Instructions for using

SINGER

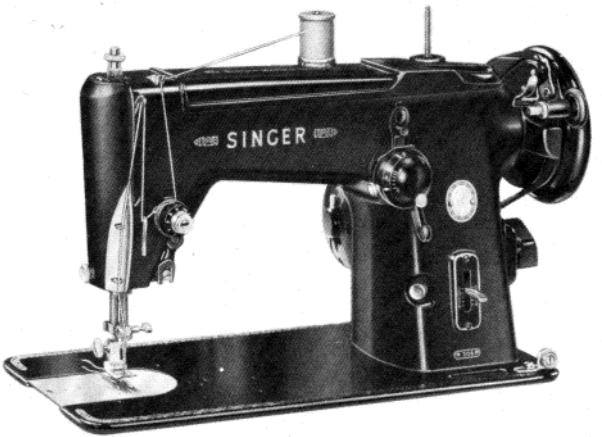
Sewing Machine 306K

THE SINGER MANUFACTURING COMPANY

SINGER*

ELECTRIC SEWING MACHINE

306K23



FOR
COMBINED
STRAIGHT
AND
ZIGZAG
LOCK STITCHING

THE SINGER MANUFACTURING COMPANY

*A Trade Mark of THE SINGER MANUFACTURING COMPANY

WHAT SINGER SERVICE MEANS TO YOU

Over 1400 SINGER SEWING CENTERS in the United States alone are fully equipped to serve women who sew.

There you'll find a wide selection of PATTERNS, BUTTONS, THREAD, and FINISHING SERVICES which include COVERING BUTTONS, MAKING BELTS AND BUCKLES, HEMSTITCHING, etc.

You are entitled to sewing lessons when you become the owner of a new SINGER. A skilled, SINGER-trained teacher personally guides you and assists you in learning the fundamentals of home sewing. Further courses embracing all phases of home sewing are available at low cost.

REPAIR SERVICE is as convenient as your telephone. Should your machine ever need adjustments, a trained, courteous SINGER representative will gladly call at your home. SINGER* Service assures excellent workmanship, guaranteed repairs, and SINGER* parts. A written estimate is given you in advance for approval.

And remember, your SINGER SEWING CENTER and the ever ready SINGER Service Car can be easily identified by the famous SINGER Red "S" Trade Mark.

AS THE OWNER OF THIS SINGER SEWING MACHINE:

You have a machine made with the same care and craftsmanship that have been the hallmark of SINGER Machines for more than a century. We are acutely aware that SINGER Sewing Machines have become an American tradition and are intensely proud of, and determined to continue, this heritage.

Your SINGER "306K" is the product of this pride, and of the determination and the unsurpassed technical skill of SINGER. This smooth-running machine-of-today will amaze and thrill you with its versatility and ease of operation.

Utilize all the advanced features, combine them with your own skill and discover a new world of sewing enjoyment. Exclusive dresses for yourself, clothing for your family and a multitude of items for your home will be yours — all at a fraction of their ready-made cost.

ADVANCED FEATURES OF THE SINGER 306K

• MORE VERSATILE STITCHING than ever before possible.

• FAST, EFFICIENT, EVER-READY for "on-the-spot" sewing, whether it be to mend a glove, sew on a button, make a dress or a trousseau, a buttonhole or a complete layette, a slip-cover or an embroidered guest towel, a snow-suit or a bridal veil.

• TWIN-NEEDLE DECORATIVE WORK can now be done without attachments, using the special Twin Needles.

• FRONT THREADING NEEDLE—visible eye is quickly threaded.

• ROTARY MOVEMENT — for smooth, quiet performance.

• FULL VISION BOBBIN CASE — facilitates removal and replacement.

• EXTRA-CAPACITY, TIME SAVING BOBBIN.

• CALIBRATED TENSION — for accurate adjustment to any type of fabric.

• REVERSIBLE FEED for sewing either in a forward or backward direction—easy to back tack and to fasten ends of seams.

• CALIBRATED STITCH REGULATOR — with finger-tip control.

• ONE-WAY NEEDLE CLAMP makes it almost impossible to place needle in clamp incorrectly.

• POSITIVE FEED—for handling all types of fabrics.

• FEED THROW-OUT DEVICE permits darning and embroidering without attachments.

• ALUMINUM CONSTRUCTION means durability and light weight.

• PERFECT CONTROL—whether high speed or stitch-by-stitch retarding is required, the "pick-up" and "stop" IS QUICK AND EFFORTLESS.

• LIGHT — illuminates working area — prevents eye-strain — lamp easily renewed.

ELECTRICAL INFORMATION

The SINGER Electric Motor*

is located at the back of the machine, and is regularly furnished for operation on an alternating current of 110-120 volts, 25-75 cycles, or on 110-120 volts direct current. Special motors can be furnished for direct or alternating current for any voltage between 50 and 250, and for 32 volts direct current.

Before Inserting Electric Plug—

be sure that voltage and number of cycles stamped on motor nameplate are within range marked on electric meter installed by electric power company.

Electrical Connections for Machine

Push 3-pin terminal plug **A, Fig. 1,** into 3-pin terminal block at right of machine and connect plug at other end of cord to electric outlet.

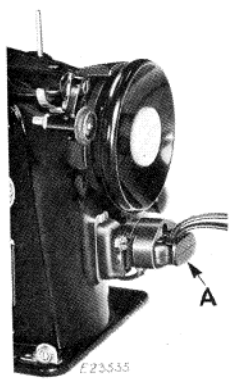


Fig. 1. Electrical Connection for Machine

Speed Controller

The speed of machine is regulated by amount of pressure on foot controller or knee controller.

CHART SHOWING RELATIONSHIP OF TYPES OF FABRICS, THREAD AND NEEDLE SIZES AND MACHINE STITCH SETTINGS

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 00 and 000 Silk Nylon 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 0 Silk Nylon Thread	11	12 to 15	15 to 20
Lightweight materials comparable to Gingham, Chambray, Pique, Poplin, Percale, 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	12	15 to 18
Medium heavy materials comparable to Corduroy, Crash, Gabardine, Rep, Heavy Suitings and Coatings	Heavy Duty Mer. 40 to 60 Cotton Nylon Thread	16	10	12
Heavy materials comparable to Sailcloth, Denim, Ticking, Overcoatings	30 to 40 Cotton Thread	18	8	10
Plastic materials	00 to 0 Mercerized 50 Embroidery	9 or 11	10	12

When ordering needles, always specify "Class and Variety 206 x 13" and state the size and quantity required.
*See **page 8** for ordering TWIN NEEDLES.*

NEEDLES AND THREAD

For perfect stitching, thread should be selected according to fabric to be stitched and needle must be correct size for thread to pass freely through eye of needle. Select correct needle according to table on **page 6.** Be sure that needle is not blunt or bent.

NOTE: Thread breakage is sometimes caused by variations in the diameter of thread. Such breakage is overcome by using the next size larger needle.

Use like threads for needle and bobbin. Do not use silk on bobbin and mercerized thread in needle or vice versa.

TO SET THE NEEDLE

Raise the needle bar to its highest position and loosen thumb screw **F, Fig. 2** in the needle clamp. Insert needle into clamp as far as it will go with **flat side to the back** and **long groove toward you.** Then tighten thumb screw **F.**

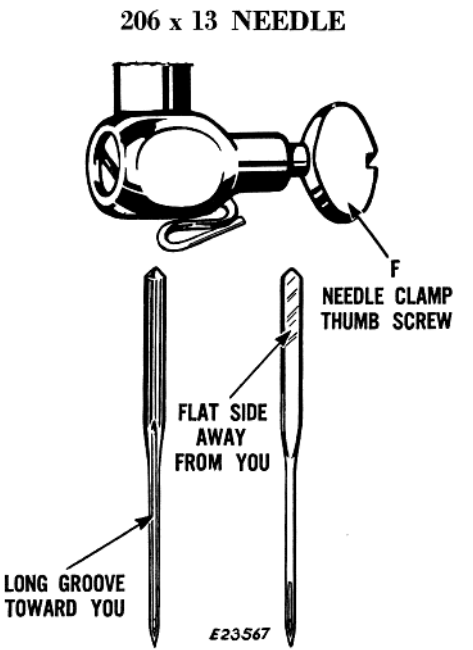


Fig. 2. Setting Needle in Needle Clamp

TO SET TWIN NEEDLES

Follow same procedure as described for setting single needle (see **page 7**).

CAUTION: Before stitching with TWIN NEEDLES be sure that Needle Position Lever is set for central position as shown in **Fig. 22, page 18** and that the machine is not operated at a bight exceeding the number shown on the cross bar of the TWIN NEEDLES. Set bight limit screw **F2, Fig. 24** at a point equivalent to the number on the cross bar, using the method described on **page 19.** Should a narrower bight be desired, screw **E2, Fig. 24,** is used in addition to screw **F2.**

In performing TWIN NEEDLE work, the All-purpose Throat Plate and Presser Foot (or Satin Stitching Foot) must be used in addition to setting the machine as described above. **Failure to heed this caution will result in the blunting or breaking of the needles.**

Straight stitching, zigzag stitching, as well as ornamental stitching can be performed when using TWIN NEEDLES.

When ordering TWIN NEEDLES, it is necessary to specify the class and variety (306x1), and the space number, such as "3", as well as the size of the needles.

306 x 1—3 NEEDLES

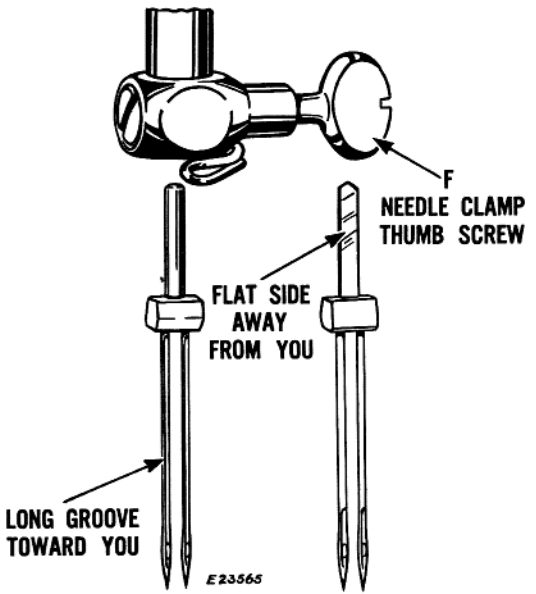


Fig. 3. Setting Twin Needles in Needle Clamp

UPPER THREADING—SINGLE NEEDLE

Raise take-up lever **5** to its highest point.

Place spool of thread on spool pin and hold spool with right hand.

Lead thread into self-threading guide **1** from under side

Down and from right to left behind or in front of center tension disc **2** (Center disc separates threads for twin needle sewing.)

Into the loop of the take-up spring **3**

Under the slack thread regulator **4**

Up and from right to left through hole in take-up lever **5**

Down through guides **6** and **7** on face plate

Into guide **8** on needle clamp

From **front to back** through eye of needle **9.**

Draw about two inches of thread through eye of needle with which to start sewing.

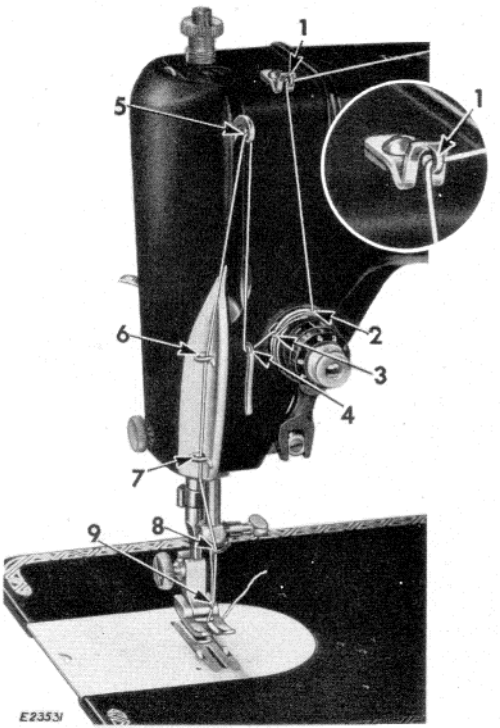


Fig. 4. Upper Threading

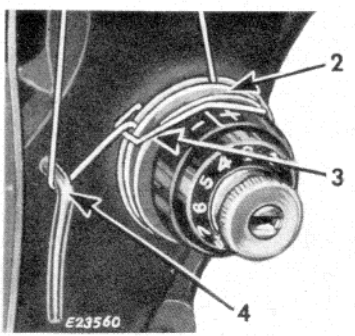


Fig. 5. Upper Threading Around Tension

UPPER THREADING—TWIN NEEDLES

Raise take-up lever **5** to its highest point. Place a spool of thread on each of the two spool pins. Thread each threading point with one thread at a time in the same manner as for single needle threading with the following exceptions:

Pass one thread between the rear and center tension discs **2** and the other thread between the center and front tension discs.

Thread eye of each needle from front to back.

Be sure that threads do not cross over or bind each other. Draw about two inches of thread through eye of each needle with which to start sewing.

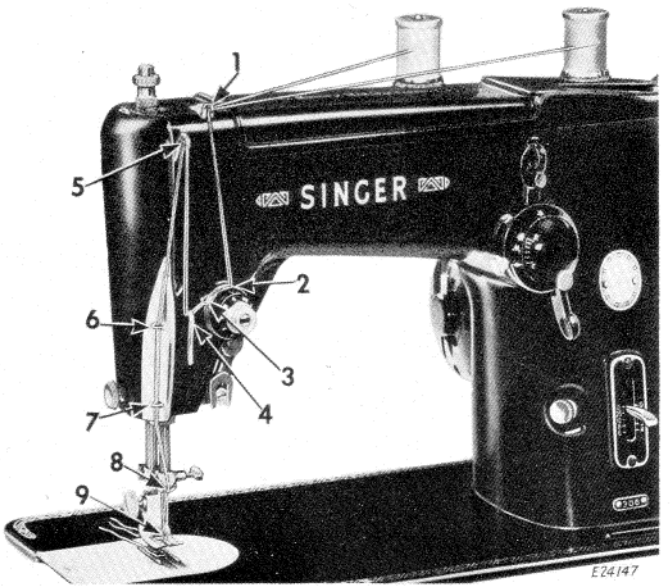


Fig. 6. Upper Threading (Twin Needles)

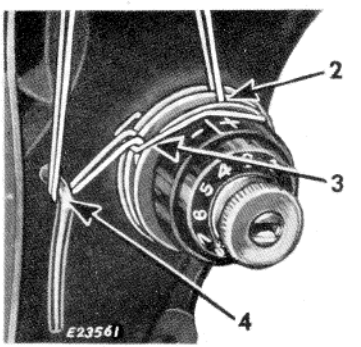


Fig. 7. Upper Threading Around Tension (Twin Needles)

TO REMOVE THE BOBBIN

Raise needle to its highest point.

Tilt machine back on its hinges.

Open latch **G, Fig. 8** and lift out bobbin case.

Release latch and remove bobbin.

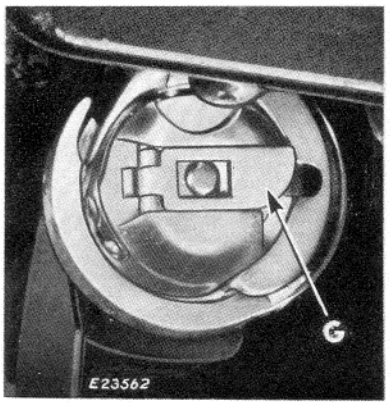


Fig. 8. Removing Bobbin Case

TO WIND THE BOBBIN

See Figs. 9 and 10

Hold hand wheel **J** with left hand, and, with right hand, loosen stop motion screw **K** to release hand wheel from stitching mechanism.

Place bobbin on bobbin winder spindle and turn bobbin until spindle pin enters slot in right side of bobbin.

Lock bobbin in place by pressing bobbin winder against hand wheel until latch **H** engages.

Place spool of thread on either spool pin.

Draw thread through self-threading guide **2** on arm of machine and pass thread down and from left to right under tension **3** on bed. Lead thread up to bobbin and thread from inside, through slot in left side of bobbin **4.**

Hold end of thread as shown in **Fig. 10** and press controller pedal as for sewing. End of thread must be held until it breaks off.

Allow tension discs **3, Fig. 9** to control flow of thread so that it winds on bobbin in uniform, level rows. Do not guide or hold thread when winding bobbin.

The bobbin winder will stop automatically when the bobbin is filled. When less than a full bobbin is desired, lift latch **H, Fig. 9.**

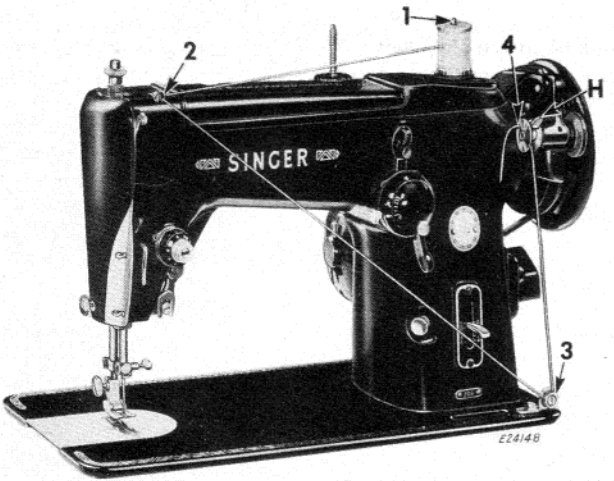


Fig. 9. To Wind the Bobbin

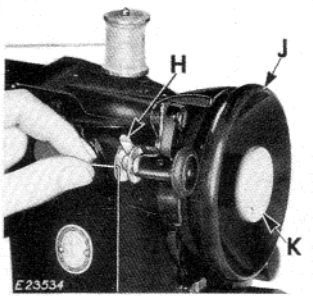


Fig. 10

Remove bobbin from spindle and retighten screw **K, Fig. 10.**

NOTE: If bobbin does not wind evenly, loosen screw which holds tension bracket **3** in position and move bracket to the left if bobbin winds high on the right; move bracket to the right if bobbin winds high on the left. When bracket is properly centered, thread will wind evenly across bobbin. Retighten tension bracket screw.

Bobbin can be wound while machine is sewing.

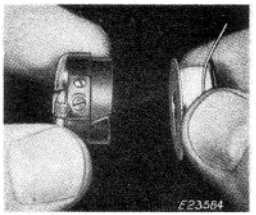


Fig. 11

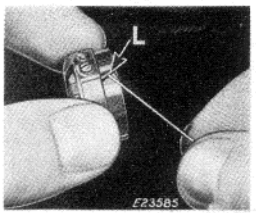


Fig. 12

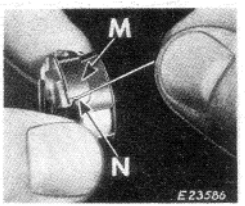


Fig. 13

TO THREAD BOBBIN CASE

Hold bobbin so that thread will unwind in direction shown in **Fig. 11.**

Hold bobbin case as shown in **Fig. 11** and place bobbin into it.

Pull thread into slot **L, Fig. 12** under tension spring **M, Fig. 13** and into slot **N** at end of spring. Allow about three inches of thread to hang free from bobbin case.

TO REPLACE BOBBIN CASE

Grasp bobbin case between left thumb and forefinger at latch hinge point as shown in **Fig. 14.**

Tilt right edge of bobbin case slightly to engage post.

Release bobbin case and press thumb against bobbin case until it snaps in place.

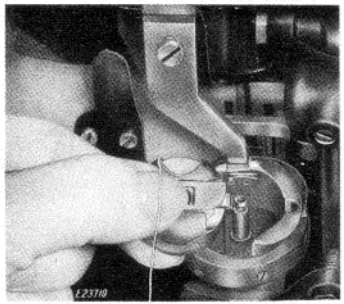


Fig. 14. Replacing Bobbin Case

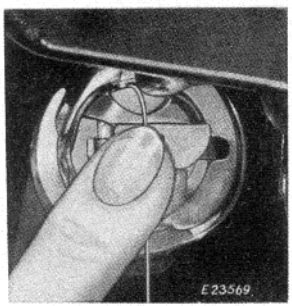


Fig. 15. Bobbin Case Threaded and Replaced

TO PREPARE FOR SEWING

This SINGER Class 306K Machine comes equipped with an All-purpose Throat Plate 105144, and an All-purpose Hinged Presser Foot. The throat plate and presser foot have the same wide opening to accommodate the swing of the needle. With the equipment illustrated below, the machine can perform:

STRAIGHT • ZIGZAG • ORNAMENTAL STITCHING

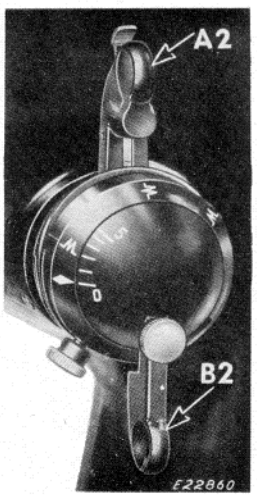
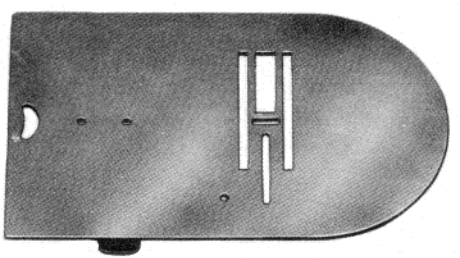


Fig. 16. Bight Control Set for Straight Stitching

FOR ALL-PURPOSE STITCHING, use



105144 All-purpose Throat Plate

105069 All-purpose Hinged Presser Foot

TO PREPARE FOR SEWING (continued)

Set Needle Position Lever and Bight Control Lever for straight stitching as shown in **Fig. 22, Page 18.**

Hold end of needle thread with left hand and turn hand wheel over toward you until needle goes down and up again, and thread take-up lever **P, Fig. 19** is at its highest point.

Pull up needle thread and bobbin thread will come with it, as shown in **Fig. 17.**

Lay both threads back under presser foot diagonally across feed to the right or left depending upon the side of the needle on which material is to be located so that when the presser foot is lowered the threads will be firmly held between the feed and the presser foot.

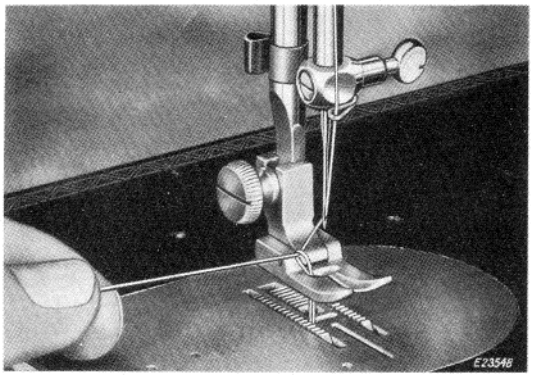


Fig. 17. Drawing Up Bobbin Thread

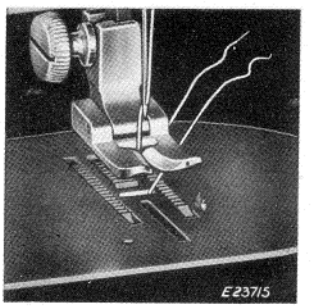


Fig. 18. Threads in Position to Start Sewing

TO START SEWING

Be sure to have take-up lever **P** at its highest point.

Adjust Needle Position Lever (see **page 18**) and Bight Control Lever (see **page 19**) to the desired setting.

For zigzag stitching, turn hand wheel over toward you until needle is ready for its extreme left stroke at left needle position; or its extreme right stroke at right needle position.

Place the material beneath the presser foot **S**, position needle in fabric, lower the foot. Hold threads which have been drawn to back and right under the foot.

Press controller pedal to start machine.

The speed depends upon amount of pressure on controller pedal.

Most materials require only guiding for best sewing results. However, the miracle fabrics, such as nylons, dacrons, orlons, blends with various rayons, puffed weaves, sheers, jerseys and tricots, which, by their nature, require light pressure, also require support in the form of holding the material taut at the back and front of the needle as the needle enters the fabric. This support assures a smooth, even seam.

Never pull the material when sewing.

Never operate machine without cloth under presser foot.

TO REMOVE THE WORK

Stop machine with thread take-up lever **P, Fig. 19** at its highest point. Raise presser foot **S,** draw fabric back and to left and sever threads on thread cutter **R.** Place ends of threads under presser foot diagonally across feed **T** as shown in **Fig. 18, page 15.**

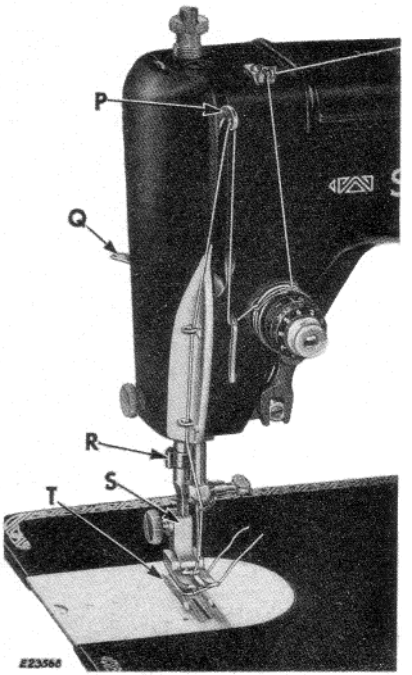


Fig. 19

TO REGULATE LENGTH OF STITCH

The machine is adjustable to make from 6 to 28 straight stitches per inch as indicated by the numerals on the left of the stitch indicator scale. When zigzag stitching, the stitch regulator controls the lengthwise distance between needle penetrations.

The **top** of the stitch regulator lever **J3** is the index for setting stitch lengths.

To lengthen stitch, loosen limit screw **K3** enough to allow stitch regulator lever **J3** to be lowered just below number desired.

Turn limit screw **K3** until top of stitch lever **J3** rises to setting desired.

The use of the limit screw **K3** is especially desirable in obtaining fine stitch adjustments between 25 and 0 for such work as bar tacking or satin stitching.

Numbers on the stitch regulator scale are relative and enable the operator to restore any previous stitch setting.

TO REGULATE STITCH LENGTH FOR SATIN STITCHING

Satin stitching is done with stitch regulator lever **J3** set between 25 and 0 position.

While stitching on a scrap of material, carefully and slowly turn limit screw **K3** until stitches are packed closely together, allowing material to feed smoothly and evenly without irregularity.

Satin Stitch Foot 189649 provides a channel for satin stitching and gives smooth uniform results.

189649
Satin Stitch Foot

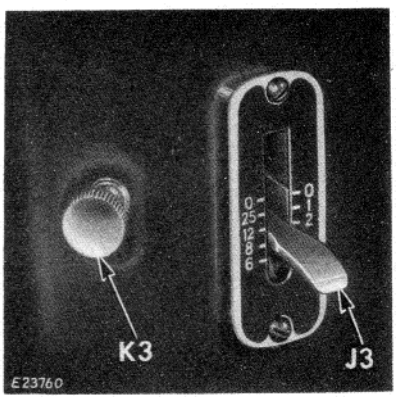


Fig. 20. Regulating Length of Stitch

NEEDLE POSITION CONTROL

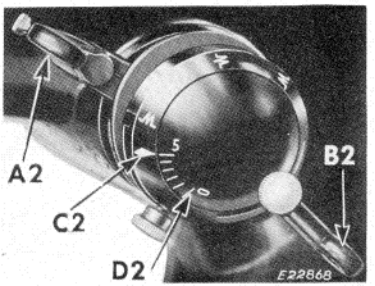


Fig. 21. Left Needle Position

When Needle Position Lever **A2** is set to the **left** on the dial, as shown in **Fig. 21**, the machine sews at the extreme left for straight stitching and, as the bight is changed from 0 to 5, the **needle swings from the extreme left,** as shown in **Fig. 21A** for zigzagging.

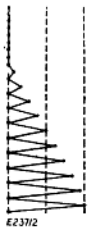


Fig. 21A

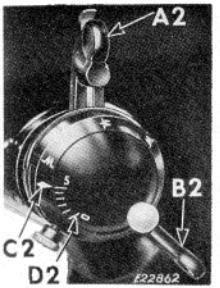


Fig. 22. Central Needle Position

When Needle Position Lever **A2** is set at the central position, as shown in **Fig. 22**, the **needle swings equally to the left and right of center,** as shown in **Fig. 22A.**

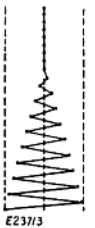


Fig. 22A

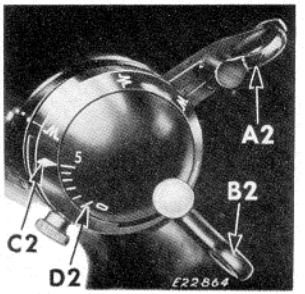


Fig. 23. Right Needle Position

When Needle Position Lever **A2** is set to the **right** on the dial, as shown in **Fig. 23**, the **needle swings from the extreme right,** as shown in **Fig. 23A.**

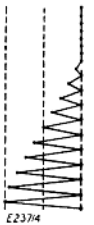


Fig. 23A

CAUTION: Left Needle Position and **Right Needle Position** are used **only** with the All-purpose Throat Plate, for straight stitching as well as zigzag stitching.

Raise needle out of fabric before changing positions of Bight Control and Needle Position Levers.

BIGHT CONTROL

STRAIGHT STITCHING can be made in any of the three needle positions described on **page 18** when Bight Lever **B2** is set at "0". It is recommended that the Bight Lever **B2** be locked in position with the MAXIMUM BIGHT STOP SCREW **F2,** by loosening, then retightening it. Loosen and move INTERMEDIATE BIGHT REGULATOR SCREW **E2** until it engages the notch, then retighten it.

ZIGZAG STITCHING The Bight or "swing of the needle" refers to the width of zigzag movement of the needle.

BIGHT LEVER B2 regulates the width of zigzag stitch or stitch pattern.

BIGHT SCALE is marked "0" to "5". Each line between "0" and "5" denotes the width of stitch pattern obtainable up to a maximum of approximately $\frac{3}{16}$ inch.

BIGHT INDICATOR. Arrow **C2** is the mark to which the desired point on the bight scale is set.

ZERO BIGHT is synonymous with straight stitching.

MAXIMUM BIGHT. The machine will sew the maximum width of stitch or stitch pattern when Bight Lever is set at "5", approximately $\frac{3}{16}$ inch.

MAXIMUM BIGHT STOP SCREW F2 restricts the movement of the Bight Lever to a maximum width of stitch of "5" or less when set at a given position.

INTERMEDIATE BIGHT REGULATOR SCREW E2 acts as an intermediate spring-stop for a desired minimum bight. This spring-stop can be passed over to zero bight if desired.

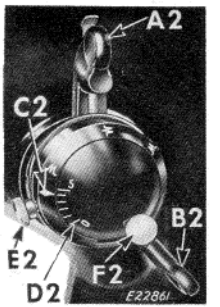


Fig. 24. Bight Control Dial

These stops allow you to operate the Bight Lever manually between set positions without continual reference to the dial while sewing. For example: To limit zigzag stitching between "1" and "4", set Bight Lever at "4", loosen MAXIMUM BIGHT LEVER STOP SCREW **F2,** then tighten. To set minimum position "1", set Bight Lever so that arrow **C2** is at "1", loosen INTERMEDIATE BIGHT REGULATOR SCREW **E2** and move it up or down until you feel the notch engaged, then tighten screw **E2.** The Bight Lever is now set to limit the maximum bight at "4" and the minimum at "1". Other limits such as "1" and "3" or "2" and "3" can be obtained in the same manner.

When free movement of the Bight Lever is desired between zero and a given bight, screw **E2** should be moved down as far as it will go and then securely tightened. Screw **F2** is used to limit the maximum bight.

CAUTION: When Straight Stitching Throat Plate 105146 is used, Bight Lever **B2 must be set at 0,** and needle **must be set at Central Position.**

Do not make any zigzag stitch or needle position adjustments while needle is in goods when the machine is not in operation.

TO REGULATE PRESSURE ON PRESSER FOOT

The surface finish on fabrics, as well as their weight, determine amount of pressure to be applied. The glazed surface of chintz and polished cotton, the loose nap surface of satin, the deep piled surface of velvet, the delicate and broken surface of lace and brocade, all require a lighter pressure.

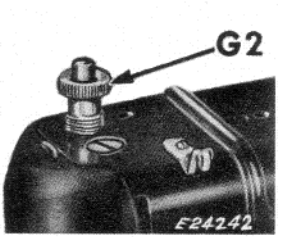


Fig. 27. Thumb Screw For Regulating Pressure on Presser Foot

To set a light pressure, turn thumb screw **G2, Fig. 27** upward until fabric moves easily under presser foot without slipping and without showing feed marks. Heavy, spongy fabrics like toweling, chenille, coating, etc., require heavier pressure.

To set a heavy pressure, turn thumb screw **G2** downward until the fabric moves easily and the seam edges are carried evenly by the foot and the feed.

The pressure should be heavy enough to prevent side creepage of material and to obtain uniform stitch length, yet light enough to carry the material without marking.

THREAD TENSIONS FOR STRAIGHT STITCHING

For perfect stitching, the tension on needle and bobbin threads must be heavy enough to pull threads to center of material and make a firm stitch as shown in **Fig. 28.**

In the unbalanced tensions of **Fig. 29,** the needle thread lies straight along top side of material, caused by too heavy tension on needle thread or too light tension on bobbin thread.

In the unbalanced tensions of **Fig. 30,** the bobbin thread lies straight along under side of material, caused by too light tension on needle thread or too heavy tension on bobbin thread.

Fig. 28. Perfect Straight Stitching

Fig. 29. Imperfect Straight Stitching

Fig. 30. Imperfect Straight Stitching

TO REGULATE NEEDLE THREAD TENSION

The tension on needle thread can be tested **only** when presser foot is down.

The numerals "0" to "9" on dial **H2, Fig. 31** indicate different degrees of tension that can be obtained. The numbers do not denote size of thread or ounces of tension.

When tension has been correctly set for average sewing, note number at indicator line **J2.** This setting may be quickly regained should the tension be altered for special work or change in size of thread.

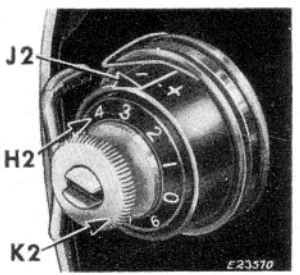


Fig. 31. Needle Thread Tension

To increase tension, turn thumb nut **K2** gradually to right (clockwise) until required tension is obtained. Each higher number denotes increased tension.

To decrease tension, turn thumb nut **K2** gradually to left (counter-clockwise) until required tension is obtained. Each lower number denotes less tension.

The tension indicator **J2** is marked with the signs + and —, which indicate the direction in which to turn the thumb nut for more or less tension.

TO REGULATE BOBBIN THREAD TENSION

The tension on bobbin thread is regulated by the larger screw **L2, Fig. 32** which is nearest center of tension spring on outside of bobbin case.

To increase tension, turn screw **L2** gradually to the right.

To decrease tension, turn screw **L2** gradually to the left.

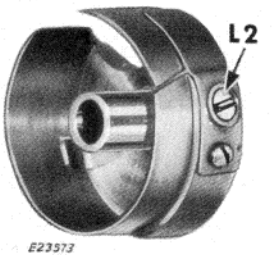


Fig. 32. Bobbin Thread Tension

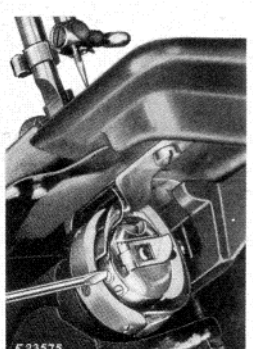


Fig. 33

TO REGULATE BOBBIN THREAD TENSION WITHOUT REMOVING BOBBIN CASE FROM MACHINE

The thread tension screw is conveniently adjusted while bobbin case remains in machine. To adjust, raise take-up lever almost to its highest point, tilt machine back on its hinges and turn the large screw on the bobbin case as shown in **Fig. 33.** Turn screw gradually away from operator to loosen tension and over toward operator to tighten tension.

TO REMOVE AND DISASSEMBLE NEEDLE THREAD TENSION

Turn thumb nut **M2** to the left (counter-clockwise) until "0" on dial **P2** stops at center line on indicator **T2.** To separate pin **N2** in thumb nut **M2** from dial **P2,** press in dial, unscrew thumb nut and remove it. Then remove tension parts from stud **V2,** as shown in **Fig. 34. Do not remove stud V2.**

TO REASSEMBLE AND REPLACE NEEDLE THREAD TENSION

Make sure that tension releasing pin **Z2** is in place in stud **V2.** Replace the tension parts on the stud **V2** as follows: Replace the three tension discs **U2** with the thick flat disc separating the convex surfaced discs. Then replace the indicator **T2,** open side out, on stud with plus and minus signs at top, then insert tension spring **S2** in indicator with the first (half) coil of this spring straddling the lower half of the stud. Place stop washer on stud with extension **R2** above stud, so that it clears the first (half) coil of tension spring. Next, place dial **P2** on stud with No. 2 opposite stop washer extension **R2,** then push dial to compress tension spring and at the same time screw thumb nut **M2** on stud, inserting pin **N2** on nut in one of the holes in dial **P2.** Then lower presser bar and turn thumb nut **M2** to left until "0" on dial **P2** stops at center line on indicator **T2.** Thread the tension and pull thread through tension discs to test amount of tension on thread at "0" position.

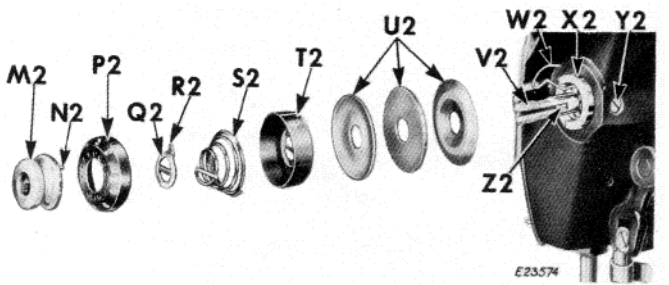


Fig. 34. Needle Thread Tension Assembly

At this point there should be a slight pull on the thread to indicate that there is a minimum tension which gradually increases with the turning of thumb nut **M2** to the right, providing a full range of tensions with one revolution of the thumb nut. If the pull is too strong for a minimum tension, press in dial **P2** to disengage pin **N2** on nut from dial, and reset pin in one of holes at **left** of previous setting. This resetting will produce less tension at "0". Repeat this process until minimum desired tension is obtained.

If there is no tension at "0", press in dial **P2** and reset pin **N2** on nut in one of holes at **right** of previous setting, repeating this process until a slight minimum tension is obtained. The tension on thread take-up spring **W2** and stroke of this spring should be just sufficient to take up slack of needle thread until point of needle reaches fabric in its descent.

To adjust tension on thread take-up spring **W2**, remove tension disc assembly, disengage end of spring from groove in tension stud, revolve spring and place its end in the groove which produces correct tension.

To regulate stroke of thread take-up spring **W2**, loosen screw **Y2, Fig. 34**, and turn the thread take-up spring regulator **X2, Fig. 34** until correct stroke is obtained, then tighten screw **Y2.**

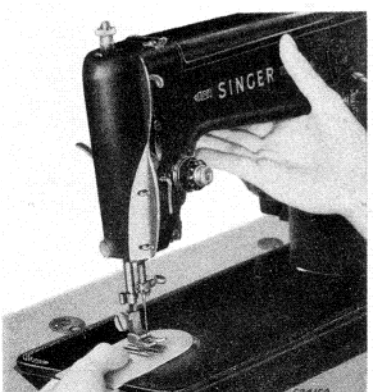


Fig. 35. Changing the Throat Plate

TO CHANGE THE THROAT PLATE

When changing from All-purpose Throat Plate to Straight Stitching Throat Plate or Embroidery Plate, FIRST raise take-up lever to its highest point, set the Needle Position Lever at its Central Position and set Bight Lever at "0". Tilt the machine head slightly with right hand, as illustrated in **Fig. 35.**

With the left hand tilt the rounded end of throat plate by pressing it up from the underside enough to clear the feed dog. Then slide the plate to the left.

To Insert the Throat Plate, slip both ends of its spring beneath the edges of the opening, and, while it is slightly tilted, slide it over the feed dog, into position.

Lower the machine head into place.

SEWING SUGGESTIONS

Breaking of needles might be caused by:

1. Wrong size of needle for thread and material—see **page 6.**
2. Wrong throat plate or presser foot for the type of work being done—see **pages 32-34.**
3. Wrong setting of needle position lever and/or bight lever—see **pages 18 and 19.**
4. Pulling of material when stitching—see **page 16.**
5. Loosely fastened presser foot or special fittings.
6. Wrong class of needle—see **page 6.**

Breaking of needle thread might be caused by:

1. A knot in thread.
2. Thread too coarse for needle—see **page 6.**
3. Wrong threading—see **pages 9 and 10.**
4. Upper tension too tight—see **pages 21, 23 & 24.**
5. Needle blunt or bent.
6. Needle set incorrectly—see **pages 7 and 8.**
7. Roughened hole in throat plate.
8. Wrong arrangement of threads when starting to sew—see **page 15.**
9. Needle thread tension too light.

Breaking of bobbin thread might be caused by:

1. Wrong threading of bobbin case—see **page 13.**
2. Bobbin thread tension too tight—see **pages 21 and 22.**
3. Bent Bobbin.
4. Damaged Bobbin Case.

Skipping of stitches might be caused by:

1. Wrong setting of needle—see **pages 7 and 8.**
2. Needle blunt or bent.
3. Needle too small for thread—see **page 6.**
4. Damaged presser foot.
5. Damaged throat plate.

Looped stitching might be caused by:

1. Wrong threading—see **pages 9 and 10.**
2. Tensions set incorrectly—see **pages 21 to 24.**
3. Needle too fine for thread used.
4. Improper presser foot.

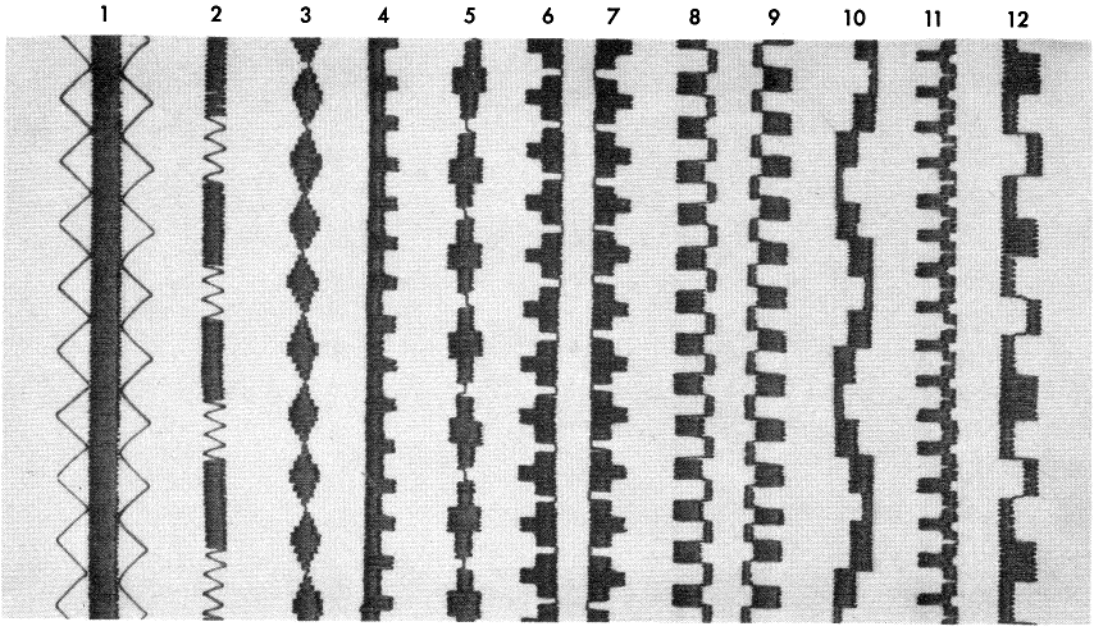
Gathering or puckering of material might be caused by:

1. Failure to use paper or tarlatan backing when zigzag stitching with a very wide bight and/or on sheer materials.
2. Excessive needle and bobbin thread tensions.
3. Improper presser foot.

If machine runs heavily after standing idle for a long period, apply a few drops of kerosene at all oiling points, run the machine for a few minutes, then wipe clean and apply SINGER* Oil as described on **pages 28 to 30.**

If the suggestions offered here do not correct your sewing problems, call your local SINGER SEWING CENTER.

DESIGNS MADE BY VARIATION OF NEEDLE POSITION AND BIGHT



Satin Stitch Foot (189649) should be used with stitch length of "almost O".
Crisp lawn, organdy, or tarlatan backing is used if material gathers on single thickness.

KEY TO STITCHES SHOWN ON PRECEDING PAGE

PATTERN	NEEDLE POSITION	BIGHT SETTING	STITCH LENGTHS	TENSION	VARIATION OF NEEDLE POSITION AND BIGHT	SETTING OF BIGHT LIMIT SCREWS—REFER TO FIG. 24
1	Central	5	Bar—Almost 0 Zigzag—6	Needle Thread— Very light for bar, Medium for zigzag line Bobbin Thread—Medium	Stitch bar then zigzag lines separately	F2 at 5 E2, below 0
2	Central	3	25 Alternating with Almost 0	Needle Thread—Very light Bobbin Thread—Medium	At 25—6 stitches At almost 0—40 stitches	F2 at 3 E2, below 0
3	Central	0 to 5 to 0	Almost 0	Needle Thread—Light Bobbin Thread—Medium	2 stitches at each mark to 5 2 stitches at each to 0	F2 at 5 E2, below 0
4	Left	3-5	Almost 0	Needle Thread—Light Bobbin Thread—Medium	At 3—16 stitches At 5— 8 stitches	F2 at 5 E2 at 3
5	Central	0-3-5-3	Almost 0	Needle Thread—Very light Bobbin Thread—Medium	14 stitches at each bight setting	F2 at 5 E2 at 3
6	Right	0-3-5-3	Almost 0	Needle Thread—Very light Bobbin Thread—Medium	8 stitches at each bight setting	F2 at 5 E2 at 3
7	Left	0-3-5-3	Almost 0	Needle Thread—Very light Bobbin Thread—Medium	8 stitches at each bight setting	F2 at 5 E2 at 3
8	Left Alternating with Right	4 Alternating with 1	Almost 0	Needle Thread—Light Bobbin Thread—Medium	14 stitches at each setting Bight 4 at left needle position Bight 1 at right needle position	F2 at 4 E2 at 1
9	Right Alternating with Left	4 Alternating with 1	Almost 0	Needle Thread—Light Bobbin Thread—Medium	14 stitches at each setting Bight 4 at right needle position Bight 1 at left needle position	F2 at 4 E2 at 1
10	Left Alternating with Right	4-1-4	Almost 0	Needle Thread—Light Bobbin Thread—Medium	20 stitches at each setting Bight 4, 1 and 4 left needle position Bight 4, 1 and 4 right needle position	F2 at 4 E2 at 1
11	Left Alternating with Right	4 Alternating with 2-0-2	Almost 0	Needle Thread—Light Bobbin Thread—Medium	6 stitches at each setting Bight 4 at left needle position Bight 2, 0 and 2 right needle position	F2 at 4 E2 at 2
12	Left Alternating with Right	2-5-2 Alternating with 2	Almost 0	Needle Thread—Light Bobbin Thread—Medium	16 stitches at each setting Bight 2, 5 and 2 at left needle position Bight 2 at right needle position	F2 at 5 E2 at 2

0 Bight = Zero Bight *2 Bight = Medium Bight* *5 Bight = Maximum Bight*

TO OIL THE MACHINE

Preparation

Remove face plate and throat plate and swing back cover plate toward hand wheel.

Remove dust and lint with brush except from sewing hook. Wipe hook free of lint with cloth or blow out with hand vacuum cleaner.

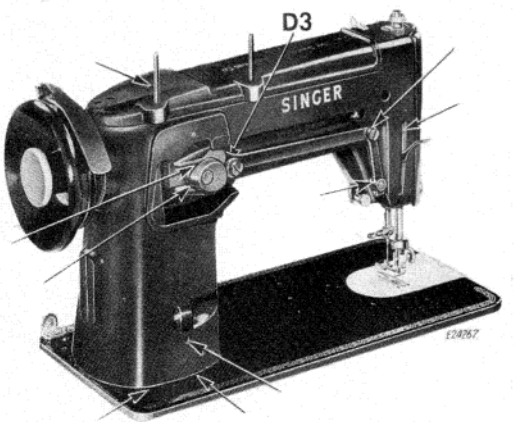


Fig. 37. Rear View, Showing Oiling Points

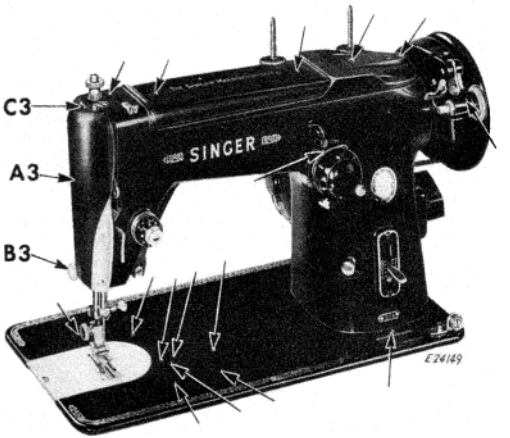


Fig. 36. Front View, Showing Oiling Points

Oiling

Apply a drop of oil to all points indicated by the unlettered arrows in **Figs. 36, 37, 38, 39, and 40.**

Apply a small amount of lubricant to the slide block at **D3, Fig. 37.**

Remove face plate **A3, Fig. 36** by taking out thumb screw **B3** and slipping plate up and off screw at **C3.** Oil the points indicated in **Fig. 38** and then replace plate **A3.**

Apply a drop of oil to race of bobbin case holder as shown in **Fig. 39.**

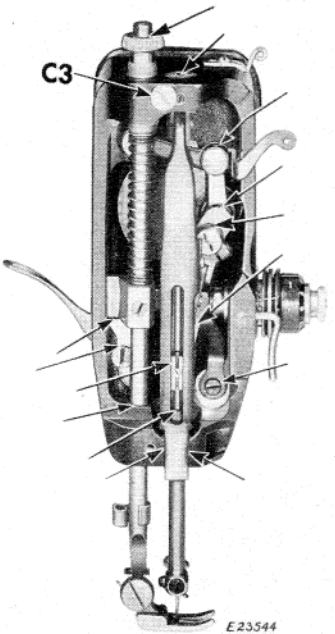


Fig. 38. Face Plate Removed, Showing Oiling Points

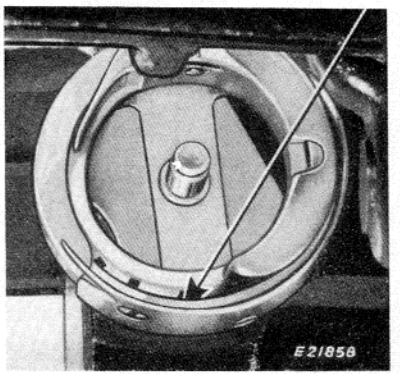


Fig. 39. Oiling Point in Bobbin Case Holder

Turn the machine back on its hinges and oil the places shown in **Fig. 40.**

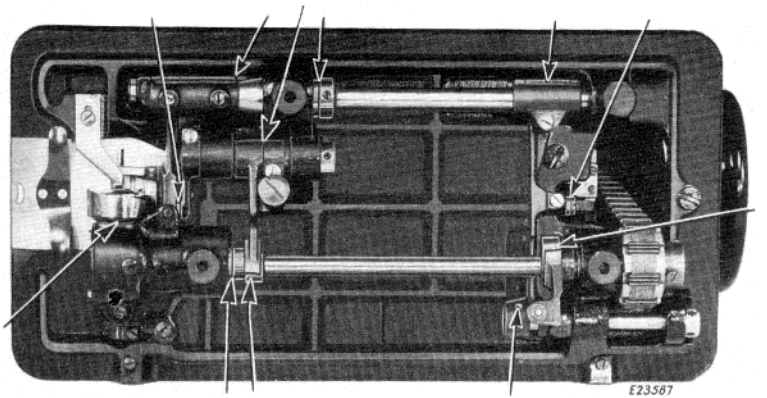


Fig. 40. Oiling Points in Base of Machine

TO LUBRICATE THE MOTOR

NEVER USE OIL OR ORDINARY GREASE ON THE MOTOR. USE ONLY **SINGER*** MOTOR LUBRICANT furnished with the machine. When the machine is shipped from the factory, the two grease tubes **H3, Fig. 41** are filled with enough lubricant for approximately six months' use. Refill grease tubes **H3** at least once each six months by inserting tip of lubricant container into grease tubes **H3** and squeezing enough lubricant into each tube to fill it.

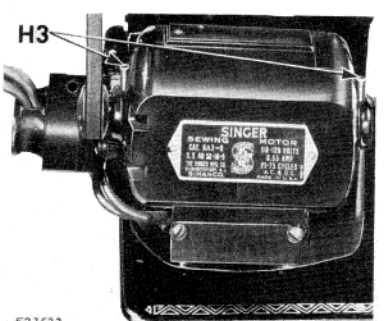


Fig. 41. Motor Lubricating Points

LIGHT

To Turn Light "on" or "off"

Reach over machine arm and turn switch **B, Fig. 42** to right.

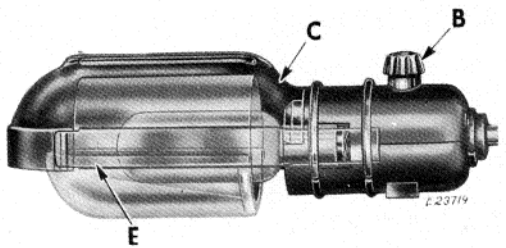


Fig. 42. SINGER Light

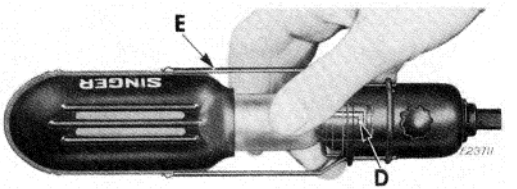


Fig. 43. Removing and Replacing the Bulb

To Remove the Bulb

Grasp light socket so that thumb extends over switch **B.** Then press shade with thumb at **C** to release shade from two catches and slide it halfway out of shade holder **E.** Then press bulb into socket and at same time turn bulb over from machine as far as it will go to unlock pin **D** (see **Fig. 44**). Withdraw the bulb.

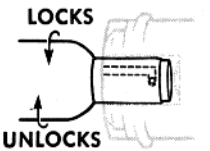


Fig. 44. Locking or Unlocking Bulb Pin

To Insert a New Bulb

Press bulb into socket and turn it over toward machine until pin **D** enters notch in socket (see **Fig. 44**). Return shade to its normal position as shown in **Fig. 42.**

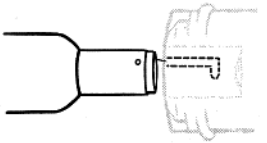
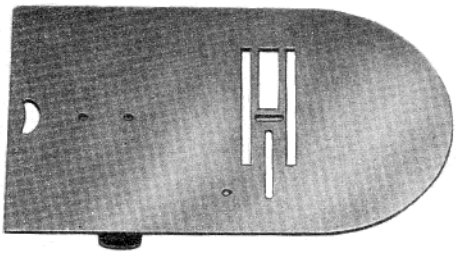
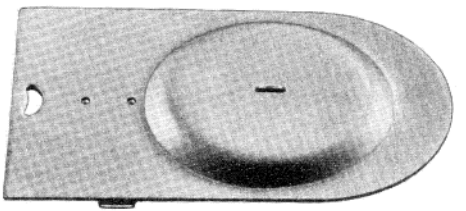


Fig. 45. Inserting Bulb in Socket

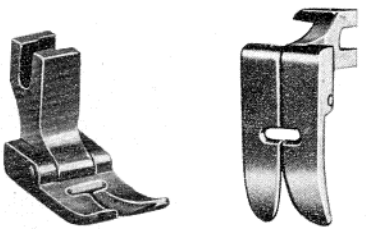
ALL-PURPOSE STITCHING EQUIPMENT



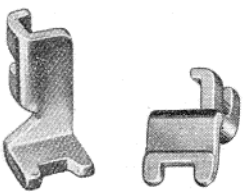
105144 All-purpose Throat Plate



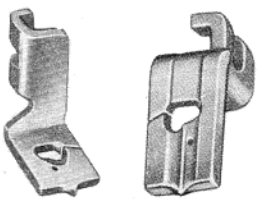
189632 Embroidery Plate



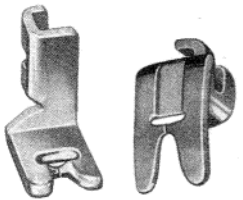
105069 All-purpose Hinged Presser Foot



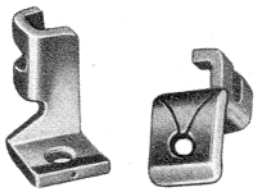
189648 Button-Sewing Foot



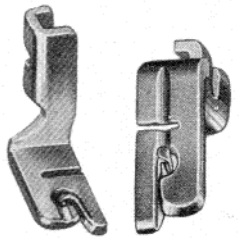
86616 Buttonholer Foot



189649 Satin Stitch Foot



189651 Embroidery and Applique Foot



189653 Shell Hemmer

Bight must not exceed "3".
Always use Central Needle Position.

NOTE: With the equipment on this page and on **page 32,** the full range of stitching variations may be attained. The settings for these stitch variations are attainable by moving the Needle Position and Bight Levers **A2** and **B2** to any point required.

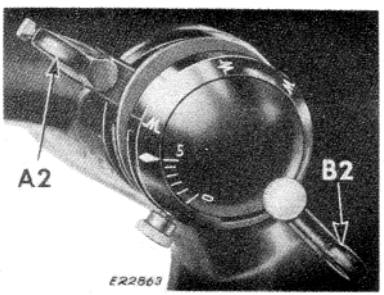
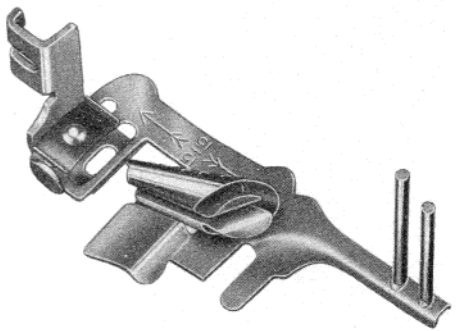
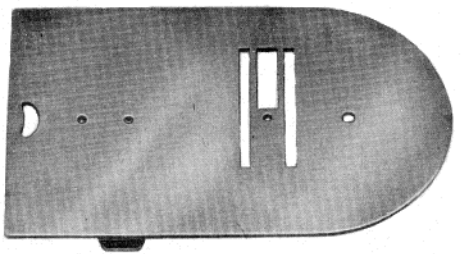


Fig. 46. Machine Set for Maximum Zigzag Stitch in Left Position

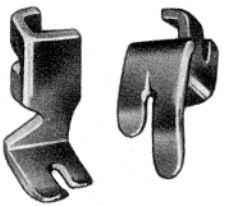


160847 Multi-slotted Binder

STRAIGHT STITCHING EQUIPMENT



105146 Straight Stitching Throat Plate



189647 Straight Stitching Presser Foot

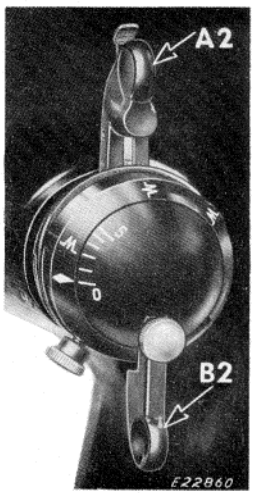
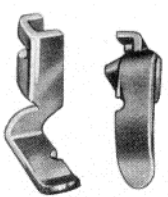
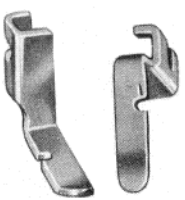


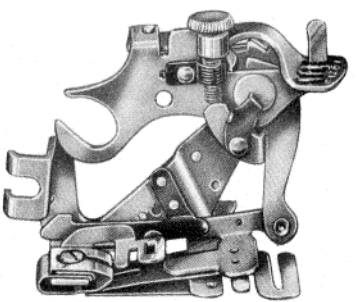
Fig. 47. Machine Set for Straight Stitching



160845 Cording Foot (Left Toe)



160846 Cording Foot (Right Toe)



120598 Ruffler

CAUTION: All of the parts shown on this page are designed for straight stitching **only.** They must not be used for zigzag stitching. Use **only** AFTER Needle Position Lever **A2** is set at central position, and Bight Lever **B2** is set at "0", as shown in **Fig. 47.**

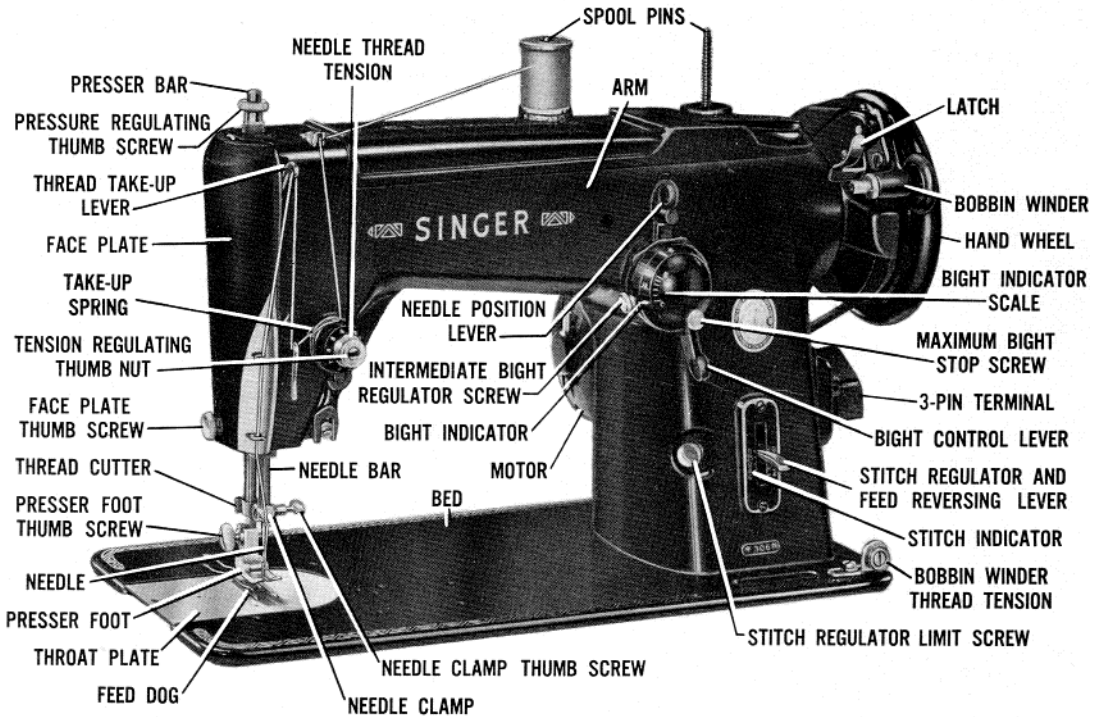


Fig. 48. Names of Principal Parts of Machine 306K23

APPLICATION OF SINGER SWING NEEDLE
TO CONSTRUCTION OF GARMENTS AND FURNISHINGS

STRAIGHT STITCHING

Straight stitching is accomplished when the bight is set at zero.

Central needle position is used for straight stitching except in the unusual situation when it is desirable to alter the location of the needle in relationship to the center of the presser foot.

The All-purpose Presser Foot and All-purpose Throat Plate are frequently used for both zig-zag stitching and straight stitching.

The Straight Stitching Throat Plate and Straight Stitching Presser Foot are designed to accommodate delicate, soft fabrics, sheers, crepe weaves and all fabrics where the weave or finish causes the fabric to cling to the needle, either on its upward or downward stroke. The Straight Stitching Throat Plate is always used when free hand straight stitching work is done where the presser foot is removed and the fabric is held in hoops, as described on **page 77.** The Straight Stitching Presser Foot is often more convenient for following the edge of a lapped seam, the fold of a pleat or when placing an edgestitching on a yoke or collar. The narrow right toe affords an excellent view at the right of the needle for such work.

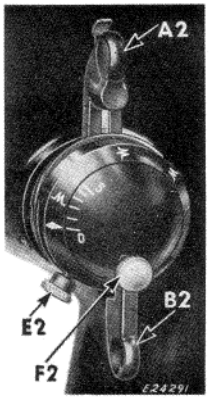


Fig. 49. Machine Set for Straight Stitching with Limit Screws Locked

When straight stitching, set Bight Lever **B2** at zero and set maximum bight stop screw **F2** as shown in **Fig. 49.** Then bring the intermediate bight regulator screw **E2** beyond zero and tighten.

It is a good practice to test stitch on a scrap of fabric before stitching a garment to determine the correctness of tensions, length of stitch and pressure. Each of these points for regulating stitch and handling the fabric are simple and easy to regulate. Because of these facilities the SINGER Swing Needle is superior in its stitching of a wide range of weights and textures of fabrics, and with a variety of threads. The Fabric, Thread and Needle Chart on **page 6** is a useful guide to the correct needle, thread and stitch length for a wide variety of fabrics.

Plain Seams comprise a large part of general sewing. Seam ends are stayed with back stitching to prevent their opening during fitting and assembling the garment. Position needle a few stitches from the edge of the garment. Hold threads which have been drawn to the back and right under presser foot. Stitch in reverse to the edge and then forward until end of seam is reached. Back stitch again to stay ends of seam.

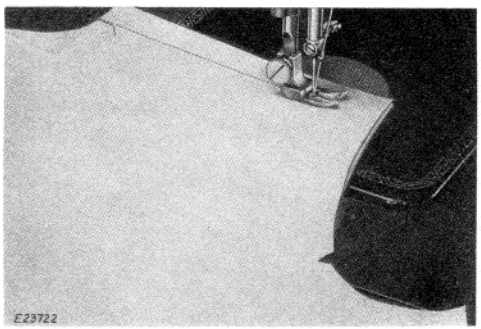


Fig. 50. Seaming Dress Sections

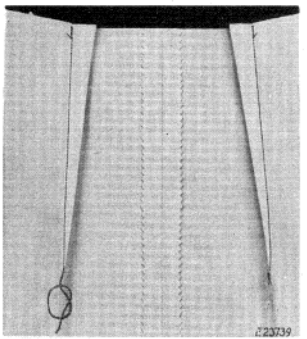


Fig. 51. Dart Thread Being Tied

Darts are conveniently stayed at the points by stitching beyond the fabric about one-half inch to form a thread chain. Tie these chained threads into a plain knot. The last three or four stitches of a dart must be very close and parallel to the fold, resulting in a smooth shaping of the garment.

TORSO OR SHAPED DARTS

Torso and shaped darts are stronger and more flexible when stitched with a shallow zigzag. Stitch the points for a distance of one inch with straight stitching. Zigzag center portion.

Use: All-purpose Throat Plate and Presser Foot
Central Needle Position
½ to 1 Bight
25 Stitch for Zigzag and 12 Stitch for Straight Stitching

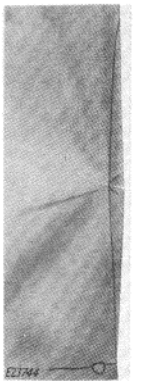


Fig. 52. Torso or Shaped Darts

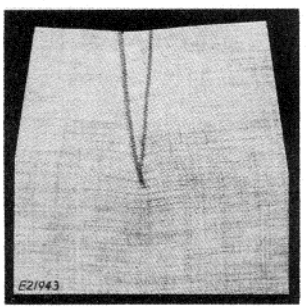


Fig. 53. Contour Dart Along Raw Edges

CONTOUR DARTS IN INTERFACINGS

Contour darts in interfacings provide permanent shaping without bulk when cut, lapped and zigzag stitched along raw edges as in **Fig. 53.** The dart is often cut away, edges abutted and stayed with straight grain strip of muslin as in **Fig. 54.**

Use: All-purpose Throat Plate and Presser Foot
Central Needle Position
5 Bight
25 Stitch

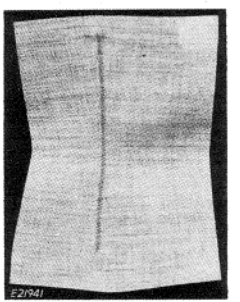


Fig. 54. Contour Dart with Abutted Edges

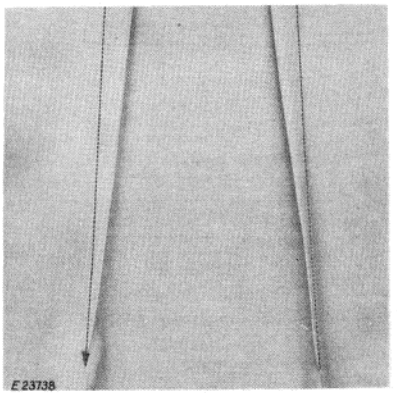


Fig. 55. Single Thread Darts

ACCENTED DARTS

Darts add styling and interest when stitched with the fold to outside of garment. Thread ends at the point of the dart are eliminated when the single thread principle for stitching is employed. With thread leading through the throat plate from bobbin, thread needle from back to front. Tie bobbin and upper threads together and draw knot through threading points toward spool until a sufficient length of the thread leading from the bobbin has passed the thread guide nearest the spool to complete stitching the full length of the dart. Stitch from point of dart toward edge of garment section and back stitch to reinforce.

Further accent is given to such a dart when an arrowhead is placed at the point. To form arrowhead, take four stitches at each bight 5, 4, 3 and 2. Take two stitches at zero bight.

For Arrowhead, use:

All-purpose Throat Plate and Presser Foot
Central Needle Position
0 to 5 Bight
Almost 0 Stitch length

CONTROL OF FULLNESS

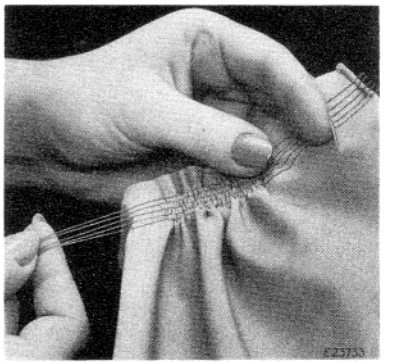


Fig. 56. Contour Shirring in Process

Contour and shaping is accomplished in garments of soft and sheer fabrics by contour shirring. Equip machine for straight stitching, and with a stitch length of 12 or less, according to the fabric, place five rows of parallel stitching ⅛ inch apart, with the first row ½ inch from the outside edge. Draw threads to inside of garment at one end only and tie. Form a pin tuck across the ends of stitching. Form shirring by pulling the threads on inside of garment at second end until shirring has been drawn together sufficiently so that garment sections match. Knot thread ends and finish with a pin tuck. Join sections of garment together. Three rows of stitching are visible when finished.

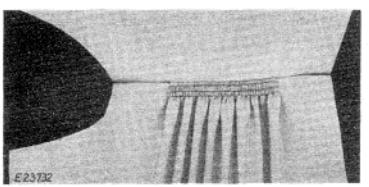


Fig. 57. Contour Shirring Completed

When controlling eased fullness in a sleeve cap, at the elbow of a long fitted sleeve, in the shaping of a circular hem or in joining yoke or fitting seams, two lines of control stitching are used and pin tucks are omitted.

COUCHED ELASTIC SHIRRING

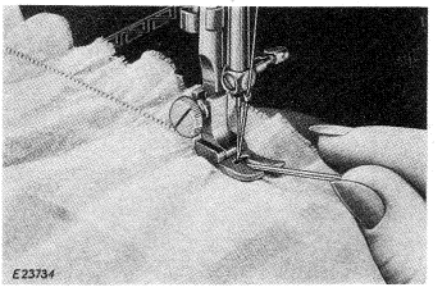


Fig. 58. Couched Elastic Shirring in Process

Elastic thread is often used to control fullness at the waistline or cuff. Zigzag stitch over one or two strands of elastic thread, drawing the elastic thread to give the tautness desired. Knot ends securely. This treatment provides a snug fit with elasticity. Either side may be used as right side, depending upon the effect desired.

Use: All-purpose Throat Plate and Presser Foot
Central Needle Position
1 Bight
12 Stitch

ELASTIC SHIRRING

Elastic thread is wound on the bobbin without stretching, while regular sewing thread is used in the needle. The machine is regulated for straight stitching. Stitch parallel rows with a 10 stitch. The bobbin tension is regulated so that it is heavy enough to stretch the elastic thread when stitching, but light enough to avoid breaking or fraying. Thread ends are fastened securely by tying.

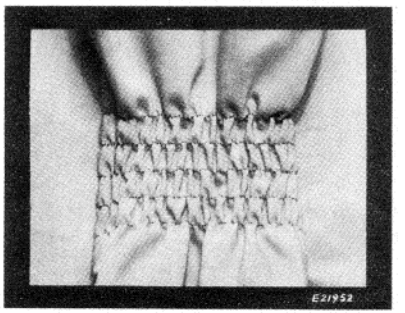


Fig. 59. Elastic Shirring Completed

ZIGZAG SEAMING

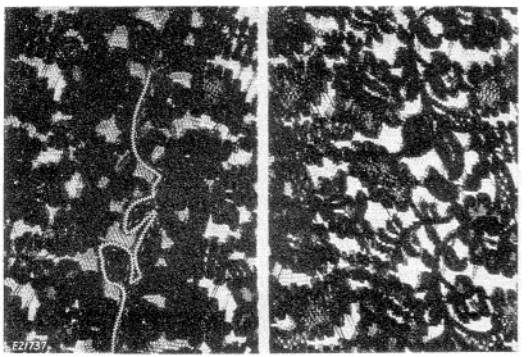


Fig. 60. Invisible Seam for All-Over Lace

Cut away excess seam up to stitching on both right and wrong sides, using curved embroidery scissors.

Use: All-purpose Throat Plate and
Embroidery Foot 189651
Central Needle Position
1½ Bight
Above 25 Stitch

After seams have been basted and fitted, mark outline of seam on both sections of garment with hand basting. Remove basting that joined seams and lay one section over other with seam lines matching and hand baste. Remove marking stitches. Embroidery Foot 189651 (see **page 33**) is used to follow outline of lace motif that runs through seam lap.

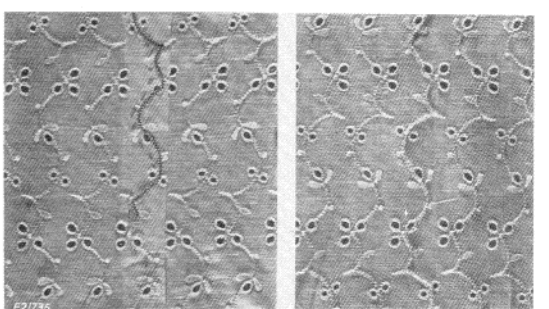


Fig. 61. Invisible Seam For All-Over Lace Embroidery

CORDING SEAM WITH EMBROIDERY FOOT 189651

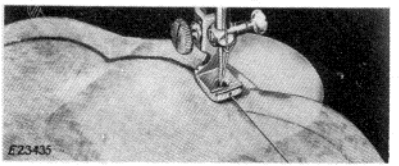


Fig. 62. Cording a Seam with Embroidery Foot 189651

Place a thread through the eye at the front of the foot and lead it underneath the foot. Cover thread with closely spaced zigzag stitches.

Use: All-purpose Throat Plate and
Embroidery Foot 189651
Central Needle Position
2 Bight
Above 25 Stitch

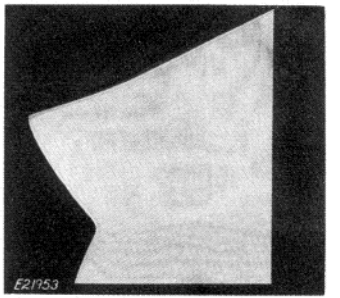


Fig. 63. Hairline Seam in Sheers

HAIRLINE SEAM IN SHEERS

For a dainty hairline seam in sheers that is also fray-proof, follow shaped seam line with a fine cording stitch, then cut surplus seam away close to line of stitching. This type of seam may be used either inside or outside.

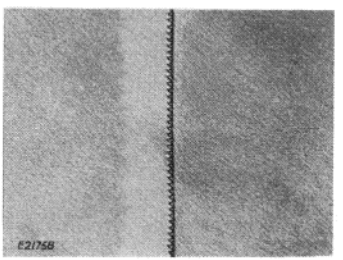


Fig. 64. Rip-proof Seam for Lingerie

RIP-PROOF SEAM FOR LINGERIE

For rip-proof seams in lingerie, first straight stitch fitted seam on wrong side and press both edges to one side.

Use: 0 Bight
15 Stitch for Straight Stitching

On right side of garment, top stitch with a fine zigzag stitch letting needle first enter channel of seam, then seam thickness.

Use: All-purpose Throat Plate and All-purpose Presser Foot
Central Needle Position
2 Bight
25 Stitch

INVISIBLE SEAM FOR HORSEHAIR OR NET BANDINGS

Use: All-purpose Throat Plate and
All-purpose Presser Foot
Central Needle Position
1½ Bight
25 Stitch

Guide braid or banding so that edges are abutted as they meet when passing under slot of foot.

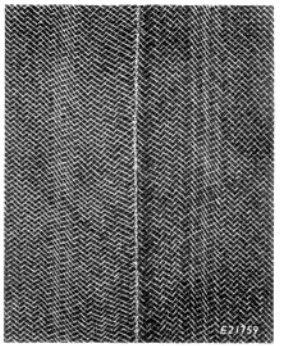


Fig. 65. Invisible Seam in Horsehair

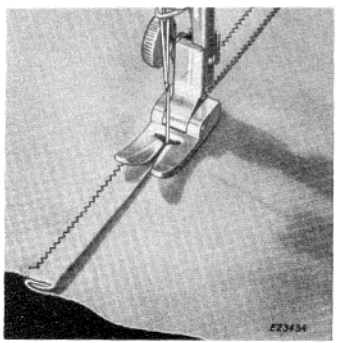


Fig. 66. Heavy Duty Reversible Seam

HEAVY DUTY REVERSIBLE SEAM

Use: All-purpose Throat Plate and Presser Foot
Central Needle Position
2 Bight
Above 12 Stitch

For heavy duty, strain-proof seams, use double interlocked seam, zigzagged on both sides. Turn **under** raw edge of one section, and turn **up** raw edge of joining section. Interlock two raw edges and zigzag across one seam on right side and across other seam on wrong side, producing a double fell, doubly reinforced, with elasticity against strain when wearing.

STAYED SEAM FOR JERSEY OR CREPE

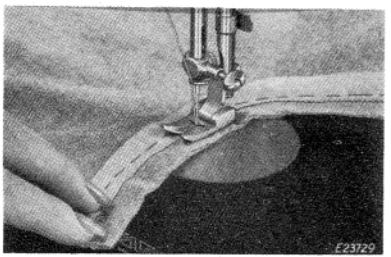


Fig. 67. Stayed Seam in Jersey

Seams in fabrics that stretch or bias seams in firm fabrics are often stayed with seam tape for durability. Position seam tape with edge exactly on seam line. If seam is curved, shape seam tape by steaming at the ironing board. Hand baste if necessary. Stitch with fine zigzag stitching.

Press seam open, after clipping on curve.

Use: All-purpose Throat Plate and Presser Foot
Central Needle Position
½ to 1 Bight
12 to 25 Stitch

TO OVERCAST OPEN SEAMS

Turn raw edge toward wrong side and, while stitching, let it pass over flanged toe of All-purpose Presser Foot and through slot. Guide material so that needle, when swinging to the right, pierces material exactly at edge.

Use: All-purpose Throat Plate and Presser Foot
Central Needle Position
2 Bight
15 Stitch

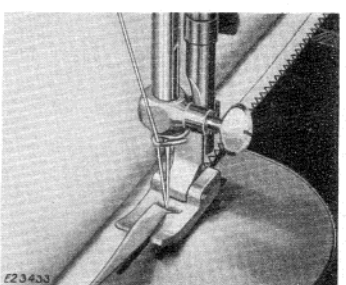


Fig. 69. Overcasting Open Seams

TO OVERCAST SEAMS

Seam edges support the garment and should always carry a durable finish if fit is to be maintained after long wearing. The zigzag stitch is especially durable and free of bulk when used as a seam finish.

When seam edges are pressed in the same direction, they are overcast together, and when pressed open, they are overcast separately.

Use: All-purpose Throat Plate and Presser Foot
Central Needle Position
4 or 5 Bight
25 Stitch

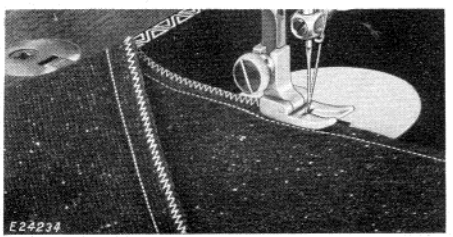


Fig. 71. Overcasting Seam Edges Together

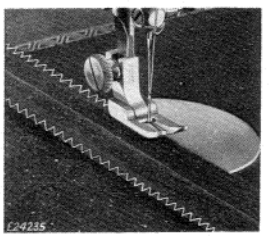


Fig. 72. Overcasting Open Seams in Process

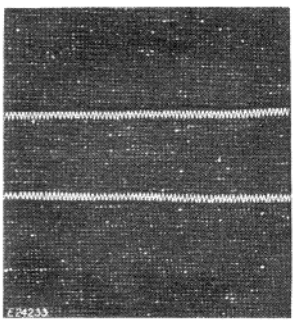


Fig. 73. Overcast Open Seams—Completed

TO MAKE BUTTONHOLES

Step 1. Marking the Material

Mark position and length of buttonholes with basting stitches (see **Fig. 74**) or marking chalk, allowing an extra 1/16" in width for cutting space and an extra 1/8" in length for 1/16" bar allowance on each end.

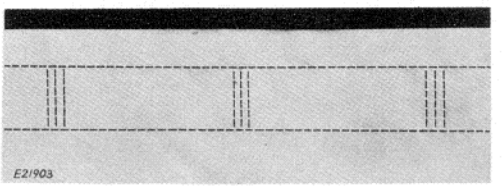


Fig. 74. Marking Location of Buttonholes with Basting Stitches

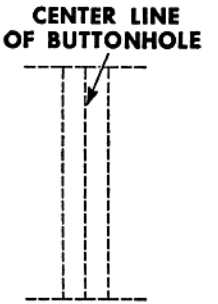
Step 2. Setting the Machine

Use: All-purpose Throat Plate and Buttonhole Foot 86616 (see **page 32**)
Left Needle Position (see **page 18**)
Above 25 Stitch
2 Bight for Side Stitches of Buttonhole
4 Bight for Barring Stitches
0 Bight for Fastening Stitches

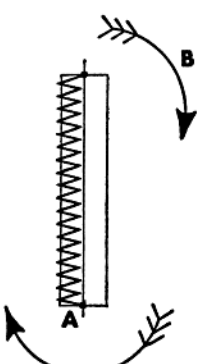
NOTE: Bight settings of 2½ for Side Stitches and 5 for Barring Stitches make slightly heavier buttonholes.

Step 3. Guiding

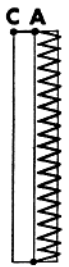
Set bight regulator at "2", position needle just left of central marking ready for left swing, and stitch, using point of Buttonhole Foot as a guide to keep stitches just left of central marking and astride side marking.
(Note slot in Buttonhole Foot for drawing needle and bobbin threads through.)



Step 1



Step 3

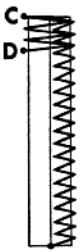


Step 4

Step 4. Pivoting

When point of Buttonhole Foot reaches end of marking, leave needle in fabric at the point nearest central marking, as shown by **A** in illustrations.

Raise Buttonhole Foot and, using needle as a pivot, turn work around clockwise, as indicated at **B.** Lower Buttonhole Foot and take one (1) stitch, leaving needle in buttonhole marking at point **C.**



Step 5

Step 5. Barring

Set bight regulator at "4" for wide swing and take six (6) stitches, leaving needle in fabric at point **D** at left.

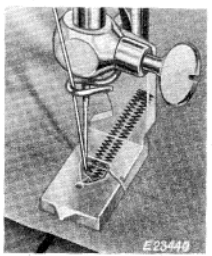
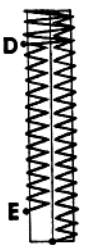


Fig. 75



Step 6

Step 6. Finishing Buttonhole Edge

Return bight setting to "2" and stitch final edge of buttonhole, keeping point of Buttonhole Foot just left of central marking to provide sufficient cutting space.

Stop within six stitches of end, leaving needle in fabric at point **E** at outside marking. This point may be easily determined, while stitching, by observing last stitch in first row at lower edge of opening in Buttonhole Foot.

Step 7. Finishing Final Bar and Fastening Stitch

Set bight regulator at "4" for widest stitch and take six (6) stitches to complete final bar. Set bight regulator at "0" and stitch length at "0" and take three (3) fastening stitches at point **F.** Cut buttonhole along line of center marking.

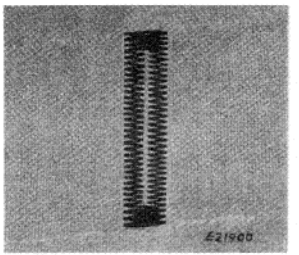
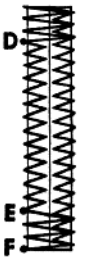


Fig. 76



Step 7

Raised or Gimp Buttonholes

Insert No. 8 Pearl Cotton or Cordonnet Thread through eyelet in front of Buttonhole Foot, as shown in **Fig. 77** and proceed as for regular buttonholes as instructed on **pages 47 and 48.**

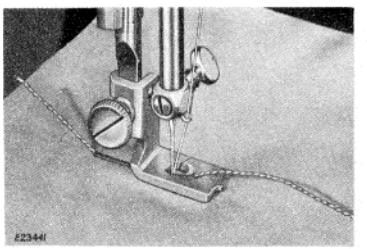


Fig. 77. Making Gimp Buttonholes

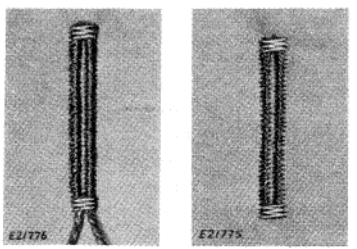


Fig. 78. Gimp Buttonholes

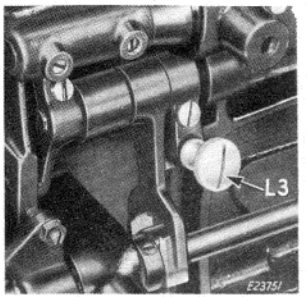


Fig. 79. To Lower the Feed

TO SEW ON BUTTONS

Lower the feed by turning machine back on its hinges and loosening screw **L3, Fig. 79,** turning it over to left (using a screwdriver, if necessary) as far as it will go. Bring machine forward into place and move stitch regulator lever **J3, Fig. 20, page 17** to its neutral position at center of slot.

When regular sewing is resumed, tighten feed throw-out screw **L3,** turning it to right as far as it will go.

Use: All-purpose Throat Plate
Button Sewing Foot 189648
Left Needle Position
Approximately 3 Bight
0 Stitch

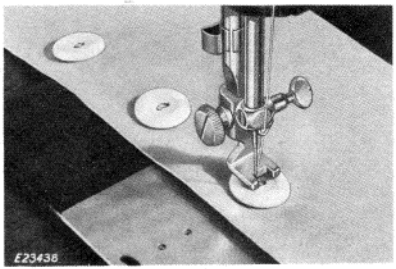


Fig. 80. Sewing on Buttons

With Bight at "0", position button, drop needle through center of left hole. Then lower Button Sewing Foot. Turn hand wheel over toward you until needle rises. Set Bight at approximately "3" or so that needle, on its right swing, enters center of right hole. Then stitch. Needle should enter each hole six times. To fasten stitch, set Bight at "0" and take 3 stitches in left hole of button.

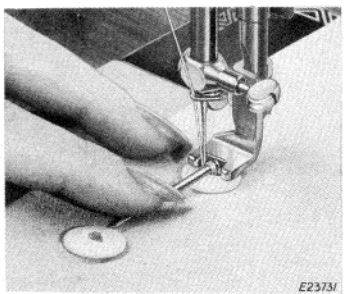


Fig. 81. Sewing Buttons with Thread Shank

TO SEW ON BUTTONS WITH THREAD SHANK

Follow steps outlined above and in addition, hold pin or needle between holes in button to deepen stitches and provide thread shank. A long thread shank results when the heavy end of sewing machine needle is used in place of a pin. Tighten needle thread tension if stitches appear to be loosely set.

TO SEW ON SNAPS AND HOOKS AND EYES

No Presser Foot is used for sewing on snaps. Instead, hold snap in place with tweezers, stiletto, or the point of embroidery scissors.

Lower the feed as instructed on page 50.

Use: All-purpose Throat Plate
Left Needle Position
0 Stitch setting
2 Bight

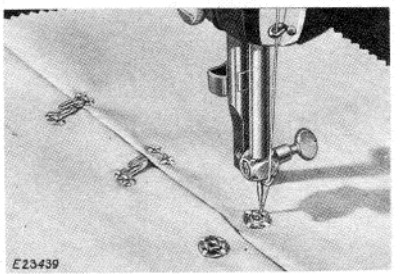


Fig. 82.
Sewing on Snaps and Hooks and Eyes

Centering needle in first hole, take 6 overedging stitches, leaving needle in hole at left position on last stitch. Change Bight to 0 and take 3 fastening stitches. Carrying thread across snap, center needle in next hole and change Bight to 2. Take 6 overedging stitches, then returning Bight to 0, take 3 fastening stitches. Continue this process with each hole.

The same procedure and settings are followed when sewing on hooks and eyes except that after taking 6 overedging stitches in first hole of hook, leave needle in center of hole and turn work so that next 6 overedging stitches will carry across bar of hook, then proceeding to second hole, take 6 overedging stitches and changing Bight to 0, finish with 3 fastening stitches.

Follow same procedure for sewing on eye, taking 6 overedging stitches in first hole, 6 overedging stitches across to second hole, 6 overedging stitches to side of hole, and, changing Bight to 0, finish with 3 fastening stitches.

BLIND STITCHED ZIPPER INSERTION

On chiffons, sheers, velvets and all delicate or textured fabrics, zippers may be inserted with a blind stitch, equal to invisible hand stitching, by using Right and Left Cording Feet. Allow seams ¼″ deeper than average. Use machine basting with stitch length set at 8, to close placket on seam line.

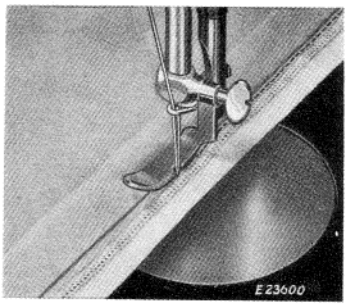


Fig. 83. Cording Foot (left toe) Applying Fold to Zipper Tape

Turn a fold in back seam allowance ⅛″ from basted seam line and pin this fold to zipper tape, rolling both over finger, while pinning, to ease fabric. Baste, then machine stitch the fold to tape, using 12 stitch length and Cording Foot (left toe)—see **Fig. 83.**

Reinforce closure at each end by stitching across top and bottom of zipper tape and front seam allowance from seam edge toward side seam and back stitch. Turn garment right side out and pin front zipper tape into position, placing pins on right side of garment, through all thicknesses, while rolling over finger to ease fabric. Baste about ⅜″ from seam line to provide guide for blind stitching.

Use: All-purpose Throat Plate and Cording Foot (right toe)
Central Needle Position
Approximately 2 Bight
6 to 8 Stitch

Turning garment inside out, lay slide fastener over feed of machine and turn back the front section of garment to line of basting, creating a soft fold.

Stitch, using Right Cording Foot (see **Fig. 84**), a 6 or 8 stitch and approximately a 2 Bight. Take first stitch through zipper tape and front seam. Take next stitch through fold of front section and continue to alternate catching a thread or two of fabric fold as needle swings to left.

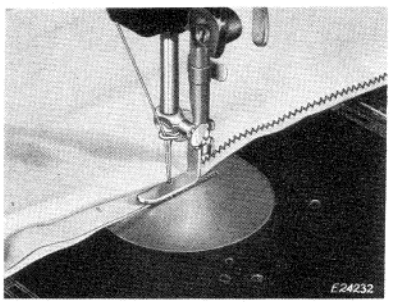


Fig. 84. Blind Stitching Zipper

The needle position lever can be used slightly left of center, the better to position the stitching and to control placement of sideward stitch. Should a deeper Bight than 2 be required for thick fabrics, **Left Needle Position** must be used.

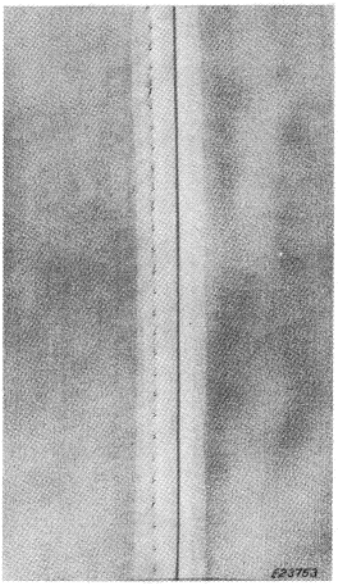


Fig. 85. Blind Stitched Zipper Insertion

BLIND STITCHED AND DECORATIVE HEMS

BLIND STITCHED HEMS WITH FOLDED EDGE

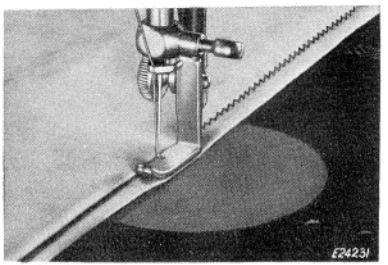


Fig. 86
Blind Stitched Hem in Process

Blind stitched hems are appropriate for curtains, draperies, table linens and fabric furnishings. Fold, press and baste hem, keeping basting stitches at least ¼″ from upper fold of hem.

Place hem against feed, turning the bulk of the work back in a soft fold. Position needle into folded edge of the hem near this soft fold. Take the first stitch through folded edge of hem, next stitch through fold of garment and so alternate, catching just a thread or two of the fabric fold as the needle swings to left. The bight is regulated at 2 or 3, depending on the weight and texture of the fabric.

The length of stitch regulates the distance between the blind stitches.

Use: All-purpose Throat Plate and
Cording Foot (right toe) 160846
Central to Left Needle Position
2 or 3 Bight
6 to 8 Stitch

CAUTION: Left Needle Position must be used when Bight 3 or 4 is used with Cording Foot (right toe).

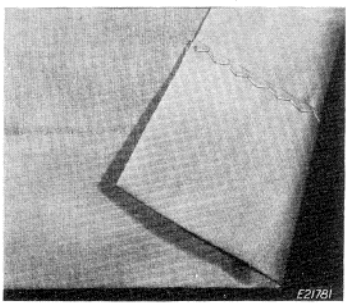


Fig. 87. Blind Stitched Hem Completed

SHADOW HEMS FOR TRICOT WEAR

Use **All-purpose Throat Plate,**
All-purpose Presser Foot,
Central Needle Position,
2 Bight and 12 to 25 Stitch setting.

After marking garment for length desired, turn on the markings and baste for depth desired. With All-purpose Presser Foot follow just below basted line and trim away raw edge close to stitches. This method may also be used for shadow panels.

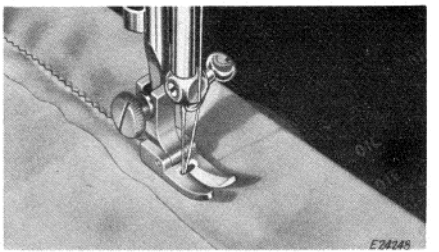


Fig. 83. Stitching Shadow Hem

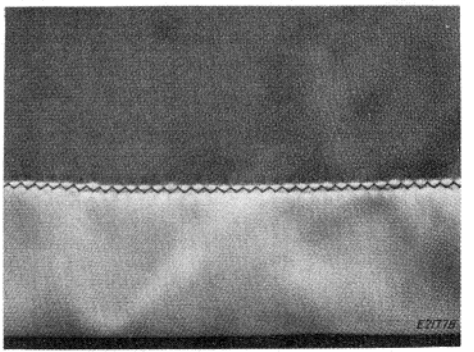


Fig. 84. Finished Shadow Hem

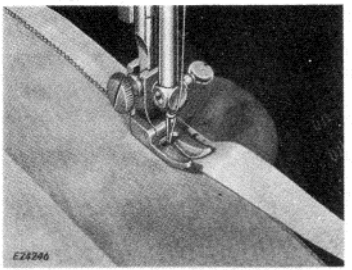


Fig. 79. Attaching Seam Tape to Raw Edge of Hem with All-purpose Foot

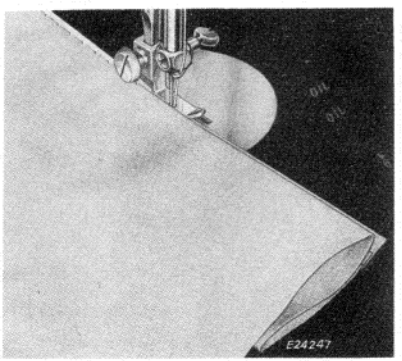


Fig. 80. Blind Stitching Hem with Seam Tape Finish

BLIND STITCHED HEM FINISHED WITH SEAM TAPE

Seam tape is first stitched to raw edge of garment.

Use **All-purpose Throat Plate,**
All-purpose Presser Foot,
Central Needle Position,
1 Bight, 25 Stitch.

Turn hem to the desired depth and baste about ¼″ from edge of seam binding.

Use **Cording Foot (right toe),**
Central Needle Position,
2 Bight, 6 Stitch.

Turn hem toward right side, exposing the ¼″ free edge of seam tape, upon which Cording Foot (right toe) is lowered. Follow same procedure as for Blind Stitching a hem with folded edge.

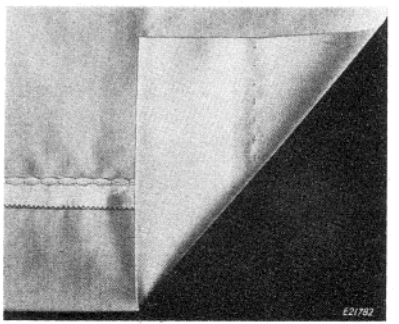


Fig. 82. Blind Stitched Hem with Seam Tape

APPLIQUE SHADOW HEMS

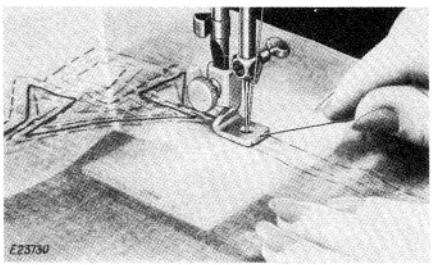


Fig. 93. Applique Shadow Hem in Process

Shadow hems are lovely for table linens of crisp organdy or fine linen, as well as for dresses or aprons of sheer, crisp fabrics. Baste hem to full depth of design, corners mitred where necessary. Mark design on right side. Draw filler thread through opening in front of Applique Foot and follow design with fine, closely spaced zigzag stitching. When applique is complete, cut away surplus edge from wrong side close to stitching.

Use: All-purpose Throat Plate
Embroidery and Applique Foot 189651
Central Needle Position
1 Bight
Almost 0 Stitch

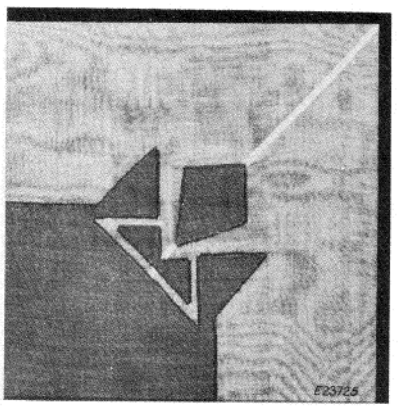


Fig. 94. Applique Shadow Hem Completed

EMBROIDERED LACE OR VIENNA WORK

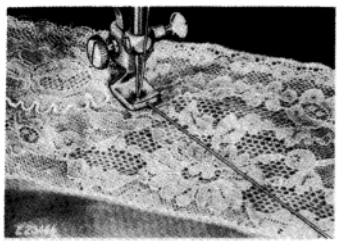


Fig. 95. Outlining Lace Motif with Embroidery Foot 189651

Embroidered Lace or Vienna Work is characteristic of high-priced lingerie. Yet it may be very quickly and easily accomplished with Embroidery Foot, using fine rayon or silk crochet thread as the filler thread to be covered.

Use: All-purpose Throat Plate
Embroidery Foot 189651
Central Needle Position
1 Bight
Almost 0 Stitch

Use wide lace edging with a definite floral design, and baste into position, where desired, on right side of fabric. First follow upper lines of motif nearest edge, covering filler cord with tiny stitches along lines of motif, and continuing in an unbroken, continuous line. Then choose a section of the motif nearest edge and fully outline this separate motif, repeating at evenly spaced intervals for length of the lace. Finally, remove bastings, cut away surplus lace close to stitches of corded outlines and, from wrong side of garment cut away surplus satin along edge, close to lines of cording.

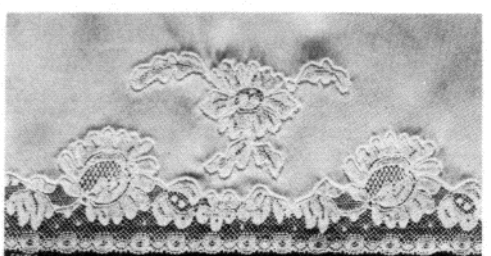


Fig. 96. Lace Motif Embroidered Into Satin

SHELL STITCHED HEMS

Shell Stitched Hems provide a soft, ornamental finish for delicate fabrics, particularly when material is cut on the bias.

Use **All-purpose Throat Plate,**
Shell Hemmer 189653 (see **page 33**),
Right Needle Position,
5 Bight,
Stitch at 8,
Tighten both upper and lower
tensions (see **pages 21 and 22**).

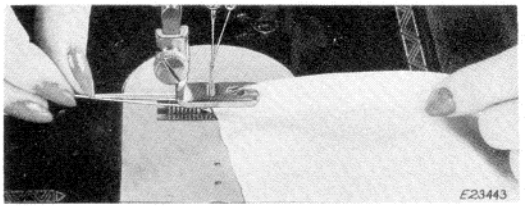


Fig. 87. Leading Raw Edge Into Scroll of Shell Hemmer

Lower Shell Hemmer over raw edge of fabric on wrong side of material. Take one stitch, letting needle enter fabric and rise again. Holding both threads, raise Shell Hemmer, draw the work back and cut off threads on Thread Cutter (**R, Fig. 19, page 16**). Still holding both threads, lead raw edge of fabric lightly into scroll of Hemmer, drawing on threads to carry it through. On reaching slot of Hemmer, lower the needle into hem, then lower Hemmer and stitch. Many variations of the soft scallop may be obtained by using different stitch settings and threads of various types in matching or contrasting colors. Metallic Thread or Buttonhole Twist wound on bobbin, affords a delicately ornamental touch for Nylons, Chiffons and Paper Silk.

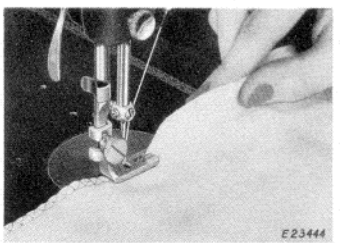


Fig. 88. Making Shell Stitched Hem

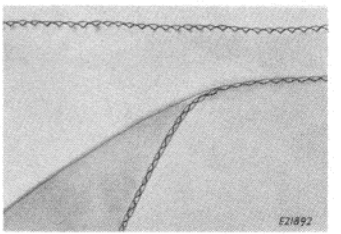


Fig. 89. Shell Stitched Hem For Sheers

SATIN STITCHED SCALLOPS

Satin stitched scallops provide a beautiful and durable finish for household linens as well as for wearing apparel.

Prepare the work for satin stitching by using a double thickness stayed with crinoline or organdy, or a single thickness backed with paper. Trace scallops in position, allowing a sufficient margin of fabric (about 2 inches), at right to grasp with right hand in guiding scallops. If, when cutting, sufficient length were not allowed, machine baste a piece of same fabric, or stay fabric just outside marked line of scallop.

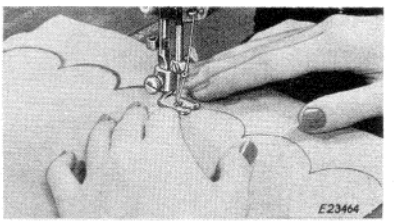


Fig. 101. Satin Stitching Scallops

Use a size 11 needle, 50 embroidery or silk thread, very light upper tension and medium light bobbin tension and **most important,** the Pressure on the **Presser Foot** must be set as light as possible so that the fabric can be moved from right to left while satin stitch is being made. The fabric remains straight at all times in line with the feed. Scallops are followed without turning by lightly moving the work, to right or left, so that the needle on its right swing follows the marking for the scallop. This will maintain parallel stitches, evenly spaced, automatically producing the effect of a narrower stitch at the point between scallops and widening to full depth at the arc.

Use: All-purpose Throat Plate
Satin Stitch Foot 189649
Central Needle Position
Almost 0 Stitch
5 Bight

TO CORD SCALLOPS

A finely corded edge is used to complete satin stitched scallops used as an edge finish. Lead heavy duty thread into eye of Embroidery Foot and carry it through and under foot. Position needle close to edge of scallop, lower foot and stitch close to scallop, covering filler thread with closely spaced stitches, crowding against scallop all along the way.

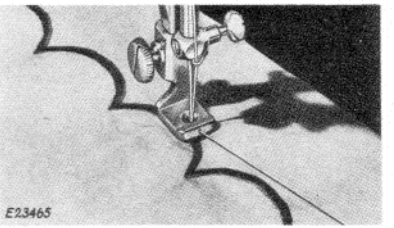


Fig. 102. Cording the Scallops

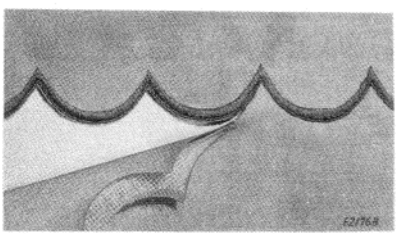


Fig. 103. Trimming Scalloped Edge

If scallops border a hem, cut away surplus of hem on wrong side close to inside of scallop. If scallops form an edge, cut away surplus border close to cording stitches on outside of scallop, at the same time cutting away foundation crinoline or organdy.

Use: All-purpose Throat Plate
Embroidery Foot 189651
Central Needle Position
1 Bight
Almost 0 Stitch

Medium Pressure Adjustment

FRINGED EDGES

Use **All-purpose Throat Plate,**
All-purpose Presser Foot 105069 (see **page 32**),
Left Needle Position,
2 Bight,
Stitch setting at 12 to 25.

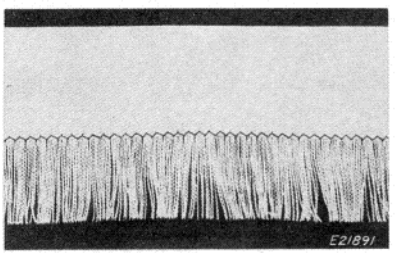


Fig. 141. Fringed Edges

Draw a thread the distance from the raw edge of fabric that you have determined should be the depth of the fringe. Positioning the needle on line of drawn thread, lower All-purpose Presser Foot and stitch along this line. Beginning at raw edge, draw out thread by thread up to the stitched line.

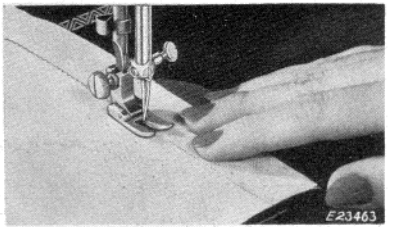


Fig. 140. Following Drawn Thread with All-purpose Presser Foot 105069

Wide Hemstitching is done in same manner as Fringed Edges, except that threads are drawn from body of fabric beginning with two threads drawn the distance apart that the hemstitching is desired. Stitch along these drawn threads and position needle as before.When first line is completed, turn fabric around to begin second line directly opposite last stitch taken in first line. Be careful to match opposite swing of stitches. Then draw remaining center threads from fabric between the rows of stitching.

Fig. 142. Wide Hemstitching

BIAS BOUND EDGES

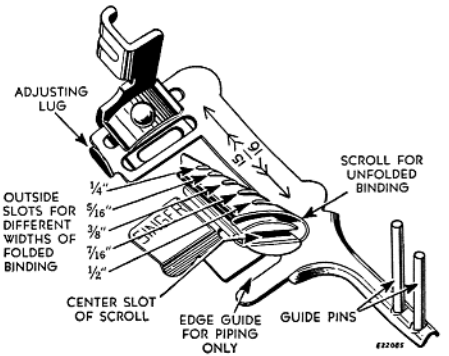


Fig. 107. Multi-slotted Binder

The Multi-slotted Binder is provided with a wide throat to accommodate zigzag as well as straight stitching. Zigzag stitched binding affords an elastic and durable flat finish for curved, scalloped or pattern edges. The Binder will apply prefolded bias binding in sizes 1, 2, 3, 4 and 5, as well as self-fabric bias cut to 15/16 inch width. Bindings are fed through slots of corresponding size in the Binder scroll.

Use: All-purpose Throat Plate and Multi-slotted Binder
Central Needle Position
2 to 5 Bight
12 to 8 Stitch

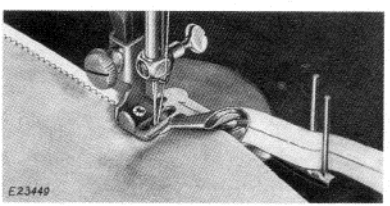


Fig. 108. Applying Binding to Garment

To thread Binder, cut binding to a long point from edges to center fold as shown in **Fig. 109.**

Insert pointed end of binding into appropriate slot for its width and pull binding through until the evenly folded edges are under needle.

Slip free length of binding between two upright pins which act as a guide for lightly feeding binding into Binder while it is being stitched. Place raw edge to be bound as far to right as it will go into mouth of scroll, guiding fabric lightly from back of Binder and to the left, permitting unfinished edges to swing naturally into scroll of Binder.

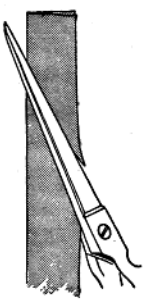


Fig. 109

BINDING CURVED EDGES

Never pull binding while it is being fed through Binder as the bias will stretch, making folds too narrow for needle to reach. Turn material slowly when binding around curves. The scroll can be adjusted to right or left for needle to catch edges of fold.

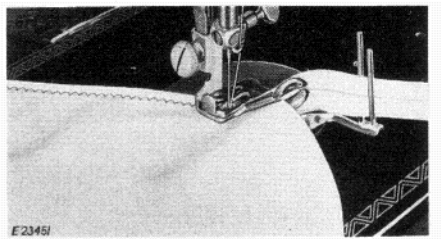


Fig. 110. Binding Curved Edge

PIPING AND BINDING IN ONE OPERATION

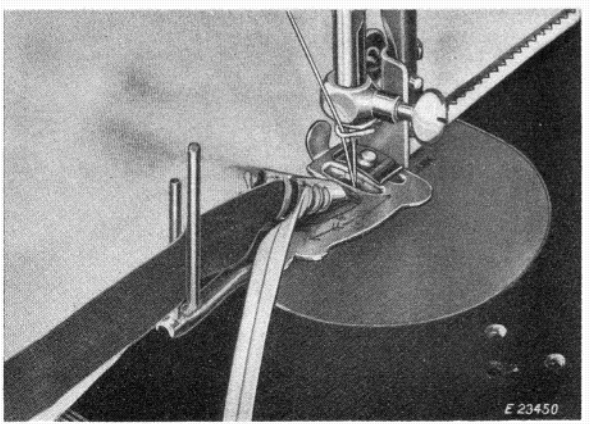


Fig. 111. Piped Binding

When piping and binding at the same time, insert narrower width of binding first, then insert wider width. Two consecutive widths should not be used at the same time. Widths 2 and 4, 3 and 5 or 2 and 5 are used in combination. Use upright guide pins for wider binding. Piped binding is very effective when piping is in contrast to both the bound edge and the garment and when it is stitched in contrasting color.

SELF FABRIC BIAS BINDING

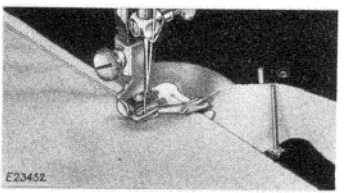


Fig. 112. Applying Unfolded Bias Binding with Straight Stitch

Self fabric bias binding should be cut $\frac{15}{16}$″ wide on the true bias. Insert this unfolded binding directly into two folds of scroll as shown in **Fig. 112** and draw it back, folded by the scroll, under the Binder. Adjust position of scroll so needle enters folded edge of binding above and below garment, lower Binder, and stitch. If preferred, a straight stitch may be employed for binding instead of zigzag stitch. For straight stitching, set Bight Lever at 0. All other operations are same as for binding done with zigzag stitches.

NET BOUND SEAMS

Delicate fabrics that fray easily, like chiffon, velvets, sheer metallics, etc., may have seam edges bound with nylon net. Cut net into ½″ wide strips and insert, **unfolded,** into slot 5 of Binder.

Use: Central Needle Position
2 Bight
12 to 25 Stitch

Feed seam edges into Binder with napped or right side up. This will insure against fraying without adding bulk.

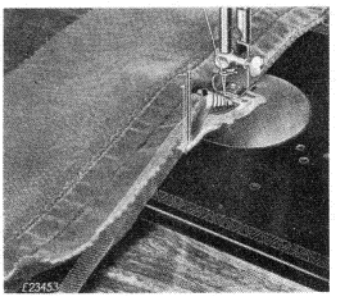


Fig. 113. Net Bound Seams for Velvets or Sheer Metallics

CORDED EDGES WITH FABRIC COVERED CORD

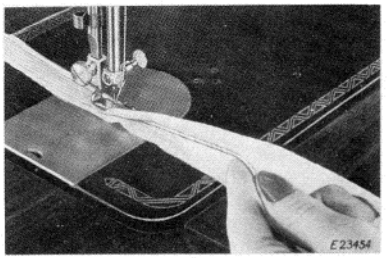


Fig. 120. Covering Cord with Cording Foot (Left Toe)

Use: All-purpose Throat Plate, or
Straight Stitching Throat Plate
Central Needle Position
0 Bight
Cording Foot (Left Toe) 160845
Cording Foot (Right Toe) 160846

To cover Cord cut bias strip twice the width of the seam allowance plus cord. Fold bias over cord, raw edges even, and position needle close to cord, but not into it, and lower Cording Foot (Left Toe). Stitch, guiding the edge of the foot next to the cord, but do not crowd the foot against it.

Machine Baste Cord to right side of garment using Cording Foot (Right Toe).

Apply facing and position under needle, with facing next to feed and garment next to foot, so that basting stitch will be in view. Stitch, this time crowding the foot against the cording and making stitches between the basting and the cording.

Before turning work, blend seams by cutting away seam allowances, the bias to ⅛″ and the garment and facing to ¼″.

Corded seams and edges lend smartness to tailored garments. Cushion covers and slip covers are usually finished with corded seams. The cording feet are essential for making corded seams and edges and have many applications in addition to stitching zippers and hems as described on **pages 52, 53 and 54.**

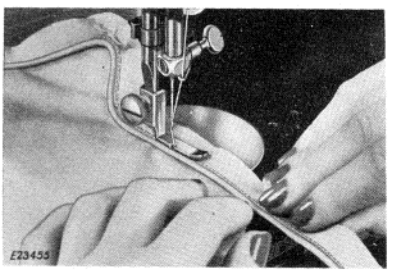


Fig. 121. Machine Basting Covered Cord to Garment

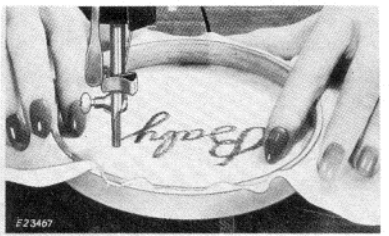


Fig. 129. Script Stitching with Hoops

SCRIPT STITCH

Do not lower the feed.

Use: Embroidery Plate No. 189632 — 3 Bight
No Presser Foot — 0 Stitch
Central Needle Position

Script Stitch is most effective for marking baby blankets, household linens, lingerie or accessories.

After tracing or marking lettering on right side of fabric, place in embroidery hoops large enough to encompass word or initials to be worked, with right side inside hoops. Place work under needle, lower the presser bar, position the needle and follow the outline traced. Should thread breakage occur, check setting of needle, decrease tension and use crisp lawn or organdy as an underlay.

SHADOW MONOGRAM

Shadow monograms have a dimensional appeal accomplished with threads of different colors or shades and with Twin Needles. Proceed as for Script Stitch. **Limit bight to 3 or less** and use a needle thread tension slightly lighter than for Script Stitch. Stitch more slowly when crossing one line of stitching over another. Where lines cross, stitch the first line less dense and allow the second line of stitching to be more prominent.

Move embroidery hoops in forming letters so that most of the motion is away from you. Move hoops with the stroke of the needle, taking care not to bend or deflect needles.

Shadow monograms are equally appropriate for linens and wearing apparel.

Fig. 130. Shadow Monogram

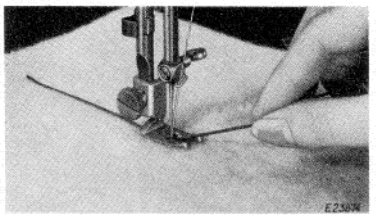


Fig. 147. Soutache Braiding with Satin Stitch Foot

BRAIDING

Use: All-purpose Throat Plate
Satin Stitch Foot
Central Needle Position
0 Bight
12 to 25 Stitch

Choose a design with simple, continuous, open lines that neither cross nor fall too closely together. Stamp or trace design on face of fabric.

Position Soutache braid under Satin Stitch Foot, then draw braid upward into the needle slot of the foot so that it lies on top of the lateral section of the foot. Stitch carefully, following the design and adjusting braid at points or corners with a stiletto or small screwdriver. The stitching will fall in the center groove of the braid.

When stitching is completed draw ends of braid to back of fabric through an opening in the weave punctured with a stiletto or coarse needle. Fasten braid with hand stitching against the underside of the design for about an inch.

Soutache braid is available in both mercerized cotton and rayon. The mercerized cotton type is a suitable trimming for cottons, linens, homespuns, cotton tweeds and similar fabrics while the rayon type is best for woolens, synthetic fabrics and silks.

According to fashion trends Soutache braid is featured for table linens, draperies, and fabric furnishings as well as for wearing apparel.

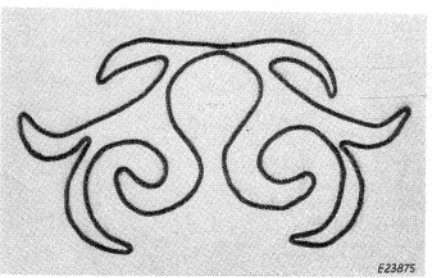


Fig. 148. Soutache Braiding Design Completed

APPLIQUE

Applique is effective on many types of apparel and fabric furnishings. Fabrics of like textures, as well as fabrics of different textures and weaves, are often used in appliqueing. For example, in lingerie, lustrous satin is appliqued to dull crepe to create beauty and interest by contrast in texture. Print fabrics are sometimes applied to plain fabrics in dresses, children's clothes, play clothes or linens, for accent. In draperies, motif and border prints may be applied to plain fabric of similar texture. When large motif designs are used in applique, the lines or sections of the design are frequently accented by continuing the stitching around these sections to bring out the design. In fabric furnishings such design sections are frequently padded to further accent the design and to give it a dimensional quality. Shadow applique on sheer fabrics is an important variation of plain applique and is described on **page 57.**

After stitching, portions of the design are cut away giving shadow contrast between portions of the design having double and single thickness.

Bold monograms of contrasting fabric may be applied to bed spreads, blanket covers or other furnishings for the home.

A closely spaced satin stitch is usually used for applique making it unnecessary to turn raw edges to underside. The width of the satin stitch may be varied to accommodate the weave. Fine fabrics are appliqued with a narrow satin stitch, while coarse fabrics require a wide satin stitch. In many cases the design is stitched to the garment with a satin stitch and the edges are trimmed away later. An alternate procedure is often used where the design is stitched to the fabric with a short straight stitch, the raw edges trimmed, and the satin stitch used to complete the outline, resulting in a smooth, lustrous edge. A trial sample is always made to determine the method most appropriate for the particular work being done, since applique is appropriate on such a diversity of fabrics.

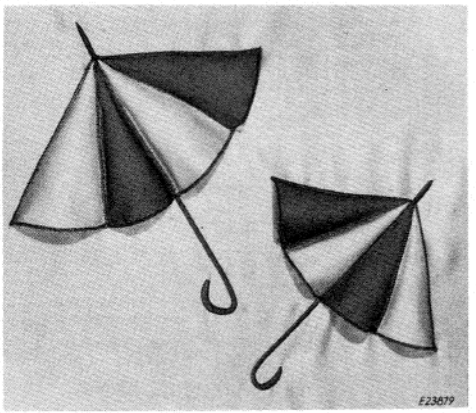


Fig. 152. Applique in Umbrella Design

The outside lines are lightly indicated on the fabric to which the design is to be applied. Any portion of the design to be made with stitching only, is completed before the applique is done. The sections of the applique in the umbrella motif are joined with straight stitching and edges are trimmed. A backing or double thickness of fabric is desirable in such a motif. All edges that are to be free of the garment are finished with satin stitching and trimmed.

Edges that are to be secured to the garment are basted and stitched with straight stitching to the garment. After trimming raw edges away close to the straight stitching, these edges are appliqued with a satin stitch. All thread ends are drawn to the underside of the fabric and tied.

Soft, lustrous, fine threads are appropriate for such stitching. A needle of a size suitable for the threads is used in accordance with the chart on **page 6.** Increased pressure on the presser bar is frequently necessary to accommodate the multiple layers of material being handled under the foot. Pressure adjustment varies with the weight and texture of fabrics being used.

TWIN NEEDLE AIR TUCKING

Use: All-purpose Throat Plate
All-purpose Presser Foot
Twin Needles—see **page 8**
Central Needle Position
0 Bight
12 to 25 Stitch

Simple air tucking on medium and light weight fabrics is effective as an accent when used to carry out a design or for straight or diagonal lines of stitching. The two threads carried by the twin needles interlock with a single bobbin thread to form air tucking. When the needle thread tension is increased, the fabric between the lines of stitching is raised, creating air tucking.

Select thread of a size appropriate for the size needle being used as well as a thread appropriate for the fabric. The Fabric, Thread and Needle Chart on **page 6** is a helpful guide.

Square corners are made by turning twice while the needles are out of the fabric.

Stitch until the inside needle has reached the corner. Raise presser foot when needles are out of the fabric. Make a one-eighth turn of the fabric, allowing the inside needle to enter for the second time into the corner stitch penetration. Turn hand wheel until the needles go down and up again and rise out of the fabric.

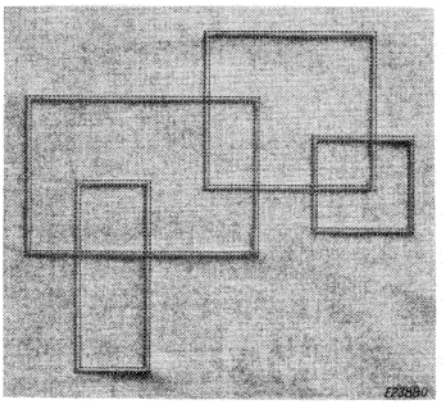


Fig. 153. Twin Needle Air Tucking

Make the second eighth turn of the fabric. Allow the inside needle to enter for the third time into the corner stitch penetration. Continue to stitch in a straight line. When design is completed draw threads to the underside and tie.

When using parallel lines of air tucking, spacing should be such that foot does not ride over a previously stitched row.

THE RUFFLER

Use: Straight Stitching Throat Plate
Ruffler 120598
Central Needle Position
0 Bight

PRINCIPAL PARTS OF RUFFLER

A—Foot—attaches ruffler to presser bar.

B—Fork Arm—straddles needle clamp.

C—Adjusting Screw—regulates fullness of gathers.

D—Projection—engages slots in adjusting lever.

E—Adjusting Lever—sets Ruffler for gathers or pleats.

F—Adjusting Finger—regulates depth or size of pleats.

G—Separator and Seam Guides—separates ruffle strip from fabric and facing—guides seam edges evenly.

H—Ruffling Blade—the upper, blue steel blade with teeth.

J—Separator Blade—lower blue blade keeps Ruffling Blade Teeth separate from Feed Dog Teeth.

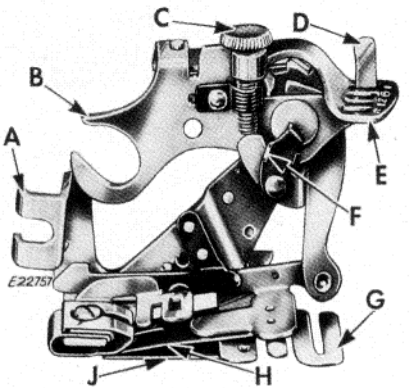


Fig. 154. Principal Parts of Ruffler

To Attach the Ruffler, raise needle to its highest point, loosen presser foot thumb screw and attach ruffler in place of presser foot, at same time placing fork arm **B** astride needle clamp. See that needle enters center of needle hole in ruffler.

To Adjust Ruffler for Gathering, swing adjusting finger **F** away from needle. Raise adjusting lever **E** and move it until projection **D** can be entered in slot marked "1". Insert material to be ruffled between two blue blades and under separator guide. Draw material slightly back of needle, lower presser bar and sew. For fine gathering, turn adjusting screw **C** upward to shorten stroke. Set machine for a short stitch. For full gathering, turn adjusting screw **C** downward to lengthen stroke. Set the machine for a longer stitch.

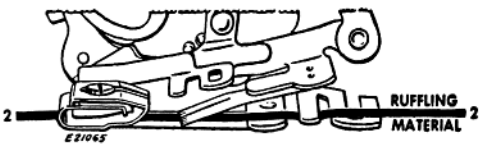


Fig. 155. Correct Position for Material to be Ruffled.

To Make a Ruffle and Sew It to a Garment in One Operation, insert material to be ruffled between two blue blades and under separator guide. Place material to which ruffle is to be attached under separator blade and under separator guide. Proceed the same as for plain gathering.

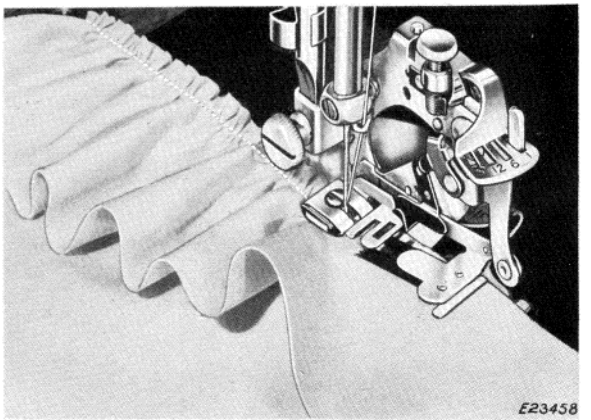


Fig. 156. Making a Ruffle and Attaching It in One Operation

To Adjust Ruffler for Pleating, raise adjusting lever **E** and move it until projection **D** can be entered in slot marked "**6**". The ruffler will then pleat once every 6 stitches. To pleat once every 12 stitches, have projection **D** enter slot "**12**" in adjusting lever **E.** Insert material to be pleated between two blue blades and under the separator guide.

To increase width of pleat, move adjusting finger **F** back toward needle and turn adjusting screw **C** downward. To make a smaller pleat, turn adjusting screw **C** upward. The distance between pleats is regulated by length of stitch.

To make the space between the groups of pleats, raise adjusting lever **E** and move it until projection **D** can be entered in small slot indicated by star on adjusting lever **E.** The ruffler will then stop pleating and plain stitching will be made.

When desired space is made, set projection **D** in either of slots "**6**" or "**12**". Insert material to be pleated between two blue blades and under separator guide.

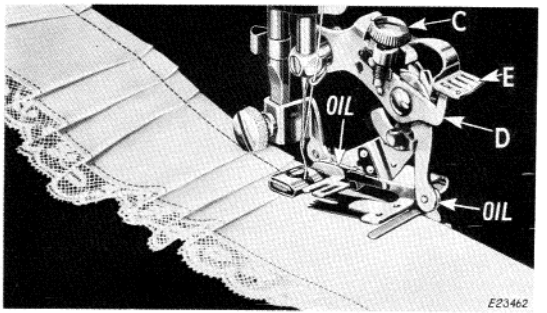


Fig. 157. Group Pleating with Ruffler

TO OIL THE RUFFLER

Occasionally apply a drop of oil to working parts of ruffler at places indicated in **Fig. 157.**

FAMILY MAINTENANCE SEWING

MENDING A RENT OR TEAR

Household linens, sheets, towels and pillow cases are quickly mended on the SINGER Swing-Needle Machine by holding an underlay of straight or bias fabric underneath the tear and zigzag stitching over the tear bringing the edges of the tear together and reinforcing them. The ends or corners are given added strength by using a shorter stitch length.

Use: All-purpose Throat Plate and Presser Foot
Central Needle Position
5 Bight
12 to 25 Stitch

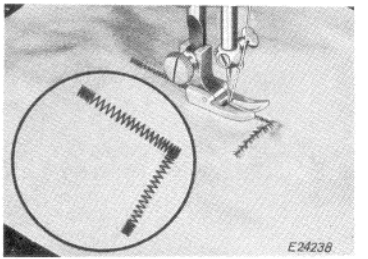


Fig. 158. Mending a Tear

MENDING TROUSER POCKET

Regulate machine in the same way as for mending a tear, and stitch pocket together allowing the needle to stitch very close to the edge on its right stroke, reinforcing the edge and closing the seam at the same time.

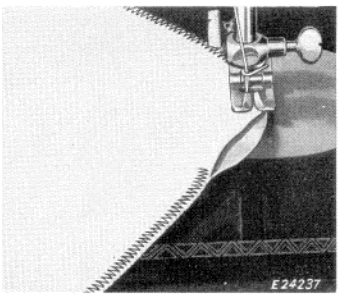


Fig. 159. Mending a Trouser Pocket

GIRDLE REPAIRS

Zigzag stitching is well suited for use on garments of an elastic nature that require firm, flexible stitching. The stitch length and bight are regulated according to the need. A needle slightly larger in size than is used for regular stitching is sometimes necessary to accommodate the multiple layers of fabric and elastic. Where both lengthwise and crosswise elasticity is important, zigzag stitching is best suited.

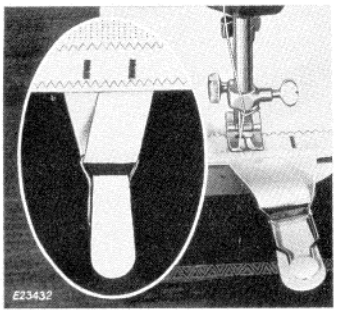


Fig. 160. Repairing a Girdle

ELASTIC WAISTBANDS

Use: All-purpose Throat Plate and
Presser Foot
Central Needle Position
2 Bight
12 Stitch

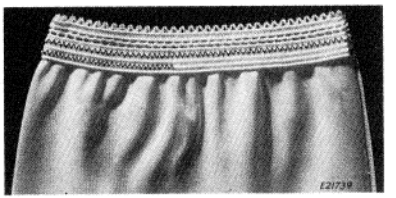


Fig. 161. Renewed Elastic Waistband

Stretch elastic while stitching to provide the degree of fullness required in the garment. If a waistband, fit elastic for snugness on the individual and join ends of elastic. Divide both elastic and garment into quarters and pin at these intervals. Stretch elastic between these points to dimension of garment while stitching. With top edge of elastic in line with raw edge of garment, zigzag two rows, following the cords in the elastic. Trim away raw edge of garment near top line of stitching.

REPLACING BLANKET BINDING

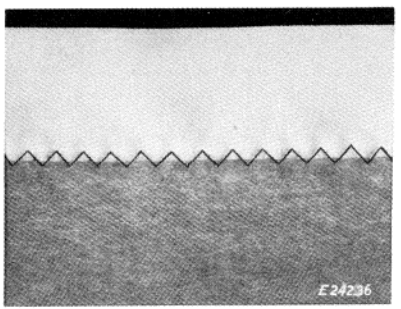


Fig. 162. Blanket Binding Replaced

The zigzag is an excellent stitch for applying blanket bindings and affords both a decorative and durable finish. Remove worn binding. Baste new binding securely in place. Stitch, using the All-purpose Throat Plate and Presser Foot, **5 Bight,** and **12 to 25** Stitch. Increase pressure adjustment to accommodate the thickness of the blanket.

DARNING

Stockings, children's balbriggans, leggings, and knit wear of all kinds, as well as household linens are often darned on the sewing machine. The area near the worn section must be held taut in the SINGER* Stocking Darner (available separately) or in embroidery hoops. The feed is lowered and the presser foot removed. Refer to **page 50,** for lowering feed. Set **Needle Position** at **Central** and **Bight** at **0,** locking bight with screw **E2, Fig. 24, page 19.**

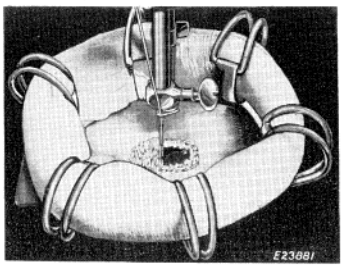


Fig. 163. Partly Finished Darn

When darning knitwear, reinforce opening by positioning needle ¼″ outside of hole, lower the presser bar to engage tension discs, and run reinforcing stitches ¼″ from edge completely around hole, moving hoops with both hands. This reinforcement may be omitted for firm fabrics whenever it seems to be desirable.

With a steady, continuous movement, move hoops backward and forward across hole, keeping the lines of stitching closely spaced and even in length. Slow movement of hoops will produce a short stitch while rapid movement will produce a long stitch. For knit and tricot fabrics a longer stitch is best, because it is softer when the garment is worn. A short stitch is best for cottons and household linens, because it approximates the weave of the fabric and is strong enough to withstand many launderings.

Use: Lowered Feed (see **page 50**)
Straight Stitching Throat Plate 105146
Central Needle Position
0 Bight
0 Stitch

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INDEX (Continued)

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