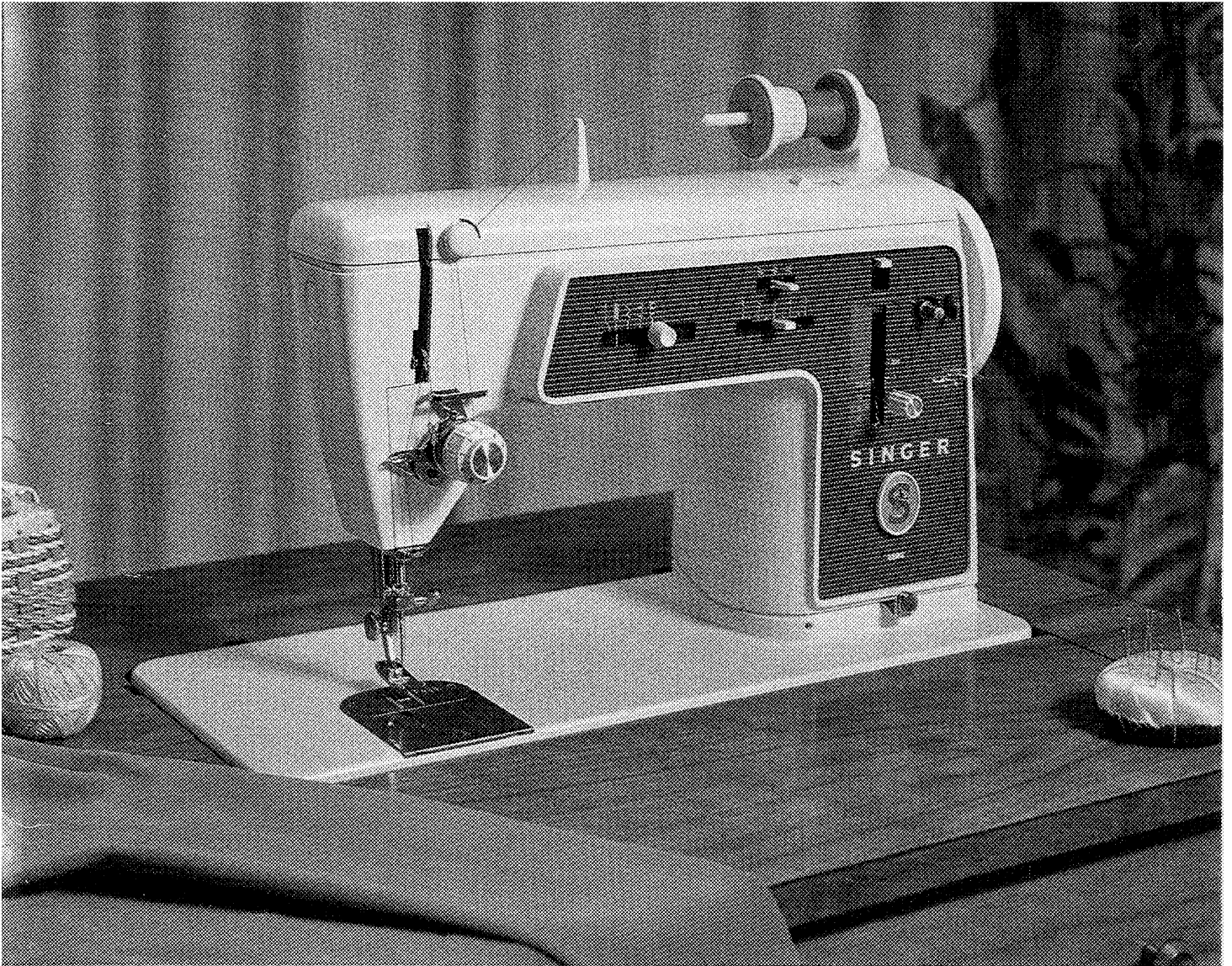
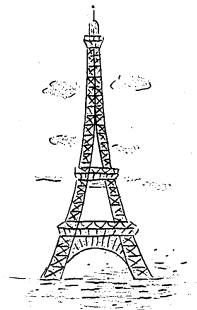


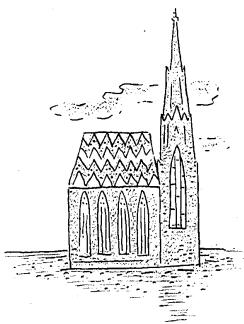
SINGER 656/676



T H E S I N G E R C O M P A N Y

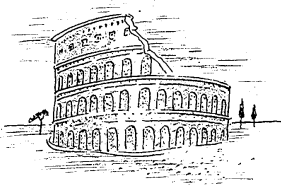


With your new
SINGER* Sewing Machine
You will be able to
follow the latest international fashion



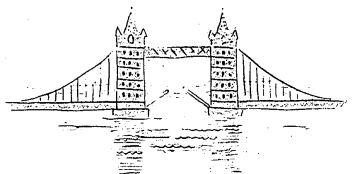
Throughout the world the woman desires to dress in a fashionable and pretty manner. Your new Singer sewing machine will help you in realizing all your desires with regard to clothing since you are owning a reliable and most versatile tool for perfect domestic dress-making. You will be delighted in combining the latest creations of the international designers with your own ideas and everybody will admire your home sewn dresses.

Make use of the numerous outstanding advantages of your new SINGER sewing machine. You only need to know the proper control of the few operating units. May we recommend that, before you begin to sew, you go through this instruction book step by step while seated at your machine and soon you will marvel at its ease of operation.



Now we wish you will get the most enjoyment from your SINGER sewing machine, being sure that you will confirm shortly:

**Sewing with SINGER —
It's the most enjoyment!**





SINGER* Service

Where ever you go you will find expert, dependable SINGER Service close at hand. Always call your SINGER SEWING CENTRE if your machine ever requires adjustment or repair. Only from there you can obtain the services of a trained Singer repair man and warranted Singer parts.

The answer to all your sewing needs is at your SINGER SEWING CENTRE. There you will find a wide choice of sewing aids, notions, sewing instructions etc.

* A Trademark of THE SINGER COMPANY

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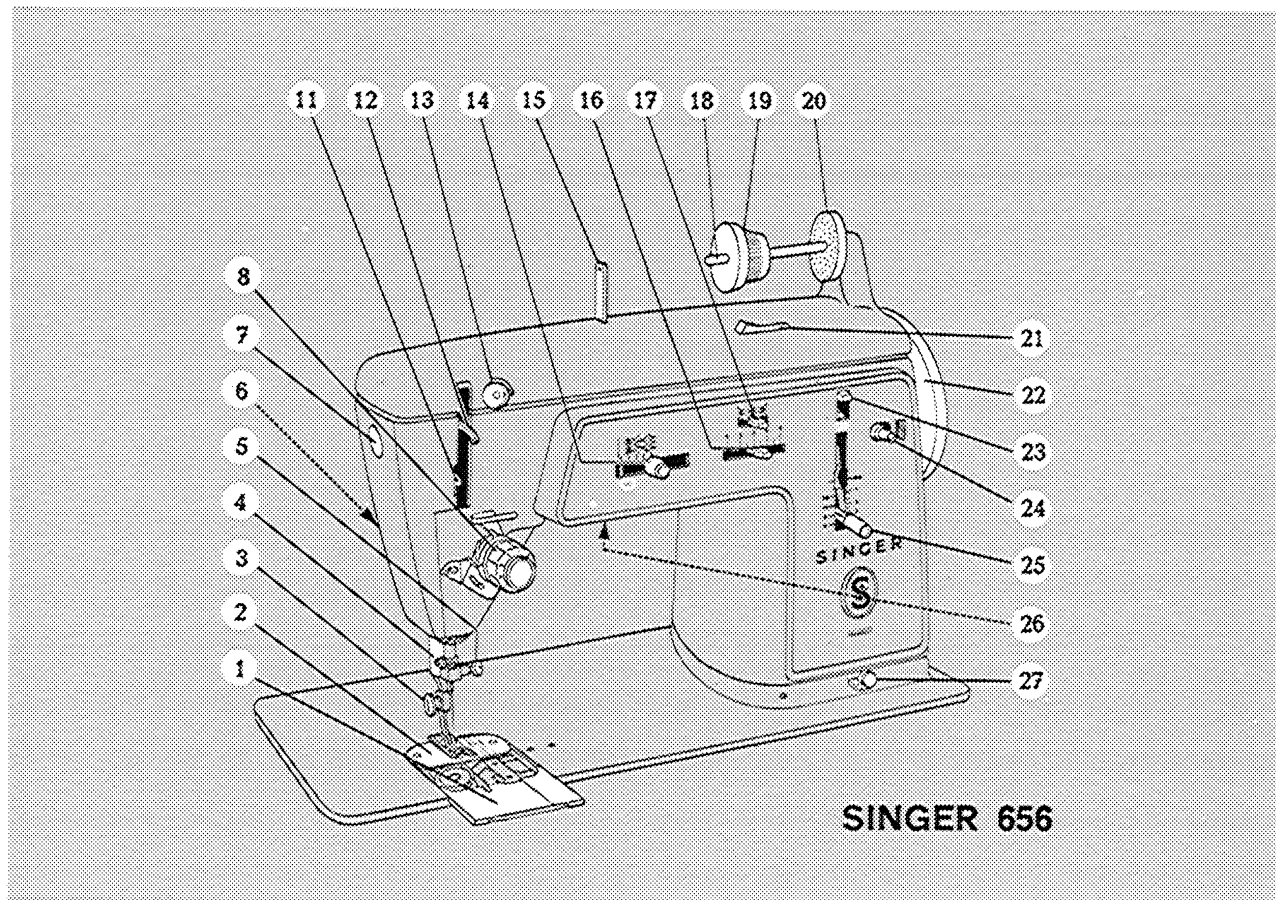
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For Prompt Information

(A detailed key word index can be seen at the end of this booklet)

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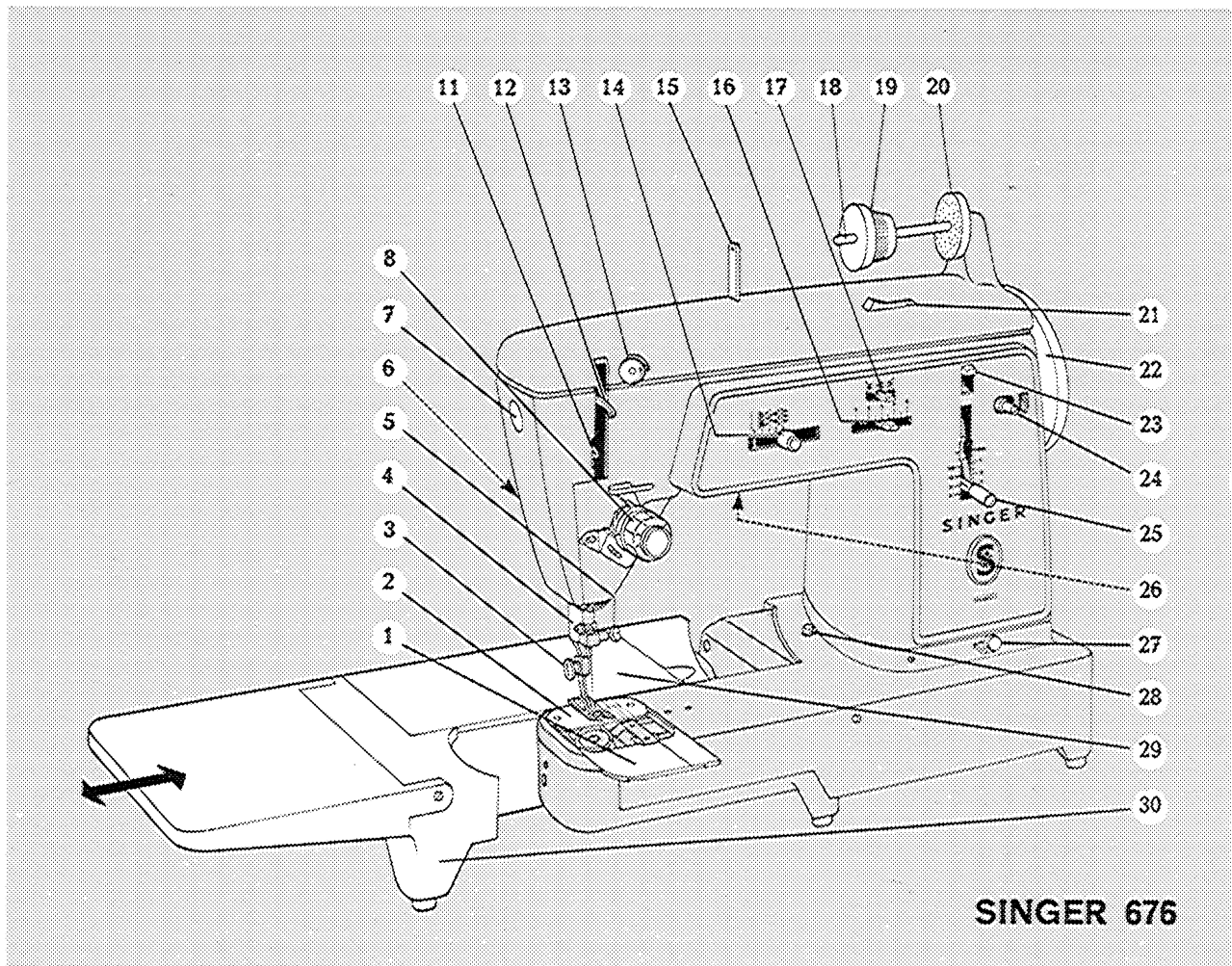
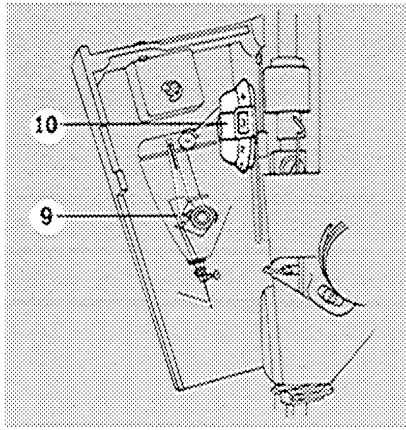
The Principal Parts of Your SINGER Sewing Machine



SINGER 656

Principal Parts of 656 and 676 Machines

- | | |
|--|----------------------------------|
| 1 Slide Plate | 17 Needle Position Selector |
| 2 Throat Plate | 18 Spool Spindle |
| 3 Presser Foot Screw | 19 Thread Lead-off |
| 4 Presser Bar | 20 Spool Seat |
| 5 Needle Clamp | 21 Light Switch |
| 6 Presser Bar Lifter Lever | 22 Hand Wheel |
| 7 Pressure Release Button for
Stitch Pattern Selector | 23 Bobbin Winder Engaging Lever |
| 8 Needle Thread Tension | 24 Bobbin Winder Spindle |
| 9 Threading Chart | 25 Stitch Length Regulator |
| 10 Pressure Regulating Dial | 26 Built-in Sewing Light |
| 11 Chainstitch Thread Guide | 27 Bobbin Winder Pre-tension |
| 12 Link Type Thread Take-up Lever | |
| 13 Needle Thread Pre-tension | |
| 14 Stitch Pattern Selector | |
| 15 Thread Guide | |
| 16 Stitch Width Selector | |
| | For 676 Machine only |
| | 28 Cloth Plate Disengaging Lever |
| | 29 Attachment Box Lid |
| | 30 Detachable Cloth Plate |



SINGER 676

To Remove and Replace Detachable Cloth Plate

To detach cloth plate from machine, press cloth plate disengaging button 28 on machine bed and withdraw plate. Replace cloth plate in same manner, locating two pins in plate with corresponding holes in machine bed. Push cloth plate to right until it snaps in locked position.

Electric Drive

Before setting the machine into operation, be sure that the voltage and cycles stamped on the electrical nameplate **B** are within the range marked on the electric meter installed by the local power company.

To plug in the machine, push 3-pin terminal plug **C** onto 3-pin terminal block at the right end of machine. Then connect plug **A** to electrical outlet.

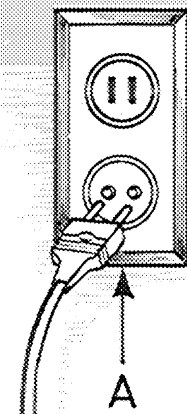
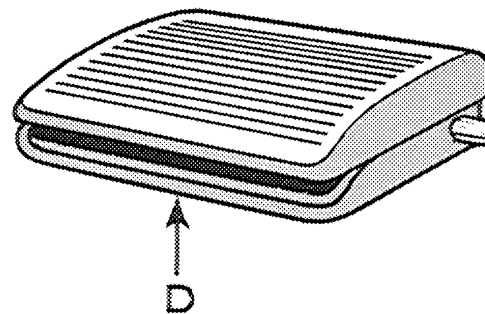
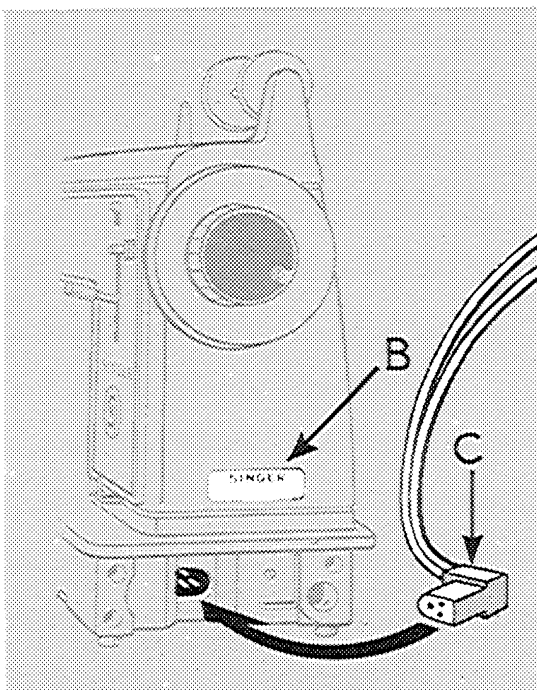
Foot Controller

The foot controller sets the machine into operation and regulates its speed. The harder you press the pedal **D**, the faster the machine will sew until the machine reaches its top speed.

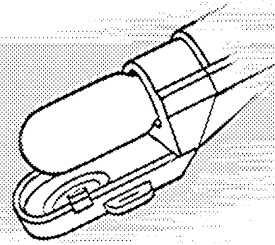
Practise operating the machine without thread until you become accustomed to guide the material and to regulate the speed.

Information for 656 G 14 Machine

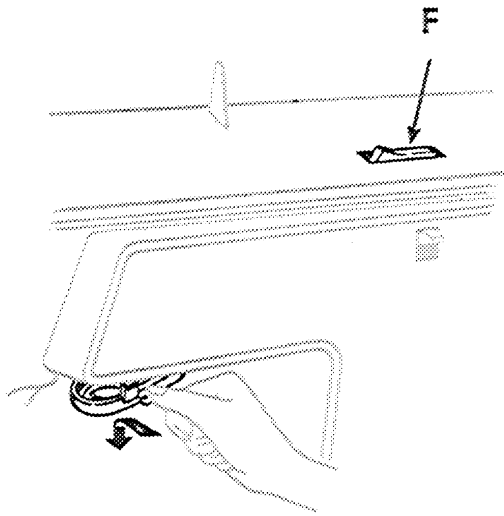
The 656 G 14 machine is equipped with a special hand wheel which can be used for motor and treadle drive. Therefore, the machine can be changed to treadle drive additionally.



SINGER Sewing Light



The built-in sewing light is turned on or off by means of light switch F.

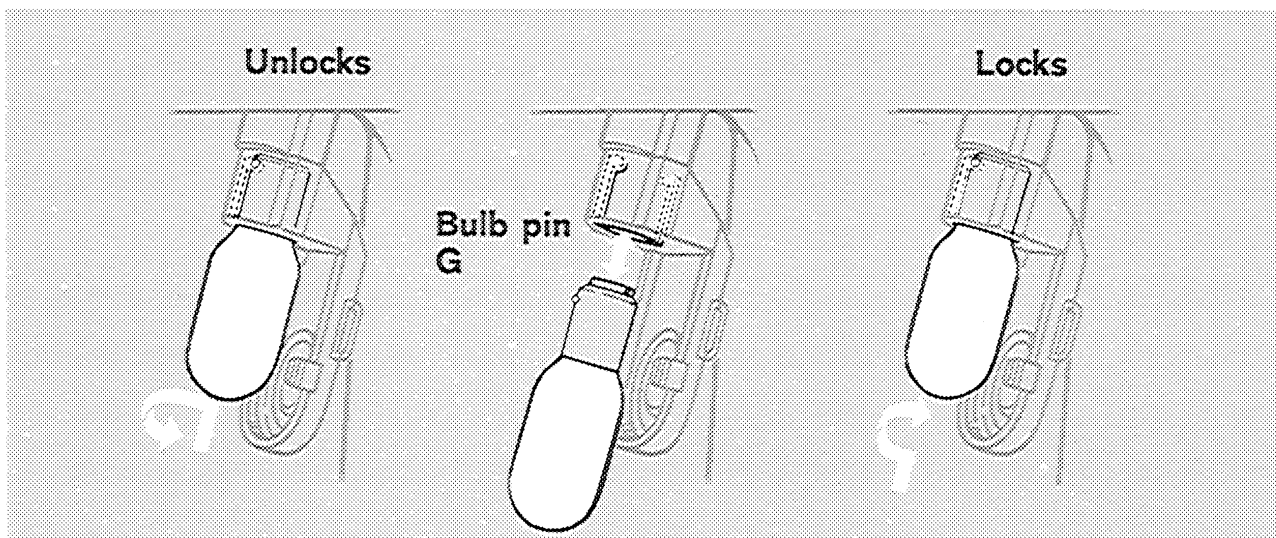


To change the light bulb

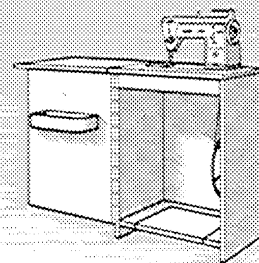
Disconnect plug from electrical outlet before removing old bulb. With thumb of right hand, push in and down on tab of light lens (see illustration).

Do not attempt to unscrew bulb out of socket. Press it into socket and at the same time turn bulb over in direction shown to unlock bulb pin G. Withdraw bulb.

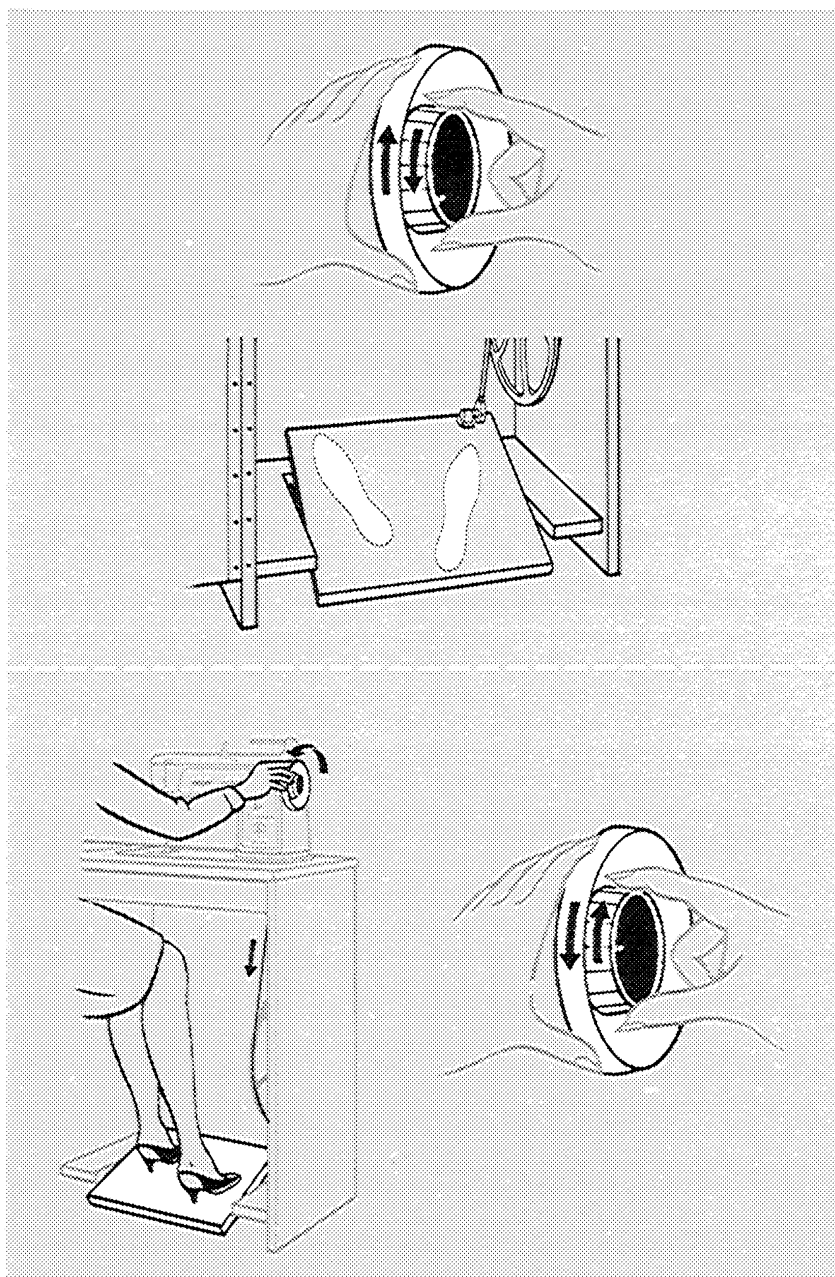
Press new bulb into socket, with bulb pin G entering slot of socket, and turn it over in direction shown to lock bulb pin G in proper position.



Treadle Drive (For 656 Machine only)



In case that you do not have any experience in sewing with treadle drive — first it is necessary to become familiar with this type of drive.



Loosen stop motion screw and place both feet on treadle.

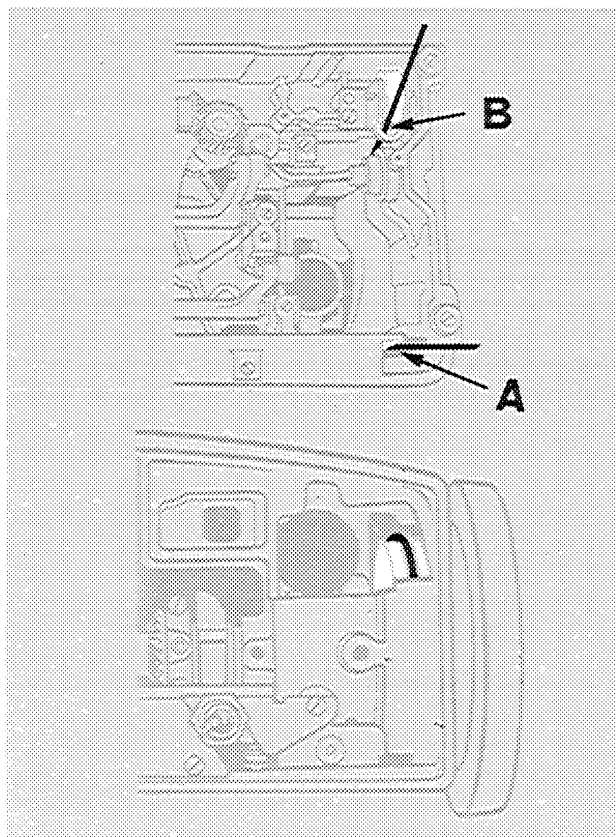
Turn hand wheel over toward you, allowing feet to move freely and lightly with motion of treadle. Practise this motion until you are able to re-start machine with hand wheel turning over toward you. Then tighten stop motion screw for normal machine drive.

To Replace Belt

Remove arm top cover (as described on page 77).

Insert end of belt into cutout A and lead to top so that it enters groove in hand wheel. Lead belt around hand wheel and down through guide of treadle belt idler pulley bracket B.

Lead belt around band wheel in cabinet. Join both ends of belt by means of belt clip. Tension on belt should be only heavy enough to keep belt from slipping. Replace arm top cover.

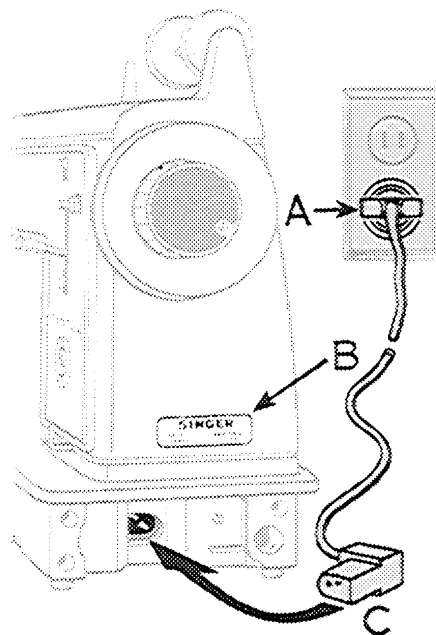


Connection of Sewing Light

Before inserting electric plug A, be sure that voltage stamped on nameplate B is within range marked on the electric meter installed by the local power company.

Electrical Connection for Machine. Push 3-pin terminal plug C onto 3-pin terminal block at right of machine and connect plug A at other end of cord to electric outlet.

Bulb replacement is described on page 7.

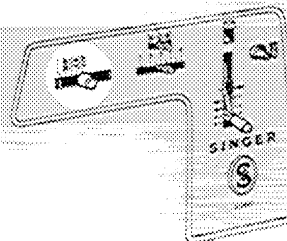


Information for 656 G 14 and G 15 Machine with Selective Motor and Treadle Drive

The 656 G 14 and G 15 machines are equipped with a special hand wheel, which can be used for motor and treadle drive. Therefore, both machine models can be changed either to treadle or electric drive additionally.

When changing over from treadle drive to electric drive, the belt has to be removed from the band wheel in the cabinet by throwing off toward cabinet wall.

Stitch Pattern Selector



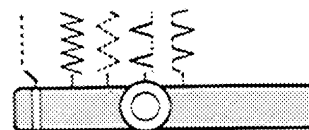
This button controls the pattern of your stitches and must be set before you start the machine for any purpose.

Description

Stitch Pattern

Setting

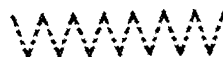
The **straight stitch** — is used as basic stitch for all types of utility sewing.



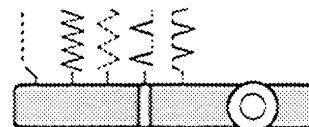
The **zig-zag stitch** — is a versatile stitch and can be used for buttonholes, button sewing, seam finishing, applique work etc.



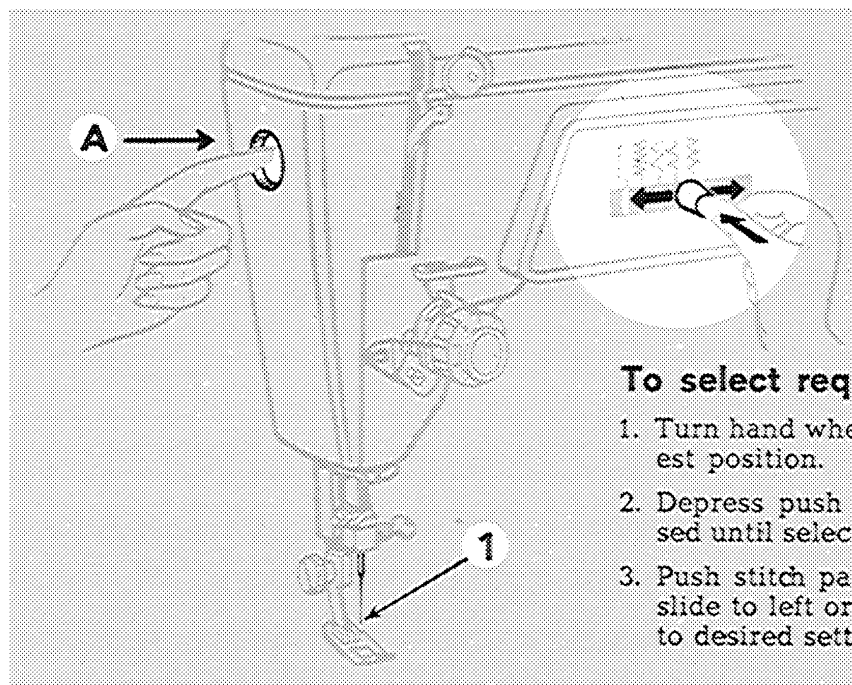
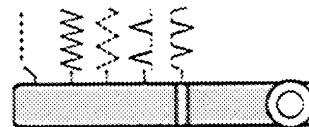
The **multiple-stitch zig-zag** — is well suited for fastening elastic and for all types of household mending.



The **blind stitch** — can be used for producing hems, seam finishing etc.



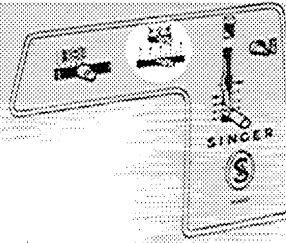
The **overedged seam (stretch stitch)** — is appropriate for use in producing and finishing of seams in elasticized fabrics.



To select required stitch pattern

1. Turn hand wheel until needle is at its highest position.
2. Depress push button A and keep depressed until selection is completed.
3. Push stitch pattern selector button in and slide to left or right to bring indicator line to desired setting.

Needle Position Selector and Stitch Width Selector



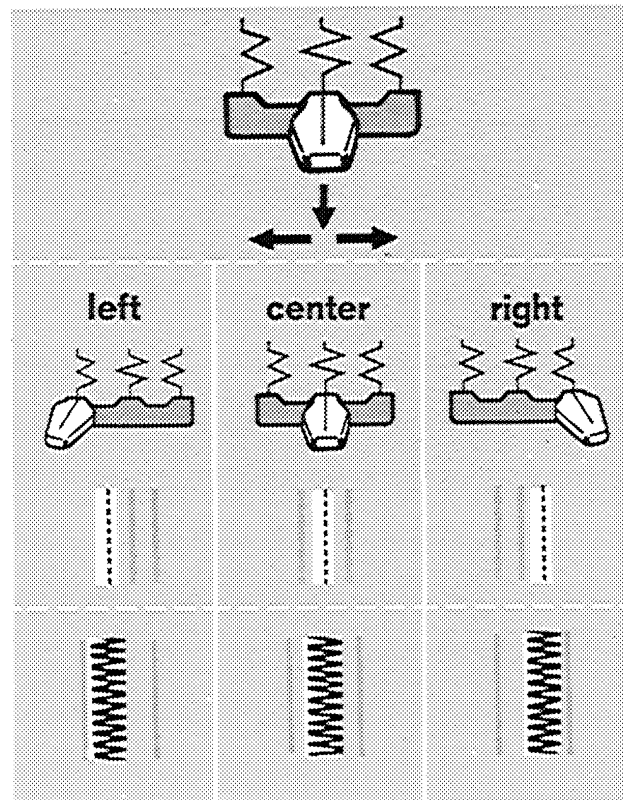
Needle Position Selector

The needle position selector sets the needle position (center, right or left) for the placement of both straight and zig-zag stitching.

Normally, you will use the center needle position. The left or right needle positions are only used when special placement of stitching is desired. For example: Buttonholes, button sewing.

When zig-zag stitching, the right and left needle positions are only effective at stitch widths less than 5.

Needle Position Selector: To set the needle position



Stitch Width Selector

This selector controls the stitch width.

Straight Stitch Setting: 1 (zero width)

Zig-Zag Width Settings: 2 to 5

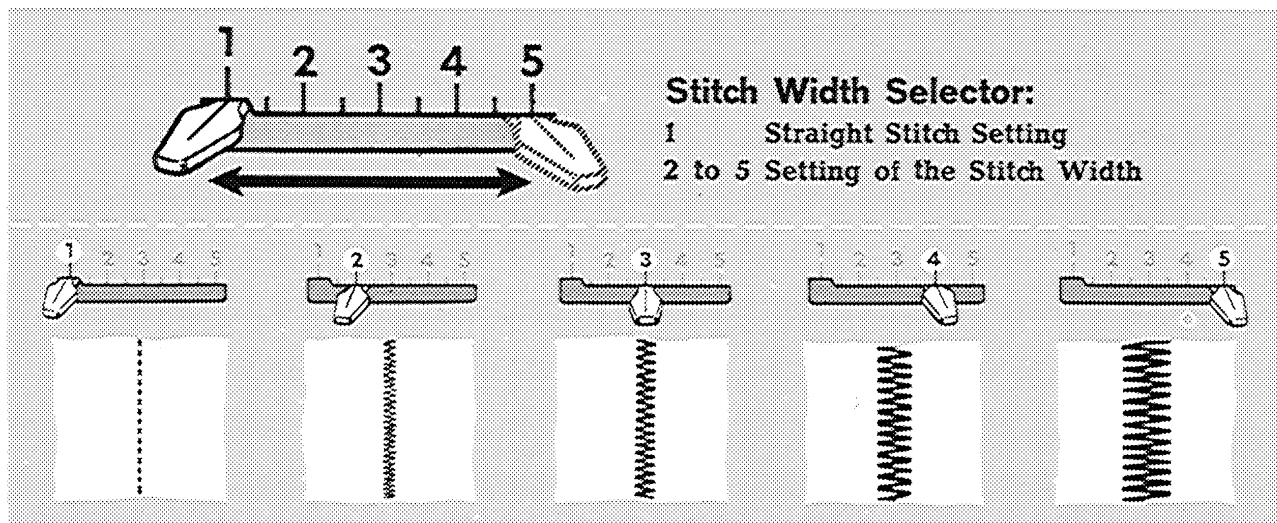
How to set the selectors

To position, depress levers and slide them left or right to the desired settings. Do not make any adjustments while the needle is in the fabric. Numerals and markings indicate the settings, but intermediate ones may also be used.

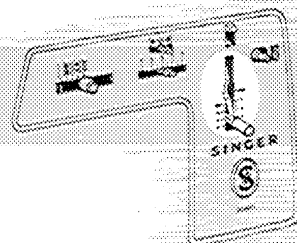
Stitch Width Selector:

1 Straight Stitch Setting

2 to 5 Setting of the Stitch Width



Stitch Length Regulator



This lever does two jobs: It controls the stitch length and lets you stitch either forward or in reverse direction.

The numerals on either side mean:

Left hand side (20 — 6):
Number of stitches per inch.

Right hand side (1 — 4):
Stitch length in millimeters.

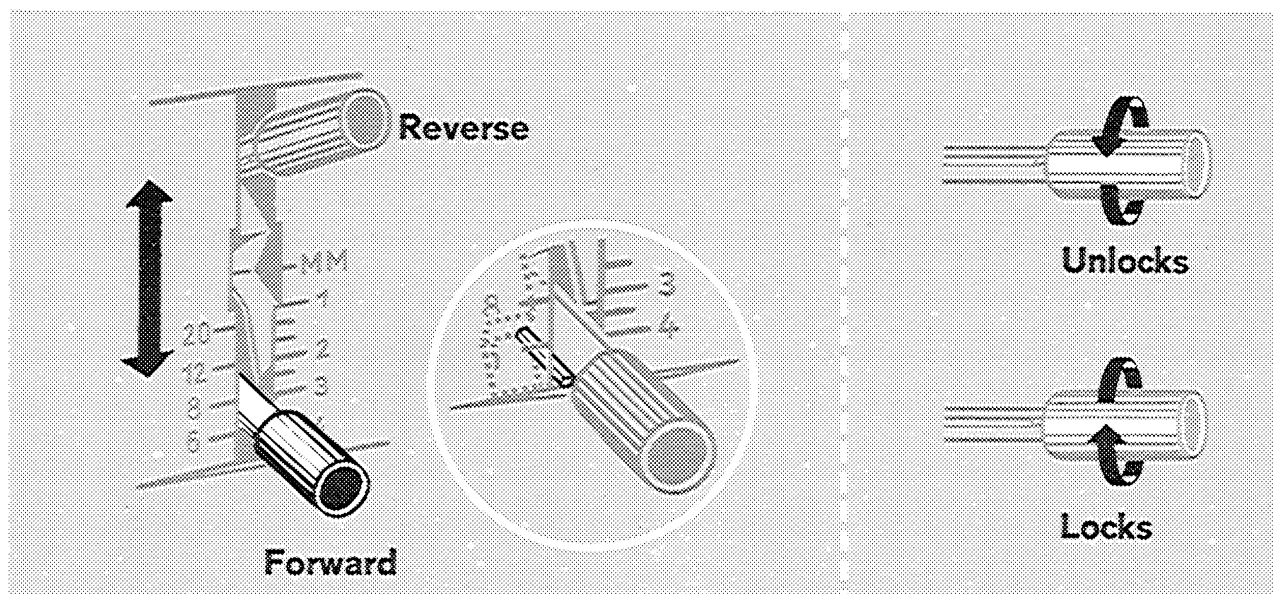
A superfine control can be made in case of stitch length less than 1 mm or stitches per inch (20).

The greatest stitch length, 4 mm (6 stitches per inch), can be locked in place when stitching folds, pleats or multiple layers of heavy fabric.

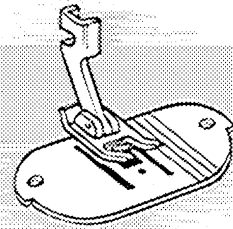
To set stitch length

Loosen thumb nut by turning to left. Position lever for desired stitch length. Tighten thumb nut by turning to right.

By raising the stitch length regulator to the highest point, reverse stitching is accomplished at the same stitch length as forward. If reverse stitching is desired with locked stitch length position at 4 mm (6 stitches per inch), turn thumb nut to the left until stitch length regulator can be adjusted to its highest point at reverse stitching.



Throat Plate and Presser Foot



Various throat plates and presser feet are included in the attachments that come with your SINGER sewing machine. They have been designed to help you do every kind of sewing easily and perfectly.

What is more, both parts can be attached and removed with no trouble at all: The throat plate is held by two magnets and the presser foot is held by a thumb screw.

1 General Purpose Throat Plate

Because of the wide needle hole this throat plate can be used for all utility sewing which includes straight and zig-zag stitching. It **must** be used for:

- Alternating between straight and zig-zag stitching, or
- Placing a line of straight stitching to the left or right of center, or
- Sewing with two needles.

Normally, the general purpose presser foot or special purpose presser foot are used with this throat plate.

2 Straight Stitch Throat Plate

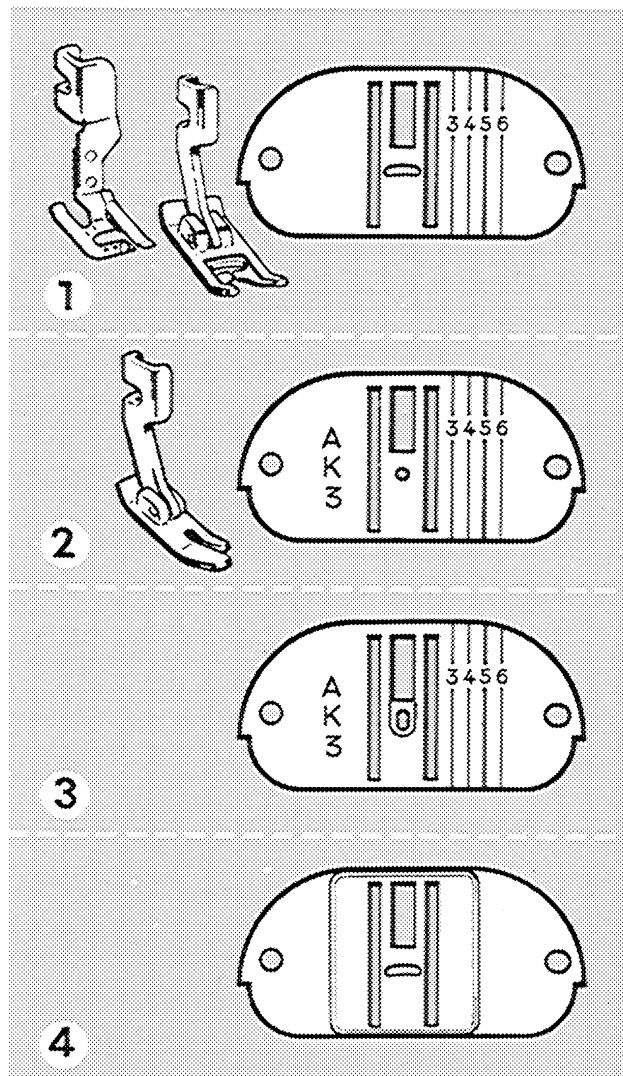
It has a round needle hole and can only be used with center needle position and with stitch width selector set on straight stitching (position 1). Together with the **straight stitch presser foot**, this throat plate should be used for seams where perfect accuracy is needed. For example: Precision stitching of a fold, curved edges, edge stitching etc. For best sewing results, these fittings should be used for stitching on delicate or spongy fabrics.

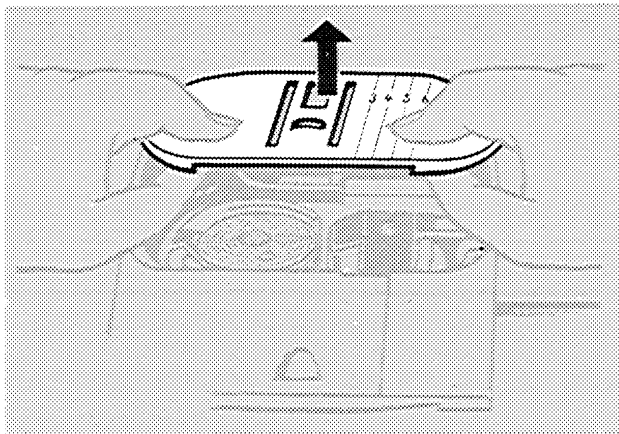
3 Chainstitch Throat Plate

For instructions, see page 35.

4 Feed Cover Plate

This feed cover plate raises the fabric so that the feed dog cannot feed the material. It is used for button sewing, darning and embroidery work.



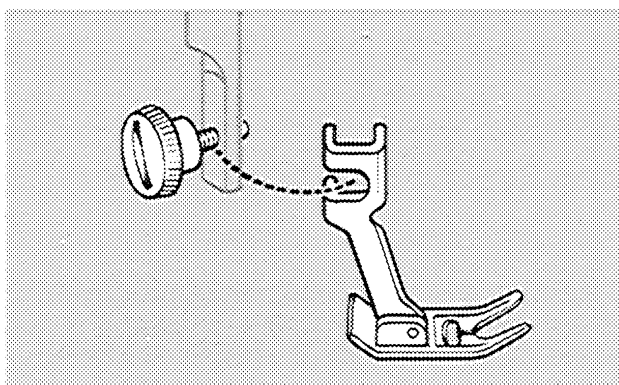


To Remove the Throat Plate

Raise presser bar. Turn hand wheel to raise needle to its highest position. Open slide plate. Place both thumbs under throat plate and lift plate from machine.

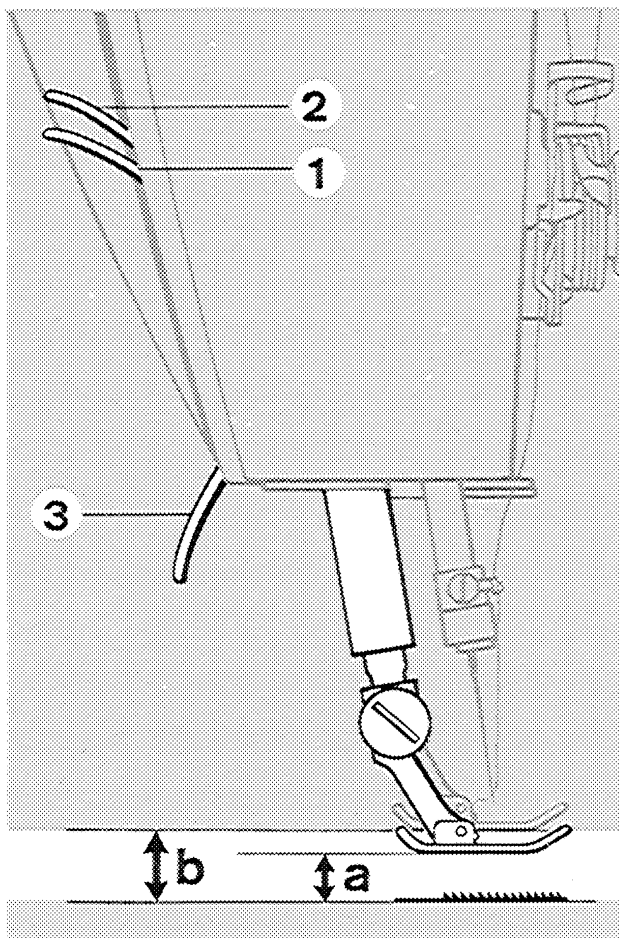
To Insert the Throat Plate

Place throat plate in position over two clamping pins and release. The magnets draw the throat plate into proper position. Close slide plate.



To Change the Presser Foot

Turn hand wheel to raise needle to its highest position. Raise presser foot. Loosen presser foot screw until the presser foot can be slipped from around the presser bar.

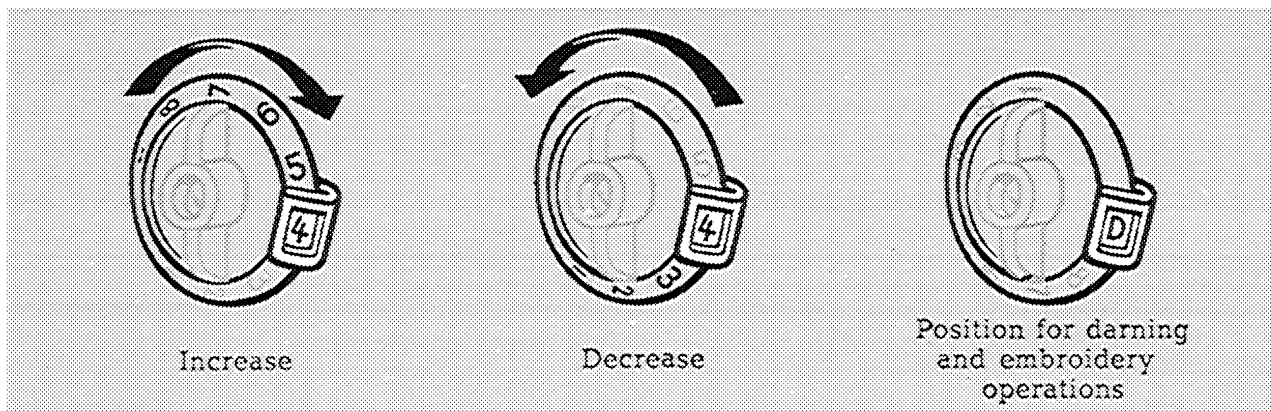


Presser Foot Lifter Lever

A normal lift of the presser foot lifter lever brings it up into position 1 and by doing so, the presser foot releases opening a. Normal fabrics can be easily placed under the presser foot.

For easier placing of thicker fabrics, the presser foot lifter lever can be raised further to position 2. This raises the presser foot to its highest position b.

When raising presser foot lifter lever into position 2 you must overcome a spring pressure and keep the lifter lever in position since it does not lock in this position; but when released the spring pressure returns the lifter lever into position 1. Be sure that the presser foot lifter lever is set on position 3 before sewing and not left in position 1 in error.



Pressure Dial

This dial regulates the pressure that the presser foot exerts on the fabric. Smooth, even handling of several thicknesses of fabric results when pressure is correctly regulated. Heavy pressure is for thick fabric and light pressure is for thin fabric.

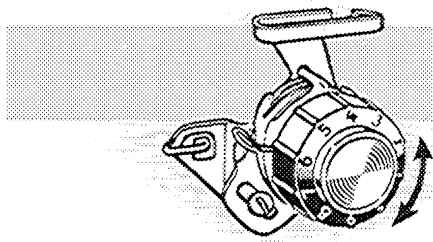
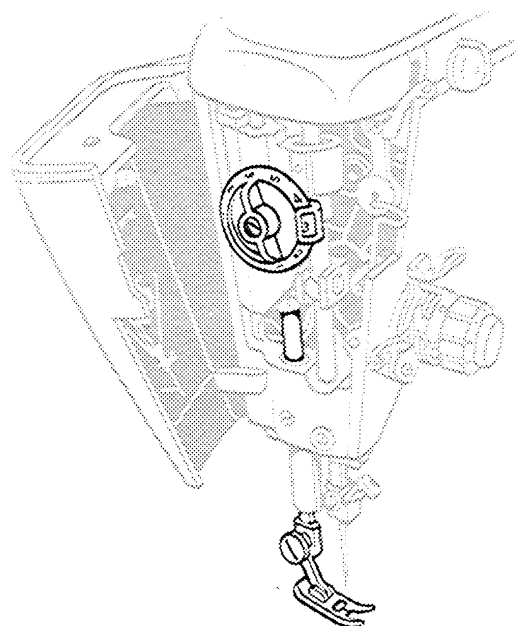
Too light a pressure will result in irregular feeding which affects both quality of stitch and evenness of seams.

Too heavy a pressure not only affects stitch and seam quality but will also mar smooth surfaces and pile fabrics.

Surface finish, as well as the weight and texture of the fabric, must be considered in determining the amount of pressure needed.

To set the pressure

- Lower the presser foot
- To increase pressure, turn dial to higher number.
- To decrease pressure, turn dial to lower number.
- For darning, turn dial to D, which releases pressure and permits darning without an embroidery hoop.



Needle Thread Tension

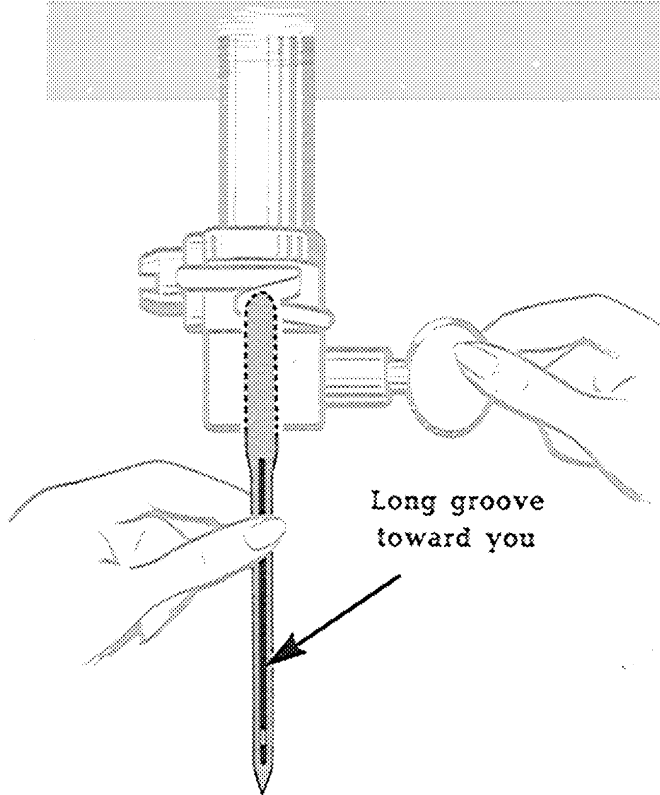
This dial regulates the degree of tension on your needle thread.

To increase tension: Turn dial to right hand side (to higher number).

To decrease tension: Turn dial to left hand side (to lower number).

For detailed instructions, see pages 26 and 27.

Needles and Thread



This machine uses SINGER needles Catalog 2020 (15×1), Sizes 9, 11, 14 and 18.

To Change the Needle

Raise needle bar to highest position. Loosen the needle-clamp screw and remove the needle. Insert new needle in clamp, with the flat side of the needle to the back and the long groove toward you; push it up as far as it will go.

Needle and Thread Selection

For perfect stitching, select correct needle and thread to correspond with fabric, according to the following table.

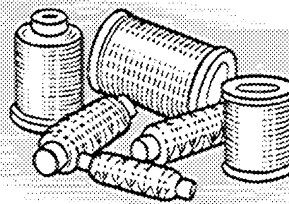
Be sure to use similar threads for both needle and bobbin.

Fabric, Thread, Needle and Stitch Length Chart *

Fabrics	Thread Sizes	Needle Sizes	Straight Stitching Machine Stitches	
			per inch	mm
Delicate — tulle, chiffon, fine lace, silk, organdie, fine tricot	60 Mercerized 100 Cotton Fine Synthetic Thread	9	15 to 20	1—1,5
Lightweight — batiste, organdie, Jersey, voile, taffeta, silk, crepe, plastic	50 Mercerized 80 to 100 Cotton Pure Silk Synthetic Thread	11	12 to 15 (8 to 10 for plastic)	1,5—2 2,5—3
Medium Weight — gingham, man-made fabric, pique, linen, chintz, faille, satin, fine corduroy, suitings, cotton-backed plastic	50 Mercerized 60 to 80 Cotton Pure Silk Synthetic Thread	14	12 to 15	1,5—2
Medium Heavy — gabardine, tweed, sailcloth, denim, coatings, furnishing fabrics	40 Mercerized 40 to 60 Cotton	16	10 to 12	2—2,5
Heavy — overcoatings, twill, upholstery fabrics, canvas	36 Mercerized 24 to 40 Cotton	18	8 to 10	2,5—3

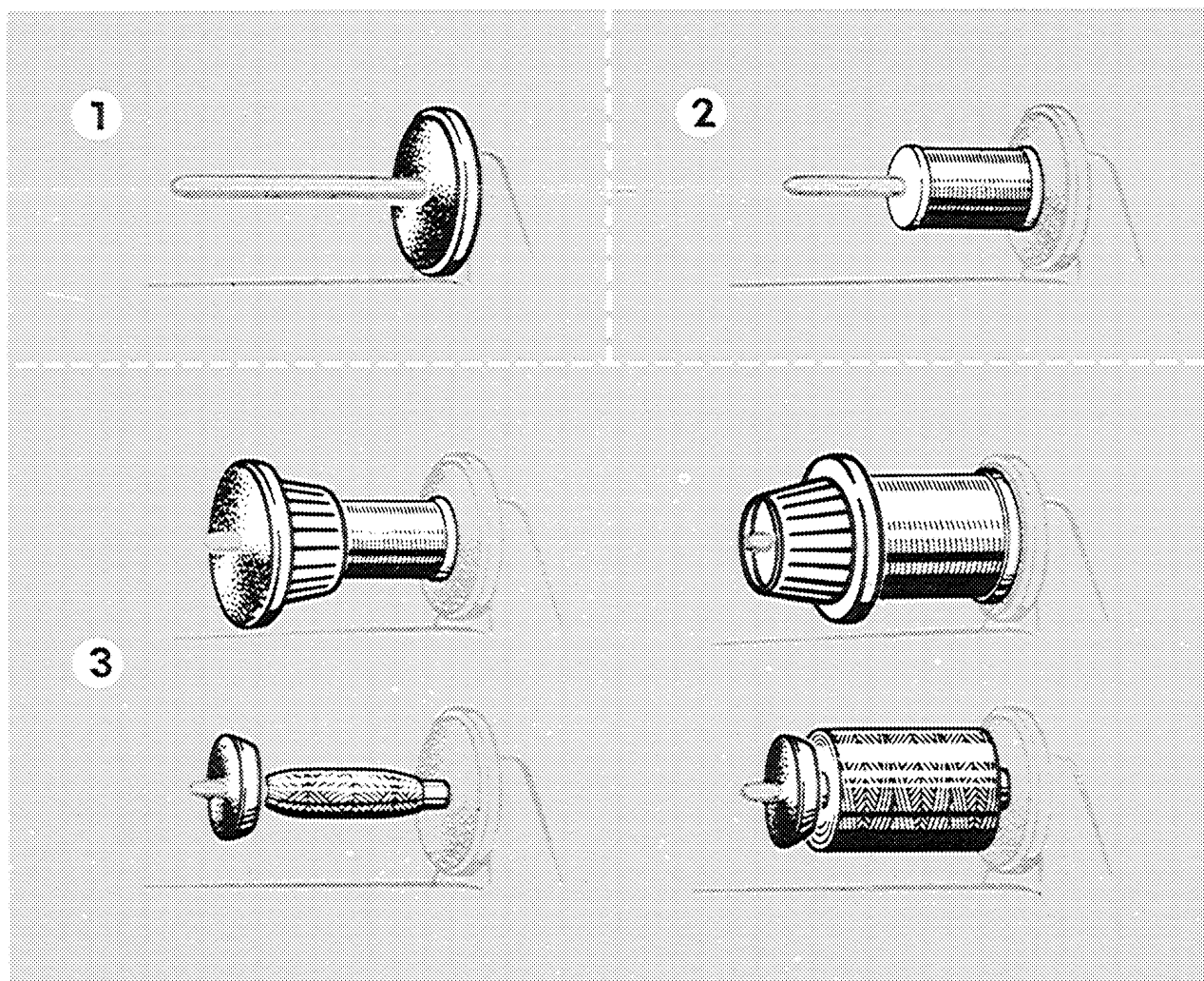
*) Does not apply to chainstitching.

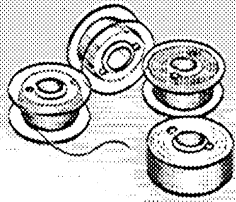
Spool Holder



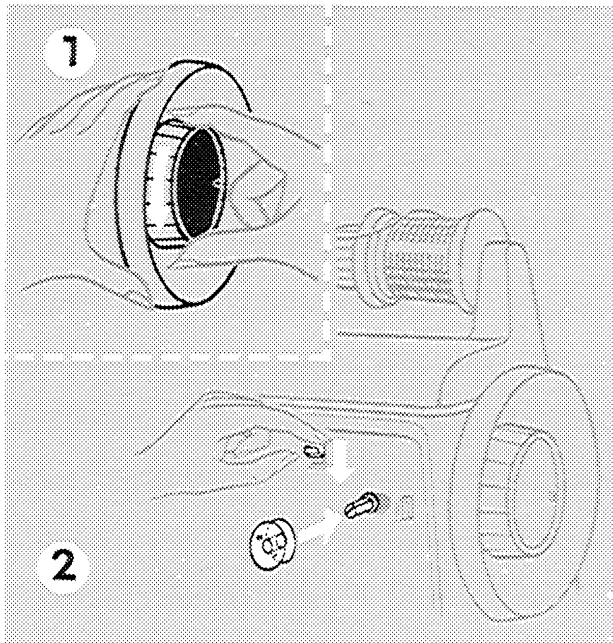
Spools of various sizes are firmly held on the spool holder of your SINGER sewing machine. The spool does not turn and the holder lets thread unwind over the thread lead-off without tug and drag to the thread guide.

1. Slip spool seat onto spindle (cushion side facing spool of thread).
2. Slip spool of thread onto spindle.
3. Press thread lead-off against spool of thread, as shown. Select thread lead-off according to the size of thread spool used.



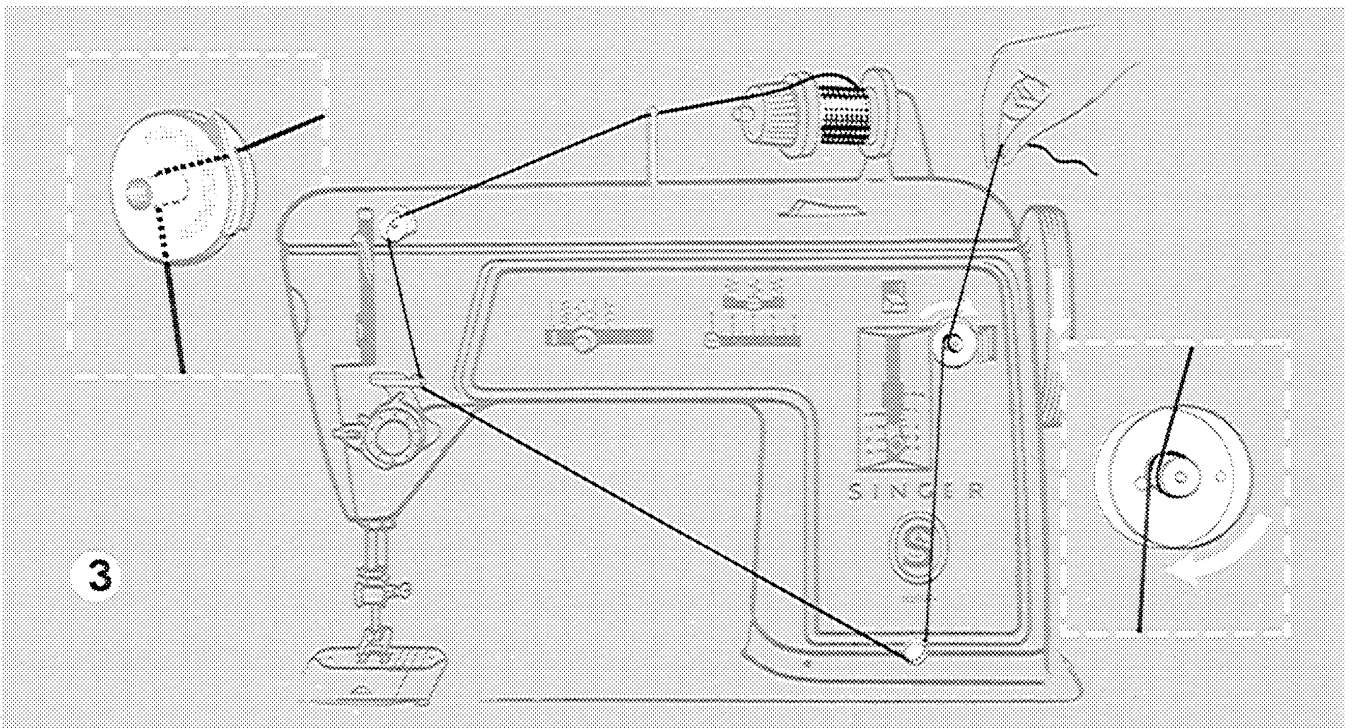


Bobbin Thread



To Wind the Bobbin

- 1 Release hand wheel: Turn stop motion screw with right hand in direction shown by arrow while holding hand wheel with left hand.
- 2 Slip bobbin onto bobbin winder spindle and depress bobbin winder engaging lever.
- 3 Thread the machine as shown. Wind several coils of thread around the bobbin in direction shown by arrow, and start machine. As soon as enough thread is wound on the bobbin it will automatically disengage itself. Stop machine, raise bobbin winder engaging

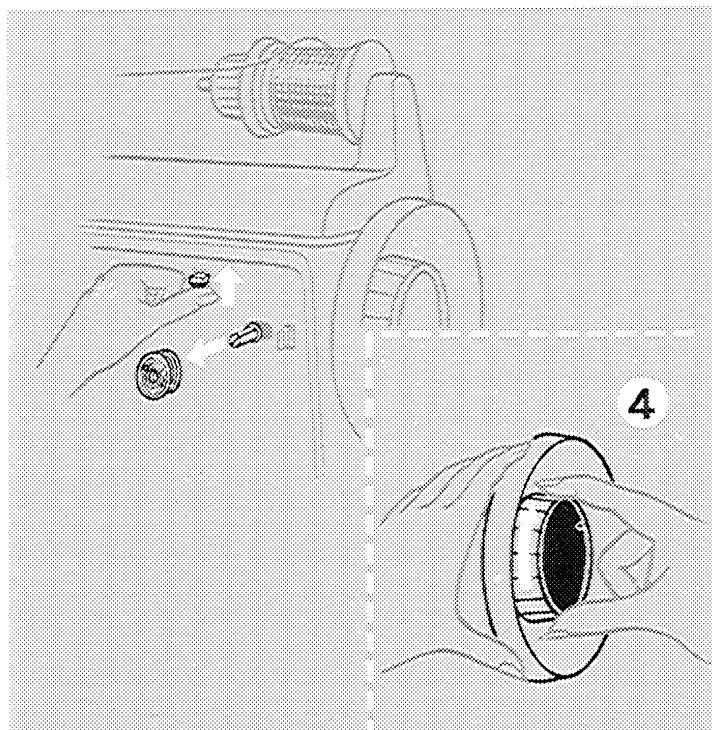
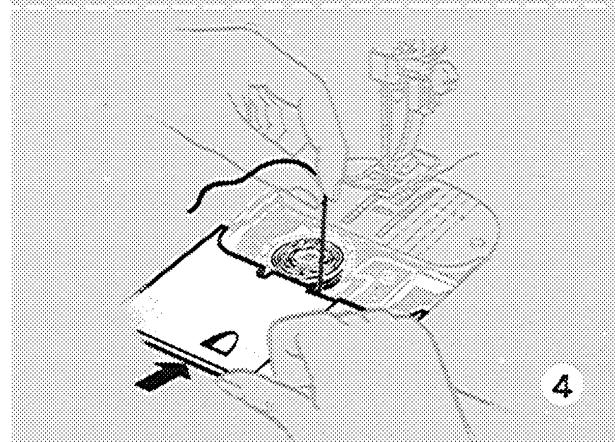
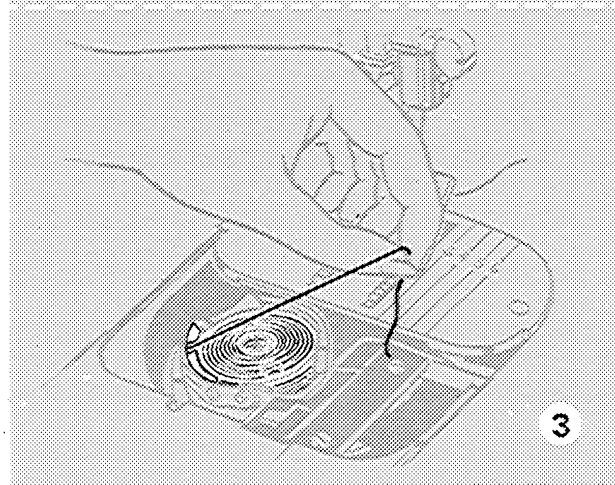
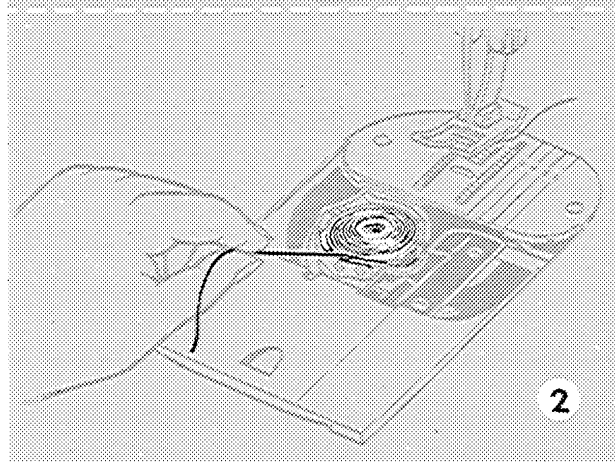
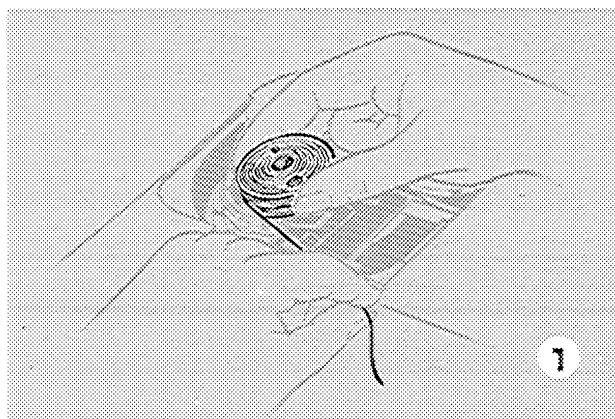


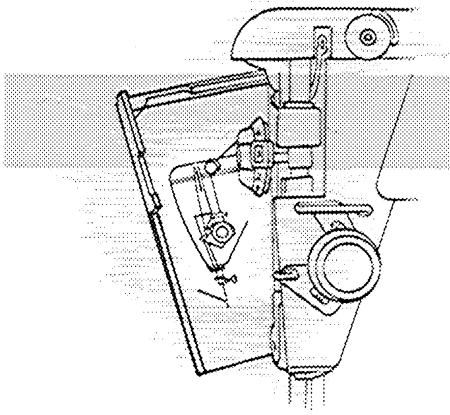
lever and remove bobbin from bobbin winder spindle.

- 4 Tighten stop motion screw with right hand in direction shown by arrow while holding hand wheel with left hand.

Threading the Bobbin Case

- 1 Hold bobbin so that thread leads off in direction shown.
- 2 Place bobbin in case. Lead thread into slot and under tension spring.
- 3 Draw thread into notch at end of spring, pulling off about 8 cm (3 inches) of thread across the bobbin.
- 4 Close slide plate allowing thread to enter notches shown.

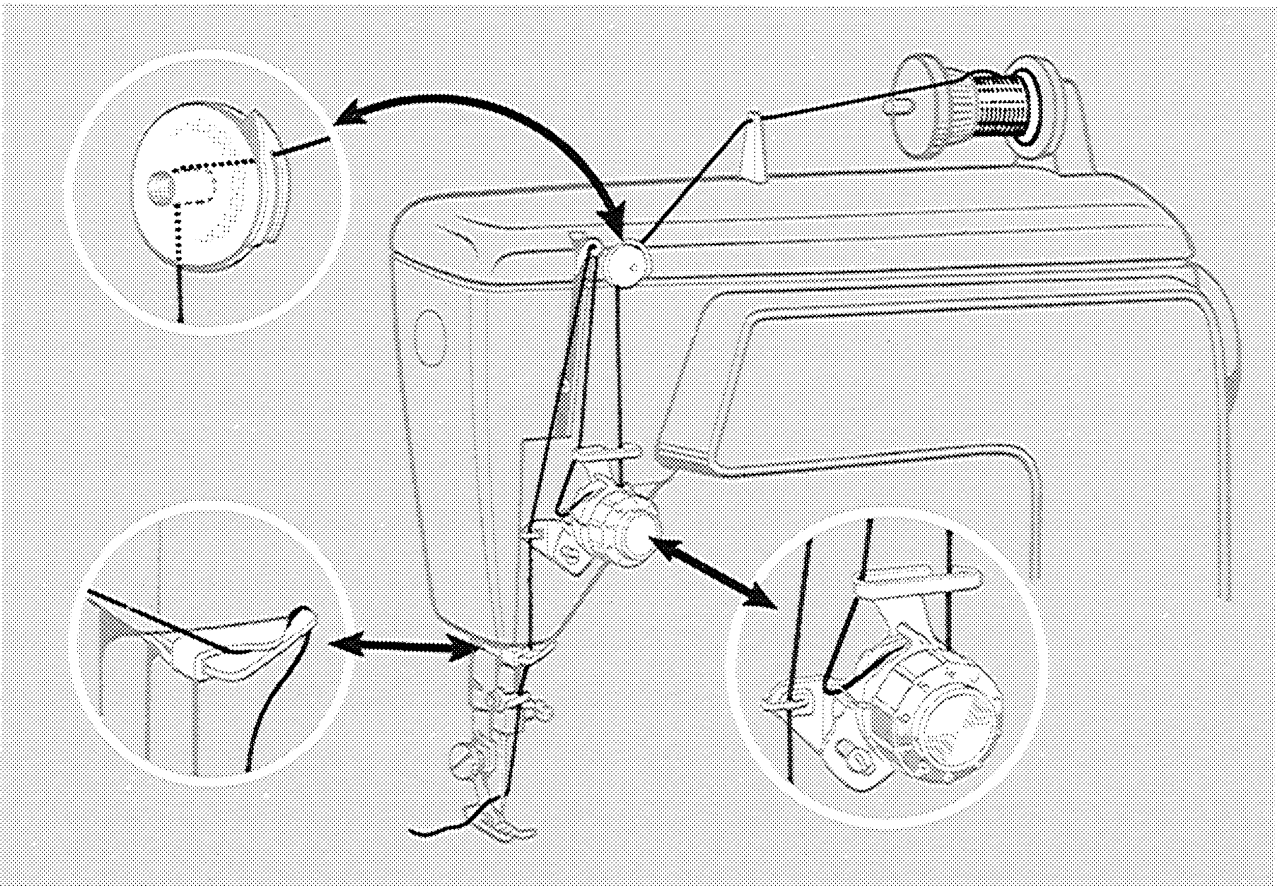




Upper Threading

Turn hand wheel to raise take-up lever to its highest position. Raise the presser foot. Slip spool of thread onto spool holder and lead thread through all threading points shown.

Thread needle from front to back. Draw sufficient thread (approx. 8 cm [3 inch]) through eye of needle with which to start sewing.



Straight Stitching



Settings and Fittings

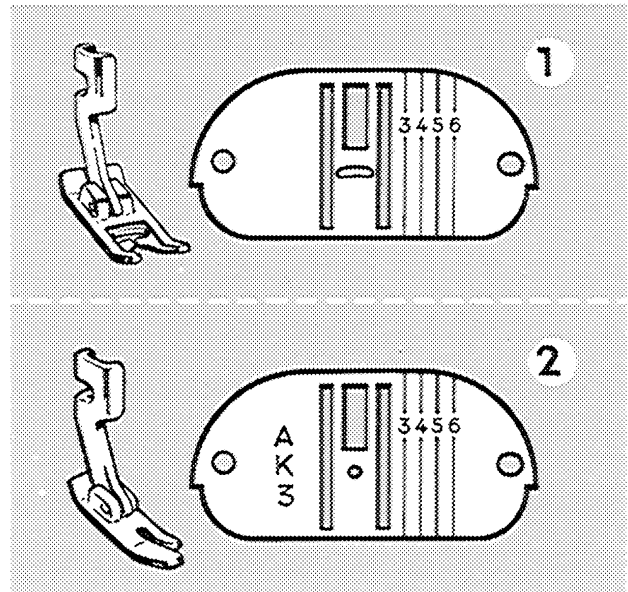
When setting the stitch pattern selector at straight stitching, the needle position selector at center and the stitch width selector at 1 you can use the following two types of equipment:

**1 General purpose throat plate
General purpose presser foot**

This is the basic equipment for all utility sewing.

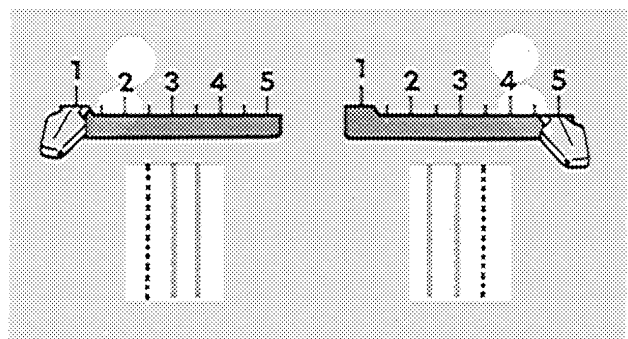
**2 Straight stitch throat plate
Straight stitch presser foot**

This equipment should be used where accurate straight stitching is required and when stitching sheer and filmy fabrics. This requires the center setting of the needle position selector, otherwise the needle hits the throat plate or presser foot and breaks.



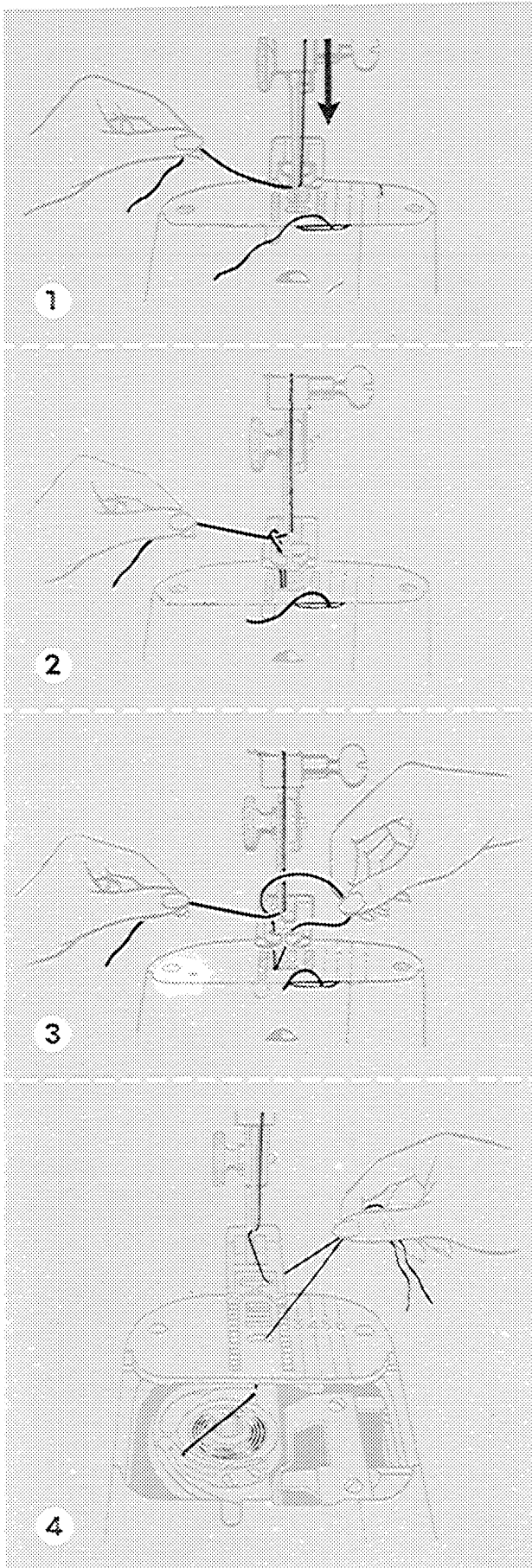
To meet special requirements, you may wish to place a line of stitching to the left or right of center. You must use the general purpose throat plate and presser foot in this case (equipment no. 1). The needle position selector places the needle to the left or right positions. Intermediate settings may also be used.

Do not make any needle position adjustments while the needle is in the fabric.



Raising The Bobbin Thread

Now that you have threaded both the bobbin case and needle, you will need to raise the bobbin thread through the needle hole in the throat plate.



1. Hold needle thread lightly with left hand (thread **above** presser foot). Turn hand wheel slowly toward you so that needle enters throat plate.

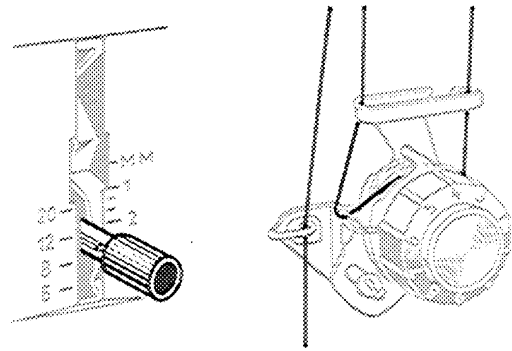
2. Continue holding needle thread and turning hand wheel until needle rises and brings up bobbin thread in a loop. Pull the needle thread to raise the loop to the eye of the needle.

3. Undo the loop with your finger.

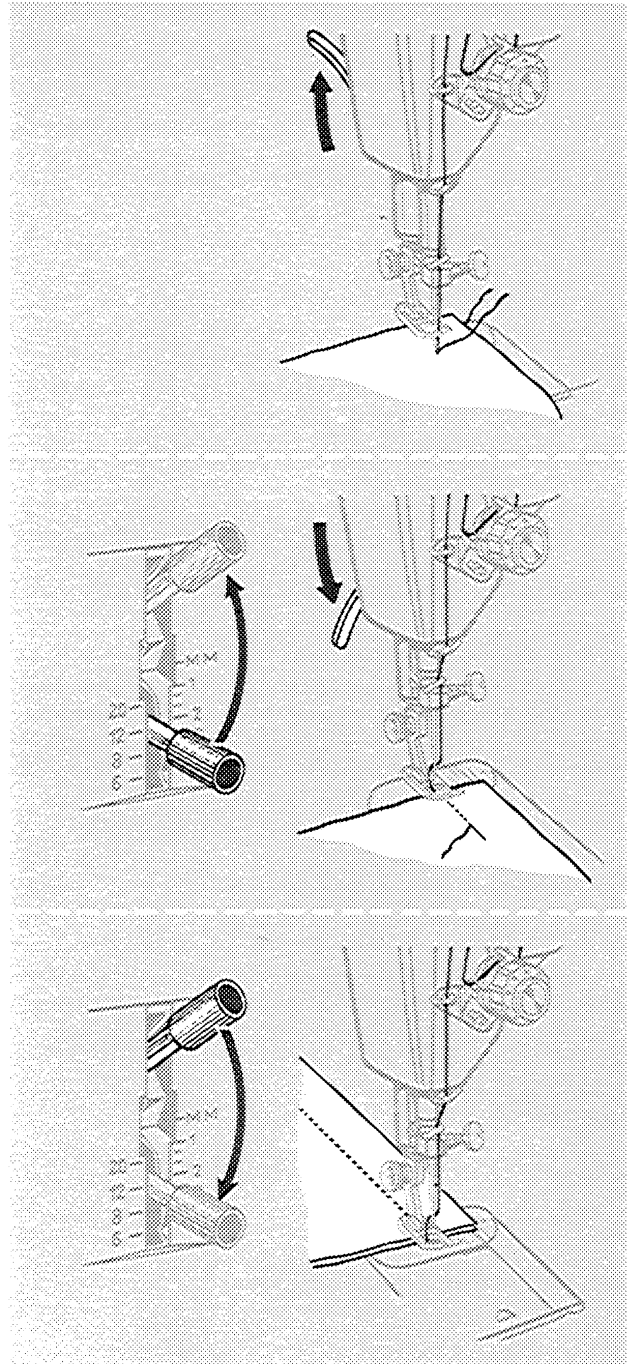
4. Place both needle and bobbin threads diagonally under presser foot, making sure bobbin thread is located in the rear thread guide of the bobbin case.

Sewing a Seam

Set stitch length regulator for stitch length desired and needle thread tension to a medium value.



With presser foot raised align fabric with appropriate seam guide line on the throat plate. Position needle into fabric about 10 mm (1/2 inch) from the rear edge.

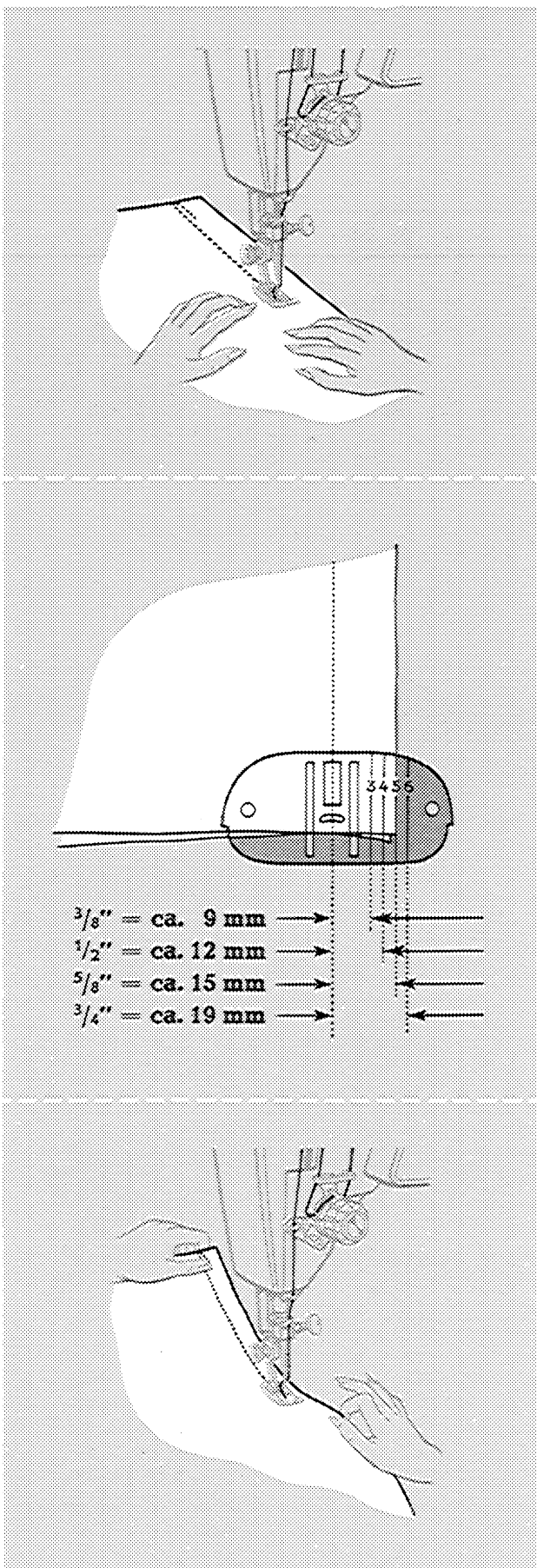


Lower the presser foot. Set stitch length regulator to reverse and backstitch to end of material for reinforcement.

Set regulator for forward stitching and stitch to end of seam.

Guiding and Supporting Fabric

Most fabrics need to be guided in front of the presser foot only.

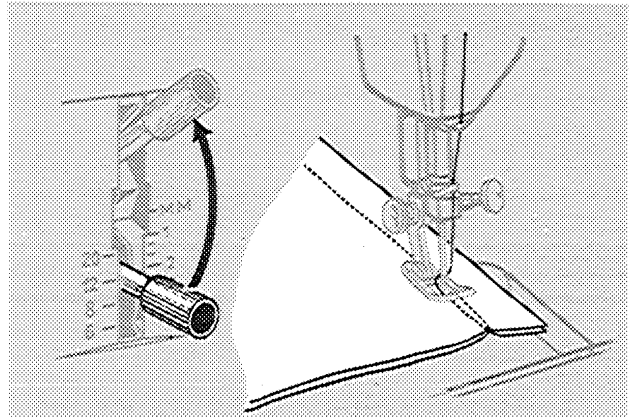


The guide lines on the throat plate are a means to keep the seam straight. The dimensions are shown in the opposite illustration. For extra control of fabric it is best to use the seam guide, described on page 54.

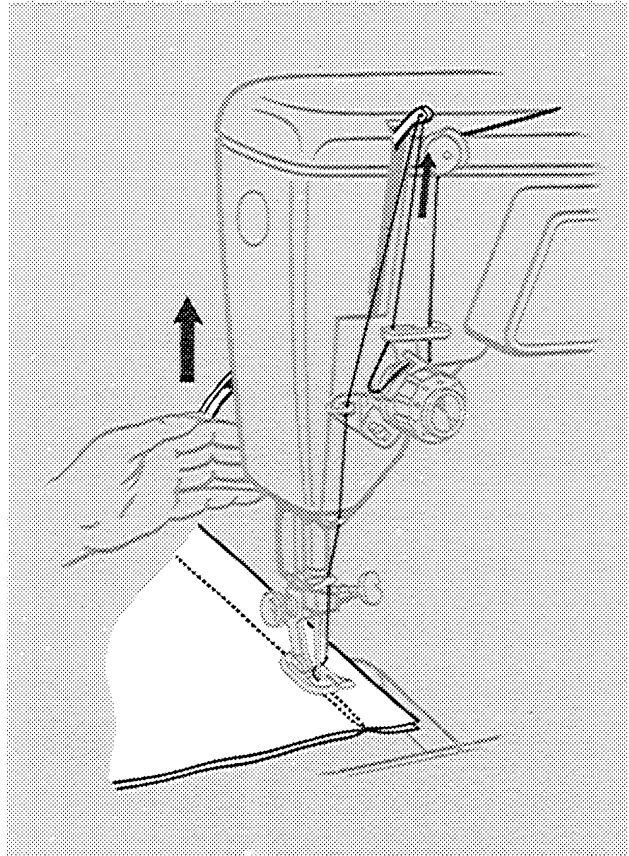
Delicate fabrics, such as chiffons etc., have to be stretched slightly while sewing to prevent fabric from puckering. In this case, hold seam in front and back of the presser foot.

For best sewing results, the straight stitch throat plate and presser foot should be used when straight stitching delicate fabrics. (Please refer to page 21.)

Stitch to edge of fabric to complete seam.
Set stitch length regulator to reverse and
backstitch somewhat to reinforce end of seam.

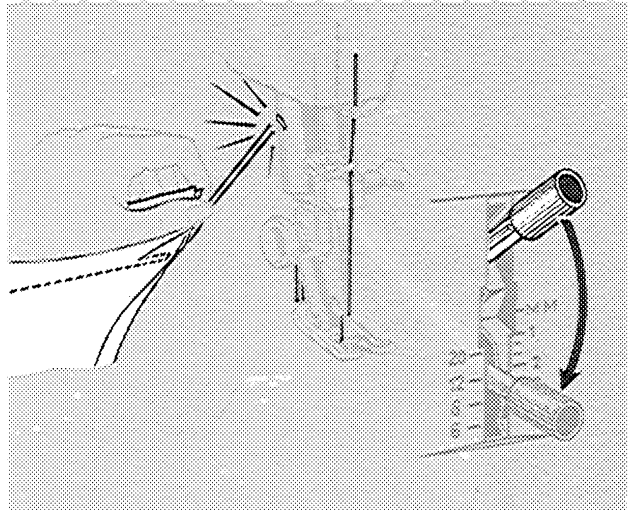


Turn hand wheel to bring take-up lever to its
highest point. Raise presser foot and remove
fabric.



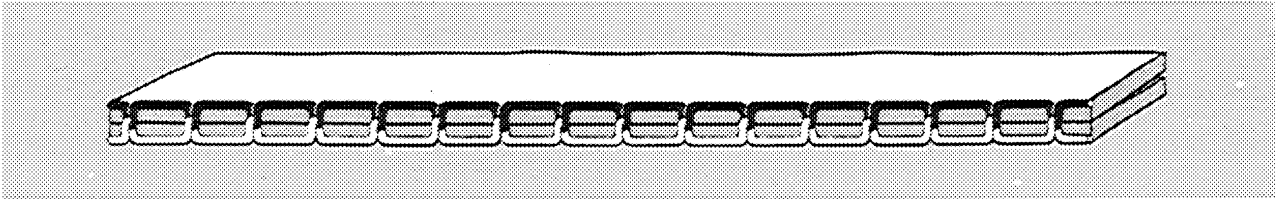
Cut both threads on built-in thread cutter, as
shown.

Reset stitch length regulator for forward
stitching.

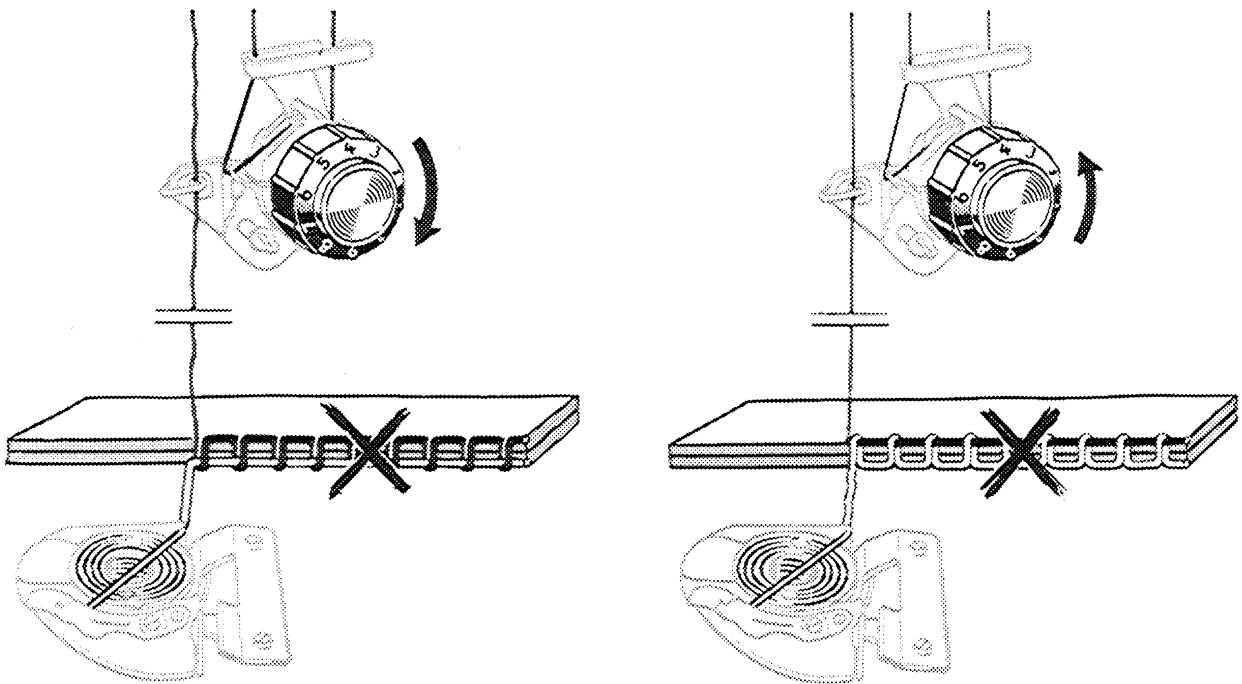


Regulating the Thread Tensions

Correct tensions are important for the good appearance of the stitches. To obtain a perfect stitch, the interlocking of the needle and bobbin threads must take place exactly in the middle of the sewing work.



To determine correct tension setting, sew a trial seam on a sample of your fabric by using medium needle thread tension (approx. 4). If this trial seam shows an improper appearance, you can correct the needle thread tension as follows:



If the thread loops lie on the underside of the seam, the needle thread tension is too loose. Correct by turning the tension dial to higher number.

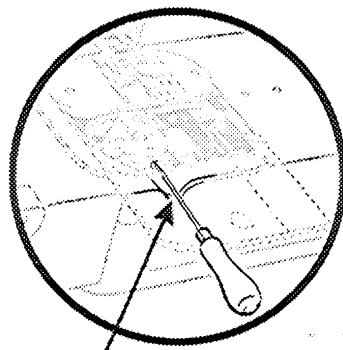
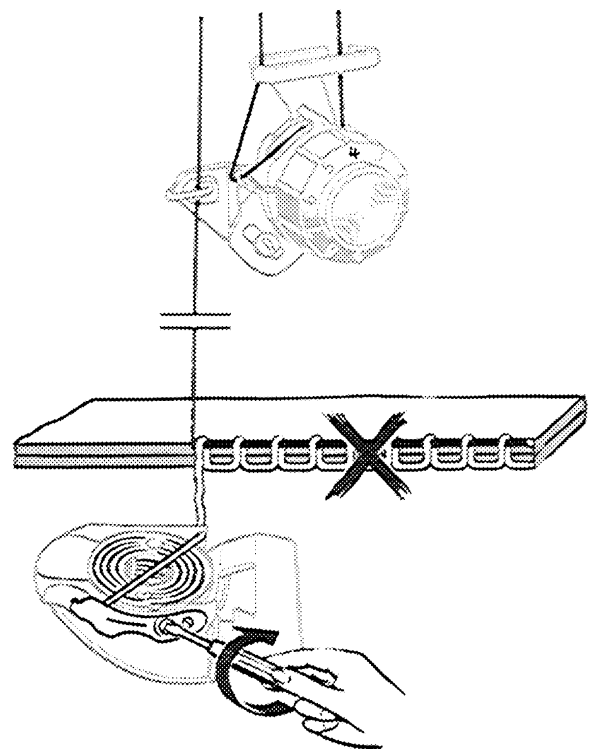
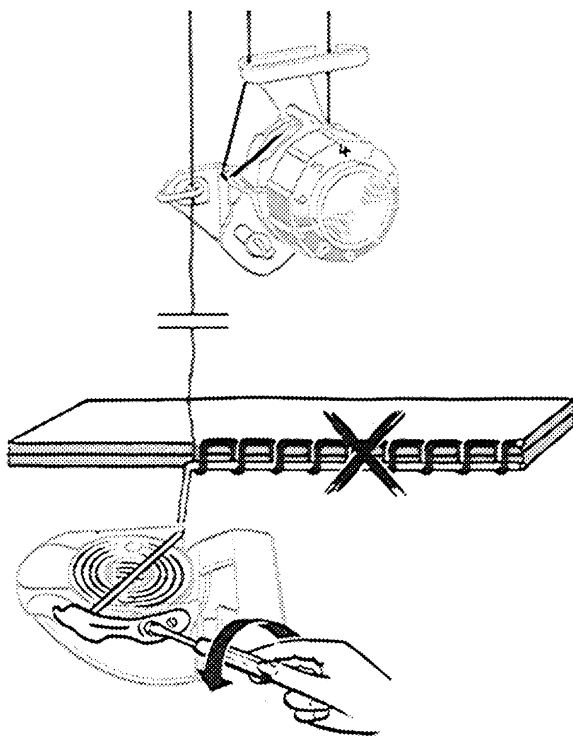
If the thread loops lie on the upper surface of the seam, the needle thread tension is too tight. Correct by turning tension dial to lower number.

In case that a balance cannot be made by adjusting the needle thread tension, the bobbin thread tension has to be corrected (see page 27).

Set needle thread tension to medium value and sew trial seam.

If the thread loops lie on the underside of the seam, the bobbin thread tension is too tight. Correct by turning the screw in direction, shown by arrow.

If the thread loops lie on the upper surface of the seam, the bobbin thread tension is too loose. Correct by turning the screw in direction, shown by arrow.

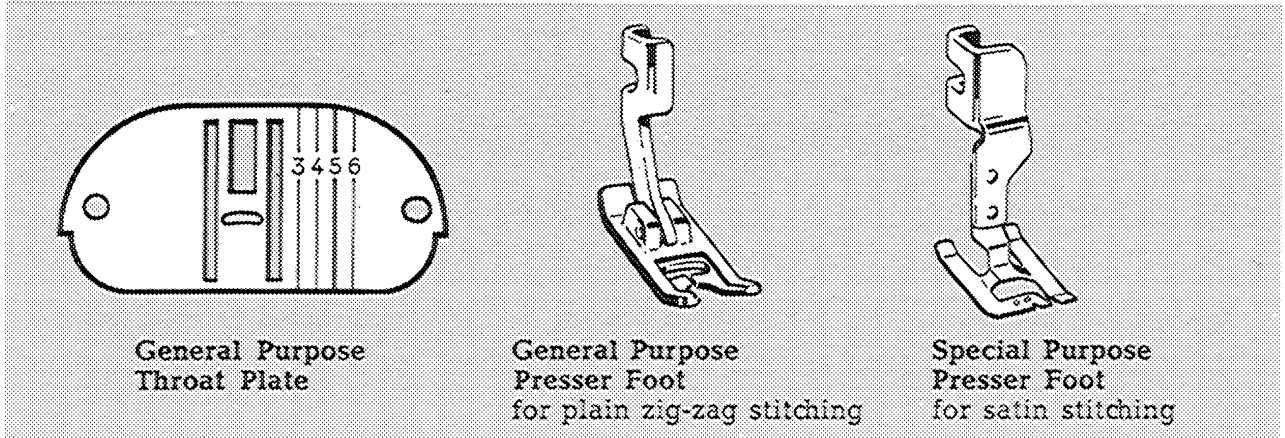


In case of Class 676 Machine (convertible), the screwdriver is inserted through the notch in the bed casting beneath the slide plate for performing the bobbin thread tension settings.

Zig-Zag Stitching



Equipment for Zig-Zag Stitching



General Purpose
Throat Plate

General Purpose
Presser Foot
for plain zig-zag stitching

Special Purpose
Presser Foot
for satin stitching

Settings for Zig-Zag Stitching

Stitch Pattern Selector: Zig-Zag Stitching

Needle Position Selector:

Center, right or left (see page 11).

The center needle position is generally preferred. The left and right needle positions are only used when special placement of stitching is desired. For example: Buttonholes, button sewing.

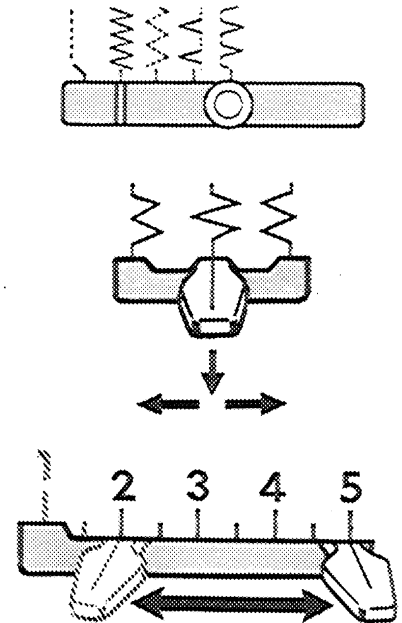
Left and right needle positions are only effective at stitch widths less than 5.

Stitch Width Selector: 2 to 5

The stitch width selector controls the stitch width (see page 11).

The settings range from a maximum of 5 to a minimum of 2.

Raise needle above fabric before making any adjustments.



Settings for Practical Sewing

Stitch Pattern Selector	Needle Position Selector	Stitch Width Selector
Multiple-Stitch Zig-Zag	center	3—5
Blind Stitch	center	3—5
Overedged Seam (Stretch Stitch)	right only	4—5

Satin Stitching

Satin stitching, a series of closely spaced zig-zag stitches, uses the fine area of the stitch length regulator.

Best sewing results can be obtained by using the special purpose presser foot.

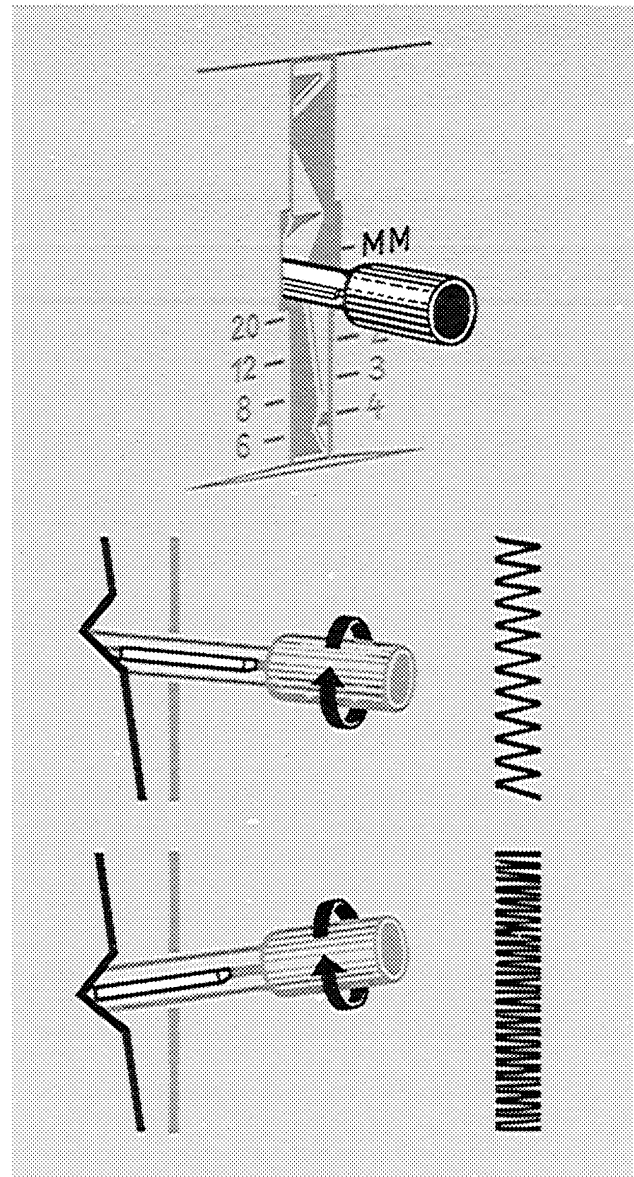
Some fabrics may require the addition of a backing to ensure firm satin stitching. Crisp organdie or lawn is suitable for this purpose.

Adjusting stitch length:

The indented area behind the stitch indicator, as shown in the illustration, provides a means of gradually shortening the stitch length.

As the regulator knob is turned, the pointer rides deeper into this indentation until a closed satin stitch is obtained.

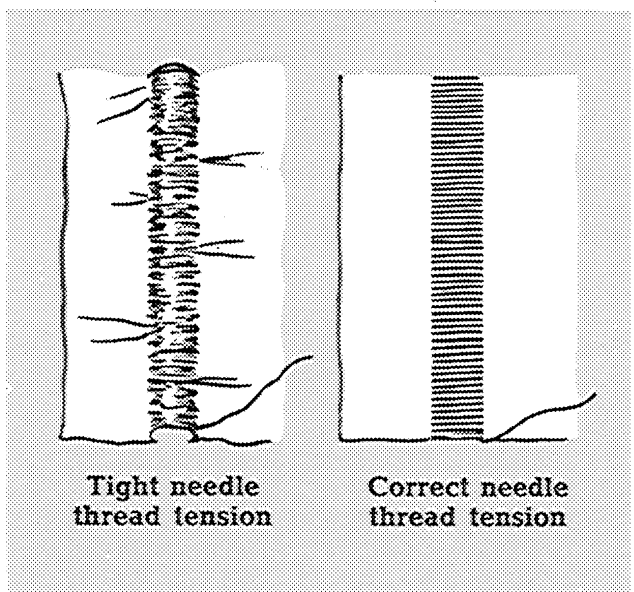
The exact stitch length will vary with the texture of the fabric. It is advisable to make a test on a scrap of same fabric first, before proceeding with actual work.



Adjusting needle thread tension:

Satin stitching requires less needle thread tension than straight stitching or open zig-zag designs. Furthermore, the wider the satin stitch, the lighter the tension on the needle thread must be.

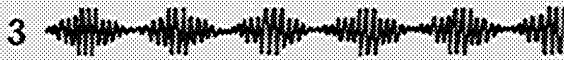
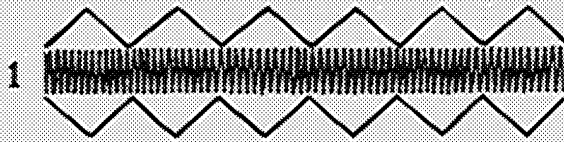
To determine correct tension setting, a test sample should be made on same fabric. A properly balanced satin stitch should lie flat across the material. Any tautness or puckering indicates too high a needle thread tension.



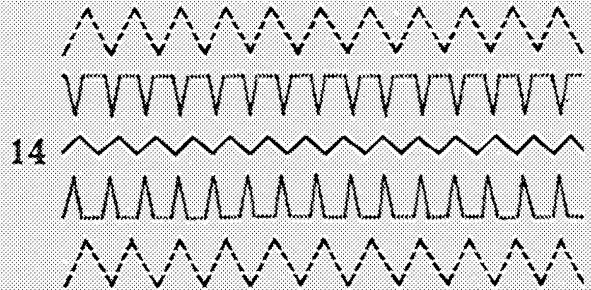
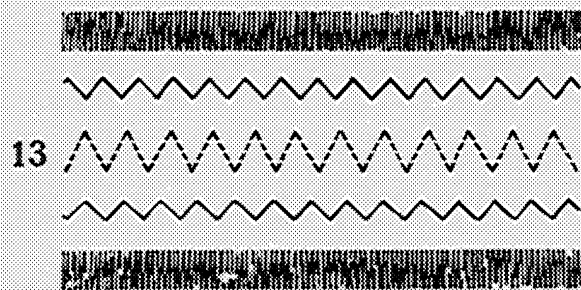
Decorative Stitch Designs

Chart for Setting the Decorative Stitch Designs can be seen on the opposite page

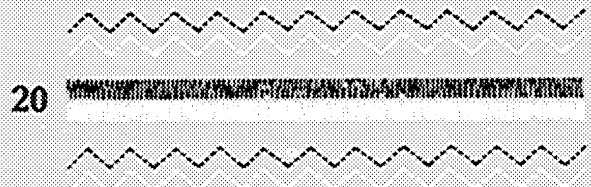
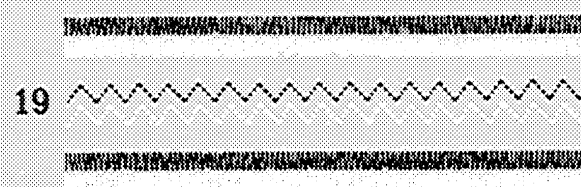
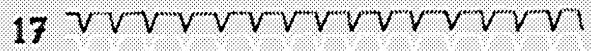
A Decorative stitch designs made by variation of needle position and stitch width.



B Combinations of zig-zag and practical stitches.



C Two-needle stitching with zig-zag and practical stitches.
Two-needle stitching with combined decorative stitches.



Decorative Stitch Designs (Key to decorative stitches shown on opposite page)

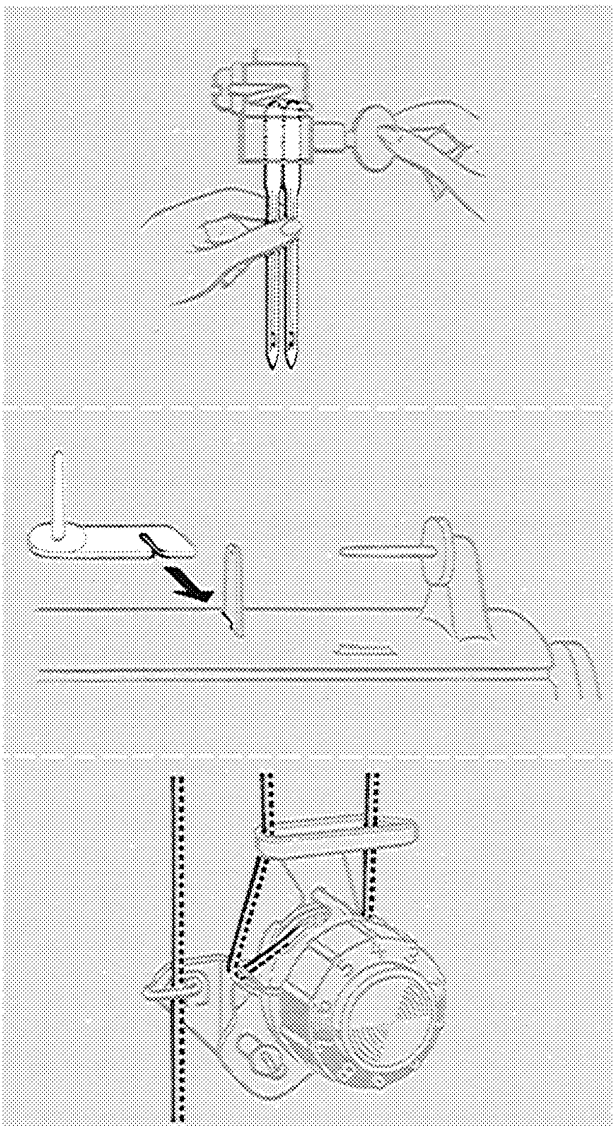
Pattern	Needle Position Selector	Stitch Width Selector	Stitch Length	Variations of Needle Position and Stitch Length
1	Center	5	Bar — Above 20 Zigzag — 6	Stitch bar, then Zig-Zag lines separately
2	Center	4	12 Alternating with Above 20	At 12 — 6 stitches Above 20 — 40 stitches
3	Center	1 to 5 to 1	Above 20	2 stitches at each width to 5 2 stitches at each width to 1
4	Left	3—5	Above 20	At 3 — 16 stitches At 5 — 8 stitches
5	Center	1—3—5—3	Above 20	14 stitches at each width setting
6	Right	1—3—5—3	Above 20	8 stitches at each width setting
7	Left	1—3—5—3	Above 20	8 stitches at each width setting
8	Left Alternated with Right	4 Alternated with 2	Above 20	14 stitches at each width setting Width 4 — Left Needle Position Width 2 — Right Needle Position
9	Right Alternated with Left	4 Alternated with 2	Above 20	14 stitches at each width setting Width 4 — Right Needle Position Width 2 — Left Needle Position
10	Left Alternated with Right	4—2—4	Above 20	20 stitches at each setting Width 4, 2 and 4: Left Needle Position Width 4, 2 and 4: Right Needle Position
11	Left Alternated with Right	4 Alternated with 2—1—2	Above 20	6 stitches at each setting Width 4 — Left Needle Position Width 2, 0 and 2: Right Needle Position
12	Left Alternated with Right	2—5—2 Alternated with 2	Above 20	16 stitches at each setting Width 2, 5 and 2: Left Needle Position Width 2 — Right Needle Position

Pattern		Stitch Pattern Selector	Needle Position Selector	Stitch Width Selector	Stitch Length
13	1st and 5th Line 2nd and 4th Line 3rd Line	Zig-Zag Stitch Zig-Zag Stitch Multiple-Stitch Zig-Zag	Center Center Center	5 3 5	Nearly 0 About 2 mm Less than 1 mm
14	1st and 5th Line 2nd and 4th Line 3rd Line	Multiple-Stitch Zig-Zag Blindstitch Zig-Zag Stitch	Center Center Center	5 5 3	Less than 1 mm Less than 1 mm About 2 mm
15		Zig-Zag Stitch	Left	3	Nearly 0
16		Zig-Zag Stitch	Left	3	About 2 mm
17		Blindstitch	Left	3	Less than 1 mm
18		Multiple-Stitch Zig-Zag	Left	3	Less than 1 mm
19	1st and 3rd Line 2nd Line	Zig-Zag Stitch Multiple-Stitch Zig-Zag	Left Left	3 3	Nearly 0 Less than 1 mm
20	1st and 3rd Line 2nd Line	Multiple-Stitch Zig-Zag Zig-Zag Stitch	Left Left	3 3	Less than 1 mm Nearly 0

Two-Needle Stitching



By using two needles at once you can produce two parallel, closely spaced lines of stitching simultaneously. You can use either one or two colors of thread; and you can choose either a straight stitch setting, or one of the zig-zag stitch patterns. Some of the attractive designs you can create are shown on page 30.



How To Insert Second Needle

The needle clamp easily accommodates two needles, Catalog 2020 (15×1). To insert the needle, simply loosen the needle clamp screw and insert the additional needle from the right with the long groove towards you.

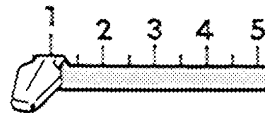
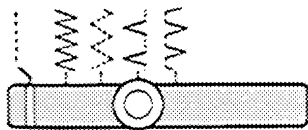
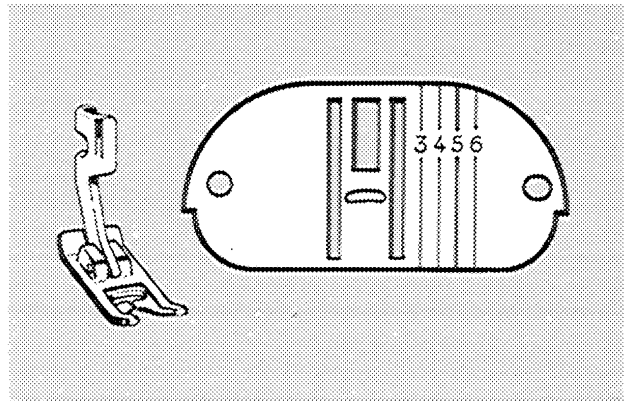
To Thread The Machine

Place first spool of thread onto spool holder and lead thread through eye of first thread guide. Insert auxiliary spool holder (which is furnished with the machine) into the thread guide on the arm top cover.

Slip second spool of thread onto auxiliary spool holder and thread as for one-needle stitching (see page 20), making certain that both threads are separated by the center disc of the needle thread tension.

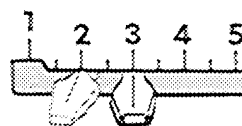
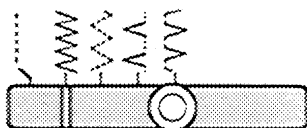
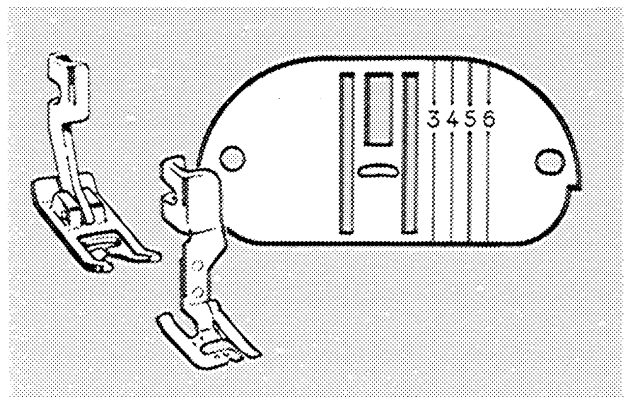
Straight Stitching With Two Needles

Stitch Pattern Selector: Straight Stitch
Needle Position Selector: Left or center only
Stitch Width Selector: 1
General Purpose Throat Plate and Presser Foot



Zig-Zag Stitching With Two Needles

Stitch Pattern Selector: Zig-Zag Stitch or another Practical Stitch
Needle Position Selector: Left only
Stitch Width Selector: 2 or 3 (maximum)
General Purpose Throat Plate
General Purpose Presser Foot
or Special Purpose Presser Foot



Chainstitching

More than any other sewing machine your new SINGER will eliminate a considerable amount of time-consuming and burdensome work previously done by hand in that lock stitching and single-thread chainstitching can be selectively produced on the same machine. This enables you to use your sewing machine in many new ways — It's like having a second machine.

Single-thread chainstitching looks like regular straight stitching on top, but it is a series of interlocking loops on the underside of the fabric. The stitches are produced by the needle thread alone — so you do not need a bobbin thread or a bobbin. Because the stitches are formed by a single thread, the interlocked loops unravel easily. The entire line of stitching can be removed with just a pull on the thread end. Also, the loop formation of the stitches makes them less taut than regular straight stitches. That's what makes chainstitching flexible.



Top Side of Chainstitch Seam



Underside of Chainstitch Seam

Here are a few of the many sewing jobs for which you will find chainstitching useful:

Basting — trial seams for fitting; construction guidelines; zipper openings; linings and interfacings.

Stay-stitching — To preserve garment shape during assembly.

Fastening removable trimming — such as fur collars, white collars and cuffs.

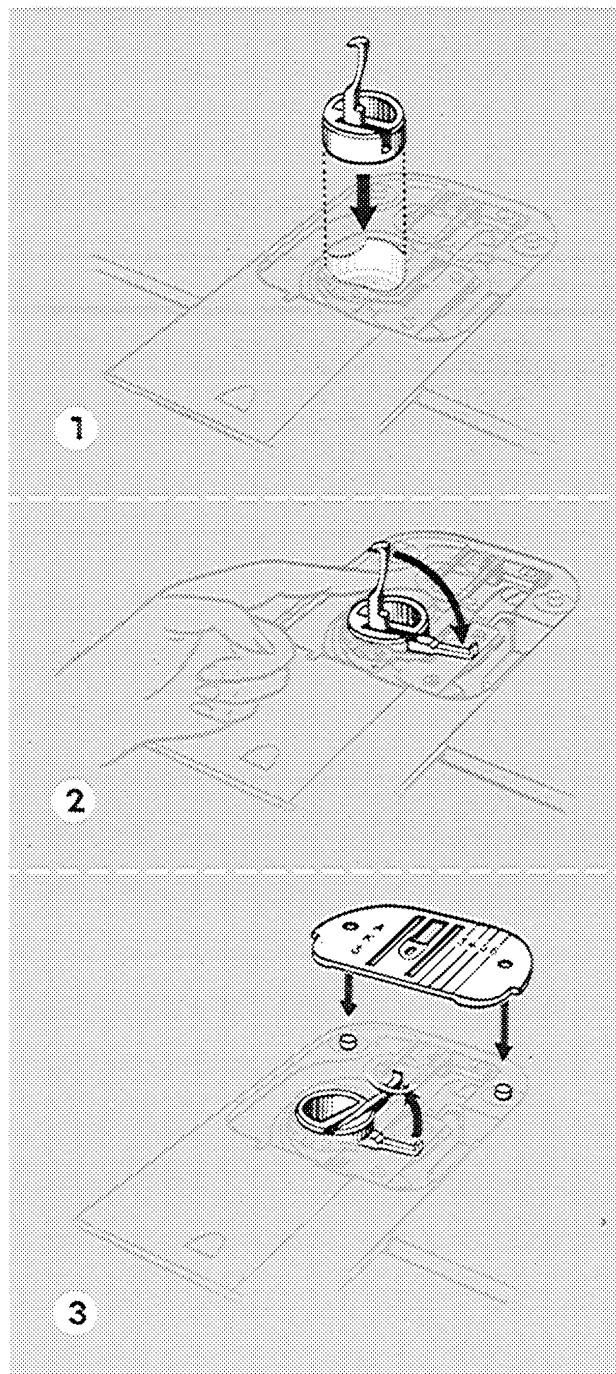
Hemming curtains and draperies that may need to be altered.

Sewing temporary tucks — for children's clothes, curtains and linings that may shrink.
Making welting for corded seams, tubular cording — for trimming and button loops.

Attaching hem tape and elastic waistbands.
Stitching seams in knit and stretch garments.
Some examples are illustrated on page 39.

To Prepare The Machine For Chainstitching

1. Remove regular throat plate and bobbin.
2. Insert chainstitch loop retainer into bobbin case (Illustration 1).
Tilt latch (Illustration 2) and turn to the rear against stop (Illustration 3).
3. Insert chainstitch throat plate.



Machine Settings

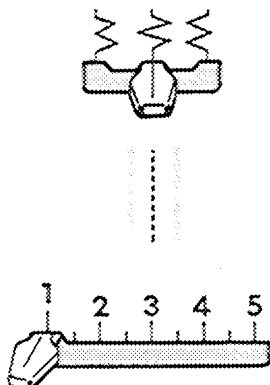
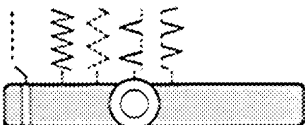
Stitch Pattern Selector: Straight Stitch

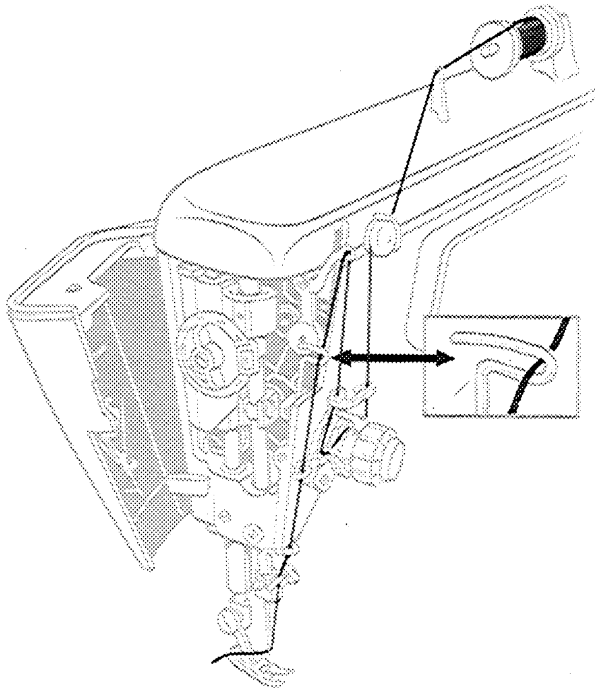
Needle Position Selector: Center

Stitch Width Selector: 1

Stitch Setting: Normally set for maximum length, approx. 4 mm; but any stitch length between 2 and 4 mm may be used.

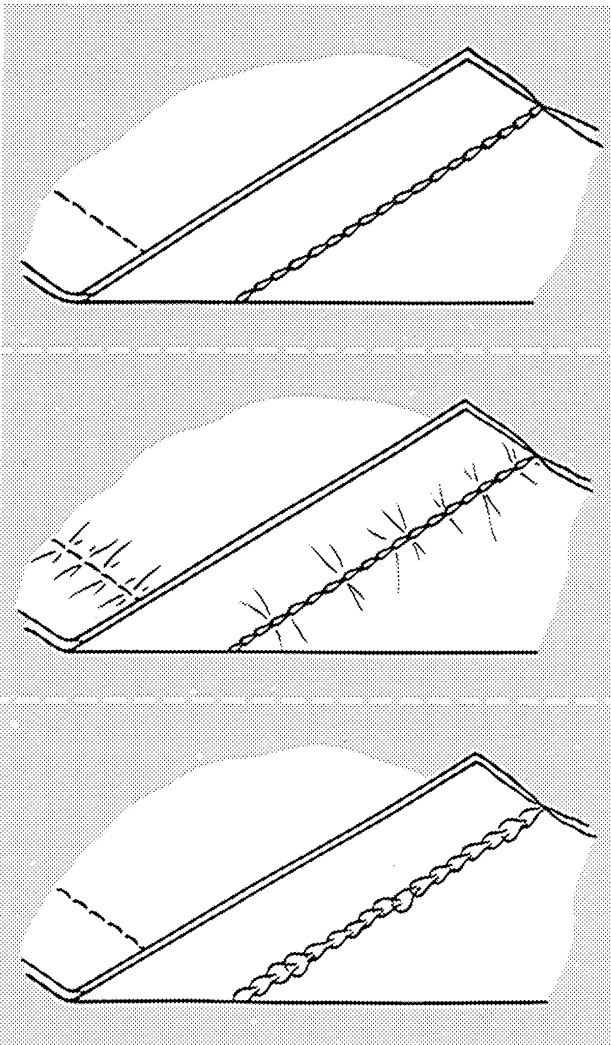
Presser Foot: General Purpose or Straight Stitch





Threading

In addition to the normal threading you must also pass needle thread through eyelet in the chainstitch thread guide.



To Adjust Thread Tension

Chainstitching requires generally less needle-thread tension than regular straight stitching, when compared to the same size and type of thread. When the tension is correctly adjusted, the chain will be flat and smooth.

Puckers in the fabric and pinched loops indicate too much tension; turn tension dial to a lower number.

Large, irregular loops indicate too little tension; turn dial to a higher number.

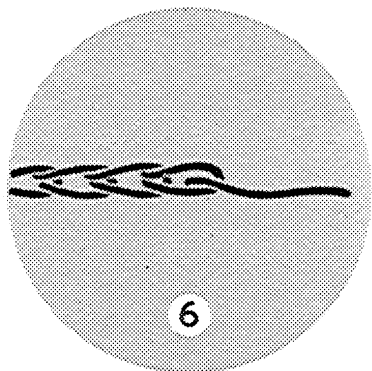
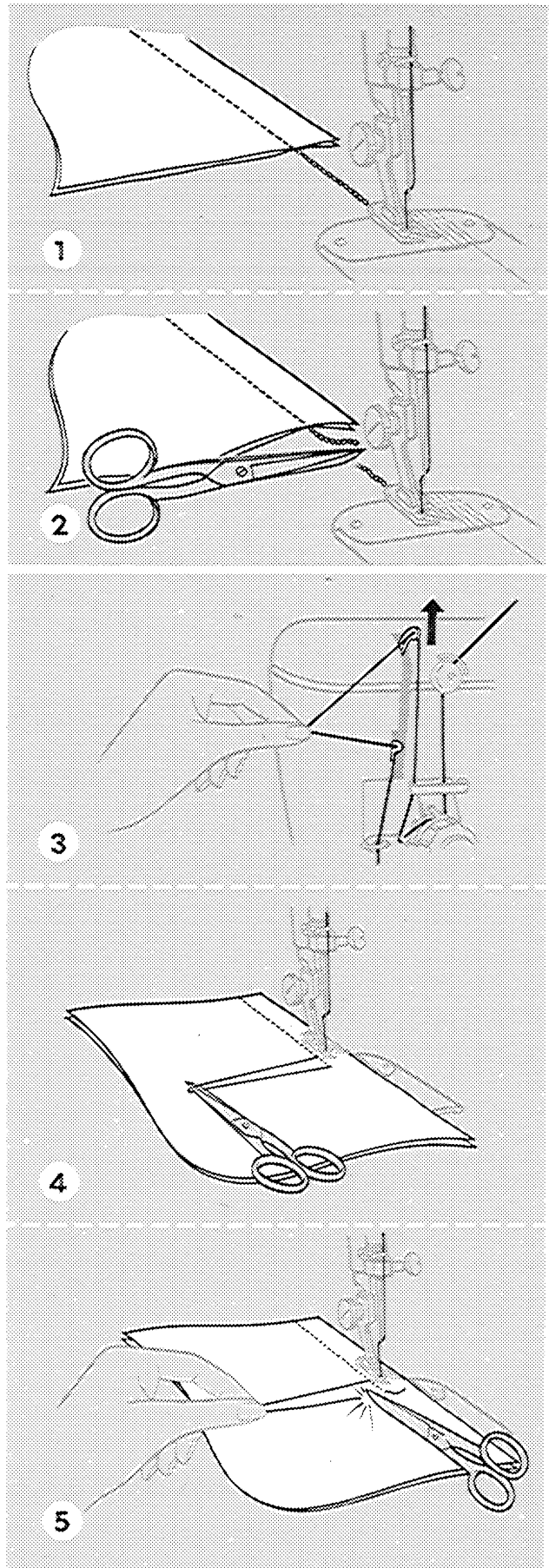
Stitching

When starting make sure that the take-up lever is in its highest position. This will prevent the needle thread from pulling out of the needle if the thread has been cut too short. **Caution, you may sew forward only.** Position needle in very edge of fabric, lower the presser foot and stitch. If the material is pivoted at the needle for operations where cornering is required, make certain that the needle is on its upward movement (approx. 1 cm [$\frac{1}{2}$ inch] above its lowest point) to avoid skipped stitches. Then continue to stitch in the new direction.

To Remove The Fabric

The easiest way of removing the fabric is to sew off the edge of the fabric (Illustration 1) while slightly pulling on the material. This produces a chain which should be cut some distance away from the fabric (Illustration 2).

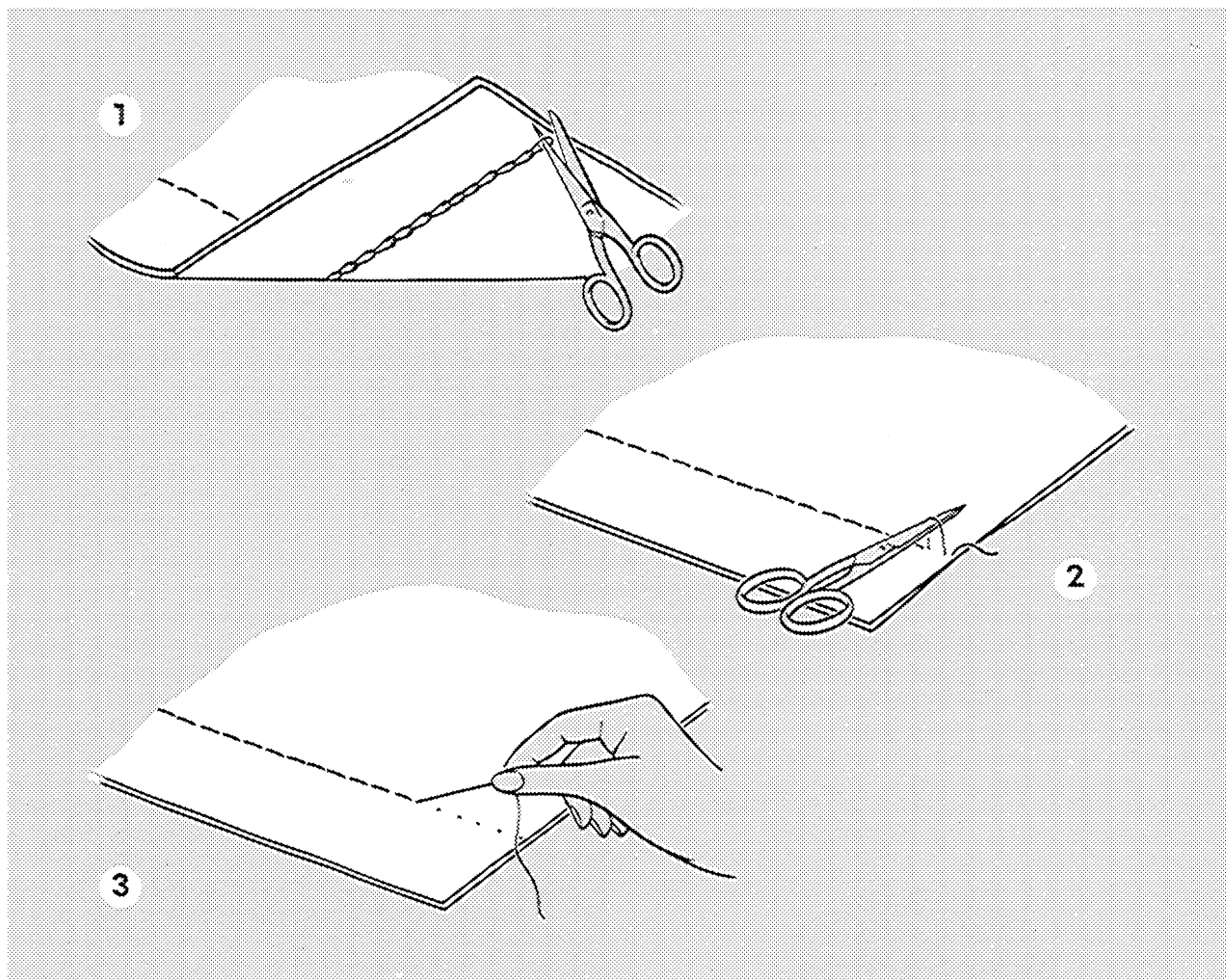
However, if the seam is ended before the edge of the fabric, bring the take-up lever to its highest point, then lift the presser foot and pull some thread through the take-up lever from the spool pin (Illustration 3). Now draw the loose thread between presser foot plate and top surface of fabric to the left with the scissors (Illustration 4) and then cut the thread approx. 1 cm above fabric (Illustration 5). Remove fabric from the machine by pulling it straight back, away from you. This will cause the thread end to pull through the fabric to the underside and form a temporary lock (Illustration 6). If you wish to secure this temporary lock, fold the thread end back over the chain and fasten with hand stitching.



To Open The Seam

Chainstitching can be removed smoothly and cleanly in seconds in one direction only, from the end of the seam toward the start of the seam. The opening direction is distinguished by the arrowheads of the loops on the underside of the fabric which point toward the beginning of the seam.

To open the seam, simply cut the last loop formed on the underside of the fabric (Illustration 1) and then pick up the free thread end from the top surface of the fabric (Illustration 2). With this free thread end the entire line of stitching can be removed by a single pull (Illustration 3).

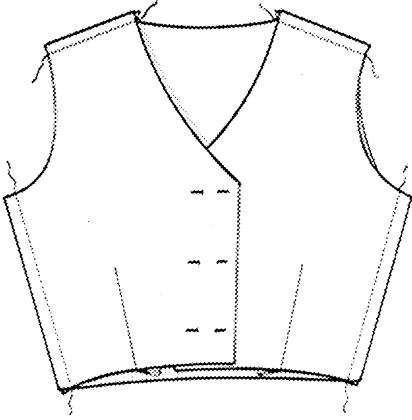


To Change from Chainstitching to Lock Stitching

Changing to lock stitching requires only unthreading of the chainstitch thread guide (see page 36), replacing the bobbin and inserting the desired zig-zag or straight stitch throat plate.

Ways To Use Chainstitching

Here are several ways in which you will find chainstitching preferable to either regular straight stitching or hand basting. Additional suggestions are listed on page 34.

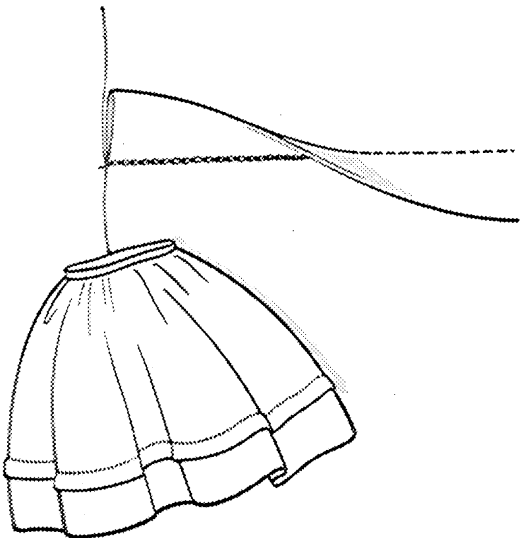
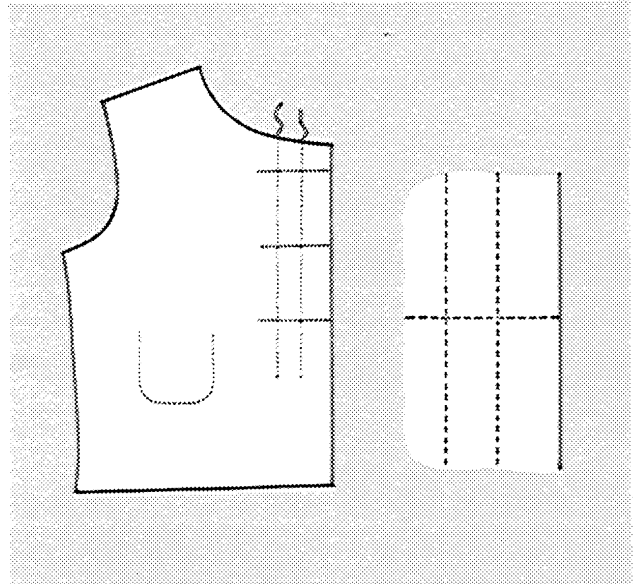


Garment Fitting

Time and energy can be saved when chainstitching is used to baste garment sections or muslin shells for trial fittings. The firmness of the stitch ensures accuracy in fitting, yet the stitching can be ripped out in seconds if adjustments are necessary.

Construction Guide Lines

In many instances, construction guide lines for pockets, buttonholes, and other details can be advantageously marked with chainstitch basting. The stitching will give clearly defined line marking. Yet, unlike chalk or pins, it will not rub off or become lost as the fabric is handled. This method lends itself particularly to use on wools and other fabrics that do not retain needle penetrations.



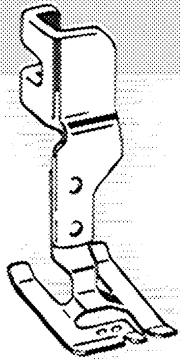
Growth and Shrinkage Tucks

Tucks are frequently put into curtains, linings, and children's clothes to allow for the child's growth or fabric shrinkage. "Letting down" is no longer a chore when tucks are chainstitched. Simply unlock the last loop of the chain formed on the underside of the tuck and pull out the stitching.

Attachments

Note: The attachments which are not regularly furnished with your machine are available for separate purchase at your local SINGER SEWING CENTRE.

Special Purpose Foot



This light, flexible foot is designed for satin and decorative stitching. It provides maximum visibility and maneuverability while allowing closely spaced zig-zag stitches to feed freely. The eyelets in the foot accommodate a filler cord.

The special presser foot is ideal for accurate placement of satin stitching in buttonholes, monograms, motifs, applique work as well as for cording.

Buttonholes

Always make a test buttonhole on a sample of your fabric. Be sure to duplicate the thickness of the garment and include interfacing if appropriate.

You will need two stitch width settings, one for side stitching and one for the bar tacks. The three possible settings are shown below.

Stitch Pattern Selector: Zig-Zag Stitch

Needle Position Selector: Left

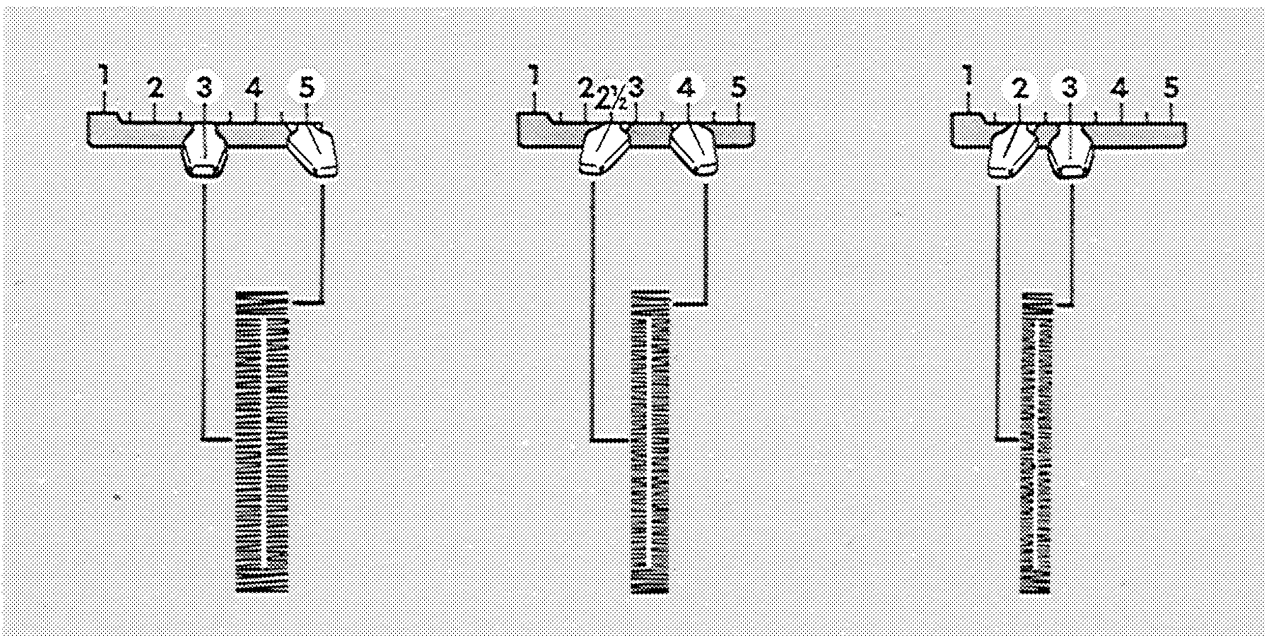
Stitch Width Selector: See below

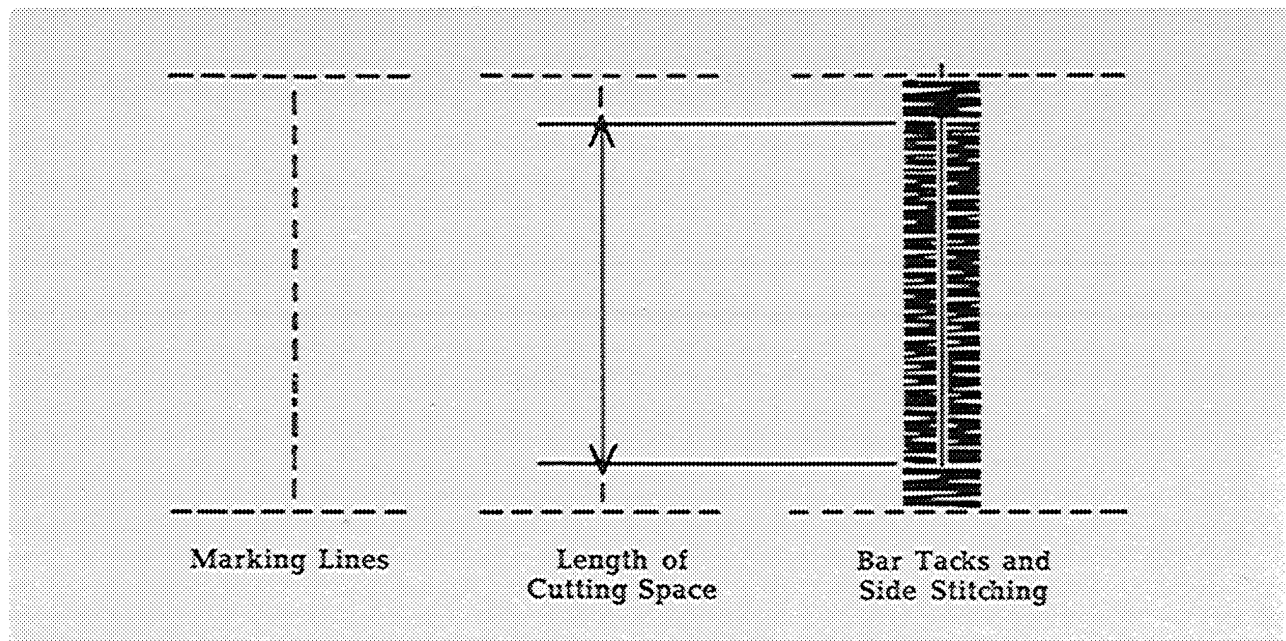
Throat Plate: General Purpose

Presser Foot: Special Purpose

Stitch Length: Less than 1 mm

(More than 20 stitches per inch)





Buttonhole Length

First, decide how long the cutting length needs to be; the opening through which the button passes. This will depend on the diameter and thickness of the button. To find the right length, cut a small hole in a scrap of your fabric and gradually enlarge it until the button slips through easily. The length of the finished buttonhole will be the cutting length plus 3 mm ($\frac{1}{8}$ inch) for each bar tack.

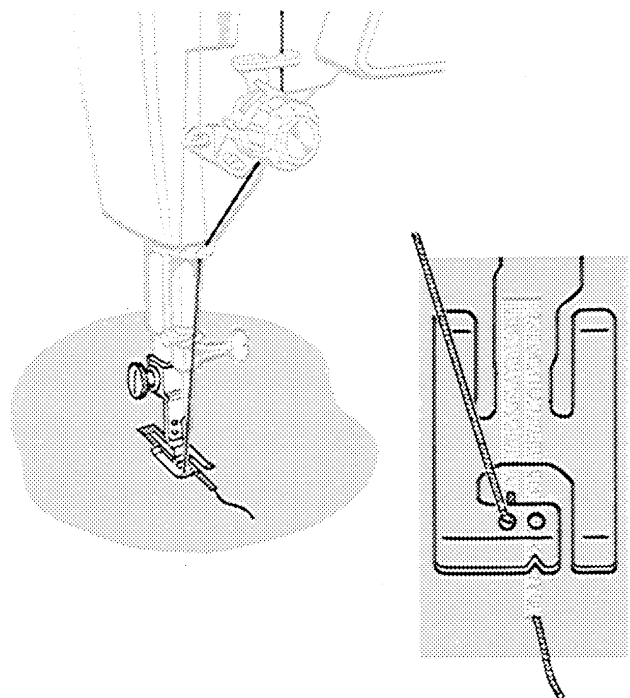
Then mark the buttonhole on the fabric as shown above.

The procedure for making a buttonhole is described on the next page.

Raised Or Corded Buttonholes

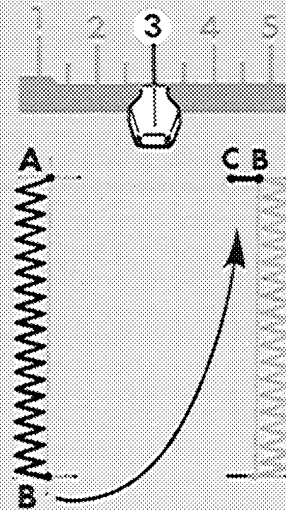
Both fine pearl cotton (size No. 8) and buttonhole twist make suitable filler cords for raised buttonholes.

Place the spool of filler cord on the second spool pin. Lead the cord through the first thread guide, straight down between the center and back tension disc, into the large thread guide and then through the eyelet on the special purpose foot. Draw the cord under and in back of the foot and proceed as for regular buttonholes.

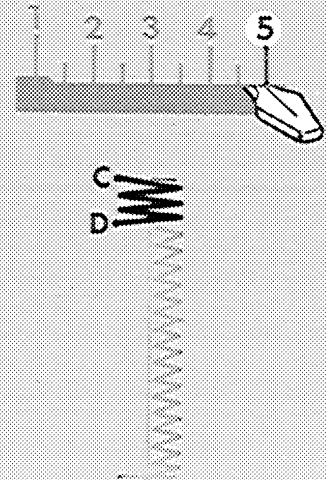


Stitching Procedure for Making a Buttonhole

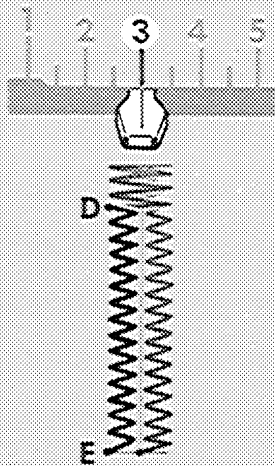
Set stitch pattern selector on zig-zag stitch, needle position selector on left position and stitch width selector on setting desired for side stitching of buttonhole. Place work under needle, aligning center marking of buttonhole with center score line of presser foot.



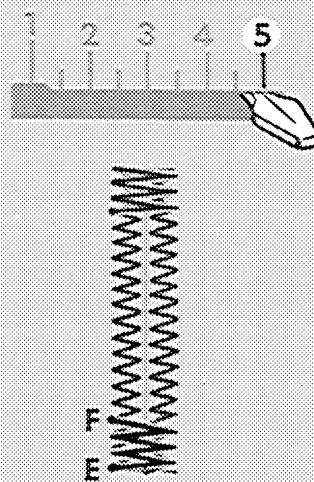
Side Stitching: Position needle in fabric at point A. Lower foot and stitch to end of marking. Leave needle in fabric at point B. Raise foot and pivot work on needle. Lower foot. Take one stitch without changing stitch width selector setting, bringing needle to point C.



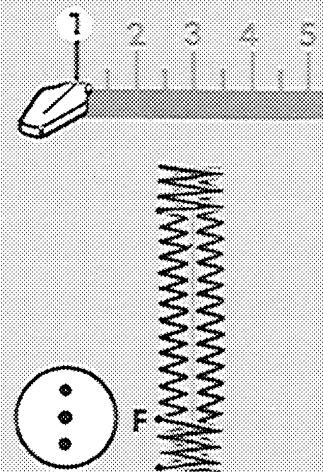
Bar Tack: Adjust stitch width selector for bar tacks and take at least six stitches. Stop at point D.



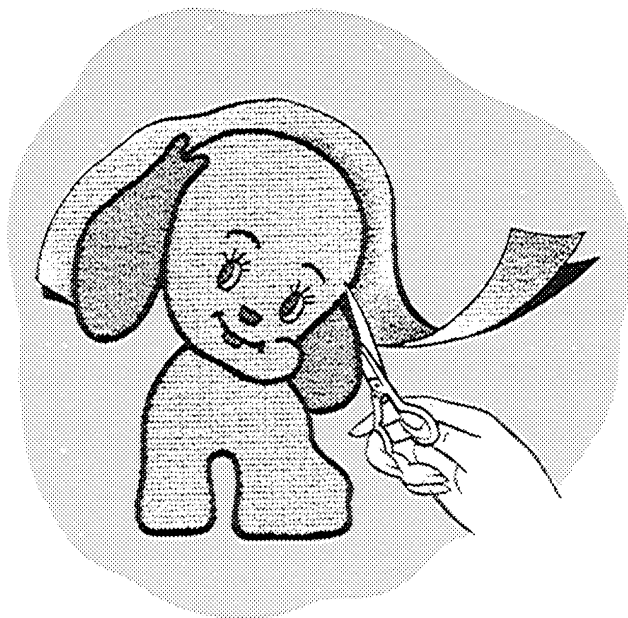
Side Stitching: Readjust stitch width selector for side stitching. Complete work to point E. Leave needle in fabric.



Final Bar Tack: Adjust stitch width selector for bar tacks and take at least six stitches in reverse, ending at point F.



Fastening Stitch: To secure stitching, move stitch width selector to 1 and take three stitches. Remove work, draw threads to the underside and trim. Cut opening for button with sharp scissors.



Applique

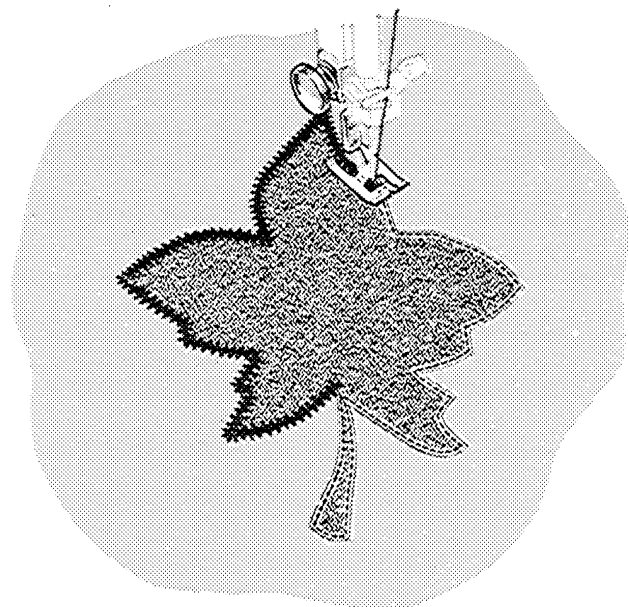
Applique adds beauty and interest to wearing apparel, lines and fabric furnishings. Either contrasting or fabric self can be used effectively.

The stitch most commonly used in appliqueing is a closely set zig-zag stitch. The width of the zig-zag stitch can be varied to accommodate fabrics of different weaves and textures. Combination patterns and variations can also be used to applique with decorative stitching.

There are two methods by which applique work can be done. The appropriate method is determined by the fabric being used, and a test sample is advisable. Position the design properly and baste it to the fabric. Attach the special presser foot to the presser bar.

Method No. 1

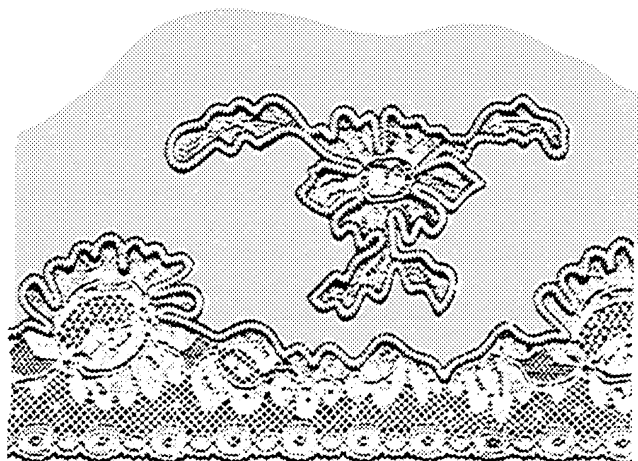
Set machine for zig-zag stitching at center needle position and set stitch width selector for the desired width of stitch. Stitch, outlining the design with applique stitching. Any excess fabric on the outer edges is trimmed away after the stitching has been completed.



Method No. 2

Set machine for straight stitching at center needle position. Outline the entire design with a short stitch. Trim raw edges to the stitching.

Overedge the design with zig-zag stitching of the desired stitch width. A smooth, lustrous finish results which requires no additional trimming.



Corded Applique

Corded applique, which gives a raised, three-dimensional effect, is a particularly attractive finish for lace applique.

Either method of appliqueing can be used when cording is desired. The only change in procedure is the introduction of the cord, over which the applique stitching is formed. See page 42 for threading.

Monograms and Motifs

The wide range of the needle position settings make possible the creation of many monograms and motifs. You can buy designs — or create them yourself.

Make a sample first to find the right stitch length and width, thread tension and pressure.

Transfer the design to the right side of the fabric.

Some fabrics may require a backing of crisp lawn or organdie.

After stitching trim any excess fabric close to the stitching.

Stitch Pattern Selector: Zig-Zag Stitch

Needle Position Selector:
Center, left or right

Stitch Width Selector: 2 — 5

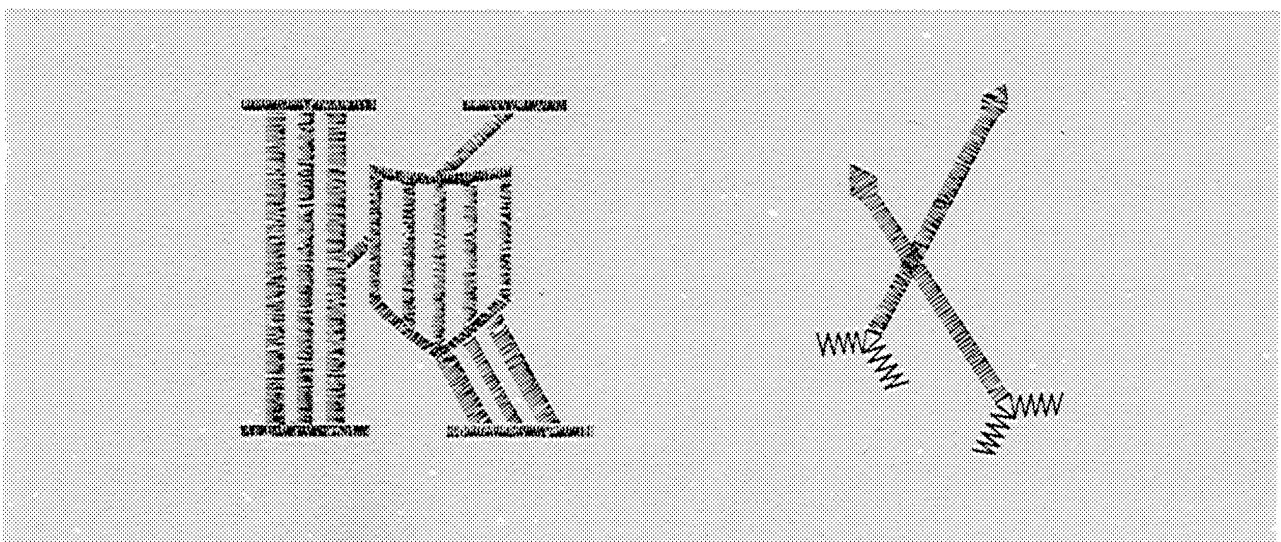
Stitch Length: Less than 1 mm
(more than 20 stitches per inch)

General Purpose Throat Plate

Special Purpose Presser Foot

To Find The Beginning Of The Pattern Unit
To reproduce a specific portion of a stitch pattern, first stitch on a scrap of material until the desired point in the design is reached.

Raise presser foot and remove scrap. Bring motif or monogram into correct position under needle; lower presser foot and stitch. This procedure is recommended for all precise design placement. Leaves, and flower petals, for example are created in this way. Free motion embroidery with hoop can be seen on page 68.



Seaming Shears

Stitch Pattern Selector: Zig-Zag Stitch

Needle Position Selector: Center

Stitch Width Selector: 2

Stitch Length: About 1 mm

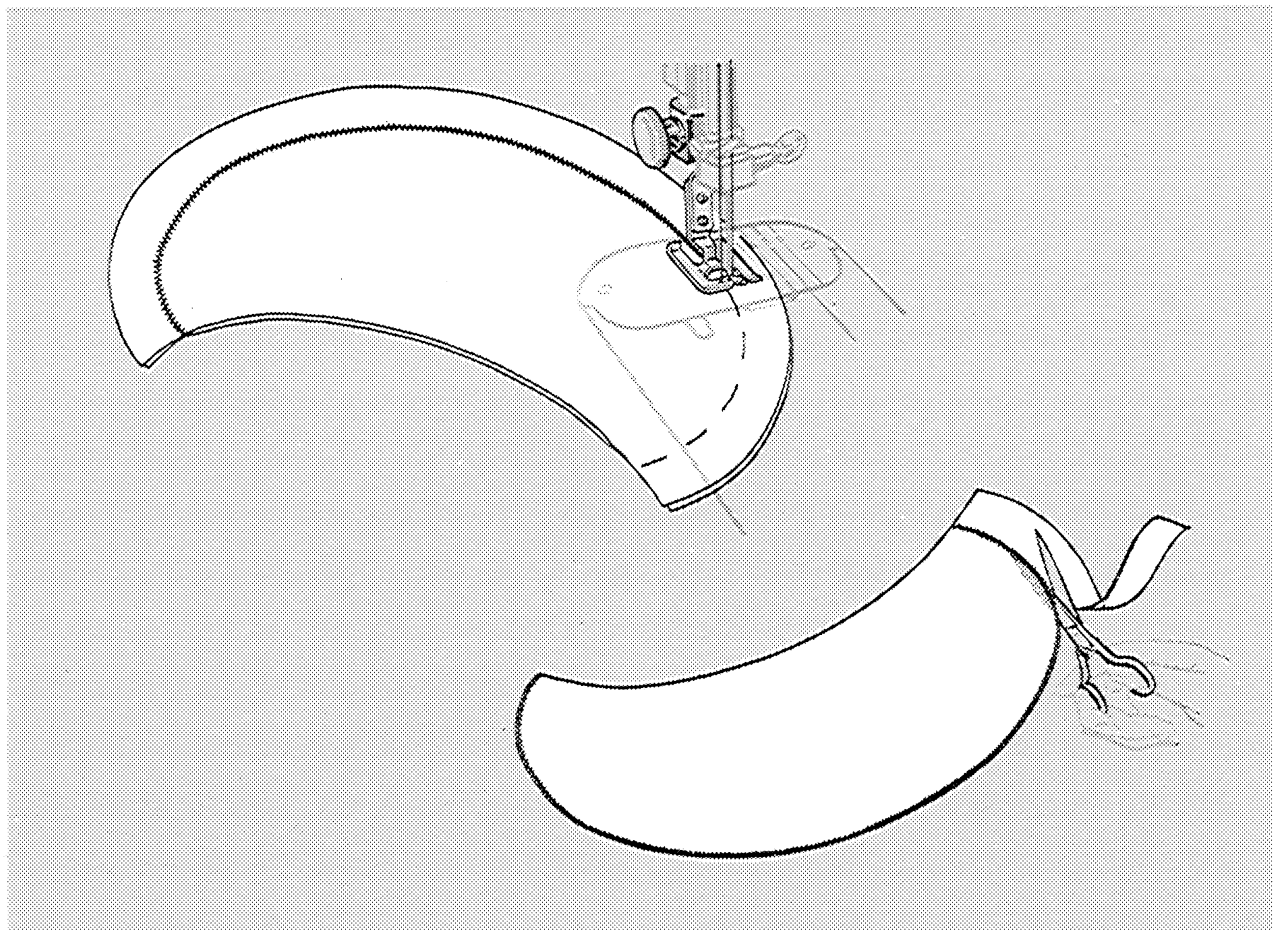
Throat Plate: General Purpose

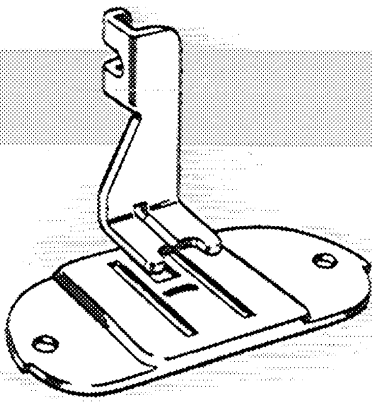
Presser Foot: Special Purpose

A dainty hairline finish is particularly desirable for the inside seams of sheer collars, facings and yokes. Seam allowances that ordinarily show through are eliminated.

Both heavy duty thread and tatting thread make suitable filler cords (see page 42 for threading).

Stitch along seam outline (covering cord if used). Trim seam allowance close to line of stitching. Turn and press.





Button Sewing Foot

The space between the holes in the button determines the stitch width settings. For buttons with standard hole spacing, use settings 1 and 4. The number 1 setting is constant, but 4 can be increased or decreased as necessary to accommodate buttons with unusual spacing.

Stitch Pattern Selector: Zig-Zag Stitch

Needle Position Selector: Left

Stitch Width Selector: 1 and 4

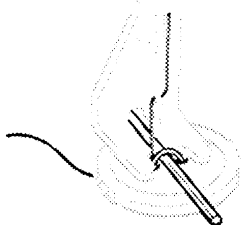
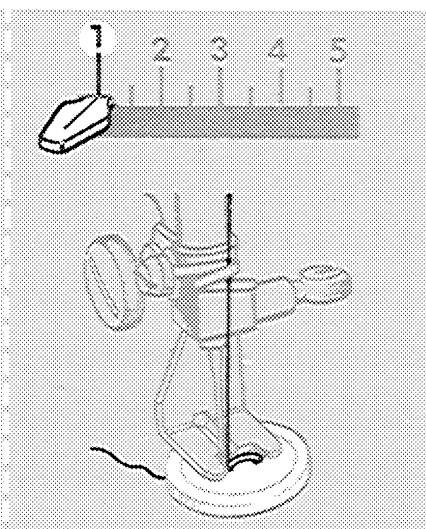
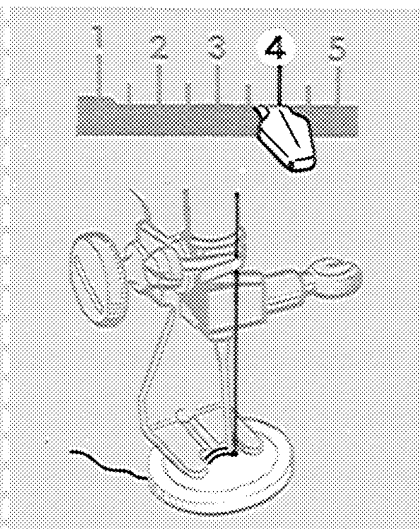
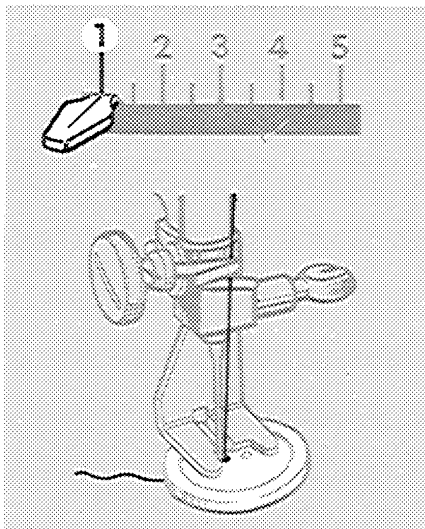
Feed Cover Plate

Button Sewing Foot

Set needle position selector at left and stitch width selector at 1. Attach feed cover plate to machine. Position fabric and button under foot so that needle will enter left hole. Lower foot. Turn hand wheel toward you until needle rises out of the fabric and is just above the foot.

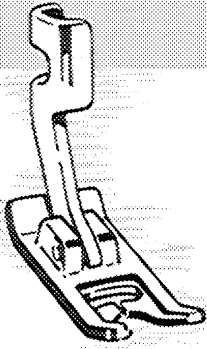
Set stitch width at 4. The needle should then enter into the right hole of the button. Take approximately six zig-zag stitches in this position. End on the left side.

To fasten stitching, adjust to number 1 stitch width setting and take approximately three stitches.



In order to form a **thread shank**, stitch over a regular machine needle. Position button and lower button sewing foot. Place needle in the groove of the foot so the point enters the hole. To form a long shank, stitch over the heavy end of the needle.

General Purpose Foot



Used with the general purpose throat plate, this foot provides a wide needle slot which accommodates all stitch settings and can be used for most sewing operations.

Applications: Seams and darts; blindstitch hems; mending and maintenance.

Lingerie Seams

Stitch Pattern Selector: Zig-Zag Stitch
Needle Position Selector: Center
Stitch Width Selector: 2½
Stitch Length: About 1 — 2 mm
depending on fabric
Throat Plate: General Purpose
Presser Foot: General Purpose

To make a lingerie seam, both durable and flexible, first straight stitch fitted seam on wrong side and press both seam allowances to one side. From the right side, top stitch with zig-zag setting, letting the needle alternately enter the seam line and seam thickness.

Flat Felled Seams

Stitch Pattern Selector: Zig-Zag Stitch
Needle Position Selector: Center
Stitch Width Selector: 3
Stitch Length: About 1 — 2 mm
depending on fabric
Throat Plate: General Purpose
Presser Foot: General Purpose

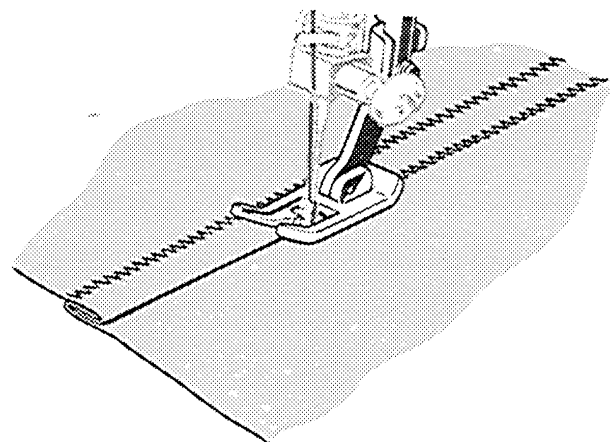
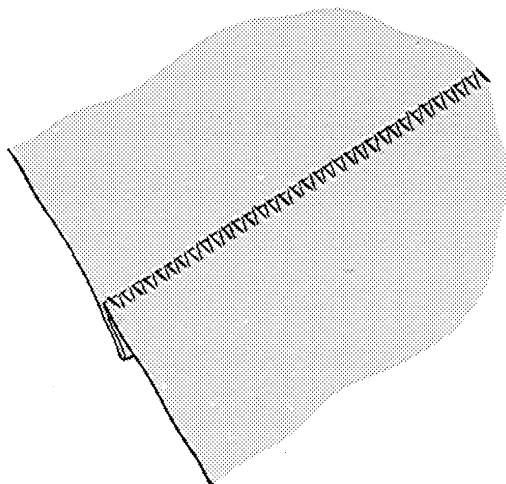
For heavy duty, strain proof seams, use double interlocked seam, zig-zag stitched on both sides.

Stitch the seam on the right side of the fabric, taking full seam allowance.

Press the seam open, then fold and press the seam allowance to one side, keeping the right side of the stitch on top.

Trim the under seam allowance to one-half its width.

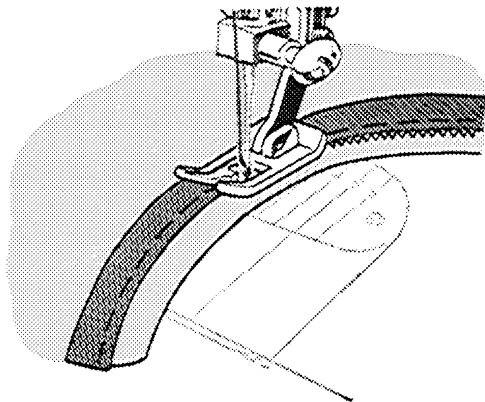
Turn the upper seam allowance edge evenly over the trimmed edge, and top stitch.



Seams In Knit Fabrics

Stitch Pattern Selector: Zig-Zag Stitch
Needle Position Selector: Center
Stitch Width Selector: 2
Stitch Length: 1.5 mm
Throat Plate: General Purpose
Presser Foot: General Purpose

Seams in fabrics that stretch or bias seams in firm fabrics are often stayed with seam tape for durability. Position seam tape with edge exactly on seam line. If seam is curved, pre-shape tape to fit by steam pressing. Baste tape in place, if necessary. Stitch with fine zig-zag stitching, allowing needle to enter seam tape and seam allowance alternately. Press seam open after clipping on curve.



Seam Finishes

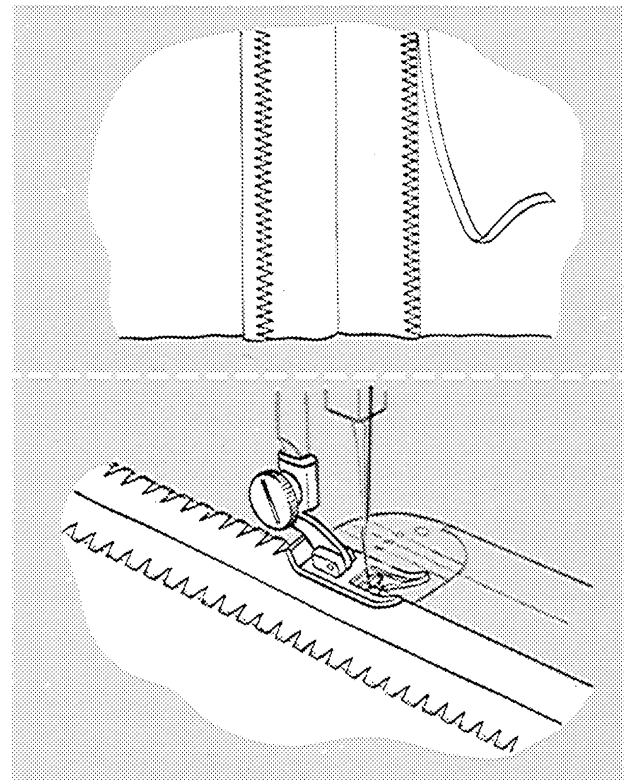
Stitch Pattern Selector: Zig-Zag Stitch
Blind Stitch, Multiple Stitch Zig-Zag
Needle Position Selector: Center
Stitch Width Selector: 4 — 5
Stitch Length: 2 — 4 mm depending on choice of stitch and fabric
Throat Plate: General Purpose
Presser Foot: General Purpose

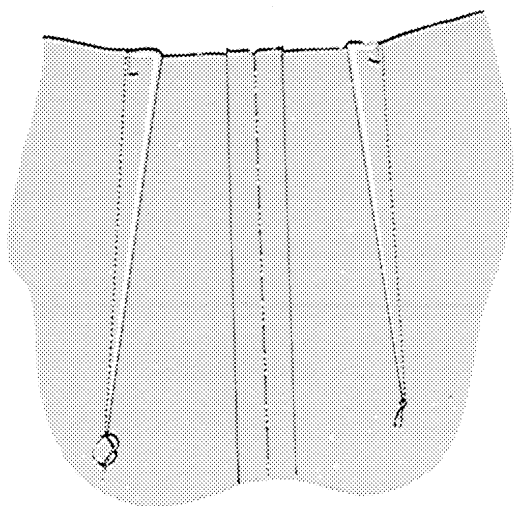
Seam edges support the garment and should be given a durable finish if the fabric is likely to ravel.

Make a test sample first to determine whether zig-zag stitch, blindstitch, or multiple-stitch zig-zag best suits your fabric. Also, adjust stitch length and width settings to suit fabric. Choose the settings that will give you the most "open" stitch that will secure the fabric edges. Avoid harsh, over-stitched edges.

Trim seam edges evenly.

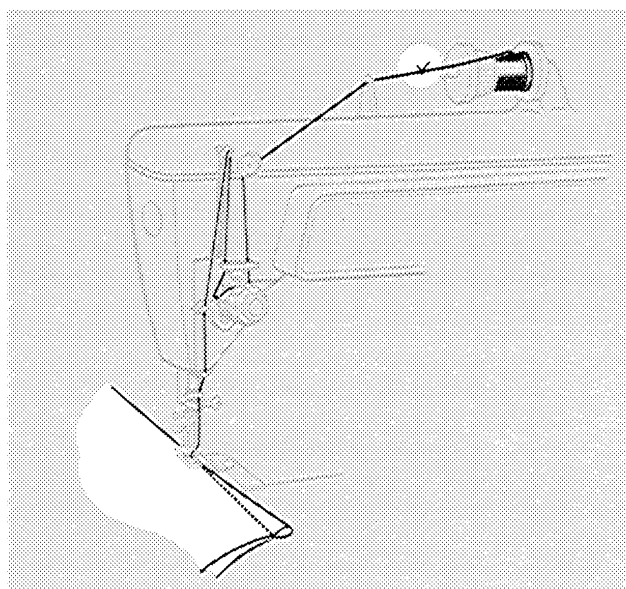
Place stitching near the edge of the seam allowance or over the raw edge as illustrated.





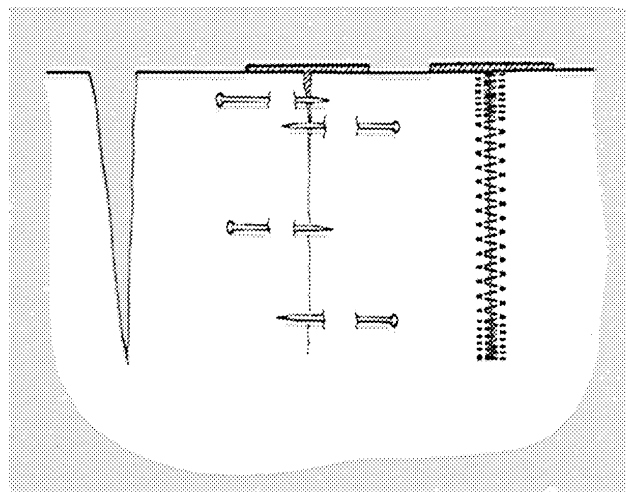
Darts

Darts provide fit and contour in a garment and should be accurately stitched. A straight stitch dart is usually formed by stitching from the seam edge, tapering gradually to the point, where the last three or four stitches are parallel to the fold. Stitch beyond the fold to form a thread chain approx. 20 mm ($\frac{1}{2}$ to $\frac{3}{4}$ inch) in length. Tie the thread ends into a single knot close to the stitching.



Thread ends at the point of the dart are eliminated when the single thread principle is employed. Unthread needle and with thread leading through the throat plate from bobbin, rethread needle from back to front. Tie bobbin and upper threads together. Draw knot through all threading points including take-up lever eyelet and tension, winding enough on the spool to complete stitching the full length of the dart. Take any slack out of the thread by turning the spool. Lower presser foot and stitch from point of dart toward edge of garment section and backstitch to reinforce.

This method is also ideal for inside darts in sheer fabrics.



Darts in Interfacing

Non-woven interfacings can be shaped without bulk with zig-zag stitching. Set stitch pattern selector at zig-zag stitch or multiple-stitch zig-zag.

Cut out the dart allowance on the stitching line. Bring raw edges together and pin over a muslin stay, and stitch. Backstitch at both ends.

Mending

The multiple-stitch zig-zag is well suited for all types of household mending. It forms a firm, flexible bond for the repair of rents and tears, and is ideal for the reinforcement and application of elastic. Stitch length and width are regulated according to need.

**Stitch Pattern Selector: Multiple Stitch
Zig-Zag, Zig-Zag Stitch**

Needle Position Selector: Center

Stitch Width Selector: 2 — 5

Throat Plate: General Purpose

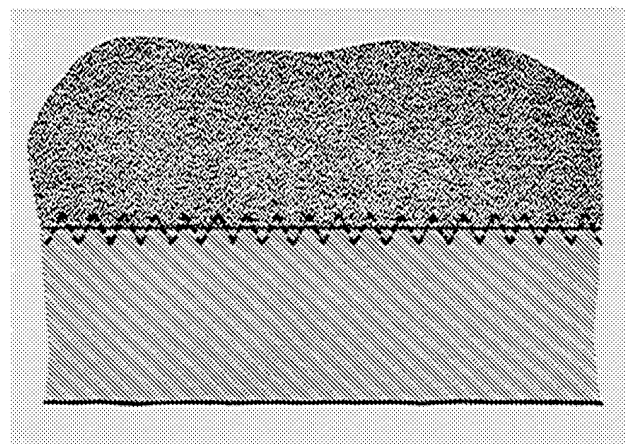
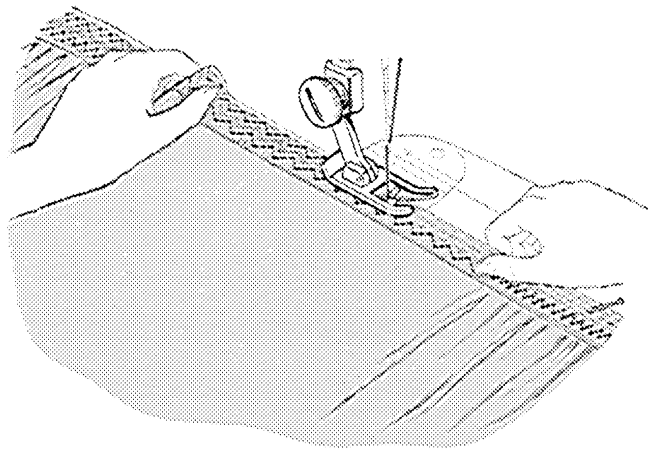
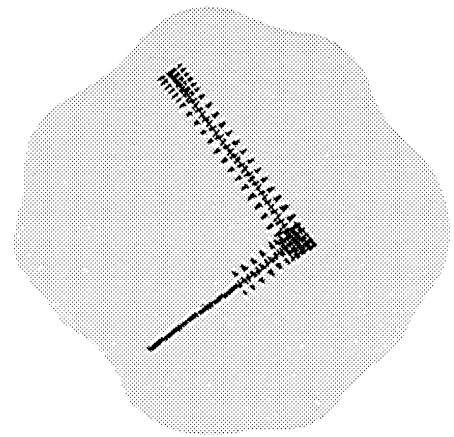
Presser Foot: Special Purpose

Rents and Tears: Trim away ragged edges. Place an underlay on the wrong side of tear for reinforcement. Using multiple-stitch zig-zag, follow the line of the tear bringing the edges together. Shorten stitch length at ends and corners to give extra strength.

Application of Elastic: Elastic, such as used in waist bands, must be stretched as it is applied, to insure fullness required in the garment.

Blanket Binding

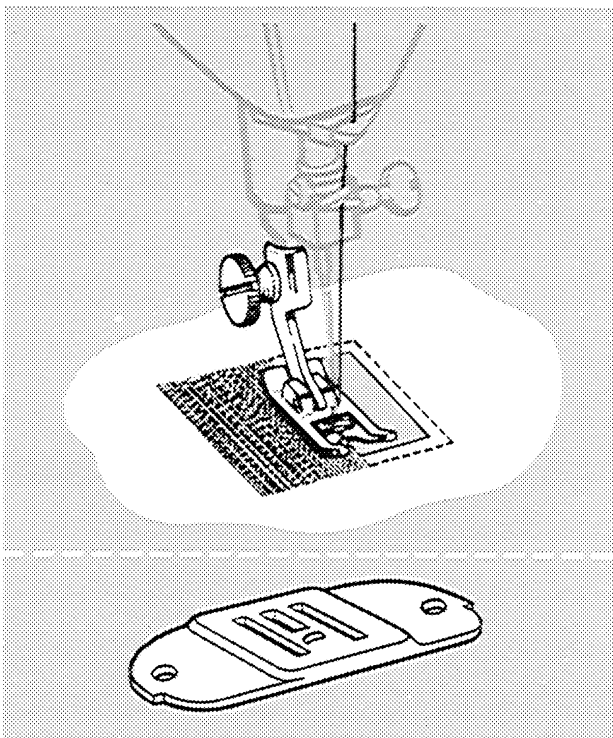
The multiple-stitch zig-zag is an excellent stitch for applying blanket bindings and affords both a decorative and durable finish. Remove worn binding. Baste new binding securely in place (stitch width selector at 5) and stitch. Adjust presser foot pressure if necessary, to accommodate the thickness of the blanket.



Darning

With some skill you can easily and quickly perform all types of darning works on your machine. For this purpose you can selectively use 1. the general purpose presser foot, or 2. the darning and embroidery foot.

Stitch Pattern Selector: Straight Stitch
Needle Position Selector: Center
Stitch Width Selector: 1
Stitch Length: 0
Feed Cover Plate
Presser Foot: General Purpose
Presser Foot Pressure: Dial Setting D



1. With General Purpose Presser Foot

First of all set pressure at **D** (refer to page 15) and stitch length regulator at **0 (MM)**. Now attach feed cover plate to machine bed in place of regular throat plate.

Trim ragged edges from area to be darned, position work under needle and lower presser foot to actuate the needle thread tension. Hold needle thread loosely with left hand, turn hand wheel toward you. This will draw bobbin thread together with loop of needle thread up through fabric. Hold both thread ends and lower needle into fabric.

Outline opening to be darned with running stitches about 6 mm ($\frac{1}{4}$ inch) from edge for reinforcement. Stitch across opening, moving fabric at a slight angle to and fro needle.

Run machine at moderate speed and guide fabric with a steady continuous movement. Slow movement of fabric will produce a short stitch; more rapid movement lengthens the stitch.

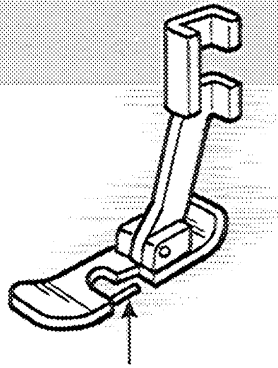
Fairly long stitches are best for knit and tricot fabrics so that the darned area remains smooth and flexible. Short stitches are best for cottons and linens as they approximate weave of fabric.

After completion of darning work, reset pressure to normal setting.

2. With Darning and Embroidery Foot

The settings of the machine for this type of handling are described on page 67.

Presser Foot For Overedged Seams (Stretch Stitch)



Thread Guide

The overedged seam is particularly appropriate for use in construction of garments made of knit, stretch or elasticized fabric. Together with the overedged presser foot, seams that stretch with the fabric can be joined and finished in one operation.

Stitch Pattern Selector:
Overedged Stitch

Needle Position Selector: Right only

Stitch Width Selector: 4 — 5

Stitch Length: Up to 1.5 mm

Presser Foot Pressure: Light, 2 — 3

Throat Plate: General Purpose

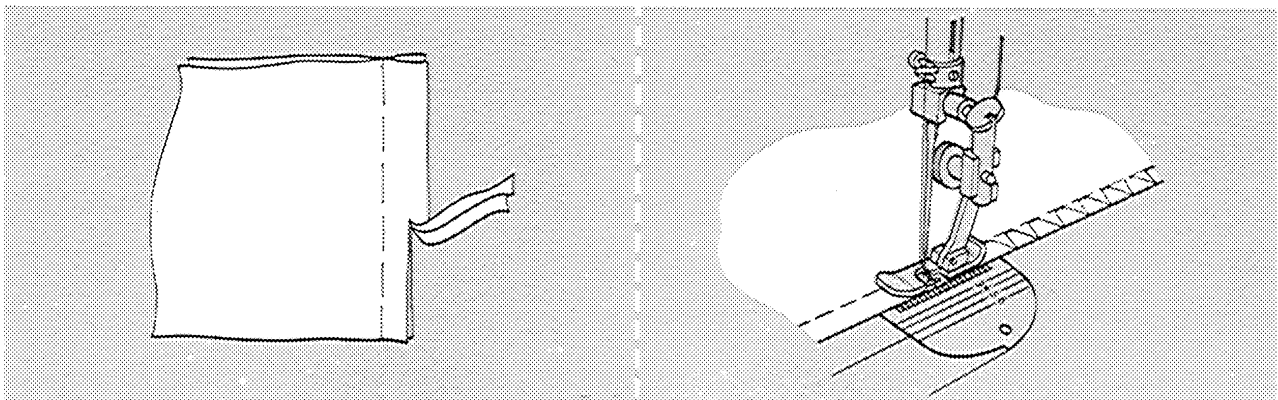
Presser Foot for Overedged Seams

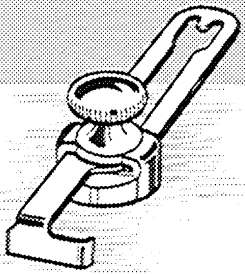
Make a test sample first to determine the suitability of an overedged seam in the construction of your garment. Be sure to duplicate the grain of your garment in your test.

Adjust stitch length, pressure and thread tension accordingly. Cut and fit garment in the regular way, using an approx. 15 mm ($\frac{5}{8}$ inch) seam allowance. Baste fitted seam line.

Trim seam edges evenly to 6 mm ($\frac{1}{4}$ inch) from seam line basting. Place trimmed seam under the presser foot so that the bulk of the work falls to the left and the seam edge to the right under the presser foot thread guide (see illustration in left top corner).

Stitch, guiding fabric up to the inside edge of the thread guide so that the straight stitches fall on the seam line and the zig-zag stitches over the seam edge.





The Seam Guide

The seam guide aids in attaining uniformity of seam width when extra control is needed. It provides for stitching to be spaced at any distance between 3 mm to 30 mm ($\frac{1}{8}$ to $1\frac{1}{4}$ inches) from the edge of the fabric. It is secured to the bed of the machine in either of the threaded holes to the right of the slide plate.

Applications: Seams, blindstitching, straight stitching and decorative stitching.

Straight Seams

Stitch Pattern Selector: Straight Stitch
Needle Position Selector: Center
Stitch Width Selector: 1
Stitch Length: 1 — 4 mm
 depending on fabric
Straight Stitch Throat Plate and Presser Foot, or
General Purpose Throat Plate and Presser Foot
Seam Guide

To guide seam stitching straight and parallel to the edge of the fabric, adjust and align the seam guide for proper seam width.

Pin seam edges and baste if necessary. Hand basting can be eliminated on easy-to-handle

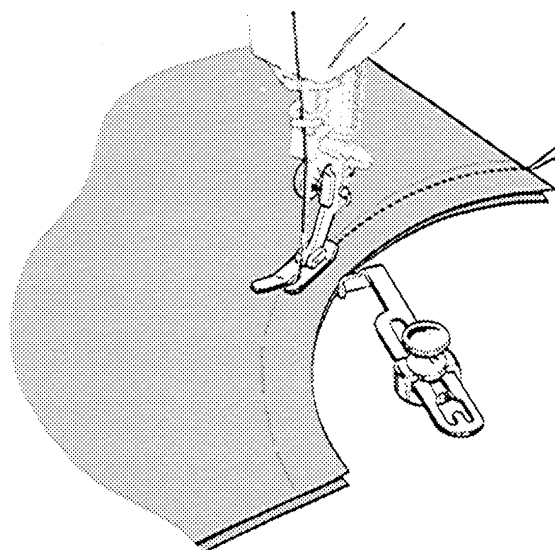
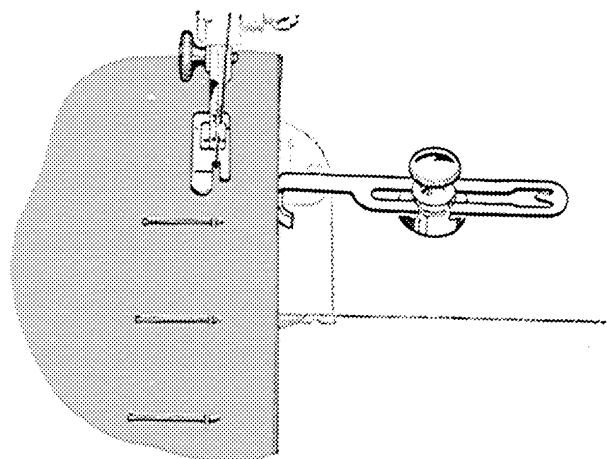
fabrics. Place pins with points toward seam edges so they nip into fabric at stitching line. The hinged straight-stitch presser foot will ride freely over the pin points. Guide fabric edges lightly against guide while stitching.

Curved Seams

Curved seams require additional treatment in handling.

A shorter stitch will provide greater elasticity and strength.

Set the seam guide at an angle so that the end closest to the needle acts as a guide.



Blindstitch Hems

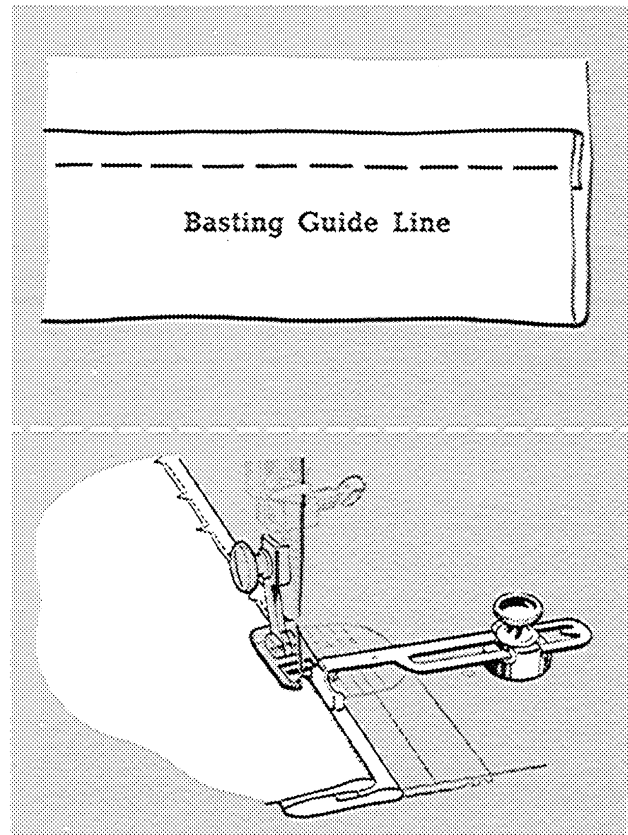
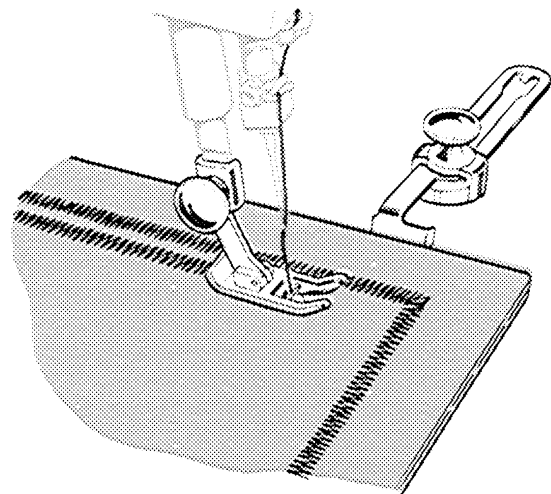
Stitch Pattern Selector: Blindstitch
Needle Position Selector: Center
Stitch Width Selector: 2 — 5
Stitch Length: 1 — 2 mm
General Purpose Throat Plate and
Presser Foot
Seam Guide

Blindstitching provides a durable hem finish that is almost invisible and comparable to hand sewing. It is equally suited to straight and curved hems. Taped, bound, turned or unfinished hem edges can be blindstitched with equal ease. Blindstitching takes a little practice, however, so make a test sample first.

Set stitch pattern selector at blindstitch. This machine setting produces four straight stitches, separated by a single sideward stitch to the left. The stitch width selector setting is determined by the weight and texture of the fabric used. The length of stitch regulates the distance between the blindstitches.

Mark, turn and press hem in the usual way. Place a basting guide line approximately 6 mm ($\frac{1}{4}$ inch) from the top of the hem edge. Place hem edge over the feed of the machine, turning bulk of fabric to the line of basting and thus creating a soft fold.

Adjust seam guide over the right toe of the presser foot until it rests next to the soft fold.

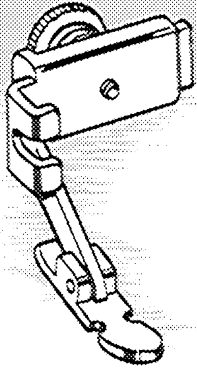


Stitch so that straight stitches fall on hem edge and sideward stitches pierce the soft fold. While stitching, feed the fold against the edge of the guide.

When stitching is completed, swing the seam guide out of position before raising presser foot.

Top Stitching

A practical, simple way to accent the lines of a dress or coat is to place one or more rows of stitching along collars, lapels, facing edges, pockets, sleeves, etc. For a tailored look, use lines of straight stitching. For decorative interest, use decorative stitching. The seam guide will help you place the rows accurately.



The Zipper Foot

This foot has been designed to facilitate the placing of stitching close to a raised edge. The hinged feature of this foot ensures even feeding over pins, heavy layers of fabric or cross seams. It is attached to the machine in place of the regular presser foot and can be adjusted to either the right or left side of the needle. Straight or zig-zag stitch settings can be used.

Applications: Zipper insertion, corded seams, tubular welting and slip cover welting.

Zipper Insertion

Stitch Pattern Selector: Straight Stitch
Needle Position Selector: Center
Stitch Width Selector: 1
Throat Plate: General Purpose or
Straight Stitch
Zipper Foot

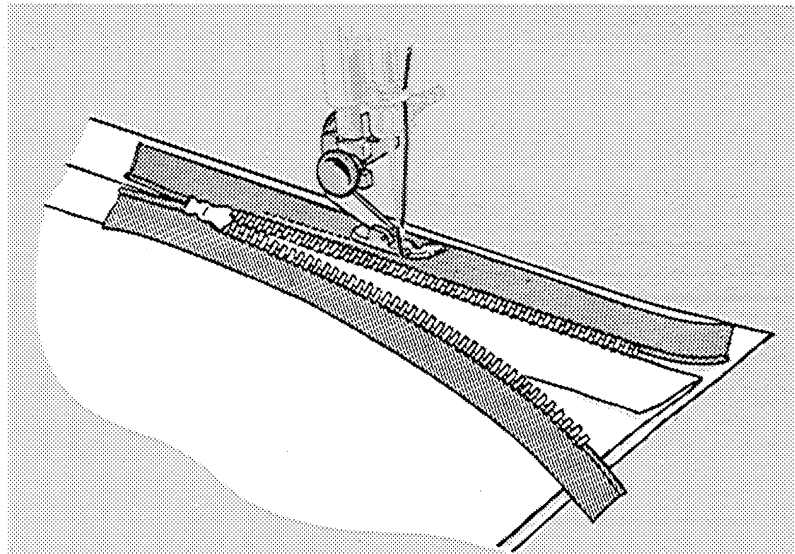
Many different types of zippers are available for everything you sew. There are several satisfactory methods for insertion. Detailed sewing instructions are included in the zipper package. For any method used, the zipper foot enables you to form an even line of stitching close to the zipper.

When the zipper is to the right of the needle, adjust the zipper foot to the left of the needle. When the zipper is to the left of the needle, adjust the zipper foot to the right of the needle.

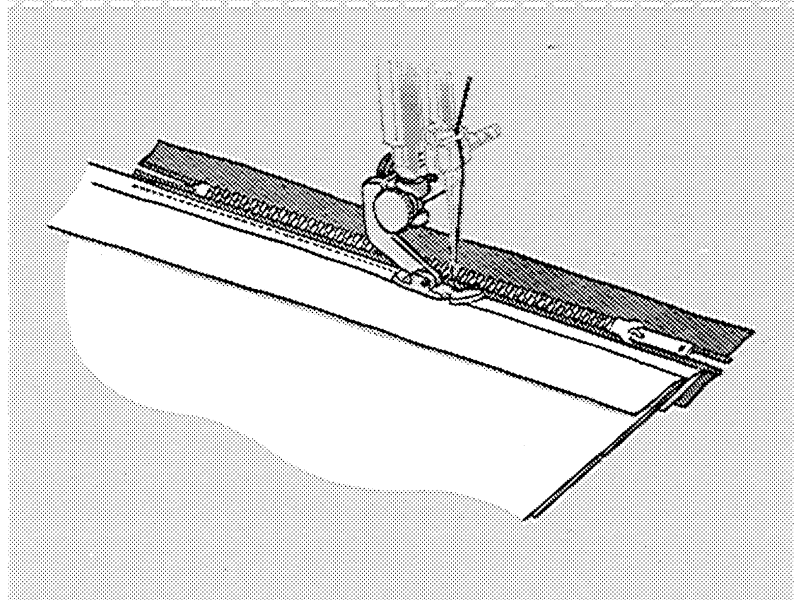
Secure the zipper foot to the presser bar as you would the regular presser foot. Adjustment to the right or left of the needle is made by loosening the thumb screw at the back of the foot. Check the position of the foot by lowering the needle into the side notch of the foot, making sure it clears the foot. Lock into position by tightening the thumb screw.

Procedure for Inserting a Zipper into a Skirt

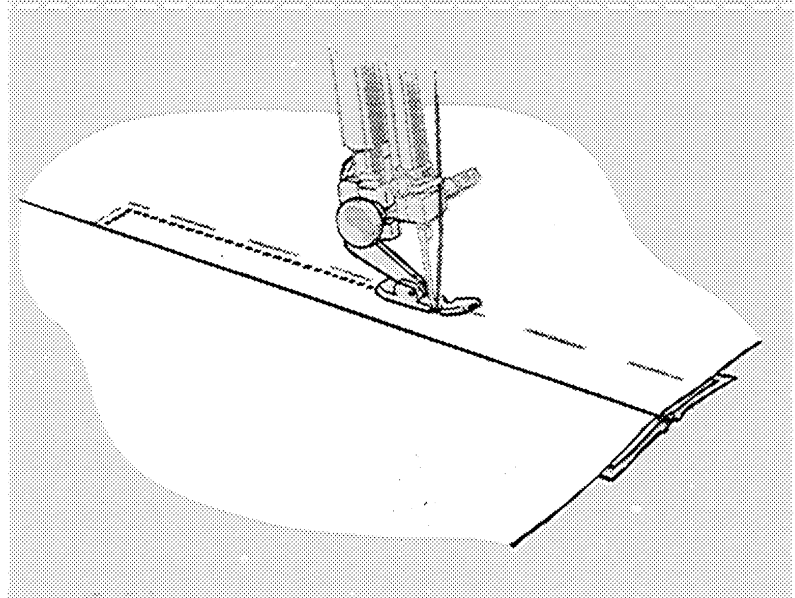
Machine baste the placket opening of the skirt and press this seam open. Attach the zipper foot to the machine and position it to the right of the needle. Open the zipper. Place the zipper face down on the seam allowance with the edge of the teeth at the seam line. Turn the back seam allowance away from the body of the skirt. Stitch the zipper tape to the seam allowance.



Adjust the foot to the left of the needle. Close the zipper and turn it face up. Smooth back the seam allowance at the edge of the zipper. Top stitch it to the tape close to the folded edge.



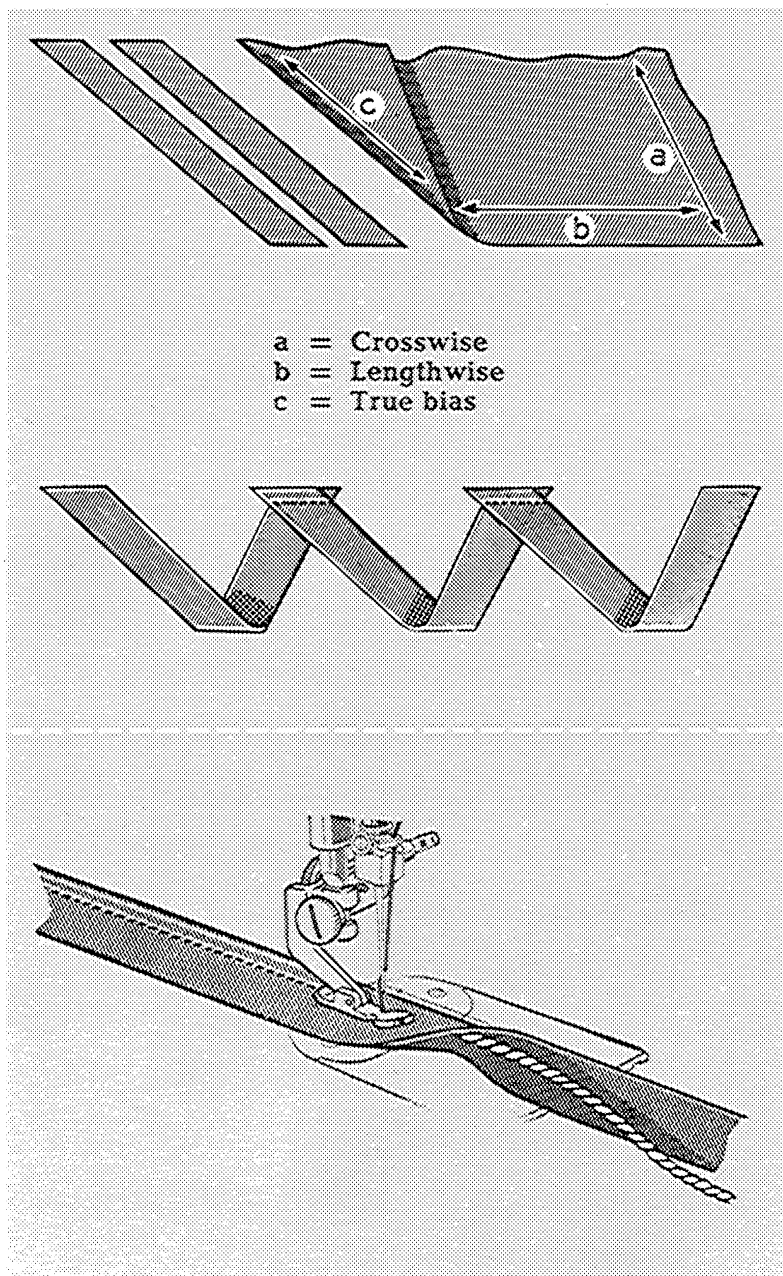
Turn zipper face down. Turn work to right side and pin in place. Adjust the foot to the right of the needle. Stitch across the lower end of the zipper and up to the waistline. Remove basting.



Corded Seams

Cable cord comes in a variety of sizes and, when covered with a firmly woven fabric, makes a welting that is a decorative seam finish for hunter's wear, children's clothes, blouses, pillow slips, lingerie etc. This welting is prepared in advance and then stitched into the seam.

Stitch Pattern Selector: Straight Stitch
Needle Position Selector: Center
Stitch Width Selector: 1
Throat Plate: General Purpose or
Straight Stitch
Zipper Foot



To make the welting:

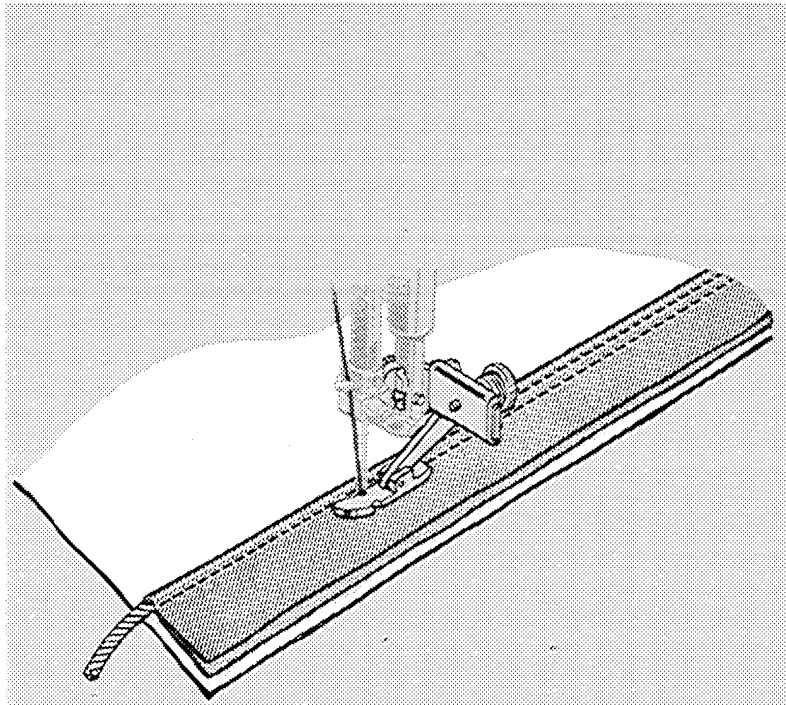
Cut bias strips of either self or contrasting fabric (width: three times the diameter of the cord plus 25—30 mm [1¼ inches]). Sew strips together on the lengthwise grain to obtain desired length.

Set stitch width selector and adjust zipper foot to the left of the needle. Encase the cord in the bias strip, raw edges even. Lower zipper foot. Stitch close to the cord, applying gentle tension to bias strip, both in front and back of the zipper foot. Use a stitch length slightly longer than for regular seaming.

To stitch welting into seam:

When stitching the welting into a seam, the zipper foot is usually adjusted to the right of the needle so that the bulk of the work will fall to the left.

Attach the welting to the right side of a single seam edge, with the same stitch length used to make the welting. Guide the foot next to the cord, but do not crowd.

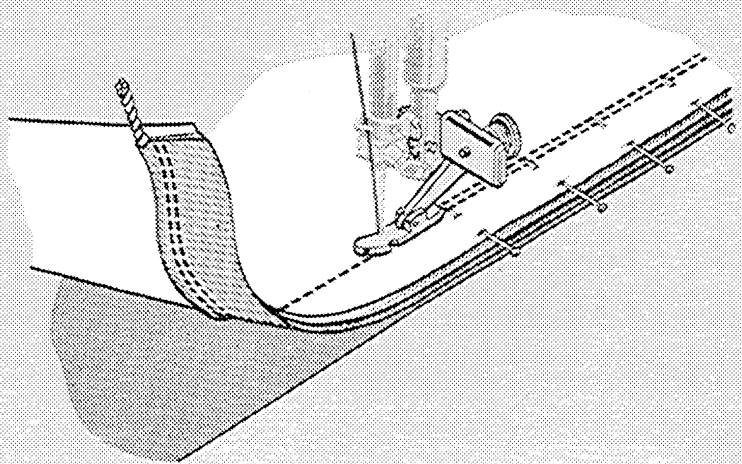


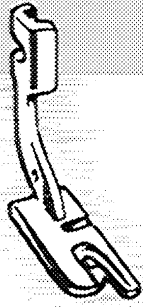
Place the attached welting over the second seam edge, and pin or baste together.

Keep the first stitching uppermost as a guide and position the seam under the needle. Stitch, this time crowding the foot against the cord.

This method produces evenly joined seam edges and tightly set welting.

Curved seams are corded as easily as straight seams, except that a shorter stitch length is used. Since the seam allowance of the welting is bias, it is not difficult to shape it to the seam.





The Narrow Hemmer

The narrow hemmer forms and stitches a perfectly turned hem without basting or pressing.

Applications: Fine hems, edging ruffles, hemming with lace, hemmed seams and lingerie finishes.

Hemming

Crease a double 3 mm ($\frac{1}{8}$ inch) fold along the edge of the fabric to be hemmed. Place the fabric under the foot. Lower the foot and stitch the creased fold for several stitches.

Hold the thread ends with the left hand and guide the raw fabric edge in front of the hemmer evenly into the scroll.

Sew slowly, still holding thread ends until the hem is well started.

Soft fabrics will enter the scroll best with the foot down; firm, crisp materials with the foot raised. Even feeding is essential to good hemming. The same width of fabric must be kept in the scroll of the hemmer at all times. A little practice will result in perfectly formed hems.

Stitch Pattern Selector: Straight Stitch

Needle Position Selector: Center

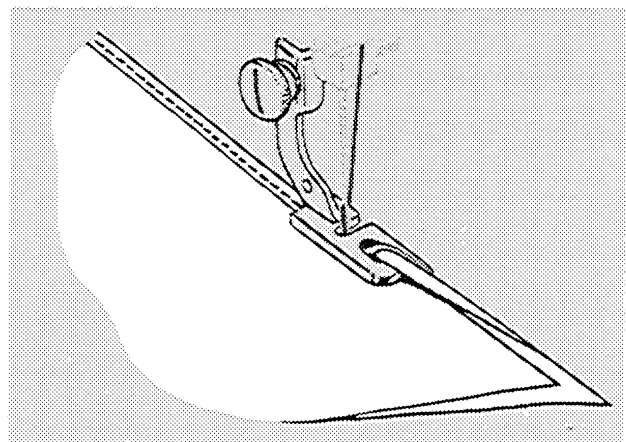
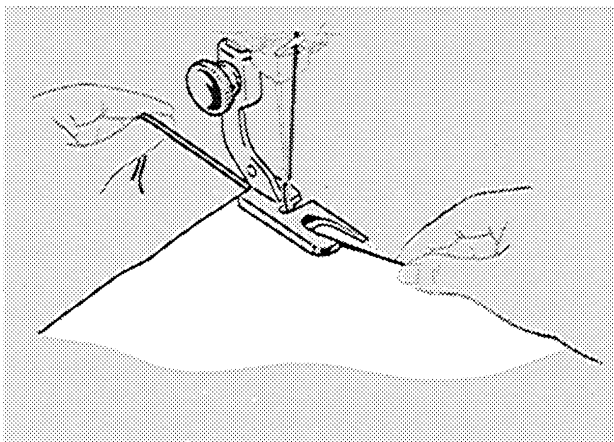
Stitch Width Selector: 1

Throat Plate: Straight Stitch or
General Purpose

Narrow Hemmer

Hemmed Seams

A hemmed seam is applied where a fine narrow seam is appropriate. Allow a scant 8 mm ($\frac{1}{4}$ inch) seam allowance. With both sides of fabric together, place upper layer approx. 4 mm ($\frac{1}{8}$ inch) to left of lower layer. Insert two fabric edges into hemmer and proceed as for plain hem.



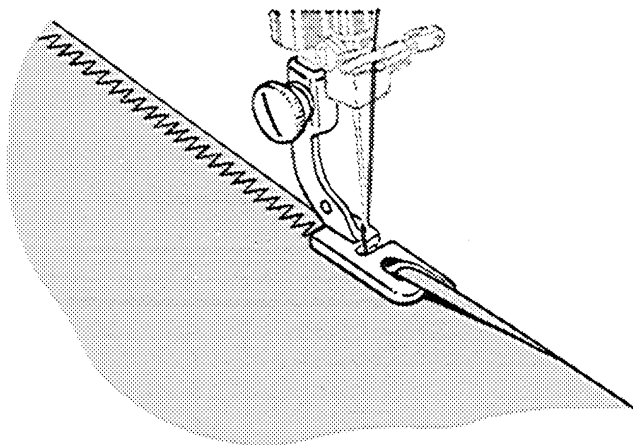
Decorative Hems

If you use the hemmer foot and choose a zig-zag stitch pattern, you can turn and decorate a narrow hem in a single operation.

This time-saving finish is especially suited to ruffle edges, aprons and lingerie finishes.

Stitch Pattern Selector: Zig-Zag Stitch
Needle Position Selector: Center
Stitch Width Selector: 2 — 5
Throat Plate: General Purpose
Narrow Hemmer

Follow same steps as for plain hems.



Hemming with Lace

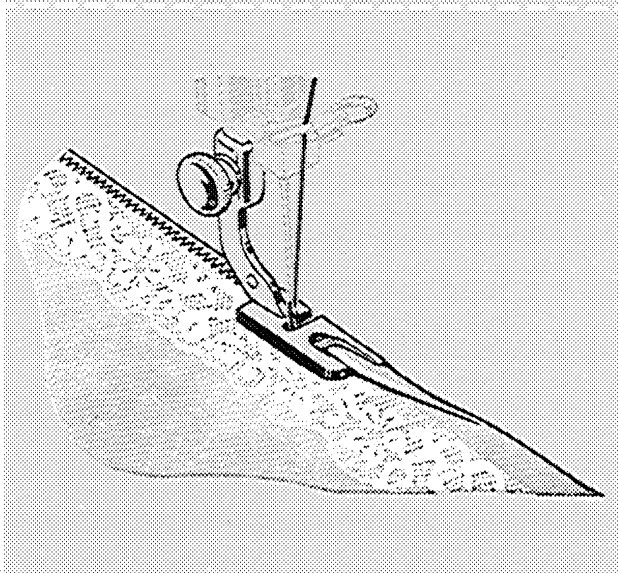
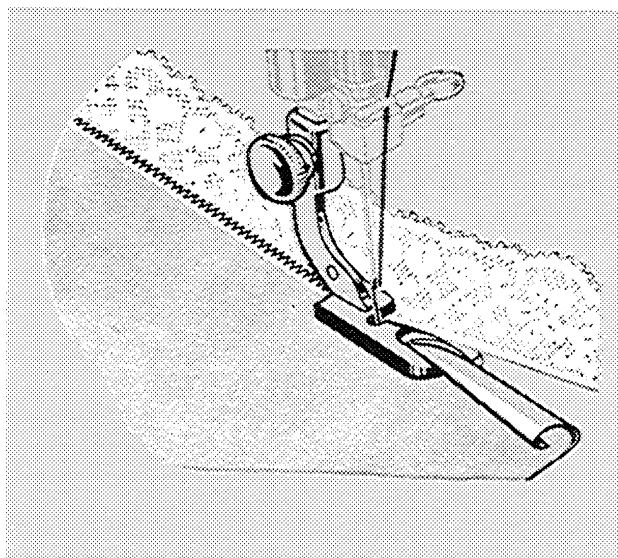
Stitch Pattern Selector: Zig-Zag Stitch
Needle Position Selector: Center
Stitch Width Selector: 3
Throat Plate: General Purpose
Narrow Hemmer

Lace Applied Over Hem

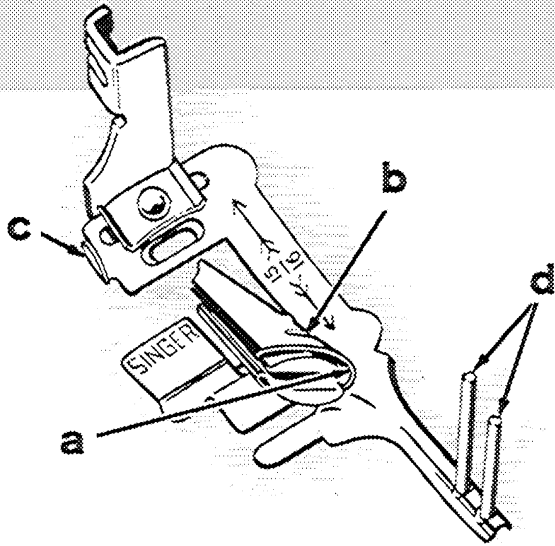
Fold and start the hem in the usual way. Starting about 25 mm (1 inch) down from the end of the lace, place the salvage under the needle and lower needle to hold lace firmly. Raise the foot slightly and slip the lace under the back portion of the foot, without disturbing the position of the fabric. Stitch slowly, guiding the fabric with the right hand, the lace with the left. Take care not to stretch the lace.

Lace Applied Under Hem

When using lace underneath the fold of a hem, the procedure is the same as when making a hemmed seam. Slip the lace in from the left as you would the second piece of fabric. This method is used where a neat finish is desired on both sides of material.



Binder

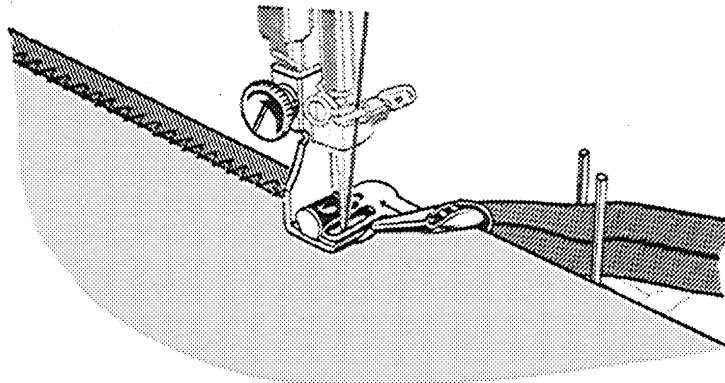


- a = Scroll for unfolded binding
- b = Slot for folded bias tape
- c = Adjusting lug
- d = Guide pins

The binder is used to apply commercial binding as well as self-fabric bias to an unfinished edge. This colorful trimming is attractive when applied to children's clothes, aprons, curtains etc. It is a practical finish for seam edges that fray and for making bound seams. Straight stitch, plain zig-zag or decorative zig-zag settings can be used.

Stitch Pattern Selector: Straight Stitch
or Zig-Zag Stitch
Needle Position Selector: Center
Stitch Width Selector: 1 — 5
Throat Plate: General Purpose
Binder Foot

Cut binding diagonally to form a long point. Commercial binding is inserted from the right into the slot for folded bias tape of the scroll. Unfolded bias 24 mm ($1\frac{5}{16}$ inch) wide is inserted into the opening for unfolded binding at the end of the scroll.



Pull binding through scroll until evenly folded edges are under the needle. The free length of the binding is held between the guide pins.

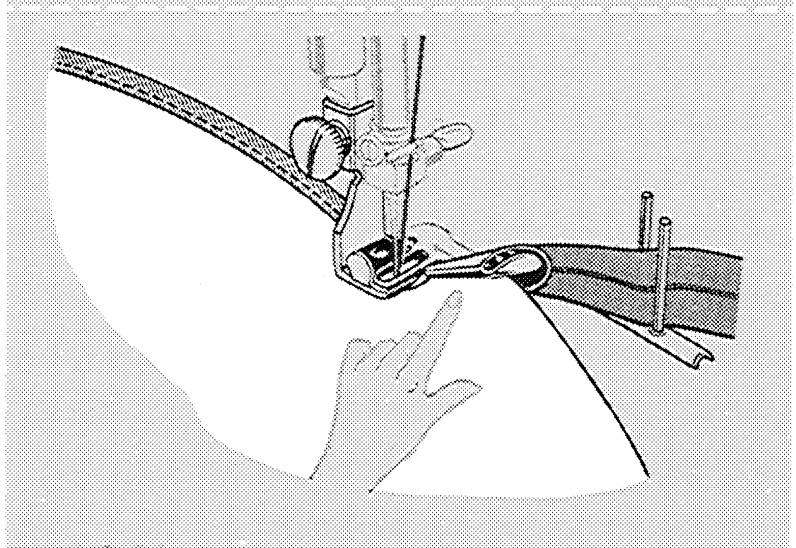
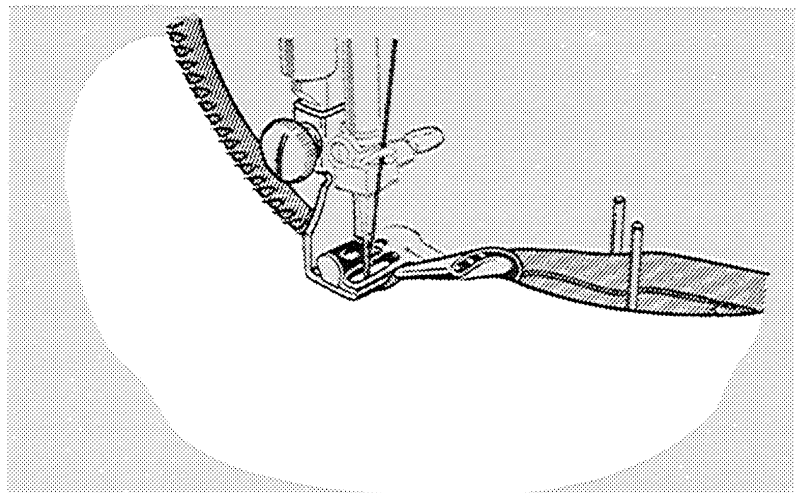
Insert edge of fabric to be bound into the center of the scroll.

The stitching is positioned close to the edge of the binding by moving the scroll portion of the binder foot to right or left by means of the adjusting lug.

Lower the foot. Allow the attachment to do the work, merely guiding the fabric into the center slot of the scroll as you stitch.

Inside Curves

Curved edges require slightly different fabric handling than straight edges. Inside curves are straightened as they are fed into the binder. If fabric is soft and has a tendency to stretch, reinforce the edge with a single row of stitching before binding.



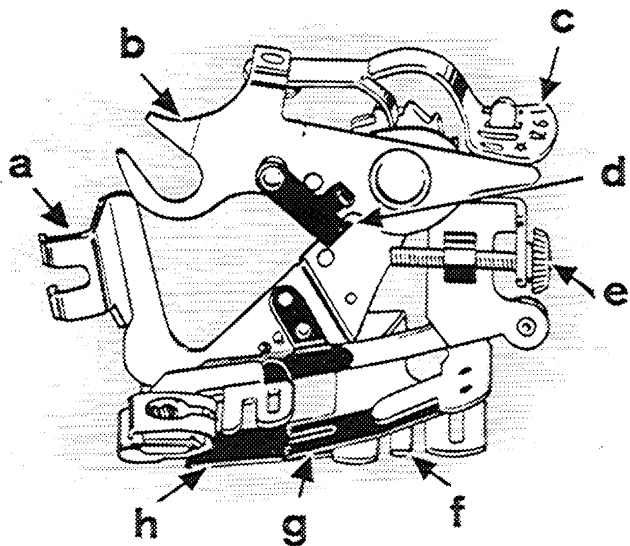
Outside Curves

Outside curves tend to lead away from the center slot of the scroll and should be guided so that a full seam width is taken at the needle point. Do not attempt to pull or straighten fabric into the full length of the scroll.

The Ruffler

This attachment offers a simple and effective way to make gathered and pleated ruffles. Ruffles may be made separately or made and applied at the same time. The ruffler is attached to the machine in place of the regular presser foot and is used with a straight stitch setting only.

The ruffling blade and the separator blade are of blue steel and hold the material to be gathered between them. The ruffling blade forms the gathers or pleats by carrying the fabric to the needle according to the spacing and fullness to which the ruffler is adjusted. The separator guide is slotted to guide seam edges evenly and to separate the ruffle strip from the material to which the ruffle is attached.



- a = Presser Bar Seat
- b = Arm Fork
- c = Adjusting Lever
- d = Adjusting Finger
- e = Adjusting Screw
- f = Separator Guide
- g = Ruffling Blade
- h = Separator Blade

To Attach The Ruffler

Raise needle to its highest point. Attach ruffler to machine in place of regular presser foot, locating ruffler on presser bar with fork arm over needle clamp screw. Securely tighten both presser bar and needle clamp screws.

Stitch Pattern Selector: Straight Stitch
Needle Position Selector: Center
Stitch Width Selector: 1
Throat Plate: Straight Stitch or
General Purpose
Ruffler

To Adjust The Ruffler

1. The adjusting lever sets the ruffler for gathers or pleats. The number 1 space setting is for gathers and places fullness at every stitch. Numbers 6 and 12 are space settings for pleats, spacing them 6 or 12 stitches apart. The star is for straight stitching and is used when grouping gathers or pleats.

2. The adjusting finger is used only for pleating and affects the width of the pleat. It is thrown out of action by turning it out of contact with the adjusting screw.
3. The adjusting screw regulates the fullness of gathers or pleats. When turned inward to its limit with the adjusting finger in place, the attachment is set for its deepest pleat. When turned outward to its limit, with the adjusting finger out of action, the ruffler gives only a hint of fullness.

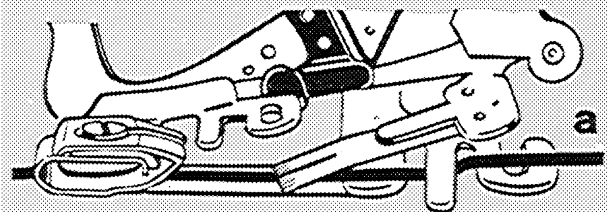
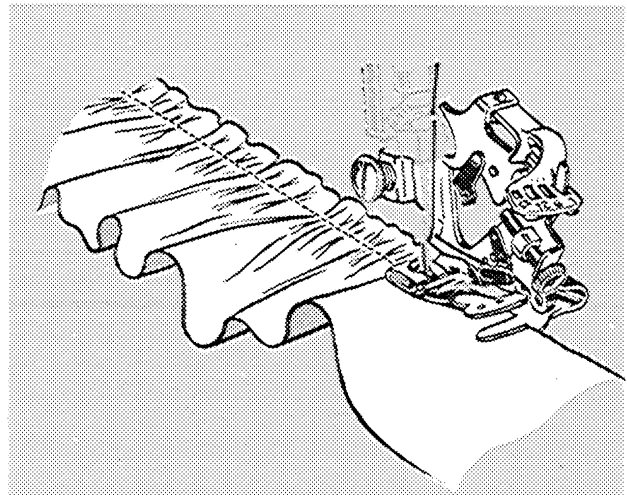
Gathering

Set adjusting lever on number 1 setting and throw adjusting finger out of action. Turn adjusting screw for amount of fullness desired and set stitch length to space fullness. Turn screw in for more fullness; turn out for less fullness.

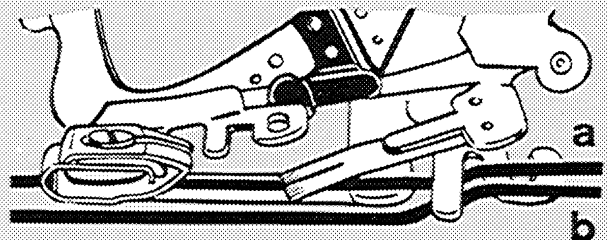
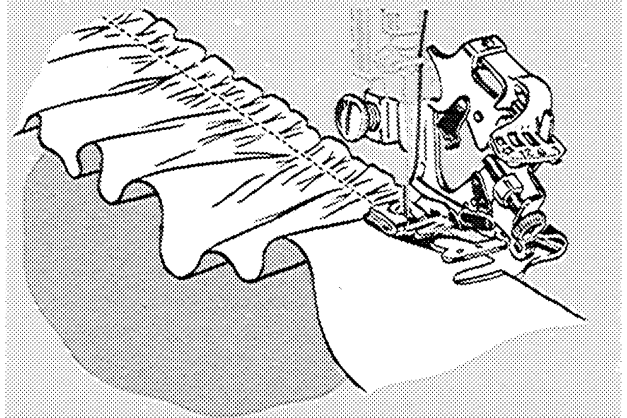
Length of sewing machine stitch length also affects ruffle fullness. Since a given attachment setting puts an equal amount of fullness into each stitch regardless of its length, shortening the stitch (more stitches to the inch) makes ruffle fuller; lengthening the stitch (fewer stitches to the inch) makes it less full.

Insert material to be gathered between blue blades and through first separator guide. Draw material to back of needle. Lower attachment and stitch.

Always test stitch length and ruffler setting on a scrap of self-fabric before proceeding with the actual work.



a = Ruffling Material

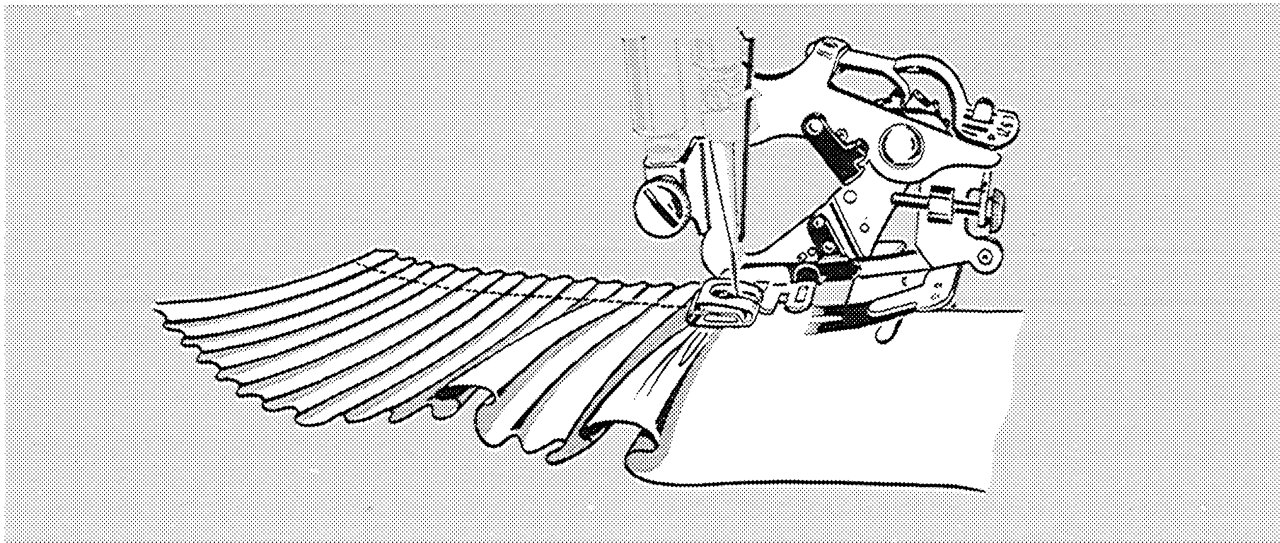


a = Ruffling Material
b = Garment

Attaching Fulls

Place strip to be gathered between blue blades and through the first separator guide. Place material to which full is to be attached between separator blade and feed of machine. Proceed as for plain gathering.

Right sides of fabric are placed together when the seam is to fall to the inside.



Pleating

Move adjusting lever to desired space setting for pleats either 6 or 12 stitches apart. For deepest pleats, set adjusting finger and turn adjusting screw inward to its maximum setting.

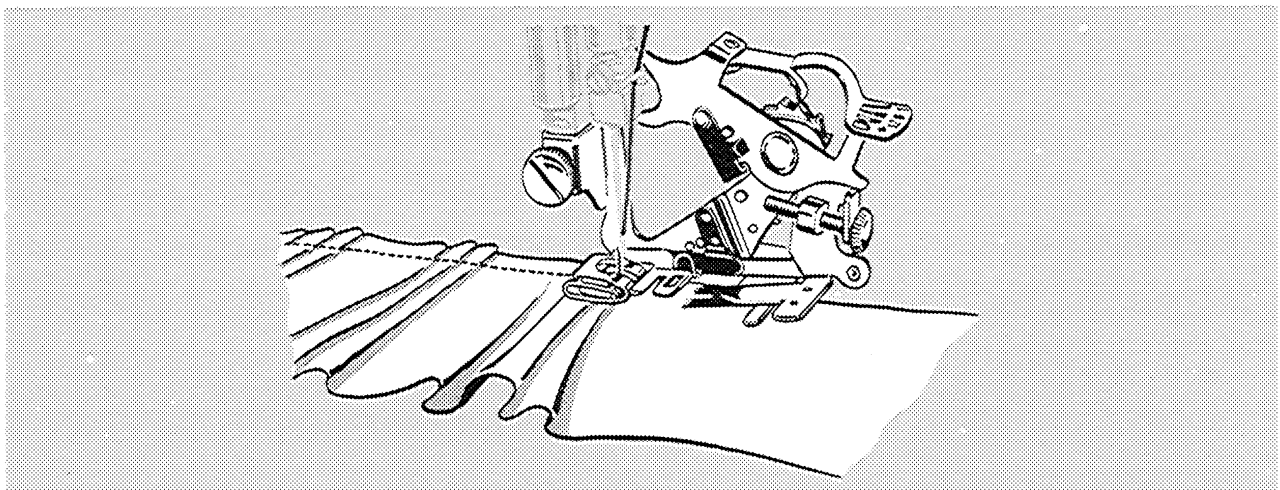
For smaller pleats, turn adjusting screw outward.

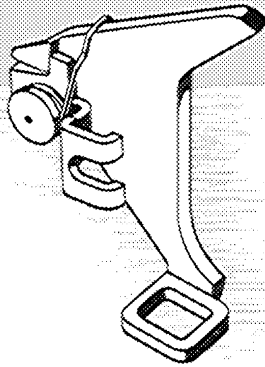
Set stitch length. A short stitch places the pleats more closely together; a long stitch separates the pleats for a greater distance. Insert fabric to be pleated between blue blades and into first separator guide. Lower attachment and stitch.

Crisp fabrics cut on the crosswise grain form the sharpest pleats. Glazed fabrics handle best if the glazed side is downward and the soft backing is next to the ruffler blade.

Group Pleating

By using the star setting (straight stitching) alternately with 6 or 12 space setting, pleats are formed in groups. Even spacing between groups is accomplished by counting the number of stitches.





Darning and Embroidery Foot

This attachment is an aid to all who desire perfection in free motion darning and embroidery work. The foot firmly holds the fabric as the needle enters and rises from the work, while fully revealing the line of design to be followed.

Stitch Pattern Selector: Straight Stitch

Needle Position Selector: Center

Stitch Width Selector: 1

Stitch Length: Less than 1 mm

Feed Cover Plate

Darning and Embroidery Foot

Trim ragged edges from area to be darned. Worn section can be fixed into hoop, but this is not absolutely necessary.

Attach feed cover plate to machine bed in place of regular throat plate.

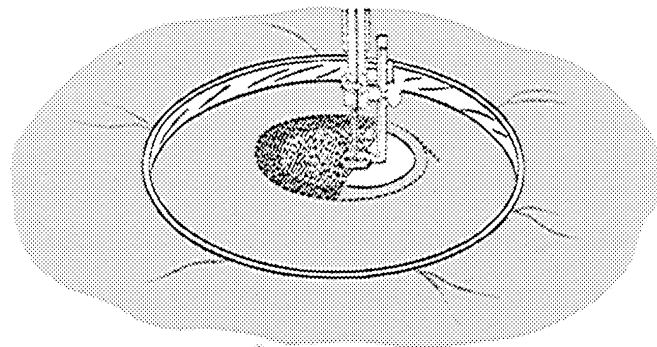
Locate darning and embroidery foot on presser bar with lifting finger over needle clamp screw.

The further steps of this sewing operation are the same as for darning with general purpose presser foot (refer to page 52).

Run machine at moderate speed and guide fabric with a steady continuous movement.

Slow movement of fabric will produce a short stitch; more rapid movement lengthens the stitch.

Fairly long stitches are best for knit and tricot fabrics; short stitches are best for cottons and linens as they approximate weave of fabric.



Free Motion Work With Embroidery Hoop

Stitch Pattern Selector: Zig-Zag Stitch

Needle Position Selector: Center

Stitch Width Selector: 2 — 5

Stitch Length: Less than 1 mm

Feed Cover Plate

Presser Foot: None

Script monograms and embroidery can be effectively accomplished with the zig-zag stitch when the free motion principle is employed.

A test sample should always be made before proceeding with the actual work to determine stitch setting and spacing. Some fabrics may require addition of an underlay of crisp lawn and organdie.

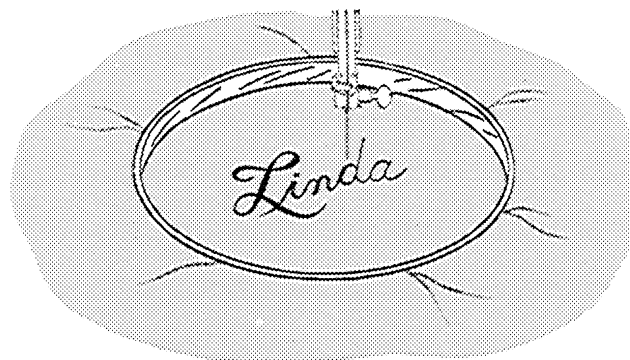
Trace or mark design on right side of fabric. Place work in embroidery hoop large enough to encompass entire design. Be sure fabric is held taut. Position work under needle and lower presser bar to engage tension. Turn

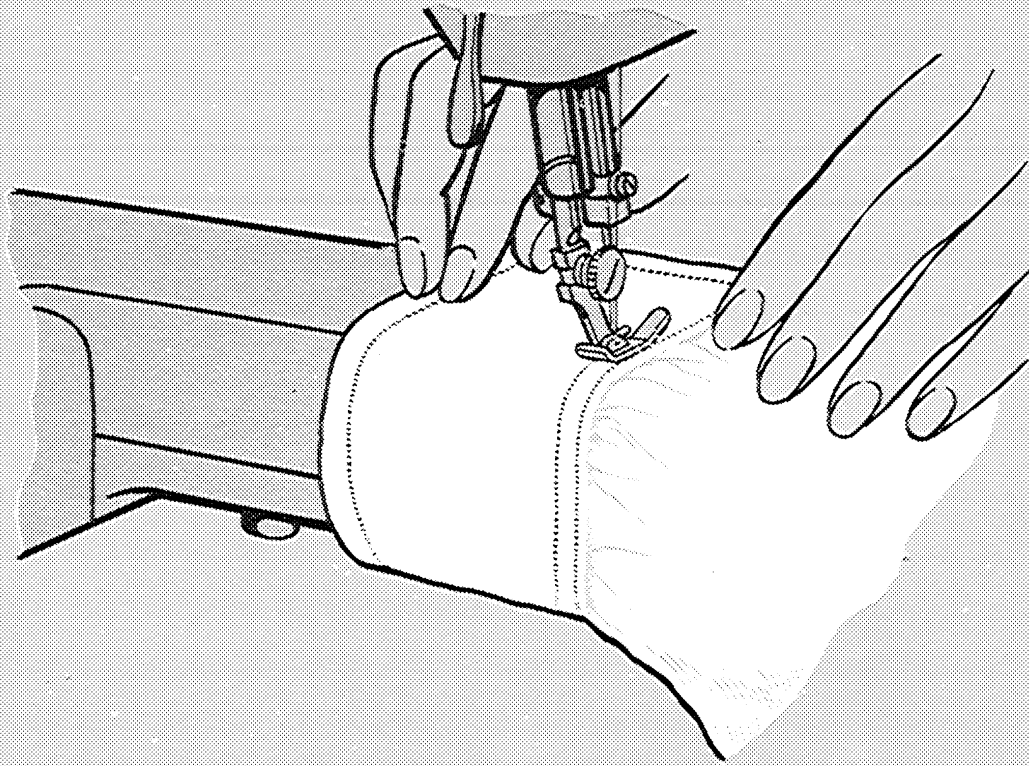
hand wheel toward you and draw bobbin thread up through fabric. Hold both thread ends and start stitching.

Move hoop slowly, following outline of design. Maintain an even rate of speed so that stitches are uniformly spaced.

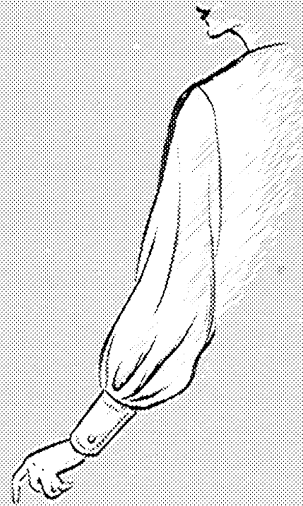
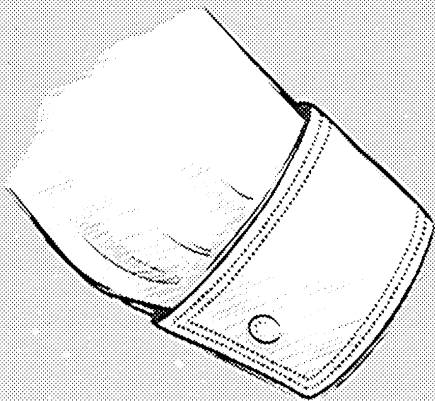
Slow movement of hoop produces a close satin stitch; more rapid movement lengthens the stitch and results in an open effect.

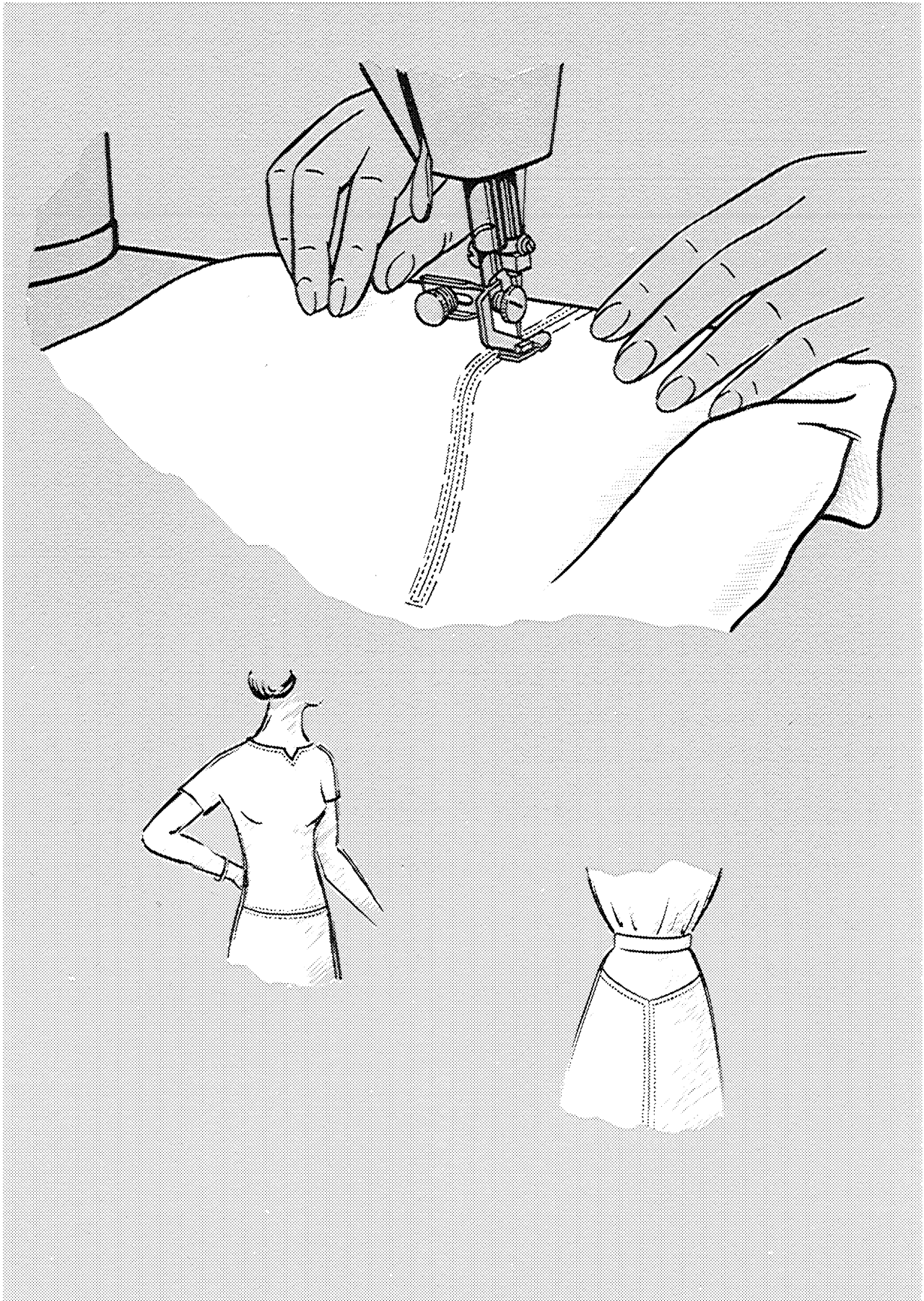
Free motion work can also be done with the darning and embroidery foot. This foot is particularly suited for stitching smooth heavy fabrics since it assists in controlling the stitch as well as in a proper guiding of the fabric.

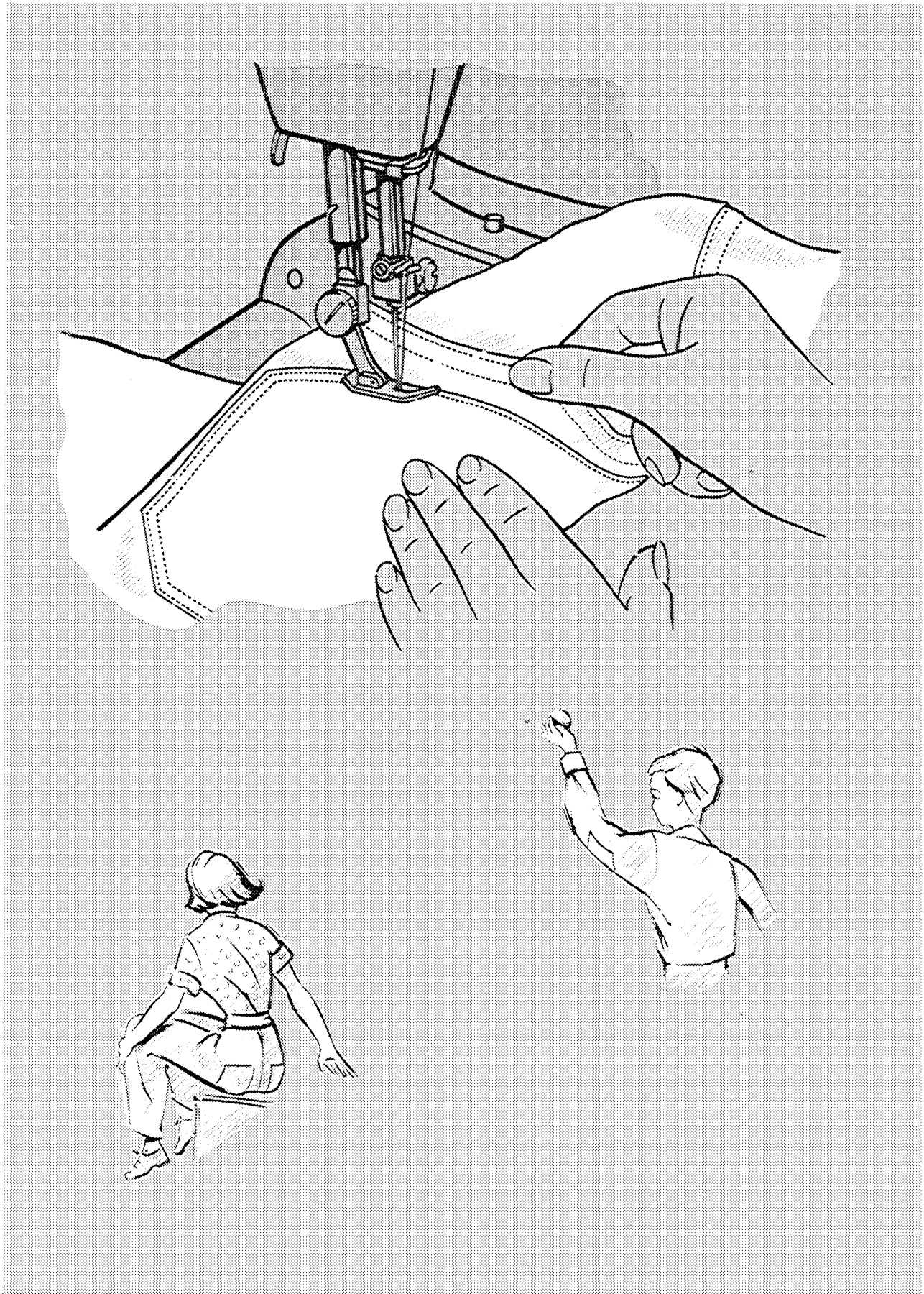


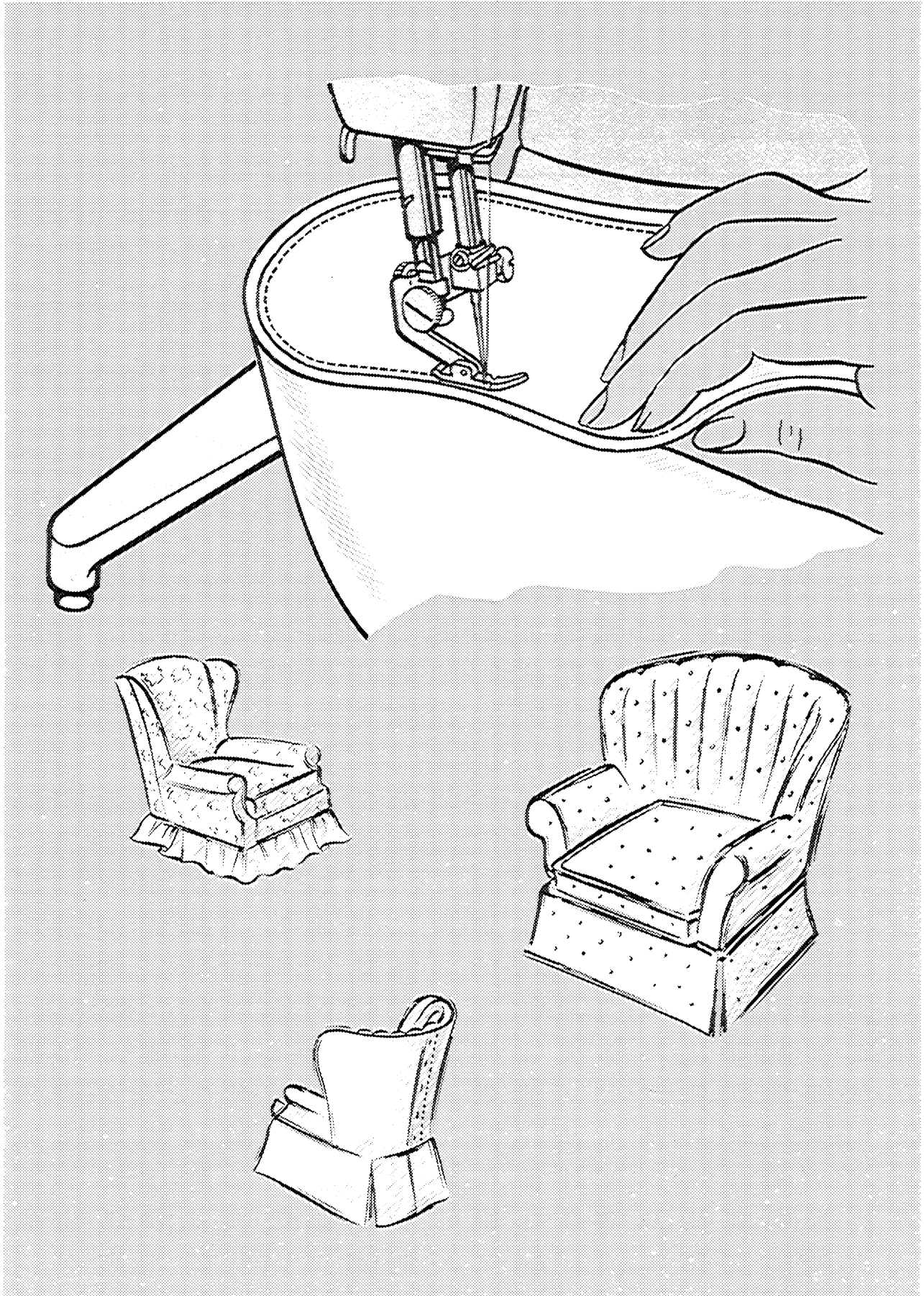


**Applications of the
Cylinder Bed Feature**









Remember to

- Position needle out of fabric when making stitch width and stitch pattern adjustments.
- Clean your machine periodically, especially the bobbin case and hook raceway areas.
- Use your Instruction Book. It was written to explain the most efficient way to operate and use your versatile SINGER sewing machine.

Sewing Difficulties?

Keep your machine in good working condition by following the easy at-home-care steps outlined in this Instruction Book, and it will serve you perfectly for many years.

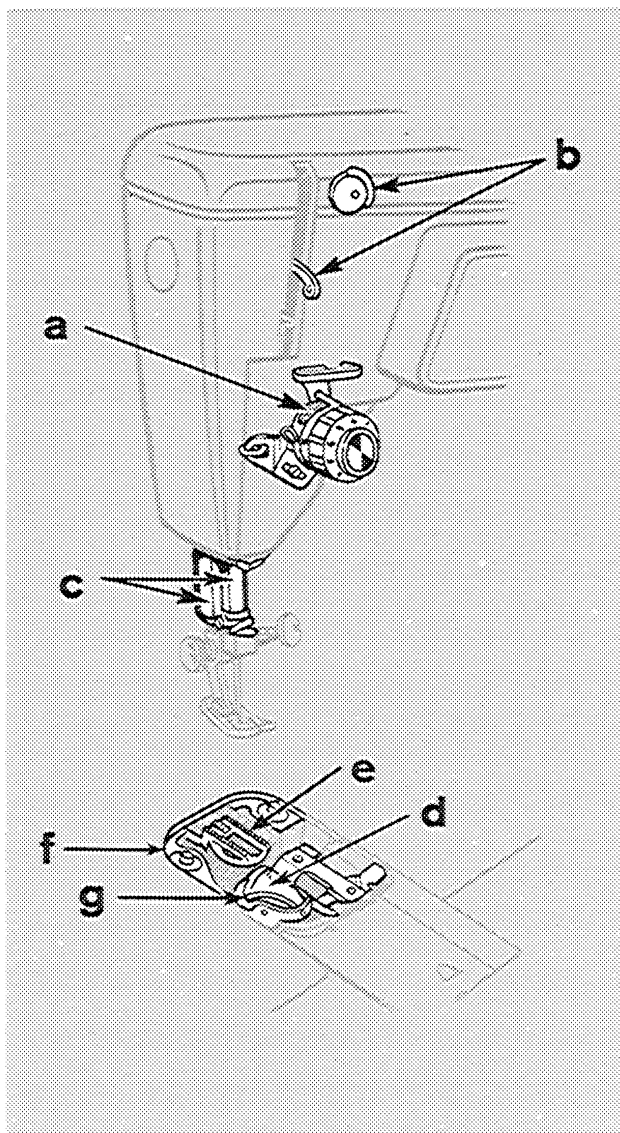
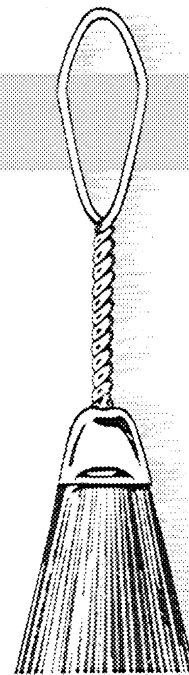
The non-observance of some details may lead to thread breakages. In such a case check:

- Is the machine properly threaded?
- Is the spool positioned correctly? Is it securely tightened by the correct thread lead-off so that the thread can unwind freely from the spool?
- Is a Catalog (15×1) needle correctly inserted and securely tightened in the needle clamp (with the long groove toward you)?
- Is the needle free of damages?
- Is the thread suitable for the size of the needle?
- Is the needle-thread tension too tight?
- Is the thread free of knots?
- Is the bobbin case and hook raceway area free of lint and loose thread ends?

Caring For Your Sewing Machine

Your sewing machine is a fine yet sturdy precision instrument and it will serve you perfectly for many years if you take a few simple steps to keep it in good working condition.

How often you will need to clean, oil and lubricate the machine will depend on how often you use it and where you keep it. The following general guidelines assume that you will be sewing two or three times a week. But if you use the machine continuously, clean and oil it daily. Or, if you keep it in a very warm or damp place, oil and lubricate it more frequently than the guidelines suggest.



Every Week Or So —

with a soft cloth, clean:

- a. Tension discs
- b. Take-up lever and thread guides
- c. Presser bar and needle bar
- d. Bobbin case (for instructions on removal, see page 75).

- Machine surface

If necessary, dampen the cloth to clean the machine surface. Do not use detergents.

With the lint brush that comes with your machine, clean:

- e. Feed dog
- f. Bearing surface for throat plate
- g. Rotating hook (area under throat plate and slide plate).

After each cleaning, apply a drop (but no more than a drop) of SINGER* oil to the hook raceway (g). Then sew a line of stitching on a scrap of material to remove excessive oil.

To Remove And Replace Bobbin Case

To clean hook raceway, remove bobbin case as follows:

Open slide plate and remove bobbin and throat plate.

Unlock bobbin case by lifting and pulling holder to right as shown.

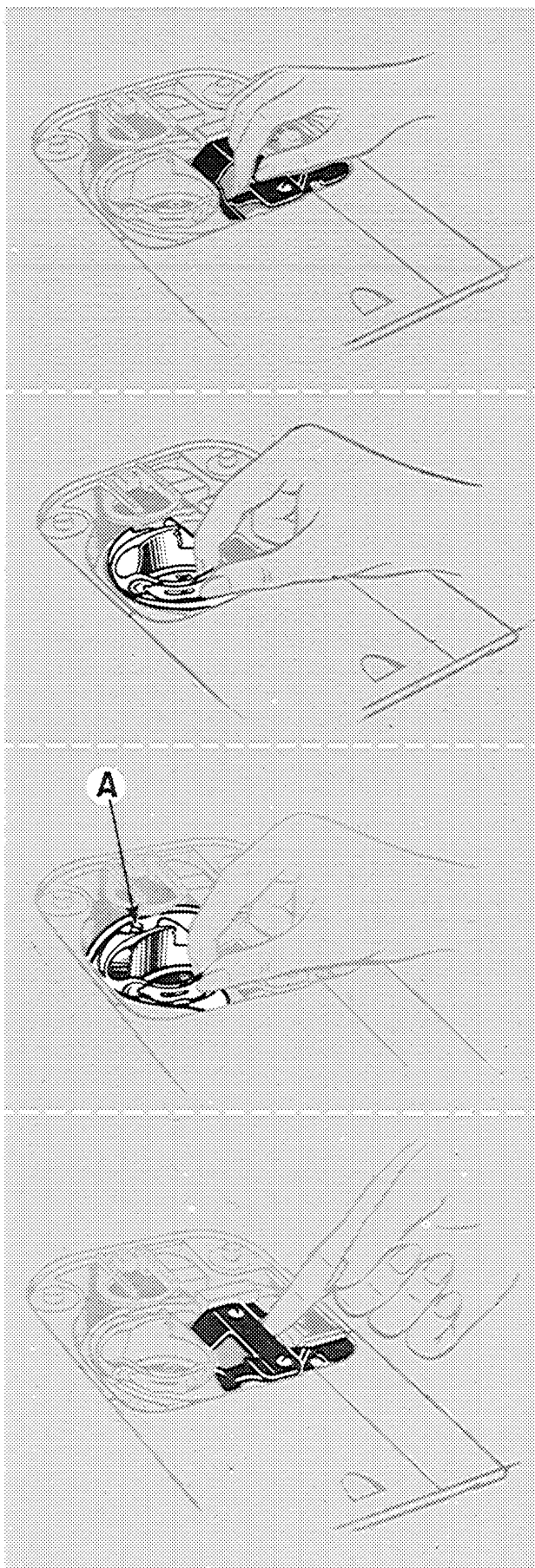
Remove bobbin case from machine.

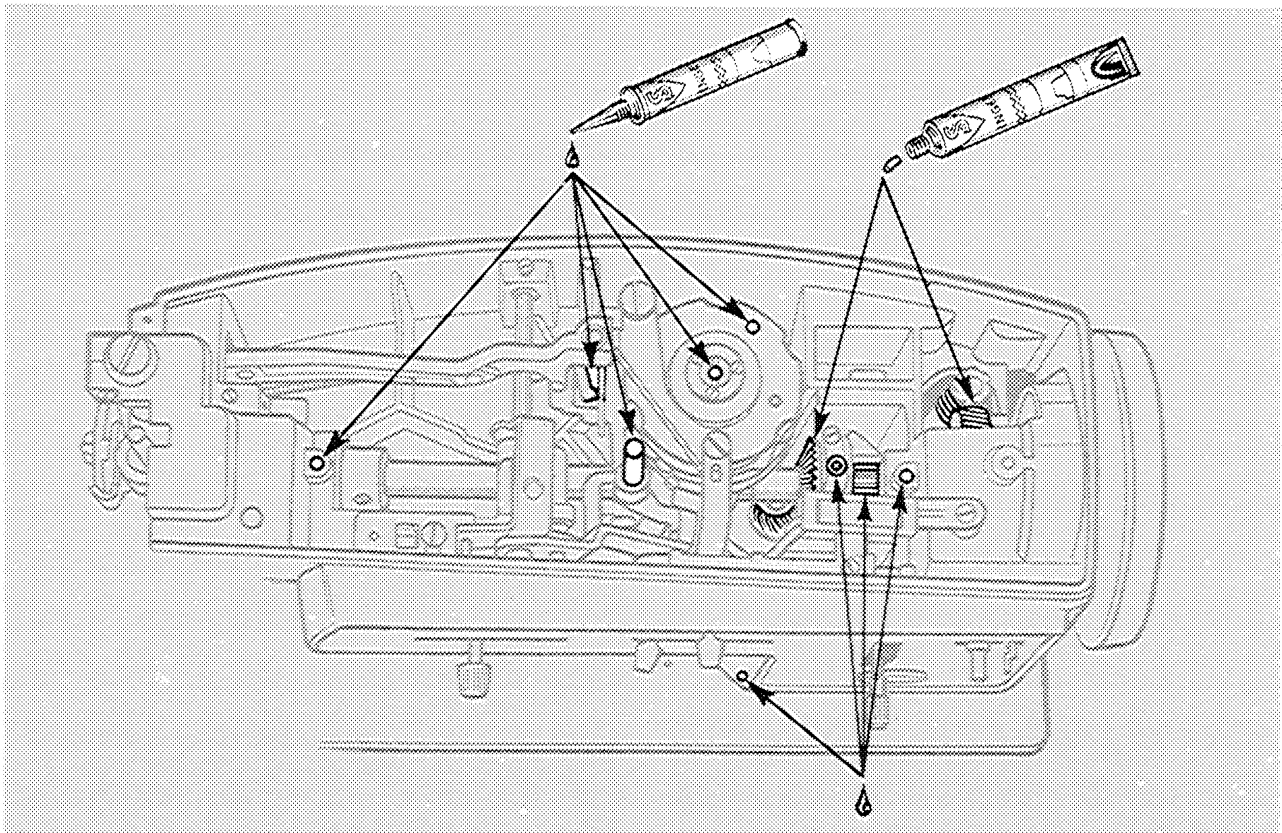
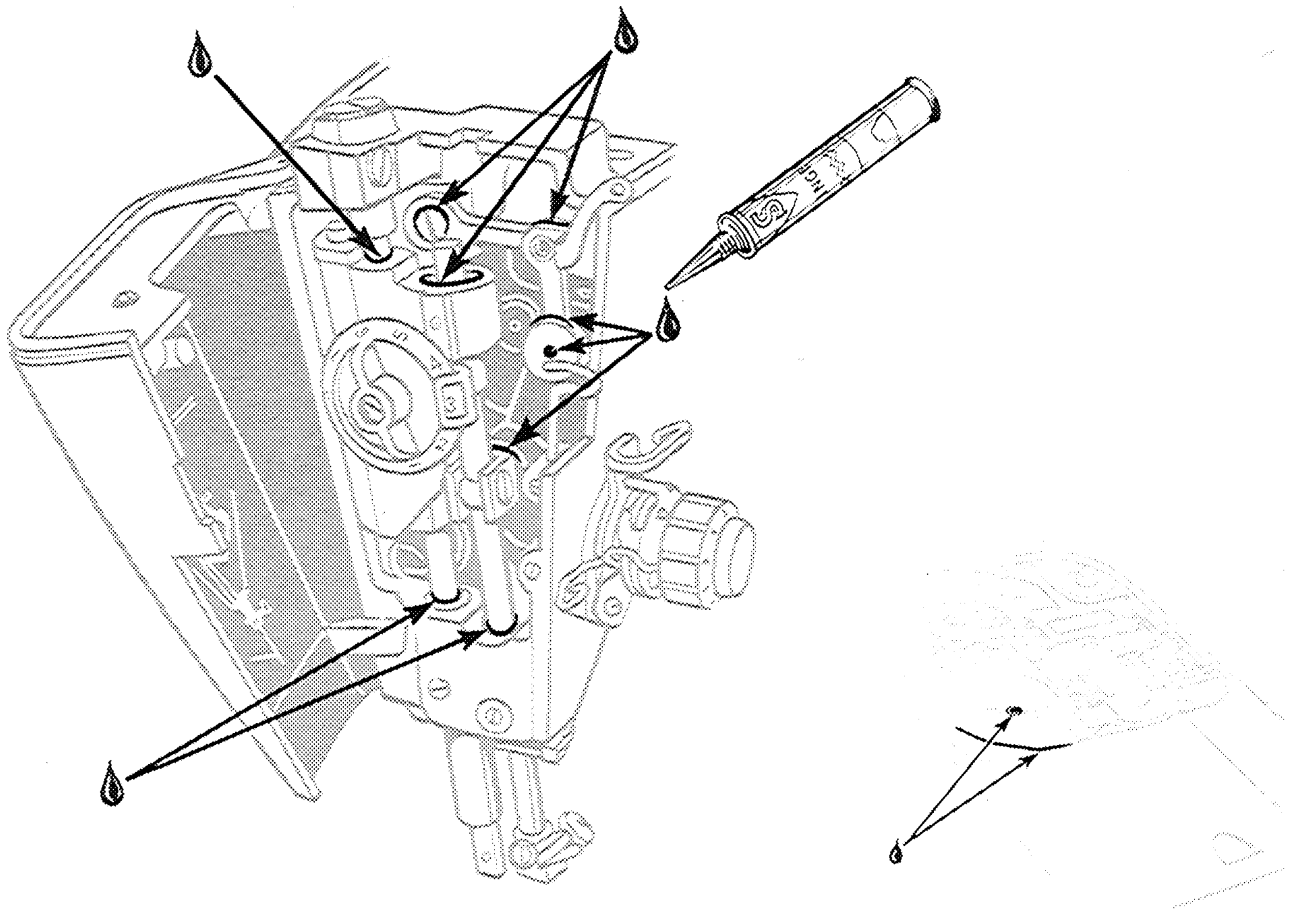
Remove all lint, fluff, loose thread ends or any other foreign matter by means of lint brush.

Replace bobbin case so that groove under tension spring fits on hook raceway and fork of bobbin case straddles positioning finger **A**.

Push bobbin case holder to left as shown until it snaps down into lock position.

Replace bobbin and throat plate and close slide plate.





Every Few Months —

Clean and oil the machine thoroughly. Use SINGER oils and SINGER lubricants only, which are available for purchase at your SINGER CENTRE. Both are extra quality products, especially prepared for sewing machines.

- **Clean And Oil Area Behind Face Plate**
Clean and apply a drop of SINGER oil to each place shown. You will find this easier to do if you remove the top cover first.
- Also, apply a drop of oil to the **hook raceway**.
- **Clean And Oil Top Of Machine**
All spots to be oiled are shown in the illustration. Do not oil gears, but apply a small amount of SINGER lubricant to them as indicated.
- **Clean And Oil Bottom Of Machine** (Refer to illustration on page 78).
Tilt machine back and remove screw B, being careful not to lose washer, and remove bottom cover from underside of machine. In case of class 676 machine, also remove screw C and cylinder cover. Clean and oil each of the places indicated. **Gears are to be lubricated only.** Replace bottom

cover (and cylinder cover). The motor requires no lubrication. Oiling of the motor can result in its burning out.

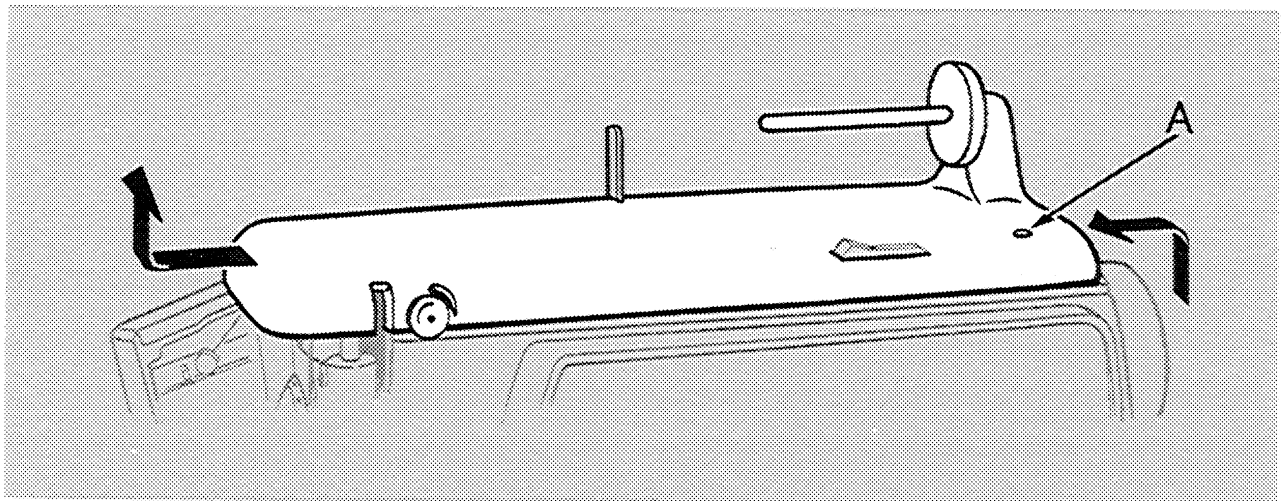
After oiling sew a line of stitching on a scrap of material to remove excess oil.

If the machine is to be stored away for an indefinite period of time, a thorough brush-cleaning to remove all traces of lint and fluff, followed by swabbing of all exposed parts with a lint-free brush saturated with SINGER oil, is necessary to protect against rust.

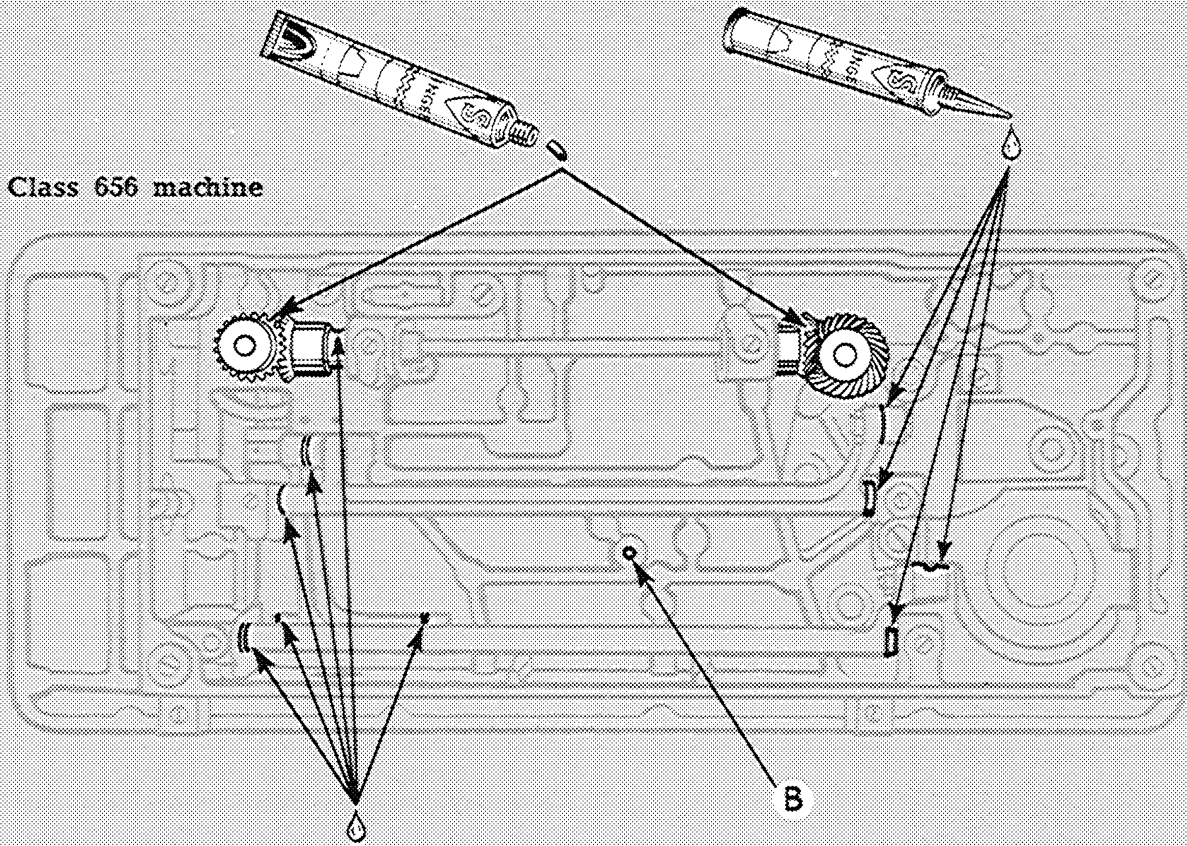
To Remove And Replace Top Cover

Move take-up lever to its lowest point. Remove screw A and lift right hand end of cover slightly and slide toward left and off the machine as shown on illustration below.

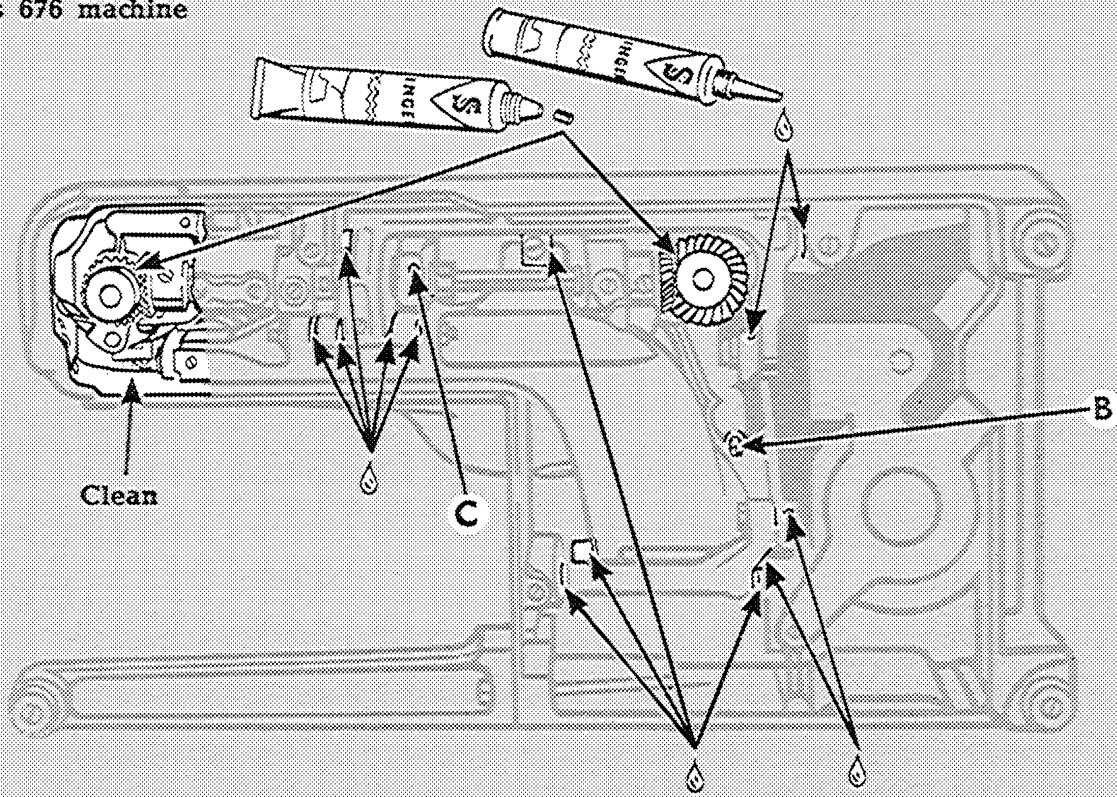
Replace cover by positioning it on top of machine with a slight overhang on the left side; slide cover to the right until it locks in place. Replace and tighten screw A.



Class 656 machine



Class 676 machine



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