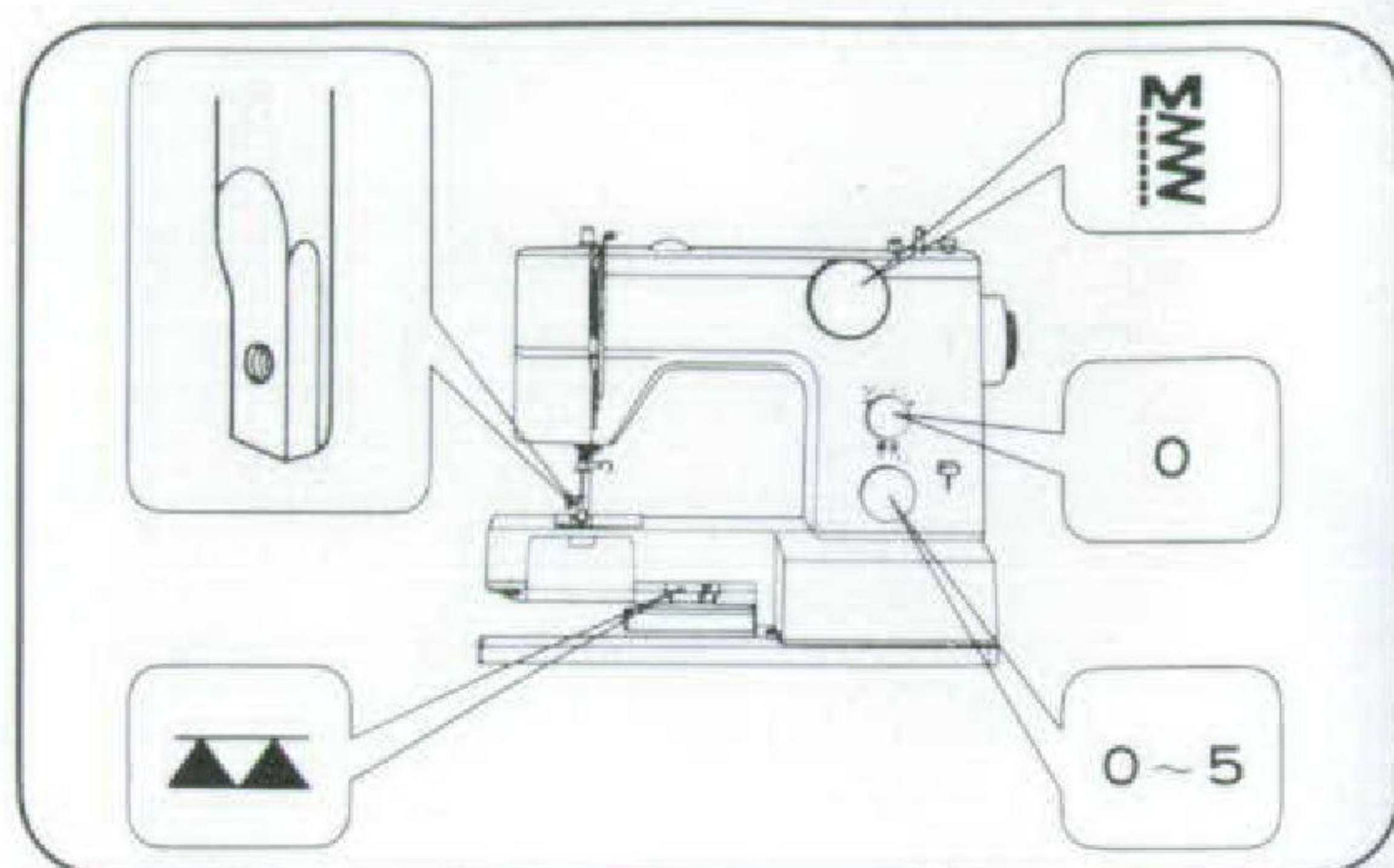
Lower presser foot lifter.

Hold both threads and start sewing along outline of design with satin stitch.

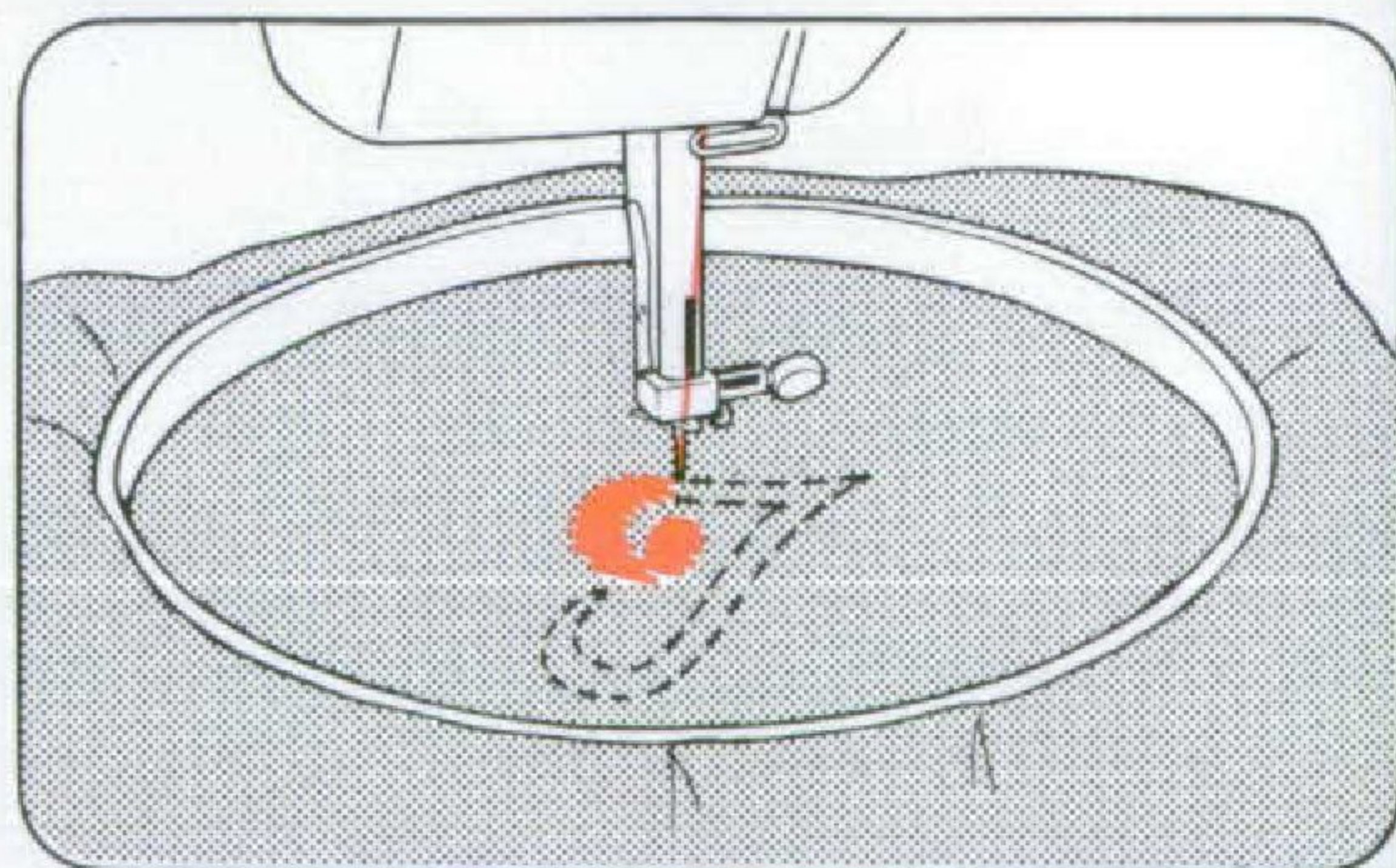
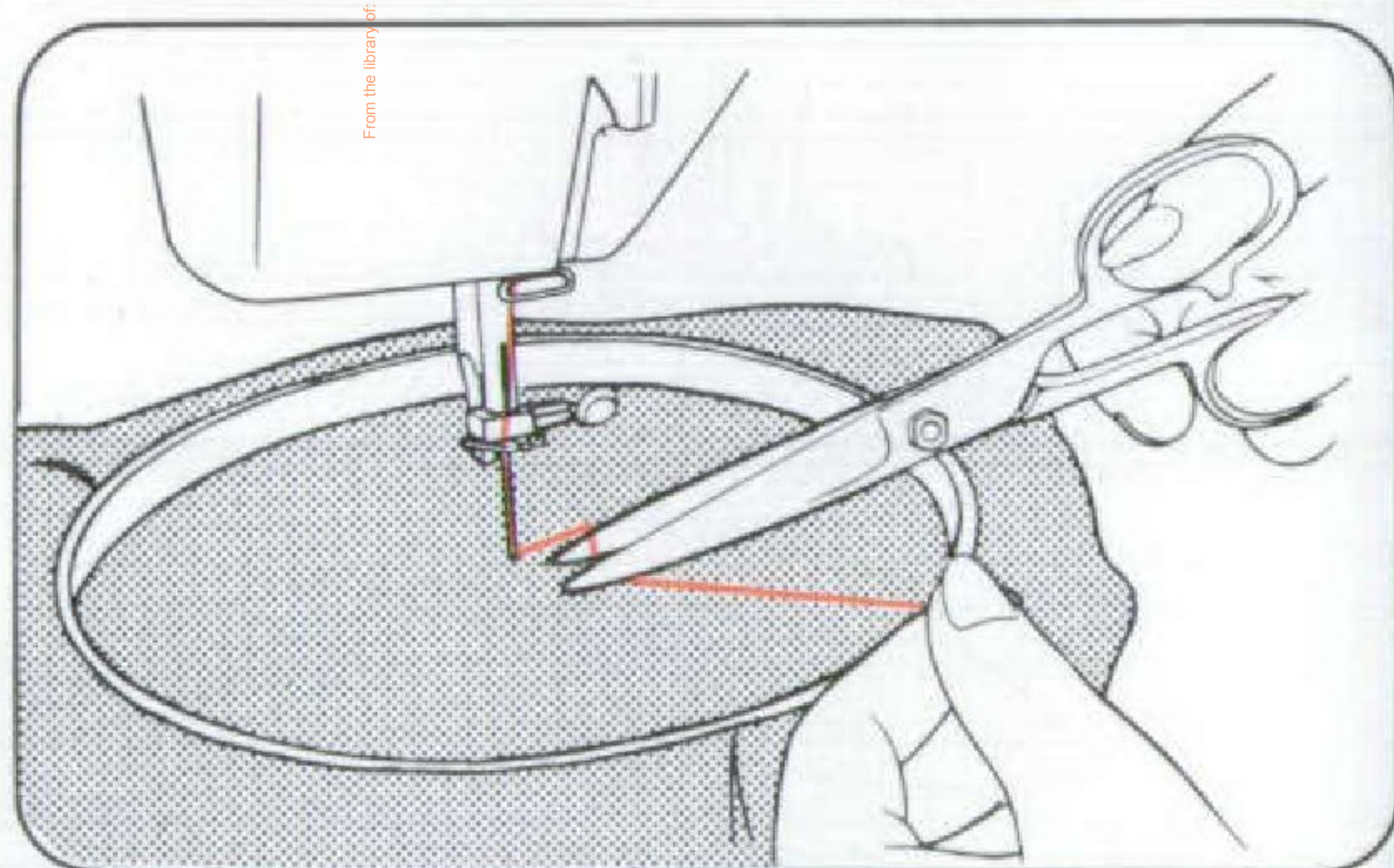
Continue sewing guiding hoop by hand.

To finish filling, sew several stitches with zigzag width at 0.

Lay typewriting paper underneath when embroidering sheer fabric.



Needle	Thread
No. 9	120~100
No. 11	100~80
No. 14	60~50



14. MAINTENANCE

Your machine requires regular cleaning and oiling for satisfactory sewing performance.

A machine which is used for a few hours a day needs to be cleaned and oiled once a month.

Cleaning

Remove foot and needle.

Remove needle plate.

Brush off all dust and lint on feed dog with cleaning brush.

Turn latches outwards.

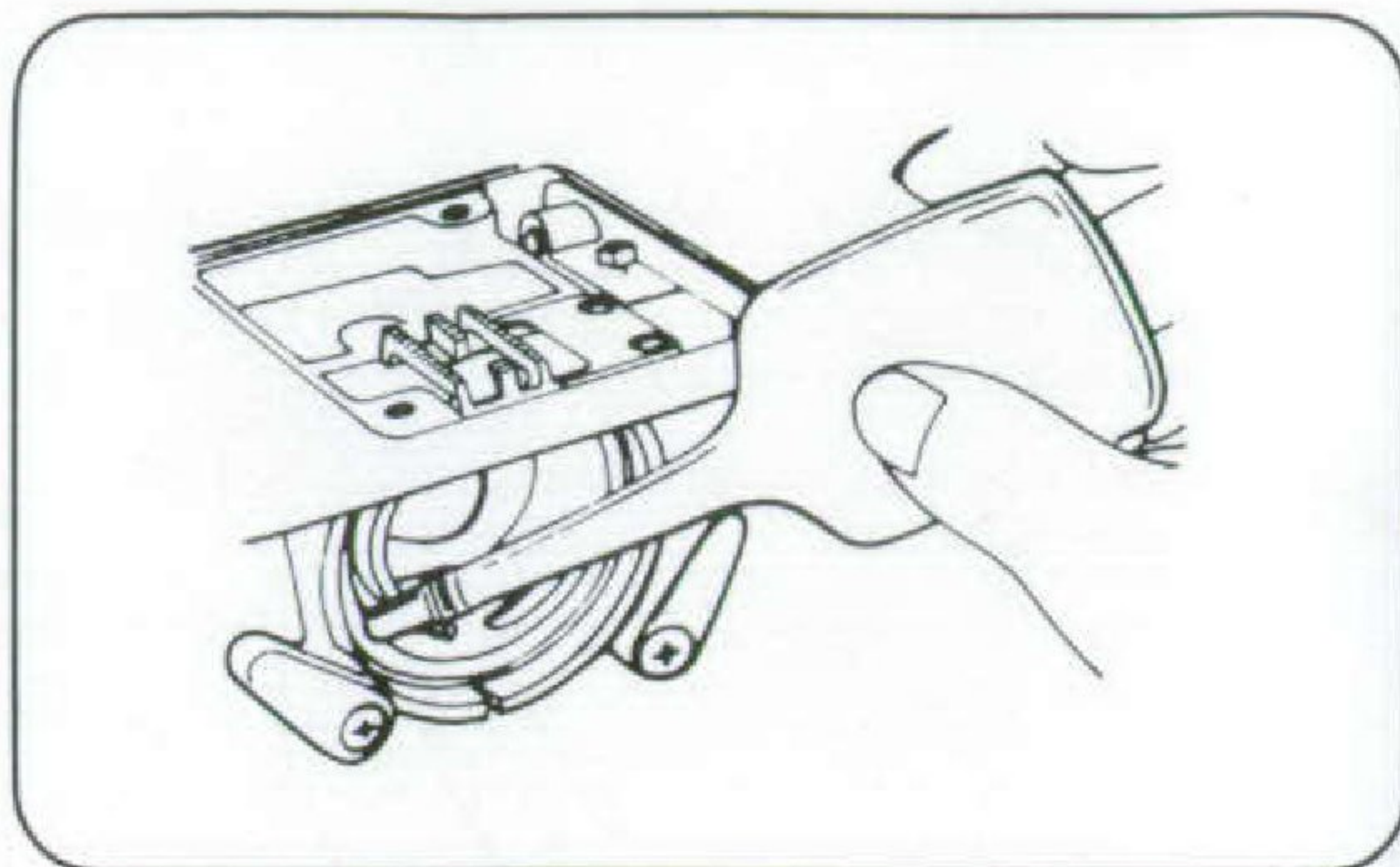
Remove shuttle race cover.

Remove shuttle. Clean shuttle race with a cleaning brush and a soft cloth.

Oiling

Use oil manufactured specially for sewing machine use. Other oils will eventually cause mechanism to jam.

Apply one drop of oil to part of shuttle where friction occurs.

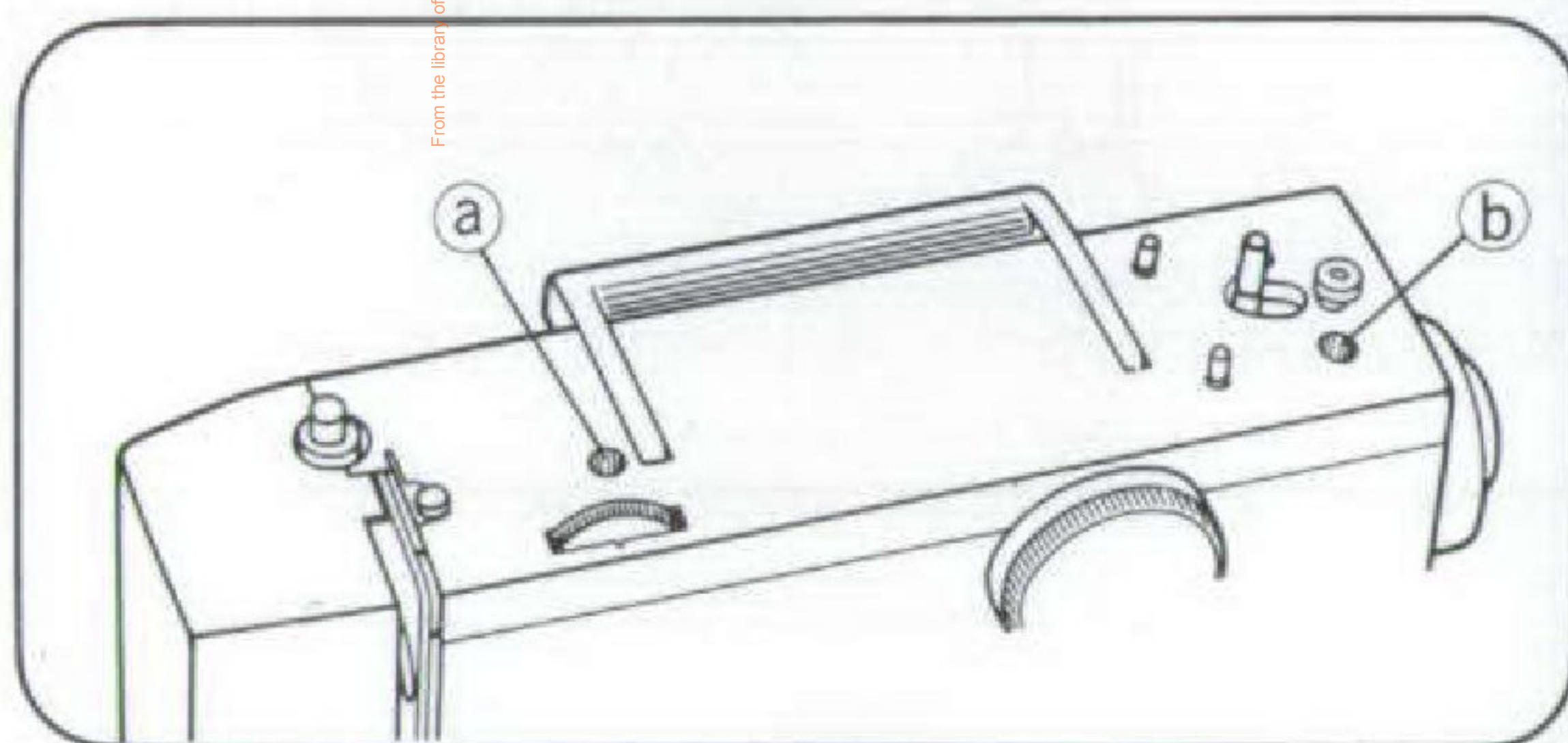
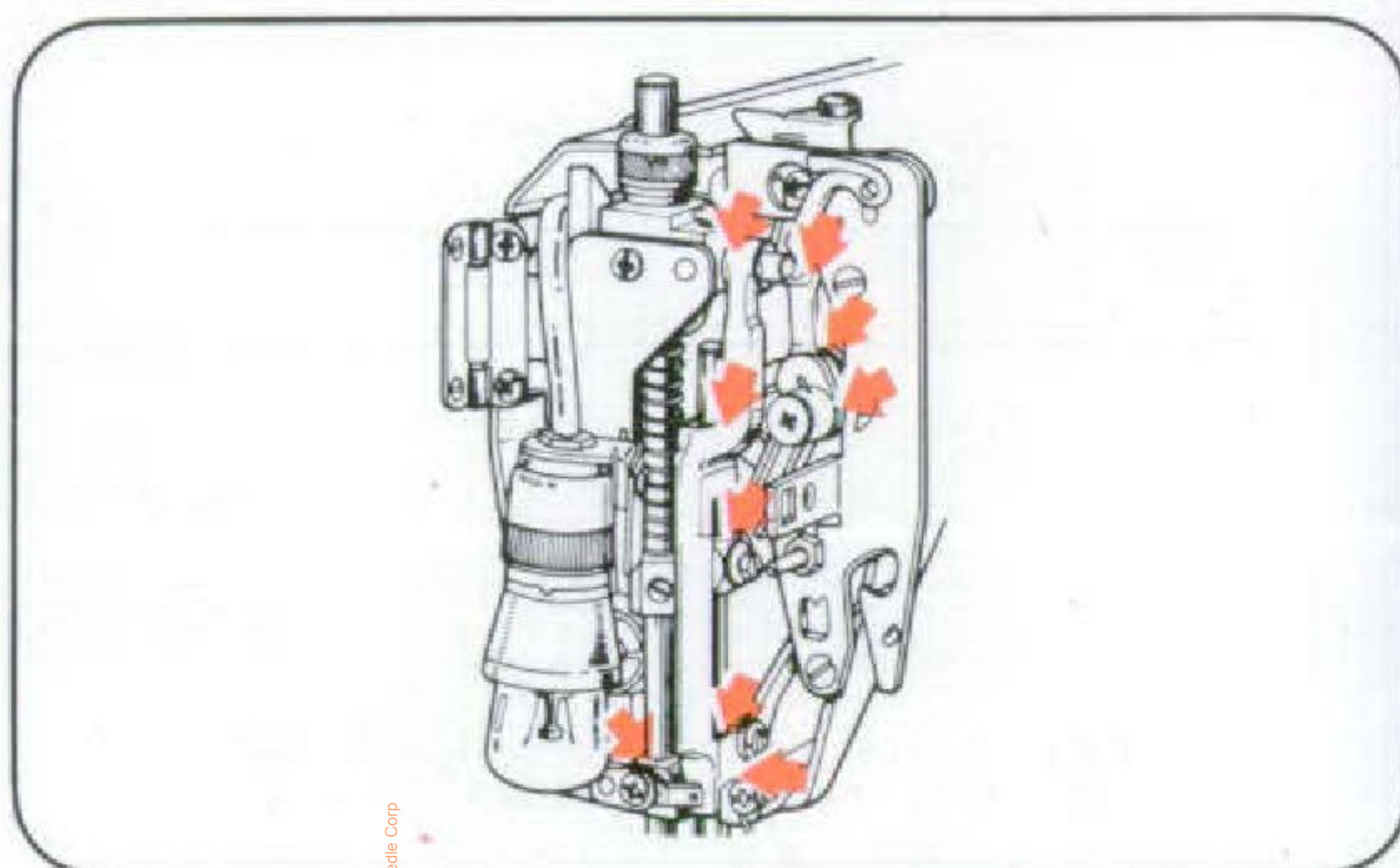


Open face cover and apply oil in the same way.

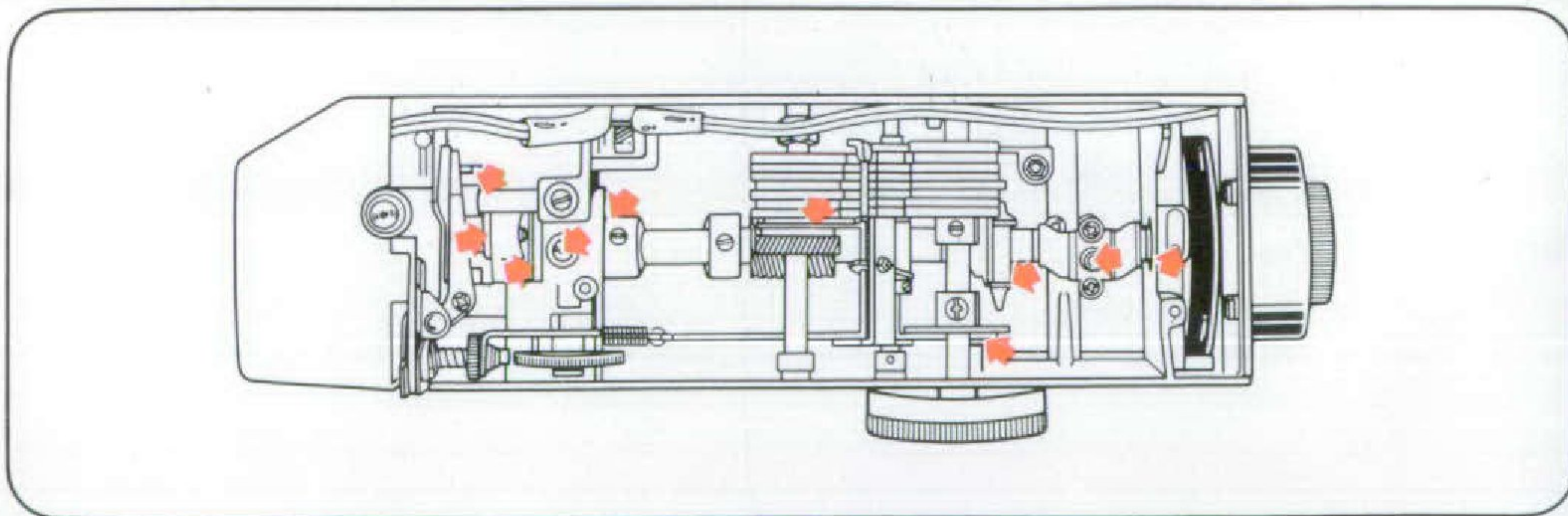
Be careful not to apply too much oil or it may stain your material and cause some sewing difficulty.

After oiling, run machine for 1-2 minutes to allow oil to penetrate to every part.

Remove top cover by loosening screws (a) and (b) with large screwdriver.



Apply one drop of oil to lubricating points indicated by arrows.



15. TROUBLE CHART

PROBLEM	PROBABLE CAUSE	CORRECTION
Breaking lower thread	Thread not wound evenly on the bobbin or not drawn up correctly Lower thread tension too tight Lint stuck in the bobbin case and inside the tension spring	P.10, P.14 P.12 Remove lint and fluff with a cleaning brush
Skipping stitches	Needle not fully inserted Needle bent Size or type of needle and thread not suitable for the material Incorrect upper threading Too much oil on the shuttle	P. 7 P. 7 P.15 P.13 P.33
Irregular stitches	Incorrect size of needle for the material Upper thread tension too loose Incorrect lower tension	P.15 P.18 P.12
The material not fed correctly	Pattern selection dial not set correctly Incorrect feed dog height Lint stuck on the feed dog	P.16 P.12 P.32

PROBLEM	PROBABLE CAUSE	CORRECTION
The material puckers	Upper or lower thread tension too tight Stitch too long for material Thread too thick Incorrect threading of upper or lower thread	P.12, P.18 P.16 P.15 P.11, P.13
Breaking needle	Needle not correctly inserted Needle bent Needle clamp screw too loose Upper thread tension too tight Needle too fine for the material Dials have been changed while the needle was down in the material Zigzag width set more than 2.5 while twin needle was attached	P. 7 P. 7 P. 7 P.18 P.15 P.16, P.19

If trouble is still apparent in the machine, please consult your nearest dealer.
Do not try to correct fault by yourself.

For adjusting the tension of any belts, please do not try to adjust it by yourself but contact your nearest dealer.

Changing Light Bulb

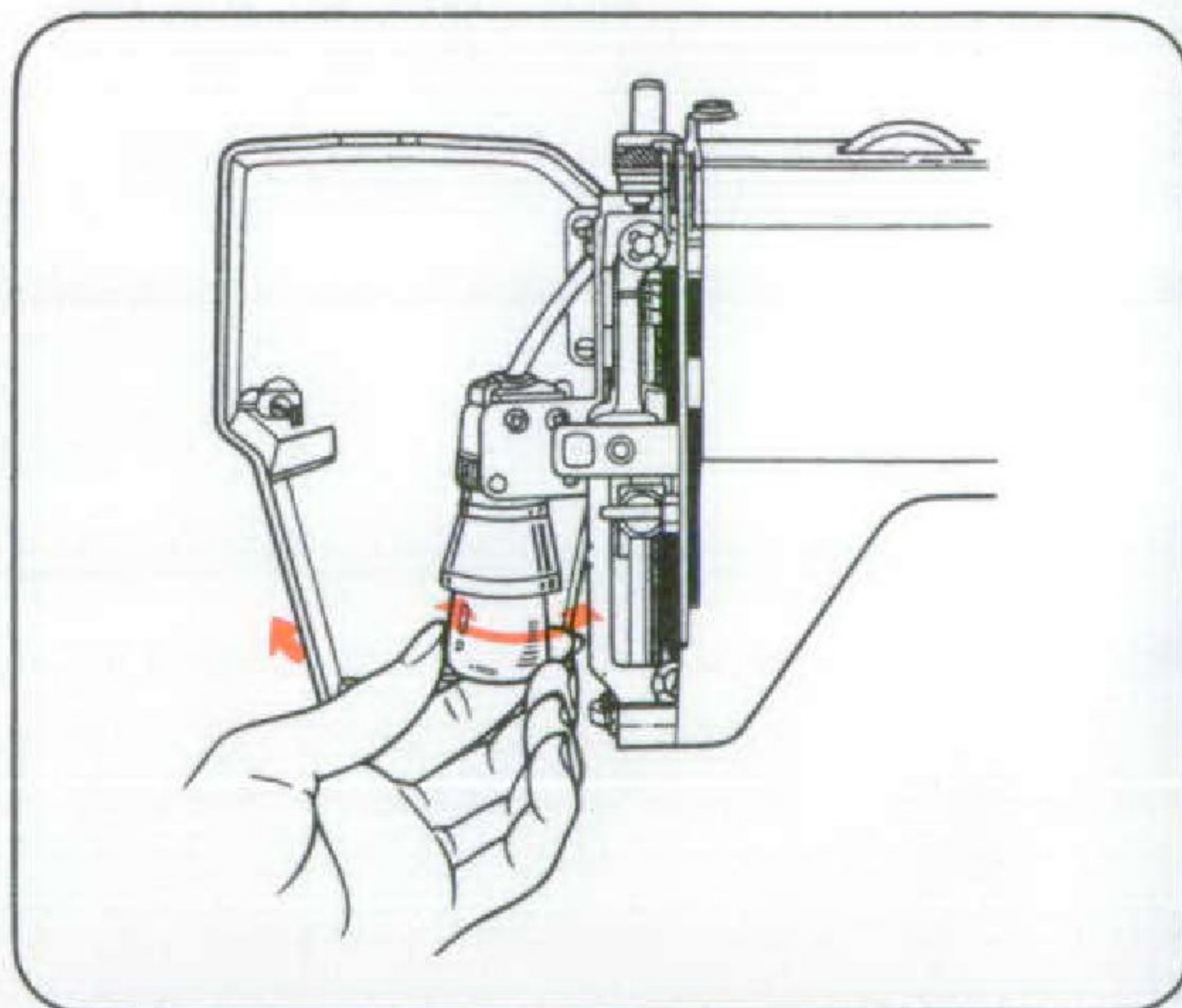
Unplug the machine.
Open face cover as shown.

Remove bulb by unscrewing it in counterclockwise.
Install a new bulb by screwing it in clockwise.

* In case face cover is fixed by a screw, open face cover after loosening a screw by screw driver.

—Important—

Do not operate with cover open.



A STITCH AHEAD OF THE TIMES

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sewing machines

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