

SINGER



Slant Needle

404

THE SINGER MANUFACTURING COMPANY

404*



the new 404 . . . the finest straight stitch sewing machine ever built!

*A Trademark of THE SINGER MANUFACTURING COMPANY

Instructions for using

SINGER*

Slant Needle

The SINGER Slant Needle 404 . . .

. . . represents the ultimate in design and styling! With the purchase of the new SINGER 404 you can take pride in owning the finest straight stitch sewing machine ever built. You'll marvel at its almost unbelievable ease of operation . . . the remarkable services it performs. You'll delight in its perfect, beautiful stitching.

Distinct features include—

- **SLANT NEEDLE** for greater visibility.
- **HINGED FACE PLATE** with built-in threading chart.
- **HANDY "DROP-IN" BOBBIN** in front of needle.
- **ALL MECHANISM** completely enclosed.
- **ELEVATOR TYPE** calibrated throat plate, lever-operated, simplifies darning.
- **GEAR DRIVE** with built-in motor — no slipping or stalling.

TO GET THE MOST ENJOYMENT FROM YOUR SINGER

Take advantage of the free sewing lessons to which you are entitled. Skilled, SINGER-trained teachers will give you personal guidance and assist you in learning the fundamentals of home sewing.



SINGER SERVICE

Wherever you go you will find expert, dependable SINGER* Service close at hand. SINGER is interested in helping you keep your SINGER Sewing Machine in top running condition. That is why you should always call your SINGER SEWING CENTER if your machine ever requires adjustment or repair. Only from your SINGER SEWING CENTER can you obtain the services of a trained SINGER repairman and warranted SINGER* parts.

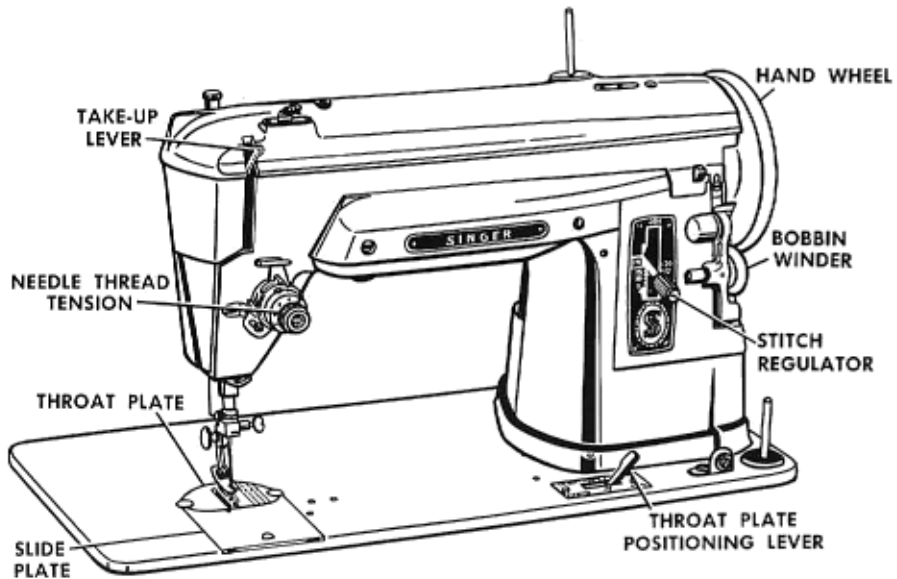


EVERYTHING FOR THE WOMAN WHO SEWS

The answer to your sewing needs is at your SINGER SEWING CENTER. There you will find a wide choice of sewing aids, notions, sewing instructions and services. Look for the famous red "S" and SINGER trademarks on your SINGER SEWING CENTER and the ever ready SINGER Service Car. See phone book under SINGER SEWING MACHINE COMPANY for address nearest you.



PRINCIPAL PARTS OF MACHINE 404



FABRIC, THREAD, NEEDLE AND STITCH LENGTH CHART

TYPES OF FABRICS	THREAD SIZES	NEEDLE SIZES	MACHINE STITCH SETTINGS FOR STRAIGHT SEWING	
			INSIDE SEAMS	TOP STITCHING
Filmy materials comparable to Net, Marquisette, Chiffon, Silk and Chiffon Velvets, Voiles, Ninon	50 Embroidery 100 Cotton Synthetic Thread	9	15 to 20	15 to 20
Sheer materials comparable to Lawn, Dimity, Synthetic Sheers, Paper Taffetas, Pure Silks, Gossamer Silks, Silk or Synthetic Tricots, Synthetic Velvets, Satins	50 Embroidery 80 to 100 Cotton Synthetic Thread	11	12 to 15	15 to 20
Lightweight materials comparable to Gingham, Chambray, Pique, Poplin, Percalé, Cretonne, Chintz, Faille, Bengaline, Wool Flannel, Wool Jersey, Wool Crepe, Cotton Velvets and Velveteens, Lightweight Suitings	50 Mercerized 60 to 80 Cotton A Silk	14 or 16	12	15 to 18
Medium heavy materials comparable to Corduroy, Crash, Gabardine, Rep, Heavy Suitings and Coatings	Heavy Duty Mer. 40 to 60 Cotton Synthetic Thread	16	10	12
Heavy materials comparable to Sailcloth, Denim, Ticking, Overcoatings	30 to 40 Cotton Thread	18	8	10
Plastic Materials	50 Embroidery Synthetic Thread 50 Mercerized	11 or 14	10	12

When ordering needles, always specify "Class and Variety 15 x 1" and state the size and quantity required.

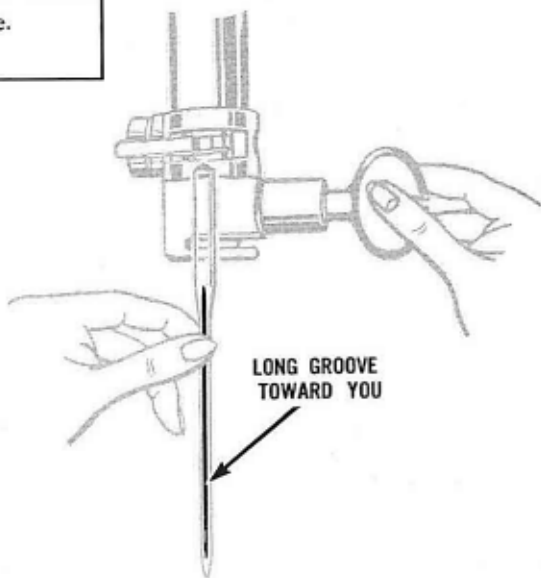
NEEDLES AND THREAD

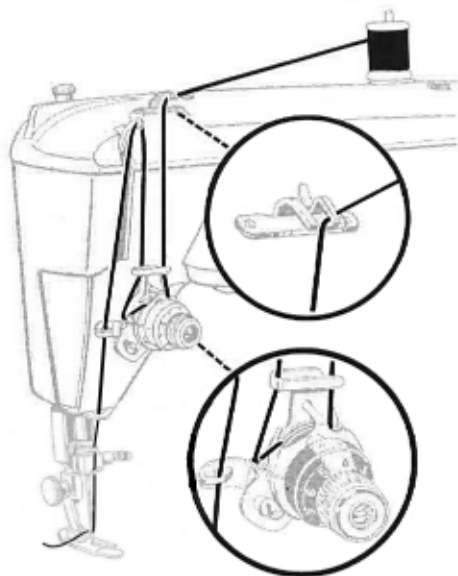
This machine uses a 15 x 1 needle.
 Sizes 9, 11, 14, 16 and 18.

For perfect stitching, select correct needle and thread to correspond with fabric according to table on **page 5**. Be sure to use like threads for both needle and bobbin.

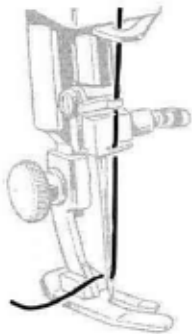
NEEDLE INSERTION

- Raise needle bar to highest point by turning hand wheel toward you.
- Loosen needle clamp screw.
- Insert needle upward into clamp as far as it will go, with flat side of needle to back and **long groove toward you**.
- Tighten needle clamp screw.

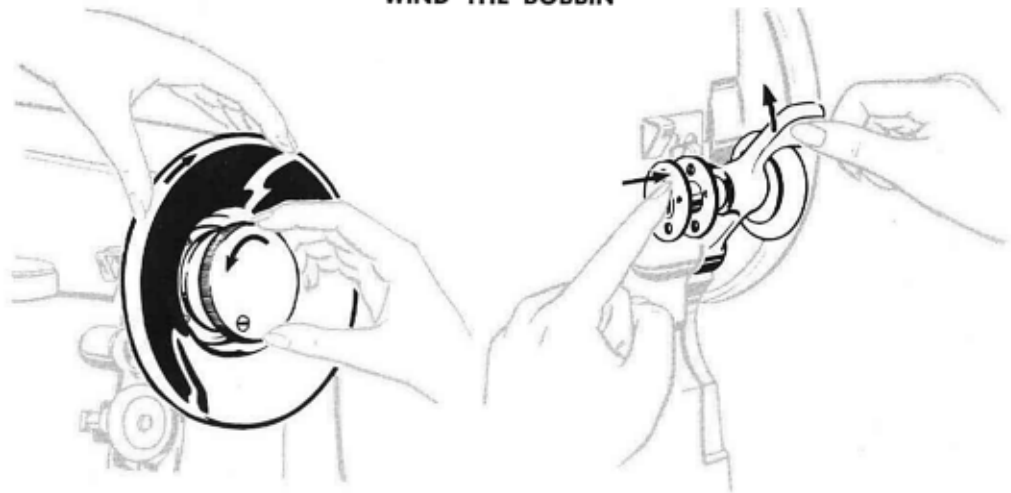


UPPER THREADING

- Raise take-up lever to highest point.
- Lead thread through threading points shown.
- Thread needle from front to back.
- Draw sufficient thread through eye of needle with which to start sewing.



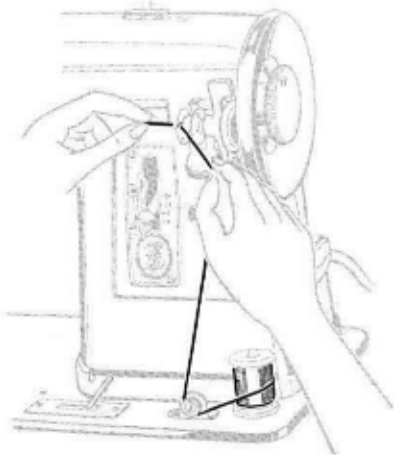
WIND THE BOBBIN



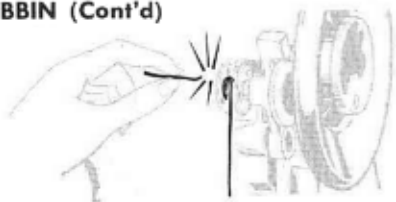
- Loosen stop motion screw with right hand.

- Raise bobbin winder and position bobbin on spindle.
- Press winder against hand wheel.

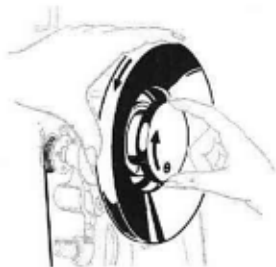
WIND THE BOBBIN (Cont'd)



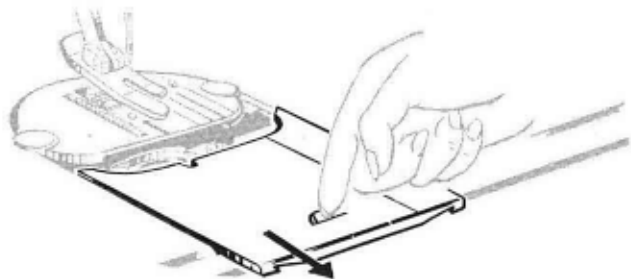
- Place thread on spool pin and lead between bobbin winder tension discs.
- Thread through hole in left side of bobbin as shown.



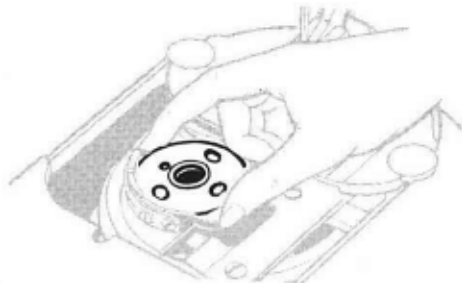
- Hold thread end to start winding.
- Activate machine.



- Full bobbin will automatically release.
- Tighten stop motion screw.

REMOVE THE BOBBIN

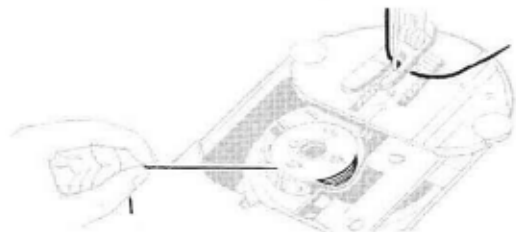
- Open slide plate and remove bobbin.



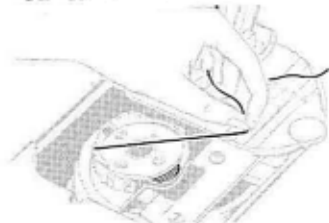
THREADING THE BOBBIN CASE



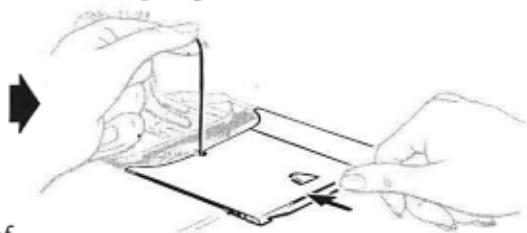
- Hold bobbin so that thread leads off in direction shown.



- Place bobbin in case.
- Lead thread into slot and under spring.

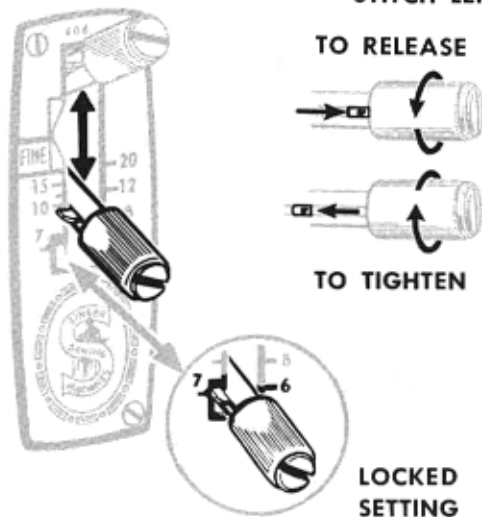


- Draw thread into notch at end of spring; pull about 3 inches of thread across bobbin.



- Close slide plate allowing thread to enter notch.

STITCH LENGTH REGULATOR



Numerals on the indicator represent the number of stitches per inch.

The fine area of the regulator represents stitch lengths above 20.

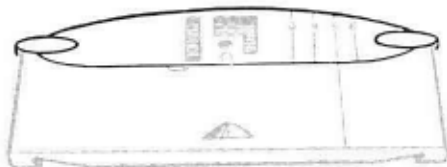
The lower indented area of the regulator allows the #6 stitch length setting to be "locked" in place when stitching folds, pleats or multiple layers of heavy fabric.

To set stitch length —

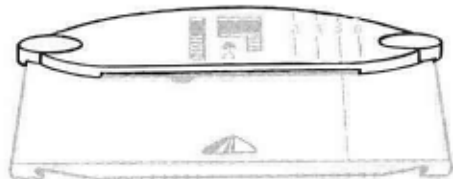
- Release pointer by turning thumb nut to the left.
- Position lever for desired stitch length.
- Tighten pointer against plate by turning thumb nut to right.

Once the pointer has been positioned, reverse stitching is accomplished by raising the lever to its highest point. The #6 "locked" position cannot be reversed.

THROAT PLATE POSITIONS

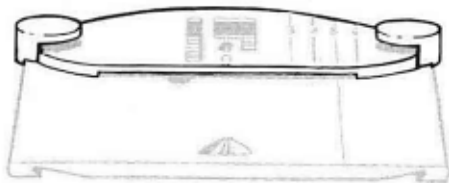


- Throat plate in “Down” position for general sewing.

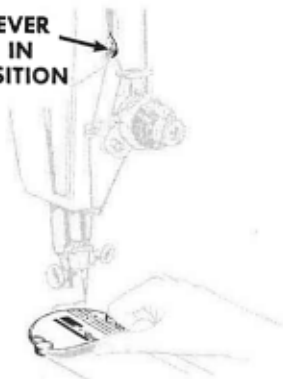


- Throat plate in “Up” position for darning and embroidering.

THROAT PLATE REMOVAL AND REPLACEMENT



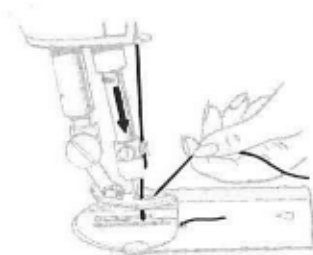
**TAKE-UP LEVER
MUST BE IN
LOWEST POSITION**



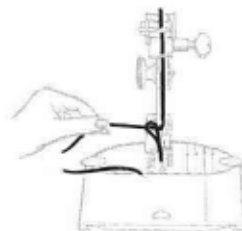
- Raise presser bar.
- Turn hand wheel to drop take-up lever to its lowest point.
- Set throat plate lever to "Unlock" position.
- Remove throat plate by sliding it back.
- Replace throat plate by sliding it on from the rear.
- Lock in position.

Presser foot need not be removed for this operation.

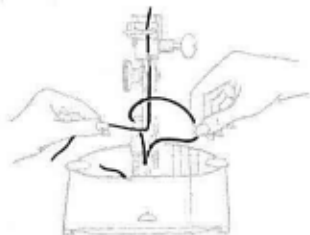
PREPARE TO SEW



- Hold needle thread lightly with left hand.



- Turn hand wheel so that needle enters plate and brings up bobbin thread.



- Pull end of bobbin thread through plate.

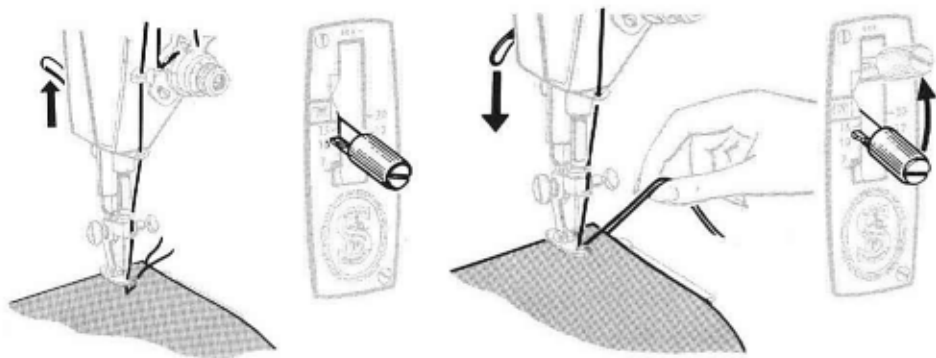


- Place both needle and bobbin threads diagonally under presser foot.

SEWING A SEAM

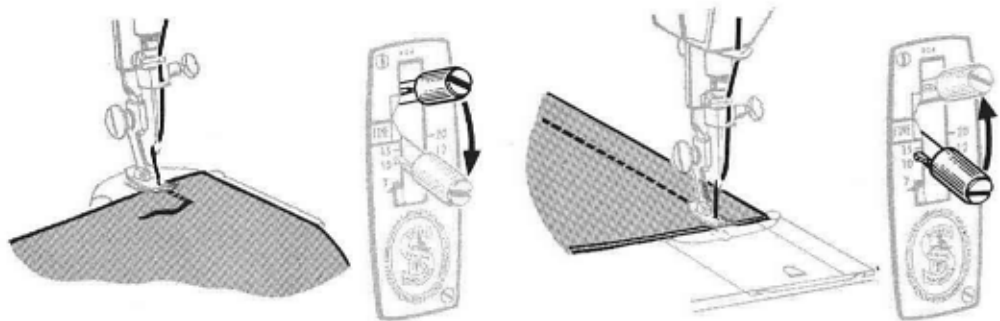
- Set stitch regulator for desired stitch length.
- Position needle into fabric about $\frac{1}{2}$ inch from edge.

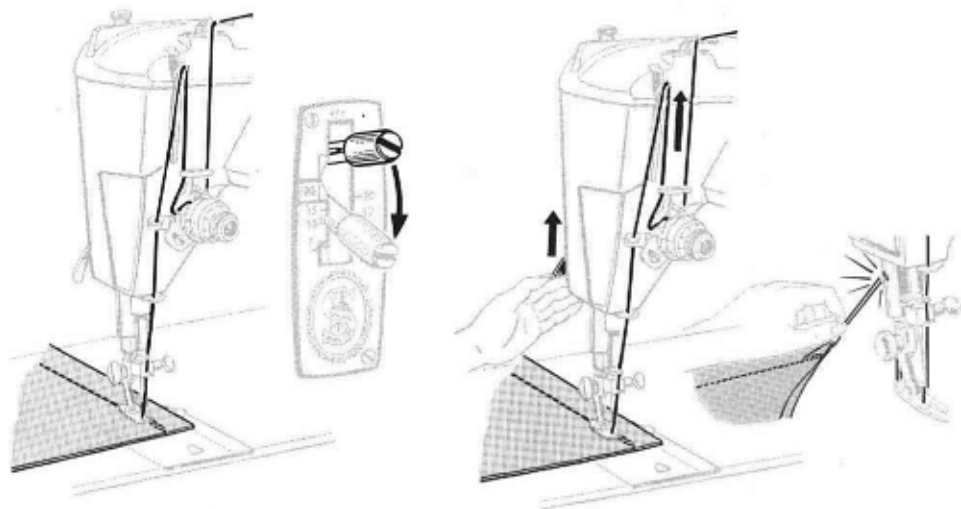
- Lower presser foot.
- Raise stitch regulator to reverse.



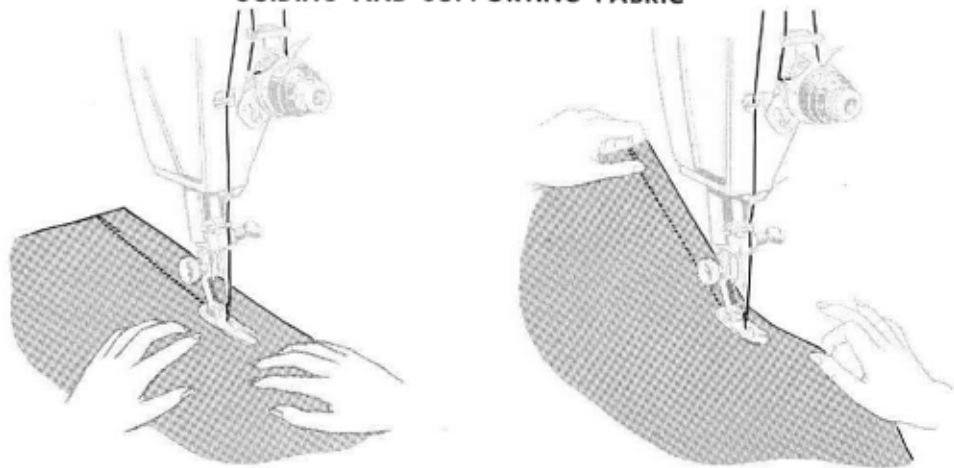
SEWING A SEAM (Cont'd)

- Back stitch to edge of fabric for reinforcement.
- Lower stitch regulator.
- Stitch to end of seam.
- Raise stitch regulator.





- Back stitch to reinforce end of seam.
- Lower regulator to forward stitching position.
- With take-up lever at highest point, raise presser foot and remove fabric.

GUIDING AND SUPPORTING FABRIC

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

Fabrics of unusual texture and weave, filmy sheers, crepes, knits, tricots, etc., require support while being stitched.

For such fabrics, use a gentle tension on the seam by holding both in front and back of the presser foot as illustrated.

PRESSURE ADJUSTMENTS

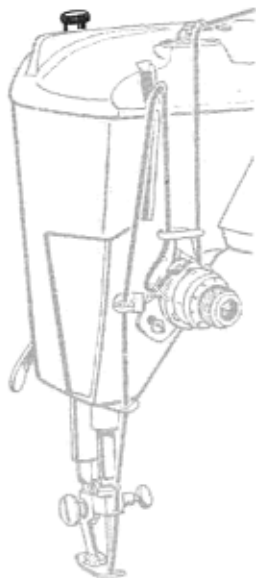


Decrease



Increase

- To decrease pressure, turn thumb screw upward.
- To increase pressure, turn screw downward.



Adjustment of the thumb screw regulates the amount of pressure exerted on the material while it is being stitched.

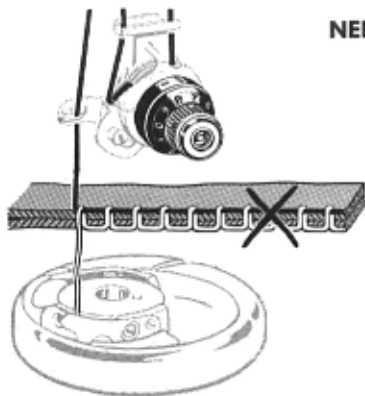
Smooth, even handling of several thicknesses of fabric results when pressure is correctly regulated.

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

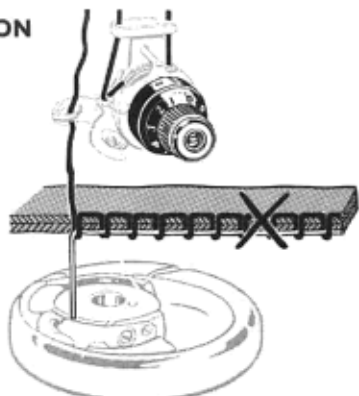
Too heavy a pressure not only affects stitch and seam quality but will mar smooth surfaces and pile fabrics.

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

NEEDLE THREAD TENSION



Needle thread tension too tight — correct by setting dial to lower number.

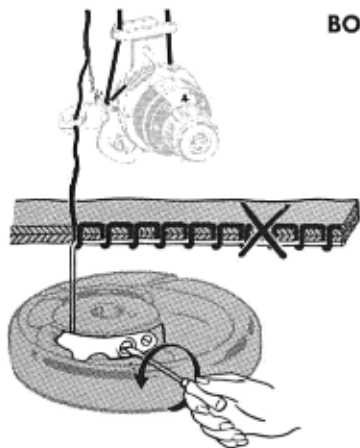


Needle thread tension too loose — correct by setting dial to higher number.

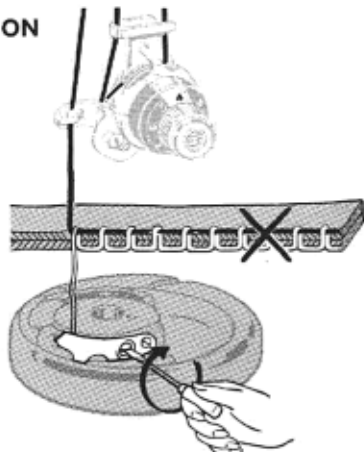


A perfectly locked stitch results with upper and lower tensions balanced so that needle and bobbin threads are drawn equally into fabric.

BOBBIN THREAD TENSION



Bobbin thread tension too tight—correct by turning screw counterclockwise.



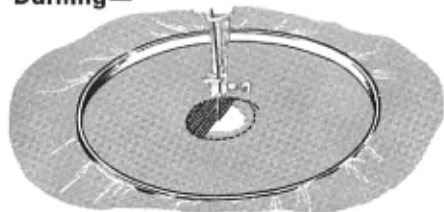
Bobbin thread tension too loose—correct by turning screw clockwise.



A perfectly locked stitch results with the upper and lower tensions balanced so that needle and bobbin threads are drawn equally into fabric.

FREE MOTION WORK

Darning—



Household linens, children's clothes and knit wear of all kinds can be repaired with the darning stitch.

Procedure—

- Trim away any ragged edges from the area to be darned. Center the worn section in embroidery hoops or the SINGER Stocking Darner (available separately) to hold it taut.
- Remove the presser foot.
- Elevate the throat plate by setting the lever in "UP" position.
- Position the work under the needle and lower the presser bar to activate the tension. Hold the needle thread loosely with the left hand, turn the hand wheel over and draw the bobbin thread up through the fabric with the loop of the needle thread. Hold both thread ends and lower the needle into the fabric.
- Outline the area to be darned with running stitches for reinforcement. Place the stitches $\frac{1}{4}$ " from the edge of the open area.
- Stitch across the opening, moving the hoops under the needle at a slight angle from lower left to upper right. Keep lines of stitching closely spaced and even in length.

FREE MOTION WORK

Darning (Cont'd)—

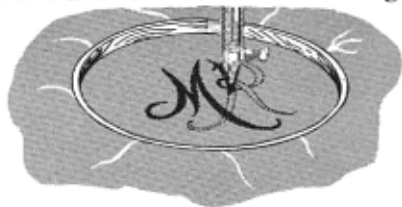
- Run machine at a moderate speed and control the hoops with a steady continuous movement. Slow movement of hoops will produce a short stitch, while more rapid movement lengthens the stitch.

Fairly long stitches are best for knit and tricot fabrics as they are softer and more flexible when the garment is worn. Short stitches are best for cottons and household linens as they approximate the weave of the fabric and are strong enough to withstand many launderings.

The darning and embroidery foot (available separately) will also contribute to the smooth handling of difficult materials as it provides a close control of both stitch and fabric.

Decorative Designs—

The darning technique is very effective when used for monogramming and in the creation of decorative designs.



Trace or transfer the design to be worked to the right side of the fabric, and place in embroidery hoops.

Designs may be "etched" by outlining with the short running stitch or filled by placing the stitches close together, using the back and forth hoop motion. For a crisp clean edge, filled portions should be outlined with a running stitch.

DARTS

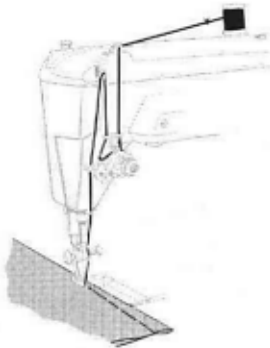
Darts provide fit and contour in a garment and should be accurately stitched.

A dart is usually stitched from the seam edge, tapering gradually to the point where the last three or four stitches parallel the fold. Stitch beyond the fabric to form a thread chain $\frac{1}{2}$ to $\frac{3}{4}$ inch in length. Tie the thread ends into a single knot close to the stitching.

**Single Thread Darts—**

Darts add styling and interest when stitched with fold to outside of garment. Thread ends at point of dart are eliminated when single thread principle is employed.

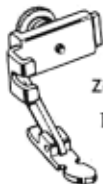
Unthread needle. Use thread leading off bobbin and rethread needle from back to front. Tie bobbin and upper threads together. Draw bobbin thread up through threading points, winding enough on the spool to complete a single dart. Lower needle into edge of fold at point of dart. Lower foot and stitch toward seam edge.



Instructions for using the ATTACHMENTS.....



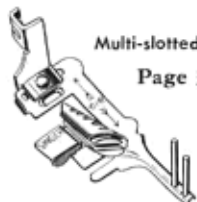
Seam Guide
Page 27



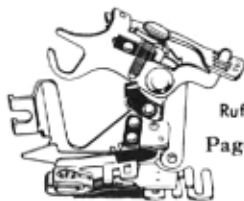
Zipper Foot
Page 29



Hemmer Foot
Page 34



Multi-slotted Binder
Page 37



Ruffler
Page 39



Gathering Foot
Page 45

THE SEAM GUIDE



The seam guide aids in attaining uniformity of seam width. It provides for stitching to be spaced at any distance between $\frac{1}{8}$ " to $1\frac{1}{4}$ " from the edge of the fabric.

APPLICATIONS

Seams

Top Stitching

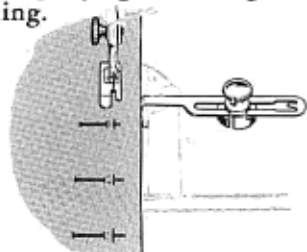
The seam guide is used in connection with the presser foot.

It is secured to the bed of the machine in either of the threaded holes to the right of the needle.

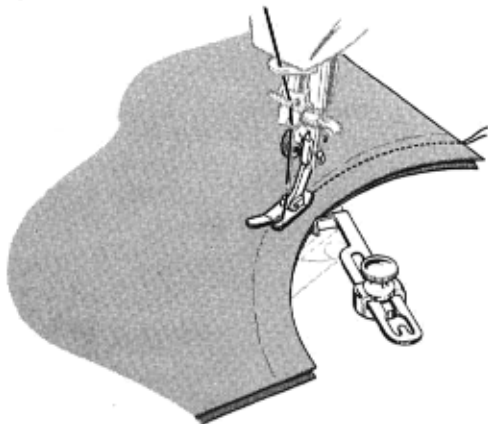
SEAMS

To guide seam stitching straight and parallel to the edge of the fabric, adjust the guide for proper seam width. Align the guide with presser foot.

Pin seam edges and baste if necessary. Hand basting can be eliminated on easy to handle fabrics. Place pins with the points toward the seam edge so they nip into the fabric at the stitching line. The hinged presser foot will ride freely over the points. Guide the fabric edges lightly against the guide while stitching.

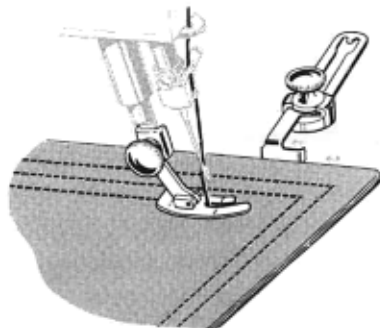


Curved seams require additional treatment in handling. A shorter stitch will provide greater elasticity and strength. Set the seam guide at an angle so that the end closest to the needle acts as a guide.

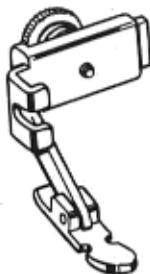


Top Stitching is a simple and practical way to accent the lines of a garment and at the same time give additional firmness.

Either single or multiple rows of stitching can be expertly placed along lapels and facing edges, around collars and pockets and as a hem finish.



THE ZIPPER FOOT



This foot is designed to facilitate the placement of stitching close to a raised edge. The hinged feature of this foot insures even feeding over pins, heavy layers of fabric or cross seams. It is attached to the machine in place of the regular presser foot, and may be adjusted to either the right or left side of the needle.

APPLICATIONS

Zipper Insertions
 Tubular Cording
 Corded Seams
 Slip Cover Welting

Preparation—

- Secure zipper foot to presser bar as you would the regular presser foot.

Adjustment to right or left of needle is made by loosening thumb screw at back of foot.

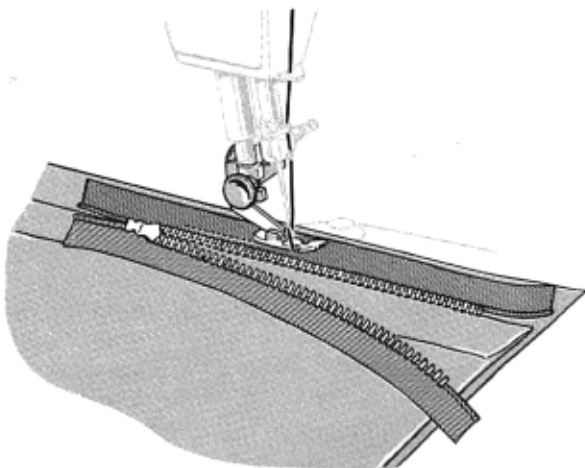
With foot down, check position of foot by lowering needle into side notch, making sure it clears foot.

Lock into position by tightening thumb screw.

ZIPPER INSERTION

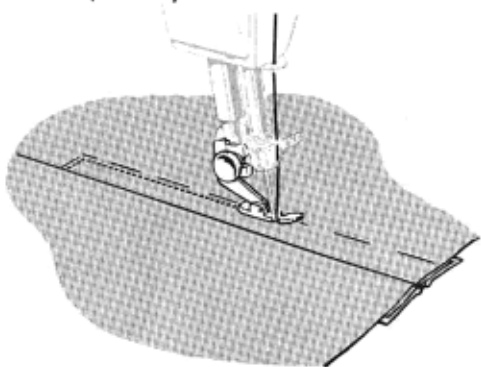
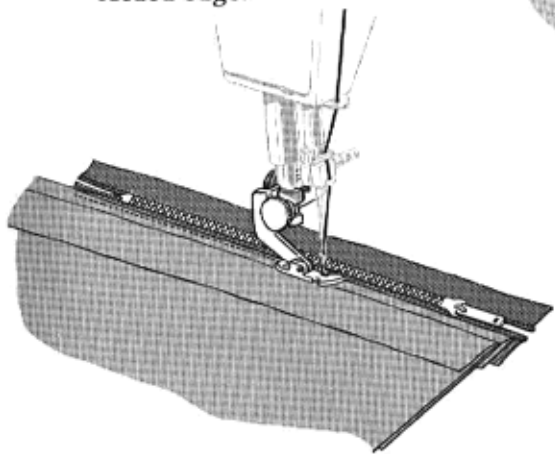
Skirt Zipper—

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



ZIPPER INSERTION (Cont'd)

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



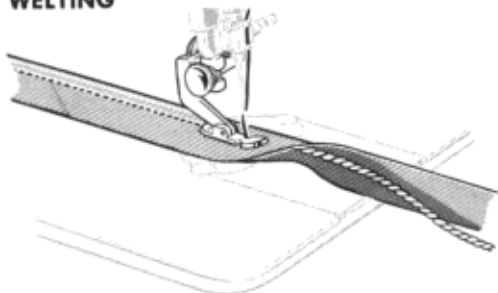
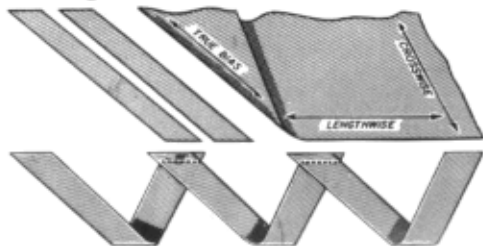
- Turn skirt to the right side and fold zipper to the front of the garment.
- Pin in place from the right side.
- Baste.
- Move the foot to the right.
- Stitch across the lower end of the zipper and up to the waistline.
- Remove basting.

CORDED WELTING

Cable cord comes in a variety of sizes. When covered with a firmly woven fabric, it makes a corded welting that is an excellent seam finish.

This welting is prepared in advance and then stitched into the seam.

- Cut a true bias strip $1\frac{1}{4}$ inches wide, plus three times the width of the cord of either self or contrasting fabric.
- Sew strips together on the lengthwise grain to obtain desired length.



- Adjust zipper foot to the left side of the needle.
- Encase the cord in the bias strip, raw edges even.
- Lower presser bar.
- Stitch close to the cord, using a stitch length slightly longer than for seaming the weight of fabric being used.

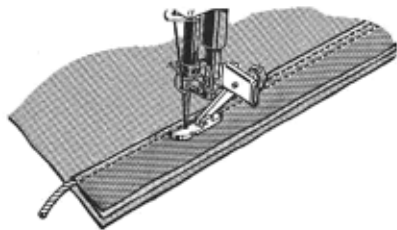
Do not crowd the stitching against the cord.

CORDED SEAMS

The corded seam is a typical treatment for slip covers, children's clothes, blouses and lingerie.

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

Attach the corded welting to the right side of a single seam edge, with the same stitch length used to make the welting ([page 32](#)). Guide the edge of the foot next to the cord but do not crowd.

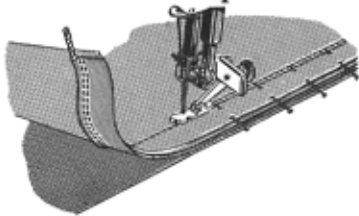


Place the attached corded welting over the second seam edge, and pin or baste together.

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

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

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



THE FOOT HEMMER



The narrow hemmer forms and stitches a perfectly turned hem without basting or pressing. It is attached to the machine in place of the regular presser foot.

APPLICATIONS

Fine hems	Hemming with lace
Edging ruffles	Lace insertion
Sheer seams	Lingerie finishes

Procedure—

- Attach foot hemmer to presser bar in place of regular presser foot.
- At very edge of fabric form a double $\frac{1}{8}$ " fold. Crease this fold for about 2".
- Draw bobbin and needle threads under hemmer.
- Place fabric under foot and stitch through creased fold for several stitches.

- Hold thread ends in left hand and guide raw edge in front of hemmer evenly into scroll.
- Sew slowly, still holding thread ends until hem is well started.

Soft fabrics will enter the scroll best with the foot down; firm, crisp materials with the foot raised.

Even feeding is essential to good hemming. The same width of fabric must be kept in the scroll of the hemmer at all times. A little practice will result in perfectly formed hems.

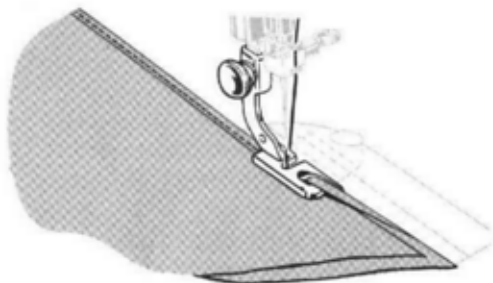


HEMMED SEAMS

A hemmed seam is applied where a fine narrow seam is appropriate. The procedure is the same as when making a plain hem except that the upper layer of fabric is held about $\frac{1}{8}$ " to the left of the lower layer to avoid bulk.

The hemmed seam may be started in the same manner as when starting a hem.

The seam may be stitched flatly to the garment, if a flat seam is desired. Open the work out flat, then insert the hem into the scroll. The hemmer will regulate the stitching uniformly from the edge of the hemmed seam.



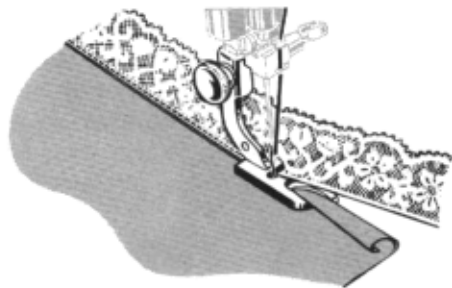
HEMMING WITH LACE

Most of the popular kinds of lace edging and insertion can be applied with the foot hemmer. It is an excellent way to trim children's clothes and to finish lingerie hems.

Lace Applied Over Hem—

- Fold and start hem the usual way.
- Starting about 1" down from end of lace, place selvage under needle to hold lace firmly.
- Raise foot slightly and slip lace under back portion of foot, without disturbing position of fabric.
- Stitch slowly, guiding fabric with right hand, the lace with left.

Take care not to stretch the lace.

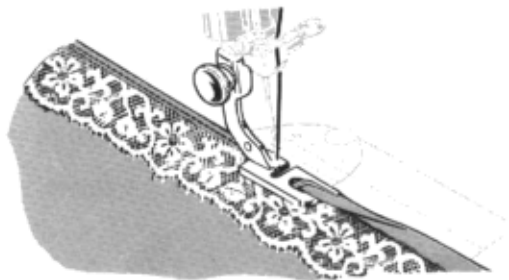


Lace Applied Under Hem—

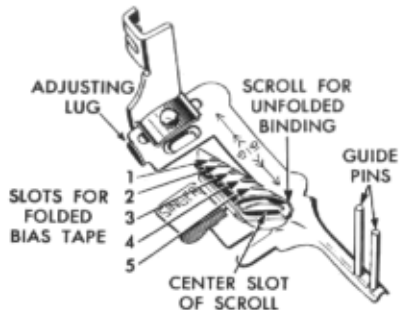
Proceed the same way as when making a hemmed seam.

- Slip lace in from the left as you would the second piece of fabric.

This method is used where a neat finish is desired on both sides of the material.



MULTI-SLOTTED BINDER



The multi-slotted binder is used to apply commercial binding as well as self fabric bias to an unfinished edge.

This colorful trim is attractive when applied to children's wear, aprons and fabric furnishings. It is a practical finish for seam edges that ravel and for making bound seams.

Cut binding diagonally to form a long point. Commercial binding in sizes 1 to 5 is inserted from the right into the appropriate slot in the scroll. Unfolded bias $\frac{15}{16}$ of an inch wide is inserted into the opening at the end of the scroll.

Procedure—

- Attach binder to presser bar in place of regular presser foot.
- Pull binding through scroll until the evenly folded edges are under the needle. The free length of the binding is held between the guide pins.
- Insert edge to be bound into center of scroll.
- Position stitching close to edge of binding by moving scroll portion of attachment to right or left by means of adjusting lug.

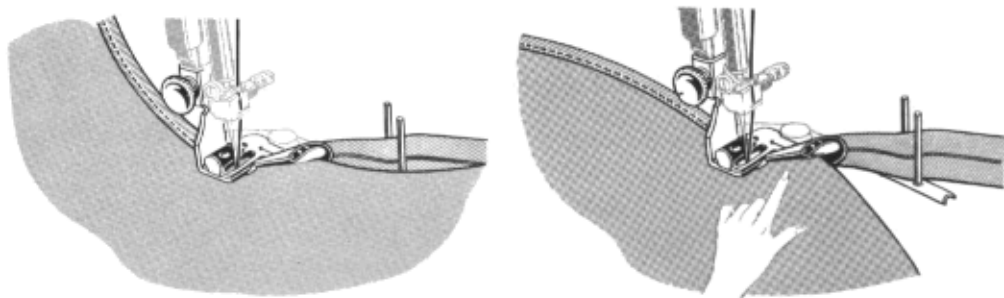
MULTI-SLOTTED BINDER

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

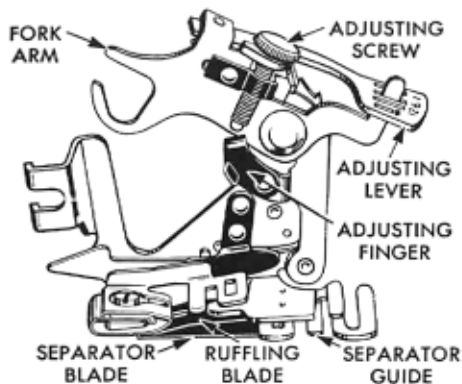
Curved edges require slightly different fabric handling than straight edges.

Inside curves are straightened as they are fed into the binder. If the fabric is soft and has a tendency to stretch, reinforce the edge with a single row of stitching before binding.

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



THE RUFFLER



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

Adjusting Points—

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

2. The adjusting finger is used only for pleating and affects the width of the pleat. It is thrown out of action by bringing it out of contact with the adjusting screw, located directly above it.

3. The adjusting screw regulates the fullness of gathers or pleats. When turned down to its limit with the adjusting finger in place, the attachment is set for its deepest pleat. When turned upward to its limit and the adjusting finger out of action, the ruffler gives only a hint of fullness.

THE RUFFLER

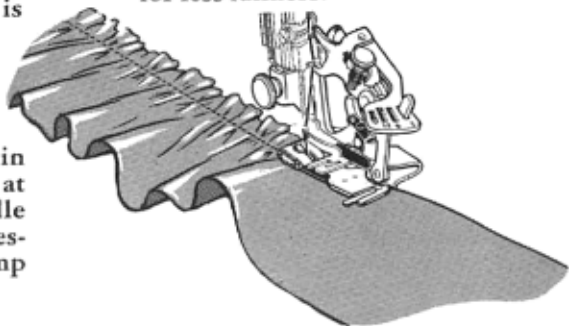
Activating Parts. The ruffling blade and the separator blade are of blue steel and hold the material to be gathered between them. The ruffling blade forms the gathers or pleats by carrying the fabric to the needle according to the spacing and fullness to which the ruffler is adjusted. The separator guide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

Preparation—

- Raise needle to its highest point.
- Locate attachment on machine in place of regular presser foot, at same time fit fork arm over needle clamp screw. Make sure both presser bar screw and needle clamp screw are tightened securely.

Gathering—

- Set adjusting lever on Number 1 setting and throw adjusting finger out of action.
- Turn adjusting screw for amount of fullness desired and set stitch length to space fullness. For maximum fullness, turn adjusting screw all the way down; turn upward for less fullness.



THE RUFFLER

The length of the sewing machine stitch also affects ruffle fullness. Since a given attachment setting puts an equal amount of fullness into each stitch regardless of its length, shortening the stitch (more stitches to the inch) makes the ruffle fuller; lengthening the stitch (fewer stitches to the inch) makes it less full. For fine, closely spaced gathering use a short stitch and an upward adjustment of the adjusting screw. For deeper, less closely spaced gathering, turn the adjusting screw downward and use a medium length stitch.



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

The texture of the fabric influences the performance of the ruffler as well as the results. Soft fabrics, cut on the crosswise grain, are best adapted for gathering ruffles. Always test stitch length and ruffler setting on a scrap of self fabric before proceeding with the actual work.

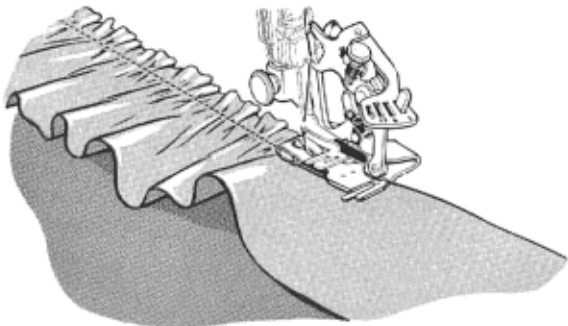
THE RUFFLER

Attaching ruffle—



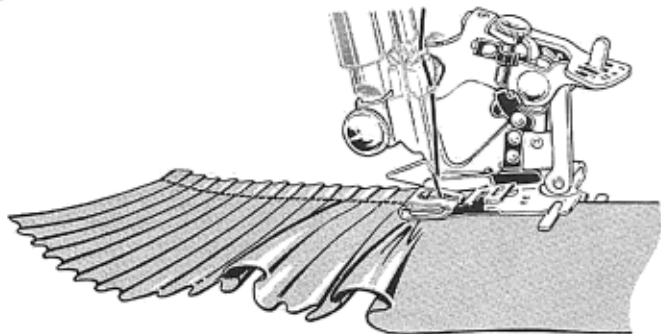
- Place ruffle strip between two blue blades and through first separator guide.
- Place material to which ruffle is to be attached between separator blade and feed of machine.
- Proceed as for plain gathering.

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



THE RUFFLER

Pleating—



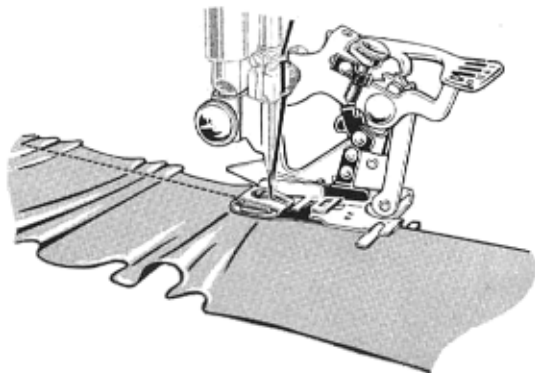
- Move adjusting lever of ruffler to desired space setting for pleats either 6 or 12 stitches apart.
- Set stitch length.
For deepest pleat, activate adjusting finger and turn adjusting screw downward to its maximum setting. For smaller pleats turn adjusting screw upward.
- A short stitch places pleats more closely together; a long stitch separates the pleats for a greater distance.
- Insert fabric to be pleated between blue blades and into first separator guide.
- Lower presser bar and stitch.

THE RUFFLER

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

Group Pleating—

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



THE GATHERING FOOT



Single or multiple rows of shirring can be quickly and expertly placed with the gathering foot. Evenly spaced shirring is ensured as this foot is designed to lock fullness into every stitch.

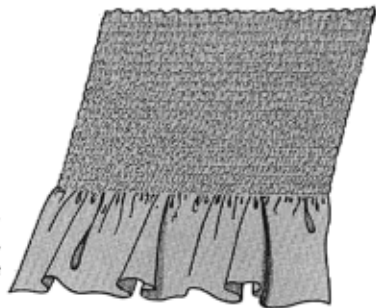
Procedure—

- Attach gathering foot to presser bar in place of regular presser foot.
- Place material under gathering foot and stitch in usual way.

Shirring is usually done on the crosswise grain of the fabric. Soft fabrics lend themselves to shirring better than firm fabrics.

The amount of fullness is very simply controlled by stitch length and degree of tension.

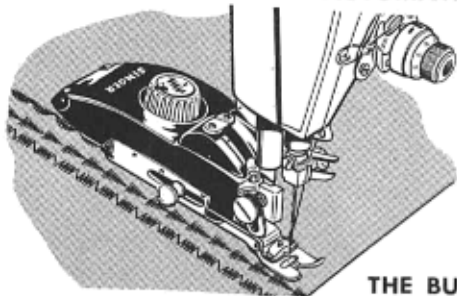
Longer stitch lengths and heavier needle and bobbin thread tensions produce more fullness than shorter stitch lengths and lighter tensions. Both upper and lower tensions should always be balanced.



FASHION® AIDS

(available for separate purchase at your local SINGER SEWING CENTER)

AUTOMATIC ZIGZAGGER



Decorative stitch patterns for border designs, lace applications and applique are accomplished automatically with the SINGER Zigzagger.

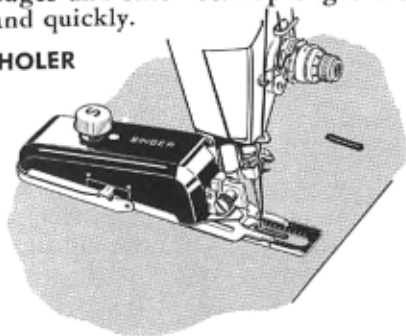
This time-saving attachment will also blindstitch hems, mend rips and tears, reinforce seams, overedge seam edges and stitch scallop edges easily and quickly.

THE BUTTONHOLER

Beautiful, evenly stitched button-holes are quickly and easily made with the SINGER Buttonholer.

The attachment makes both straight and eyelet-end styles, automatically guiding them to the size and shape selected.

Nine different lengths are available, ranging from $\frac{5}{16}$ " to $1\frac{1}{16}$ ".





DARNING AND EMBROIDERY ATTACHMENT

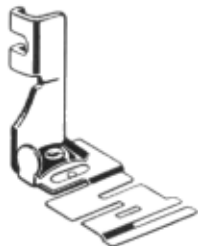
Free motion darning and decorative work are accomplished with greater ease and more expert results when the Darning and Embroidery Attachment is used.

This specially designed foot holds the fabric firmly while the needle enters and rises out of the work, while fully revealing the line of the design to be followed.

THE EDGE STITCHER

This attachment provides a series of slotted guides which regulate the placement of stitching in relation to a fabric edge.

Among its many decorative and practical applications are the joining and insertion of lace, tucking from pin width to $\frac{1}{4}$ ", French seaming, and seam piping, facing and seam finishing.

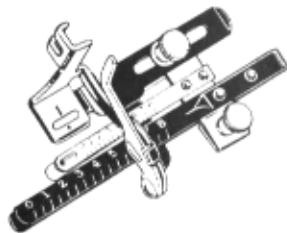


TUCKER

Since the beauty of tucking lies in its explicit accuracy, use of the Tucker will contribute greatly to the attractiveness of the work.

With this time-saving attachment, tucks up to one inch may be stitched and marked in one operation.

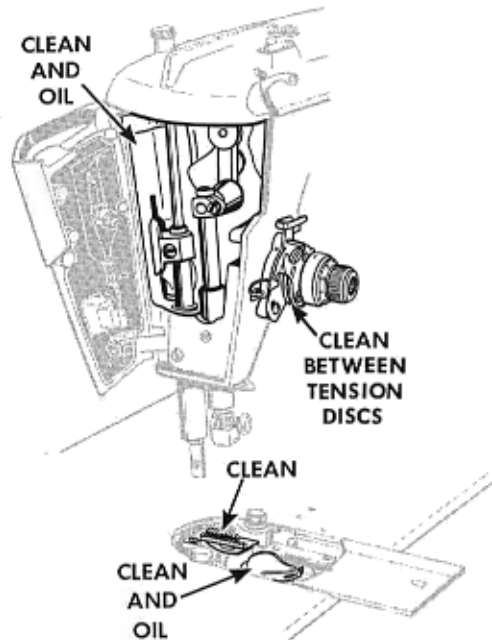
Two adjustable scales are provided to gauge tuck width and spacing.



CARE and MAINTENANCE
of your SINGER 404

Your sewing machine was built to exacting standards of precision and workmanship. Its performance depends on the care and treatment it receives when in use and before storing it away.

TO CLEAN THE MACHINE



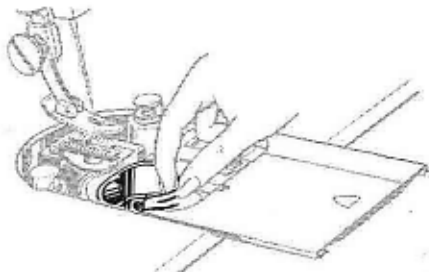
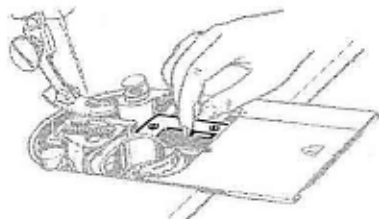
When in regular use—

The machine should be cleaned periodically to remove the lint and fluff which may have accumulated around the working parts. To clean the bobbin case area, see instructions for removing and replacing bobbin case on page 50. Oil the machine after each cleaning as instructed on pages 51, 52 and 53.

When stored—

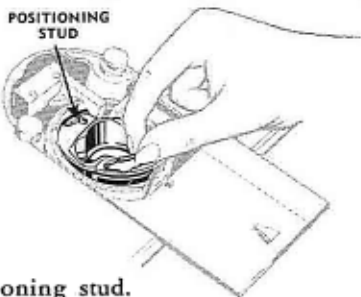
If the machine is to be stored away for an indefinite period of time, a thorough brush-cleaning to remove all traces of lint and fluff, followed by swabbing of all exposed parts with the lint-free brush saturated with SINGER* Oil, is necessary to protect the machine against rust damage. The areas that should be cleaned and covered with a protective coat of oil are shown in the illustration at the left.

TO REMOVE AND REPLACE BOBBIN CASE



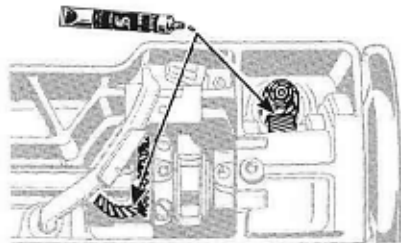
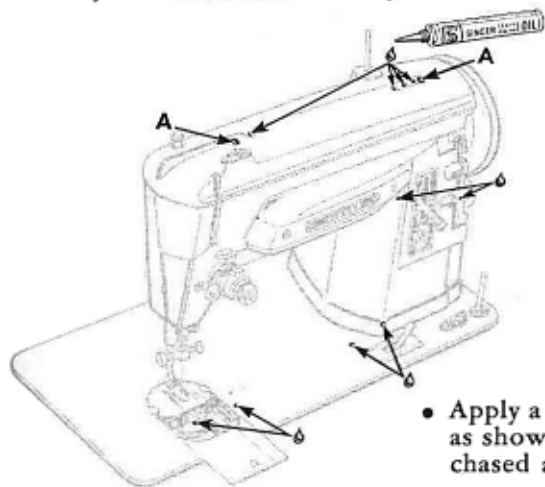
To clean hook raceway, remove bobbin case as follows—

- Remove throat plate (see page 14) and open slide plate (see page 10).
- Unlock bobbin case by lifting and pulling holder to right as shown.
- Remove bobbin case from machine.
- Remove all lint, fluff, loose thread ends or any other foreign matter which might clog the machine.
- Replace bobbin case so that groove under tension spring fits on hook raceway and fork of case straddles positioning stud.
- Push bobbin case holder to left until it snaps down into lock position.
- Close bed slide and replace throat plate.



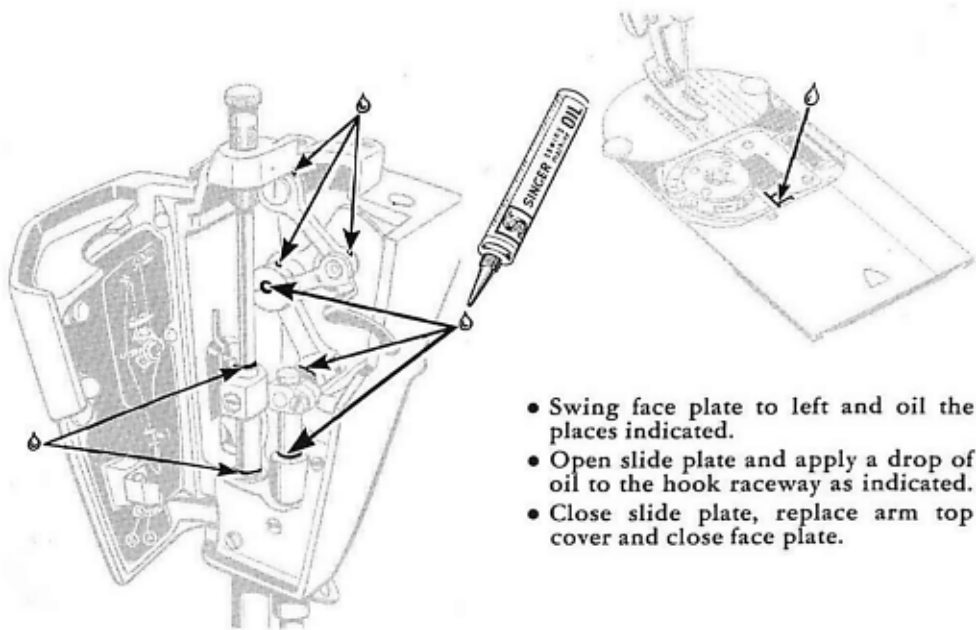
TO OIL THE MACHINE

To keep your machine in top condition, use SINGER Oil and SINGER* Lubricant. Both are quality products especially prepared for sewing machines, and should always be used in the care of your 404.

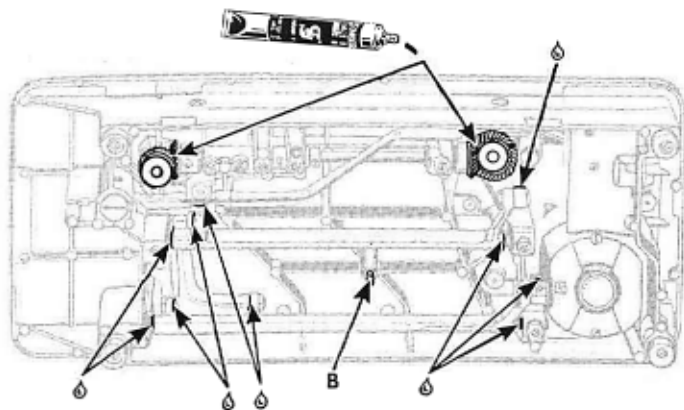


- Clean the machine periodically as instructed on page 49.
- Apply a drop of oil to each place indicated.
- Remove screws A and lift off arm top cover.
- Apply a small amount of lubricant to the gears as shown. A tube of this lubricant can be purchased at your SINGER SEWING CENTER.

NEVER APPLY OIL TO THE GEARS



- Swing face plate to left and oil the places indicated.
- Open slide plate and apply a drop of oil to the hook raceway as indicated.
- Close slide plate, replace arm top cover and close face plate.



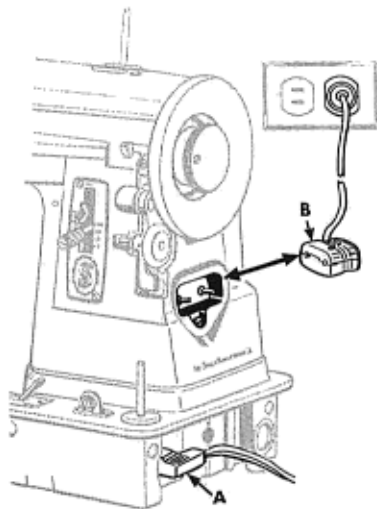
Tilt machine back and remove thumb nut from screw **B**, being careful not to lose felt washer, and remove cover from underside of machine.

Oil each of places indicated by arrows and occasionally apply a small quantity of lubricant to teeth of gears as shown.

Replace bottom cover.

THE MOTOR REQUIRES NO LUBRICATION.

ELECTRICAL INFORMATION



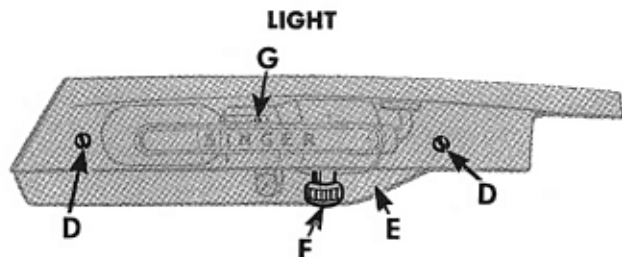
The **SINGER*** Electric Motor in your sewing machine is furnished for operation on an alternating current of 110-120 volts, 25 to 75 cycles, or on 110-120 volts direct current. Special motors can be provided through your **SINGER SEWING CENTER** for direct or alternating current for any voltage between 50 and 145, and for 32 volts direct current.

Before Inserting Electric Plug, be sure that the voltage and the number of cycles stamped on the two-pin terminal block are within the range marked on your electric meter installed by your power company.

Electrical Connections for Machine. Push 2-pin terminal plug **A** on 2-pin terminal block at right end of bed.

Push 2-pin terminal plug **B** on 2-pin terminal block at right of machine and connect plug at other end of cord to electrical outlet.

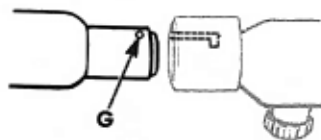
Speed Controller. The speed of machine is regulated by amount of pressure on the pedal of the foot controller or the knee lever.



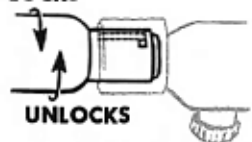
The light is turned "on" or "off" by the switch **F**.

To Remove Bulb. Remove two screws **D** and lamp cover **E**. Do not attempt to unscrew bulb. Press it into socket and at same time turn bulb over in direction shown to unlock bulb pin **G**, then withdraw bulb.

To Replace Bulb. Press new bulb into socket with bulb pin **G** entering slot of socket and turn it over in direction shown to lock bulb pin **G** in position. Replace lamp cover **E** and securely fasten it in position with two screws **D**.



LOCKS



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To all whom it may concern:

The improper placing or renewal of the trademark "**SINGER**" or any other of the trademarks of The Singer Manufacturing Company (all of which are duly Registered Trademarks) on any machine that has been repaired, rebuilt, reconditioned, or altered in any way whatsoever outside a SINGER factory or an authorized SINGER agency is forbidden.

For your protection

SINGER Sewing Machines are sold and serviced wherever you see the famous SINGER and Red "S" Trademarks. When your machine needs servicing call your SINGER SEWING CENTER to be sure of warranted SINGER parts and service. See address in the classified telephone directory.

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