

How To Use and Care For Your

Zigzag Sewing Machine

MODEL 465

You are now the owner of a new White zigzag stitching machine with a built in button-hole making device which makes it the most versatile machine of its type you can possess.

By just the movement of two levers your machine makes any size buttonhole you choose. Also monogramming, overcasting, and creative embroidery can be done with ease and speed.

To aid you in obtaining the greatest performance from your new White, this book on its care and use has been written for you. Read the instructions carefully as a thorough understanding of your machine will reward you with many hours of trouble-free creative sewing.

Time-saving attachments such as rufflers, binders, edgestitchers, hemmers, cording feet and so forth, to complement the accessories furnished with your White, are available from the store where you purchased your machine.

WHITE SEWING MACHINE COMPANY
11750 BEREA ROAD
CLEVELAND, OHIO 44111
WHITE CONSOLIDATED INDUSTRIES, LTD.
1470 BIRCHMOUNT ROAD
SCARBOROUGH, ONTARIO, CANADA

I N D E X

	Page
Features and Parts	2-3-4
Needle and Thread Chart	5
Setting the Needle	6
Winding the Bobbin	6-7
Threading the Bobbin Case	7
Placing Bobbin Case in Shuttle	8
Upper Threading	9
Straight Stitching	10
Setting the Stitch Length	11
Stitch Length Chart	11
Sewing in Reverse	11
Adjusting the Tensions	11-12
Adjusting Pressure and Feed	12
General Sewing	12
Light Weight Fabrics	13
Darning and Monogramming	13
Preparing to Sew	13
Removing the Work	14
Creative Embroidery	14
Samples of Embroidery	15
Embroidering with a Hoop	16
Making Buttonholes	17
Sewing on Buttons	18
How to Use Accessories	19

	Page
Narrow Hemmer	19
Lace Trimmed Hem	19
Lace Edge	20
French Seam	20
Flat Felled Seam	20
Hand Rolled Effect	20
Quilting Guide	20
Seam Gauge	21
Care and Maintenance	21-22
Replacing Light Bulb	22
How to Change Belt	22-23
Cleaning and Oiling Shuttle	24
Accessories	25
Trouble Chart	26-27-28
Attachments	30
Attachment Foot	31
Edgestitcher	31
Binder	32
Hemmers	33
Adjustable Cording and Zipper Foot	36
Ruffler	38
Sewing Hints	40, 41, 42, 43
Installing Sewing Head	44, 45, 46

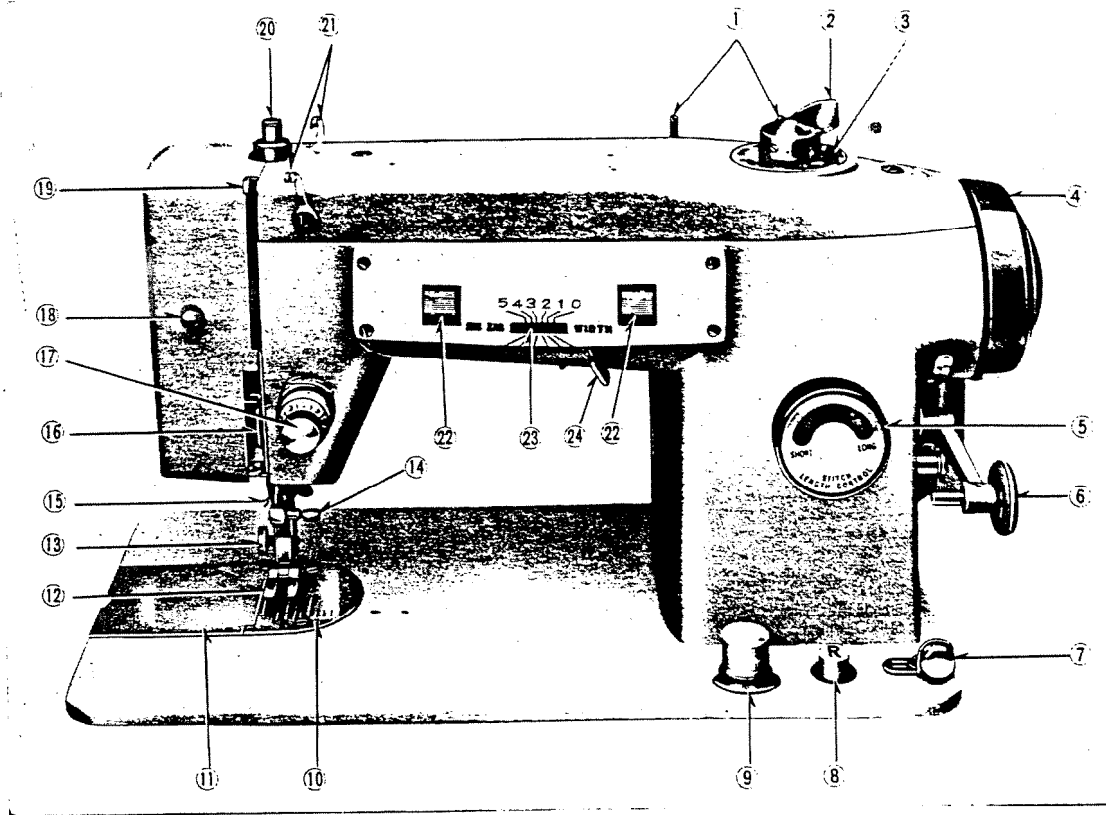


Fig. 1

FEATURES AND PARTS

(Front View)

1. Spool Pins
2. Buttonhole Lever
3. Button Lever Dial
4. Hand Wheel
5. Stitch Length Dial
6. Bobbin Winder
7. Bobbin Winding Tension
8. Push Button Reverse
9. Drop Feed Knob
10. Needle Plate-Seam Guide
11. Cover Plate
12. Presser Foot
13. Attachment and Foot Thumb Screw
14. Needle Clamp and Screw
15. Needle Bar Thread Guide
16. Thread Guides
17. Tension Regulator
18. Sew Lite Switch
19. Take-up Lever
20. Pressure Release-Darner
21. Arm Thread Guides
22. Zigzag Stitch Width Locks
23. Stitch Width Window
24. Stitch Width Lever

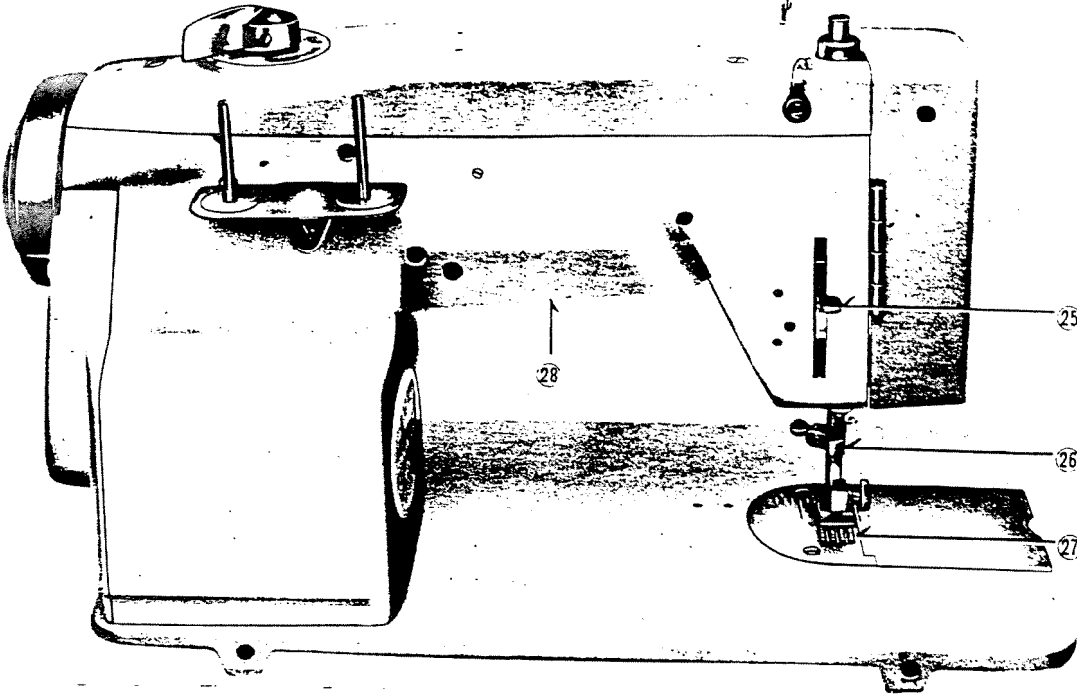


Fig. 2

- 25. Presser Bar Lifter
- 26. Thread Cutter
- 27. Feed
- 28. Handle

NEEDLE - THREAD - FABRIC - STITCHING GUIDE

Fabric	Needle No	Machine Stitches Per Inch	Cotton Thread	Mercerized Thread	Silk or Nylon
Extremely heavy tarpaulin, sacking, canvas, duck, etc.	4	6 to 8	10 to 30	Heavy Duty	
Heavy upholstery fabric, ticking, denim, leatherette	3	8 to 10	30 to 40	Heavy Duty	
Medium heavy drapery fabric, velveteen, suiting, felt, terry, etc.	2	10 to 12	40 to 60	Heavy Duty	
Medium broadcloth, percale, gingham, linen, chintz, taffeta, sheer wool, shantung, etc.	1	12 to 14	60 to 80	50	A
Sheer voile, lawn, dimity, crepe, handkerchief linen, plastic film, etc.	0	14 to 16 (Plastic film) 8 to 10	80 to 100	50	A
Very sheer chiffon, batiste, lace, organdy, ninon, net, marquissette, etc.	00	16 to 20	100 to 150	50	A

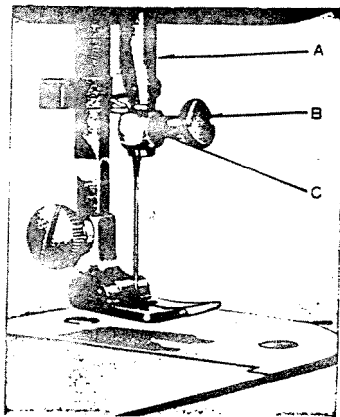


Fig. 3

SETTING THE NEEDLE

See Fig. 3. Raise the needle bar A to its highest point, turning wheel toward you by hand.

Then loosen the needle clamp screw B and the needle can be inserted into clamp C. Place needle (flat side to right) in the needle clamp and push it upward as far as it will go into needle clamp hole, tightening the needle clamp screw securely with a screw driver.

After changing the needle, make one complete revolution of the balance wheel by hand to be sure the needle is in the correct position.

Flat surface of
needle shank

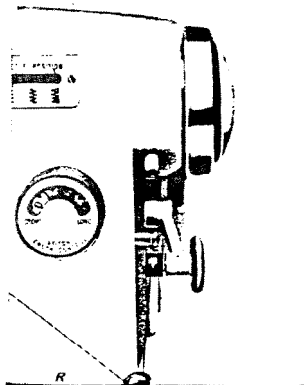


Fig. 4

WINDING THE BOBBIN

Place a spool of thread on one of the spool pins, lead thread through the upper thread guides on the arm, and down through the tension disc (7, Fig. 6) at the base of the machine. Run end of thread through a hole in the bobbin edge and place bobbin B on spindle of bobbin winder (S) fitting the notch on bobbin over small pin on spindle. Push bobbin winder pulley against hand wheel which will declutch the sewing mechanism. Hold thread end loosely and start machine slowly.

Bobbin will stop winding when it is filled. By moving the bobbin winder from the hand wheel, it will engage the sewing mechanism. Approximate one turn of the hand wheel may be required to completely engage sewing mechanism.

Break off loose thread end used to start the winding.

THREADING THE BOBBIN CASE

Step 1 illustrated in Fig. 6). Hold bobbin case between thumb and forefinger of left hand, so that the slot in the edge of the bobbin case is on top. Take the bobbin between thumb and forefinger of right hand so that the thread on top leads from left to right. Step 2. Insert bobbin into bobbin case, pull the thread into the slot of the bobbin case as shown in Fig. 7, and draw it under the tension spring and into the fork-shaped opening of the spring as shown in Fig. 8.

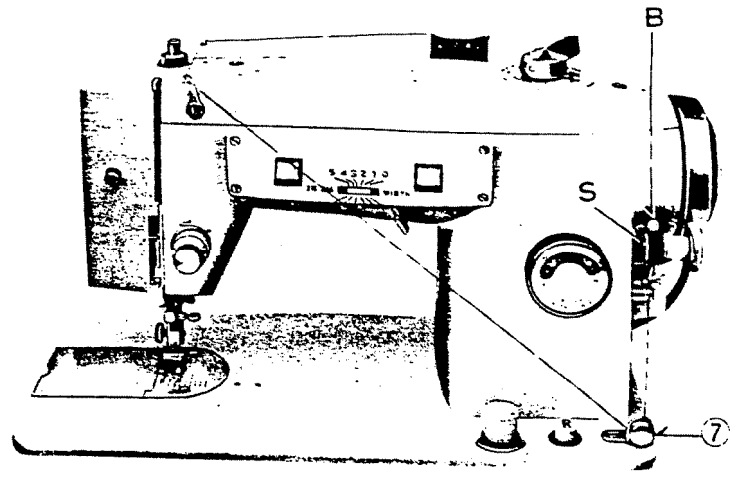


Fig. 5

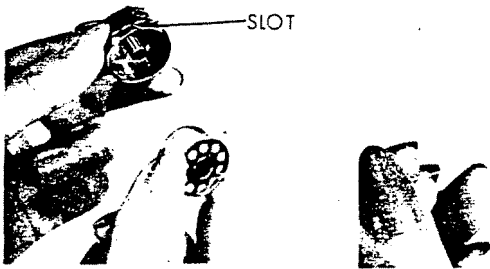


Fig. 6

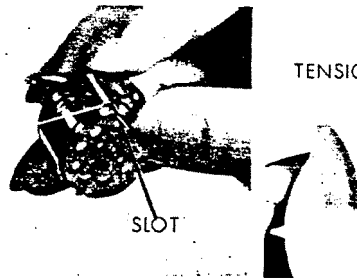


Fig. 7

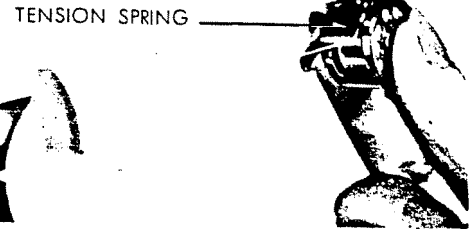


Fig. 8

PLACING BOBBIN CASE IN SHUTTLE

Open hinged cover plate left of the needle. (See 11, Fig. 1) Hold the bobbin case latch, (D), Fig. 9, between the thumb and forefinger of the left hand, with at least three inches of thread running from the top of the bobbin case to the right. Insert and center the bobbin case on the stud of the shuttle body, (C). Be sure the bobbin case finger, (E), is opposite the shuttle race notch, (A). Press the bobbin case (B) into the shuttle as far as possible until latch catches on the centerpost of the shuttle.

THEN release the bobbin case latch. (D). Press bobbin case again after latch has been released to make sure the bobbin case is locked securely in place. Close the cover plate.

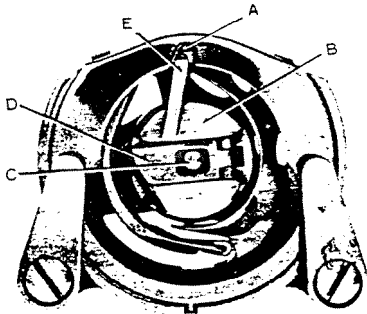


Fig. 9

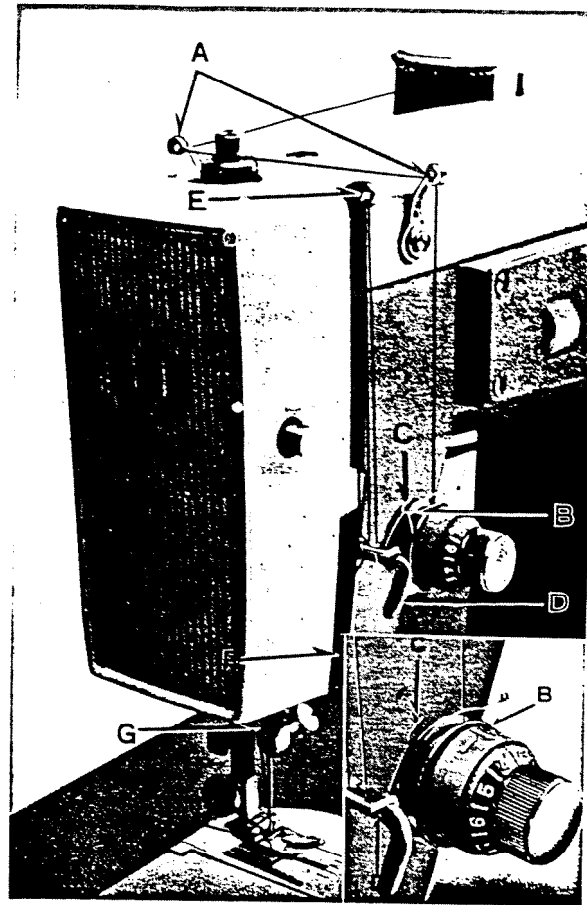


Fig. 10

UPPER THREADING

(Fig. 10)

1. Turn the hand wheel toward you to raise the take-up lever and needle to their highest position.
2. Place spool of thread on the spool pin nearer the needle.
3. Lead thread through rear and front arm thread guides A.
4. Down and between tension discs B from right to left
5. Up and around into the notch on check spring C over tension discs
6. Down under thread guide bar and into guide D
7. Up into take-up lever from right to lift E
8. Down through guide D in thread bar again
9. Into thread guide F
10. Through needle clamp guide G and into needle from left to right pulling three to four inches of thread through needle.

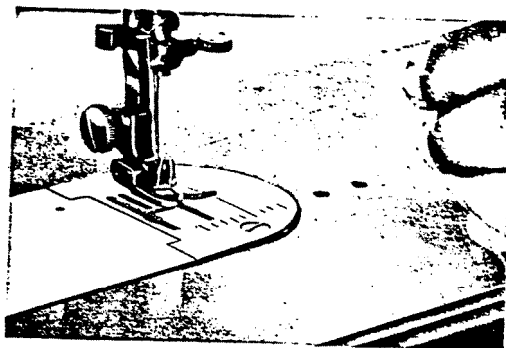


Fig. 11

Hold the end of upper thread loosely and turn hand wheel toward you until the needle goes all the way down and comes back up. A loop will be formed over the upper thread which then can be pulled out straight (Fig. 11). Place both thread ends under the slot of the presser foot and toward the back of the machine, leaving both threads three or four inches long.

STRAIGHT STITCHING

For straight sewing on fine fabric or very soft material, you may want to use the straight stitch presser foot and the straight stitch needle plate which are included in your accessory box. Both have narrow needle slots.

Changing the Foot and Plate. To change presser foot 12, Fig. 1) loosen thumb screw 13 and remove zigzag foot. Replace with hinged narrow foot and tighten screw securely.

To change needle plate (10, Fig. 1) remove screws and lift off with cover plate 11 attached. Turn assembly wrong side up. Hold needle plate with right hand and cover plate with left. (Fig. 12-A)

Press corner of cover plate down slightly and pull needle plate upward, slipping upper pin on needle plate out of groove. Then slide lower pin out.

Attach cover plate to straight stitch plate by reversing the above procedure. Slip pin on lower side of needle plate into groove on cover plate. Slide upper pin under lip and into groove on cover plate. Put plates on machine and fasten securely with needle plate screws.

Be sure to set stitch width at 0, or the needle will break in striking the foot or plate. Turn the right stop adjustment wheel 22 Fig. 12B) upward until the red indicator is in the extreme right hand position, lever 24 Fig. 12B will then be set for straight stitching.

To prevent lever 24 from being moved while sewing a straight stitch turn the left stop adjustment wheel (22, Fig. 12B) upward until the red indicator lines up with the 0 marking in window (23 Fig. 12B).

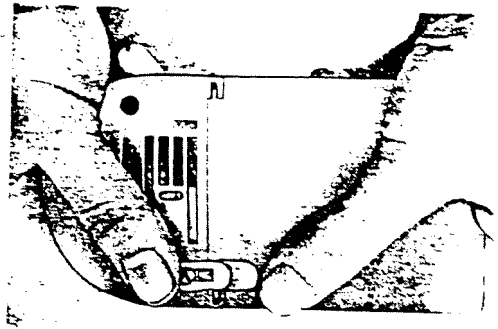


Fig. 12-A

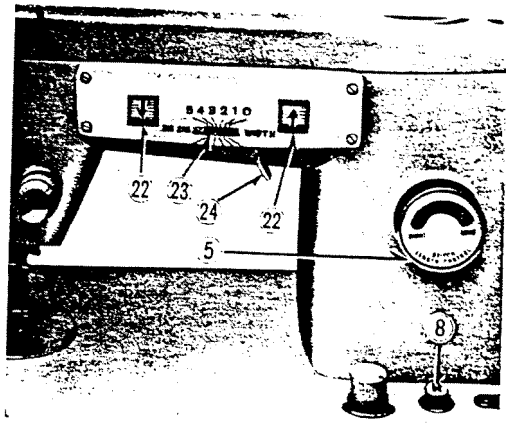


Fig. 12-B

SETTING THE STITCH LENGTH

The length of the stitch is regulated by the dial, 5, shown in Fig. 12-B. Near 0 is shortest stitch and 8 is the longest, but the dial may be set any spot between markings for a variety of lengths. Turn the dial to the left to lengthen and to the right to shorten the stitch. The number of the stitch length you choose should appear under the red line of the indicator window.

STITCH LENGTH CHART (Approximate)

Figures on indicator	0	1	2	3	4	5	6	7
Number of stitches per inch	No Feeding	30	15	12	10	8	7	6

SEWING IN REVERSE

When you wish to sew backward to tie the threads at the beginning or the end of a seam, press the R button (9 Fig. 12-B) down as far as it will go. The machine will sew backward as long as the button is held down.

ADJUSTING THE TENSION

Always adjust the upper tension with the presser foot down, as the tension is released when it is raised. To increase the tension on the upper thread, turn dial (Fig. 13) to the right, or clockwise. To decrease, turn to the left. The higher the number on the dial the tighter the tension. Before adjusting lower tension be sure that the machine is threaded properly.

When necessary to change the bobbin tension, turn small screw (Fig. 14) on side of the bobbin case clockwise to tighten, counterclockwise to loosen.



Fig. 13

When the upper and lower tensions are properly adjusted, a perfect stitch will be formed with both threads interlocking in fabric (Fig. 15).

When the upper tension is too tight, the lower thread is pulled up over the upper thread which is lying flat on the fabric (Fig. 16).

When the upper tension is too loose, the upper thread forms loops over the lower thread lying flat on the fabric (Fig. 17).

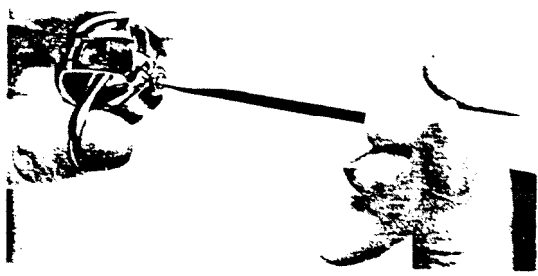


Fig. 14

ADJUSTING PRESSURE AND FEEDING OF FABRIC

GENERAL SEWING. Usually for straight sewing and zigzag stitching, the pressure bar capstan release Fig. 18 is at its lowest position and the drop feed knob is turned to "HI" position, Fig. 19.

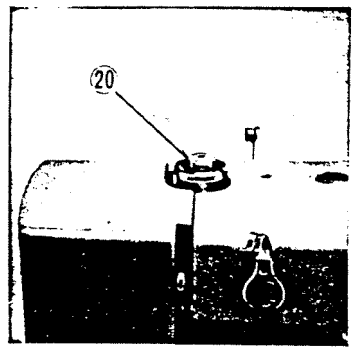
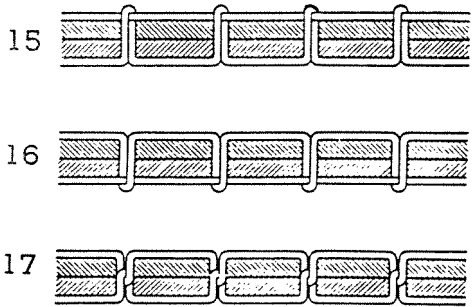


Fig. 18

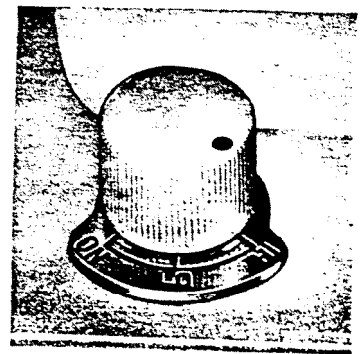


Fig. 19

SEWING THIN OR LGHT WEIGHT FABRICS.

When lighter pressure is required to sew satisfactorily on thin silk or filmy material, the pressure cap should be about halfway down. Release all the way by pressing the snap lock, A, Fig. 20, and then press cap B down again to halfway spot. Lower the feed slightly by turning the black dot on the knob to "LO" position.

DARNING AND MONOGRAMMING. In order to move the fabric freely in any direction for darning, mending and certain kinds of free-hand embroidery, release the pressure cap B completely by pressing down on the snap lock, A, Fig. 20. Turn the knob to "DN" position, which drops the feed well below the needle plate. To return feed to normal, return knob to "HI".

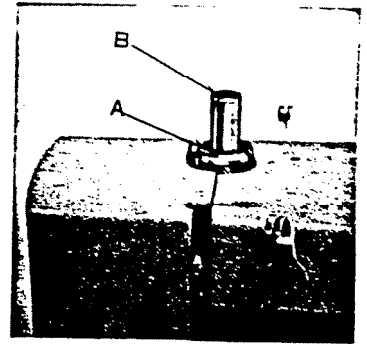


Fig. 20

PREPARING TO SEW

Have take-up lever at highest point before starting to sew. Do not try to help the feeding by pulling the material as this may deflect the needle and cause it to break.

NEVER run machine without material under presser foot.

Place material and threads in position under the presser foot and lower the presser foot. Turn the hand wheel toward you until the needle is at its highest point. You are now ready to begin sewing. By having the needle at its highest point, it is not necessary to touch the hand wheel to start the machine. You merely press the control. The speed of the machine is regulated by increasing or decreasing the amount of pressure exerted on the control.

REMOVING THE WORK

Be sure to stop the machine when the thread take-up lever and needle bar are at their highest position.

Now raise the presser foot and draw the fabric back and to the left, Fig. 21-A and B, and pass the thread over the thread cutter.

Pull down slightly, holding thread in both hands, so as not to bend the needle.

Leave the ends of thread under the presser foot.

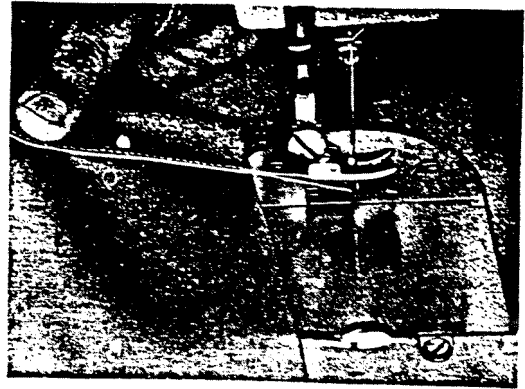


Fig. 21-A

CREATIVE EMBROIDERY

Be sure zigzag presser foot and zigzag needle plate are in place.

The satin stitch, Fig. 22, which is really just a very short zigzag stitch, and the basis for most embroidery, is obtained by setting the stitch length as near 0 as possible without stopping the feeding action.



Fig. 22

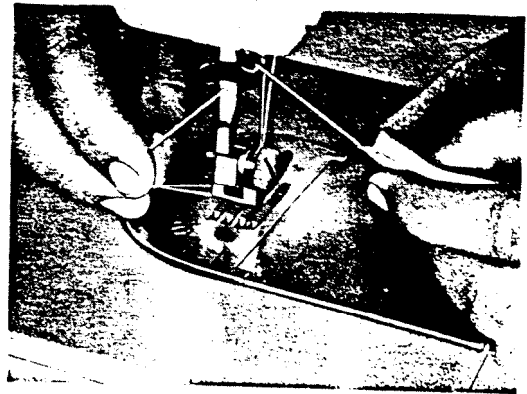


Fig. 22-B

Adjusting the Stitch Width

To stitch continuously at one width of zigzag stitching, both stop adjustment wheels 4, Fig. 12-B) may be turned until the indicators meet at the chosen stitch width number.

Should you wish to move freely between any two widths, such as 3 and 4, in doing free-hand embroidery or buttonholes, turn the right wheel downward until the right indicator moves to the 2 setting, and turn the left wheel upward until the left indicator is on 4 setting.

The 2 width will be produced until the zigzag lever (24, Fig. 12-B) is moved to the width. Embroidery Patterns.

With the machine set for a short stitch length, different designs can be made by swinging the stitch width or zigzag lever back and forth between 0 and 5 or any other combination of widths. Try setting the locks at 1 and 5, 2 and 4, etc. Set a rhythm for yourself and then proceed. After a while you will become quite skillful, varying your designs by the speed of the machine, stitch length and width and the manipulation of the lever.

SAMPLES OF CREATIVE EMBROIDERY

- A. Sew a few stitches at 5 width, then quickly move lever back to 0 for a short period. Count, if necessary, to establish a rhythm.
- B. Set stop wheels at 2 and 4, then move lever slowly between settings, operating machine rather fast.
- C. Set stop wheels at 1 and 5. Gradually move lever from 1 to 5, then snap it back quickly to 1.

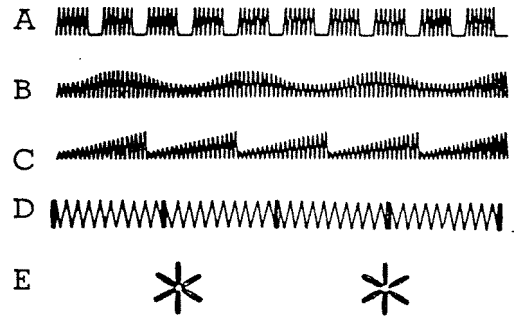


Fig. 23

- D. Set both stop wheels at 4, stitch length at 3. Do a few zigzag stitches, drop feed for 3 or 4, stitches then raise it again. By operating the feed knob rhythmically it is not necessary to count stitches.
- E. Drop feed, lock stitch width at 4, take 3 or 4 stitches, leave needle in fabric left of stitches. Pivot fabric on needle to make next daisy petal. Continue until flower design is complete. Lock threads by setting stitch width at 0 and taking 3 or 4 stitches in center of design.

EMBROIDERING WITH A HOOP

It is easy to follow a stamped design or to work free hand when embroidering or monogramming. (See Fig. 24). Release the pressure from the foot by pressing down the snap lock on the darning. Turn drop feed knob to darn position.

Stretch the fabric in an embroidery hoop, and place under the needle after removing the presser foot. Set the stitch width at the size you prefer and lower the presser bar lifter. Then operate the machine at a rather high speed while moving the hoop slowly with both hands. Work carefully and be sure to keep fingers out of the path of the needle.

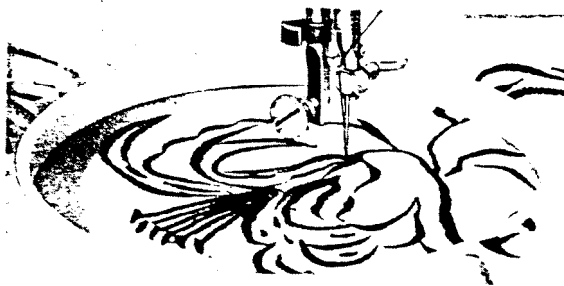


Fig. 24

MAKING BUTTONHOLES

First mark the beginning and end of the buttonhole on fabric with a basting line or Tailor's Chalk. Make a sample, following the directions below, on scrap fabric to be certain the finished buttonhole will fit the button to be used).

1. Replace presser foot with buttonhole foot which is grooved deeply underneath to prevent piling of the threads. (See Fig. 25).
2. With buttonhole control lever in the "M" position set stitch width at approximately number 2 by turning right stop wheel 4 Fig. 12B downward the higher the number the less cutting space a lower will give more cutting space.
3. Turn hand wheel until needle comes down on the left hand side of its throw.
4. Lower needle carefully into mark on fabric indicating the beginning of the buttonhole, lower presser foot and sew left side of buttonhole.
5. Stop machine and raise needle to highest position, turn control knob A Fig. 26 to bar tack position and sew 4 or 5 stitches.
6. With needle at highest position turn control knob A Fig. 26 to right hand position and sew right side of buttonhole.
7. Stitch to the starting point of the buttonhole. The machine will sew in reverse and make the bar tack.
8. Should you prefer to sew the right side of the buttonhole (reverse stitching) first-start with step 6 and follow with steps 5, 2 and 7.

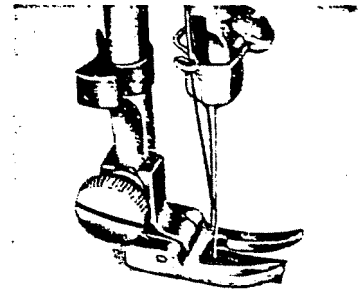


Fig. 25

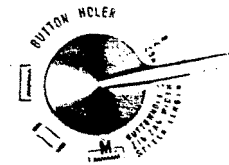


Fig. 26

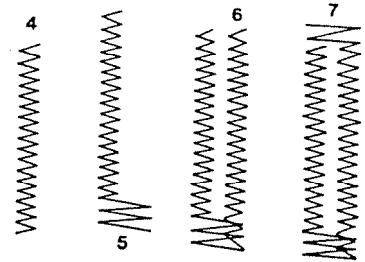


Fig. 27

If you plan to make buttonholes on sheer or soft material, place batistan or paper, which can be torn away after stitching, under the fabric. And it is always wise to make several buttonholes on scraps of fabric before working on the garment.

For buttonholes, with more cutting space set the stitch width at than 2 and for less cutting, higher then 2.

SEWING ON BUTTONS

1. Remove hinged presser foot and attach button sewing foot. (See Fig. 28-A, B). And place needle position lever left.
2. Turn drop feed knob to "DN" position.
3. Move zigzag width lever, to '0' position or to the extreme right. Place the button so that its left hole comes directly under the needle, then gently lower the presser foot. Move the zigzag width lever by turning the right stop adjustment wheel (Fig. 30-C) until the needle comes exactly over the right hole of the button. Turn the balance wheel slowly by hand to besure the needle clears both holes of the button. Correct width if necessary.
4. When needle goes into the center of each hole, run the machine at medium speed, making five or six stitches, stopping with the needle in the left hole.
5. To lock the zigzag stitch and prevent raveling, set the stitch width at 0, and take a few stitches in the same hole. If you wish you may place a rounded toothpick over the button, between the two holes, and sew button to fabric in regular way.

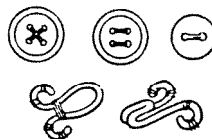


Fig. 30-C

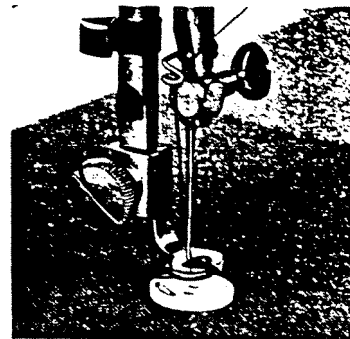


Fig. 28-A

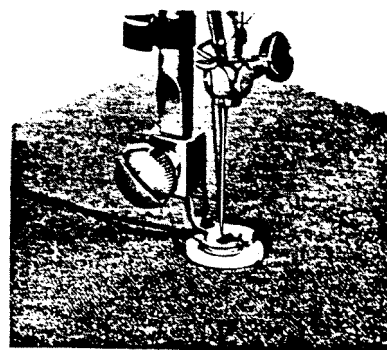


Fig. 28-B

Remove the toothpick and wind thread under button, forming a shank to fasten.

Apply the above method to sew on buttons with four holes, hooks and snaps, etc.

If a four-hole-button is to be sewn, follow the same procedure above for the two hole button.

Now lift presser foot slightly and move fabric to permit stitching the remaining two holes. Hooks, snaps, etc., are sewn to the fabric with the same procedure as for sewing two hole buttons.

HOW TO USE ACCESSORIES

NARROW HEMMER. With the needle at its highest position, replace regular presser foot with narrow hemmer (Fig. 29). For a plain narrow hem, make a $1\frac{1}{8}$ inch double fold for about two inches along edge of fabric. Hold each end of the two inch fold, slip underneath hemmer. Bring fold up into the scroll of hemmer, draw forward to end and fasten with point of needle. Lower presser bar lifter. Gently pull ends of thread as you start stitching.

Guide material slightly to right, and it will take a double turn through scroll.

LACE TRIMMED HEM. To sew a narrow hem and attach lace in one stitching, insert lace in the slot next to needle (Fig. 30). Sew hem as above, guiding lace under needle and hem into scroll.

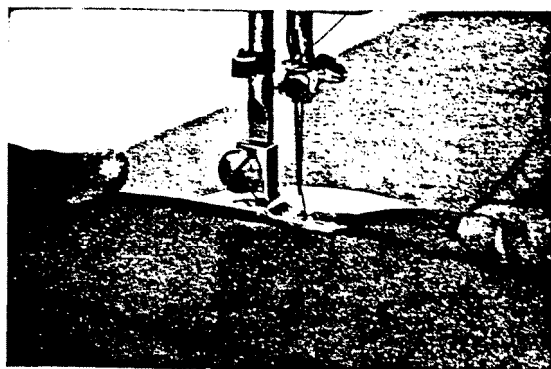


Fig. 29

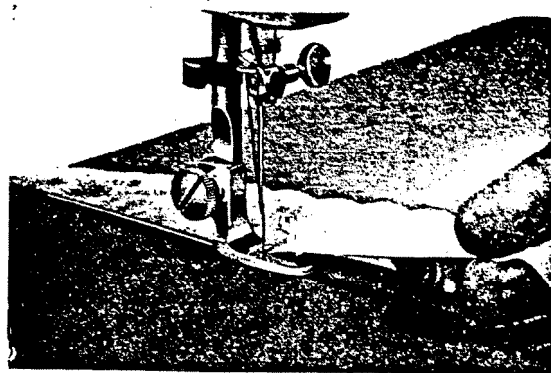


Fig. 30

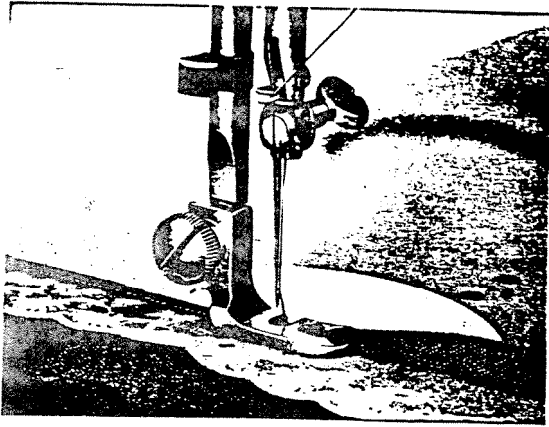


Fig. 31

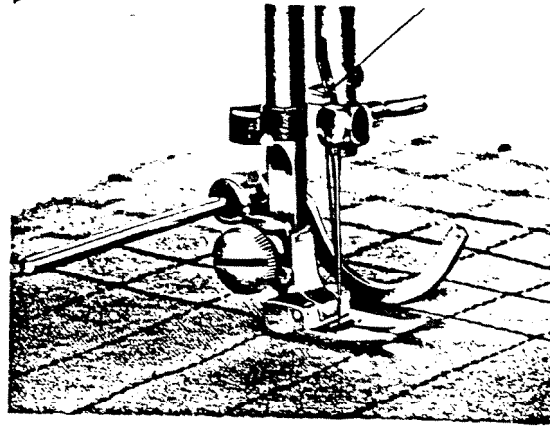


Fig. 32

LACE EDGE WITH INVISIBLE STITCHING. Hold lace 1/8 inch from raw edge on right side of fabric. Insert both in scroll as for plain narrow hem (Fig. 31). Let hem roll over and sew in lace. Press lace out flat along edge with hem turned up. It is possible to have a little fullness in lace by feeding it freely under scroll.

FRENCH SEAM. With right sides together, place top piece of material 1/8 inch inside edge of lower piece. Insert in hemmer scroll, allowing hem to roll over and sew in top fabric, making French seam.

FLAT FELLED SEAM. Open out French seam and insert rolled edge in scroll of hemmer. Edgestitch to lay seam flat.

HAND ROLLED EFFECT. Use a narrow zigzag stitch, just wide enough to catch both edges of the narrow, rolled hem.

QUILTINGGUIDE. This guide for making parallel rows of stitching is attached by placing the pronged holder between the presser foot and the presser foot clamp screw (Fig. 32).

Adjust the curved bar to press lightly on the fabric.

By letting the guide ride on the first stitching line, successive rows will be an equal distance apart.

When the bar is attached so that the curved part is to the right of the needle, it may also serve as a seam width guide.

SEAM GAUGE OR CLOTH GUIDE. Use the seam gauge as a guide for straight seams and even rows of top stitching along edges of fabric. Fasten gauge with accompanying screw in threaded hole in needle plate or in bed of machine (Fig. 33). Adjust to seam width desired.

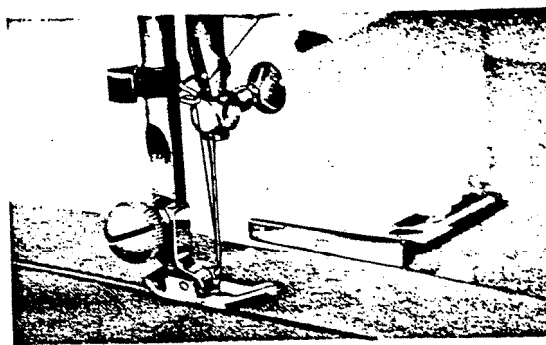


Fig. 33

CARE AND MAINTENANCE OF YOUR MACHINE

HOW TO OIL YOUR MACHINE

Your machine should be oiled occasionally to keep it operating smoothly-how often depends on the amount of sewing you do.

Before oiling the upper part of the sewing unit at points indicated by arrows in Fig. 34 turn hand wheel toward you until the take-up lever is at its lowest point.

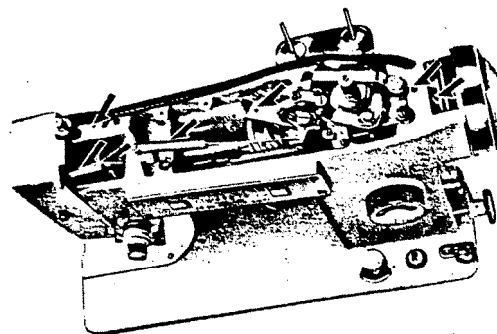


Fig. 34

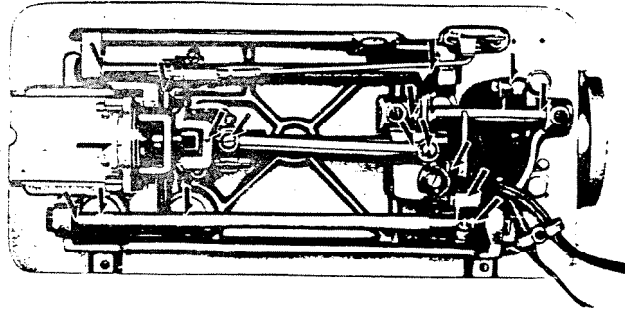


Fig. 35

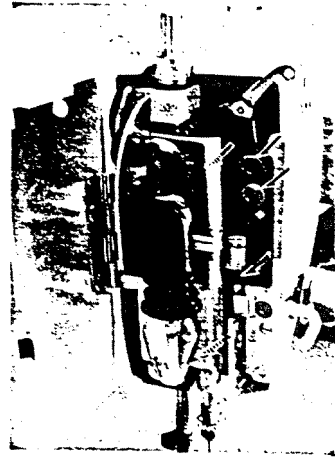


Fig. 36

Avoid over-oiling, only a drop is needed at each point.

To oil parts under the bed of the machine, tip the unit back on its hinges and apply a drop of oil at each point indicated in Fig. 35.

To oil moving parts inside the face plate, which only rarely require oiling, remove plate by taking out the screws. Oil at spots indicated in Fig. 36.

HOW TO REPLACE LIGHT BULB

The lamp is built-in under the face plate. Open the face plate. Unscrew bulb and replace with bulb of same size, which is available from your sewing machine dealer.

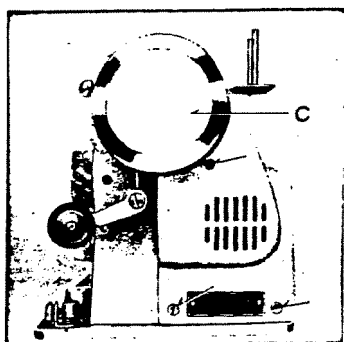


Fig. 37

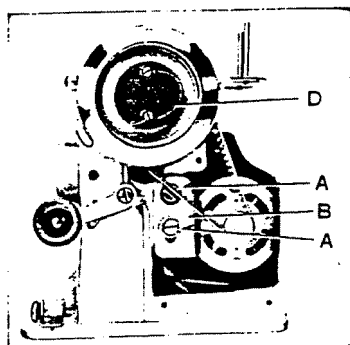


Fig. 38

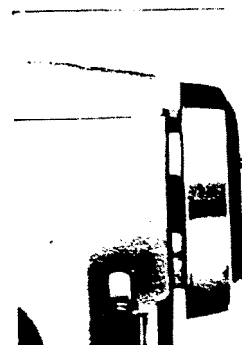


Fig. 39

To do this, follow these instructions ;

1. Remove screws holding rear cover Fig. 37.
2. Remove rear cover Fig. 37.
3. To adjust "V" belt loosen screws (A) Fig. 38 and move bracket (B) up to loosen belt and down to tighten.
4. To move "V" belt ; -
 - A. Place bobbin winder in off position, see Fig. 38.
 - B. Loosen screw (A) Fig. 38 and move bracket (B) to its highest position.
 - C. Remove plastic cover (C) Fig. 39. with screw driver being careful not to break it.
 - D. Remove spring stop (D) Fig. 39.
 - E. Move hand wheel away from machine to form a gap through which the belt will pass Fig. 39.
 - F. Slip belt off motor pulley and then over hand wheel.
 - G. Replace "V" belt by slipping it over hand wheel and then over motor pulley.
 - H. Move hand wheel back to its original position and replace spring (D), plastic cover (C) and rear cover.

After doing this, turn the clutch toward you to disengage the sewing mechanism. If the needle still moves up and down as you turn the hand wheel, again remove the clutch nut. Give the washer a half turn and replace the nut.

CLEANING AND OILING THE SHUTTLE

(See Figs. 40 and 41)

The stitch forming mechanism occasionally becomes clogged with loose threads and lint. This will interfere with the efficient operation of the machine. Cleaning and removal of the lint will safeguard the performance. To remove the shuttle assembly, proceed as follows:

1. Turn the balance wheel until the needle reaches its highest position. Tilt head back on its hinges.
2. Remove bobbin case (A), Fig. 40.
3. Turn the two shuttle race cover clamps (B) outward and remove the shuttle race cover (C) and shuttle body (D).

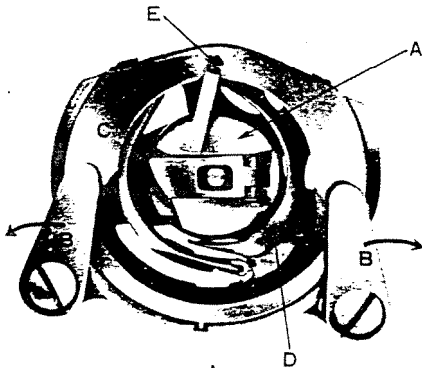


Fig. 40

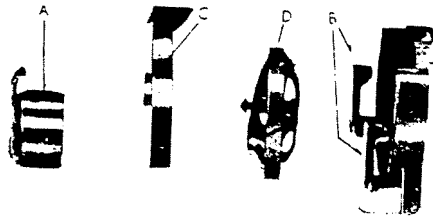


Fig. 41

4. Clean the shuttle race, the shuttle and shuttle race cover by removing all threads, lint, etc.
5. Apply a drop of oil with finger tip to outer edge of shuttle.

When the cleaning has been completed, proceed as follows to replace the shuttle assembly:

1. Turn the balance wheel until the needle reaches its highest position.
2. Place shuttle body, (D), against shuttle driver and adjust into position.
3. Replace shuttle race cover, (C), fitting pin at lower edge into notch, and lock into position with shuttle race cover clamps, (B), making certain the clamps have been snapped securely into position.

4. Put bobbin into bobbin case.
5. Put the bobbin case into the shuttle race, fitting tongue into notch E of race cover.

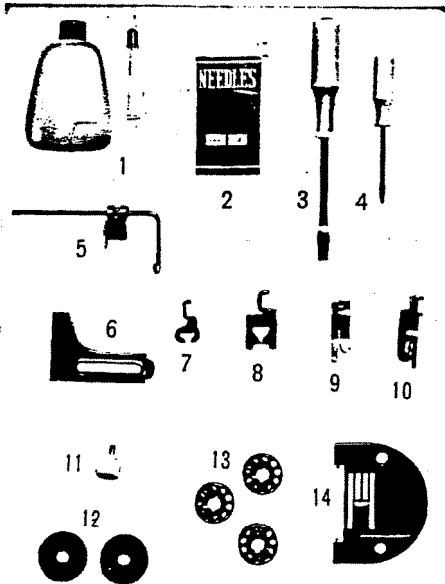


Fig. 42

ACCESSORIES

1. Plastic Oiler (Sealed and Filled)
2. Package of Needles (5)
3. Large Screw Driver
4. Small Screw Driver
5. Quilter Guide
6. Cloth Guide
7. Button Sewing Foot
8. Buttonhole Foot
9. Presser Foot for Straight Sewing
10. Narrow Hemmer
11. Thumb Screw
12. Felt Washers (2) (for spool pins)
13. Bobbins (3)
14. Needle Plate for Straight Sewing (graduated)

TROUBLE CHART

Trouble	Probable Cause	Correction
If Machine Binds	Thread or lint in race way	<p>1—With take-up lever in highest position, tilt head back on hinges and remove bobbin case.</p> <div style="text-align: center; margin: 10px 0;"> </div> <p>2—Turn clamps outward and remove race cover. 3—Remove hook. 4—Clean thread and lint from all parts, including race. 5—Run a drop of oil along rim of shuttle. 6—Replace shuttle, then race cover. Snap clamps into place. 7—Grasp threaded bobbin case by latch and replace, fitting tongue into notch of race cover.</p>

Trouble	Probable Cause	Correction
Upper thread breaking	Improperly threaded	Refer to threading instructions see page No. 8 and rethread machine.
	Too much tension	Loosen tension on upper thread by turning thread tension knob to lower number.
	Starting with take up in incorrect position	Always start sewing with take up lever in highest position.
	Improper setting of needle	Refer to needle setting instructions see page No. 6.
	Eye or blunt needle	Try a new needle.
Material puckering	Bent or blunt needle	Discard all blunt or bent needles and replace with new.
	Tensions too tight	See tensions adjustment page No. 10.
	Dull needle	Change needle.
	Stitch length too long	Reduce stitch length.

Trouble	Probable Cause	Correction
Skipping stitches	Bent needle	Discard and replace.
	Needle placed incorrectly in clamp	See instruction page No. 6.
	Too fine a needle for thread being used	See needle and thread chart, page No. 5.
Irregular stitches	Upper thread tension too loose	Tighten upper tension.
	Improper threading	See threading instruction, page No. 8 and 9.
	Bobbin not wound evenly	Rewind bobbin.
Uneven stitches	Pulling or holding material	Avoid pulling or holding material, just guide it.
	Not enough tension on upper thread	Increase tension.
	Poor quality thread	Try different thread.
	Needle too fine for thread being used	See needle and thread chart, page No. 5.
Machine not operating	Bobbin winder near hand wheel.	Move bobbin winder to off position away from hand wheel.

Your sewing machine comes equipped with the basic set of accessories described earlier in this book.

The following pages illustrate additional time saving attachments that have been designed specifically for your machine. They are available at modest cost from your dealer. If your dealer cannot supply you with these items, ask him to order them for you by part number. Then you will be assured of receiving the genuine part designed for best performance with your machine.

If a sewing machine dealer is not available mail your inquiry directly to:

WHITE SEWING MACHINE COMPANY
11750 BEREA ROAD
CLEVELAND, OHIO 44111

In Canada

WHITE CONSOLIDATED INDUSTRIES, LTD.
1470 BIRCHMOUNT ROAD
SCARBOROUGH, ONTARIO, CANADA

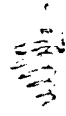
SOME OF THE ATTACHMENTS AVAILABLE FOR YOUR MACHINE

Fig. 43



PART # 1403

Ruffler



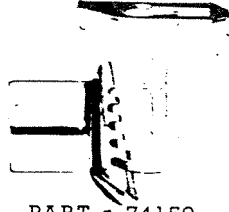
PART # 4990

Darning Spring



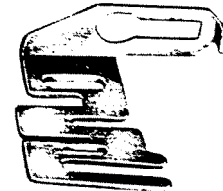
PART # 82528

Attachment Foot



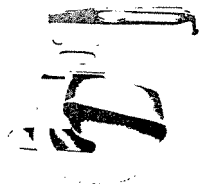
PART # 74159

Binder

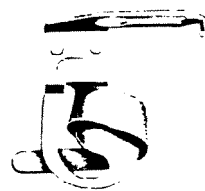


PART # 76554

Edgestitcher

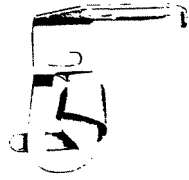


$\frac{7}{8}$ PART #76552



$\frac{5}{8}$ PART #76552

Hemmers



$\frac{3}{8}$ PART #76551



$\frac{1}{4}$ PART #76550

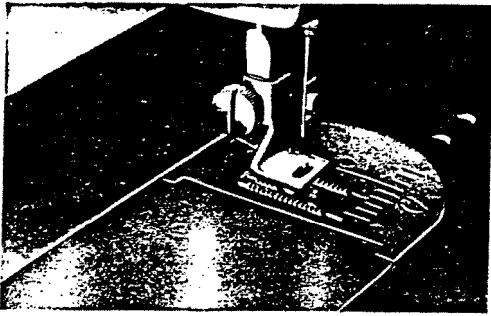


Fig. 44

ATTACHMENT FOOT

In order to attach the binder, edgestitcher and the hemmers, it is necessary to remove the presser foot and replace it with the attachment foot (Fig. 44).

Mount binder, edgestitcher or hemmers, sliding the attachment to the left as far as possible and tighten screw.

The mounting slot enables you to sew as close to or as far away from the edge as desired. Just move the attachment to the correct position before tightening the mounting screw.

EDGEStITCHER

The edgestitcher is used in making dainty lace insertions, edgings and pipings.

The slots in the edgestitcher serve as guides in sewing together various pieces of material. If you want to sew lace, lace and embroidery, or lace and tucked strips together, place the piece of material that will be on top in slot 1 (Fig. 45) and the lower fabric in slot 4. For instance, if you are sewing lace edging to a finished edge of fabric place the fabric in slot 1 and the lace in slot 4 (Fig. 46).

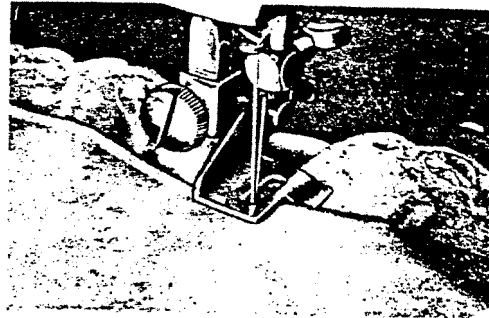


Fig. 45

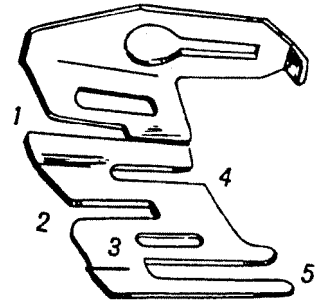


Fig. 46

Be sure to draw the lace and material under the needle and back of the edgestitcher so that the feed will carry it backward as you stitch. Hold the fabric in the left hand and the lace in the right, being sure the fabric overlaps the lace slightly.

Rick Rack can be sewn to the edge of the material in the same manner.

To trim with wide piping, place the fabric in slot 4, and the fold of the piping to the left in slot 3, for a narrow piping place fabric in slot 2 and the folded edge of the piping to the right in slot 3.

Slot 5 may be used as a guide in stitching a French seam.

See Fig. 81, 47, 48, 49 and 50 for suggestions on how to use the edgestitcher. There are hundreds of other uses.

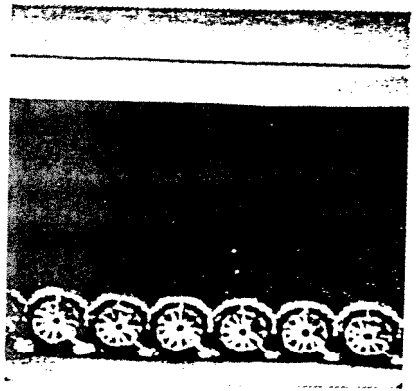


Fig. 47



Fig. 48



Fig. 49

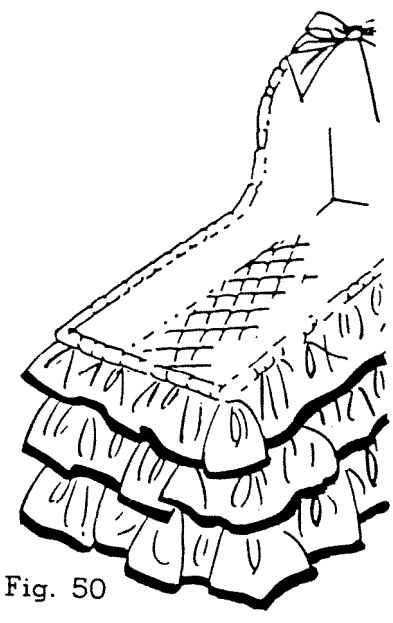


Fig. 50

B I N D E R

This attachment folds bias binding applies it to the edge of material in one operation. Slots on scroll of the binder are for corresponding widths of commercialfolded bias binding. The open mouth of binder scroll is used for unfolded bias strips cut 15 16 inch wide.

FOLDED BINDING (Fig. 51)

Cut a point on folded binding, insert in appropriate slot. Draw through slot and under binder with strong pin. Test stitching to be sure it is on the edge. Adjust by sliding binder to right or left.

TWO-TONE BINDING (Fig. 52)

Two bindings can be sewn on fabric edge also in one operation. When two are used, always skip one size between widths, inserting each in correct size slot.

HAND-CUT BIAS BINDING (Fig. 53)

Cut 15 16 inch bias binding fold in half for a couple of inches. Cut binding (diagonally toward end, almost to fold. Slip fold into center of binder. Draw back until cut opens and binding encircles open end of scroll. Test stitching to be sure it is on the edge. Adjust if necessary.

See Fig. 53 and 54 for suggestions on how to use the binder. There are hundreds of other uses.

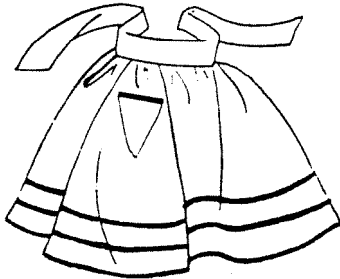


Fig. 51

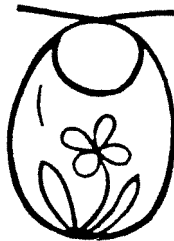


Fig. 52

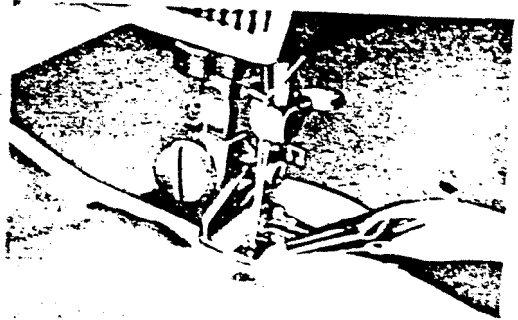


Fig. 53

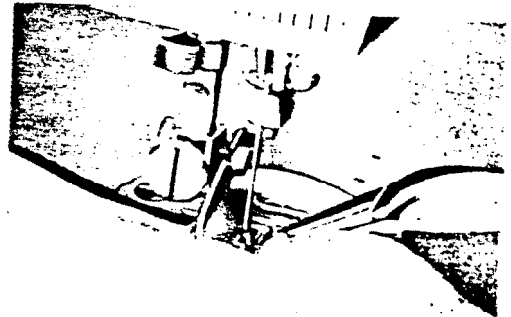


Fig. 54

THE SET OF HEMMERS

Before attaching any of the hemmers, be sure bobbin thread is pulled up. Then, with hemmer in place, hold top thread loosely and turn hand wheel a full turn toward you, making a loop under hemmer. Grasp bobbin thread with both hands and pull horizontally under hemmer toward back. Bobbin thread will catch loop and carry upper thread to back of hemmer.



Fig. 55

Fold material to suit for two inches along edge, and at each end of fold. Slip fold into guide and over spoon (Fig. 55). Fold hem in material back of hemmer. Draw forward to end of hem and fasten with point of needle. Pull on threads gently as you start stitching.

H E M M E R S E T

You can make a hem 1/4", 3/8", 5/8", or 7/8" in width, depending upon which hemmer you use. For a few of the many uses see Fig. 56, 57, 58, 59, 60 and 61.

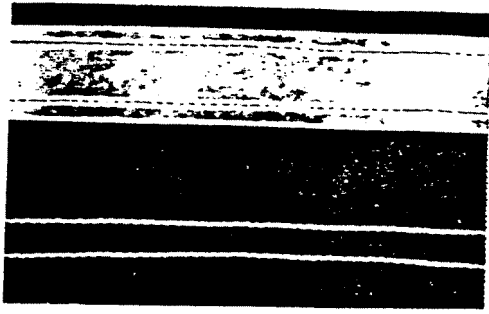


Fig. 56

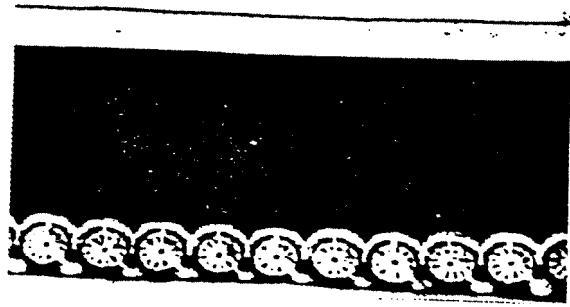


Fig. 57

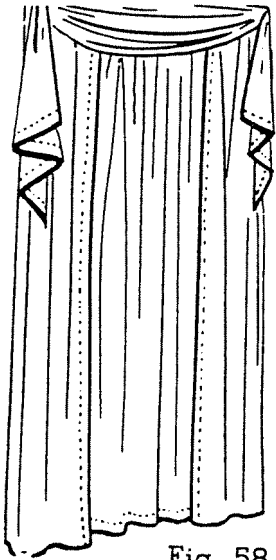


Fig. 58

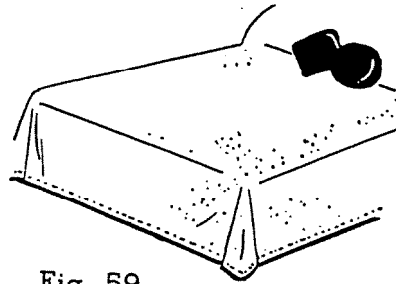


Fig. 59

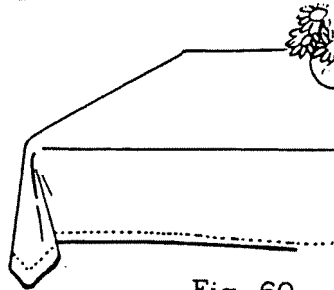


Fig. 60

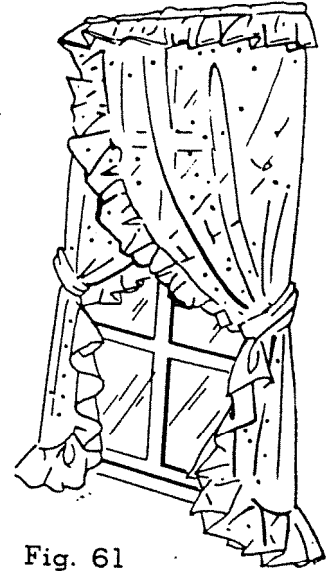


Fig. 61

THE ADJUSTABLE CORDING AND ZIPPER FOOT

This attachment is used to make and insert covered cording, and to sew in zippers. Loosen thumb screw to slide foot to either right or left of needle.

CORDING. Fold bias strip of fabric over cord. Loosen thumb screw and set foot so needle is centered in needle hole. Machine bastes cord in place (Fig. 63~64).

To sew covered cord to material, reset adjustable foot so needle stitches closer to cord, and on edge of base fabric.

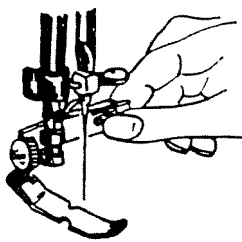


Fig. 62

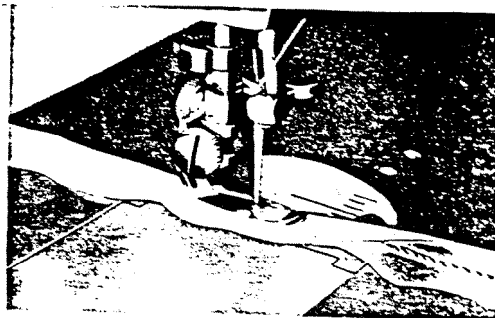


Fig. 63

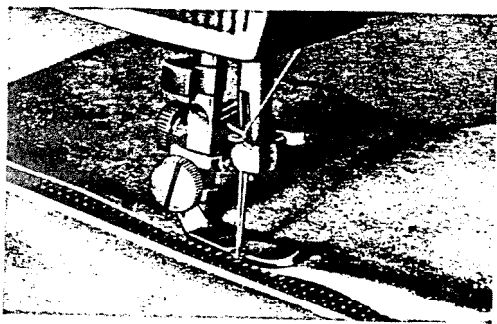


Fig. 64

SEWING IN A ZIPPER

Loosen thumb screw and slide foot so needle enters center of needle hole. Guide metal of zipper along edge of foot (Fig. 64). Stitching should be close to zipper to allow easy opening and closing. Adjust to sew from either right or left side, whichever is more convenient.

ADJUSTABLE CORDING AND ZIPPER FOOT

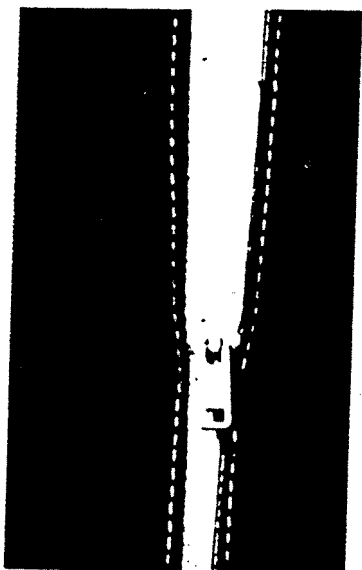


Fig. 65

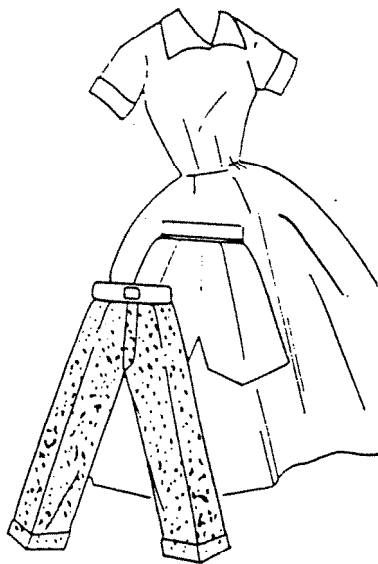


Fig. 66

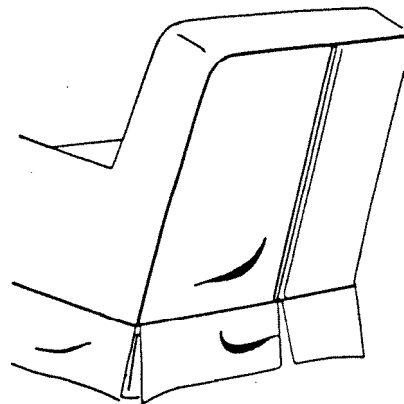


Fig. 67

RUFFLER



Fig. 68

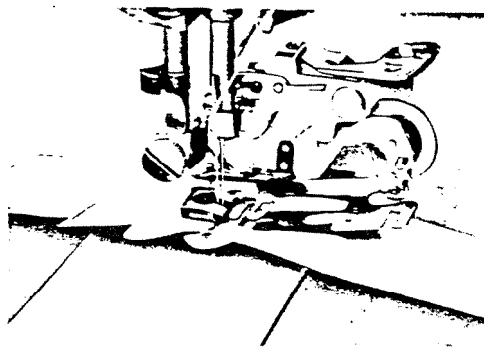


Fig. 69



Fig. 70

The ruffler will produce yards of delicate ruffling or precision pleating. Ruffling can also be done and sewn to another piece of fabric at the same time. This highly versatile attachment despite its wide range of use, is simple to use. Use the ruffler for making aprons, curtains, pleating a skirt, adding fullness to the bodice of a dress, etc.

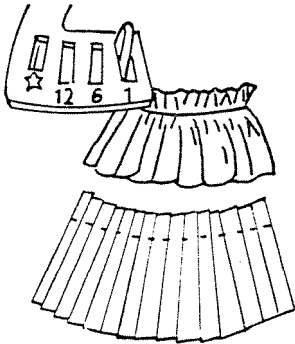


Fig. 68-A

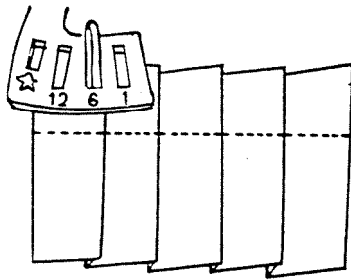


Fig. 69-A

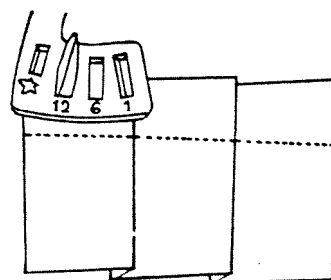


Fig. -A70

R U F F L E R



Fig. 71



Fig. 72

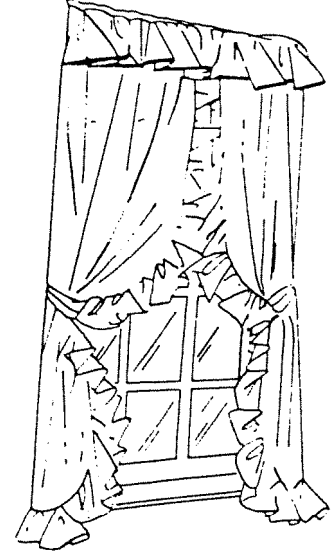


Fig. 75

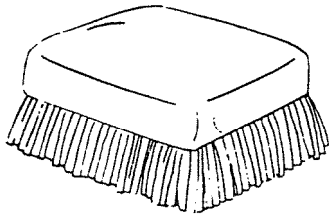


Fig. 78



Fig. 74

SEWING TIPS

When a dainty hair-line finish is particularly desirable for the inside seams of sheer collars, facings, and yokes, seam allowance that would ordinarily show through is eliminated by following the seam outline with a narrow zigzag stitch.

Trim seam allowance close to line of stitching. Turn and press.

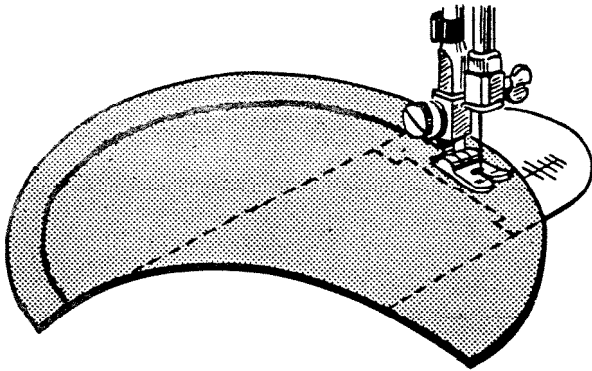


Fig. 76

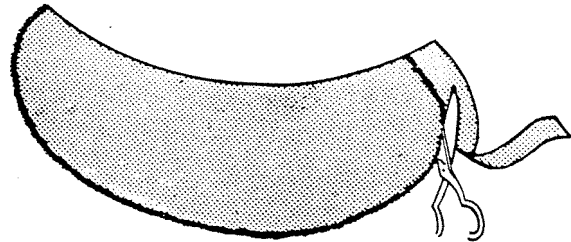


Fig. 77

EVENLY SPACED BUTTONHOLES

To make a row of buttonholes evenly spaced and accurately stitched, draw the outlines for the buttonholes on one long strip of tissue paper. Pin this pattern to position on the garment with fabric strips under each marking. Stitch around the outlines then tear paper away. Finish buttonholes as explained for plain bound buttonholes.

OVERCASTING WORN EDGES

Zigzag stitch along the worn edges, catching the fabric as the needle swings to the left, and allowing the needle to just pass over the edge of the fabric on the right. Fig. 78.

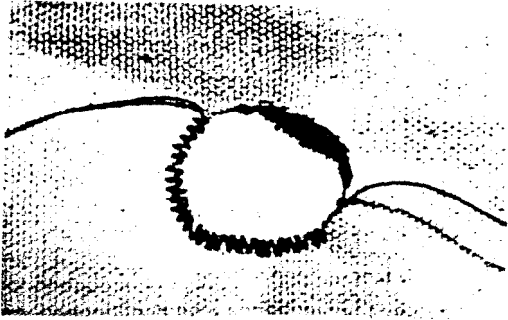


Fig. 79

PATCHING

Machine baste patch into place under hole or worn area which has been cut away. Then zigzag stitch the patch into place by overcasting around edge of hole. Fig. 79.

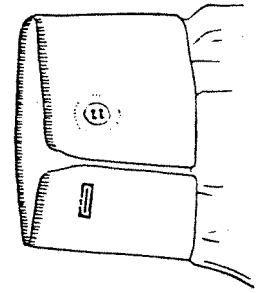


Fig. 78

STRAIGHT OR THREE CORNERED TEAR

Zigzag stitch along a straight tear catching fabric on left and right side of tear by swing of needle. Be sure your tensions are not too tight or puckering will be encountered.

In mending a three cornered tear, zigzag stitch from each end to center. Fig. 80.

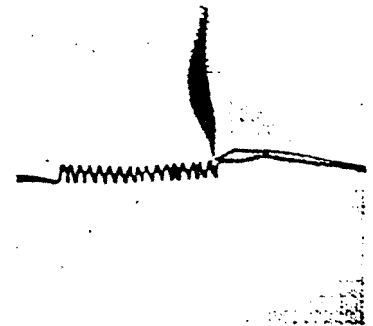


Fig. 80

SHAPING DARTS IN INTERFACING

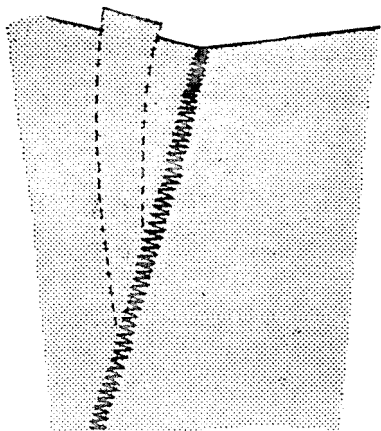


Fig. 81

3
1/2
Center

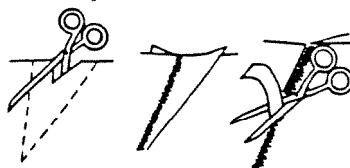


Fig. 82

Cut interfacing down center between dart lines. Overlap cut edges, matching dart lines. Zigzag stitch along marking line from point to wide end of dart. Trim both raw edges close to stitching.

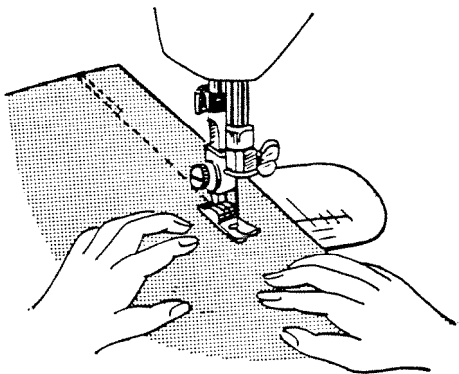


Fig. 83

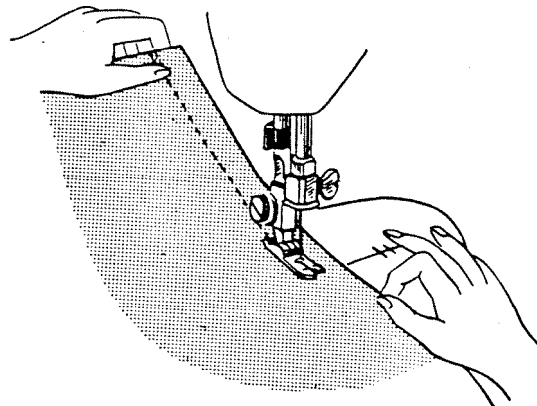


Fig. 84

SEWING ON SHEER MATERIALS

Most fabrics need to be guided only in front of the presser foot as shown at left. Many filmy sheers, crepes, knits, tricots, etc., require support while being stitched. For such fabric use the straight stitch needle plate and presser foot and apply gentle tension by holding seam in front and back of the presser foot as shown at right.

PLAIN BOUND BUTTONHOLE

Cut straight or bias strips of fabric 2" wide and 1" longer than the desired buttonholes. Place right sides together over positions for buttonholes. Mark exact length of each buttonhole in center of each strip; place a pin through center of the marking. Begin to stitch at the pin; marking an oblong box $\frac{1}{8}$ " above and below the line; $\frac{1}{4}$ " across each end. Run a few stitches beyond starting point to reinforce, View 1.

Slash through the center line of the box to within $\frac{1}{4}$ " of each end, then diagonally into each corner, View 2. Turn the strip through the opening. Press seams flat across the ends so the facing will not be visible from the right side. Fold the strip to meet in the center of the opening. Baste the folds together across the opening, View 3.

Turn garment back at each end and stitch across the strip, securing the triangular slashed section to the pleated strip and press, View 4. Bring facing of garment to position and baste around each buttonhole. Insert the point of a pin through each corner and slash through the center and into each corner pin. Turn under the raw edges and slipstitch the facing to the underside of the buttonhole, View 5. Press the finished buttonhole, View 6.

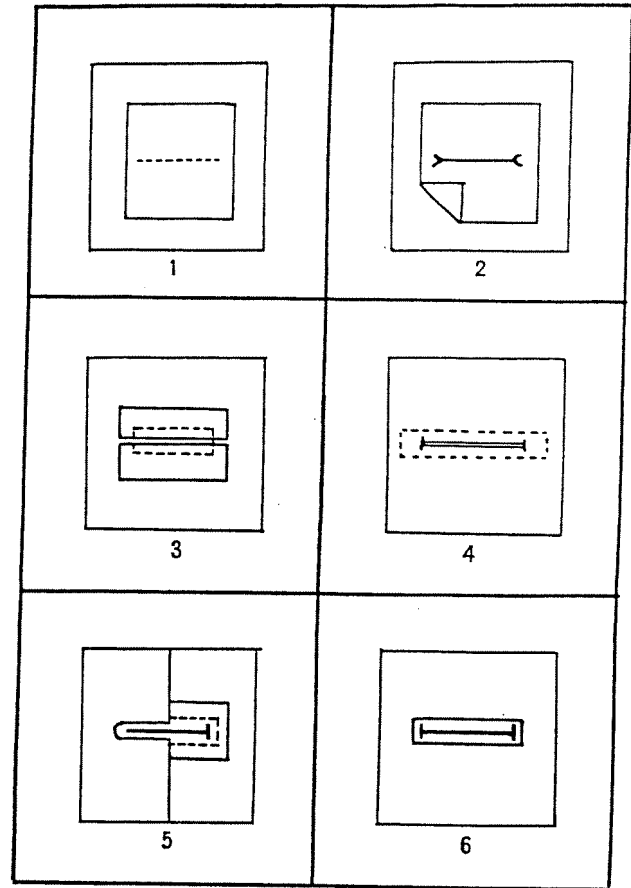
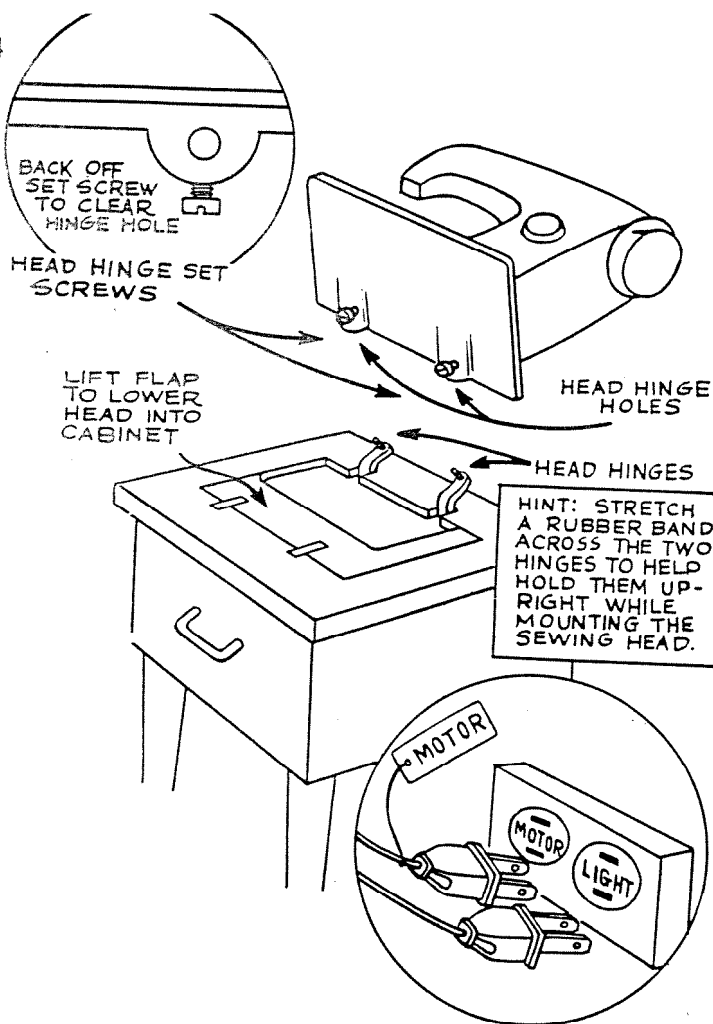


Fig. 85



INSTALLING SEWING HEAD IN CABINET

1. Back off both head hinge set screws until head hinge hole is clear.
2. Tilt head hinge tongues up and back as far as they will go.
3. Carefully slip head onto head hinges --making sure tongues are inserted as far as they can go into head hinge holes.
4. Allow the head to rest in its tilted-back position.
5. Tighten both set screws securely with screw driver.
6. Plug electrical leads into sockets located inside cabinet. Cord identified with "motor" tag must be plugged into socket marked "motor". Untagged cord goes to "light" socket.

FOR PORTABLE INSTALLATION

Please read these important instructions which were written to aid you in placing your new sewing machine on its portable base.

First, remove the nail which holds the foot control inside the base to avoid damage in shipping. If a small plastic clamp is fastened to the back and not to the top of the partition at one end of the base, remove it, too.

After unpacking the sewing machine unit, being certain to take out the instruction book, guarantee and accessory box, lay the unit face down on a table. You will see two clamping screws A entering head hinge holes B on the underside of the back.

On the base you will find two head hinges C which will fit into holes B. Lower the base onto the sewing machine fitting hinges C into holes A. Tighten screws A securely with a screw driver.

With machine in sewing position attach plastic clamp D to top of partition with screw provided so that it may be turned across the bed of the machine, to hold it down. On some bases the clamp may be positioned in the proper spot).

To make the electrical connection draw the two wires through the slot in the partition of the base. Plug the cord labeled "Motor" into the receptacle marked "Motor" on the block attached to the outer section of the base. Then insert the other cord into the "Light" receptacle.

Place the foot control on the floor, insert plug into a wall outlet (110-115 volts) and you are ready to sew. But first read the instruction book to become familiar with the threading of the machine, tension adjustments and all the other features designed to make sewing a pleasure.