

# *Stylist*

Zig-Zag Sewing Machine

Model 776



**SINGER**

## Stylist Zig-Zag Sewing Machine by SINGER

Congratulations . . .

The new *Stylist*\* Zig-Zag Sewing Machine (Model 776) you are about to use will take you into a wonderful new world of sewing. Model 776 features a hinged bed for free arm sewing. And on the 776 you will enjoy:

- the *simplicity* of dial controls. Now you can simply dial a stitch length, a stitch width, pressure and tension settings; even buttonhole stitching
- *built-in stitch patterns*, which let you produce a straight stitch and a variety of zig-zag patterns by simply turning a dial, plus *Flexi-Stitch*\* patterns for stitching knit and stretch fabrics and producing intricate stitch designs
- *exclusive built-in threading chart* that flips open to keep an easy-to-follow diagram at your fingertips
- *one-way needle clamp* that makes it impossible to insert the needle backwards
- *stitch control dial* that lets you switch from regular to s-t-r-e-t-c-h stitching
- *guidelines* on both sides of the needleplate, which help you keep seams straight
- *convenient power and light switch* that gives you a choice of two speeds
- *easy needle plate changing* — needle plate secured by magnets is easy to lift out for cleaning.
- *three-position presser foot lifter* that lets you place bulky fabric or many fabric layers under the presser foot
- *built-in sewing light* that illuminates the sewing area

Your SINGER sewing machine is the key to your sewing success when used properly. To achieve professional results, SINGER suggests you sit down at your machine and go through this book step by step before you begin to sew. You will discover all the many advantages of sewing with your *Stylist* sewing machine.

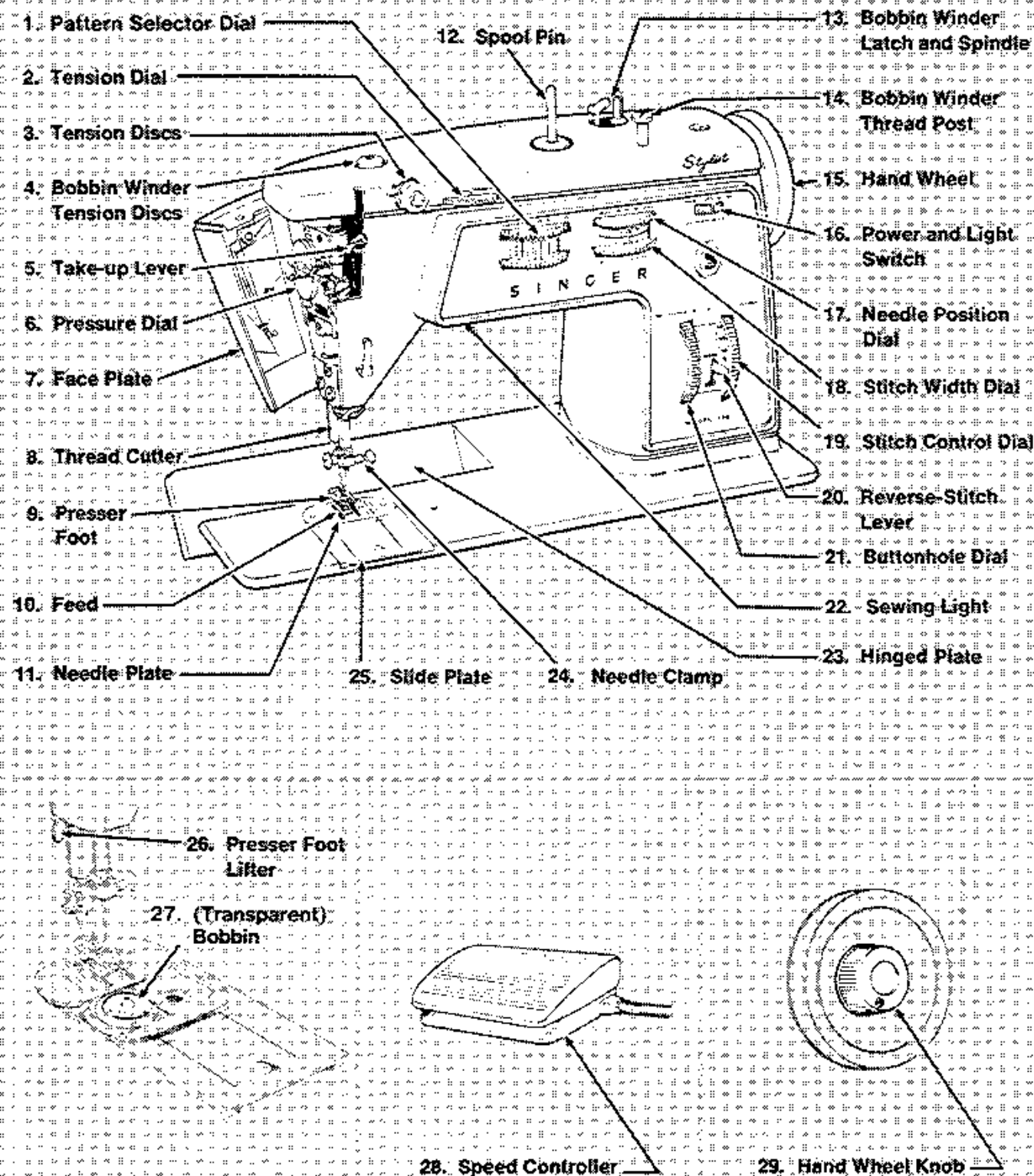
Enjoy sewing!

SINGER\* Service is always close at hand. If your machine should need servicing, call your local SINGER Sewing Center to be sure of warranted SINGER Parts and Service. You will find the address in the telephone directory under SINGER COMPANY.


## CONTENTS

<b>1. Getting to Know Your Machine</b> .....	2
Principal Parts and What They Do .....	3
Accessories .....	4
<b>2. Getting Ready to Sew</b> .....	7
Preliminary Steps .....	7
Choosing Needle and Thread .....	8
Threading the Machine .....	9
<b>3. Straight Stitching</b> .....	14
Preparation .....	14
Starting to Sew .....	14
Adjusting for Your Fabric .....	15
Sewing a Seam .....	17
<b>4. Zig-Zag Stitching</b> .....	21
Zig-Zag Stitch Patterns .....	21
Adjusting Dials .....	22
Satin Stitching .....	24
<b>5. Twin-Needle Stitching</b> .....	25
Inserting the Needle .....	25
Threading the Needle .....	26
Dial Settings .....	27
Turning a Square Corner .....	28
<b>6. Temporary Stitching</b> .....	29
Speed Basting .....	29
<b>7. Buttons and Buttonholes</b> .....	31
Buttons .....	31
Buttonholes .....	32
<b>8. Free-Motion Stitching</b> .....	38
Flower Embroidery .....	38
<b>9. Sewing the Professional Way</b> .....	39
Construction Details .....	39
Sewing Knit and Stretch Fabric .....	44
Hints on Sewing Special Fabric .....	48
Decorative Touches .....	50
Keeping Up Appearances .....	55
<b>10. Free-Arm Sewing</b> .....	58
<b>11. Caring for Your Machine</b> .....	62
Cleaning the Machine .....	62
Removing Covers, Bobbin Case, and Bulb .....	63
Performance Checklist .....	66
<b>12. Sewing Aids</b> .....	67
<b>Index</b> .....	68

# 1. GETTING TO KNOW YOUR MACHINE



## *principal parts and what they do*

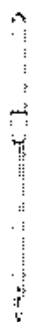
1. **Pattern Selector Dial** can be set to produce a straight stitch, a decorative or practical zig-zag stitch; or speed basting.
2. **Tension Dial** lets you select just the right tension for your stitch, thread, and fabric. The numbers eliminate guesswork in duplicating settings.
3. **Tension Discs**, controlled by the tension dial, regulate the amount of tension on your needle thread.
4. **Bobbin Winder Tension Discs** regulate thread tension for bobbin winding.
5. **Self-Threading Take-up Lever** controls flow of needle thread.
6. **Pressure Dial** regulates presser-foot pressure on fabric. It has an all-purpose sewing setting plus settings for extra-light and extra-heavy pressure and for darning.
7. **Face Plate** swings open for access to threading chart and pressure dial.
8. **Thread Cutter** is built into presser bar for safety and convenience.
9. **Presser Foot** holds fabric against feed.
10. **Feed** moves fabric under the presser foot.
11. **Needle Plate**, secured by magnets, lifts out for removal. Guidelines on right and left sides of plate help you keep seams straight.
12. **Spool Pin** holds spools of various sizes.
13. **Bobbin Winder Latch and Spindle** let you fill bobbin quickly and easily. Latch disengages when bobbin is full.
14. **Bobbin Winder Thread Post** guides the thread when winding the bobbin.
15. **Hand Wheel** controls movement of take-up lever and needle. *Always turn it toward you.*
16. **Power and Light Switch** turns on machine and sewing light simultaneously. **FAST** and **SLOW** speed range settings let you choose the best sewing speed for your work.
17. **Needle Position Dial** places needle in either **L** (left),  (center) or **R** (right) stitching position.
18. **Stitch Width Dial** controls the width of zig-zag stitching and positions the needle for straight stitching.
19. **Stitch Control Dial** allows for a variety of stitch lengths; also has a special stretch setting for straight or zig-zag stretch stitching.
20. **Reverse-Stitch Lever** instantly reverses stitching direction at the touch of your finger.
21. **Buttonhole Dial** controls steps in sewing round-end buttonholes. *Dial must be in OFF position when not in use.*
22. **Built-in Sewing Light** illuminates sewing area. Pull-down bracket makes it easy to replace bulb.
23. **Hinged Plate** converts machine for free arm sewing.
24. **Needle Clamp** is designed to make needles self-setting and eliminate the possibility of inserting needle backwards.
25. **Slide Plate**, opens easily, lets you see bobbin. Seam guidelines (extended from needle plate) have cross lines to help you turn square corners.
26. **Presser-Foot Lifter**, at back of machine, allows you to raise and lower presser foot. Extra-high lift position permits easy placement of bulky fabrics.
27. **Transparent Bobbin** shows thread supply, is easily removed for winding.
28. **Speed Controller** is designed for your convenience and safety, controls the speed of your machine.
29. **Hand Wheel Knob** engages hand wheel to sewing mechanism. Loosen knob for bobbin winding.



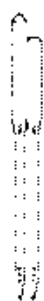
Transparent Bobbin



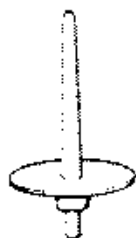
Regular Needle



Ball Point  
(Yellow Band) Needle



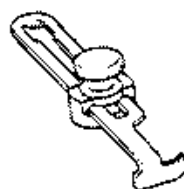
Twin Needle



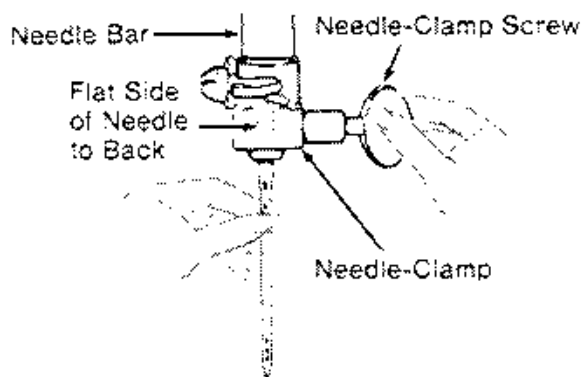
Vertical Spool Pin



Blindstitch Hem Guide



Seam Guide



Changing the Needle

## accessories

The following accessories come with your Model 776 sewing machine.

### BOBBINS

- One transparent drop-in bobbin in machine.
- Extra transparent drop-in bobbins.

### NEEDLES

**IMPORTANT:** Your SINGER sewing machine has been designed to obtain best results with SINGER® needles. You should follow the recommendations in this instruction book and on the needle package for correct style and size of needle for different types and weights of fabric.

- Catalog 2020 (15x1) needles, for all-purpose sewing.
- Catalog 2045 ball-point (yellow band) needles, for sewing synthetic knits and stretch fabrics.
- Catalog 2028 needle, for twin-needle decorative stitching.

### VERTICAL SPOOL PIN

- One vertical spool pin for decorative twin-needle stitching.

### BLINDSTITCH HEM GUIDE

- Use this with the zig-zag foot to position the hem for blindstitch hemming. (See page 42)

### SEAM GUIDE

- Use this guide to help you stitch seams of uniform width.

### Changing the Needle

The needle clamp has been designed so that the needle can only be inserted with the flat side of the shank toward the back.

1. Raise needle bar to its highest position, loosen needle-clamp screw, and remove needle.
2. Insert new needle in clamp, with the flat side of the needle to the back, and push it up as far as it will go.
3. Tighten needle-clamp screw.

## PRESSER FEET

- The zig-zag foot on your machine.

Additional interchangeable snap-on presser feet:

- Straight stitch foot for close fabric control.
- Zipper foot for inserting zippers and stitching corded seams.
- Overedge foot for overedged seams in stretch fabric.
- Buttonhole foot to make round-end buttonholes.
- Special purpose foot for all kinds of decorative zig-zag stitching.

## CHANGING PRESSER FEET

The presser feet furnished with your machine snap on and off a common shank.

1. Raise needle to its highest position and raise the presser foot.
2. Press toe of presser foot upward (as far as it will go) and then snap down to remove.
3. Center the new presser foot under the shank and lower the presser bar so that the shank fits over the presser foot pin.
4. Press down on presser foot screw until foot snaps into place.

To remove the complete presser foot (with shank), loosen the presser foot screw and remove shank and foot together.



Zig-Zag Foot



Straight Stitch Foot



Zipper Foot



Overedge Foot

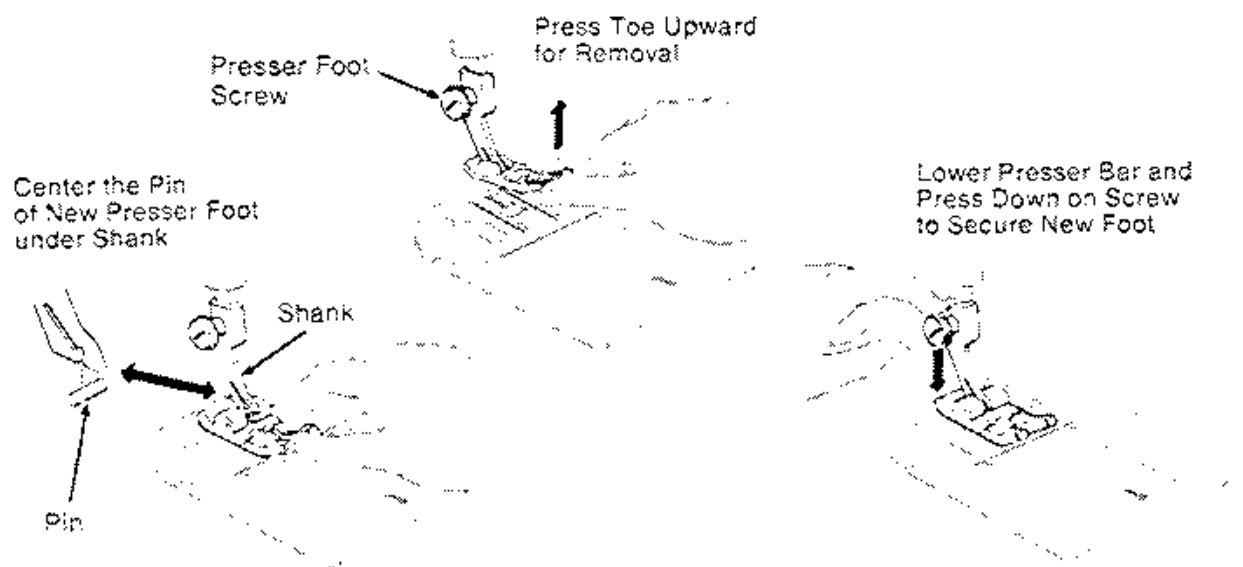


Buttonhole Foot



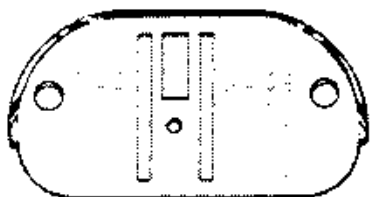
Special Purpose Foot

### Changing Snap-on Presser Feet

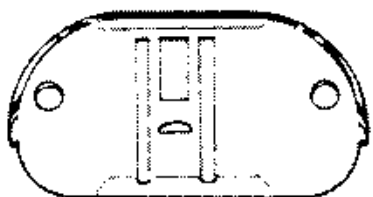




**Zig-Zag Needle Plate**



**Straight Stitch Needle Plate**



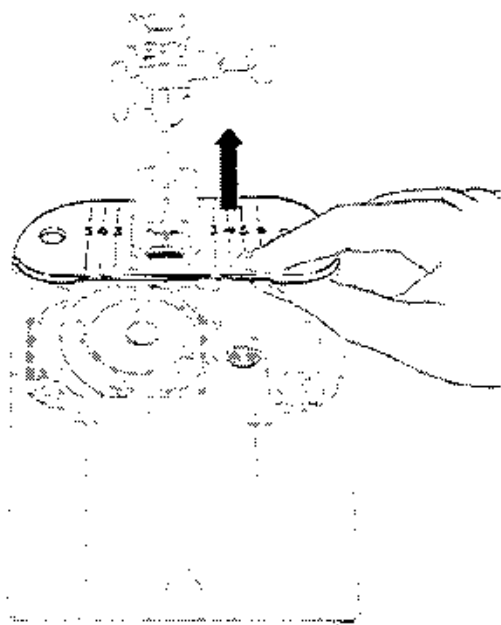
**Feed Cover Needle Plate**

## NEEDLE PLATES

- The zig-zag needle plate in place on your machine.

- The straight stitch needle plate for use with the straight stitch foot.

- The feed cover needle plate for button sewing and free-motion work.



**Changing Needle Plate**

## CHANGING NEEDLE PLATES

(NOTE: Remove bobbin if it contains thread in order to prevent thread being caught when needle plate is replaced.)

1. Raise needle to its highest position and raise presser foot.
2. Open slide plate. Remove needle plate by placing thumb under plate and lifting it up and out.
3. Position new plate over the two pins and release. (Needle plate is drawn into position by magnets.)
4. Close slide plate.



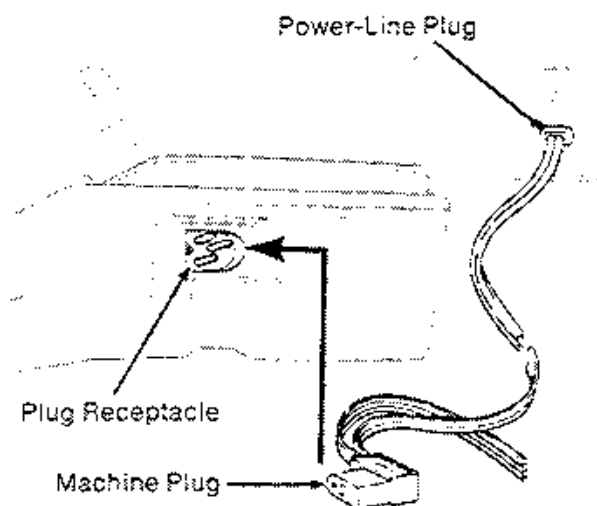
## 2. GETTING READY TO SEW

### *preliminary steps*

#### 1. CONNECTING MACHINE

Before plugging in your machine, be sure that the voltage and number of cycles indicated at the right end of the machine, or on the inside of face plate, conform to your electrical power supply.

Push the machine plug into the machine receptacle. Then connect the power-line plug to your electrical outlet.



Electrical Connections

#### 2. OPERATING MACHINE AND CONTROLLER

To turn on both the machine and sewing light and set speed range, slide the power and light switch to the selected range.

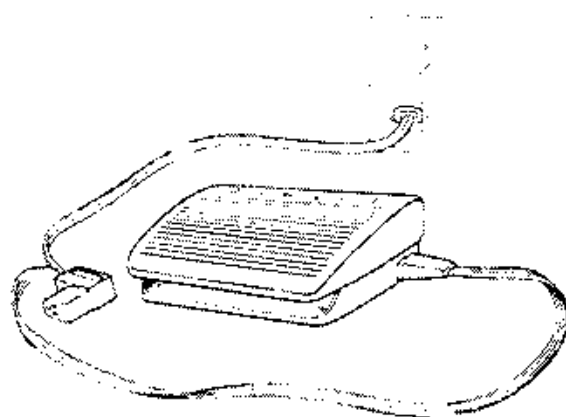
- The **FAST** setting allows for full speed capacity of the machine. It is best for long, straight seams, easy-to-handle fabrics, and general sewing where a variety of speeds are needed.
- The **SLOW** setting allows for maximum control at lower sewing speeds. Use this setting for special jobs such as button sewing, buttonhole making, and where intricate construction details require close control.

**CAUTION:** We recommend that you turn off the power and light switch before changing needles, presser feet or needle plates and when leaving the machine unattended. This eliminates the possibility of starting the machine by accidentally pressing the speed controller.

To run the machine, press the speed controller. The harder your press, the faster the machine will sew within the selected speed range.



Power and Light Switch



Speed Controller

## choosing needle and thread

The needle and thread you choose will depend upon the fabric being stitched. The table below is a practical guide to needle and thread

selection. Refer to it before starting a sewing project. Be sure to use the same size and type of thread in both needle and bobbin.

**FABRIC, THREAD AND NEEDLE TABLE**

FABRIC WEIGHT AND TYPE	THREAD	NEEDLES	
		TYPE	SIZE
DELICATE — tulle, chiffon, fine lace, organza, chiffon velvet	Fine polyester, nylon, or cotton thread	Style 2020 (15x1)	9
LIGHTWEIGHT — batiste, organdy, voile, taffeta, crepe, chiffon velvet, plastic film, satin, surah, peau de soie, shantung, brocade	Cotton-wrapped polyester (FINE) 100% polyester 50 mercerized cotton "A" nylon "A" silk	Style 2020 (15x1)	11
MEDIUM WEIGHT — gingham, seersucker, madras, percale, piqué, linen, chintz, tulle, fine corduroy, velveteen, suitings, vinyl, terry cloth, challis, twill	Cotton-wrapped polyester 100% polyester 50 mercerized cotton 60 cotton "A" silk	Style 2020 (15x1)	14
MEDIUM HEAVY — gabardine, tweed, sailcloth, duck, denim, coatings, drapery fabrics, vinyl, deep-pile fabrics, corduroy, bonded fabric	Cotton-wrapped polyester 100% polyester Heavy-duty mercerized cotton 40 to 60 cotton	Style 2020 (15x1)	16
HEAVY — overcoatings, upholstery fabrics, canvas	Cotton-wrapped polyester Heavy-duty mercerized cotton 40 cotton	Style 2020 (15x1)	18
KNITS, WOVEN STRETCH AND ELASTIC — double knits, bonded knits, spandex, nylon tricot, ciré tricot, jersey, panne velvet, stretch terry	Cotton-wrapped polyester 100% polyester "A" nylon 50 mercerized cotton "A" silk	Style 2045 Ball Point (Yellow Band)	14
LEATHER — suede, kidskin, calf, capeskin, buckskin, cabretta, patent, cobra, lined leathers, simulated leathers	Cotton-wrapped polyester 100% polyester 50 mercerized cotton "A" nylon "A" silk	Style 2032 (15x2)	11 14 16
VINYLS (KNIT BACK) — suede, imitation reptile, crinkle patent, patent, embossed and printed vinyls	Cotton-wrapped polyester 100% polyester 50 mercerized cotton "A" nylon "A" silk	Style 2045 Ball Point (Yellow Band)	14
WOVEN FABRICS (ALL WEIGHTS) — decorative straight-stitch topstitching	"D" silk <sup>†</sup> (Buttonhole twist)	Style 2020 (15x1)	16 18
LIGHT AND MEDIUM WEIGHTS (WOVEN) — decorative twin-needle stitching	Cotton-wrapped polyester 100% polyester 50 mercerized cotton	Style 2028 (twin)	14

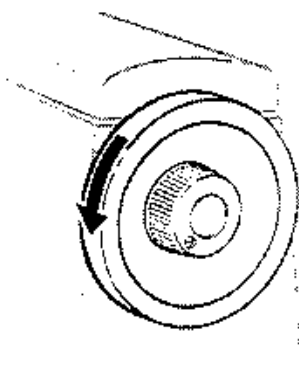
<sup>†</sup>Use with 50 mercerized cotton or "A" silk in bobbin

# *threading the machine*

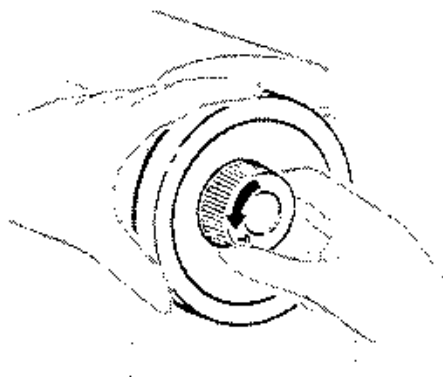
## **WINDING THE BOBBIN**

### **Preparation**

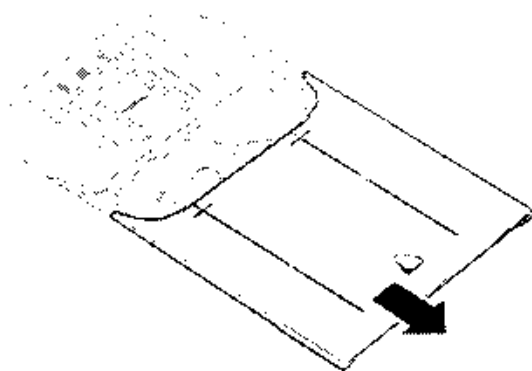
It is best to wind the bobbin before you thread the machine.



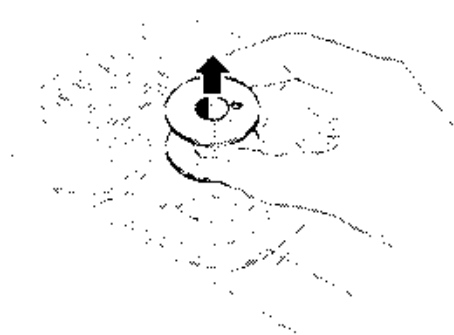
1. Turn hand wheel toward you until needle is at its highest position.



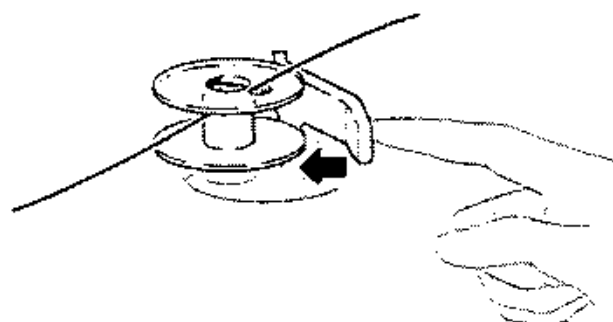
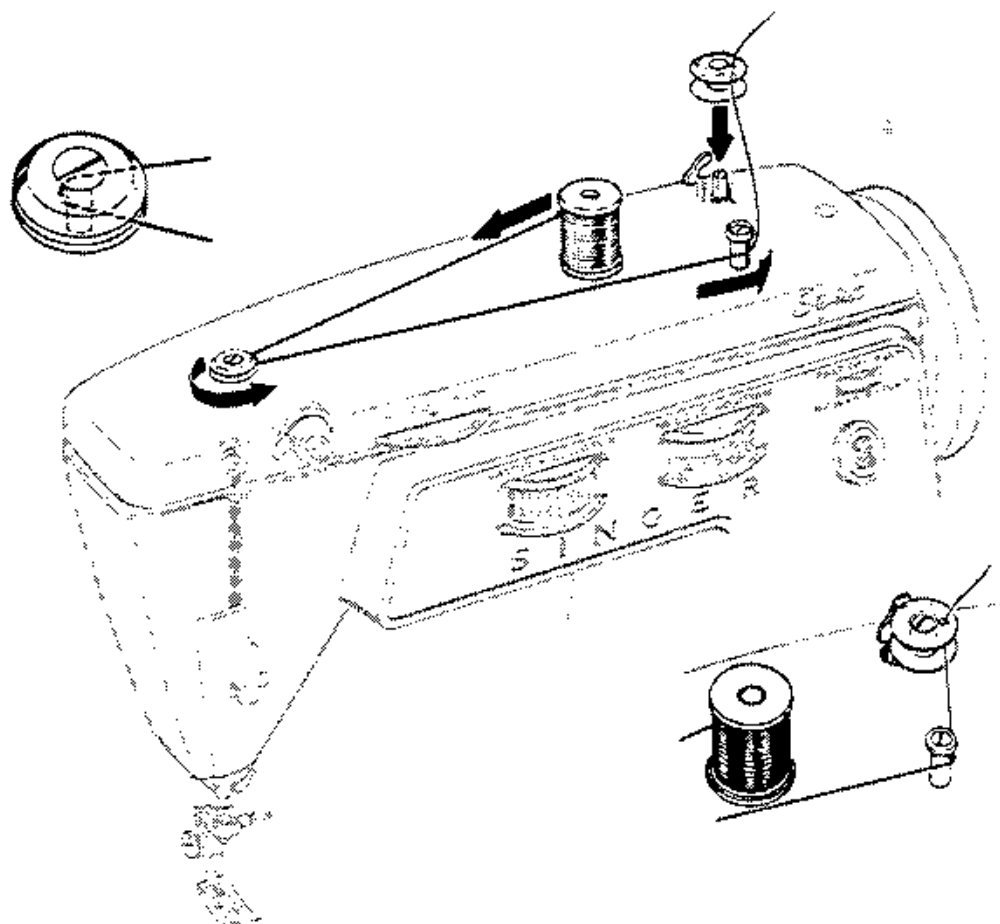
2. Disengage hand wheel by loosening the hand wheel knob with your right hand while holding the hand wheel with the left.



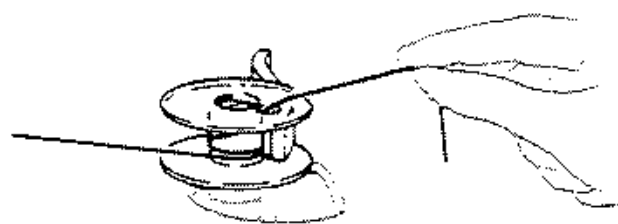
3. Open the slide plate.



4. Lift out the bobbin.



**Engage Bobbin Winder Latch**

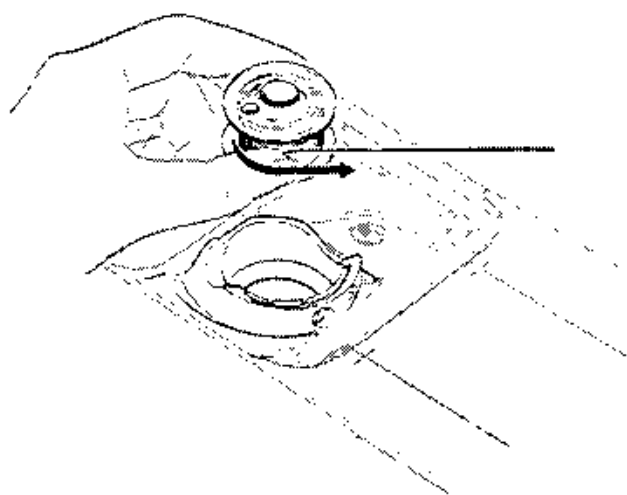


**Hold Thread End to Start Winding**

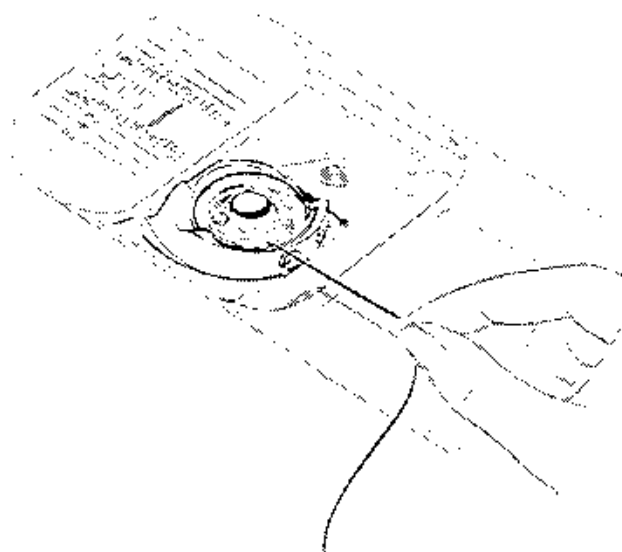
### **Winding Steps**

1. Place thread spool on spool pin over the spool pin felt. Lead thread between tension discs (as shown), around thread post and through small hole in bobbin (from the inside out).
2. Place bobbin on spindle and engage latch by pressing it toward the bobbin.
3. Hold thread end as shown and start the machine. Break off thread end when winding is well under way.
4. When required amount of thread has been wound, disengage bobbin latch (full bobbin will automatically release), cut thread and remove bobbin from spindle.
5. Tighten hand wheel knob by turning it away from you with your right hand while holding the hand wheel with your left hand.

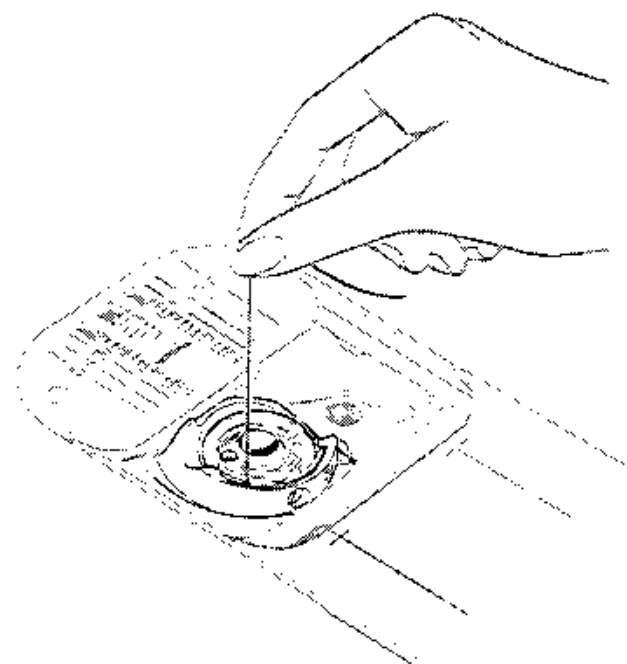
## THREADING THE BOBBIN CASE



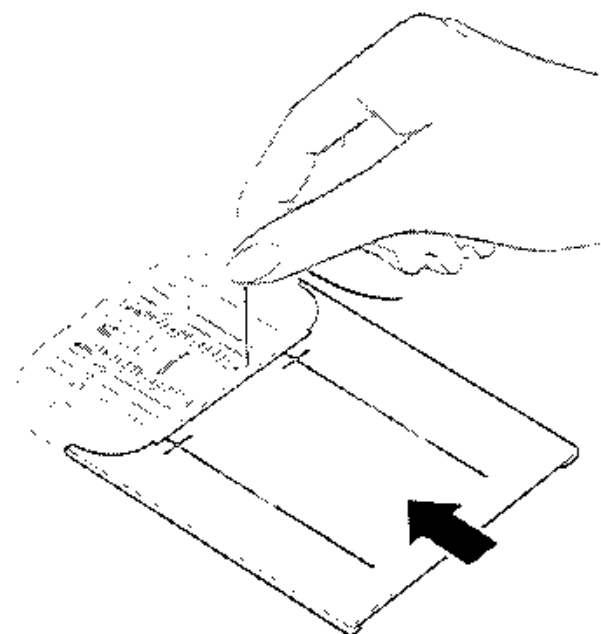
1. Hold bobbin so that the thread unwinds in direction shown, and put bobbin in bobbin case.



2. Pull thread into notch in bobbin case, draw it under the tension spring and into the slot.



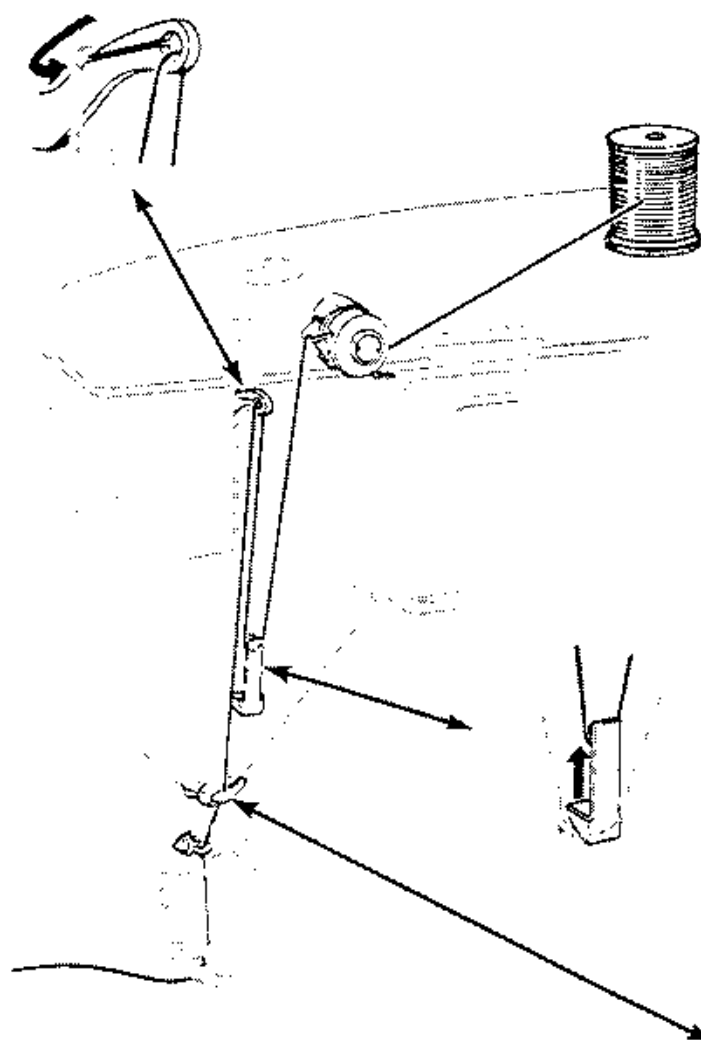
3. Draw approximately four inches (10cm) of thread diagonally across the bobbin.



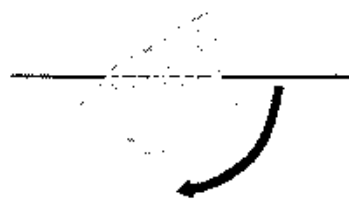
4. Close slide plate, allowing the thread to enter the slot in the slide plate.

## THREADING THE NEEDLE

1. Turn hand wheel toward you to raise needle to highest position with take-up lever midway in slot. Raise presser foot to release tension discs.
2. Place spool of thread on spool pin over the spool pin felt. Lead thread through all points as shown, making sure to:
  - Thread tension discs as illustrated. ➡
  - Thread take-up lever from *back* to *front*, guiding thread down over top of lever and then up into eyelet.
  - Thread needle from *front* to *back*, drawing about four inches (10cm) of thread through eye of needle.



Note: Dotted lines in illustrations represent thread path hidden by machine.



With two hands, slip thread horizontally *between* tension discs from the top.



With right hand, lead thread *under* thread guide on right side . . .



. . . and, with left hand, lead thread *over* spring and *under* guide on left side.

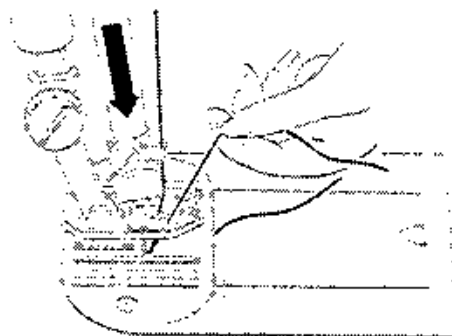


Allow spring to return to its normal up position and continue threading the machine.

## RAISING THE BOBBIN THREAD

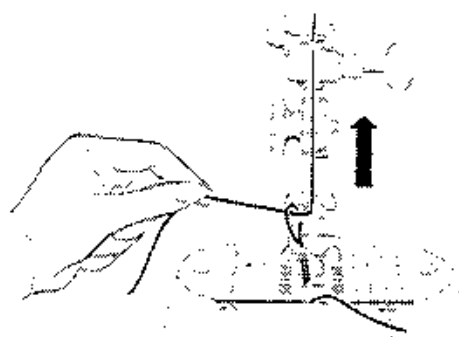
Now that you have wound the bobbin and threaded the needle, you will need to raise the bobbin thread through the needle hole in the needle plate.

1. Hold needle thread lightly with the left hand and turn the hand wheel *slowly* toward you so that the needle enters needle plate.



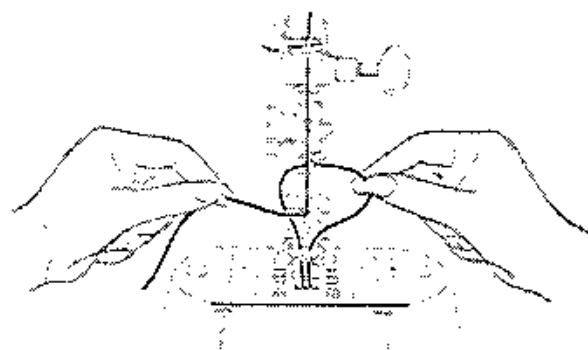
Step 1

2. Continue turning hand wheel and holding needle thread until needle rises and brings up bobbin thread in a loop.



Step 2

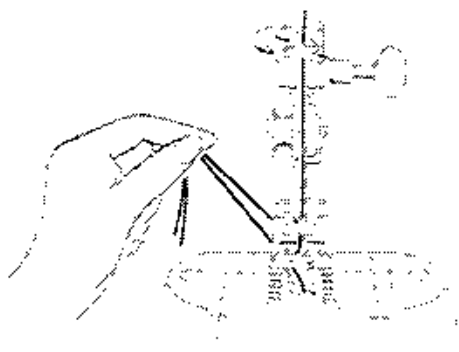
3. Undo the loop with your fingers.



Step 3

4. Place both needle and bobbin threads under presser foot and draw to back of machine.

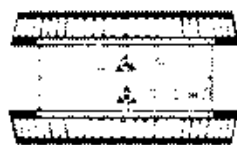
To regulate needle-thread tension, see page 16.



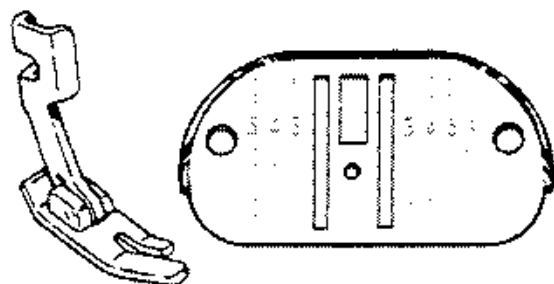
Step 4

**...you are now ready to sew**

# 3. STRAIGHT STITCHING



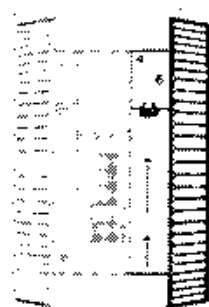
Dials Set for Straight Stitching



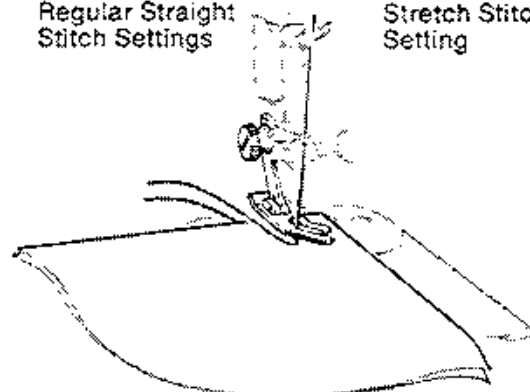
Straight Stitch Foot and Needle Plate



Regular Straight Stitch Settings



Stretch Stitch Setting



Starting to Sew

- Pattern: Straight Stitch
- Needle Position: 1
- Stitch Width: 1
- Stitch Control: To suit fabric
- Straight Stitch Needle Plate or Zig-Zag Needle Plate
- Straight Stitch Foot or Zig-Zag Foot

## preparation

Before you set the dials for straight stitching, turn the hand wheel toward you until the needle is above the needle plate.

## SETTING THE MACHINE

1. Set pattern dial selector at 1.
2. Move needle position dial to 1.
3. Set stitch width dial on 1.
4. Set stitch control for desired stitch length. For regular straight stitching, turn dial to a numbered setting; for straight stretch stitching, turn dial to 1 setting.

## CHOOSING ACCESSORIES

Best results will be obtained if you use the straight stitch foot and needle plate. However, the zig-zag foot and needle plate may also be used.

## starting to sew

- Place needle and bobbin threads under presser foot and draw to back of machine.
- Position the needle in the fabric where desired for stitching start.
- Lower the presser foot and start the machine.

To sew perfectly on a wide variety of fabrics adjust stitch length, pressure and thread tension as instructed on the following pages.

For information on straight stretch stitching, turn to page 44.




## adjusting for your fabric

### SETTING STITCH LENGTH

The stitch-control dial regulates the length of both straight and zig-zag stitches. The numbers 6 to 20 represent the number of straight stitches per inch and the numbers 1 to 4 represent stitch length in millimeters. Generally, shorter stitches are best for light-weight fabric; longer ones for heavy fabric. Curved seams, bias-cut seams and scallops require short straight stitches for elasticity and smooth contours. Bound buttonholes should be sewn with a short stitch for durability and strength.

The **FINE** area is used for the adjustment of zig-zag satin stitching (page 24) and speed basting (page 29).

The  setting is used for straight-stretch stitching and *Flexi-Stitch* patterns only. For information on *Flexi-Stitch* patterns and straight-stretch stitching, see pages 21 and 44.

- To set stitch control, turn dial until setting desired is under the red line.

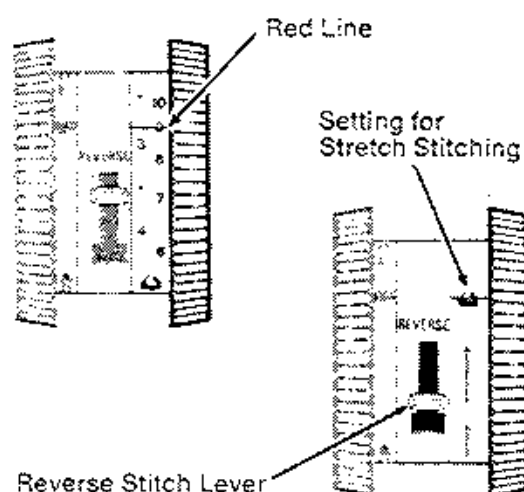
For reverse stitching, simply press reverse-stitch lever all the way down and hold in place. Release lever for forward stitching.

### REGULATING PRESSURE

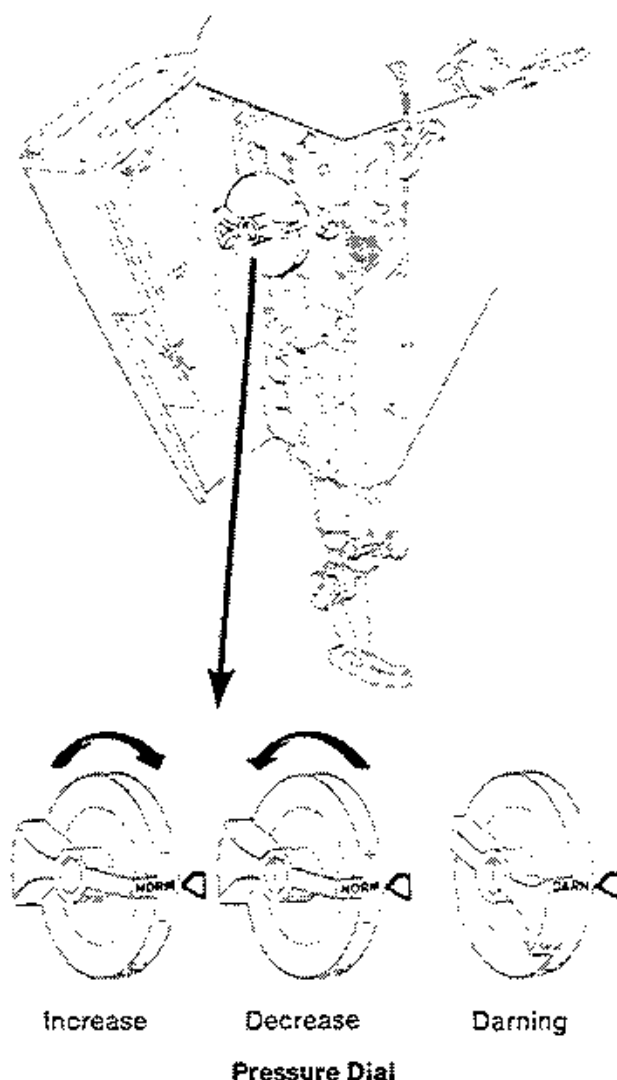
The pressure dial regulates the pressure that the presser foot exerts on the fabric. Correct pressure is important because it means fabric feeds smoothly and evenly. The **NORM** (normal) setting is an all-purpose setting that can be used for sewing a wide variety of fabrics of different weights and textures. Intermediate notched settings, above and below **NORM**, are also provided. When you need extra control to sew very heavy fabric, use the **MAX** (maximum) setting.

Lower the presser foot before setting pressure.

- To increase pressure, turn dial from **NORM** toward **MAX**.
- To decrease pressure, turn dial from **NORM** toward **DARN**.
- For darning, set dial on **DARN**.

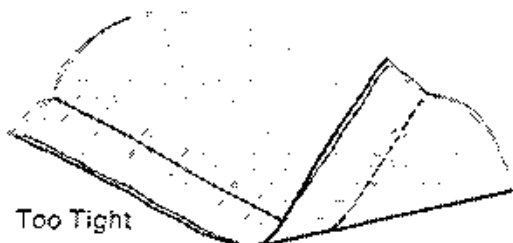
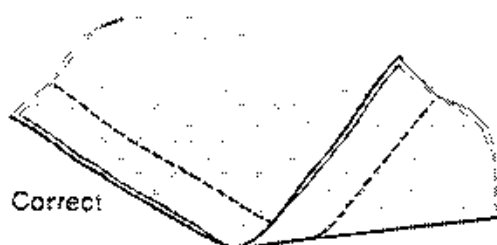
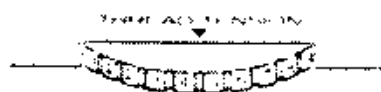
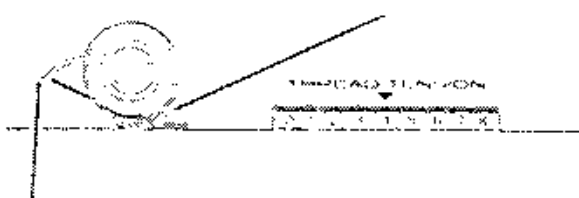


Stitch Control Dial



Pressure Dial

## Needle-Thread Tension



## REGULATING NEEDLE-THREAD TENSION

The tension dial regulates the degree of tension on your needle thread. Set it according to the type of thread and fabric you use. The numbers on the dial are for reference and eliminate guesswork in duplicating settings.

Correct tension is important because too much or too little will weaken your seams or cause your fabric to pucker. Make a test sample with the fabric and thread you plan to use, and examine it.

A Perfect stitch will have the needle and bobbin threads locked between the two layers of fabric with no loops on top or bottom and no puckers.

- If the top stitches in your test sample look loose, **increase needle-thread tension** by turning the dial to a higher number.
- If the fabric puckers, **decrease needle-thread tension** by turning the dial to a lower number.

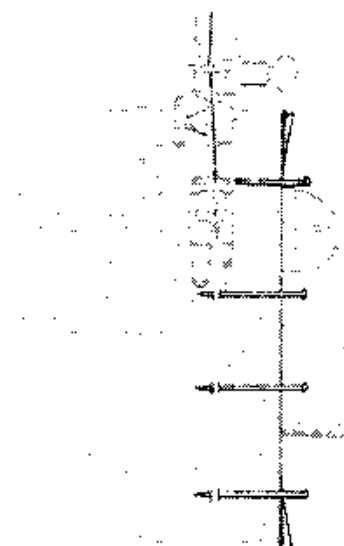
## sewing a seam

### PIN BASTING

Pin basting is a time saver and can be used in place of hand basting when you are straight stitching seams in easy-to-handle fabric.

Use fine pins and place them so that:

- They are at right angles to the presser foot and just nip into the fabric at the stitching line.
- They do not extend under both sides of the presser foot. *Never place pins on the underside of the fabric in contact with the feed.*

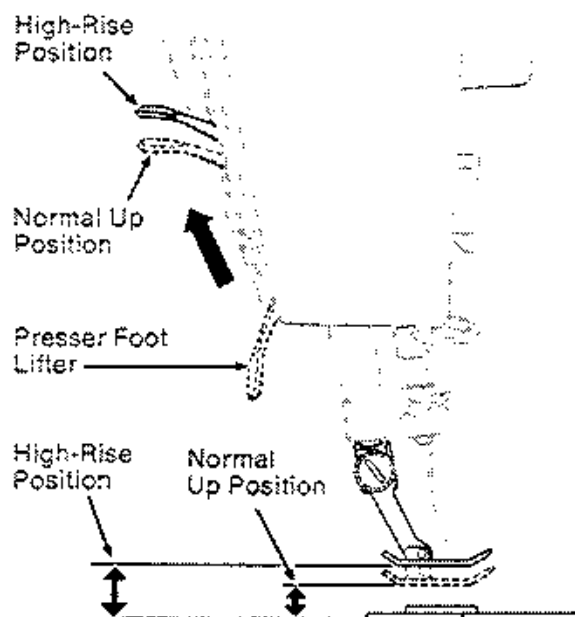


Pins Nip into Fabric  
at the Stitching Line

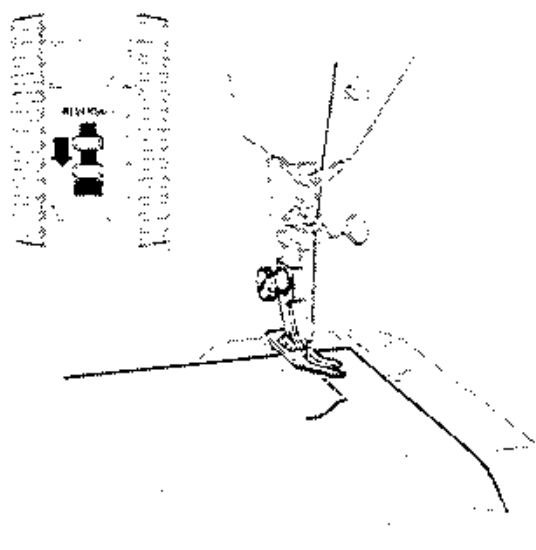
Pin Placement

### PLACING FABRIC

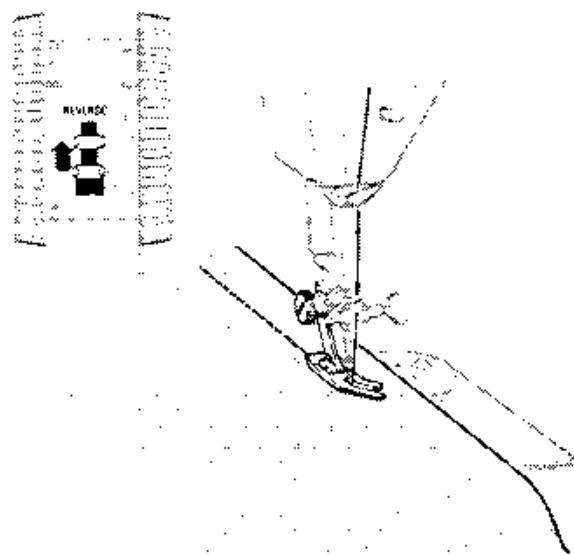
Most fabric can be placed under the presser foot by raising the presser-foot lifter to its normal up position. When placing bulky fabrics, such as coating, knit or terry cloth, or multiple fabric layers, you will find it convenient to raise the presser-foot lifter to the high-rise position. Hold lifter in position (since it does not lock) while placing fabric under the presser foot. Make sure the lifter is all the way down before starting to sew.



Presser Foot Lifter Settings

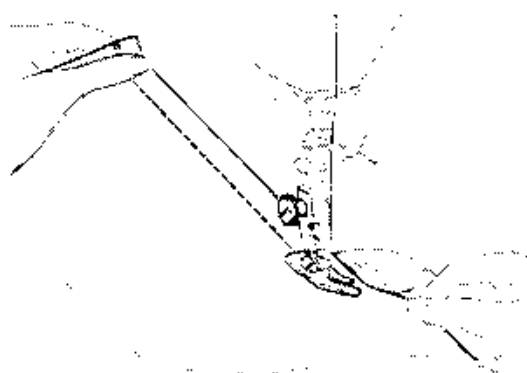


Starting a Seam

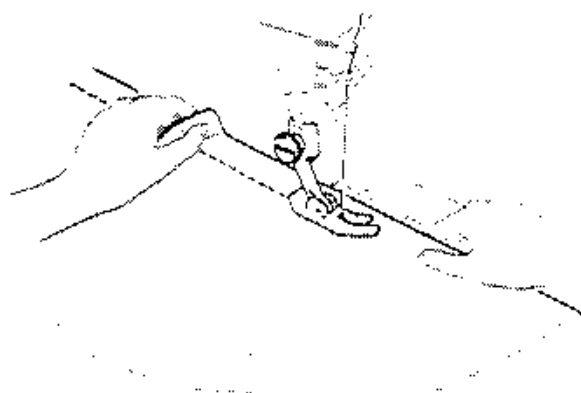


Stitching a Seam

#### Guiding and Supporting Fabric



Applying Gentle Tension



Applying Firm Tension

#### STARTING A SEAM

1. With presser foot raised, turn hand wheel toward you to position needle in fabric about 1/2 inch (1.3cm) from starting edge. Lower the presser foot.
2. Press reverse-stitch lever all the way down and hold in place. Backstitch to edge of fabric for reinforcement.
3. Release reverse-stitch lever and stitch in forward direction.

#### GUIDING AND SUPPORTING FABRIC

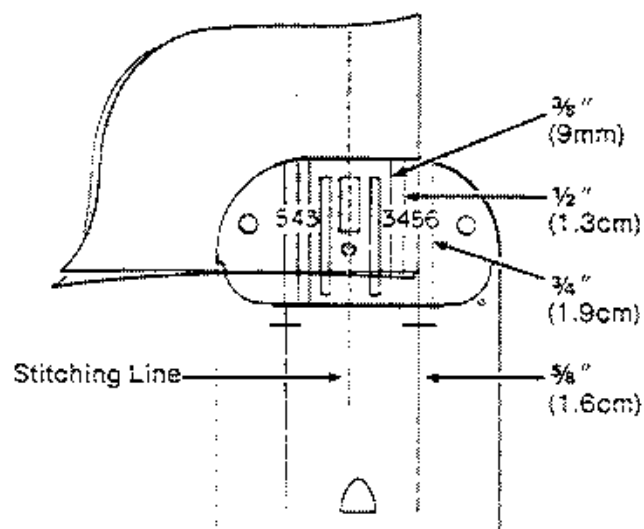
Most fabrics need only to be guided in front of the presser foot. Some fabrics, however, require support while being stitched, as shown. These fabrics require using the straight stitch presser foot.

- For filmy sheers, knits, tricot, etc., apply *gentle* tension by holding seam in front and back of the presser foot.
- For stretch fabrics, apply *firm* tension front and back when stitching in the same direction as the stretch. For seams not on the stretch direction, stitch in the conventional manner, guiding fabric in front of the presser foot.

**CAUTION:** Do not pull the fabric while you are stitching as this may deflect the needle, causing it to break.

## KEEPING SEAMS STRAIGHT

To keep the seam straight, use one of the numbered guidelines on the needle plate. The numbers indicate distance, in eighths of an inch, from the needle. If you want a  $\frac{5}{8}$  inch (1.6cm) seam, for example, line up your fabric with the number 5 guideline. Note that both number 5 guidelines (the most commonly used) are extended on the slide plate for your convenience: the crosslines serve as cornering guides when stitching a square corner.



Using Guidelines

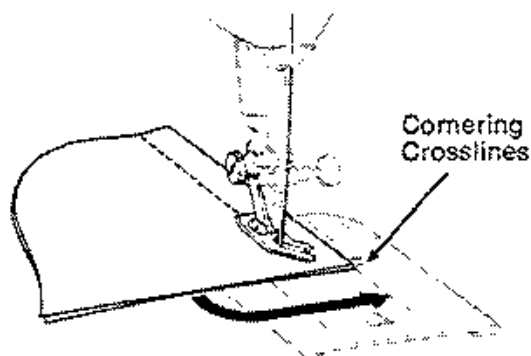
## TURNING SQUARE CORNERS

To turn a square corner  $\frac{5}{8}$  inch (1.6cm) from the fabric edge, you need not measure or mark the seam. Simply use the crosslines on the slide plate.

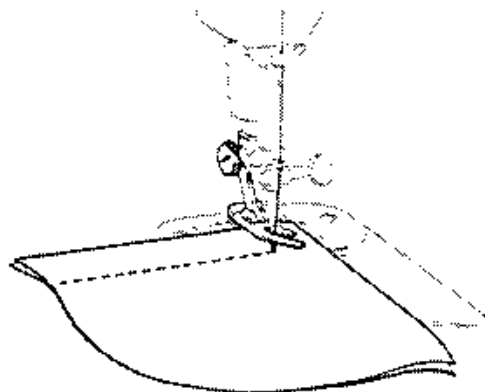
- Line up your fabric with right or left guideline 5 on the needle plate. Stitch seam, slowing speed as you approach corner.

- Stop stitching, *with the needle down*, when the bottom edge of the fabric reaches the cornering crosslines on the slide plate.
- Raise presser foot and turn fabric on needle, bringing bottom edge of fabric in line with guideline 5.
- Lower the presser foot and stitch in new direction.

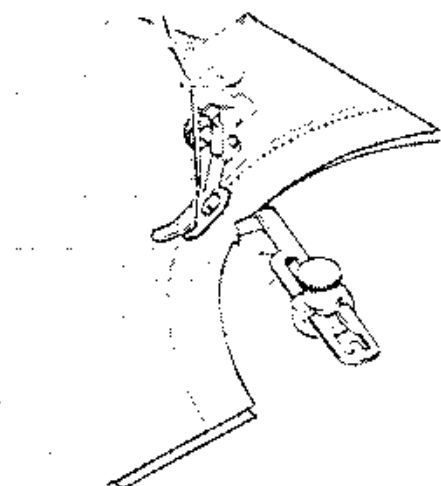
Pivoting at Corner



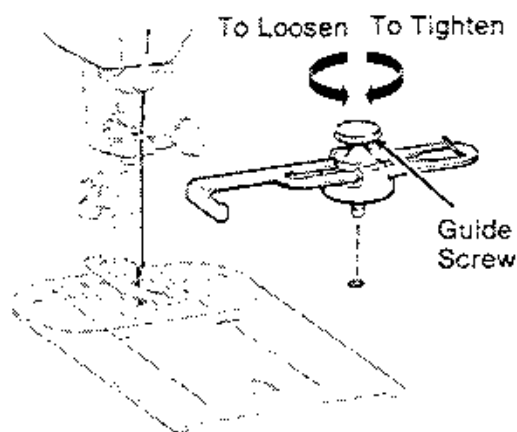
Fabric at Crosslines



Fabric after Turning



**Stitching a Curved Seam**



**Attaching the Seam Guide**

## **CURVED SEAMS**

1. Use a fairly short stitch for elasticity and strength. For example, if you use a medium stitch length for straight seams, select a slightly shorter stitch length to stitch curved seams in the same fabric.
2. If you use the seam guide to guide stitching, attach it at an angle so that the edge that is closer to the needle acts as a guide.

## **TO ATTACH SEAM GUIDE**

Fasten seam guide by securing guide screw into hole provided for it in machine bed.

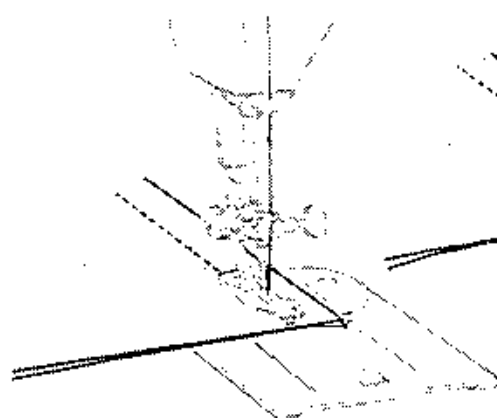
To adjust the seam guide, loosen the guide screw and slide the guide to the required seam width. Then tighten the guide screw.

## **REINFORCING END OF SEAM**

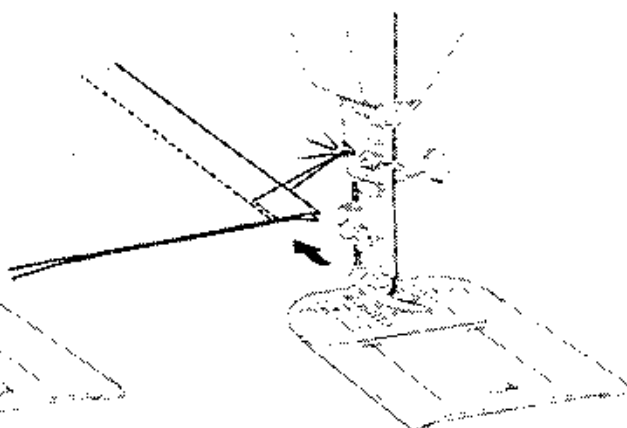
1. Stitch to the edge of the fabric.
2. Press reverse-stitch lever all the way down and hold in place. Backstitch approximately 1/2 inch (1.3 cm) to reinforce end of seam. Release lever.
3. Raise needle to its highest position, raise the presser foot, and remove the fabric by drawing it to the back and left.
4. Cut threads on thread cutter at rear of presser bar.



**Reverse-Stitch Lever**



**Ending a Seam**



**Cutting Threads**
















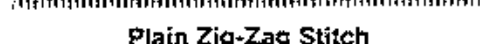


## 4. ALL ABOUT ZIG-ZAG STITCHING

### two kinds of zig-zag stitches













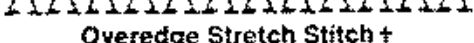



The zig-zag stitches built into your machine include basic zig-zag stitches and *Flexi-Stitch* patterns. In addition to the obviously decorative uses of these stitches, some also serve practical purposes. Under the section called "Sewing the Professional Way" beginning on

page 39, you will find instructions for both decorative and practical uses of these stitches. All of the basic zig-zag stitches and some of the *Flexi-Stitch* patterns are charted below. (When sewing *Flexi-Stitch* patterns, set speed range at **SLOW**.)

#### BASIC ZIG-ZAG STITCHES AND THEIR DIAL SETTINGS

Stitch Pattern	Pattern Dial	Stitch Width Dial	Needle Position Dial	Stitch Control
 Solid Pyramid Stitch		1 - 5	L  R	6 thru FINE
 Ball Stitch		1 - 5	L  R	6 thru FINE
 Crescent Stitch		1 - 5	L  R	6 thru FINE
 Multi-Stitch Zig-Zag		1 - 5	L  R	6 - 20
 Blindstitch		1 - 5	L  R	6 - 20
 Plain Zig-Zag Stitch		1 - 5	L  R	6 thru FINE

#### FLEXI-STITCH PATTERNS AND THEIR DIAL SETTINGS

Stitch Pattern	Pattern Dial	Stitch Width Dial	Needle Position Dial	Stitch Control
 Semaphore Stitch		2 - 5	L  R	
 Slant Overedge Stretch Stitch††		2 - 5	L  R	
 Ric-Rac Stitch††		2 - 5	L  R	
 Overedge Stretch Stitch†		2 - 5	L  R	

†Stitch width must be set at 5 when using the Overedge Foot (see page 47).


††This stitch is designed for strength and permanence and cannot be readily ripped out without risk of fabric damage.

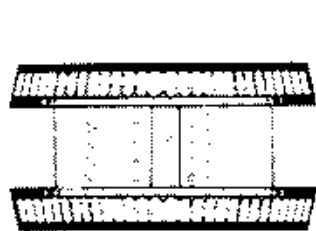
## adjusting dials

### SETTING PATTERN DIAL

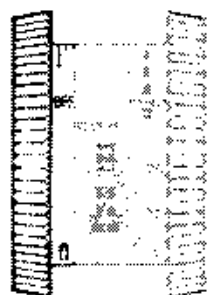
Before moving the dial, make sure buttonhole dial is in **OFF** position and needle is above fabric.

Push the pattern dial in and turn it until desired zig-zag stitch pattern is between the red lines.

To produce a Flexi-Stitch pattern, the stitch control dial must be turned to the  setting.



- Push In
- Rotate
- Release



Buttonhole Dial  
in OFF Position

### ADJUSTING STITCH PLACEMENT

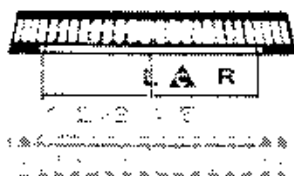
Before moving needle position dial, move stitch width dial to **5**, and make sure buttonhole dial is in **OFF** position and needle is above fabric.

Needle position setting **A** places the needle in center stitching position. Settings **L** and **R** place the needle in left and right stitching positions at stitch widths less than 5.

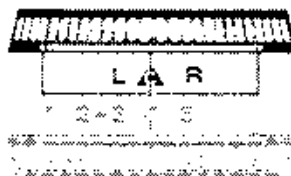
Setting **A** is used most often. Settings **L** and **R** are for special placement of stitching. For example, an **R** setting is required for two-step buttonholing and an **L** setting for button sewing and twin-needle work. An **L** or **R** setting can be used to place narrow zig-zag stitching to the left or right of center in decorative work.

To adjust stitch placement, turn needle position dial until desired setting is aligned with red line.

#### Adjusting Stitch Placement



Left Needle Position



Center Needle Position



Right Needle Position



## ADJUSTING WIDTH OF DESIGN

Before moving dial, make sure needle is above the fabric.

To produce a zig-zag stitch, turn the stitch width dial to any setting between 1 and 5. The higher the number, the wider your stitch will be. A stitch width setting of 2 or more is recommended for *Flexi-Stitch* patterns.


## ADJUSTING NEEDLE-THREAD TENSION


Zig-Zag stitching usually requires less needle-thread tension than straight stitching. Make a test sample with the fabric and thread you plan to use so that you can adjust tension to suit the stitch pattern you have chosen. The stitches should lie flat against the fabric without causing the fabric to pucker.

If the stitches are not flat and the fabric is puckered, lower the needle-thread tension by turning the dial to a lower number.

## ADJUSTING STITCH LENGTH

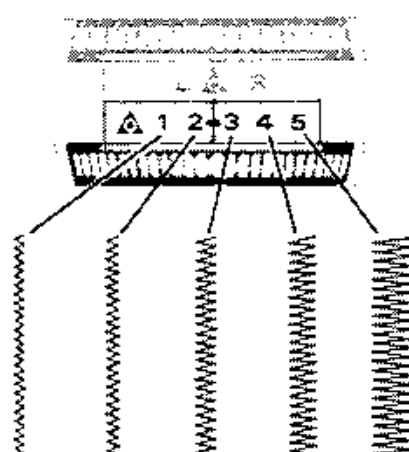
Any **numbered** stitch length setting will give you an open zig-zag stitch of the pattern you select except *Flexi-Stitch* patterns. As you rotate the stitch control dial away from the **FINE** setting (towards the numbered settings), your stitches become more open, or farther apart. The symbol on the dial above the numbered settings designates the **FINE** stitch area and is used for the adjustment of zig-zag satin stitching (see page 24 for specific instructions).

To produce a *Flexi-Stitch* pattern (refer to stitch pattern chart on page 21), the stitch control dial must be set on the  symbol. Simply turn the dial downward until the symbol is centered under the red line. No further adjustment is necessary.

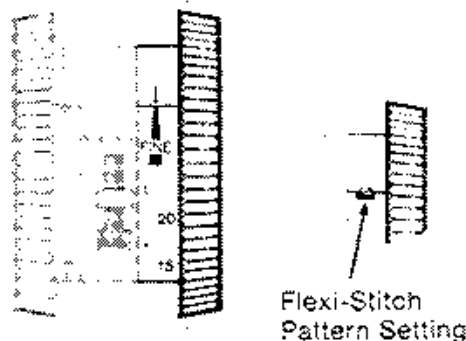
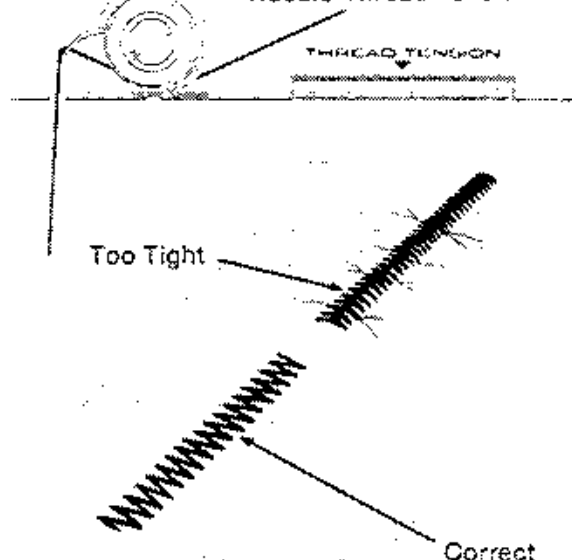
When using the  setting of the stitch control, you cannot backstitch the stitch pattern.

For instructions on **basting stitch**, see page 29.

Adjusting Width of Design

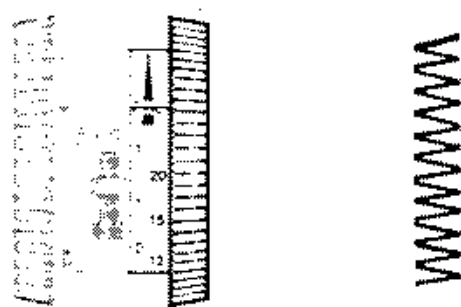


Needle-Thread Tension

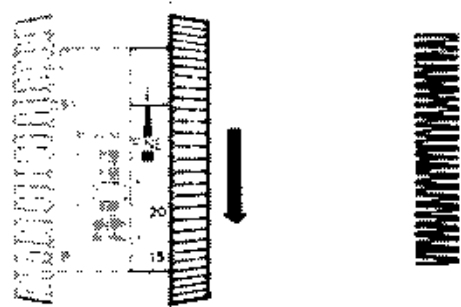


Stitch Control Dial

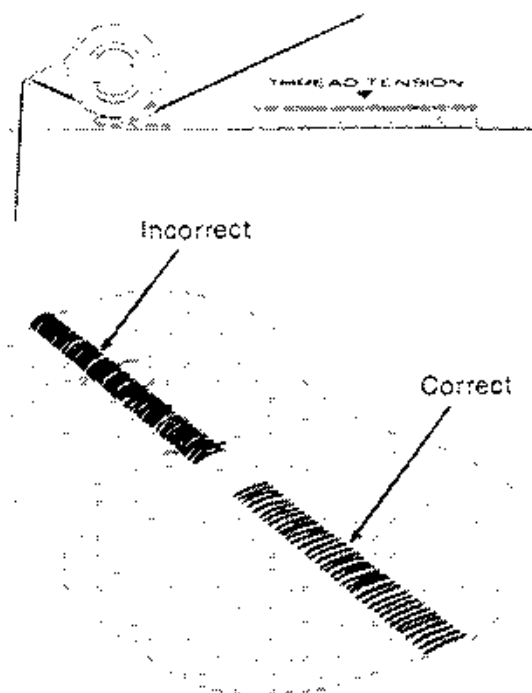
## satin stitching



Stitch Control in FINE Area



As the Dial Is Rotated, Stitches Close Up



Adjusting Thread Tension

Satin stitching, a series of closely spaced zig-zag stitches that form a smooth, satin-like surface, is useful for both practical and decorative work. The plain zig-zag stitch, for example, is suitable for bar tacks and applique when closed up to form a satin stitch. The *Flexi-Stitch* patterns, however, have a single stitch length setting and cannot be satin-stitched.

When you wish to produce a satin stitch, make a test sample first so that you can adjust the stitch length and thread tension properly. Soft fabrics may require a backing to ensure firm satin stitching. Crisp lawn or organdy is suitable for this purpose. For best results use the special purpose foot.

### DIAL SETTINGS

- Pattern: Plain Zig-Zag
- Needle Position:
- Stitch Width: 2 to 5
- Stitch Control: In **FINE** area
- Zig-Zag Needle Plate
- Zig-Zag Foot or Special Purpose Foot

### Adjusting Stitch Length

1. Set stitch control dial at bottom of **FINE** area.
2. Run machine at **SLOW** speed.
3. Gradually turn dial downward until stitches are closely spaced and form a smooth surface.

### Adjusting Thread Tension

Satin stitching requires less tension than straight stitching or open zig-zag stitching. Furthermore, the wider the satin stitch, the lighter the tension on the thread must be. Notice the stitching on your sample. If the fabric is puckered, lower the needle-thread tension by turning the tension dial to a lower number.

## 5. TWIN-NEEDLE STITCHING

By using a twin needle, you can produce two parallel, closely spaced lines of decorative stitching simultaneously. You can choose

either a straight stitch or one of the decorative stitch patterns.

### STITCH PATTERNS AND THEIR DIAL SETTINGS

To produce patterns at right, use settings shown below

Pattern Dial					
Stitch Width Dial	2	2	2	2	2
Needle Position Dial	L	L	L	L	L
Stitch Control	IN FINE AREA	15-20		15-20	

\*This stitch is designed for strength and permanence and cannot be readily ripped out without risk of fabric damage.

### inserting the twin needle

Before inserting the twin needle, place the needle position selector at L and stitch width selector at

1. Raise needle to its highest position.
2. Loosen needle-clamp screw and remove single needle.
3. Insert twin needle into clamp with the flat side of shank to the back.
4. Push needle up as far as it will go and tighten needle-clamp screw.



Best twin-needle stitching results are obtained with No. 50 mercerized cotton thread

## threading the needle

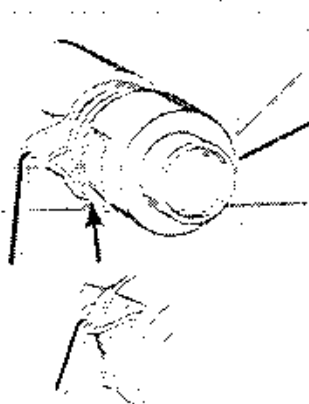
1. Thread as for one-needle stitching except:

- Pass thread between *center* and *back* tension discs, through the thread guide above the needle, and through *right* eye of needle.

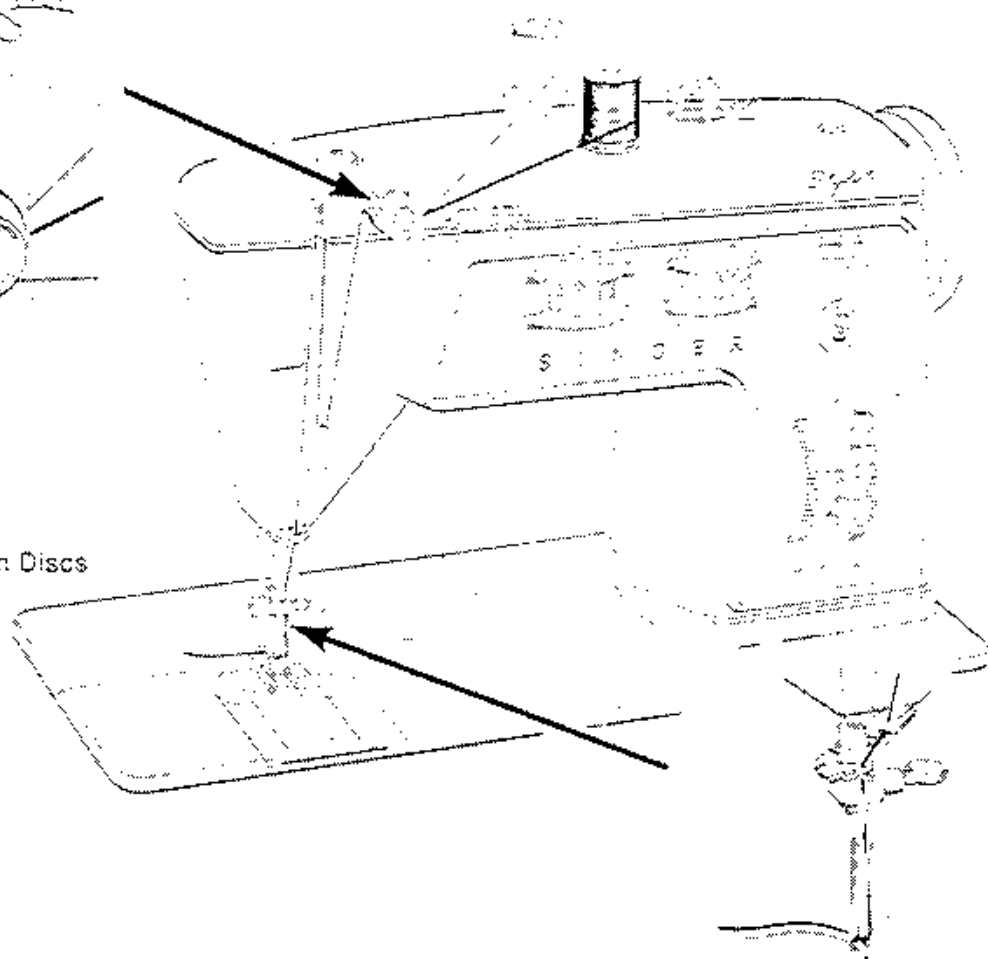
2. Insert detachable vertical spool pin into hole provided for it in top cover of machine.

3. Place spool of thread on detachable spool pin and thread as for one-needle stitching except:

- Pass thread between *center* and *front* tension discs and through *left* eye of needle, *omitting the thread guide above the needle*.






Passing Thread  
Between Tension Discs

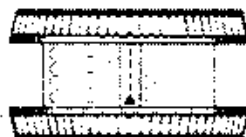


Twin-needle Threading


## *dial settings*

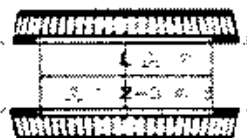
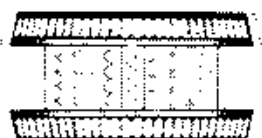
### STRAIGHT STITCHING WITH A TWIN NEEDLE

- 
- Pattern: Straight Stitch 
  - Stitch Width: 
  - Needle Position: L or  only
  - Stitch Control: To suit design
  - Zig-Zag Needle Plate
  - Zig-Zag Foot
- 



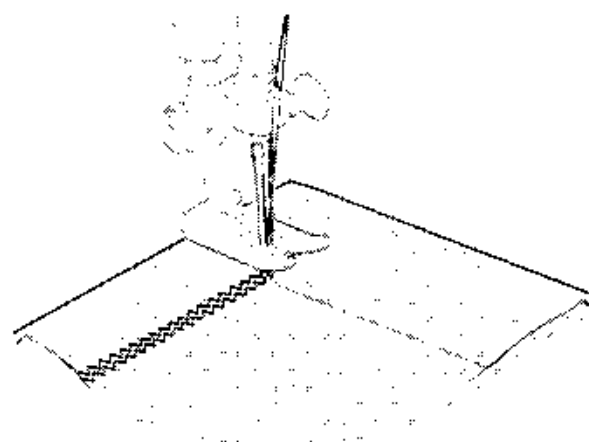
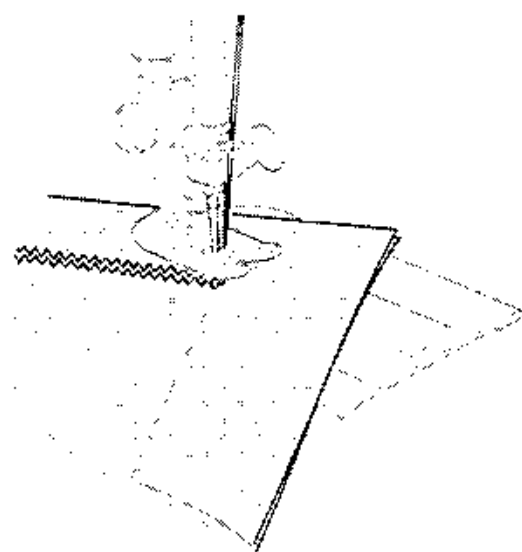
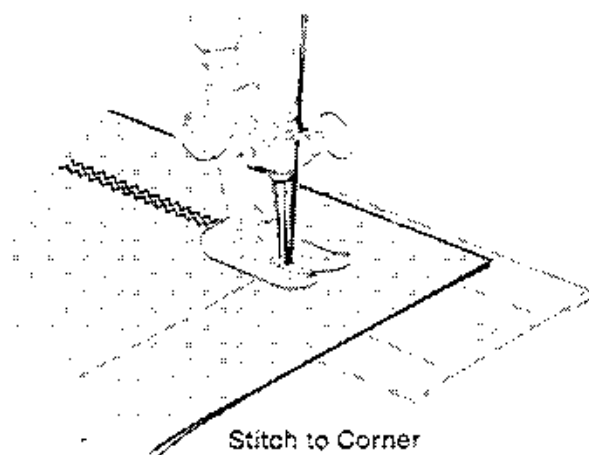
### ZIG-ZAG STITCHING WITH A TWIN NEEDLE

- 
- Pattern:  Any Zig-Zag pattern†
  - Stitch Width: 2
  - Needle Position: L only
  - Stitch Control: To suit design
  - Zig-Zag Needle Plate
  - Zig-Zag Foot (for open stitching)
  - Special Purpose Foot (for satin stitching)
- 



†Excluding basting stitch which cannot be produced with a twin needle.

### Turning a Corner with a Twin-Needle

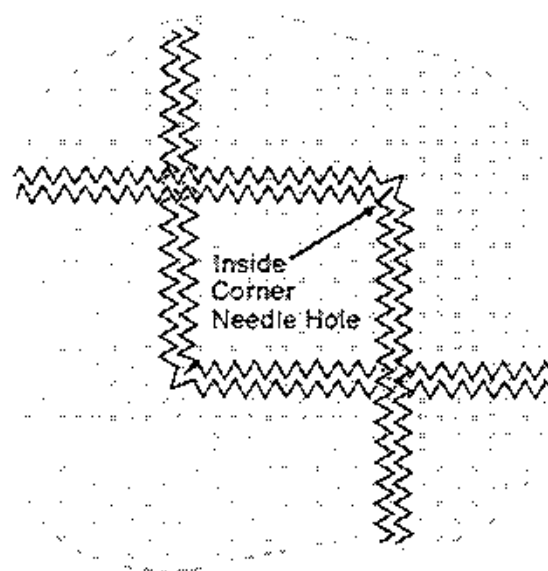


Complete Fabric Turn

## turning a square corner

Geometric twin-needle designs are easy to accomplish with the plain zig-zag stitch and the special purpose foot when you know how to turn a square corner. Be sure to practice turning in right and left directions.

- Mark or baste a stitching guideline on the fabric.
- Stitch to the corner and stop with the needle *in the fabric* on the *inside* of the corner.
- Raise the presser foot and turn the fabric halfway around the corner (needle in fabric). Lower the foot and take *one* stitch by turning the hand wheel. Continue to turn the hand wheel until needle is *about to enter* fabric on the *inside* of the corner.
- Raise the foot again and complete the fabric turn, positioning the work under the foot so that the needle will enter the *inside* corner needle hole a *second time*.
- Lower the foot and continue stitching in the new direction.



Corner Detail


## 6. TEMPORARY STITCHING

### *speed basting*

With the basting stitch that is built into your sewing machine, you can produce basting stitches of any length up to two inches (5cm). Thus, you can choose just the right length for your sewing job, considering the weight of your fabric and how securely the pieces need to be held together. A few of the many sewing jobs for which you will find speed basting particularly useful are:

- Joining seams for trial fittings
- Marking construction guidelines
- Basting pleats, hems and seams

### DIAL SETTINGS AND ACCESSORIES

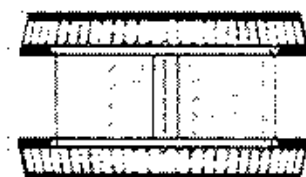
- Pattern: Basting Stitch
- Stitch Width: 5 only
- Needle Position:  only
- Stitch Control: Any setting thru FINE
- Speed: In SLOW range
- Zig-Zag Needle Plate
- Zig-Zag Foot

### Stitch Length

The stitch-control dial regulates the length of basting stitches, but because the basting disc changes the interval at which the needle enters the fabric, the numbers on the dial no longer represent stitches per inch or stitch length in millimeters.

The settings of the control dial and the approximate length of the basting stitches they produce are illustrated. The very short stitches produced in the triangle at the top of the **FINE** area are used to secure the beginning and ending of a line of basting.

PATTERN SELECTOR



STITCH WIDTH

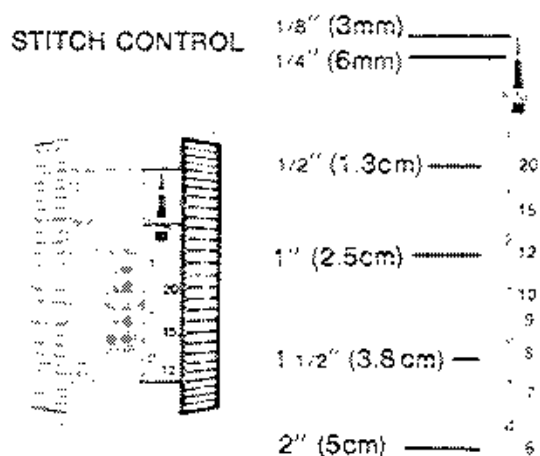


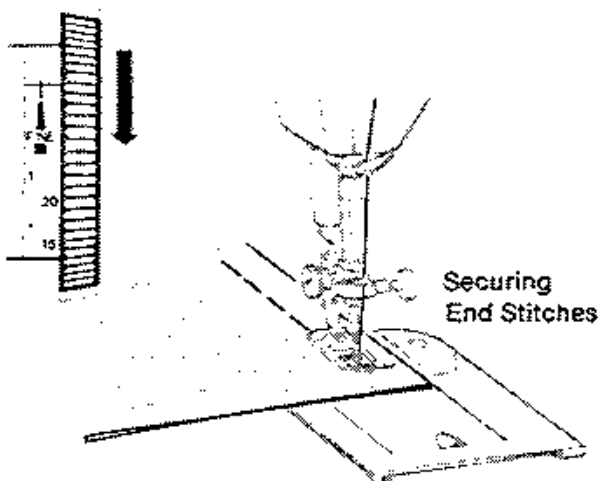
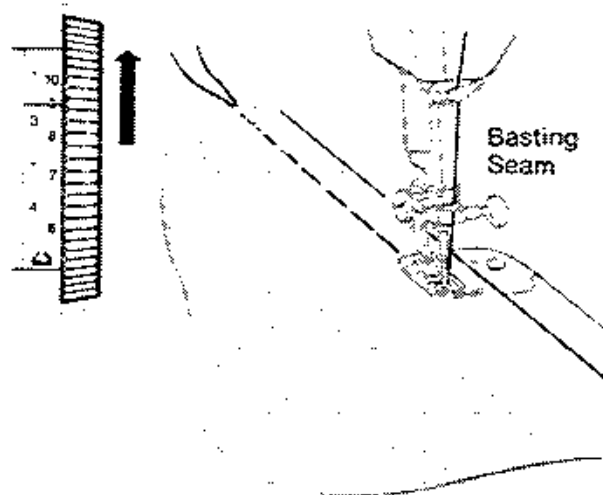
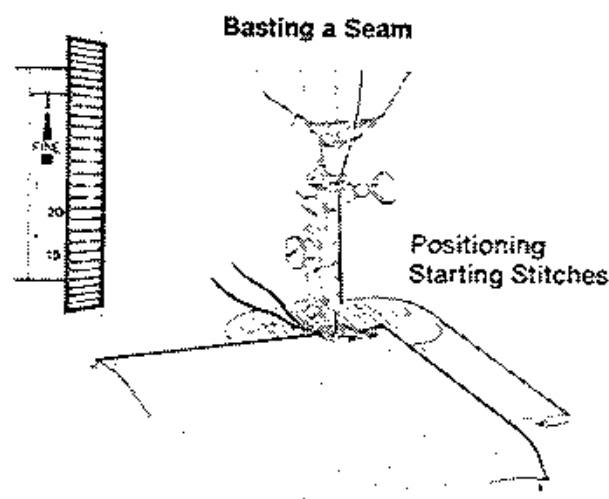
Zig-Zag Foot



Zig-Zag Needle Plate

Dial Settings





## Thread Tension

Machine basting requires a light needle-thread tension. *The longer the stitch, the lighter the tension needs to be.* When tension is correctly adjusted, stitches up to 1/2 inch (1.3cm) long should lie flat in firm fabrics. If stitches are more than 1/2 inch (1.3cm) long, place tension *on the fabric* by holding it in front and back of the presser foot, as you sew, to prevent pucker.

## PREPARATION

Thread the machine and fill the bobbin in the usual way. Select needle and thread according to your fabric: mercerized cotton threads are particularly recommended. Choose a thread color to contrast with your fabric so that it can be seen easily. *Make sure the zig-zag foot and zig-zag needle plate are on the machine and the needle is in its highest position.*

## PROCEDURE

1. Set stitch control for a short stitch in the triangle at the top of the **FINE** area on the dial. Place work under the needle, lower the presser foot, and take a few stitches to position and secure basting start.
2. Reset stitch control dial for the length of basting stitch desired (stitches less than 1 inch (2.5cm) long are recommended for seam basting) and proceed as for regular sewing. Stitch slowly, supporting the fabric in front and back of the presser foot if stitches are more than 1/2 inch (1.3cm) long.
3. To secure the end of basting, turn dial downward for a short stitch in the **FINE** area and take a few stitches.

To avoid pressing marks, remove basting stitches as soon as they have served their purpose.



# 7. BUTTONS AND BUTTONHOLES

## buttons

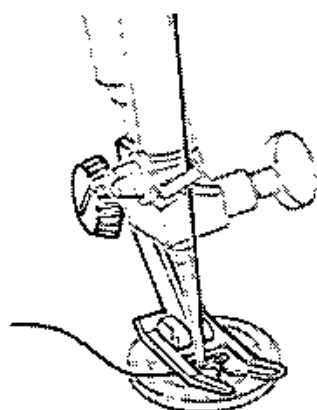
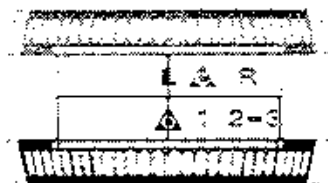
- Pattern: Plain Zig-Zag
- Stitch Width:  $\Delta$  and 4
- Needle Position: L
- Feed Cover Needle Plate
- Zig-Zag Foot

The space between the holes in the button determines the stitch width settings. The  $\Delta$  setting must always be used to position the needle over the left hole and fasten stitching. For buttons with standard hole spacing, use settings  $\Delta$  and 4. For buttons with unusual hole spacing, use setting  $\Delta$  and increase or decrease the width setting 4 as necessary.

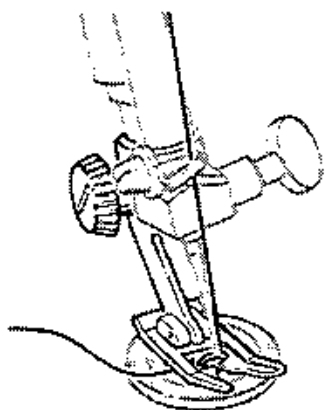
To sew on buttons approximately one inch (2.5cm) in diameter or larger:

1. Set stitch width dial at  $\Delta$ . Position button under foot so that the needle will enter the left hole. Lower foot. Turn hand wheel toward you until needle rises out of button and is just above the foot.
2. Set stitch width at 4. Then, when you begin to stitch, the needle should enter the right hole of button. Take six or more zig-zag stitches at this setting, ending on left side.
3. To fasten stitching, return to stitch width  $\Delta$  and take about three stitches.

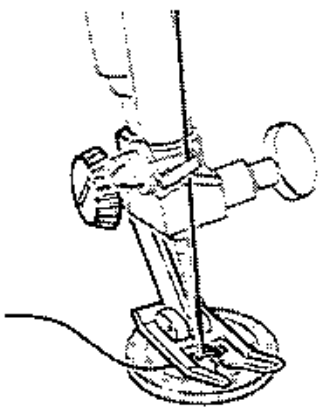
For best results with buttons smaller than one inch (2.5cm) in diameter, it is recommended that the Button Sewing Foot be used. See page 67.



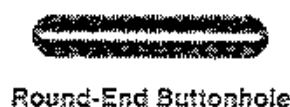
Step 1



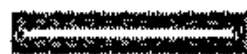
Step 2



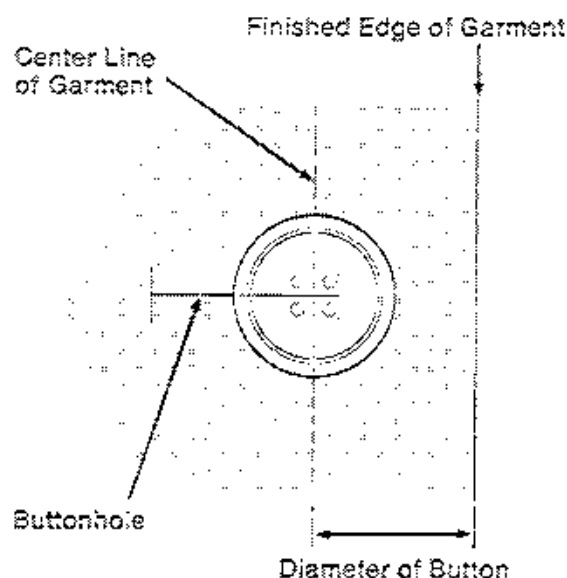
Step 3



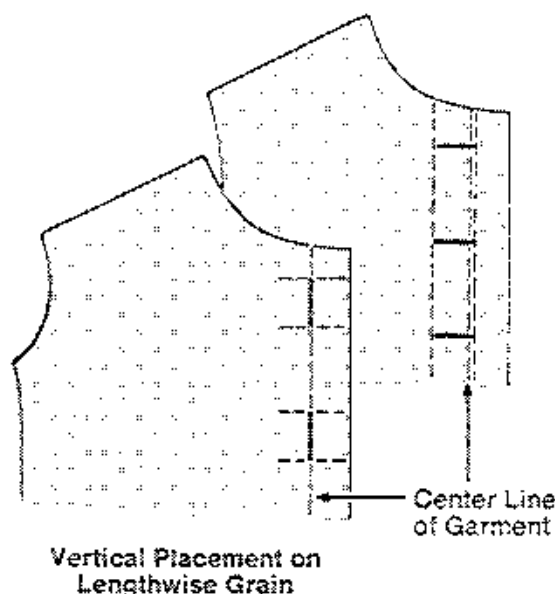
Round-End Buttonhole



Bar-Tack Buttonhole



Horizontal Placement  
on Crosswise Grain



Vertical Placement on  
Lengthwise Grain

## buttonholes

You have a choice between two buttonhole styles and two buttonhole-making methods: round-end buttonholes made with the built-in buttonhole system of your machine and bar-tack buttonholes with square ends made manually in four steps. Round-end buttonholes can be made in light- and medium-weight fabric; bar-tack buttonholes are best in lightweight fabric.

### BUTTONHOLE POSITION

Accurate guidelines are essential to keep buttonholes at a uniform distance from the edge of the garment, evenly spaced, and on the grain of the material.

1. For center closures, mark the center line of the garment as indicated on your pattern. This guideline can be made by hand basting or machine speed basting. The space from the center line to the finished edge of the garment must be at least equal to three-quarters the diameter of the button. With this spacing, the button will not extend beyond the edge when the garment is buttoned. Make sure that the center line marking follows a lengthwise fabric thread.
2. Mark a position guideline for each buttonhole.
  - **Horizontal** buttonholes are placed to extend  $\frac{1}{8}$  inch (3mm) beyond the center line of the garment, as illustrated, so that the buttons will be in the center of the figure when the garment is fastened. Horizontal buttonhole guidelines should follow a crosswise fabric thread and be longer than the finished length of the buttonhole. Mark ends of each buttonhole vertically.
  - **Vertical** buttonholes are placed so that the center line of the garment is in the center of the buttonhole, as illustrated. Mark the ends of each buttonhole horizontally across the center line basting and use the center line marking as the buttonhole guide when stitching.

## BUTTONHOLE LENGTH

A buttonhole length should be just long enough to allow the button to slip through the opening without stretching it. You can estimate the proper buttonhole length by measuring the width plus the thickness of the button. To make sure the measurement is correct, cut a slit in a scrap of fabric the diameter of the button you intend to use. Increase length of opening until button slips through easily. This test is particularly advisable for buttons of unusual shape or thickness.

## BUTTONHOLE INTERFACING

It is almost always wise to use an interfacing in the buttonhole area. An interfacing holds the fabric firmly so that a neat buttonhole may be stitched and keeps the finished buttonhole in shape. Interfacing is essential when the fabric is loosely woven or is a crepe or knit that stretches easily.

When planning your garment, remember that both round-end and bar-tack buttonholes are stitched through three thicknesses of fabric

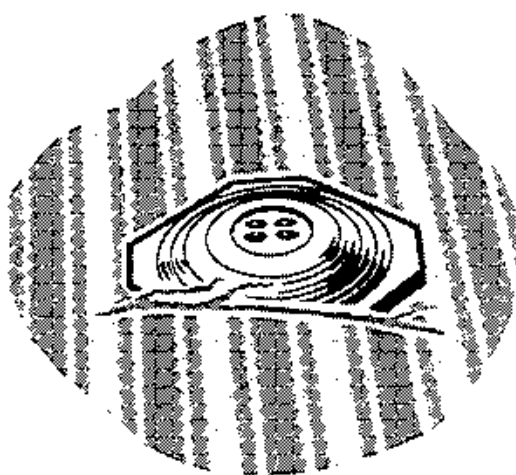
(garment, interfacing and facing) after the facing has been attached.

## TEST SAMPLE

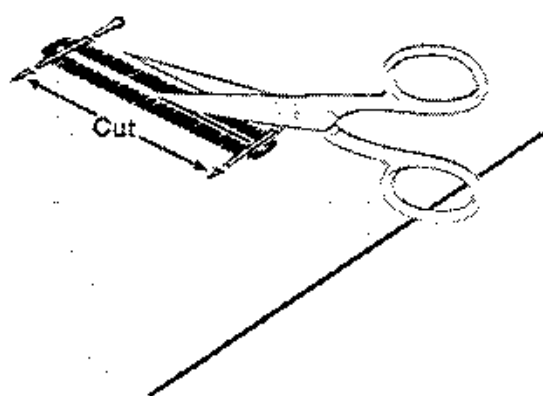
Always make a test buttonhole in a sample of your fabric to determine suitability of buttonhole style, buttonholing method, and machine settings. Be sure to duplicate the number of fabric layers in the garment and include interfacing if appropriate. Remember, too, that loosely woven and medium-weight fabrics require buttonholes with wider side stitching than firmly woven or lightweight fabrics. Finally, check to see that the opening for the button can be cut without damaging buttonhole stitching.

## CUTTING BUTTON OPENING

Place a pin across the cutting space at each end of the buttonhole to protect end stitching. Use a pair of small, sharp scissors to cut the button opening. Insert blade in center of buttonhole cutting space and cut from this point in either direction.



Testing Buttonhole Length

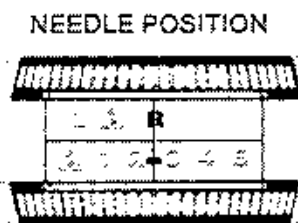
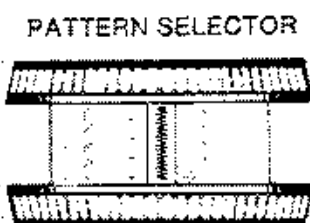


Cutting Button Opening

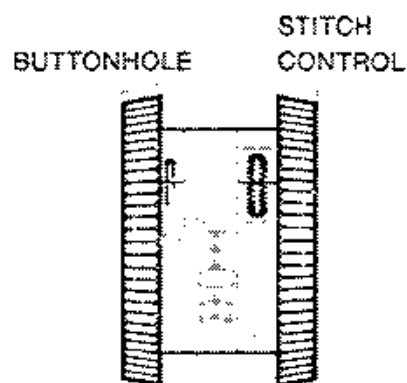
## ROUND-END BUTTONHOLES


To stitch a buttonhole, set all dials on red symbols.

- Attach buttonhole foot
- Use zig-zag needle plate



STITCH WIDTH



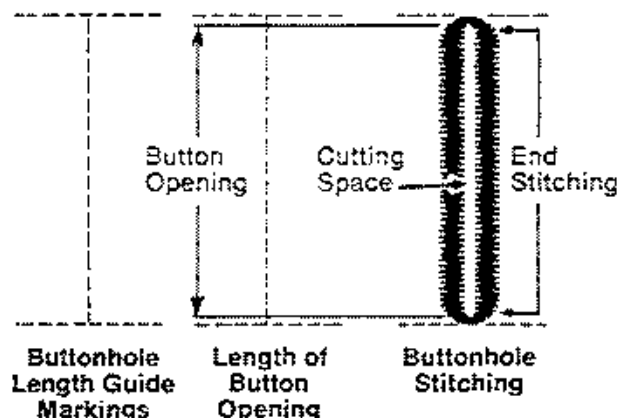
Make sure buttonhole dial is in **OFF** position when you set or reset stitch control dial on red .




Buttonhole Foot

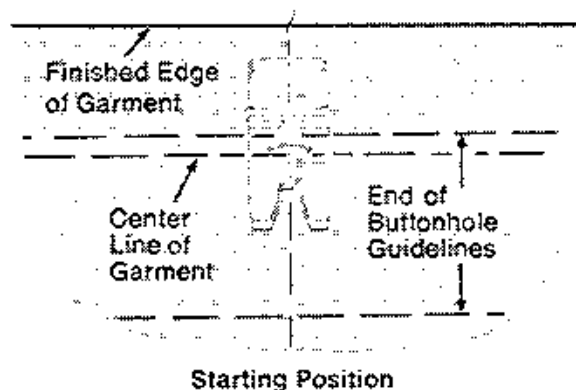
### Buttonhole Length

First, decide how long the button opening must be. This will depend on the diameter and thickness of the button as explained on page 36. Then add 1/8 inch (3mm) for end stitching (1/16 inch or 1.5mm for each end of the buttonhole). This end-stitching allowance is approximate and should be increased slightly if the buttonhole is to be stitched twice. Fabric thickness and thread diameter will also vary end-stitching depths, so be sure to check measurements by making a test buttonhole. Mark buttonhole position and length on fabric. See page 32 for placement information.



### Buttonhole Stitch Width

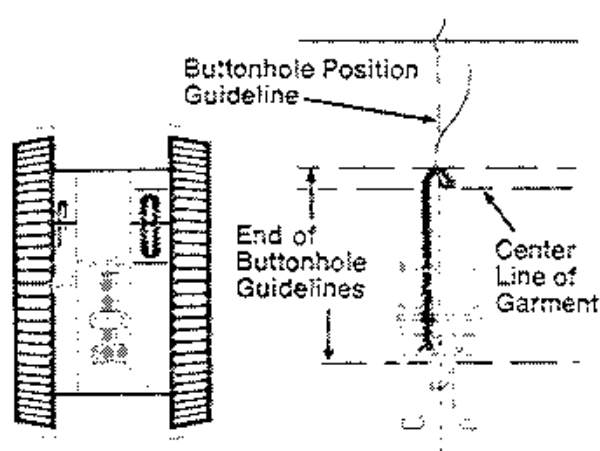
The stitch width setting, designated by red  symbol, is an approximate setting; use it to make your test buttonhole. You may need to increase or decrease stitch width slightly to suit your fabric, to arrive at more pleasing buttonhole proportions, or to change the width of the buttonhole cutting space. When making stitch width adjustments, remember that as stitch width is increased, the cutting space in the center of the buttonhole is decreased.



## Procedure

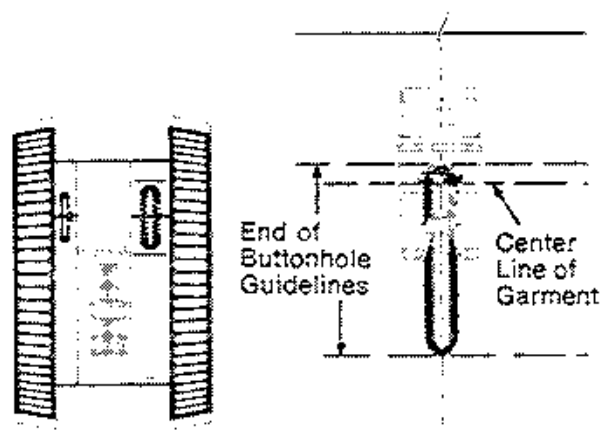
- Place garment under buttonhole foot so that buttonhole position marking is centered.
- Align center gauge line of buttonhole foot with center line of garment.
- Lower the presser foot, and rotate buttonhole dial downward until symbol for step 1 is centered under red line (click indicates engagement).
- Start machine and let it complete step 1 of the buttonholing cycle; that is, stitching across the end and down the left side of buttonhole. *Stop machine when front gauge line on buttonhole foot reaches end-of-buttonhole guideline on garment.*
- Rotate buttonhole dial downward until symbol for step 2 is centered under red line.
- Start machine and let it complete step 2 of the buttonholing cycle; that is, stitching across the end and up the right side of buttonhole. *Stop machine when back gauge line on buttonhole foot is in line with the end-of-buttonhole guideline on garment.* Take one or two stitches if necessary to overlap stitching at starting point. For a smooth, satiny appearance and greater durability, stitch around the buttonhole a second time by repeating the two-step dial sequence.
- Remove work from machine, clip thread ends and cut button opening with sharp scissors.

When buttonholes are completed, reset dials for regular sewing. Make sure buttonhole dial is in **OFF** position.



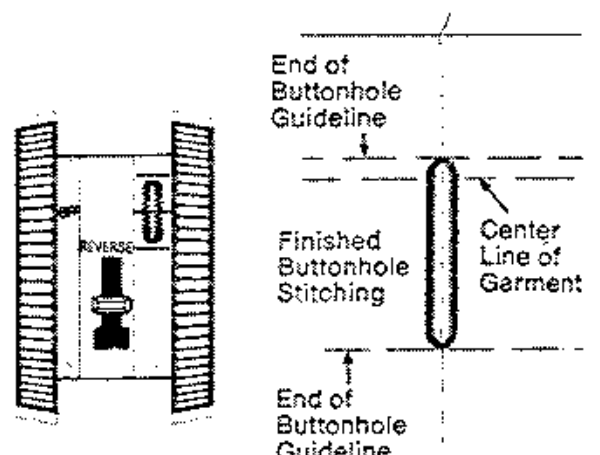
Step 1 Dial Setting

Presser Foot Position at End of Step 1



Step 2 Dial Setting

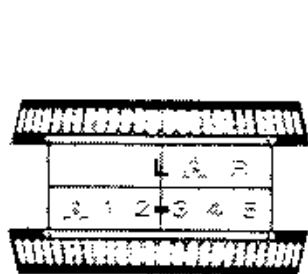
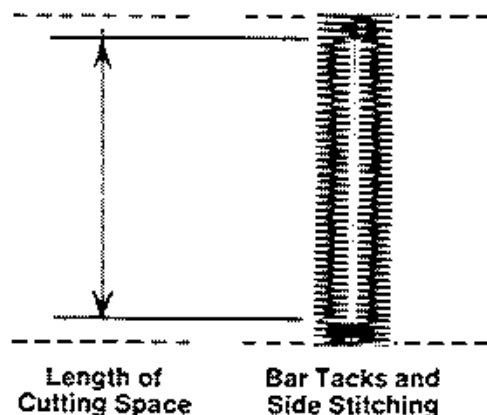
Presser Foot Position at End of Step 2



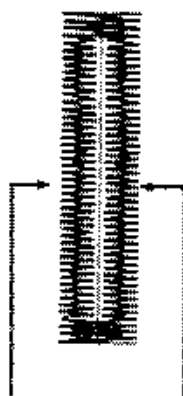
Off Dial Position at End of Step 2

## BAR-TACK BUTTONHOLES

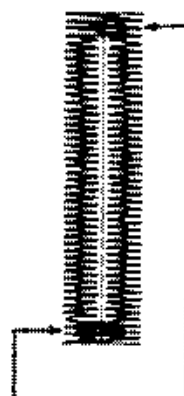
- Pattern: Plain Zig-Zag
- Stitch Width: 2 1/2 and 5 or to suit fabric
- Needle Position: L
- Stitch Control: in FINE area
- Zig-Zag Needle Plate
- Special Purpose Foot



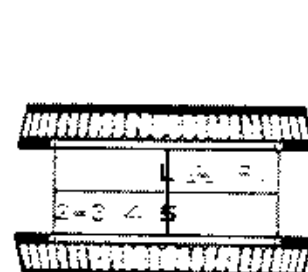
Selector  
at 2 1/2



Side Stitching



Bar Tacks



Selector  
at 5

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.

## BUTTONHOLE LENGTH

First decide how long the opening needs to be. This will depend on the diameter and thickness of the button. To find the right length, cut a small slit in a scrap of your fabric and gradually enlarge it until the button slips through easily. Then add at least 1/8 inch or 3mm (1/16 inch, or 1.5mm for each bar tack, the closing at each end of buttonhole), and mark the fabric as illustrated. This bar-tack measurement is approximate; on some buttonholes, you may need to increase it to arrive at pleasing proportions.

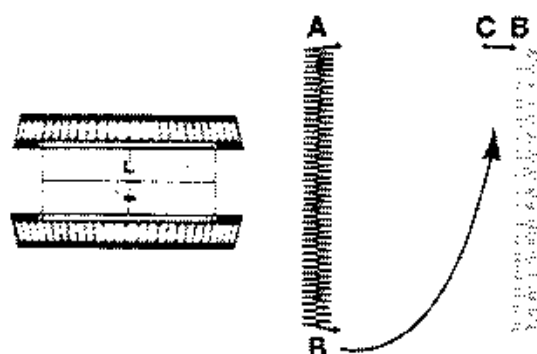
## STITCH WIDTH SETTINGS

Next, determine the two stitch width settings that you will need: one for side stitching and one for bar tacks. Settings 2 1/2 and 5 are illustrated below, although other combinations may be used, as long as combined widths of side stitching does not exceed the width of the bar tacks.

## PROCEDURE FOR MAKING BAR-TACK BUTTONHOLES

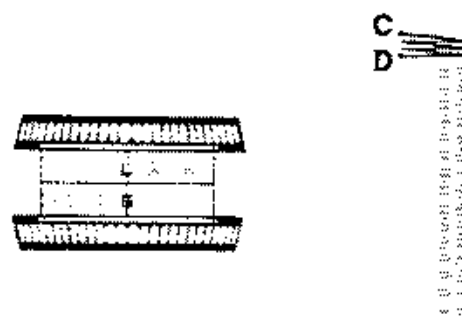
With needle position dial at **L**, set stitch width dial on  $2\frac{1}{2}$  for side stitching of buttonhole. Place work under needle, aligning center marking of buttonhole with slot in the presser foot.

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



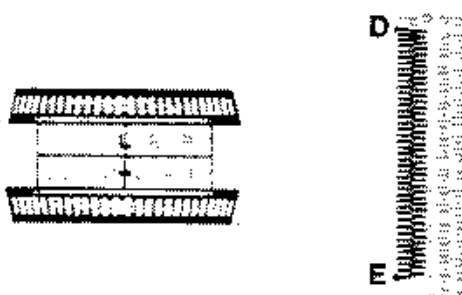
Side Stitching

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



Bar Tack

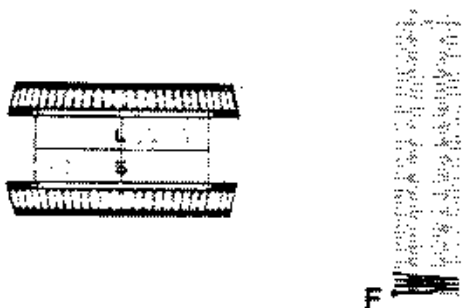
**Side Stitching:** Readjust stitch width for side stitching. Complete work to point **E**. Leave needle in fabric.



Side Stitching

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

**Fastening Stitch:** To secure stitching, move stitch width dial to  $\Delta$  and take three stitches. Remove work, draw threads to underside, fasten and trim. Cut opening for button with sharp scissors.



Final Bar Tack

## 8. FREE-MOTION STITCHING


In free-motion stitching, you sew without a presser foot and control fabric movement by means of an embroidery hoop. Either a straight or a plain zig-zag stitch can be used. Because you can move the hoop in any direction — forward or backward, from side to side, or even diagonally—free-motion stitching is extremely useful for embroidery designs. On the other hand, it is equally useful for darning.

If you are **embroidering**, you can vary the length of stitches simply by moving the hoop faster or slower under the needle. The faster you move the hoop, the longer the stitches will be. You can also vary the width of zig-zag stitches from wide to narrow by controlling the angle at which the hoop is placed and moved under the needle.

For **darning**, the embroidery hoop used in free-

motion stitching enables you to hold the fabric taut—a real advantage when your fabric is lightweight or soft and thus likely to pucker. See page 57 for directions.

### *flower embroidery*

- 
- Pattern: Plain Zig-Zag
  - Stitch Width: 2 to 5
  - Needle Position: 
  - Feed Cover Needle Plate
  - No Presser Foot
- 

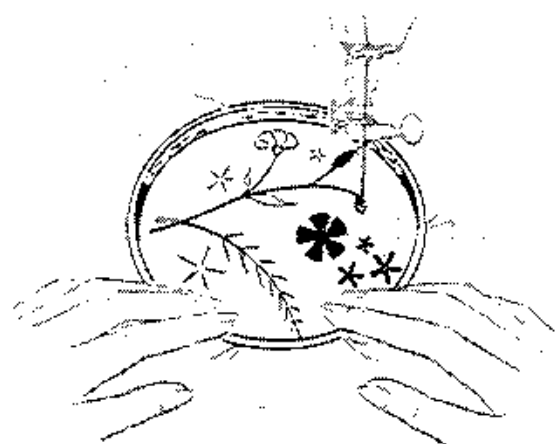
#### PREPARATION

Trace design on right side of fabric. (If you have designing skill, you will enjoy creating your own patterns; otherwise, you can buy attractive transfer designs.) Place work in an embroidery hoop large enough to encompass the entire design, but small enough so that hoop can be easily managed. Add an underlay if fabric is soft. Remove presser foot (see page 5), and replace regular needle plate with the feed cover needle plate.

#### PROCEDURE

1. Position work under needle and *lower presser bar to engage tension.*
2. Hold needle thread loosely and turn hand wheel toward you to bring bobbin thread up through fabric. Hold both thread ends and lower needle into fabric.
3. Stitch, outlining or filling in design with zig-zag stitches. For a smooth, satiny surface, place parallel stitches close together, moving hoop slowly and steadily. For an irregular texture, move the hoop more rapidly, allowing some stitches to overlap.

A series of bar-tacks can be used to form spray-like leaves or flowers. This technique adds variety and lightness to many designs. Leaves and petals formed in this way may carry the thread from one bar tack to the next. This carrying thread eliminates tying of the thread ends.



Stitching Flower Design



Completed Flower Design






# 9. SEWING THE PROFESSIONAL WAY

## construction details

### ZIPPERS

At the notions counter in your Singer store, you will find many different kinds of zippers, one of which will be just right for whatever you wish to sew. How the zipper is inserted will depend on the type of garment and the location of the zipper. The zipper package will contain easy-to-follow instructions. And, if you use the zipper foot, you will find it easy to form an even line of stitching close to the zipper.

- 
- Pattern: Straight Stitch 
  - Stitch Width: 
  - Needle Position: 
  - Stitch Control: 10 to 15 (1.5 to 3.2 mm)
  - Zig-Zag or Straight Stitch Needle Plate
  - Zipper Foot
- 

### Attaching the Zipper Foot

The zipper foot snaps onto the presser foot shank in the same manner as instructed on page 5.

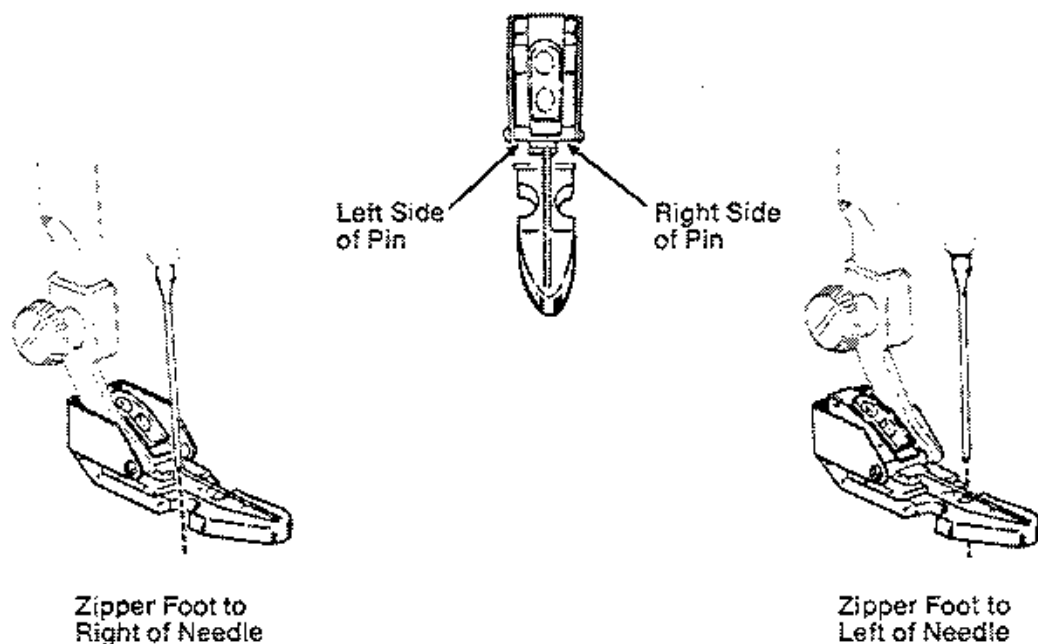
When the zipper is to the *right* of the needle:

- Place the zipper foot under the presser foot shank and lower the presser bar to allow the shank to fit over the pin on the *right* side of the zipper foot, so that the needle will enter the *right* notch in the foot. Press down on presser foot screw until foot snaps into place.

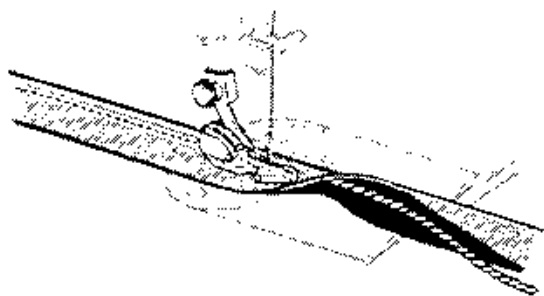
When the zipper is to the *left* of the needle:

- Place the zipper foot under the presser foot shank and lower the presser bar to allow the shank to fit over the pin on the *left* side of the zipper foot, so that the needle will enter the *left* notch in the foot. Press down on presser foot screw until foot snaps into place.

### Attaching the Zipper Foot

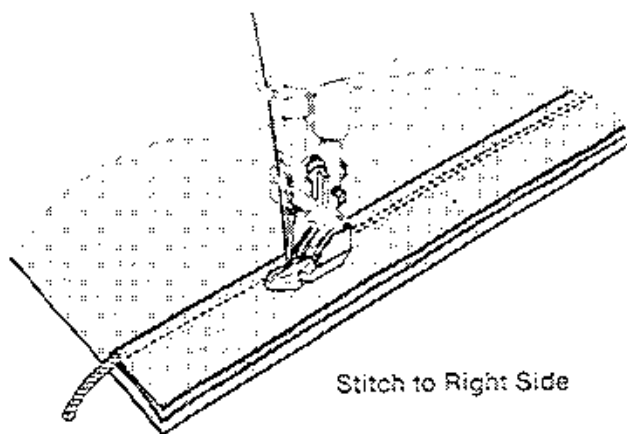


### Making the Welting

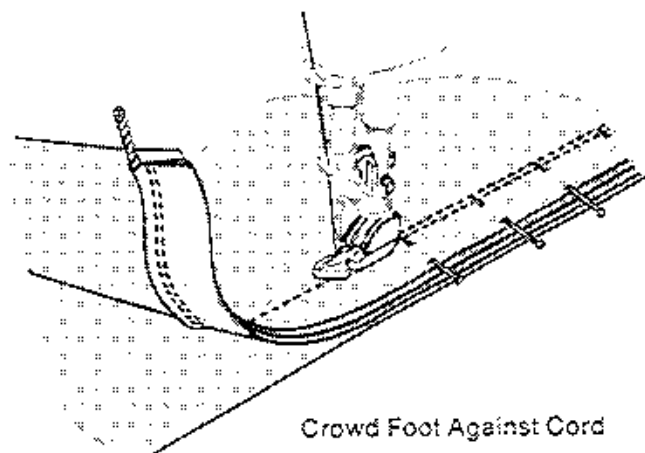


Stitch Close to Cord

### Making a Corded Seam





Stitch to Right Side



Crowd Foot Against Cord

## CORDED SEAMS

The corded seam is a professional treatment for slipcovers, children's clothes, blouses, and lingerie. To make a corded seam, make the welting first (or buy it ready-made at a notions counter), then stitch it into the seam.

- Pattern: Straight Stitch
- Stitch Width: 
- Needle Position: 
- Stitch Control: Slightly longer than for regular seaming
- Zig-Zag or Straight Stitch Needle Plate
- Zipper Foot

### Making the Welting

1. Buy cable cord of desired size.
2. Cut bias strips of fabric to cover cord (width: three times the diameter of the cord plus 1-1/4 inches or 3.2cm). If it is necessary to sew strips together to obtain desired length, join on lengthwise fabric grain.
3. Fold bias fabric strip over cord, raw edges even.
4. Attach zipper foot for use on *left* side of needle.
5. Lower the presser foot.
6. Stitch close to the cord (do not crowd stitching against cord), pulling gently on the strip, both in front and in back of the zipper foot.

### Stitching Welting into Seam

1. Attach zipper foot for use on *right* side of the needle so that the bulk of the fabric will fall to left.
2. Stitch welting to the right side of a single seam edge; guide the edge of the foot next to the cord but do not crowd.
3. Place the attached welting over the second seam edge, and pin or baste together.
4. Place work under needle, with the first stitching on top so that you can use it as a guide. Stitch, crowding foot against cord.

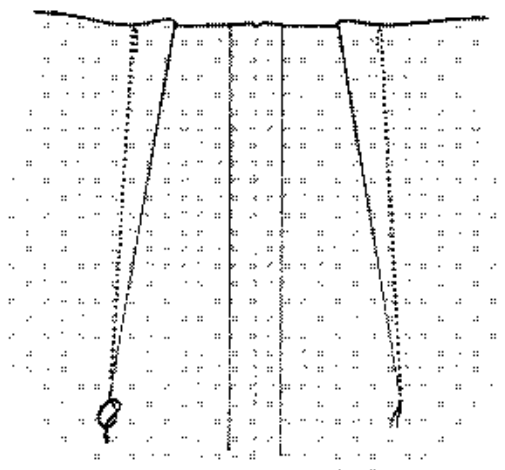
## DARTS

Darts can be made in the usual way on your sewing machine. That is, you begin stitching at the wide end of the dart, stitch to the point, and then fasten the two thread ends.

### Regular Darts




- 
- Pattern: Straight Stitch 
  - Stitch Width: 
  - Needle Position: 
  - Stitch Control: About 12 (2.5 mm) or to suit fabric
  - Zig-Zag Needle Plate
  - Zig-Zag or Straight Stitch Foot
- 

1. Stitch from the seam edge, tapering gradually to the point.
2. Stitch beyond the fabric to form a thread chain 1/2 to 3/4 inch (1.3 cm to 1.9 cm) long. Clip thread ends about two inches (5 cm) from dart point.
3. Tie the thread ends into a single knot close to the stitching.



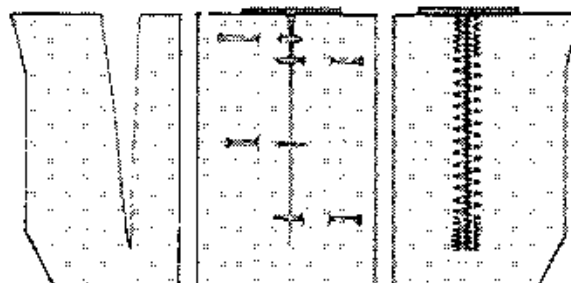
Regular Darts

### Darts in Interfacing

- 
- Pattern: Zig-Zag  or Multi-Stitch Zig-Zag 
  - Stitch Width: 5
  - Needle Position: 
  - Stitch Control: About 20 (1.3 mm) or to suit fabric
  - Zig-Zag Needle Plate
  - Zig-Zag Foot
- 

With zig-zag stitching, darts in interfacings can be shaped without bulk.

1. Cut out the dart allowance on the stitching line.
2. Bring raw edges together and pin or baste in position over a muslin stay.
3. Stitch, backstitching at both ends of dart for reinforcement.

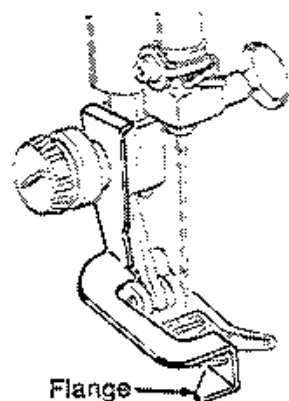


Step 1

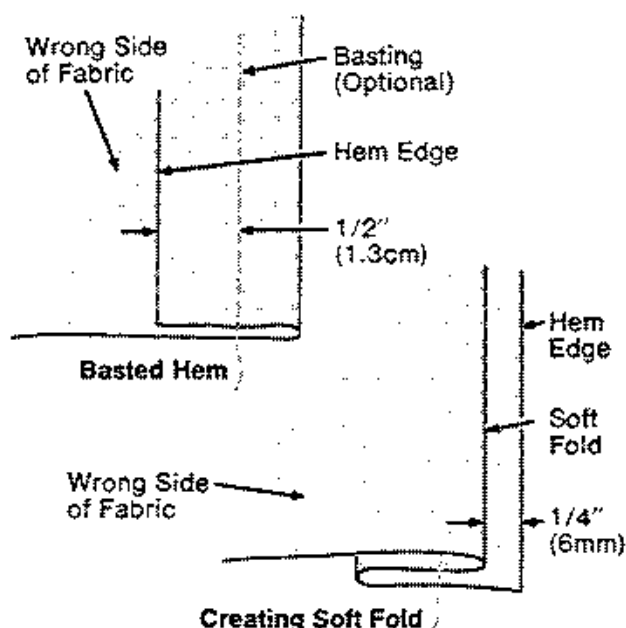
Step 2

Step 3

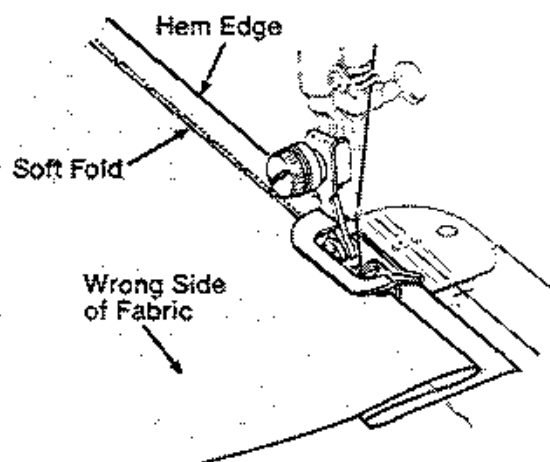
Darts in Interfacing



**Blindstitch Hem Guide**



**Creating Soft Fold**



**Blindstitching a Hem**

## BLINDSTITCH HEMS

- Stitch: Blindstitch
- Stitch Width: 2 to 5 (to suit fabric)
- Needle Position: A or R
- Stitch Length: 10 to 20 (1.3 to 3.2 mm)
- Zig-Zag Needle Plate
- Zig-Zag Foot
- Blindstitch Hem Guide

Blindstitching takes a little practice, so make a test sample first.




*Raise take-up lever to its highest position.*

1. Raise presser foot, loosen presser-foot screw, and slip blindstitch hem guide between screw and shank of zig-zag foot. Make sure underside of guide clears slide plate and front of foot. Tighten presser-foot screw.
2. Turn up hem in width desired. Apply appropriate finish to hem edge and press. (You may want to baste the turned hem to hold it in place. If so, be sure to place basting at least 1/2 inch (1.3cm) below top edge of hem.)
3. Fold the hem back against right side of garment, creating a soft fold about 1/4 inch (6mm) from top edge of hem on wrong side of work. Press lightly.
4. Position hem under foot with soft fold resting against wall of guide. Make sure flange of guide is between the soft fold and top of hem.
5. Lower the foot and stitch so that the straight stitches fall on the hem edge and sideward stitches pierce the soft fold. While stitching, guide hem edge in a straight line and feed soft fold evenly against wall of hem guide.
6. Raise take-up lever to its highest position. Raise presser foot and remove work (by drawing it to the back).

## SEAMS IN FABRICS THAT RAVEL





Seam edges support the garment and should be given a durable finish if the fabric is likely to ravel. There are two ways of finishing seams in such fabrics: trimming seam edge or overedging. Make a test sample first to determine whether method #1 or method #2 best suits your fabric.

### Method #1 — Trimmed Seam Finish

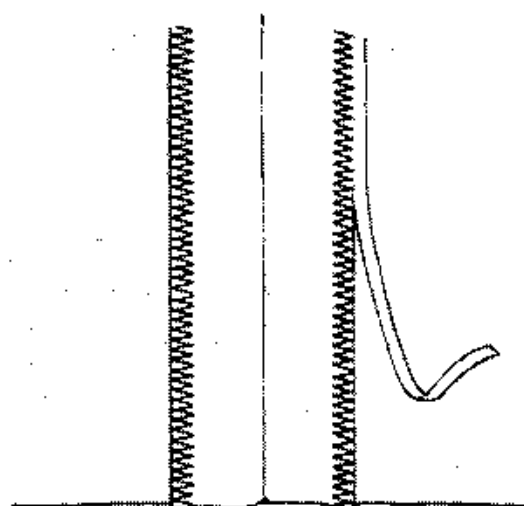
- Pattern: Plain Zig-Zag  or Multi-Stitch Zig-Zag 
- Stitch Width: 4 or 5
- Needle Position: 
- Stitch Control: 8 to 20 (1.3 to 3.8 mm) to suit fabric
- Zig-Zag Needle Plate
- Zig-Zag Foot

1. Select the stitch pattern that best suits your fabric.
2. Adjust stitch width and stitch length to give the most "open" stitch that will secure the fabric edge; avoid harsh over-stitching.
3. Place stitching near the edge of the seam allowance.
4. Trim seam edges evenly, as shown, after stitching is completed.

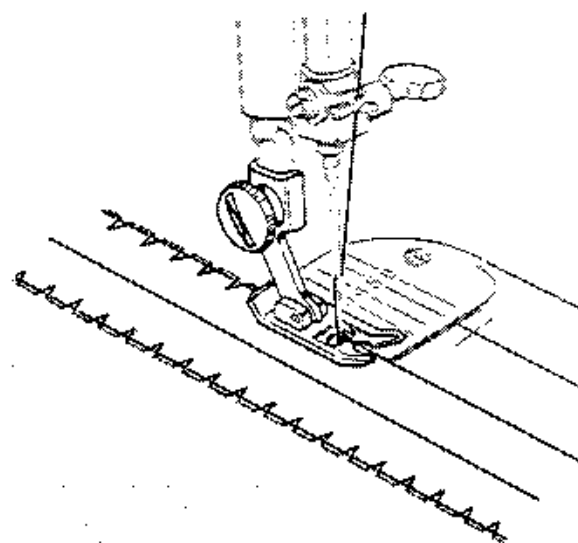
### Method #2 — Overedged Seam Finish

- Pattern: Plain Zig-Zag , Blindstitch , or Multi-Stitch Zig Zag 
- Stitch Width: 4 or 5
- Needle Position: 
- Stitch Control: 8 to 20 (1.3 to 3.8 mm) to suit fabric
- Zig-Zag Needle Plate
- Zig-Zag Foot

1. Adjust stitch length and stitch width to suit your fabric.
2. Trim seam edges evenly.
3. Place stitching over the trimmed edge of the seam allowance as illustrated.



Trimming Edges








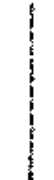



Overedged Finish

## sewing knit and stretch fabric

When you are sewing stretch fabrics, double-knit, tricot or jersey, choose one of the stretch patterns that build s-t-r-e-t-c-h into the seam. The table below will help you make the right selection.

*Remember to use a ball-point (yellow band) needle, Catalog 2045, in the machine, and increase presser foot pressure when you are attaching elastic or sewing a synthetic knit or stretch fabric.*

### STRETCH STITCH CHART

Stitch	Where to Use
 <p><b>Multi-Stitch Zig-Zag</b> Built-in Pattern</p>	<p>Attaching elastic and stretch lace — Lingerie and swimsuit construction — Girdle seams — Seam finishes — Casings and waistband finishes.</p>
 <p><b>Blindstitch</b> Built-in Pattern</p>	<p>Flexible blindstitch hemming — Overcast seam finishing — Shell hems in lingerie.</p>
 <p><b>Slant Overedge Stretch Stitch†</b> (See Stitch Pattern Chart on Page 21)</p>	<p>Sweater and swimsuit construction — Overcast seams in bulky knits and stretch terry cloth — Attaching elastic and stretch lace — Edge finishes for seams, hems, and facings.</p>
 <p><b>Plain Zig-Zag</b> Built-in Pattern</p>	<p>All-purpose stretch sewing — Lingerie seams — Attaching stay tapes — Seam finishing — Edge finishing — Attaching stretch lace.</p>
 <p><b>Ric-Rac Stitch†</b> (See Stitch Pattern Chart on Page 21)</p>	<p>Heavy-duty, all-purpose stretch sewing — Reversible topstitch applications.</p>
 <p><b>Straight Stretch†</b> Straight Stitch — Stitch Width  Stitch Control on </p>	<p>Plain seams that s-t-r-e-t-c-h (press-open or closed construction) — Crotch seaming — Sleeve and gusset insertion — Flexible top stitching — Swim and ski suit construction — Attaching patch pockets — Repairing and reinforcing seams.</p>
 <p><b>Overedge Stretch</b> Built-in Pattern</p>	<p>Overedge seams that stretch — Crotch seams — Waistband and seam finishes in shorts and slacks — Ski-suit, snow-suit, and swimsuit construction.</p>

†This stitch is designed for strength and permanence and cannot be readily ripped out without risk of fabric damage.





## GUIDING AND SUPPORTING FABRIC

Most fabrics of stretch or knit construction need only to be guided in front of the presser foot when you use one of the stretch stitches. Simply let the machine move the fabric to make the stitches that give *s-t-r-e-t-c-h* to the seam.

Some fabrics — nylon tricot and elasticized fabrics, for example — do require support while being stitched.

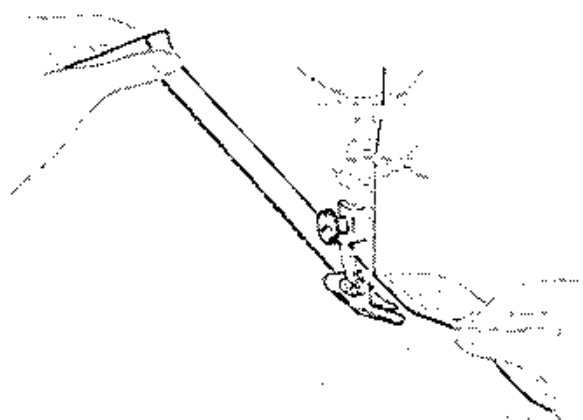
- For nylon tricot and similar synthetic knits, apply *gentle* tension by holding the seam in front and back of the presser foot as you sew.
- For elasticized fabric, stretch lace, and knits with an unusual amount of elasticity, apply *firm* tension in front and back of the presser foot to stretch the seam as the stitches are being placed.

## FINISHES FOR HEMS AND FACINGS

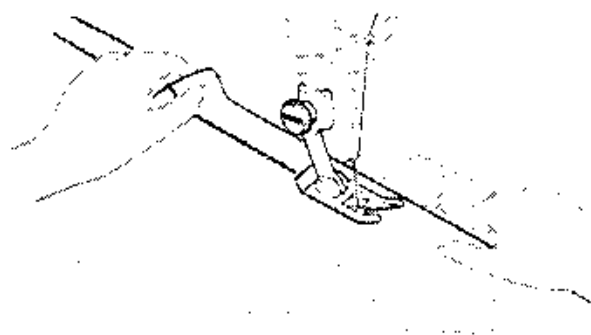
- Pattern: Multi-Stitch Zig-Zag  or Slant Overedge Stitch  (see page 21)
- Stitch Width: 5
- Needle Position: 
- Stitch Control: 8 to 20 (1.3 to 3.8 mm) for Multi-Stitch Zig-Zag or  for Slant Overedge Stitch
- Zig-Zag Needle Plate
- Zig-Zag Foot

Hem and facing edges in knit and stretch fabrics will be less apt to press through and mark when given a flat edge-finish. Edge finishing with the slant overedge stitch or multi-stitch zig-zag eliminates the bulk of turned-in edges and retains fabric flexibility.

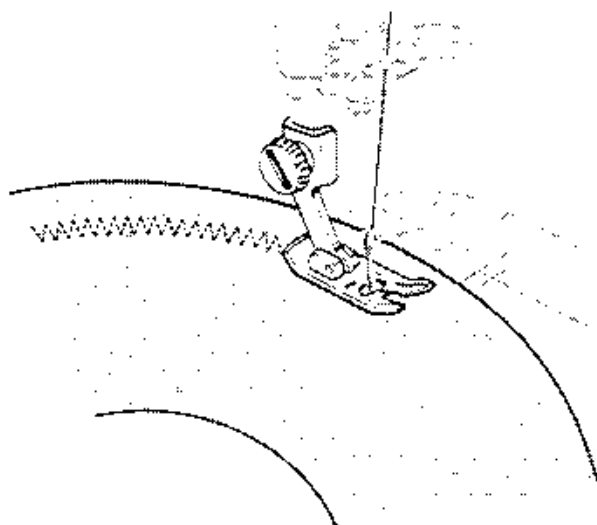
1. Make a test sample to check thread tension and stitch length if you are using the multi-stitch zig-zag.
2. Place stitching about 1/2 inch (1.3cm) from hem or facing edge.
3. Press after stitching and trim away excess fabric close to the stitching line.



Applying Gentle Tension







Applying Firm Tension



Applying Facing Finish

## PLAIN STRETCH SEAMS

- Pattern: Straight Stitch 
- Stitch Width: 
- Needle Position: 
- Stitch Control: 
- Zig-Zag Needle Plate
- Zig-Zag Foot

When you use the straight stretch stitch to seam knit, stretch, and elasticized fabric, *s-t-r-e-t-c-h* and strength are built in as the seam is being sewn. Because it is equally useful for closed or press-open seam construction and will not break thread under stress, the straight stretch stitch is also good for seams that receive an unusual amount of strain when the garment is worn. For example: crotch seaming, sleeve insertion, and construction seams in sportswear and swimsuits.



### Procedure

1. Make a test sample to determine the correct thread tension. Be sure to insert a yellow-band needle in the machine if you are stitching a synthetic knit fabric.
2. Stitch and guide fabric as you do for plain seams stitched with the regular straight stitch, letting the machine make the back-and-forth stitches that give *s-t-r-e-t-c-h* to the seam. If fabric has an unusual amount


of elasticity, it should be stitched under tension as instructed on page 45 (Guiding and Supporting Fabric).

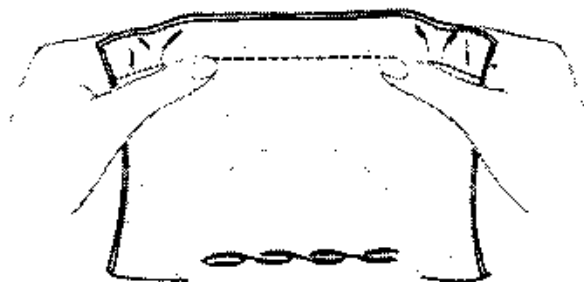
3. Press seam as when using the regular straight stitch.

## LINGERIE SEAMS

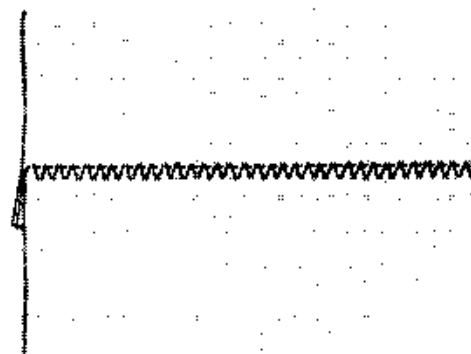
- Pattern: Plain Zig-Zag 
- Stitch Width: 1 to 2½
- Needle Position: 
- Stitch Control: 12 to 20 (1.3 to 2.5 mm)
- Zig-Zag Needle Plate
- Zig-Zag Foot

To make a lingerie seam durable and flexible, use the plain zig-zag stitch at a narrow width setting. This seam treatment is particularly suitable for bias seams. When seaming nylon tricot, insert a yellow-band needle in the machine before you begin to sew.

- Straight-stitch the seam (dials set on black  symbols) on wrong side of fabric.
- Press both seam allowances in the same direction.
- From the right side, topstitch with narrow zig-zag stitching, letting the needle alternately enter the seam line and the seam thickness.






Straight Stretch Stitching



Lingerie Seam



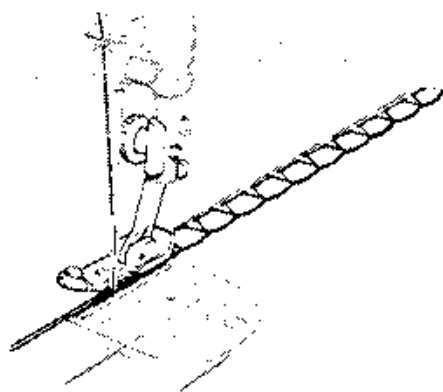
## OVEREDGED SEAMS

- Pattern: Overedge Stretch  (see page 21)
- Stitch Width: 5 only†
- Needle Position: 
- Stitch Control: 
- Speed: In **SLOW** range
- Zig-Zag Needle Plate
- Overedge Foot

Seams in knit and stretch fabrics can be joined and finished in one operation when you use the overedge stretch stitch.




### Procedure

1. Make a test sample before beginning garment construction to test machine settings. Be sure to duplicate the cut of the garment seam in your test, and use a ball-point (yellow band) needle if you are sewing a synthetic knit fabric.
2. Cut and fit the garment in the regular way, using a 5/8 inch (1.6cm) seam allowance. Baste seam line.
3. Trim seam edge evenly to a scant 1/4 inch (6mm) from seam-line basting.
4. Place trimmed seam under the overedge foot so that the straight stitches fall on the basted seam line and zig-zag stitches fall over the seam edge.



Overedged Seam

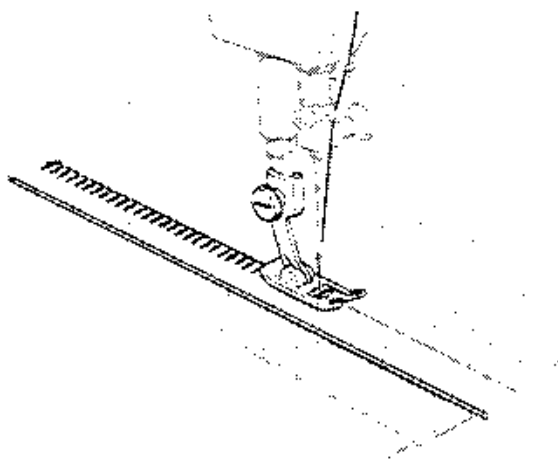
## MOCK OVEREDGING

- Pattern: Slant Overedge  (see page 21)
- Stitch Width: 5
- Needle Position: 
- Stitch Control: 
- Speed: In **SLOW** range
- Zig-Zag Needle Plate
- Zig-Zag Foot

When it is not practical to overedge a seam because of the construction of the fabric, a mock overedge finish can be applied. This finish is appropriate for bulky knits, fine tricot, and fabrics that curl or ravel.

### Procedure:

1. Make a test sample to check machine adjustments before beginning garment construction.
2. Cut and fit the garment, allowing for 5/8 inch (1.6cm) seam allowance. Baste seam line.
3. Place seam under the presser foot so that the straight stitches fall on the seam-line basting.
4. Press after stitching and trim away fabric to produce a narrow seam. When the seam supports the garment, omit the trimming step.



Mock Overedging

†If a narrower stitch width is desired, as for overedging fine fabrics, use the zig-zag foot in place of the overedge foot.

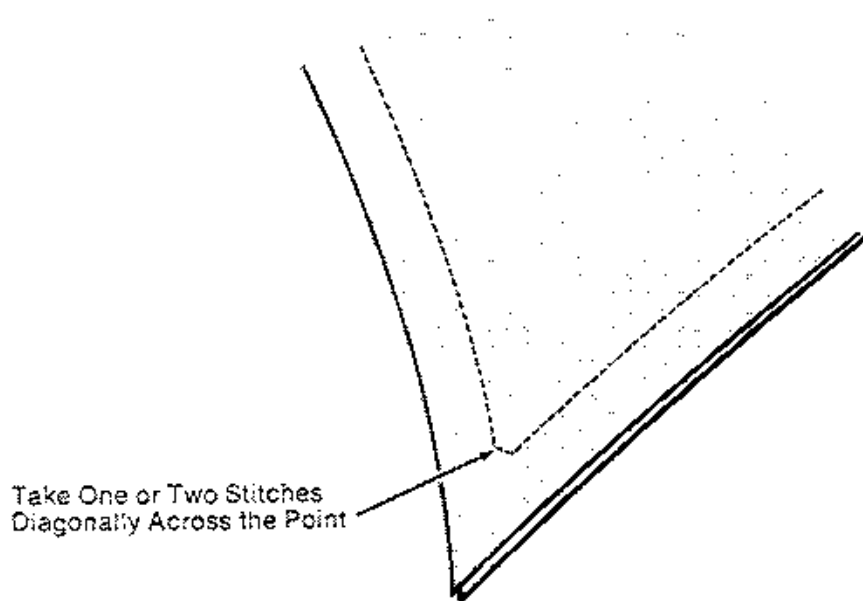
## *hints on sewing special fabric*

### **LEATHER-LOOK VINYL †**

- Use masking tape or zipper adhesive tape instead of pins or basting to hold seams, zippers and hems in place for stitching.
- Stitch with a long stitch (8 to 10 (3.2 to 3.8 mm) straight stitches per inch). A short stitch may cut the fabric.
- Sew with a steady, even pace and stitch accurately. Seams cannot be ripped out without leaving needle marks in the fabric.
- The shiny side of some vinyls tends to stick to metal surfaces. Use a strip of tissue paper between the fabric and metal machine surfaces to prevent this.
- Reinforce button and buttonhole areas with interfacing. Bound buttonholes are the best choice for vinyls with knit backing.
- Topstitching holds seams and garment edges smooth and flat, and adds a decorative note.
- For sharp points on collars and lapels, take one or two stitches diagonally across the point to allow enough space to enclose the seam edge smoothly.

### **CIRE (Wet-Look Taffeta and Tricot)**

- Do not use pins in any area of the garment that will be visible when completed.
- Use masking tape or zipper adhesive tape instead of pins or basting to hold seams, zippers and hems in place for stitching.
- Stitch accurately; seams cannot be ripped out because needle marks remain in the fabric.
- Sew seams under gentle tension by holding fabric slightly taut at front and back of needle.
- Stitch ciré taffeta with a fairly long stitch (8 to 10 (3.2 to 3.8 mm) straight stitches per inch) and use an enclosed edge finish for seams and hems.
- Stitch ciré knits with a medium-length stitch and use a catalog 2045 ball-point needle.
- Machine-worked buttonholes (as well as bound buttonholes) can be made in ciré fabric. Always use an interfacing and make sure the close zig-zag stitches do not cut the fabric.

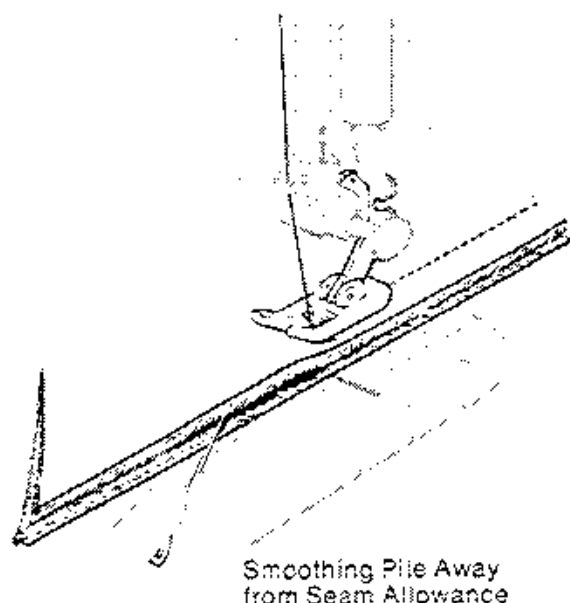


**Turning a Sharp Corner on Leather-Look Vinyl**

†The Even Feed Foot described on page 67 is designed to aid in sewing this fabric.

## DEEP-PILE FABRICS (Fake Fur) †

- Pin, rather than baste, seams. Place pins at short intervals at right angles to the seam line. Pins with colored heads are easy to see and remove.
- Sew in direction of nap.
- Stitch with a fairly long machine stitch (8 to 10 (3.2 to 3.8 mm) straight stitches per inch) and use polyester/cotton thread in a size 14 or 16 Catalog 2020 needle.
- As seam is stitched, smooth pile away from seam allowance with a darning needle or upholstery pin.
- After stitching seams with a 5/8-inch (1.6 cm) seam allowance, use small hand scissors to shear pile from entire seam allowance to reduce bulk.
- Stitch 1/4 inch (6mm) preshrunk tape into neckline and shoulder seams for stability and reinforcement, or stitch with the straight stretch stitch (stitch control set on ☺).
- Leather and leather-look fabrics complement fur fabrics; use them for bound buttonholes and easy button loops.
- Coat hems are less bulky if narrow and finished with a 3-inch (7.6 cm) fabric facing or grosgrain ribbon.
- Slash through the center fold of darts and finger-press open or stitch with a narrow zig-zag stitch and trim away excess fabric after stitching.



Stitching Deep-Pile  
Fabrics (Fake Fur)

## VELVET AND VELVETEEN †

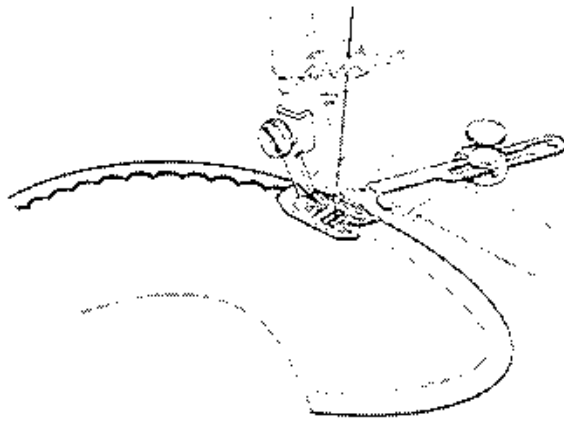
- Use a light pressure dial setting to prevent crushing pile.
- Mark and baste with silk thread.
- Use a catalog 2020, size 9 or 11 needle and a fine thread for seaming. "A" silk or nylon thread is recommended for sewing velvet and velveteen.
- Always stitch in the direction of the nap.
- Pin or hand-baste seams and sew under gentle tension by holding fabric slightly taut at front and back of needle (see page 18). Extra-long straight seams may be machine basted with a long, wide zig-zag stitch.
- To sew panne velvet, use a ball-point needle (yellow band) and a shorter-than-normal stitch length (12 to 15 (1.5 to 2.5 mm) straight stitches per inch).

†The Even Feed Foot described on page 67 is designed to aid in sewing this fabric.

## decorative touches

### TOPSTITCHING

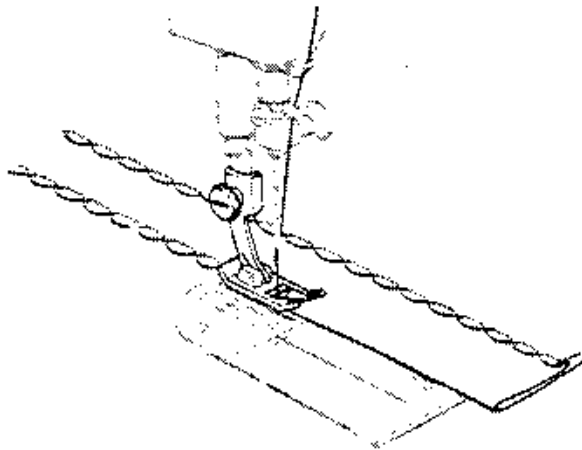
A practical, simple way to accent the lines of a dress or coat is to place one or more rows of stitching along collars, lapels, facing edges, pockets, seams, etc. For a tailored look, use lines of regular straight stitching; sew them with buttonhole twist for added emphasis. For decorative interest, use a stitch pattern. To add firmness to hems and seams in knit and stretch garments, topstitch with the crescent stitch, (stitch control at any numbered setting through **FINE**, and stitch width at 1-5). The seam and hem guide will help you place the rows of stitching accurately.



Topstitching with Crescent Stitch

### SHELL EDGING

- 
- Pattern: Blindstitch
  - Stitch Width: 3 to 5
  - Needle Position:
  - Stitch Control: 12 to 20 (1.3 to 2.5 mm)
  - Zig-Zag Needle Plate
  - Zig-Zag Foot
- 



Shell Edging with the Blindstitch

On soft, fine fabrics, shell edging makes an attractive finish for narrow hems and bias folds.

1. Make a test on a sample of your fabric to find the right thread tension, stitch length, and stitch width.
2. Place folded hem or bias fold (basted, if necessary) under presser foot with hem or fold toward the left.
3. Stitch slowly, guiding fabric so that the sideward stitches *do not* pierce the folded edge.

## MONOGRAMS AND MOTIFS

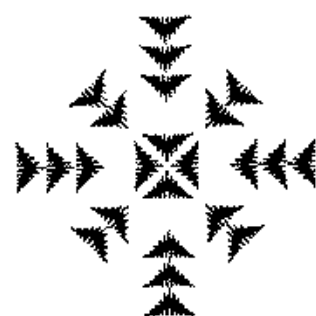
Many decorative stitch patterns can be used for monograms and motifs — to add a personal touch to a blouse collar, for example, or for initialing household linens. You can buy designs or create them yourself to suit the stitch pattern you wish to use.

Very simple straight-line monograms can be made with the plain Zig-Zag stitch, or you can create a motif by arranging individual pattern units to form a design. (Detailed information on zig-zag stitch patterns and dial settings begins on page 21.)

When you use a decorative stitch pattern to form a motif, you will want to start at the beginning of the pyramid, ball, or whatever pattern you have selected.

### Finding Beginning of Pattern Unit

1. On a scrap of material, stitch until you come to the end of a complete pattern unit. Now you are ready to start stitching at the beginning of the next unit.
2. Raise presser foot and remove scrap.
3. Position motif under needle, lower the presser foot, and stitch.



Pyramid Pattern Used in Motif



Monogram in Plain Zig-Zag and Ball Stitch



Line Monogram in Plain Zig-Zag Stitch



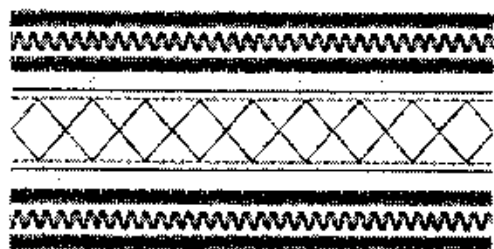
Initial in Plain Zig-Zag and Ball Stitch

## BORDER DESIGNS

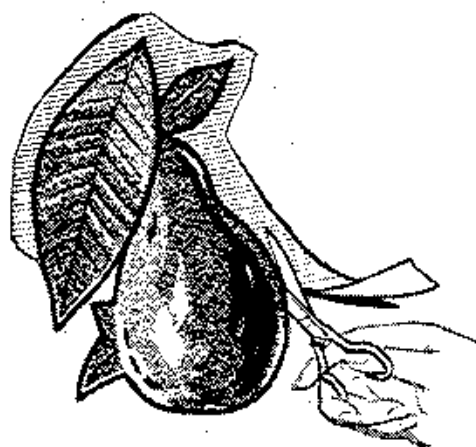
Border designs that add a decorative touch to wearing apparel and household items can be created by combining different types of straight stitching and zig-zag stitching. Simple or elaborate, delicate or bold, they can be varied to suit the application. Use them as you would a braid or to simulate horizontal, vertical or bias stripes on plain fabric.

### Procedure

Mark or crease fabric for the center line of first row of stitching. If spacing between rows is not greater than 1/2 inch (1.3cm), gauge additional rows with the presser foot. If spacing is wider,



Border Design



Method #1—Trimming after Stitching

mark for each line of stitching. Use a backing of crisp lawn, organdy or organza and be sure to make a test sample on a swatch of your fabric to check stitch settings and thread tension.

## APPLIQUÉ

Appliqué adds beauty and interest to clothing and household linens. You can create your own design, trace a simple outline from a coloring book, or use a motif cut from a printed fabric. Fabrics of like or different texture combine equally well.

Use a closely spaced, fairly narrow zig-zag stitch. Although you may vary stitch width to accommodate fabric weave or texture, never allow the stitch to be too wide.

When appliquéing, make a test sample to help you decide which of the following methods is more appropriate for your fabric and design.

### Preparation

- Baste appliqué design to fabric.
- Outline design with straight stitching (use a short stitch).
- Remove basting and press.
- Attach special purpose foot and zig-zag needle plate.

### Method #1

1. Set stitch width dial. Adjust stitch length in the **FINE** area of the stitch control.
2. Outline the entire design with applique stitching.
3. Cut away the fabric on the outer edges of the stitching with embroidery scissors.

### Method #2

1. Trim outside edges close to straight stitch outline of design.
2. Set stitch width dial. Adjust stitch length in the **FINE** area of the stitch control.
3. Overedge the design with satin stitching. This step will produce a smooth, lustrous finish that requires no additional trimming.

## SMOCKING

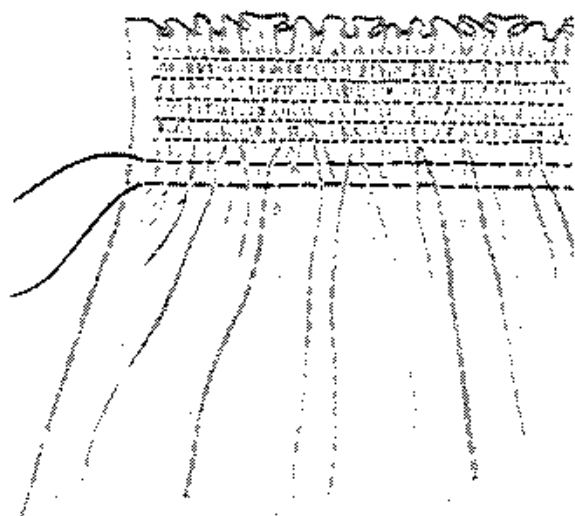
Smocking is a youthful decorative detail that is particularly charming when used for a yoke, insert or band on baby clothes, little girls' dresses, or lingerie.

When worked by hand, smocking is a time-consuming process. However, the heavy-stitched look, typical of hand work, can be stitched quickly and easily with your machine when you use *Flexi-Stitch* patterns.

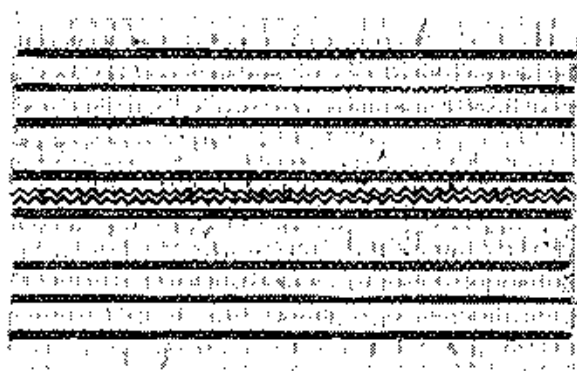
### Procedure:

1. Space rows of straight stitching, 1/4 inch (6 mm) apart, on the crosswise fabric grain.
2. Pull up evenly for the amount of fullness desired.
3. Baste to underlay.
4. Stitch over and between rows of shirring with decorative stitching. Create your own design or adapt the one illustrated. Use thread that contrasts with or matches your fabric, depending on the effect desired.

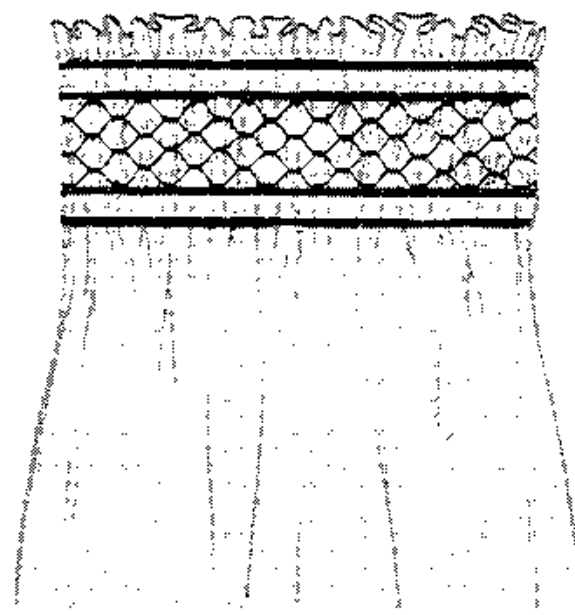
A test sample is always advisable to check stitch settings. Be sure to use the same fabric and degree of fullness you plan for your garment.



Gathering Stitches for Smocked Band

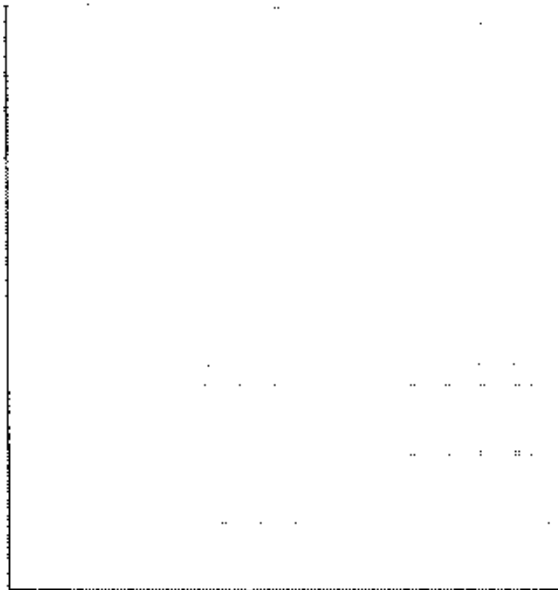


Smocked Band Accented with Cording

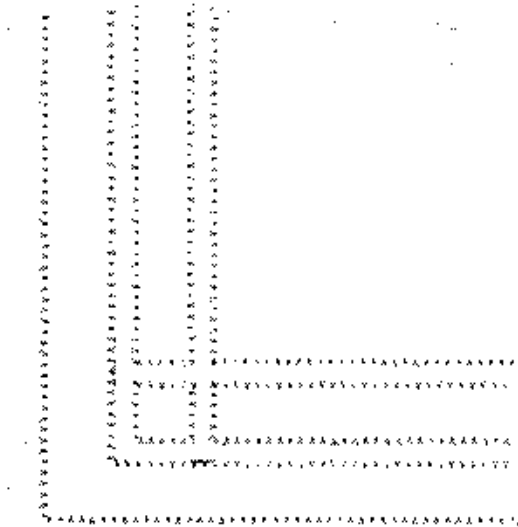


Smocked Band Completed

## Drawn-Thread Work



Drawn-Thread Channels



Drawn-Work Detail with Fringed Edge

## DRAWN-THREAD WORK

- Pattern: Blindstitch
- Stitch Width: 2 to 3
- Needle Position:
- Stitch Control: 15 to 20 (1.3 to 1.5 mm)
- Zig-Zag Needle Plate
- Zig-Zag Foot or Special Purpose Foot

Drawn-thread work is a simple decorative treatment that can be used to add interest to table linens, dresses, and blouses. It is accomplished by drawing threads from plain-weave fabrics to form open-work bands and accenting the band edges with blindstitching.

Choose a linen or linen-like fabric from which threads can be easily withdrawn.

### Procedure:

1. Draw one (or more) threads from the fabric to mark edges of open-work bands.
2. Stitch, in drawn-thread channels, placing the fabric so that the straight stitches of the blindstitch pattern are made *in* the thread channel and the sideward stitches (or points) in the solid body of the fabric. If the fabric is soft, stitch through an underlay of tissue paper.
3. After stitching is completed, draw remaining threads from the fabric to form the open work between rows of stitching. Whenever stitching crosses threads that are to be drawn, cut threads close to stitching before drawing them out.



To form a fringe, draw a thread to mark fringe depth. Stitch in drawn-thread channel (with fabric edge to the right). Ravel threads between stitching and fabric edge.



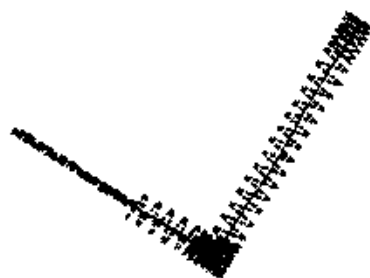
## keeping up appearances

Many zig-zag stitch patterns are just as useful for mending as they are for creative sewing. The multi-stitch zig-zag (a built-in pattern) forms a firm, flexible bond that is ideal for repairing tears.

### MENDING A TEAR

- Pattern: Multi-Stitch Zig-Zag 
- Needle Position: 
- Stitch Width: 2 to 5
- Stitch Control: About 20 (1.3 mm)
- Zig-Zag Needle Plate
- Zig-Zag Foot



1. Trim ragged edges.
2. Place underlay on the wrong side of tear for reinforcement. (It is best not to baste or pin the underlay, since you will be bringing the edges together in the next step.)
3. Stitch on the right side, bringing the edges of the tear together. Shorten stitch length at ends and corners to give extra strength.
4. Trim underlay.



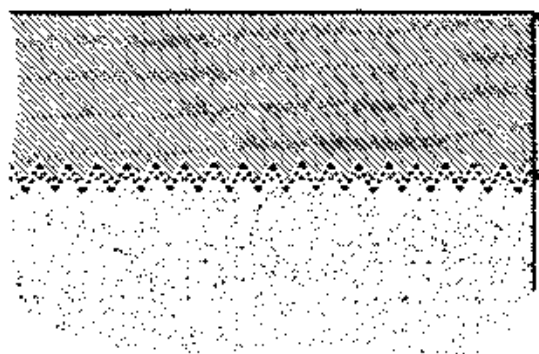
Tear Mended with Multi-Stitch Zig-Zag

### BLANKET BINDING

Often you can make an old blanket look almost new by replacing the binding. A zig-zag stitch pattern such as the plain zig-zag or multi-stitch zig-zag or the semaphore *Flexi-Stitch* pattern may be used.

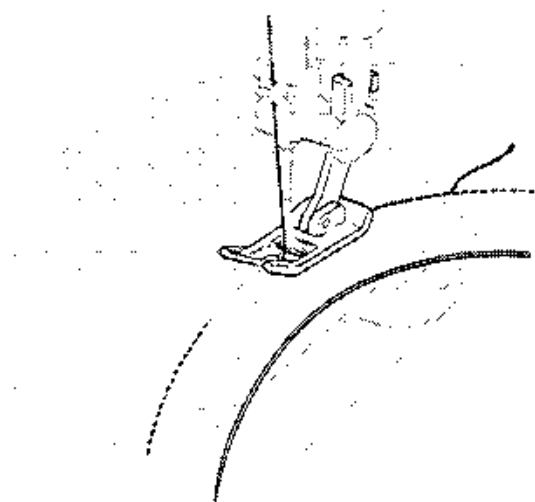
- Pattern: Desired zig-zag stitch (see above)
- Stitch Width: 5
- Needle Position: 
- Stitch Control:  for *Flexi-Stitch* pattern or 15 to 20 (1.3 to 1.5 mm)
- Pressure: **NORM** or less
- Zig-Zag Needle Plate
- Zig-Zag Foot or Even Feed Foot†

1. Make a sample to determine correct dial settings. Reduce pressure on fabric and increase stitch length, if necessary, so that blanket feeds freely.
2. Remove worn binding and baste new binding securely in place.
3. Stitch, and remove basting.

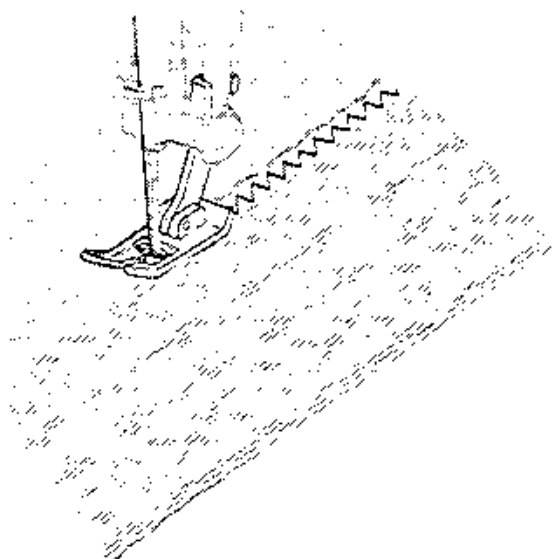


Blanket Binding

†For best results in blanket binding, the Even Feed Foot is recommended (available for purchase, see page 67).






**Seam Repair**





**Stretch Garment Repair**

## REPAIRING SEAMS

Breaks in press-open garment seams can be repaired quickly and easily when you use the straight stretch stitch (stitch pattern , stitch width , and stitch control on  setting). This reinforced stitch is both strong and flexible. It is ideal for knit and stretch fabrics and particularly useful for repairing or strengthening curved seams or seams that will receive strain when worn.

1. Make a test sample to check dial settings.
2. Remove loose thread along the break and press the seam edges together.
3. Re-stitch along original seam line, guiding seam under presser foot without stretching fabric, letting the machine move the fabric to make the back-and-forth stitches that give s-t-r-e-t-c-h to the seam. Overlap stitching one inch (2.5 cm) at each end. Press seam open.

## REPAIRING STRETCH GARMENTS

- Pattern: Plain Zig-Zag 
- Needle Position: 
- Stitch Width: 3 to 5
- Stitch Control: 20 (1.3 mm) or to suit fabric
- Zig-Zag Needle Plate
- Zig-Zag Foot

Seams and hems in stretch and elasticized garments retain their elasticity when stitched with the plain zig-zag stitch. This stitch is particularly effective when used in topstitch applications (as shown) or to overedge. Make a test sample to check dial settings.



### Bar Tacks

Bar tacks, to reinforce points of strain, are made with the plain zig-zag stitch at satin stitch length. Use them at pocket corners, to attach garters, secure shoulder straps, belt loops and zipper openings.

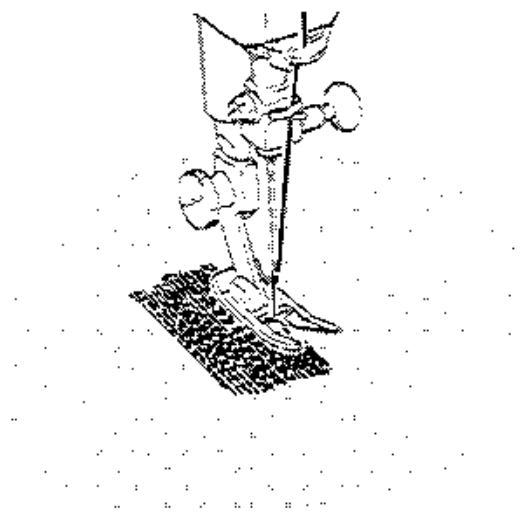
## DARNING

Worn or torn spots on children's clothes, knits, and household linens can be darned effortlessly and quickly with little practice. You may choose to darn either with or without an embroidery hoop. When greater control is needed, an embroidery hoop is usually best.

### Without Embroidery Hoop



- Pattern: Straight Stitch
- Needle Position: 
- Stitch Width: 
- Stitch Control: 10 to 15 (1.5 to 3.2 mm)
- Pressure: **DARN**
- Zig-Zag Needle Plate
- Zig-Zag Foot

1. If area to be darned is open, baste an underlay in place.
2. Place area to be darned under presser foot; lower presser foot and start stitching, alternately drawing fabric toward you and pulling it gently away from you.
3. Continue this forward and backward motion as you fill the area with parallel lines of stitching. For additional strength, cover area with crosswise lines of stitching.

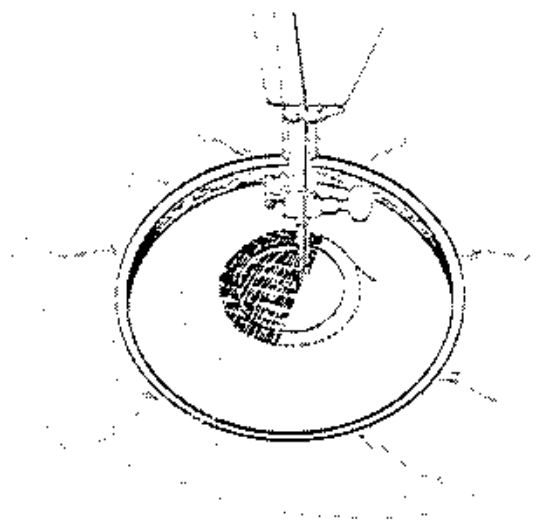


Darning without Embroidery Hoop

### With Embroidery Hoop

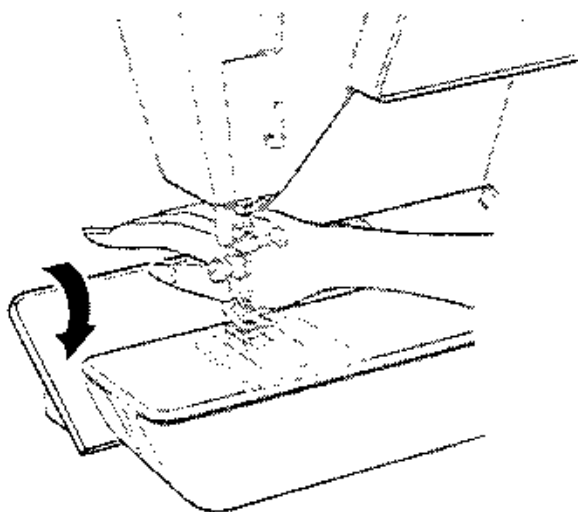
- Pattern: Straight Stitch
- Needle Position: 
- Stitch Width: 
- Stitch Control: In **FINE** area
- Feed Cover Needle Plate
- No presser foot

1. Trim ragged edges from area to be darned.
2. Center worn section in embroidery hoop.
3. Position work under needle over feed cover plate and *lower presser bar to engage tension.*
4. Hold needle thread loosely with left hand, turn hand wheel over and draw bobbin thread up through fabric. Hold both thread ends and lower needle into fabric.
5. Outline area to be darned with running stitches for reinforcement.
6. Stitch across opening, moving hoop under needle at a slight angle from lower left to upper right. Keep lines of stitching closely spaced and even in length.
7. When opening is filled, cover area with crosswise lines of stitching.



Darning with Embroidery Hoop

## 10. FREE-ARM SEWING

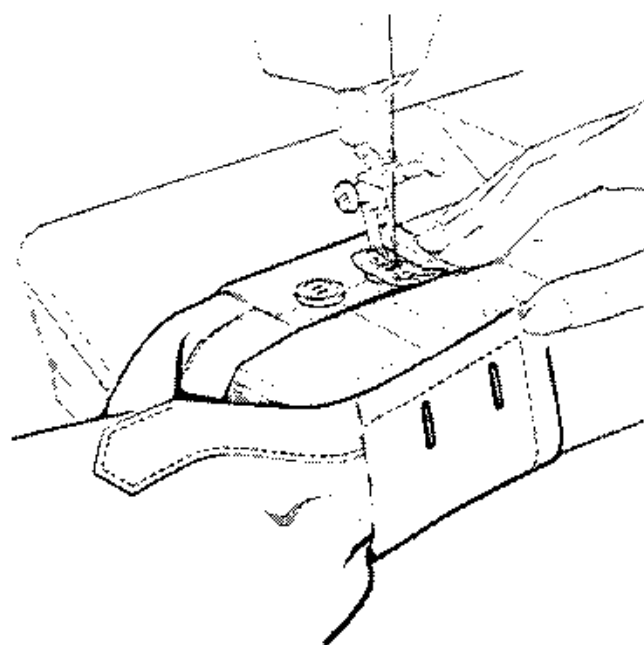
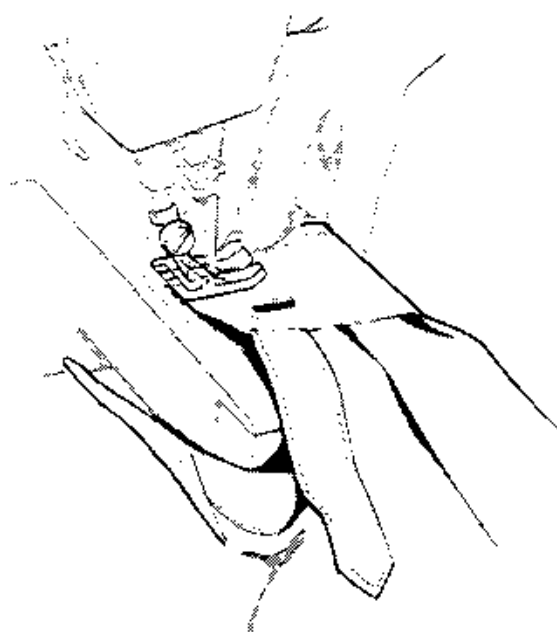


Press Down on Corner of Hinged Plate

Fabric handling, when sewing tubular and hard to reach garment areas, is simplified when you convert your Model 776 to free-arm sewing. A few of the sewing jobs for which you will find the free arm particularly useful are shown below and on pages 59 through 61. You will discover many more for yourself.

To convert your machine for free-arm sewing, simply press down on the corner of the hinged plate as illustrated.

To convert your machine back to flat-surface sewing, raise the hinged plate of the machine until it snaps into flat-surface position.

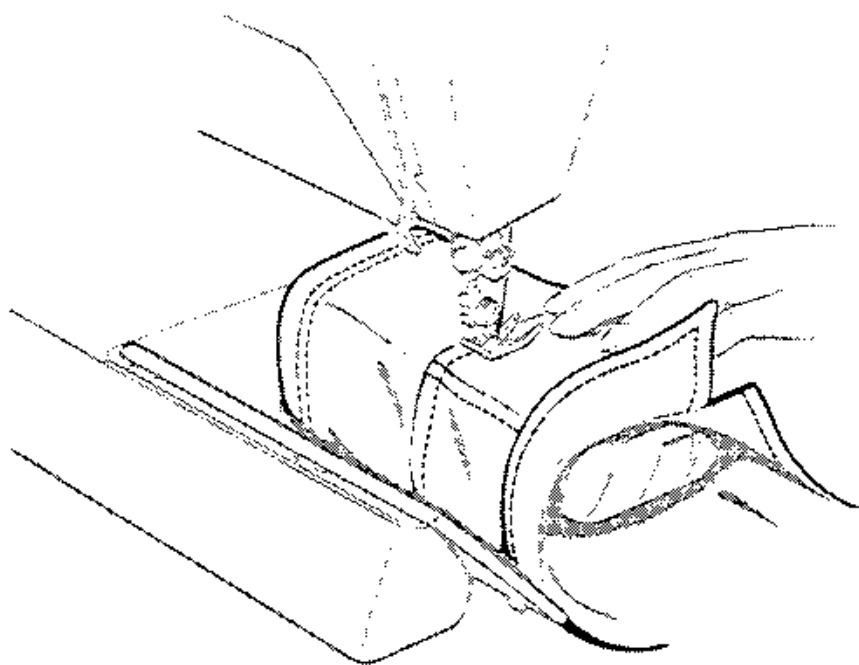


### BUTTONHOLES AND BUTTONS

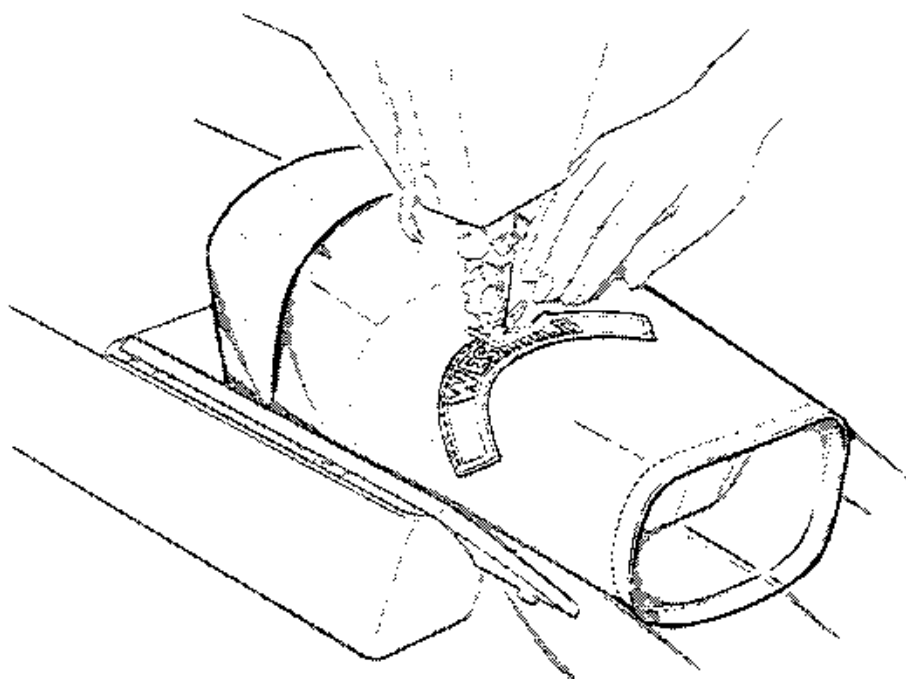
Stitching buttonholes on a cuff or neckband is no longer a task when the free-arm surface is used. Cuffs slip around the sewing surface without being pulled out of shape, so you can see and handle the stitching area easily.

For buttonholing, follow the instructions that start on page 32.

## SLEEVES

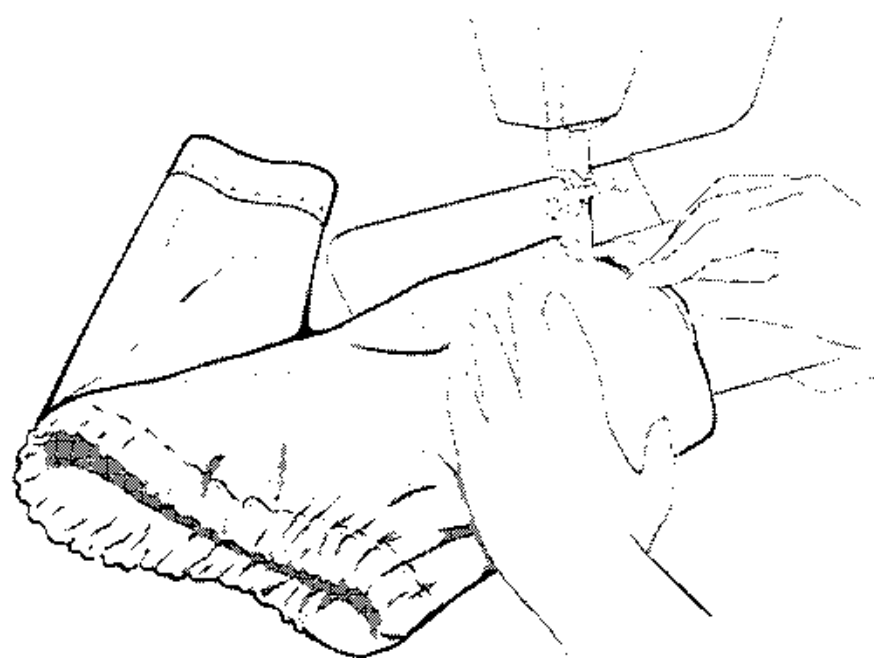
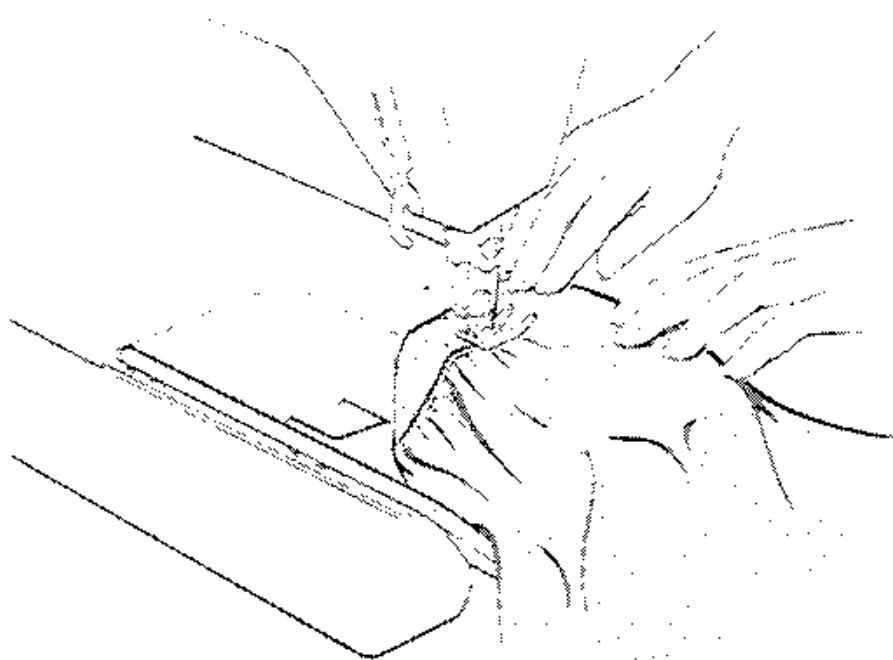


Free-arm sewing takes the difficulty out of topstitching a sleeve. The armhole rotates smoothly under the needle so that you can place stitching accurately. The extra control afforded by the free-arm is especially helpful for topstitching flat-fell seams.



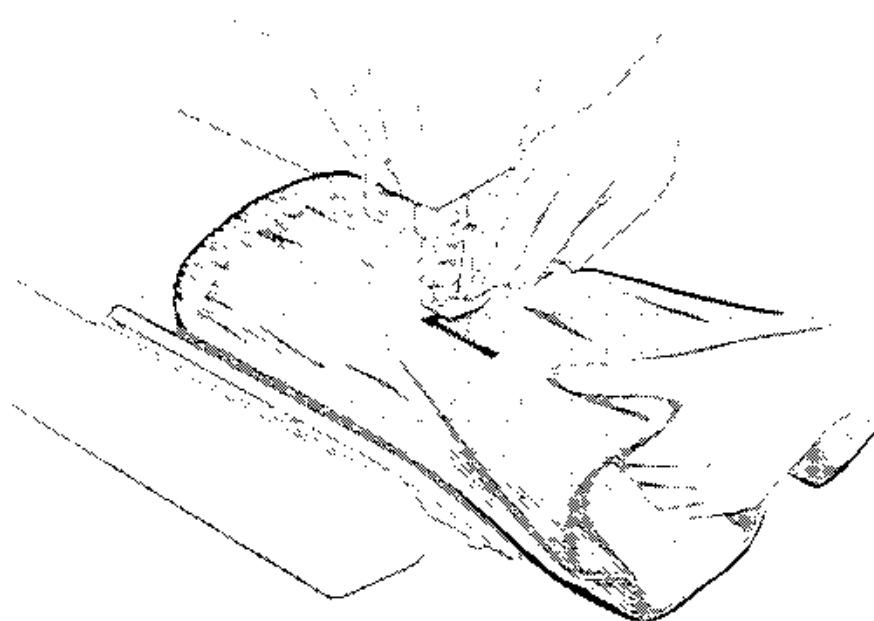
Badges, emblems and insignia of all sizes and shapes can be quickly attached to shirts and uniforms by slipping sleeve or hard-to-reach area over the sewing surface.

## EDGE FINISHES



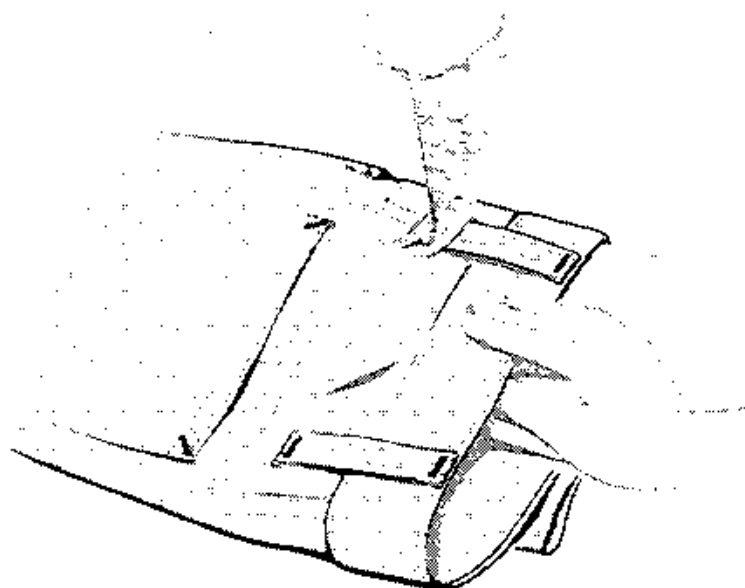
The free-arm surface makes it easy to finish sleeves, pant legs and waistlines. These circular garment areas rotate smoothly around the sewing surface, giving you full visibility and control as you blindstitch hems, attach elastic, or topstitch cuffs.

## DARNING AND MENDING



Knees, elbows and other areas of wear in children's clothes, sweaters, jackets and shorts become readily accessible for darning, mending or patching when the free-arm surface is used. The sewing surface fits inside the enclosed sleeve and leg areas, making it unnecessary to open seams or roll the garment. For darning, follow the instructions on page 57 and refer to page 55 for mending information.

## BAR TACKS



Bar tacks reinforce areas of strain and can be applied to ready-made garments, as well as to those sewn at home. Use the free-arm surface to avoid fabric bulk around the needle when you apply this detail to pockets, plackets, and waistlines.

# 11. CARING FOR YOUR SEWING MACHINE

## *cleaning the machine*

Your machine will serve you perfectly for many years if you take a few moments of your time to keep it clean. How often you will need to clean the machine will depend on how often you use it.

**CAUTION:** Before cleaning your machine, disconnect power-line plug from electrical supply.

Remove lint or fluff from exposed parts. With a soft cloth, clean:

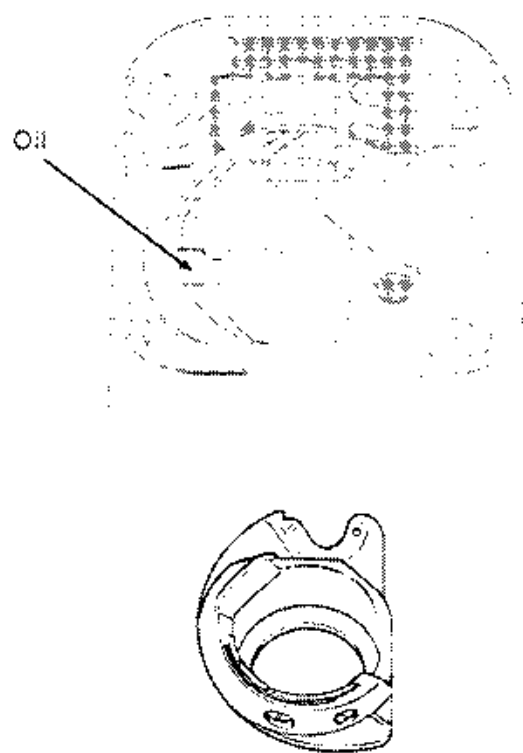
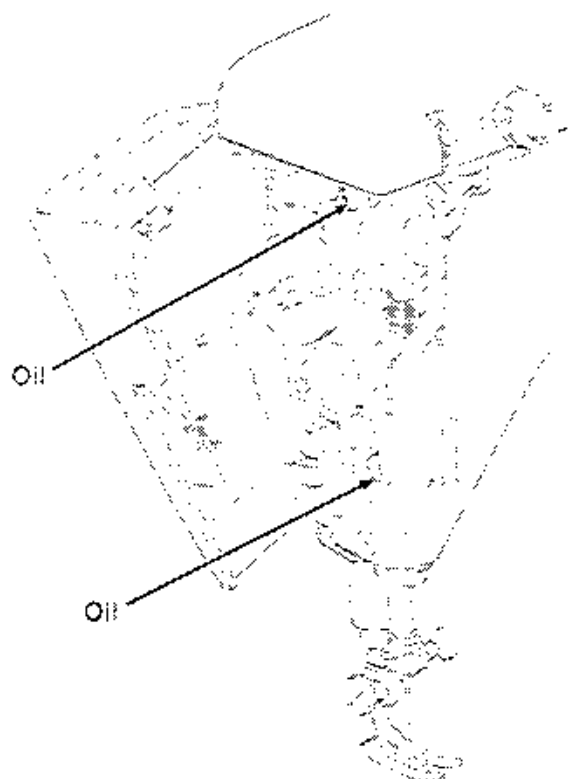
- Tension discs, presser bar, and needle bar
- Take-up lever and thread guides
- Bobbin case (If there is a lot of lint in the area, remove bobbin case for cleaning. See page 64 for instructions).
- Machine surface (If necessary, dampen the cloth and use a mild soap.)

Open the face plate and clean area behind it with a brush.

Remove needle plate as instructed on page 6 and, using a brush, clean the rotating hook area under the needle plate and slide plate.

After cleaning, apply only SINGER® oil at points indicated below. SINGER oil is specially prepared and does not contain harmful deposits that can interfere with the smooth action of precision parts.

Approximately once every year, remove top and bottom covers as instructed on page 63, and clean and lubricate all moving or rotating machine connections to ensure freedom of movement and to protect metal parts from excessive wear. To determine which connections are moving or rotating, turn hand wheel slowly (by hand) while covers are removed.





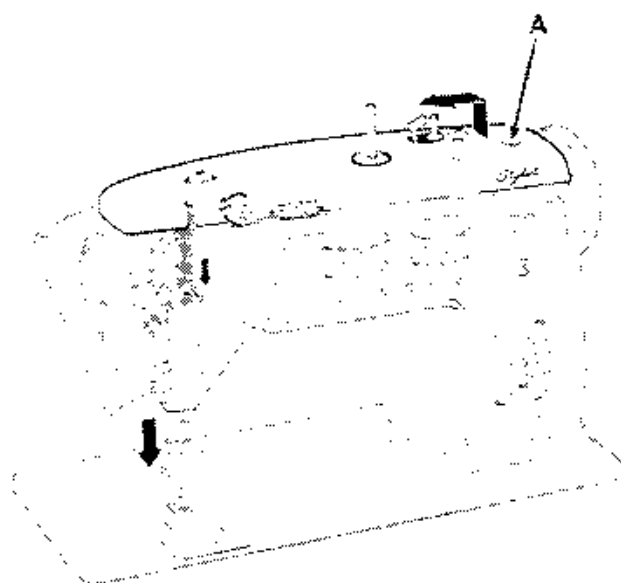
## removing covers, bobbin case, and bulb

**CAUTION:** Before removing covers, bobbin case, and light bulb, disconnect power-line plug from your electrical supply.

### REMOVING AND REPLACING TOP COVER

Move take-up lever to a low point and lower the presser-foot.

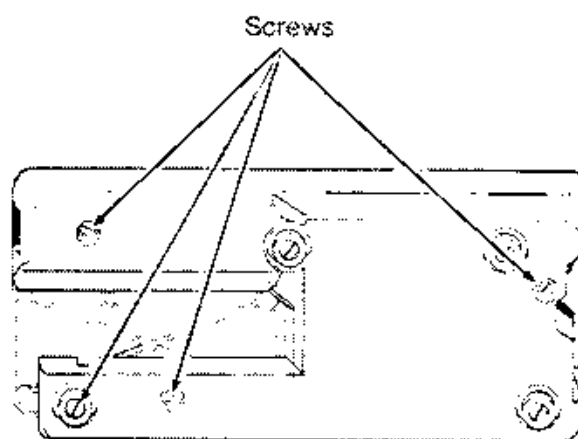
1. Loosen and remove screw A, lift up right end of top cover, and slide cover toward left and off machine.
2. Replace cover by positioning it on top of arm with a *slight* overhang on left side.
3. Engage bobbin winder latch (see page 10) and slide cover to the right as far as it will go. Replace and securely tighten screw A.
4. Release bobbin winder latch.



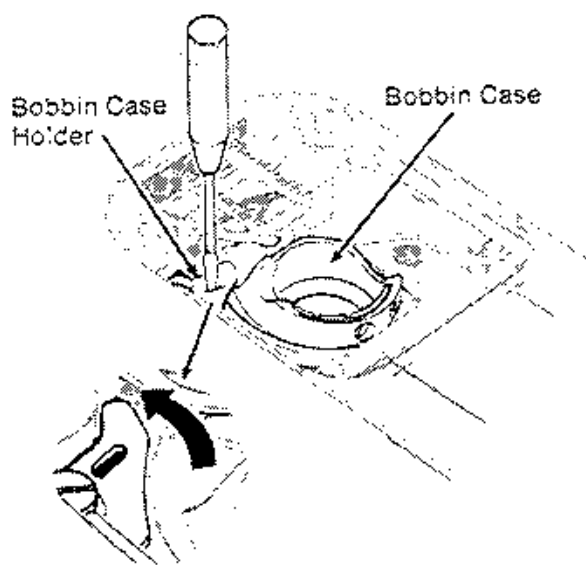
Removing and Replacing Top Cover

### REMOVING AND REPLACING BOTTOM COVER

1. Disconnect machine plug from electrical receptacle at right end of machine.
2. Tilt machine back and remove four screws indicated in illustration. A rubber cushion will be removed with one of the screws. Pull cover toward you to remove.
3. Replace bottom cover by aligning screw holes in cover with screw holes in machine. Push cover against machine to snap it into place. Replace and tighten four screws.



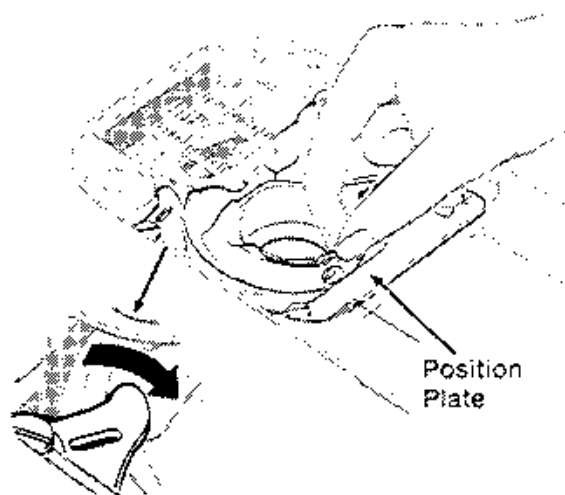
Removing and Replacing Bottom Cover



**Removing the Bobbin Case**

### **REMOVING THE BOBBIN CASE**

1. Turn hand wheel toward you to raise take-up lever to its highest position.
2. Open slide plate, remove needle plate (see page 6 for instructions), and remove bobbin.
3. Turn bobbin case holder to back as far as it will go.
4. Lift out bobbin case.



**Replacing the Bobbin Case**

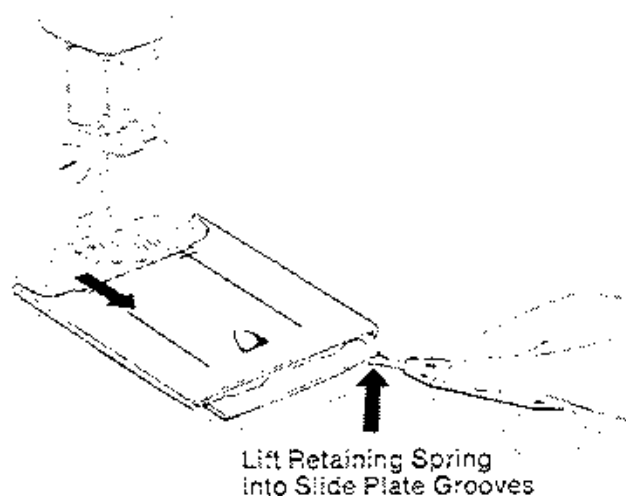
### **REPLACING THE BOBBIN CASE**

1. Turn hand wheel to raise take-up lever to its highest position.
2. Insert bobbin case with a back-and-forth motion so that the front of the case is under the position plate as illustrated.
3. Turn holder all the way forward to lock bobbin case in position.
4. Replace bobbin and needle plate and close slide plate.

## REPLACING THE SLIDE PLATE

You will not have any occasion to remove the slide plate. However, if it should accidentally become disengaged from the machine, it is easily replaced.

- Raise the presser foot and make sure needle is in its highest position.
- Place slide plate in slide way with the front edge close to, but not covering, the retaining spring (as shown).
- With a small screwdriver, lift each end of the spring into each of the side grooves on the underside of the plate.
- Draw the plate gently toward you and fully engage the spring.
- Close slide plate.



Replacing the Slide Plate

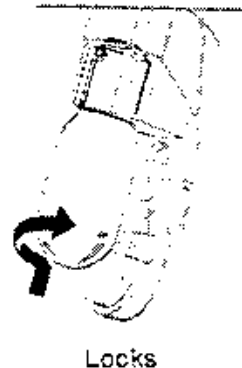
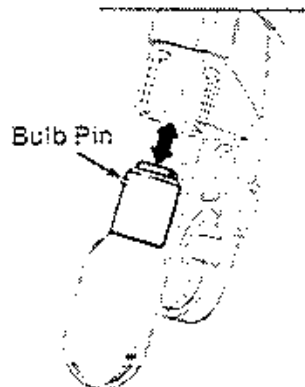
## CHANGING THE LIGHT BULB

**Caution:** Before changing light bulb make sure you have disconnected power-line plug from electrical outlet.

**Removing Bulb.** With thumb of right hand, push in and down on tab of light lens and lower the light bracket. *Do not attempt to unscrew the bulb.* Press it up into the

socket and at the same time turn bulb over in direction shown to unlock the bulb pin.

**Replacing Bulb.** Press new bulb into socket, with bulb pin entering slot of socket, and turn it over in direction shown to lock bulb in position. Push entire assembly up until it snaps in position.



## *performance checklist*

### REMEMBER TO

- Make sure electrical plug is properly connected.
- Turn on power and light switch.
- Turn hand wheel toward you to raise needle above fabric or needle plate before making adjustments to stitch width or needle position.
- Use a ball-point (yellow band) needle to sew nylon tricot and synthetic double-knits.
- Use high-lift presser bar setting to place heavy fabric under presser foot.
- Start and finish sewing with take-up lever in its highest position.
- Adjust stitch length, pressure, and thread tension to suit your fabric.
- Test stitch on a fabric sample before starting a sewing job.
- Replace bent or burred needles.
- Lower presser foot before setting pressure dial.
- Tighten hand-wheel knob after winding a bobbin.
- Use the zig-zag needle plate and zig-zag foot for all zig-zag stitching, and for straight stitching in **L** (left) or **R** (right) needle positions.
- Remove feed cover needle plate after button sewing and after free-motion darning or embroidery.
- Sew at a moderate speed (**SLOW** speed setting) when using the straight stretch stitch or *Flexi-Stitch* patterns.

### IF THREAD BREAKS

- Is the machine properly threaded?
- Is the bobbin case properly threaded?
- Is thread unwinding freely from spool?
- Is the needle securely tightened in the needle clamp?
- Is the needle straight?
- Is the thread suitable for the size of the needle and free of knots?
- Is the spool-pin felt being used under the thread spool?
- Is the needle-thread tension too tight?
- Is the bobbin-thread tension too tight?
- Is the bobbin-case area free of lint and loose thread ends?
- Are the thread guides and tension discs also free of lint?

### IF FABRIC FAILS TO FEED

- Is the presser foot down?
- Is pressure dial adjusted properly for the weight and texture of your fabric?
- Is the stitch control dial properly set?
- Are you using the feed cover needle plate instead of the regular plate?

If you have any questions, please write to:  
Department of Sewing Education  
The Singer Company  
321 First Street, Elizabeth, N.J. 07207

## 12. SEWING AIDS

### *special accessories for special jobs*

Sewing Aids have been designed to increase the versatility of your sewing machine and enable you to give your sewing that extra professional touch. The ones described below are just a few of the complete selection available at your local Singer Sewing Center.

#### **Professional\* Buttonholer** No. 102991

The Professional Buttonholer sews six kinds of buttonholes, plus eyelets in a wide variety of fabrics. You choose the style and length and make perfect buttonholes every time.

#### **Deluxe Monogrammer** No. 171276

With the deluxe monogrammer you will have the pleasure of stitching initials 1 1/2 inches (3.8cm) high to create monograms that are ideal for adding a personal touch to table linens, towels, and wearing apparel. An attractive flower motif can also be made.

#### **Even Feed Foot** No. 506415

The Even Feed Foot is effective in keeping fabric piles even, and in matching plaids, stripes, and patterns. It is an invaluable aid for sewing hard-to-feed vinyl and fake fur, pile, stretch, bonded and laminated fabrics. Ideal for topstitching.

#### **Hemmer Foot** No. 171145

Narrow hems can be turned and stitched in a single operation if you use the hemmer foot. Thus, you can eliminate basting or pinning whenever you are making ruffle edges, lingerie finishes, and the like.

#### **Button Sewing Foot** No. 161168

This short, open foot holds any two-hole or four-hole button securely for stitching. The groove in the foot can be used to hold a needle, over which a thread shank can be formed.

#### **Ruffler** No. 161561

This accessory offers a simple, effective way to make gathered and pleated ruffles. The ruffler is used for straight stitching only.

#### **Binder Foot** No. 81200

The binder foot is used to apply ready-made bias tape or unfolded bias binding to an unfinished edge. It can also be useful for binding seam edges that might ravel.

#### **Quilting Foot** No. 160691

The quilting foot is especially well adapted to stitching lightly padded fabrics. It is excellent for the placement of straight stitching in block, floral, or scroll designs. This short, open foot permits following curved lines with ease and accuracy.

#### **Darning and Embroidery Foot** No. 161875

This foot is recommended for all types of free-motion work. It is ideal for embroidery, monogramming, and decorative designs because the transparent toe fully reveals the line of the design to be followed.

#### **Gathering Foot** No. 161169

The gathering foot can be used for evenly spaced shirring as well as for a single line of gathering. This foot is used for straight stitching only.

#### **Tucker** No. 161226

Tucks up to one inch can be stitched and marked in one operation by using the tucker. Two adjustable scales are provided to gauge tuck width and spacing.

#### **Finger Guard** No. 161681

The finger guard provides extra safety by protecting fingers from the needle. It is ideal for the student, beginner, or the blind person.

# INDEX

Accessories .....	4	Preliminary Steps .....	7
Adjusting Dials .....	15, 22, 27, 29	Presser Feet .....	5, 14
Applique .....	52	Buttonhole Foot .....	5, 28
Bar Tacks .....	36, 61	Changing Presser Feet .....	5
Basting .....	29	Overedge Foot .....	5, 47
Blanket Binding .....	55	Special Purpose Foot .....	5, 24, 52
Blindstitch Hems .....	42	Straight Stitch Foot .....	5
Blindstitch Hem Guide .....	4, 42	Zig-Zag Foot .....	5
Bobbin .....	4, 9	Zipper Foot .....	5, 39
Raising Bobbin Thread .....	13	Presser Foot Lifter .....	17
Winding .....	9, 10	Pressure Adjustment .....	15
Bobbin Case .....	11, 52	Principal Parts and What They Do .....	3
Removing and Replacing .....	64	Repairing Seams .....	56
Threading .....	11	Repairing Stretch Garments .....	56
Border Designs .....	52	Reverse Stitching .....	15
Buttonholes .....	32	Sating Stitching .....	24
Buttons .....	31	Seams .....	17
Caring for Your Machine .....	62	Corded .....	40
Choosing Needle and Thread .....	8	Curved .....	20
Darning .....	57, 61	In Fabrics That Ravel .....	43
Darts .....	41	Lingerie .....	46
Drawn-Thread Work .....	54	Overedged .....	47
Fabric, Thread and Needle Table .....	8	Plain Stretch .....	46
Finishes for Hems and Facings .....	45, 60	Reinforcing End of Seam .....	20
Free-Arm Sewing .....	58	Straight .....	19
Free-Motion Stitching .....	38	Sewing Knit and Stretch Fabrics .....	44, 67
Guiding and Supporting Fabric .....	18, 45	Slide Plate .....	65
Hints on Sewing Special Fabric .....	48, 49	Shell Edging .....	50
Cire (Wet-Look Taffeta and Tricot) .....	48	Smocking .....	53
Deep-Pile Fabrics (Fake Fur) .....	49	Stitch Control Dial .....	14, 15, 22
Leather-Look Vinyl .....	48	Stitch Pattern Dial .....	22
Velvet and Velveteen .....	49	Stitch Width Dial .....	14, 23
Light Bulb .....	62	Starting to Sew .....	14
Mending a Tear .....	55, 61	Straight Stitching .....	14
Monograms and Motifs .....	51	Choosing Accessories .....	14
Needle .....	4, 8	Curved Seams .....	20
Position .....	14, 22	Starting a Seam .....	18
Replacement .....	4	Straight Seams .....	19
Threading .....	12	Turning Square Corners .....	19
Needle Plates .....	6	Tension Adjustment .....	16, 23
Changing Needle Plate .....	6	For Zig-Zag Satin Stitching .....	24
Feed Cover Needle Plate .....	5, 31, 57	Zig-Zag Stitching .....	21
Straight Stitch .....	5, 14	Satin Stitching .....	24
Zig-Zag .....	5	Zig-Zag Stitch Patterns .....	21
Performance Checklist .....	66	Temporary Stitching .....	29
Pin Basting .....	17	Twin-Needle Stitching .....	25
Power and Light Switch .....	7	Zipper Insertion .....	39



Here, there, everywhere... **SINGER**

SINGER\* Service is always close at hand. If your machine should need servicing, call your local Singer store to be sure of warranted SINGER Parts and Service. You will find the address under SINGER COMPANY in the telephone directory.

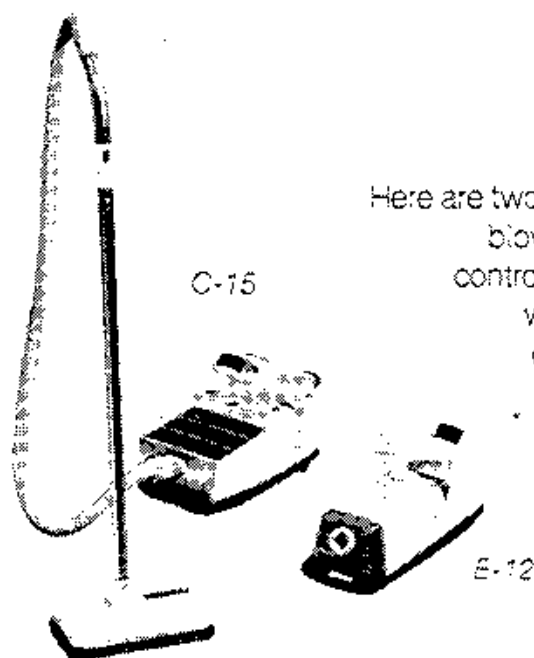
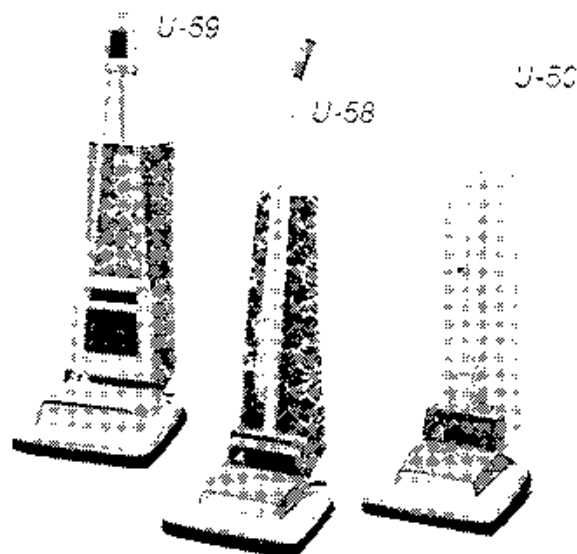
# SINGER

*...the First Name in Sewing, the Last Word in Cleaning*

Sure, we build the world's best sewing machines. But did you know we take the same pride in our floor-care products?

SINGER has a line of stylish, hardworking cleaners — one perfect for your needs.

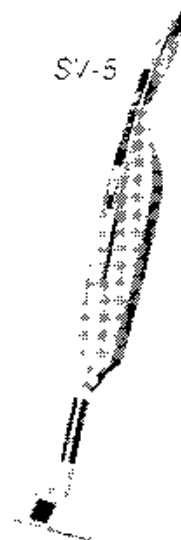
We have three uprights — the *POWERmaster\** vacuum cleaners. Each has dual jet suction fans, for evenly distributed, full-nozzle, full-suction power. King-size disposable dust bag, for less frequent changes. Three-position handle and carrying grip, for easy handling. Plus much more.



Here are two canister vacuum cleaners. Each has an air-jet blower, for cleaning out corners, crevices. Suction control, for power to suit your job. Roll-a-way storage wheels — and more! Model C-15, has a motor-driven power brush with pile-selection control, for professional carpet cleaning.

There's still more! SINGER has a powerful, lightweight cleaner — the *Power Sweeper\** unit. This handy cleaner has infinite comfort height adjustment, easy-grip handle, wrap-up cord storage. And other convenience features, too.

That's six good reasons to make your nearby Singer Sewing Center your *cleaning* center, too. And here's a seventh good reason: You can take advantage of our easy 1-36 credit plan.



*You get what you pay for...and a little bit more!*