Dear Customer:

We recommend that for future reference you record the serial number of your Sewing Machine in the space provided.

Refer to illustration below for location of serial number on your machine.

Serial No.
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8. **Caring for Your Sewing Machine**
   - Cleaning and Lubricating
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Principal Parts -- what they are called

1. **Pressure Dial** regulates presser-foot pressure on fabric.

2. **Take-up Lever** controls flow of needle thread.

3. **Bobbin-Winder Tension Discs** supply just the right amount of thread tension for uniformly wound bobbins.

4. **Disc Holder** holds any one of the interchangeable stitch pattern discs.

5. **Stitch Chart** shows the stitches which the pattern discs produce.

6. **Bobbin Winder Spindle** let you fill the bobbin with thread quickly and easily.

7. **Hand Wheel** manually positions needle. Always turn it toward you.

8. **Needle-Thread Tension Dial** lets you select the right tension for your stitch, thread, and fabric.

9. **Electric Motor** drives the machine through a belt to the hand wheel. A Power and Light Switch located on the motor turns on machine and sewing light simultaneously.

10. **Built-in Sewing Light** illuminates sewing area.

11. **Thread Cutter** is built into presser bar for safety and convenience.

12. **Presser Foot** holds fabric against feed. (See item 21.)

13. **Needle Plate** provides working surface around the feed.

14. **Slide Plate** opens for easy removal and replacement of bobbin.

15. **Needle Clamp** holds single and twin needles. It is designed to eliminate the possibility of inserting needle backwards.

16. **Stitch Width Selector** controls the width of zigzag stitching and sets the machine for straight stitching.

17. **Needle Position Selector** places the needle in either (left), (center) or (right) stitching position.
Principal Parts continued...

18. **Spool Holder** with horizontal pin holds spools of various sizes and lets thread unwind smoothly without the spool turning.

19. **Stitch Length Selector and Built-In Four-Step Buttonhole Dial** has two separate functions. The numbered settings on the stitch length side of the dial allow for a variety of stitch lengths. The four settings for the buttonhole sequence are on the opposite side of the dial.

20. **Reverse-Stitch Push Button and Stitch Balancing Control** allows you to stitch backwards, and to balance stitching in four-step buttonholes. Pushing the button reverses stitching direction; rotating the button balances side stitching of buttonhole.

21. **Feed** moves fabric as it is being stitched.

22. **Transparent Bobbin** shows thread supply; is easily removed for winding.

23. **Presser Foot Lifter** raises and lowers the presser foot.

24. **Electrical Connections and Speed Controller** are designed for safety and convenience. To run the machine, press speed controller. The harder you press, the faster the machine will sew.

25. **Hand Wheel Knob** engages hand wheel to sewing mechanism. Loosen knob for bobbin winding.
Accessories

The accessories described below will help you to sew with ease and comfort.

Some of them may not be supplied with your sewing machine, but they are available for over the counter sales at SINGER stores.

**CAUTION:** Disconnect power-line plug from electrical outlet when changing needles, presser feet or needle plates.

**Bobbins**
- One bobbin in your machine.
- Extra bobbins.

**Needles**
(See Fabric, Thread and Needle Table for selection of needle.)
- Style 2020, Size 14, in place in your machine
- Style 2020 needles, for all-purpose sewing
- Style 2028 needles, for twin-needle work
- Style 2045 needles, for sewing synthetic knit and stretch fabrics

**Changing the Needle**
1. Raise the needle bar to its highest position by turning the hand wheel toward you.
2. Loosen the needle-clamp screw and remove needle.
3. Insert new needle in clamp, with the flat side of the needle to the back; push it up as far as it will go.
4. Tighten the needle-clamp screw.

**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.
Accessories

PRESSER FEET
• Interchangeable snap-on presser feet:
  General purpose foot on your machine
  Straight stitch foot
  Buttonhole foot
  Zipper foot
  Special purpose foot
• One-piece button foot

General Purpose Foot
The general purpose foot can be used for both straight and zig-zag stitching.

Straight Stitch Foot
This foot, used for straight stitching only, should be used when your fabric or sewing procedure requires close control.

Buttonhole Foot
This transparent presser foot has guidelines to simplify buttonhole placement and make it easy to gauge buttonhole length. See instructions for making buttonholes.

Zipper Foot
The zipper foot makes it easy to place stitching close to a raised edge. Thus, it is useful for corded seams (page 70) as well as zipper insertion.

Special Purpose Foot
Use this transparent foot for zig-zag satin stitching and for all kinds of decorative zig-zag stitching.

Button Foot
This short, open foot holds any two-hole or four-hole button securely for stitching. For instructions on button sewing, see page 86.
Changing Snap-on Presser Feet

These presser feet snap on and off a common shank.

To remove presser foot from shank, raise presser foot and press toe up as far as it will go until it snaps free.

To attach new presser foot to shank

• Center foot under shank and lower presser foot lifter so that shank opening fits over the hinge pin.
• Press down on presser foot screw until shank snaps onto foot.

To remove and replace shank of snap-on presser feet, follow instructions below for one piece presser feet.

Changing One-piece Presser Feet

• Raise needle to highest position.
• Raise presser foot lifter.
• Loosen presser foot screw (you do not need to remove the screw) and remove the foot.
• Hook new foot around the presser bar and tighten presser foot screw.

Use a coin to tighten or loosen the presser foot.
NEEDLE PLATES

The general purpose needle plate on your machine can be used with all presser feet.

The straight stitch needle plate is for use with the straight stitch presser foot.

The feed cover needle plate is used for button sewing, free-motion work, and darning.

Removing and Replacing Needle Plate
- Raise presser foot.
- Turn hand wheel toward you until the needle is in its highest position.
- Open the slide plate. Lift needle plate up and to the right until it snaps free.
- Insert new needle plate by placing it under the clamping pin. Push it gently to the left and press down until it snaps into place.
- Close slide plate.
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PATTERN DISCS

• One removable pattern disc in place on holder in your machine (plain zig-zag stitch).
• Additional in interchangeable pattern discs.

Each pattern disc is numbered and its design is reproduced on its surface for quick recognition. See illustrations for the patterns.

Changing Pattern Discs

• Move stitch width selector to (straight-stitch position).
• Raise pattern disc lid.
• Pull pattern disc releaser up and remove the disc.
• Replace with another disc, making certain that the numbered side of the disc is face up and that the notch in the center of the disc fits over the positioning key on the disc holder. Push disc down firmly.
SPOOLED PIN FOR TWIN-NEEDLE STITCHING
This spool pin permits you to stitch two parallel rows of stitching simultaneously.

SMALL SPOOL HOLDER
This holder retains small-diameter spools of thread on the spool pin.

BLINDSTITCH HEM GUIDE
The blindstitch hem guide, used with the general purpose foot, positions the hem fold in front of the needle for blindstitch hemming. To attach guide, loosen presser foot screw and slip guide between screw and presser foot shank.

LINT BRUSH
The lint brush is used for cleaning your sewing machine.

CONTAINER OF OIL
Container of SINGER oil

Your machine will serve you perfectly for many years if you will take a few moments to keep it in good operating condition.

Note: Before using your new machine for the first time, we recommend that you apply oil as indicated in section on lubricating.
2. Getting ready to Sew
Preliminary Steps

CONNECTING MACHINE WHEN EQUIPPED WITH ELECTRIC MOTOR AND CONTROLLER

Before plugging in your machine, be sure that the voltage and frequency indicated on the motor are within the range marked on the electric meter installed by your power company.

If your speed controller cord has a motor disconnect plug, push the plug into the receptacle at right end of motor. Then connect the power line plug to your electrical outlet.

If the speed controller cord is wired directly to the motor, connect the power-line plug to your electrical outlet.

CAUTION: Disconnect the powerline plug from the electrical outlet when changing needles, presser feet or needle plates or when leaving the machine unattended. This eliminates the possibility of starting the machine by accidentally pressing the speed controller.

OPERATING MACHINE

To turn on the machine and sewing light, press the power and light switch located on the motor.

If Machine has a 3-position switch:
• The SLOW setting (switch moved to symbol) allows for maximum control for special jobs.
• The FAST setting (switch moved to symbol) allows for full speed capacity of the machine.

To run the machine, press the speed controller with your foot. The harder you press, the faster the machine will sew. To stop machine, remove foot from controller.
With Foot Treadle

Become acquainted with your treadle. First, hold hand wheel from turning, then loosen the handwheel knot as shown.

Place both feet on treadle. Turn hand wheel over toward you and allow your feet to move freely and lightly, following the motion of the treadle. Practice this motion until you are able, with your feet alone, to re-start the machine with the hand wheel turning toward you and maintain a steady speed.

When you have become accustomed to the treadle motion, tighten the hand wheel knob by turning it away from you. Place a piece of material under the presser foot and lower the presser foot lifter. Now operate the machine (without thread) until you become accustomed to guiding the material.
Threading the Machine

CHOOSING NEEDLE AND THREAD
The needle and thread you choose will depend upon the fabric to be stitched. The needle should be fine enough to prevent the fabric from being marred with large punctures, yet heavy enough to pierce the fabric without being bent or deflected.

The eye of the needle must be large enough for the thread to pass through it freely: too fine a needle will cause the thread to fray.

The table below is a 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. This guide also applies to zig-zag stitching.

<table>
<thead>
<tr>
<th>FABRIC, THREAD AND NEEDLE TABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FABRIC</strong></td>
</tr>
<tr>
<td>FILMY — chiffon, organza, tulle, voile</td>
</tr>
<tr>
<td>SHEER — net, lace, ninon, crepe de chine, voile</td>
</tr>
<tr>
<td>LIGHT — shantung, faille, organdy, muslin, batiste, dimity, lawn, percale, pique, poplin cashmere, flannel, mohair, felt, taffeta, satin, challis, eyelet, gingham, crepe, broadcloth.</td>
</tr>
<tr>
<td>MEDIUM — velvet, crepe de chine, shantung, suiting, satins, crepe, velveteen, corduroy, fleece, flannel, gabardine, felt, serge, mohair.</td>
</tr>
<tr>
<td>HEAVY — brocade, taffeta, satin, crepe, corduroy, linen, drapery fabric, burlap, suiting, gabardine, poplin denim, ticking, canvas.</td>
</tr>
<tr>
<td>VERY HEAVY — denim, duck, canvas, sailcloth, coating, blanketing, upholstery fabric</td>
</tr>
<tr>
<td>KNITS, STRETCH &amp; ELASTICS — jersey, cirÈ, sweater knit, bonded knit, tricot, stretch terry, double knit, spandex, deep pile, fake furs</td>
</tr>
<tr>
<td>LEATHER, PLASTIC, VINYLs — kidskin, patent leathers &amp; suedes, plastic film, imitation upholstery vinyl &amp; leather</td>
</tr>
</tbody>
</table>
WINDING THE BOBBIN

It is best that you wind the bobbin before you thread the needle.

Preparation:

• Raise pattern disc lid.
• Turn hand wheel toward you until needle is at its highest position.
• Loosen the hand wheel knob with your right hand while holding the hand wheel with your left hand.
• Open the slide plate and lift out bobbin.

Procedure

1. Place spool of thread on spool pin. Lead thread around the bobbin-winder tension disc and through small hole in bobbin (from inside out). Place bobbin on spindle.
WINDING THE BOBBIN continued...

2. Push spindle toward the right. Hold thread end and start the machine. Thread end will snap off after a few coils have been wound.

3. When required amount of thread has been wound (winding will stop when bobbin is full). Push spindle to left, cut thread and remove bobbin.

4. Tighten hand wheel knob by turning it away from you with your right hand while holding hand wheel with your left hand.
1. Hold bobbin so that the thread unwinds in direction shown, and insert bobbin in bobbin case.
2. Pull thread into notch A in bobbin case, draw it toward left and into slot B.
3. Draw approximately eight centimeters (3") of thread diagonally across the bobbin.
4. Close slide plate, allowing the thread to extend through the slot between the slide plate and the needle plate.
THREADING THE NEEDLE

1. Slip spool of thread onto spool holder. If spool has a
   retaining slot, place it against the spool cushion to
   the right. If spool has excessive length or diameter,
   use vertical spool pin.
2. Press appropriate thread lead-off holder firmly
   against spool.
   • For large spools of thread, use the large holder
     with the wide end against the spool.
   • For medium-size spools of thread, use the large
     holder with the narrow end against the spool.
   • For very small diameter spools, use the small
     holder.
3. Raise presser foot and be sure needle is in its high-
   est position.
4. Lead the thread through all threading points as illus-
   trated.
5. Thread the needle from front to back, drawing about
   ten centimeters (4") of thread through the eye of the
   needle.

For Large Spools

For Medium Spools

For Very Small Spools
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 hole in the needle plate.

1. Hold needle thread lightly with left hand and turn hand wheel slowly toward you so that needle enters needle plate.
2. Continue turning hand wheel and holding needle thread until needle rises and brings up bobbin thread in a loop.
3. Undo the loop with your fingers.
4. Place both needle and bobbin threads under the presser foot and lay them diagonally to the left.
Setting Selectors

SETTING STITCH WIDTH

The stitch width selector does two jobs: it sets the machine for straight stitching, and it controls the width of zig-zag stitching. Four stitch width settings are indicated plus a setting for straight stitching.

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

To set stitch width, slide the selector lever until indicator line is aligned with desired setting.

Straight Stitching: Set the selector at ( ).

Zig-Zag Stitching: To suit sewing application, set the selector at any zig-zag position between (narrow-position) and (wide-position).

SETTING NEEDLE POSITION

The needle position selector places the needle in left ( ), center ( ), or right ( ) stitching position. You will need to set it before you start running the machine.

Before moving the selector, always make sure the needle is out of the fabric.

To position the needle, slide the lever to left or right until indicator line is under desired settings.

Straight Stitching: Normally you will use the center ( ) needle position. But if you wish to place the stitching at left or right of center, slide the lever to desired position. The general purpose needle plate and presser foot must be used if left or right needle positions are selected.

Zig-Zag Stitching: You will use center ( ) position most often. Left ( ) and right ( ) positions are for special stitch placement. For example: A setting is used for button sewing. Settings and are used to place narrow zigzag stitching to the left and right of center in decorative work.
REGULATING NEEDLE-THREAD TENSION

The needle-thread tension dial regulates the amount of tension on the needle thread and lets you select just the right setting for your fabric and thread. The numbers on the dial eliminate guesswork in duplicating settings.

Correct tension is important because too much or too little will weaken your seams or mar the appearance of decorative work. To determine the correct tension, make a test on a sample of your fabric. If the stitches look loose, increase tension. If the fabric puckers, decrease tension.

• To increase tension, turn to higher number.
• To decrease tension, turn to lower number.
SETTING STITCH LENGTH

The stitch length selector dial controls the length of both straight and zig-zag stitching. The numerals from 1 to 4 represent the length of each stitch in millimeters: the higher the number, the longer the stitch. Generally, shorter stitches are best for lightweight fabric, longer ones for heavier fabric. The area between 0 and 1 represents less than 1 mm. long, and is used for closed zig-zag or satin stitching.

- **To shorten stitch length**, turn dial clockwise to a lower number.
- **To lengthen stitch length**, turn dial counterclockwise to a higher number.

For reverse stitching, push in on push button located in center of dial. Hold in until reverse stitching is completed. Then release push button. Push button can be pushed in while machine is sewing.

REGULATING PRESSER FOOT PRESSURE

The pressure regulates the pressure that the presser foot exerts on the fabric. Correct pressure is important to make the fabric feed smoothly and evenly without being marred.

- **To increase pressure**, turn dial to a higher number. Heavy or crisp fabrics require heavier pressure.
- **To decrease pressure**, turn dial to a lower number. Lightweight or soft fabrics, or those with a pile (like velvet) require lighter pressure.
- **For darning**, turn dial to 0.
3. Straight Stitching

Setting Selectors
Before making any setting adjustments, raise the needle out of the fabric.

- Stitch Width: 
- Needle Position: 
- Stitch Length: To suit fabric
- General Purpose or Straight Stitch Foot

When your fabric or sewing procedure requires close control, you may wish to use the straight stitch presser foot and the straight stitch needle plate that come with your accessories.

Sewing a Seam

PIN BASTING
Pin basting is a time saver and can be used when you sew easy-to-handle fabrics. 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 beyond both sides of the presser foot. Never place pins on the underside of the fabric in contact with the feed.
- Sew, pulling pins out of fabric as you stitch. We do not recommend sewing over pins.
STARTING A SEAM

1. Set stitch length selector for desired length of stitch
2. Align edge of fabric along one of the numbered guidelines on the needle plate. The numbers represent eighths of an inch. If you want a 5/8-inch seam (15mm.) for example, line up your fabric with line 5.
3. Position needle in fabric about twelve millimeters (1/2") from the edge.
4. Lower the presser foot. Depress and hold reverse-stitch push button, and run the machine at a slow speed.
5. While holding reverse-stitch push button backstitch to edge of fabric for reinforcement.
6. Release push button and stitch forward to end of fabric, using the selected guideline to keep seam straight.
Guiding and Supporting Fabric
Most fabrics need only to be guided in front of the presser foot.

Some fabrics such as filmy sheers, knits, etc., require support in front and back of the presser foot while being stitched.

ENDING A SEAM

1. Leave presser foot in down position. Depress and hold reverse-stitch push button and run the machine at slow speed.
2. While holding reverse-stitch push button, backstitch about 12 millimeters (1/2") in from edge of fabric to reinforce end of seam. Then release push button.
3. With the take-up lever at its highest point, raise the presser foot and remove the fabric by drawing it back and to the left.
4. Cut thread ends on thread cutter at rear of presser bar.
CURVED SEAMS

Follow the same steps as for straight seams except use a shorter stitch length for greater elasticity and strength.

Inside Curves

Outside Curves
4. Zig-Zag Stitching

How Patterns are Produced

All Patterns are produced from the interchangeable pattern discs. Some stitch patterns are used for practical purposes, such as buttonholes and button sewing, seaming, blindstitch hemming, and mending. Others are purely decorative and will give an individual touch to your clothes and home.

The pattern discs that come with your machine produce the stitches illustrated on the following page. The numbers indicate pattern disc numbers.

For instructions on changing pattern discs, see section on Chaging Pattern Discs.
ADJUSTING STITCH WIDTH

Before moving stitch width selector, always raise needle above fabric.

To produce a zig-zag stitch, the stitch width selector must be moved from \( \frac{1}{2} \) toward the right. The further you move the selector lever toward the right, the wider your stitch pattern will be.

ADJUSTING STITCH POSITION

Before moving needle position selector, make sure needle is above fabric.

A needle position selector setting of \( \text{center} \) places the needle in center stitching position. Selector settings \( \text{left} \) and \( \text{right} \) place the needle in left and right stitching position at stitch width settings narrower than the maximum width.

Selector setting \( \text{center} \) is used most often. Settings \( \text{left} \) (left) and \( \text{right} \) (right) are for special placement of stitching. For example, a \( \text{left} \) (left) setting is uses for button sewing. A \( \text{left} \) (left) or \( \text{right} \) (right) setting is used to place narrow zigzag stitching to the left or right of center in decorative work.
ADJUSTING STITCH LENGTH AND NEEDLE-THREAD TENSION

When you are preparing to do zig-zag stitching, make a test sample with the fabric and thread you plan to use so that you can adjust the stitch length and needle-thread tension correctly.

**Stitch Length**

Any stitch length setting from 1 to 4 will give you an open zig-zag stitch of whichever pattern you select. The higher the number, the more open, or farther apart, your stitch will be. The area between 1 and 0 of the selector is used for the fine adjustment of zig-zag satin stitching.

**Needle-Thread Tension**

Zig-Zag stitching requires less tension than straight stitching. Notice the stitching on your test sample. The stitches should lie flat against the fabric without causing the fabric to pucker. If the stitches are not flat and the fabric is puckering, lower the tension by turning the dial to a lower number.
Satin Stitching

Satin stitching is a series of closely spaced zig zag stitches that form a smooth satin-like surface. It is useful for both utility and decorative work. Always 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 organdy and lawn are suitable for this purpose.

- Pattern Disc: Any zig-zag stitch
- Stitch Width: 
- Needle Position: 
- Stitch Length: Between 0 and 1
- Special Purpose Presser Foot
- General Purpose Needle Plate

ADJUSTING STITCH LENGTH

1. Turn selector dial to 1 and run the machine at a slow speed.
2. While running machine gradually turn dial toward 0 until stitches are closely spaced and form a smooth satin stitch.

ADJUSTING THREAD TENSION

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

Notice the stitching on your sample. If the stitching appears to be too tight, or the fabric is puckering, lower the thread tension by turning the dial to a lower number.
5. Twin-Needle Stitching

By using a twin needle, you can produce two parallel, closely spaced decorative lines of stitching simultaneously. You can use either one or two colors of thread, and you can choose either a straight-stitch setting or any of the pattern discs.

When preparing to do twin-needle stitching, it is recommended that you wind an extra bobbin with the thread you plan to use, for replacement in case the bobbin should run out of thread. (Note: When raising bobbin thread, hold both needle threads.)

Inserting the Twin Needle

Before inserting the twin needle place the needle position selector at (left) 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 e-c clamp screw.
Threading the Needle

For best results, use No. 50 mercerized cotton thread. Thread the machine in the same manner as for single-needle stitching except:

1. Insert twin-needle spool pin under pattern disc lid.
2. Be sure that threads are separated by center tension disc as they pass around tension assembly.
3. Pass only one thread through the last thread guide before the needle.

Machine Settings

STRAIGHT STITCHING

- Stitch Width: 
- Needle Position: 
- General Purpose Presser Foot
- General Purpose Needle Plate
- Speed: Moderate

ZIG-ZAG STITCHING

- Pattern Disc: Any zig-zag stitch
- Stitch Width: only
- Needle Position: 
- General Purpose Presser Foot (open patterns) or Special Purpose Foot (satin stitching)
- General Purpose Needle Plate
- Speed: Moderate
6. Free-Motion Stitching

In free-motion stitching, you sew without a presser foot and control fabric movement (and stitch length) on your own, by means of an embroidery hoop. Either a straight or zig-zag setting can be used. Because you can move the hoop backward, from side to side, and even diagonally - free-motion stitching is extremely useful for intricate embroidery designs. It is equally useful for darning.

When embroidering, you can vary the length of stitches by moving the hoop faster or slower. The faster you move it, the more open the stitches will be. A slow hoop movement will produce closely packed stitches. You can also vary the width of the stitches, from a hairline to the full width of whichever stitch width setting you have chosen, by the way you move your hoop. If you move it sideways and stitch in a horizontal line, you will get a hairline; if you move it forward and backward and stitch in a vertical line, you will get full stitch width. Thus, you can produce a ribbon-like effect in script lettering or create delicate flower designs. See following pages for specific directions.

When darning, the embroidery hoop enables you to hold the fabric taut, a real advantage when your fabric is lightweight and is likely to pucker.

**Preparation**

1. Have available an embroidery hoop large enough to encompass the entire design.
2. Remove the presser foot.
3. Remove regular needle plate and insert feed cover needle plate.
4. Rotate stitch length selector dial clockwise to area below 1 (as for satin stitching).
If you wish to embroider a whole name on a dress or shirt, you can do so by free-motion stitching.

1. Always make a sample first to find the right stitch width.
2. Trace or mark lettering on right side of fabric.
3. If the fabric is soft or loosely woven, add an underlay of crisp lawn or organdy.
4. Place work in embroidery hoop. Be sure fabric is held taut.
5. Position work under needle and lower presser bar to engage tension.
6. Hold needle thread loosely and turn handwheel toward you to bring bobbin thread up through fabric at start of design. Hold both thread ends and lower needle into fabric.
7. Stitch following outline of lettering. Maintain an even rate of speed for uniformly spaced stitches.
8. To produce a close satin stitch, move hoop slowly to produce an open stitch, move hoop more rapidly.
9. To shade the lettering from wide to narrow stitching, turn the work slightly so that you will be moving it at an angle as you stitch.
Floral Designs

- Pattern Disc: No. 1
- Stitch Width: [image of stitch width settings]
- Needle Position: [image of needle position]
- Stitch Length: Between 0 and 1
- Presser Foot: None
- Feed Cover Plate
- Speed Range: To suit operator

With a little practice on your sewing machine, you will be able to embroider flowers to decorate table linens and other household items, as well as dresses and blouses. If you have designing skill, you will enjoy creating your own designs. Otherwise, you can buy attractive transfer patterns.

To embroider flower designs, prepare the machine and your fabric by following the same steps as for script lettering. On your test sample, try out different stitch width settings to determine the one or more best suited to your design.

When filling in outlines, place stitches in parallel lines, shifting the hoop movement as appropriate to the design.

- For a smooth satin stitch that will catch the light place the parallel stitches close together, moving the 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.
Sewing the Professional Way

Construction Details

SEAMS

Lingerie Seams
• Pattern Disc: No. 1
• Stitch Width:
• Needle Position: 
• Stitch Length: To suit fabric
• General Purpose Presser Foot
• General Purpose Needle Plate

To make a lingerie seam both durable and flexible, use a zig-zag stitch. This treatment is particularly suitable for bias seams.
1. Straight-stitch the seam (with stitch width selector at  on the wrong side.
2. Press both seam allowances in the same direction.
3. From the right side, top-stitch with zig-zag pattern, letting the needle alternately enter the seam line and seam thickness.

Seams in Knit Fabrics
• Pattern Disc: No. 1 or 37
• Stitch Width: 
• Needle Position: 
• Stitch Length: 1 -1.5
• General Purpose Presser Foot
• General Purpose Needle Plate

A narrow, closely spaced zig-zag stitch is ideal for seaming knit fabric. It is particularly desirable for underarm seams where elasticity and give are needed.

Where a stay is needed to prevent stretching at neckline and shoulder seams for example this same stitch can be used to apply seam tape. For a flat, smooth finish:
1. If seam is curved, pre-shape tape to fit by steam pressing.
2. Baste tape in place.
3. Stitch, allowing needle to enter seam tape and seam allowance alternately.
Inside Seams of Sheer Collars, Facings, and Cuffs

- Pattern Disc: No. 1
- Stitch Width:
- Needle Position:
- Stitch Length: Between 0 and 1
- Special Purpose Presser Foot
- General Purpose Needle Plate

With a delicate hairline finish, seam allowances that ordinarily show through can be eliminated.
1. Stitch along seam line.
2. Cut seam allowance away close to the line of stitching.
3. Turn to the right side, gently roll out curved edges with thumb and forefinger, and press flat.

Seam Finishes

- Pattern Disc: No. 1, 2, 37 or 350 to suit fabric
- Stitch Width:
- Needle Position:
- Stitch Length: 1 - 3 depending on choice of stitch and fabric
- General Purpose Presser Foot
- General Purpose Needle Plate
- Trim raw seam edges evenly before stitching.
- Place stitching over the fabric edge.
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), then stitch it into the seam. For both steps, use the following settings and accessories.

- Stitch Width:
- Needle Position:
- Stitch Length: Slightly longer than for regular seaming
- Zipper Foot
- General Purpose or Straight Stitch Needle Plate

Making the welting

1. Buy cable cord (at a notions counter) of desired size.
2. Cut bias strips of fabric (width: three times the diameter of the cord plus 30 millimeters (1 1/4”))
3. Sew strips together on the lengthwise grain to obtain desired length.
4. Fold resulting strip over cord with raw edges even
5. Attach zipper foot to the left side of the needle. (For instructions on attaching zipper foot see upcoming section)
6. Lower the presser foot.
7. Stitch close to the cord (but 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 to the right of the needle so that the bulk of the fabric will fall to the left.
2. Stitch welding 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 the work under the needle with the first stitching on top so that you can use it as a guide.
5. Stitch, this time crowding the foot against the cord.
DARTS
Darts add fit, contour, and styling to a garment.

Regular Darts

- Stitch Width:
- Needle Position:
- Stitch Length: About 2, or to suit fabric
- General Purpose or Straight Stitch Presser Foot
- General Purpose or Straight Stitch Needle Plate

1. Stitch from the seam edge, tapering gradually
2. Stitch beyond the fabric to form a thread chain 2.5 to 5cm (1" to 2") long.
3. Tie thread ends into a single knot close to the stitching

BLINDSTITCH HEMS

- Pattern Disc: No. 350
- Stitch Width: To suit fabric
- Needle Position:
- Stitch Length: 1 to 2.5
- General Purpose Presser Foot
- General Purpose Needle Plate
- Blindstitch Hem Guide

1. Mark, turn, and press hem in the usual way.
2. Baste a guideline at least 1.3cm (1/2") from the top edge of the hem so that the basting will not be caught by the flange of the blindstitch hem guide.
3. Attach the blindstitch hem guide to the presser bar
4. With the work wrong side up and the bulk of the fabric to the left, turn the hem under creating a soft fold about 6mm (1/4") from top edge of the hem.
5. Position the hem under the presser foot with the flange on the front of the guide resting on the 6mm (1 4") hem edge and the soft fold against the wall of the flange.
6. Stitch so that straight stitches fall on the hem edge and the sideward stitches pierce the soft fold. While stitching, feed the soft fold against the wall of the flange a and guide 'he hem edge in a straight line.
ZIPPER

At your notions counter you will find many kinds of zippers with detailed Sewing instructions in the package. If you use the zipper foot you will find it easy to form an even line of stitching itching close to the zipper.

Straight Stitch Zipper Insertion

- Stitch Width: 
- Needle Position: 
- Stitch Length: 1.5 to 2.5
- Zipper Foot
- General Purpose or Straight Stitch Needle Plate
- Speed: Moderate

Attaching the Zipper Foot

The zipper foot is snapped onto the shank

When the zipper is to the right of the needle:
- Move spacer on zipper foot to left, to allow shank to enter right side of foot so that needle will enter right notch in foot.

When the zipper is to the left of the needle:
- Move spacer on zipper foot to right, to allow shank to enter left side of foot, so that needle will enter left notch in foot.
Sewing Knit and Stretch Fabric

When you sew stretch fabrics, doubleknit, tricot and jersey, choose one of the stretch patterns that sews stretch into the seam. The table on the following page will help you select the right stitch pattern for your fabric and sewing job.

Remember to use a SINGER yellow band ballpoint needle Style 2045. in your machine when you sew synthetic knit or stretch fabric.

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GUIDING AND SUPPORTING FABRIC

Most fabrics of stretch or knit construction need only to be guided in front of the presser foot. Some fabrics, however, require support while being stitched.

- For nylon tricot, cire, panne velvet, and similar synthetic knits, apply gentle tension by holding fabric taut 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.

The Semi-Stretch pattern (disc 37) with a narrow stitch width is ideal for sewing stretch seams.
OVEREDGED SEAMS

- Pattern Disc: No. 350
- Stitch Width: 
- Needle Position:
- Stitch Length: 1 to 3, depending on fabric
- Special Purpose Presser Foot
- General Purpose Needle Plate
- Speed: Moderate

2. Trim seam edge evenly to a scant 6 millimeter (1/4") from seam line basting.
3. Place seam under the presser foot so that the straight stitches fall on the basted seam line and the zig-zag stitches fall over the seam edge.

LADDER SEAM

The blindstitch ladder seam is particularly appropriate for knit and stretch fabrics. It is ideal for stretchable construction seams and edge finishes for necklines, pockets and collars in sportswear and swimsuits.

- Pattern Disc: No. 350
- Stitch Width: 
- Needle Position:
- Stitch Length: 1.5 to 2.5
- General Purpose Presser Foot
- General Purpose Needle Plate

1. Make a test sample to adjust stitch length and needle-thread tension to suit the fabric. (Tension should be lighter than normal.)
3. Place fabric under presser foot so that the straight stitches fall on the seam basting and the points toward the center of the garment.
4. After stitching, open seam by pulling fabric back on opposite sides of the seam to produce ladder effect. Press seam allowance after opening.
ATTACHING ELASTIC

Elastic will remain stretchable when it is attached with either the multi-stitch zig zag or semi-stretch stitch.

- Pattern Disc: No. 2 or 37
- Stitch Width: 
- Needle Position:  
- Stitch Length: Approx. 1.5
- General Purpose Presser Foot and Needle Plate
- Speed: Moderate

To Attach Waistline Elastic

1. Fit elastic at waistline, allowing 25 millimeters (1") for joining. Lap ends and join with multi-stitch zig-zag.
2. Divide elastic band and garment waistline into quarters or eighths. Place elastic over fabric and pin the two together at these points.
3. Take a few stitches to anchor elastic in place, then stretch-elastic between pins as you sew using both hands to hold elastic taut in front and back of the presser foot.

PLAIN STRETCH SEAMS

- Pattern Disc: No. 37
- Stitch Width: 
- Needle Position:  
- Stitch Length: 1 to 2
- General Purpose Presser Foot
- General Purpose Needle Plate

A narrow, closely spaced semi-stretch stitch is ideal for seaming knit and stretch fabrics. It can be used in place of straight stitching to retain fabric elasticity and is particularly appropriate for underarm and crotch seams where stretch and give is essential. Stitch and press seam edges open as when using the straight stitch.
Buttons

- Pattern Disc: No. 1
- Stitch Width: As required
- Needle Position: ▼ ▼ ▼
- Button foot
- Feed Cover Plate
- Speed: Moderate

Flat buttons can be sewn on quickly and easily using the plain zig-zag stitch.

The space between the holes in the button determines stitch width settings.

1. Insert feed cover needle plate.
2. Set stitch width at / and needle position selector at Position button under foot and lower the needle into the center of the left hole. Lower the foot. Turn hand wheel toward you until needle rises out of button and is above the foot.
3. Move stitch width selector until needle is over the other hole in the button. Then, when you begin to stitch the needle should enter into the - right hole of the button. Take six or more zig-zag stitches to attach button. End on left side.
4. To fasten stitching, adjust stitch width to, and take three or four stitches.
5. Remove work, draw threads to underside fasten, and trim.

FORMING A THREAD SHANK

To form a thread shank, sew over the blade of a regular machine needle.

- Position button and lower button foot. Place needle in groove of foot so that the point enters the hole in the foot. The farther in you push the needle, the longer the shank will be.
- After stitching, remove the needle from the groove. Remove work and cut the threads about 15 centimeters (6 inches) from fabric. Pull thread ends to back of button and form a firm shank between button and fabric by winding threads tightly around the attaching stitches. Tie thread ends securely.
Buttonholes

You have a choice between two methods of making bar-tack buttonholes: using the built-in-four-step system or manually controlling the selectors.

You will find detailed instructions for using the two methods in this manual; but you will find the following information basic to both.

1. 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.
2. Use No.50 or finer mercerized cotton thread or embroidery thread, and reduce needle thread tension to slightly less than normal.
3. Use a size 11 needle for embroidery thread and 2 size 14 needle for cotton thread.

**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.

Mark the center line of the garment. This guideline can be made by hand basting. The space from the center line to the finished edge of the garment must be from 3/4 to the full diameter of the button. With this spacing the button will not extend beyond the edge when the garment is buttoned. Make sure the center line marking follows a lengthwise fabric thread.
Marking the Garment

- Mark a position guideline with hand basting for each buttonhole.
- Horizontal buttonholes are placed to extend 4 millimeters (1/8") beyond the center line of the garment, as illustrated below, so that buttons will be in the center of the figure when the garment is fastened. Horizontal buttonhole guidelines should follow a crosswise fabric thread and should be longer than the finished length of buttonhole. Mark ends of buttonhole vertically.
- Vertical buttonholes are placed on center line of garment, as illustrated. Mark ends of buttonhole horizontally across the center line basting.

Spaces between buttonholes should be equal. When a line of buttonholes crosses the machine be sure that one buttonhole will fall exactly on the waistline. Then measure the other buttonhole markings from that point.

BUTTONHOLE LENGTH

First decide how long the opening needs to be. To find the right length, cut a small slit in a scrap of fabric and gradually enlarge it until the button slips through easily. Then add at least 4 millimeters (2 millimeters for each bar tack). This bar-tack measurement is approximate; on some buttonholes you may need to increase it to arrive at pleasing proportions.

CUTTING BUTTON OPENING

Use a pair of small sharp scissors to cut button opening. Insert blade in center of cutting space and cut from this point in either direction. Place a pin across the cutting space at each end of the buttonhole to protect the end stitching.
BUTTONHOLES MADE WITH THE BUILT-IN FOUR-STEP BUTTONHOLER

The four dial settings for buttonholing are located on the opposite side of the stitch length selector. As you turn the dial for each step, your machine is automatically set for the correct needle position, stitch width, and stitch length, as well as for stitching direction for that step. You need not turn the fabric during buttonholing.

- Pattern Disc: No. 1
- Buttonhole Foot

Procedure:

- Follow the instructions beginning on page 88 for preparing and marking the garment.
- Press the needle above the fabric.
- Position the work under the buttonhole foot aligning center marking of buttonhole with center score line on the foot.
- Align end marking of buttonhole with the horizontal score lines on the foot.
- Set reverse-stitch push button in neutral position Adjust if necessary to equalize difference in stitch density between left and right side of test buttonhole. Turn to page 96 for detailed instructions.
Step 1: Side Stitching

With the needle raised above the fabric, turn the buttonholed dial clockwise to step 1. Position needle in fabric at point A. Lower the foot and stitch to end of buttonhole (point B). The end marking should be aligned with the horizontal score lines on the foot.

Step 2: Bar Tack

Raise the needle above the fabric. Turn buttonhole dial counterclockwise to step 2. Take four or five stitches to point C.

Step 3: Side Stitching

Raise the needle above the fabric. Turn buttonhole dial counterclockwise to step 3. Stitch to within two stitches of the end of the buttonhole (point D).

Step 4: Bar Tack

Raise the needle above the fabric. Turn buttonhole dial counterclockwise to step 4. Take four or five stitches to point E. For a smooth, satin appearance and greater durability, stitch around the buttonhole a second time by repeating the four-step sequence.

Remove the work, draw threads to the underside ties, a, and trim. Cut button opening with sharp scissors.

When buttonholes are completed, rotate dial counterclockwise to stitch length settings to set machine for regular stitching.
Adjusting Forward-Reverse Stitch Balance

1. Make a test buttonhole with the push button in neutral position (indicator dot directly below symbol on control panel).
2. If the stitches on the right side of the buttonhole are too open, rotate the push button clockwise from its neutral position to increase density of stitching.
3. If the stitches on the left side of the buttonhole are too open, rotate the push button counterclockwise from its neutral position to increase density of stitching.

After buttonhole stitching is completed, return push button to its neutral position (indicator dot directly below symbol).
**BUTTONHOLES (MANUAL METHOD)**

Settings:

- Pattern Disc: No. 1
- Stitch Width: See below
- Needle Position: [Diagram of needle positions]
- Stitch Length: Between 0 and 1
- Special Purpose Presser Foot
- General Purpose Needle Plate
- Speed: Moderate

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.

Follow the instructions beginning on page 88 for preparing and marking the garment.

**Stitch Width Settings**

You will use two stitch width settings: one for side stitching and one for the bar tacks (the closing at each end of the buttonhole). These stitch widths may vary according to the size of the buttonhole required. Two possible combinations are illustrated on next page.
Procedure

Place work under needle, aligning center marking of buttonhole with the centerline on the special purpose foot.

**Step 1: 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 foot and pivot work on needle. Lower the foot. Take one stitch without changing stitch width setting, bringing work to point C.

**Step 2: Bar Tack**

Adjust stitch width selector for bar tacks, and take about six stitches. Stop at point D.

**Step 3: Side Stitching**

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

**Step 4: Final Bar Tack**

Adjust stitch width selector for bar tacks and take about six stitches, ending at point F.

**Step 5: Fastening Stitch**

To secure stitching, move stitch width selector to and take three stitches. Remove work, draw threads to underside, fasten, and trim. Cut opening for button with sharp scissors.
Decorative Touches

TOP STITCHING

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

SHELL EDGING

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

- Pattern Disc: No. 350
- Stitch Width: [width icon]
- Needle position: [needle position icon]
- Stitch Length: To suit fabric
- General Purpose Presser Foot
- General Purpose Needle Plate

1. Make a test on a sample of your fabric to find out if your thread tension, stitch width and stitch length.
2. Place folded hem (basted, if necessary) or bias fold 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 of the decorative stitch patterns can be used for monograms or motifs, adding a personal touch to a blouse collar, for example, or for initiating household linens. You can buy designs or create them yourself.

Stitching a Monogram or Motif

• Pattern Disc: Any decorative pattern

• Stitch Width: 

• Needle Position: 
• Stitch Length: To suit fabric and stitch
• Special Purpose Presser Foot
• General Purpose Needle Plate
• Speed: Moderate

1. Make a sample first to determine suitability of stitch pattern and to find the right stitch width and stitch length settings.
2. Transfer the design (by tracing, usually) to the right side of the fabric.
3. If the fabric is soft or loosely woven, baste a backing of lawn or organdy onto the wrong side.

Finding the beginning of the pattern unit

When you use decorative stitch patterns in a motif, always start stitching at the beginning of the pattern unit, that is, at the beginning of the arrowhead or whatever pattern you are using. To find the beginning:

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 the presser foot and remove scrap material.
3. Position motif under the needle, lower the presser foot, and stitch.
4. After stitching, trim the backing, if used close to the stitching.
APPLIQUÉ

The stitch most commonly used in appliquing is the plain zig-zag stitch closely spaced to form a satin stitch. Many of the other stitch patterns can be used to applique with decorative stitching.
- Position the design.
- Baste it to the fabric.
- Attach special purpose foot.

Method No. 1

1. Insert pattern disc for desired applique stitch. Set stitch width selector for the desired width and set stitch length dial for satin stitching (between 0 and 1).
2. Outline the entire design with appliqué stitching.

Method No. 2

1. Insert pattern disc for desired applique stitch.
2. Adjust stitch width selector for straight stitching and outline the entire design with a short stitch.
3. Trim raw edges to the stitching.
4. Adjust stitch width selector to desired width setting for applique 3/4 pattern, and set stitch length selector between 0 and 1.
5. Stitch, following and covering straight-stitch outline. This step will produce a smooth overedged finish with no raw edges to be trimmed. Remove basting.
MENDING
Many of the zig-zag stitch patterns are just as useful for mending as they are for creative sewing. The multi-stitch zig-zag ( ) forms a firm, flexible bond for repairing tears and for replacing elastic. The plain zig-zag ( ) is useful for making bar tacks to repair lingerie.

**Tears**

- Pattern Disc: NO. 2
- Stitch width: [Diagram]
- Needle Position: [Diagram]
- Stitch Length: About 1 or to suit fabric
- General Purpose Presser Foot
- General Purpose Needle Plate

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 of the tear together in the next step.)
3. Stitch on the right side, bringing the edges of the tear together
4. Shorten stitch length at ends and corners to give extra strength.
5. Trim underlay.

**Bar Tacks**

Use Disc No. 1, plain zig-zag, at satin-stitch length between 0 and 1 (micro area) for belt loops, pockets, zippers, shoulder straps, etc.
Seam Repair

Breaks in seams can be repaired quickly and easily by using the straight stitch.

1. Remove loose thread along the break and press seam edges together.
2. Restitch along the original seam line, overlapping stitching about 25 millimeters (1") at each end.
   Press seam open.

BLANKET BINDING

Often you can make an old blanket look almost new by replacing the binding.

- Pattern Disc: No. 2
- Stitch Width: 
- Needle Position: 
- Stitch Length: 1 - 1.5
- General Purpose or Special Purpose Presser Foot
- General Purpose Needle Plate

1. Remove worn binding.
2. Baste new binding securely.
3. Increase stitch length if necessary so that blanket feeds freely.
4. Stitch, and remove basting.
DARNING

You may choose to darn either with or without an embroidery hoop. When greater control is needed, an embroidery hoop is usually best.

Darning Without Embroidery Hoop

- Stitch Width: 
- Needle Position: 
- Stitch Length: 1.5 - 2.5
- General Purpose Presser Foot
- General Purpose Needle Plate
- Pressure Dial: 0

1. If area to be darned is open, baste an underlay in place.
2. Place area to be darned under the presser foot. Lower the presser foot and start stitching, alternately drawing the fabric toward you and gently pulling it away from you until area is filled with parallel lines of stitching.
3. For additional strength, cover area with crosswise lines of stitching.
Darning With an Embroidery Hoop

- Stitch Width: 
- Needle Position: 
- Stitch Length: Between 0 and 1
- Presser Foot: None
- Feed Cover Plate

Preparation:

1. Remove regular needle plate and insert feed cover needle plate.
2. Trim ragged edges from area to be darned.
3. Center worn area in embroidery hoop. Pull fabric as taut as possible.
4. Position work under needle and lower presser bar to engage thread tension.

Procedure:

1. Hold needle thread loosely with left hand turn hand wheel toward you, and draw bobbin thread up through fabric. Hold both thread ends and lower needle into fabric.
2. Reinforce the area to be darned with stitching 6 millimeters (1/4") from the edge.
3. 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.
4. When opening is filled, cover area with crosswise lines of stitching.
8. Caring for Your Sewing Machine

Cleaning and Lubricating

How often you will need to clean and lubricate the machine will depend on how often you use it and where you keep it. The following general guidelines assume that you will be sewing several times a week. But if you use your machine more frequently, lubricate it more often than the guidelines suggest.

CAUTION: Before cleaning and lubricating your machine, disconnect the power-line plug from your electrical gullet.

EVERY FEW WEEKS —

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

• Tension discs
• Take-up lever and thread guides.
• Presser bar and needle bar
• Bobbin case
• All machine surfaces (If necessary, dampen the cloth. Do not use detergents.)

Remove needle plate and clean:

• Feed and hook area (after cleaning, apply one drop of oil at point indicated)
Removing and Replacing Bobbin Case

1. Turn hand Wheel toward you to raise needle to its highest position.

2. Open slide plate, remove needle plate and remove bobbin.

3. Insert Screwdriver into bobbin case hold down and turn it toward the rear as illustrated.

4. To remove bobbin case;
   • Push bobbin case toward the rear and lift it up and out toward the front

5. To replace bobbin case:
   • Guide forked end under the feed. Draw bobbin case toward you so that front of case is under the position plate as illustrated.
   • Turn the bobbin case hold down toward you to lock bobbin case in position.

6. Replace bobbin, needle plate and close slide plate.
Lubricate parts under arm top cover and behind face plate.

- Raise top cover lid, loosen screws A, B, C and D, and lift arm top cover off machine.
- Loosen screw E and remove face plate.

**Note:** Screws A, B, C and D are designed to remain in the top cover to prevent them from being lost.
Lubricate parts continued...

- Apply a drop of oil (but no more than a drop) to all places indicated.
- Apply three drops of oil to all places indicated by (+).
- After oiling, replace face plate first and then arm top cover. Sew a few lines of stitching on a scrap of material to remove excess oil.
- Apply a small amount of SINGER gear lubricant to gears as shown. Never apply oil to gears.

SINGER gear lubricant and oil are available for purchase at your Singer store.
Lubricate bottom of machine

- Clean out lint and apply oil to each of the places indicated.

IF MACHINE IS TO BE STORED

- Disconnect power-line plug from electric outlet.
- Clean all exposed parts and area behind face plate.
- Swab all exposed metal parts and parts behind face plate with SINGER oil to protect against rust.

Hints for Home Service

If needle breaks, make sure . . .
- Needle is straight, correct style for machine and proper size for thread being used.
- Needle is correctly inserted into machine.
- Stitch width and needle position selectors are correctly set for work being done.
- Stitch width setting does not exceed (setting when twin needle is used.
- Presser foot shank is securely fastened to presser bar.

If needle thread breaks, make sure . . .
- Machine is threaded properly.
- Thread is unwinding freely from spool.
- Thread is free from slubs and knots.
- Needle is correct size for thread.
- Needle-thread tension is not too tight.
- Bobbin and bobbin case are properly inserted in machine.

Remember to . . .
- Remove thread from bobbin before rewinding.
- Keep a pattern disc on disc holder at all times.
- Set combination stitch length and buttonhole dial for regular stitching when not making buttonholes.
ADJUSTING BOBBIN WINDER

If there is too much thread on the bobbin:
• Loosen stop latch screw A.
• Slide latch B to the left for less thread on bobbin.
• Tighten stop latch screw.

If there is not enough thread on the bobbin:
• Loosen stop latch screw A.
• Slide latch B to the right for more thread on bobbin.
• Tighten stop latch screw.

ADJUSTING MOTOR BELT TENSION

Tension on the motor belt should be just sufficient to keep the belt from slipping. If the motor belt needs adjustment:
• Loosen motor bracket screw a full turn.
• To increase belt tension, lower the motor bracket.
• To decrease belt tension, raise the motor bracket.
• Tighten motor bracket screw.
CHANGING THE LIGHT BULB

**CAUTION:** Disconnect power-line plug from electrical outlet before removing old bulb.

Remove face plate.

**Removing Bulb:** Press bulb into socket and at the same time turn bulb in direction shown to unlock bulb pin. (Do not attempt to unscrew the light bulb).

**Note:** This machine is designed to use a 20 watt maximum light bulb.

Press new bulb into socket with bulb pin entering slot of socket and turn it in direction shown to lock bulb in position. Replace face plate.
REPLACING THE SLIDE PLATE

You will not have any occasion to remove the side-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 plate.