



instructions

for the use
and maintenance

of your
NECCHI B-U MIRA





As the purchaser of a NECCHI, the world's finest sewing machine, you are entitled to the world's finest service. You are certain of receiving it, if you get into the habit of doing business only with authorized NECCHI dealers, all of whom prominently display the NECCHI Sewing Circle insignia somewhere in their place of business.

It is only through authorized NECCHI dealers that you can be sure of obtaining the satisfaction to which you are entitled, as well as the assurance of prompt, courteous service, and replacement of worn out parts . . . as covered by NECCHI's guarantee bond which accompanies each machine sold. It is especially important that only authorized NECCHI dealers be called in to adjust or repair your machine on the infrequent occasions when such repairs or adjustments may be needed.

Furthermore, authorized NECCHI dealers carry in stock for your convenience a complete line of sewing supplies, including NECCHI oil, needles, belts, bobbins, and other parts and accessories.

Guarantee Bond

NECCHI SEWING MACHINE SALES CORPORATION guarantees against defects or breakage resulting from imperfections in manufacture, without time limit, all parts (except needles, belts, lamp bulbs, and electrical equipment) entering into the manufacture and assembly of the new sewing machine which this Bond accompanies, provided said sewing machine is used only for household sewing and is given reasonably good care in accordance with the accompanying printed instructions.

Any part, other than those excepted in the preceding paragraph, which is found to be defective will be replaced without charge if returned, transportation prepaid.

All electrical equipment, except lamp bulbs, is guaranteed for a period of two (2) years from date of this Bond, and will be replaced without charge if returned within its guarantee period, transportation prepaid.

This guarantee is extended only to the original purchaser of this machine when new and when purchased from a properly authorized NECCHI SEWING MACHINE franchised dealer. NECCHI SEWING MACHINE SALES CORPORATION is not responsible for any representation or guarantee other than those contained herein.

For your protection this guarantee is valid only when:

1. Authorized NECCHI Dealer's stamp bearing his franchise number appears on the reverse of this Bond and on attached mailing card.
2. Mailing card is filled in by purchaser and mailed not later than 10 days after purchase to NECCHI SEWING MACHINE SALES CORPORATION.

IMPORTANT: Purchaser should retain this Bond and present it when service is requested.

LIST OF CONTENTS

FOREWORD	7
LIST OF STANDARD ACCESSORIES	11
RECOMMENDED NEEDLE AND THREAD SIZES	12

GENERAL INSTRUCTIONS:

1) To Insure Perfect Functioning of Machine	14
2) To Oil the Machine	14
3) To Connect Machine with the Electric Current	16
4) To Insert a Needle	17
5) To Change Needle Plate	18
6) To Change Presser Foot	18
7) To Drop Feed Dog	19
8) To Thread the Machine	19
9) To Thread Needle with NECCHI Automatic Threader	22
10) To Prepare Machine for Sewing	22
11) To Run the BU MIRA Machine	23
12) To Commence Sewing	25
13) To Turn a Corner	25
14) To Remove Work from the Machine	25
15) To Adjust the Tensions	25
16) To Clean the Upper Tension	27
17) To Wind the Empty Bobbin	28
18) To Insert Bobbin into Bobbin Case	29
19) To Remove the Bobbin Case	30
20) To Insert the Bobbin Case	31
21) To Remove and Replace the Shuttle (Hook)	32
22) To Regulate Length of Stitch	33
23) To Tack	34
24) To Baste	35
25) To Regulate Width of Zig-Zag Stitch	35
26) To Change the Needle Position	35
27) To Remove and Replace the Light Bulb	35
28) Causes of Minor Difficulties	37
USEFUL SEWING ACCESSORIES	38

OPERATING INSTRUCTIONS

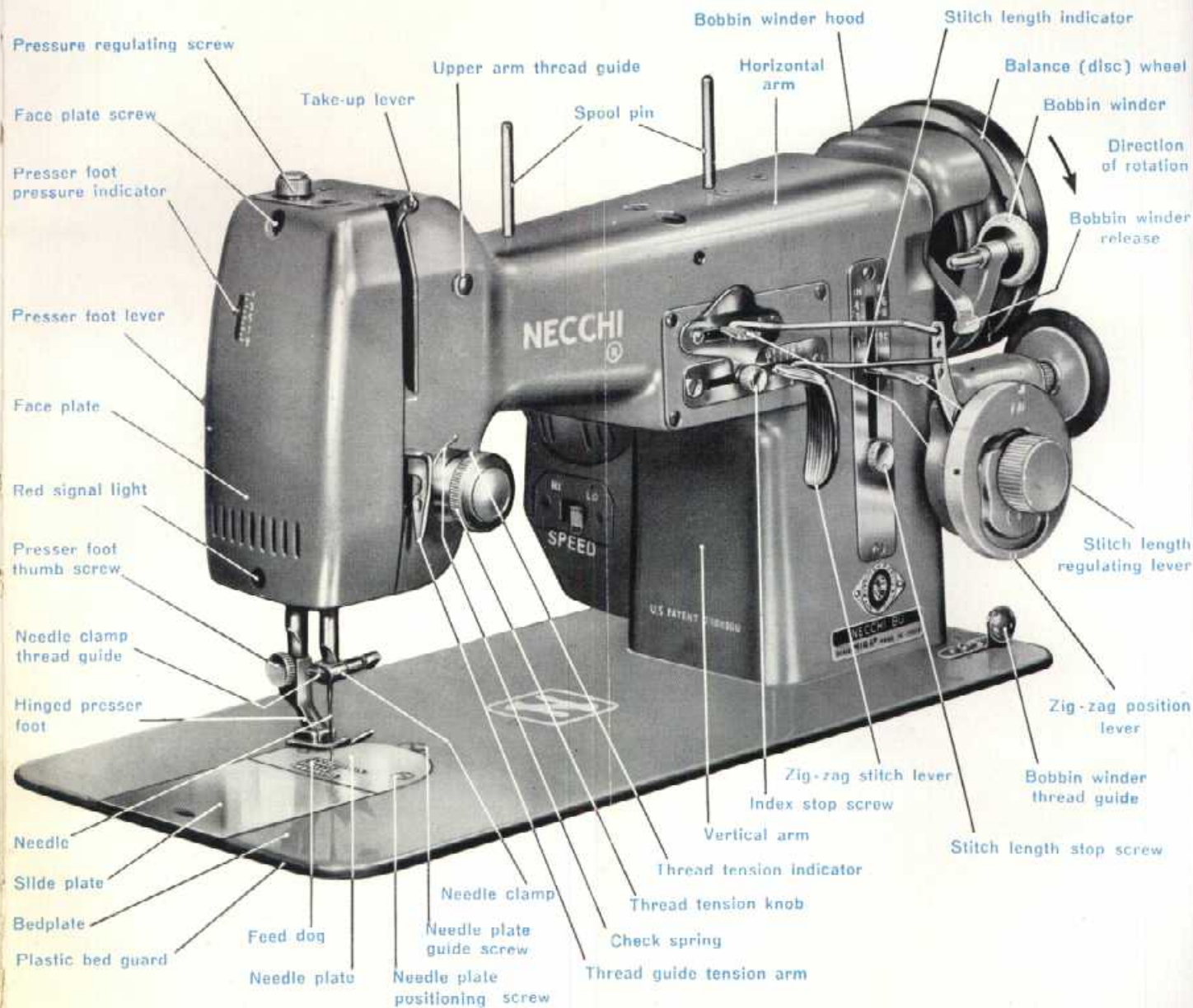
1) Straight Stitch	40
2) Zig-Zag Stitch	41
3) Embroidery	41
4) Embroidery and Monogramming with Dropped Feed	44
5) Making Embroidered Daisies	45
6) Applique Work	46
a) Lace Edging	46
b) Raised Stitch Applique	46
c) Contrast Work Applique	47
d) Cut-out	48
7) Hemstitching	48
a) Hemstitching with Drawn Threads	48
b) Hemstitching - Picot Edge	49
8) Overlock Stitch (Zig Zag on Raw Edge - Overcasting a Raw Edge)	50
9) Narrow Straight Stitch Hem	51
10) Flat Felled Seams	52
11) Narrow Rolled Edges	53
12) Hemming and Sewing on Lace	54

13) Shell Stitch	55
14) Quilting	56
a) Straight Stitch Quilting	56
b) Zig-Zag Stitch Quilting	57
15) Making Buttonholes	57
a) Regular (Pearl Stitch) Buttonhole	57
b) Buttonhole with Cord (Gimp)	60
16) Button Sewing	61
a) Two-Hole Buttons	61
b) Four-Hole Buttons with Parallel-Stitching	62
c) Four-Hole Buttons with Cross-Stitching	63
17) Darning (Mending)	64
18) Bias Binder	65
19) Ruffling and Pleating with the Ruffler	66
To Ruffle (Gather)	68
To Make a Ruffle and sew to Garment	69
To Make Ruffle and Attach with Facing to Garment	70
To Pipe a Ruffle and Attach to Garment	71
To Make a Pleat once Every Six Stitches	72
To Make a Pleat once Every Twelve Stitches	73
To Do Group Pleating	73
20) Blindstitching (without Attachment)	73
21) Tucking	76
22) Adjustable Cloth Stitching Guide	80
LIST OF AVAILABLE EXTRA ACCESSORIES	81
Making of Eyelets	84
Making Keyhole Buttonholes	85
Shirring (Gathering)	86
Cording and Zipper Operations	87
Patent Foot (Gauge Foot)	88
Grooved Zig-Zag Stitch Hinged Foot	89
Round Swirl Stitch and Embroidery Foot	89
Festoon Foot	89
Blindstitch Foot	90
WORKING WITH THE WONDER WHEEL NECCHI-MATIC	92
Placing the Discs on the NECCHI-MATIC	93
The Connecting Rods «F» and «G»	93
Adjusting the Stitch Length Lever	94
Disengaging the Needle Position Lever from the Notches	94
Operating Instructions	94
Breaking of Thread during Sewing	98
Sewing Very Thin Fabrics	98
Maintenance of the NECCHI-MATIC	98
VARIOUS DESIGNS MADE WITH THE NECCHI-MATIC	99
1) NECCHI-MATIC Borders	99
2) NECCHI-MATIC Flowers	100
3) NECCHI-MATIC Scalloping on Raw Edges of Fabric	102
4) Raised Satin Dots	103
5) NECCHI-MATIC Snow Flakes	104
SWIRL STITCHING	105
SEWING WITH THE DOUBLE NEEDLE	106
Regular Sewing	109
Sewing with Double Needle and NECCHI-MATIC	111
CIRCULAR SEWING	112
SEWING WITH NYLON	114
HOW TO USE THE NECCHI OILER	116
ALPHABETICAL INDEX	119



What your BU MIRA machine offers you

Your NECCHI Model BU MIRA sewing machine is suitable for home sewing, professional dressmaking, and instructional purposes in schools. *It performs the operations of various types of special sewing machines.* The NECCHI « BU MIRA » machine is provided with a built-in light which is located just above the needle of the machine. Due to this ideal location of the light, the material to be sewn is always properly illuminated. Moreover, the BU MIRA is equipped with a small, powerful electric motor, attached by means of a bracket to the arm of the machine, and with a transformer which is just below the motor. This motor-transformer combination makes it possible, by just throwing a « SPEED » switch on the transformer to the « LO » position, to run the machine at a considerably reduced *constant* speed for as long a time as is desired, while the lever of the knee control, or that of the foot control, is in a fully pressed-down position. At the same time, the operator keeps full control over the speed of the motor, for, by gradually releasing the lever of the knee control, or that of the foot control, the speed of the machine can still be further reduced as desired. This feature is convenient for beginners in sewing who are not yet accustomed to the higher speeds of the machine, or for those who, while doing a special kind



of work, find it of advantage to operate the machine at a constant reduced speed for a greater length of time. By moving the « SPEED » switch on the transformer to the « HI » position, the machine can be run at the highest possible speed while the lever of the motor control is in a fully pressed-down position. Here too, by gradually releasing the lever of the motor control, the speed of the machine can be reduced as desired.

The BU MIRA offers also the possibility for *automatic* sewing with the aid of the Wonder Wheel NECCHI-MATIC. This device presents to the woman the privilege to enjoy the latest accomplishment in home sewing — AUTOMATIC SEWING. Detailed instructions for using the Wonder Wheel NECCHI-MATIC are contained in this booklet.

These are some of the outstanding features of your BU MIRA machine:

- 1) Instant Control for forward and reverse sewing.
- 2) Simple Drop Feed Adjustment, to permit darning, embroidering, monogramming, mending and button sewing.
- 3) Floating (hinged) Presser Foot, to permit sewing over pins, seams and unequal thicknesses of materials, thus eliminating tedious basting.
- 4) Snap-Out Shuttle Race, for easy cleaning.
- 5) Automatic (self-releasing) Bobbin Winder.
- 6) Double Spool Pins, to permit bobbin winding while machine is in operation.
- 7) Oilers, protected by steel balls, to prevent oil holes from getting clogged with lint and dust.
- 8) Numerically Calibrated Thread Tension, to make adjustment of thread tension simpler and to prevent thread breakage.
- 9) Exclusive Third Level (intermediate) Position of Presser Foot Lever, to make darning or embroidery work, etc., easier by allowing presser foot

to be raised without releasing tension. This third level position is the intermediate position between the highest and lowest positions of this lever.

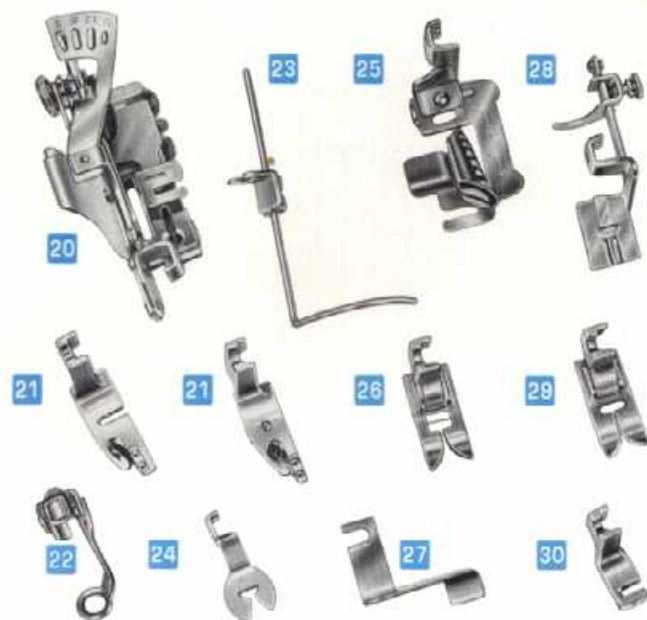
- 10) Exclusive Calibrated Presser Bar Regulator, to eliminate all guess-work as to proper pressure for various materials.
- 11) Exclusive Drop-On Needle Plate, made of case-hardened steel, which is quickly removed by lifting it from location posts. No removing of screws necessary to free needle plate.
- 12) Horizontally adjusted Feed Dog, assures straight sewing with little guiding due to even grip of fabric at both sides of feed dog.
- 13) Slide Plate, provided with three round holes to make *Circular Sewing* possible. Rubber Stopper, required for circular sewing, supplied in accessory box. Slide Plate is simple to open and cannot be removed accidentally, thus avoiding danger of losing or misplacing.
- 14) Automatic Needle Threader, enables threading of needle in a jiffy.
- 15) Nylon thread provided with knots, for easy cleaning of upper thread tension.

The motor of the BU MIRA drives the machine by means of a durable belt. Speed is regulated by a knee control or foot control, depending on the user's preference.

The BU MIRA machine is designed to be operated with *AC (Alternating Current) only*. Should it be necessary to run the machine with DC (Direct Current), request special wiring of the machine from your nearest NECCHI dealer.

To use your NECCHI machine most efficiently, read the following simple instructions carefully and study the illustrations to which reference is made. By following these instructions you will, step by step, prepare the machine for sewing.

LIST OF STANDARD ACCESSORIES



- 1 Plastic Box for Accessories.
- 2 Spool Pin Extension.
- 3 Needle Plate for Double Needle.
- 4 Needle Plate for Embroidery and Darning.
- 5 Bobbins (3).
- 6 Screw Driver, large.
- 7 Plastic Oiler.
- 8 Stopper for Circular Sewing.
- 9 Tension Ring (for increasing upper tension).
- 10 Envelope with Knotted Nylon Thread.
- 11 Double Needle.
- 12 Seam Ripper and Buttonhole Cutter.
- 13 Bobbin Case with black Latch.
- 14 Straight Guide with 2 Screws.
- 15 Zig-Zag Index Stop Plate.
- 16 Needle Threader with one spare Hook.
- 17 Case with six Needles.
- 18 Screw Driver, small.
- 19 Brush (for cleaning parts)
- 20 Ruffler and Pleater.
- 21 Hemming Presser Feet (2).
- 22 Darning Presser Foot.
- 23 Quilter Wire with clamp.
- 24 Presser Foot for sewing on Buttons.
- 25 Multiple slotted binder.
- 26 Presser Foot for Double Needle.
- 27 Guide for Blindstitching.
- 28 Buttonhole Presser Foot with Screw and Index Stop.
- 29 Zig-Zag Hinged Foot with grooved bottom for Satin Stitch.
- 30 Cording Presser Foot.

Recommended Needle (**NECCHI machines use 15x1 needles**)

and Thread Sizes

Types of Fabrics and Classes of Work

Very thin fabrics like Muslin, Georgette, Chiffon, Batiste, fine Linens, Cambrics, etc. For lingerie, infants' wear and delicate lace work.

Light-weight Shirting and summertime Fabrics, Linens, fine Silk Goods and Calicoes. For children's and house dresses, washable cotton dresses, aprons and curtains.

Shirtings, Sheetings, Calicoes, Dress Silks and Cottons, light weight Woolens, Draperies, etc. For general household sewing and all classes of general work.

Heavy Calicoes and Silk, light weight Woolens, heavy Cretonnes, Madras, Muslin, Brocades and Quilts. For men's work shirts, smocks and aprons, quilting and fabric furnishings.

Bed Tickings, Upholstery and Awning Materials, Slip Cover Fabrics, Woolen Goods, heavy woven Coating, light weight Canvas. For trousers, boys' clothing, work uniforms, awnings, slip covers and mattresses.

Heavy Tickings and Woolens, heavy woven Suiting and Coating, Canvas and Sacking. For heavy clothing in general, such as heavy uniforms, coats, trousers, etc., for bedding supplies, bags, etc.

For heavy goods, coarse cloths, Canvas, Bags, etc.

Cotton	Size of Thread		Mercerized	Sizes of Needles (Grades)
	Silk			
100 to 150	00 and 000 Twist	00 and 000		9 (Fine)
80 to 100	0 Twist	50 to 00		11 (Medium- Fine)
60 to 80	A & B Twist	50		14 (Medium)
40 to 60	C Twist	Heavy Duty		16 (Light- Heavy)
30 to 40	D Twist	Heavy Duty		18 (Medium- Heavy)
24 to 30	E Twist	40 to 60		19 (Heavy)
Very Coarse		40 to 60		21 (Extra- Heavy)

GENERAL INSTRUCTIONS

IMPORTANT

After unpacking, and before using the sewing machine, clean it thoroughly with a soft rag (or soft brush), then oil it with a good quality, light sewing machine oil, as suggested in General Instruction No. 2 (see below).

1. TO INSURE PERFECT FUNCTIONING OF MACHINE

- Balance Wheel must always be turned toward the operator, whether rotated by hand or motor.
- Do not operate machine with presser foot resting on feed dog, unless there is cloth under presser foot.
- Keep a small piece of cloth underneath presser foot whenever machine is not in use. This will prevent damage to feed dog and presser foot.
- Do not operate sewing machine when presser foot lever is raised.
- Do not try to help feeding by pulling fabric, since this action will bend needle. The machine automatically feeds the fabric without assistance.
- Keep slide plate closed when operating machine.

2. TO OIL THE MACHINE

Use good quality, light sewing machine oil, as recommended by your NECCHI dealer.

To insure easy and trouble-free running, the machine requires oiling. If used continuously, it should be oiled every day. For intermittent use (once or twice a week), oil it about once a week. It is not necessary to flood the machine with oil. If oiled regularly, one or two drops of oil in each oil hole will suffice.

- The pointers in Fig. 3 indicate the small oil holes into which one drop of oil should be put whenever the machine is used.
- Remove screw at upper portion of face plate (see Fig. 2), remove face plate, and put one drop of oil into each of the oil holes and joints (see fig. 3 a). Replace face plate and screw and tighten it firmly.
- Tilt the machine back on its hinges, so that the underside is accessible, and apply a drop of oil to all oiling points indicated in Fig. 4 by pointers.

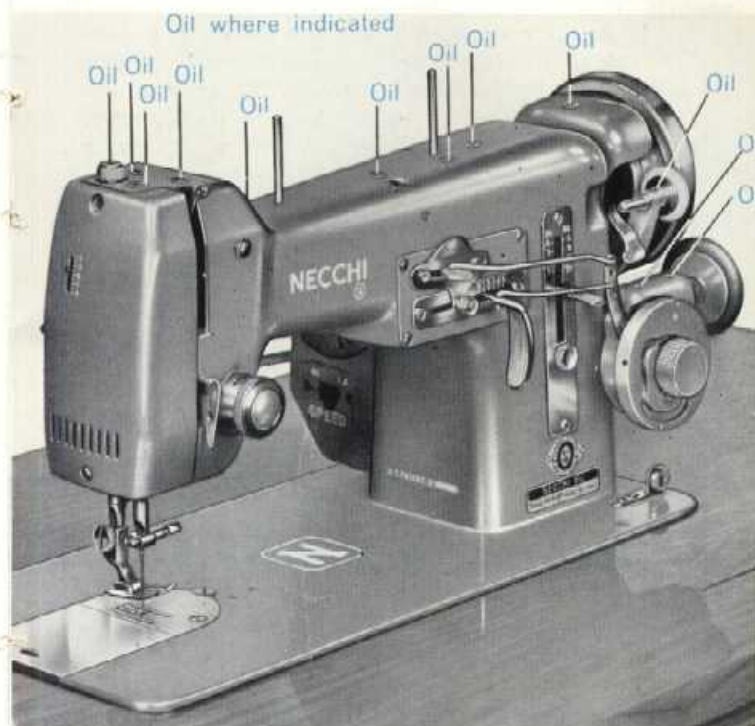


Fig. 3

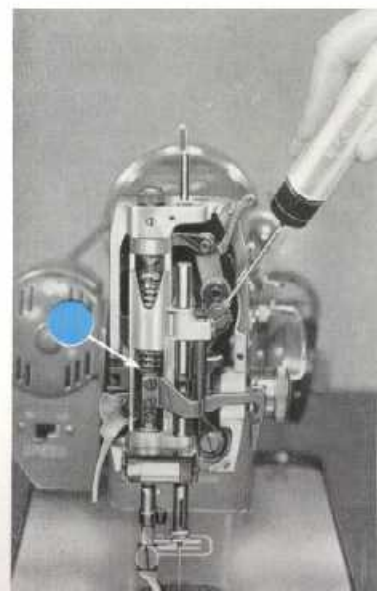


Fig. 3 a

- d) When the machine is in continuous use, it is advisable to remove the race plate and the shuttle (hook) occasionally (see Instruction No. 21 on page 32). To clean and oil the shuttle bed, use an oil-soaked rag. In replacing, oil the rim only of the shuttle (hook).

Oil where indicated

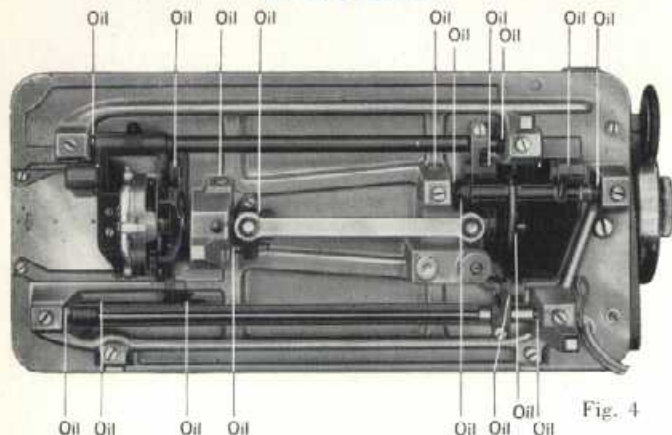


Fig. 4

3. TO CONNECT MACHINE WITH THE ELECTRIC CURRENT

CAUTION: Make certain that your electric power line carries AC (Alternating Current) and that its voltage is within ten volts of the voltage listed on your motor. Insert the three-way connector plug *fully* into the corresponding opening of the transformer (see Fig. 5) and push the male plug at the end of the extension cord into the wall outlet.

CAUTION: When you have finished sewing, always make certain to push the **LIGHT** switch on the transformer to the « OFF » position.

Fig. 5



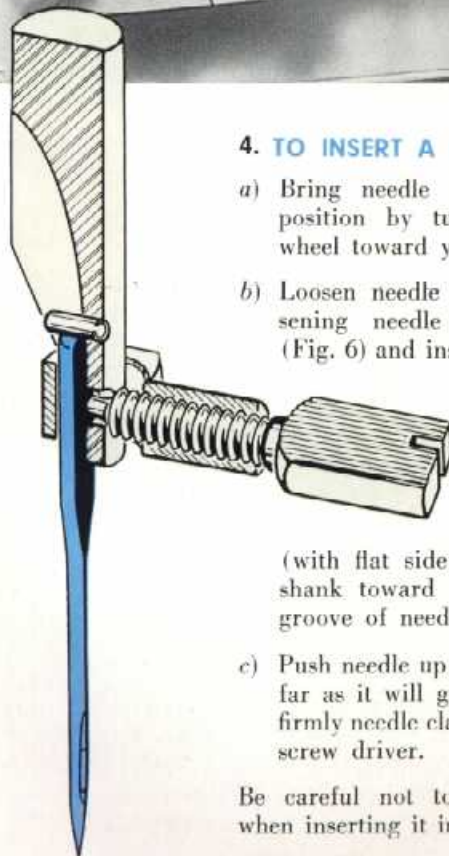
Three-way
connector
plug



Fig. 6

4. TO INSERT A NEEDLE

- Bring needle to its *highest* position by turning balance wheel toward you.
- Loosen needle clamp by loosening needle clamp screw (Fig. 6) and insert new needle



(with flat side of the needle shank toward the right) into groove of needle bar.

- Push needle up into groove as far as it will go, then tighten firmly needle clamp screw with screw driver.

Be careful not to bend needle when inserting it into needle bar.

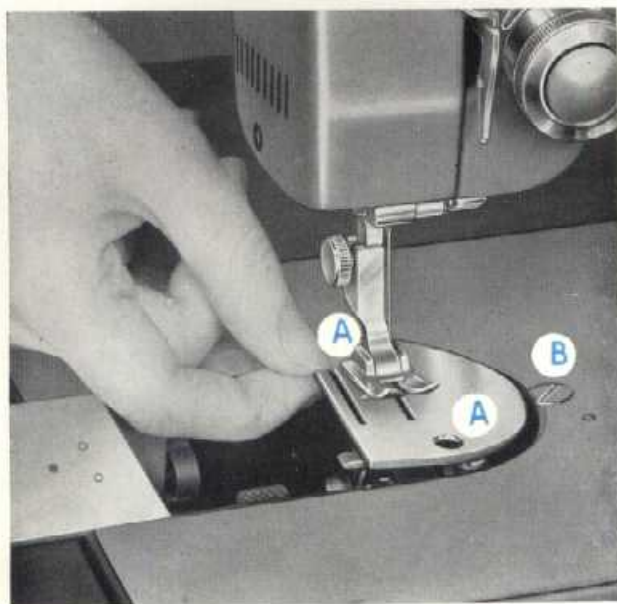


Fig. 7

5. TO CHANGE NEEDLE PLATE

- Raise presser foot by raising presser foot lever (Fig. 2).
- Move slide plate (Fig. 2) to extreme left.
- Lift up needle plate (Fig. 7) and move it to the left, thus freeing it from its locating screws « A ».
- Slide new needle plate toward the right, under screw « B », and place holes in needle plate over top of two locating screws « A » in bed plate.
- Move slide plate toward the right to close it.

6. TO CHANGE PRESSER FOOT

- Bring needle to its highest position by turning balance wheel toward you.
- Raise presser foot by raising presser foot lever.
- Loosen presser foot thumb screw.
- Move presser foot to the left, as far as thumb screw has been loosened, then, by bringing the foot down, remove it from the presser foot bar.
- Slide grooved portion of new presser foot up on

presser foot bar, press it against bar and tighten presser foot thumb screw securely with screw driver.

7. TO DROP FEED DOG

- Pull out slide plate as far as possible (Fig. 8).
- To lower the feed dog « B », press down lever « A » completely. This will permit you to feed the fabric freely by hand while you are following the embroidery design or monogram outline, or while covering the portion of the article to be darned. The feed dog must also be lowered for sewing on buttons.

To raise the feed dog, bring up lever « A » completely.

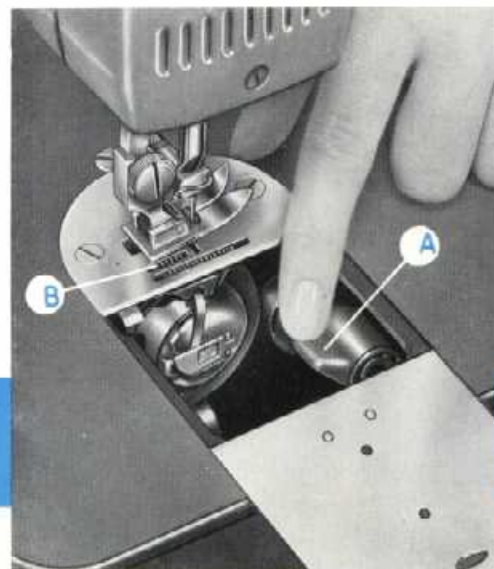


Fig. 8

8. TO THREAD THE MACHINE

To prevent breaking of the upper thread, it is essential to thread the machine as described below:

- Bring needle to its highest position by turning balance wheel toward you.
- Place spool of thread on spool pin « H », then pull the thread from the spool and run it over the upper arm thread guide « S » (Fig. 9).

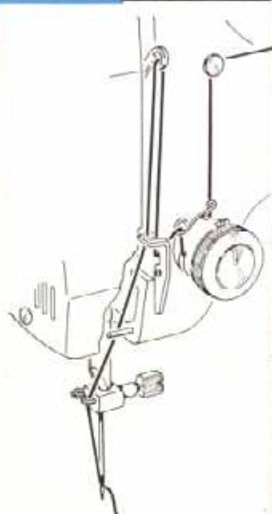
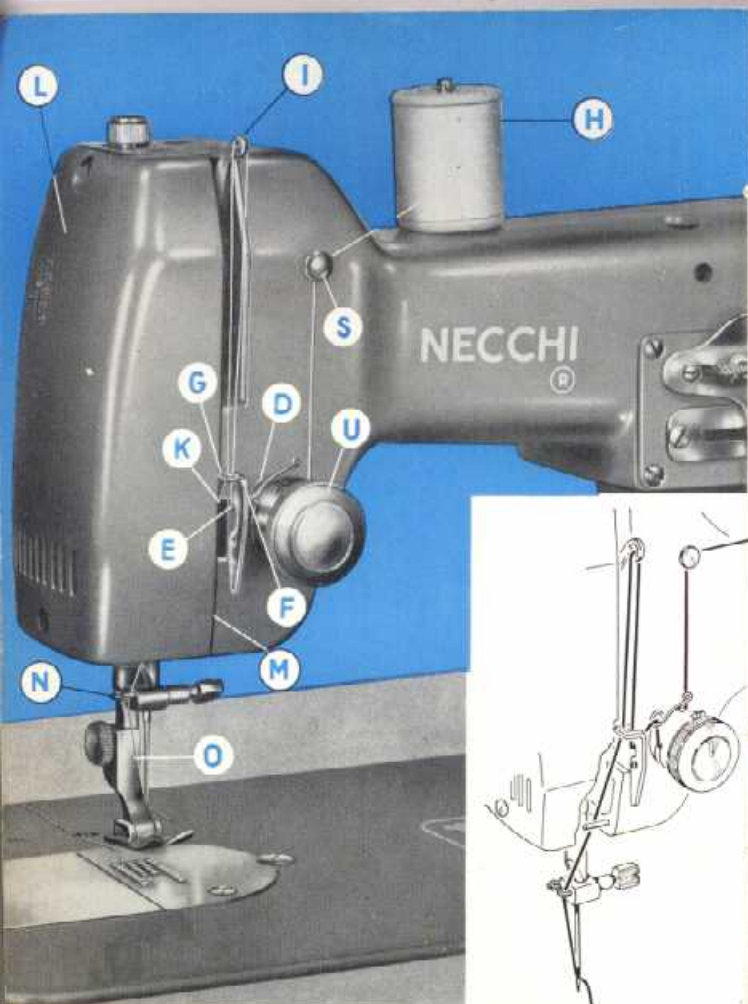


Fig. 9

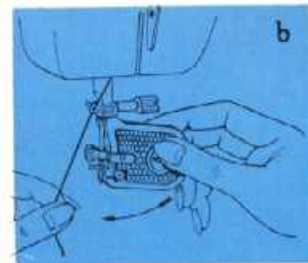
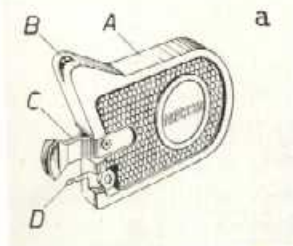
- c) Draw thread down, then insert it from right to left in slot of tension disc housing «U» (Thread Tension Knob).
- d) Bring the thread up and then down over the thread take-up (check) spring «D».
- e) Bring the thread downward under the thread guide tension arm «E»; pass it through the slot «F» and then upward through the guide hook «G». Next, draw the thread upward and guide it, from right to left, through the eyelet «I» of the thread take-up lever.
- f) Pull thread down and lead it again through the guide hook «G».

- g) Draw thread into slot «K» between machine arm and face plate «L», then pull it toward the left until it slides behind the pin «M» (which is visible in the slot «K») and comes out below the face plate «L».
- h) Pass the thread end through the needle clamp thread guide «N» and finally, guide it from left to right through the eye of the needle «O».
- i) Pull thread through needle eye, leaving about four inches of free thread hanging down from needle.

9. TO THREAD NEEDLE WITH NECCHI AUTOMATIC THREADER (See Figs. 10 (a-d) for reference)

- a) Take needle threader between thumb and forefinger of right hand (Fig. 10 b) and place it against needle so that needle fits in groove «B» (Fig. 10 a) and

Fig. 10



uppermost portion of plastic body « A » (Fig. 10 a) touches the underside of the needle clamp (Fig. 10 b). Slip spring jaws « C » (Fig. 10 a) over the needle (Fig. 10 b), then swing needle threader slightly against needle until threader hook « D » (Fig. 10 a) passes through eye of needle (Fig. 10 b).

- b) With thumb and forefinger of left hand, pass thread under the threader hook and hold it there under tension (Fig. 10 c).
- c) Gently swing needle threader upwards (see arrow Fig. 10 c), then draw it away from the needle (Fig. 10 d). The threader hook will draw the thread through the eye of the needle.

Each NECCHI Needle Threader is delivered with a spare hook which can be easily mounted in case of breakage of the original hook.

10. TO PREPARE MACHINE FOR SEWING

- a) Hold end of needle thread with left hand so that thread remains loose.
- b) With right hand, turn balance wheel slowly toward you until needle goes down and up again to its highest position. This will cause the bobbin thread to be caught by the needle thread.
- c) Now, by drawing the upper thread by hand, the lower thread will be pulled up through the stitch hole of the needle plate, as shown in Fig. 11.
- d) Place the ends of threads, away from you, underneath the presser foot. Place material between presser foot and needle plate, and lower the presser foot. The machine is now ready for sewing.

CAUTION: It is of importance, once the machine is threaded, to make certain that the presser foot is down, and that there is fabric between presser foot and needle plate. Failure to observe this precaution may cause the threads to get tangled underneath the needle plate, jam the hook (shuttle) and damage or break the needle.

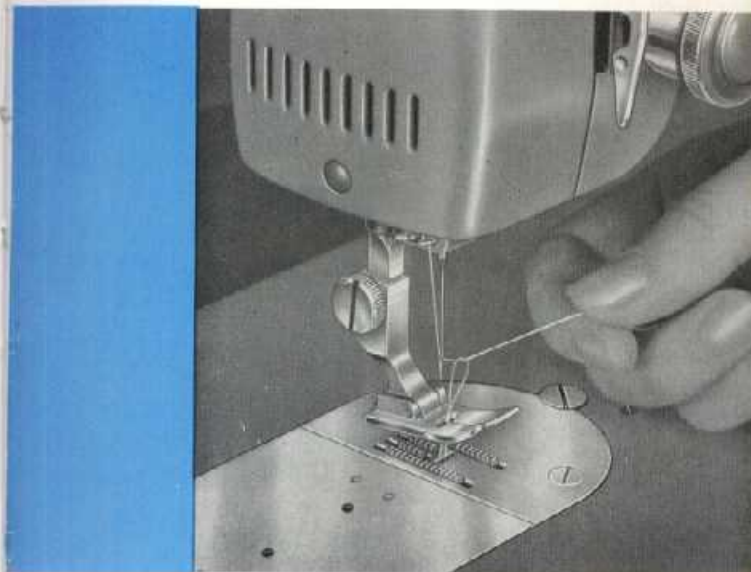


Fig. 11

11. TO RUN THE BU MIRA MACHINE

- a) Throw the « LIGHT » switch on the transformer (Fig. 5) to the « ON » position and leave it in this position while the machine is in use. When the « LIGHT » switch is at the « ON » position, a red signal light (see Fig. 12) will appear at the lower portion of the face plate, indicating that the sewing machine is now under current. This red signal light will glow as long as the « LIGHT » switch is at the « ON » position.
- b) See whether the « SPEED » switch on the transformer (see Fig. 13) is at the « HI » or « LO » position and throw this switch to the position which you desire.
- c) By pressing against lever of motor control (knee control or foot control) the speed of the machine can be increased as desired. When « SPEED » switch is on « LO », the machine will only reach a certain reduced speed, even if the motor control lever is in a fully pressed-down position. By releasing the control lever, the speed of the machine can be reduced still further if desired.

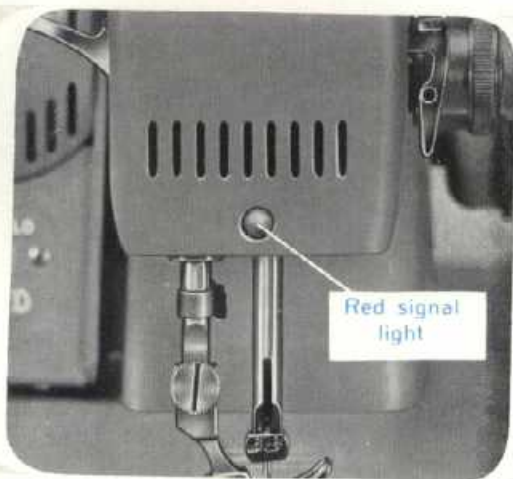


Fig. 12

- d) When you have finished your sewing work, throw the «LIGHT» switch to the «OFF» position. This will automatically disconnect the motor of the machine from the electric current.

NOTE: If sewing conditions make the built-in light unnecessary, it can be cut out simply by moving with a finger the shade which is controlled by the knurled button A (see fig. 29 a) under the face plate. The red signal light, however, will continue to glow (Fig. 28).

Fig. 13



12. TO COMMENCE SEWING

- Place fabric between presser foot and needle plate.
- Lower presser foot by pushing presser foot lever down.
- Turn balance wheel toward you until take-up lever is at highest point and set machine in motion by pushing knee control (or stepping on foot control).
- Hold both threads with left hand, for about three or four stitches, to prevent tangling of the threads, or clogging of the hook (shuttle).
- You may now proceed with sewing as you see fit.

13. TO TURN A CORNER

- Slow down machine and stop it at desired point while needle is still in the fabric.
- Raise presser foot by lifting presser foot lever, then revolve fabric around needle as desired.
- Lower presser foot and proceed with sewing.

14. TO REMOVE WORK FROM THE MACHINE

- Turn balance wheel toward you until take-up lever reaches its highest position.
- Raise presser foot by raising presser foot lever to highest level.
- Draw fabric back (away from you) about four inches.
- Cut threads and remove material.

15. TO ADJUST THE TENSIONS

- When tensions of needle thread and bobbin thread are properly adjusted, stitches on both sides of fabric will look alike (Fig. 14). Both threads will be locked in the center of the fabric thickness, and no adjustment is necessary.

- b) If tension of needle thread is too tight, or tension of bobbin thread is too loose, then needle thread will lie flat on top of fabric and bobbin thread will be pulled up to upper surface, being visible there in form of small knots (Fig. 15).
To correct this condition, make certain that the presser foot is down, then turn Tension Regulating Knob (Fig. 16) to the left.
Make several stitches to check whether needle thread tension is correct, and, if necessary, adjust further by turning Regulating Knob.
- c) If tension of needle thread is too loose, or tension of bobbin thread is too tight, bobbin thread will

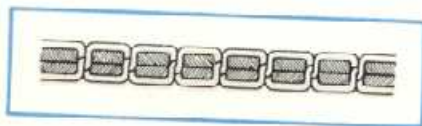


Fig. 14



Fig. 15



Tension
regulating
knob

Fig. 16

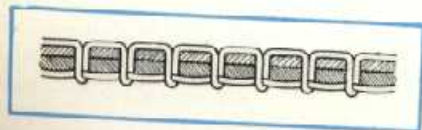


Fig. 17

lie straight along underside of fabric and needle thread will be pulled down to underside, being visible there in form of loops or small knots (Fig. 17). To correct this condition, make certain that the presser foot is down, then turn Regulating Knob to the right.

Make several stitches to check whether needle thread tension is correct, and, if necessary, adjust further by turning Regulating Knob.

16. TO CLEAN THE UPPER TENSION

For cleaning the upper tension and removing lint, dirt or any bits of thread that may have become lodged between the discs, the string of nylon thread should be used (as contained in envelope to be found in accessory box) which will make it possible to clean the tension within a few seconds.

Proceed as follows:

- a) Insert nylon thread into slot of upper tension as shown in Fig. 18.

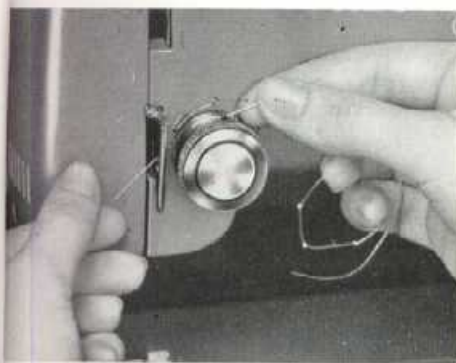


Fig. 18

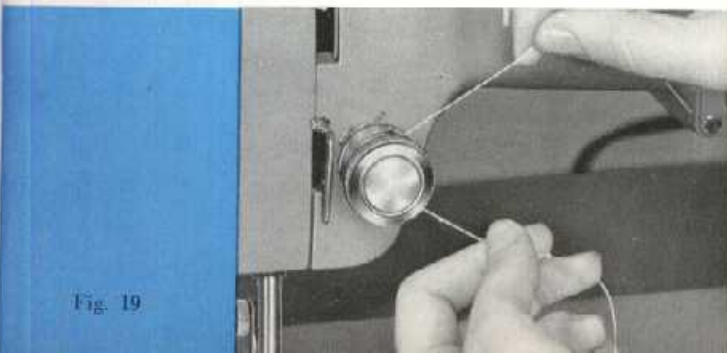


Fig. 19

- b) Pass thread forward and backward several times, in different directions, so that the knots of the thread, while passing between the discs (Fig. 19), can remove any dirt or bits of thread.

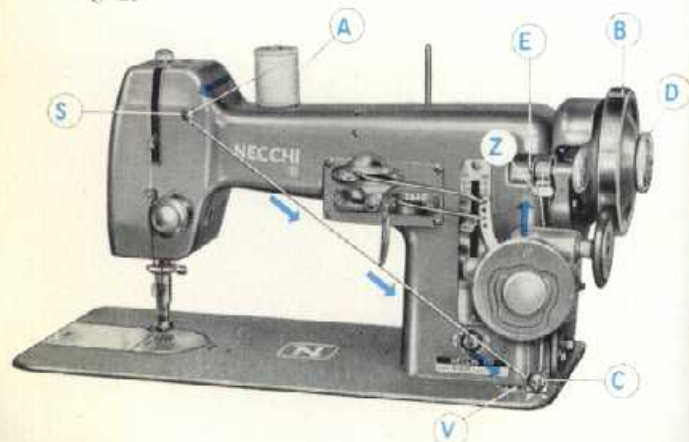
If it becomes necessary to take the upper tension apart, this should be done by an experienced sewing machine mechanic.

17. TO WIND THE EMPTY BOBBIN

IMPORTANT: It is necessary to understand the function of the «Stop Motion» by means of which the balance wheel can be disconnected from the sewing mechanism, when required, thus permitting winding of the bobbin without sewing.

- Disconnect balance wheel «B» (Fig. 20) from sewing mechanism by holding wheel with left hand and turning stop motion knob «D» toward you with right hand, until knob feels loose.
- Place spool of thread «A» on first spool pin.
- Draw thread from spool «A» through thread guide «S» on the arm, from there guide it through the tension device «C» on the bed plate, then lead it along the rear portion of the NECCHI-MATIC and finally wind a few turns of thread by hand on bobbin from front to back.

Fig. 20



- Place bobbin on spindle «E», as far as it will go.
- Press lever «Z» forward and push knee control (or step on foot control), running machine at medium speed to fill the bobbin. Bobbin Winder will automatically stop when bobbin is full.
- To prevent uneven winding of thread on bobbin, loosen screw «V» and move thread guide «C» either from right to left, or from left to right, as required, then tighten screw «V».
- If bobbin winds too full, without being stopped automatically, force down lever «Z», so that it will reach slightly below the rim of the bobbin.
- If not sufficient thread is wound on bobbin, force up lever «Z» past natural stopping point, then press it forward and push knee control, running machine at medium speed.

18. TO INSERT BOBBIN INTO BOBBIN CASE

- With left hand, hold bobbin case between thumb and forefinger in such a way that the slot in the edge of the bobbin case is on top and its open side faces to right, as shown in Fig. 21.



Fig. 21

- Hold bobbin between thumb and forefinger of right hand, so that thread on top leads from left to right, as shown in Fig. 21.
- Insert bobbin into bobbin case, preventing bobbin from turning by holding latch with thumb of left hand, and with right hand pull thread into slot of

bobbin case, as shown in Fig. 22; then draw it under the tension spring and up to the end of the tension spring (Fig. 23), leaving about four inches of loose thread.

Fig. 22

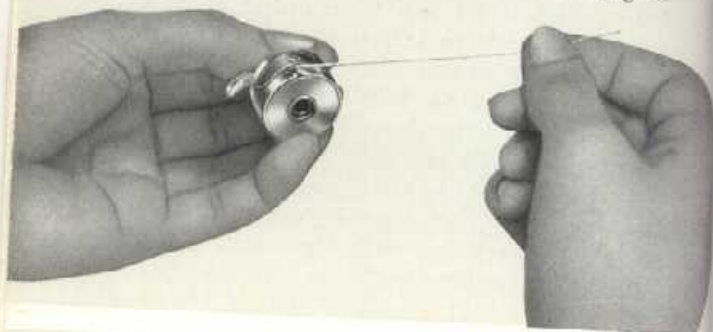
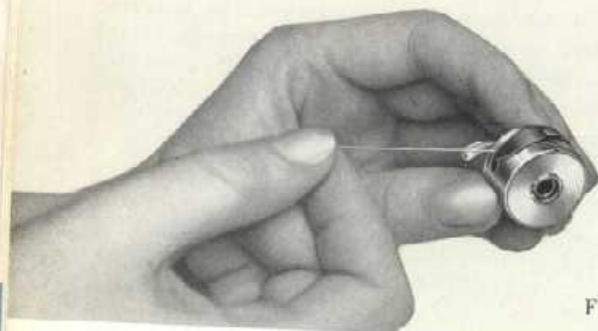


Fig. 23



19. TO REMOVE THE BOBBIN CASE

- Raise presser foot by raising presser foot lever.
- Bring needle up to its highest position by turning balance wheel toward you.
- Move slide plate of machine all the way to the left.
- Lift latch of bobbin case (Fig. 24) with thumb and forefinger of left hand, and remove bobbin case by pulling it toward the left and out of the machine.
- The bobbin will drop out when the open end of the bobbin case is held downward and the latch is permitted to snap back into place.

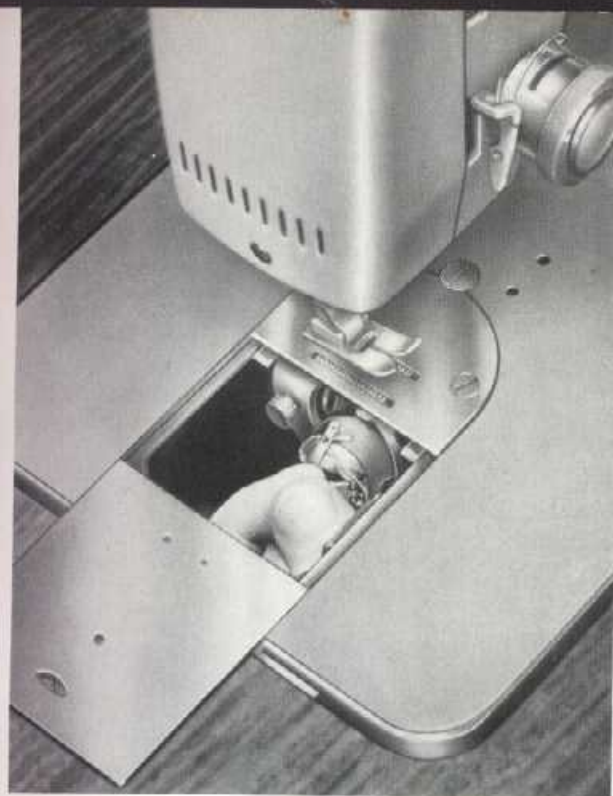


Fig. 24

20. TO INSERT THE BOBBIN CASE

- Raise presser foot by raising presser foot lever.
- Bring needle up to its highest position, by turning balance wheel toward you.
- Move slide plate of machine all the way to the left.
- Insert bobbin into bobbin case (See Instruction page 29).
- With thumb and forefinger of left hand, take bobbin case (into which full bobbin has been inserted) by the latch and place it on the center stud of the shuttle (hook). The position finger of the bobbin case must go into the notch on top of the race plate, as shown in Fig. 25.
- Release latch and press bobbin case into shuttle (hook) as far as it will go. Leave about four inches of loose thread hanging down.
- Push slide plate to right, closing it.

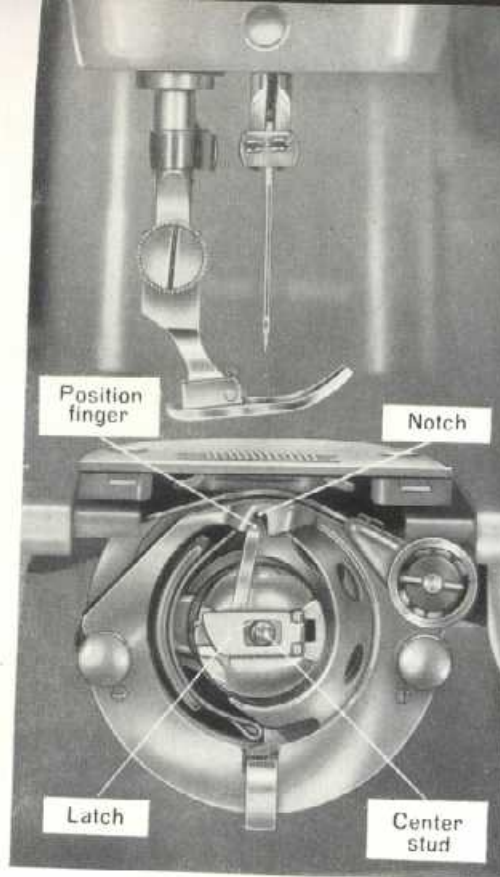


Fig. 25

21. TO REMOVE AND REPLACE THE SHUTTLE (HOOK)

Should machine (balance wheel) turn heavily or jam slightly, it may be due to a piece of loose thread which has been caught between shuttle (hook) and shuttle race. To correct this condition, proceed carefully as follows:

- Bring needle up to its highest position by turning balance wheel slowly toward you.
- Tilt machine back on its hinges, so that underside is in full view.
- Remove bobbin case (see Instruction, page 30).
- Snap out pins «Z» (Fig. 26) by swinging them sideways, and, with left hand, remove race plate «T» by turning it away from the race.

- Remove shuttle (hook) «R» by gripping its center stud with thumb and forefinger of left hand pulling it to the left. This leaves the shuttle race free for cleaning.
- Remove lint and pieces of thread with a small (paint or pastry) brush, put a drop of oil into the race, and oil rim only of shuttle (hook).

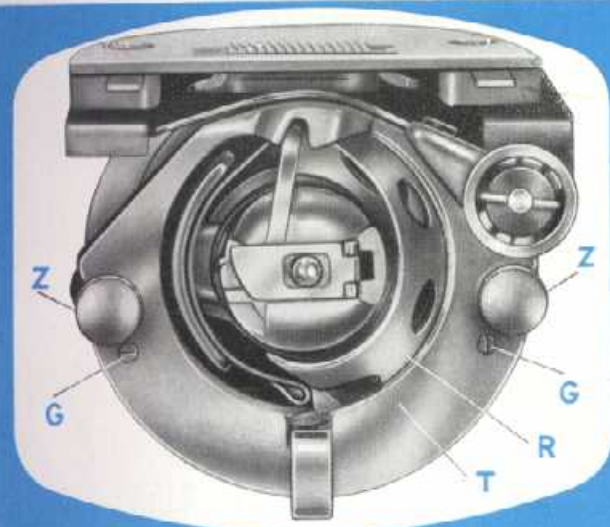


Fig. 26

- To replace shuttle (hook), insert it into race with thumb and forefinger of left hand, fitting it into place opposite the shuttle carrier without force.
- Fit race plate «T» onto the two small studs «G», and snap pins «Z» back into place.
- Insert bobbin case (see Instruction, page 31), then lower machine to working position.

22. TO REGULATE LENGTH OF STITCH

(See Fig. 27)

- Release thumb screw «A» by turning it toward the left.
- Set lever «B» below the zero mark, until indicator «C» moves to desired stitch length on scale. (No. 1 is the shortest stitch; No. 4 is the longest. Normal stitch length is No. 2).

- c) Tighten thumb screw «A» by turning it toward the right. This insures same length of stitch for forward and reverse sewing.



Fig. 27

23. TO TACK

(«Tacking» — A quick backward and forward stitching for reinforcement and finishing of seams).

(See Fig. 27)

- Regulate length of stitch (see Instruction, page 33).
- Tighten thumb screw «A», thus locking lever «B» between indicators «C» and «D».
- Bring lever «B» down as far as lower indicator «D», to sew forward.
- Raise lever «B» as far as upper indicator «C» to sew in reverse.

24. TO BASTE

- Bring lever «B» (Fig. 27) down as far as possible.
 - Loosen top tension slightly by setting tension indicator (Fig. 16) between zero and «3».
- This makes possible a long loose stitch that can be easily removed.

25. TO REGULATE WIDTH OF ZIG-ZAG STITCH (See Fig. 27)

Move zig-zag stitch lever «R» along numbered scale to desired width of stitch. If lever «R» fails to move, loosen thumb screw «Q».

IMPORTANT: Widest stitch is obtained with zig-zag lever «R» at extreme right, and narrowest stitch with zig-zag stitch lever «R» on zero.

26. TO CHANGE THE NEEDLE POSITION (See Fig. 27)

Change position of needle by setting Needle Position Lever «P» in left notch, center notch or right notch, as required for the type of work to be done.

27. REMOVING AND REPLACING THE LIGHT BULB

Should it ever be necessary to replace the light bulb, proceed as follows:

- Loosen completely screw «S» (Fig. 28) and remove face plate «I» of machine. This gives now free access to the lamp holder «P» (Fig. 29).
- Carefully remove old light bulb «B» (Fig. 29) by pulling it, together with its shade, downward and out of the lamp holder «P». If necessary, spread slightly the wall portion «R» of the lamp holder to make removal of the light bulb easier.
- Remove old bulb from shade and insert new bulb. In both cases a slight effort must be exerted on the end of the bulb.
- Insert new light bulb and shade into lamp holder and press slightly against wall portion «R» to secure firm fit of light bulb in lamp holder.

- 5) Replace face plate «L» and attach it to machine arm by tightening screw «S» firmly.
- 6) Make certain to use only NECCHI light bulbs.

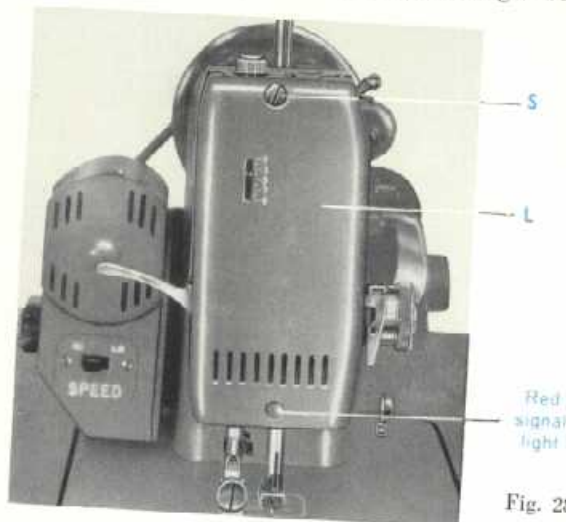


Fig. 28

Fig. 29

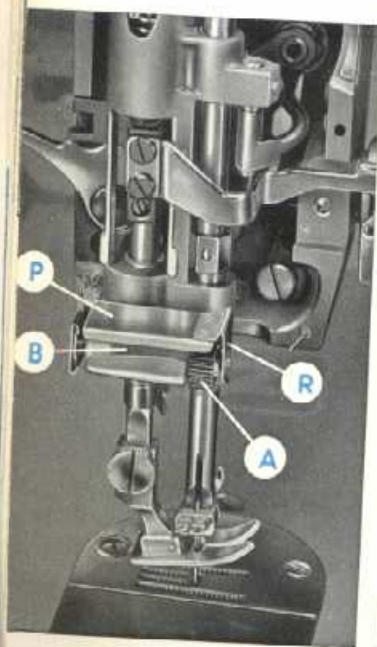
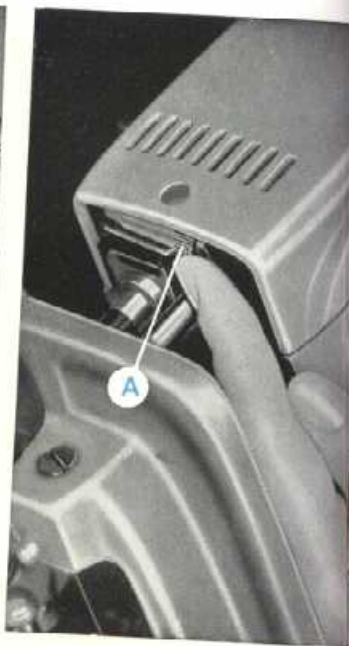


Fig. 29 a



28. CAUSES OF MINOR DIFFICULTIES

Needle (Upper) Thread Breaks

May be due to following reasons:

- 1) Needle is inserted incorrectly.
- 2) Needle thread is improperly threaded.
- 3) Needle thread tension is too tight.
- 4) Needle thread is of wrong quality for material being used.
- 5) Needle thread has knots.
- 6) Needle eye is rough or sharp.
- 7) Point of needle is damaged (bent over) or blunt.
- 8) Stitch hole in needle plate is rough or sharp.
- 9) Needle is too fine for thread in use.
- 10) Machine is started at full speed.
- 11) Machine is started with thread take-up lever not in highest position.
- 12) Bobbin case has rough spot due to being hit and damaged by needle.
- 13) Shuttle (hook) has rough or sharp spot.

Needle Breaks

May be due to following reasons:

- 1) Pulling fabric to or from you in such a manner that needle strikes needle plate.
- 2) Insufficient pressure on presser foot.
- 3) Needle is bent or has blunt point.

Bobbin (Lower) Thread Breaks

May be due to following reasons:

- 1) Bobbin thread tension is too tight.
- 2) Bobbin is wound unevenly.
- 3) Bobbin is too full and binds in bobbin case.
- 4) Dirt or lint in bobbin case.

Skip Stitches

May be due to following reasons:

- 1) Needle is inserted incorrectly.
- 2) Needle is bent or blunt.
- 3) Thread is too heavy for size of needle.
- 4) Needle is of wrong size for material being used.
- 5) Insufficient pressure on presser foot.

Uneven Stitches

May be due to following reasons:

- 1) Presser foot not resting evenly (fully) upon fabric.
- 2) Insufficient pressure on presser foot.
- 3) Feed dog is set too low.
- 4) Pulling fabric instead of allowing it to be fed by machine.
- 5) Stitch is too short.
- 6) Using too fine a needle with too coarse or uneven a thread.

Heavy Turning or Jamming of Machine (Balance Wheel)

May be due to a loose piece of thread which has become wedged between shuttle (hook) and race (see Instruction, page 32).

IMPORTANT It is possible that, after considerable use, some of the parts inside or underneath your machine will get out of adjustment. If, by referring to the aforementioned causes of trouble, you are not able to bring your machine into working condition and to obtain a perfect seam, do not try to repair the machine yourself. Call for your local NECCHI sewing machine dealer. He has excellent facilities and the technical knowledge required to bring your machine to perfect working order.

USEFUL SEWING ACCESSORIES

Needles — Proper sizes for all types of work (See Recommended Needle and Thread Sizes on Pages 12 and 13).

Scissors — Assorted sizes for various uses.

Sewing Chair — Comfortable to sit on. Has compartment to hold sewing supplies.

Thimbles — For protection of fingers and speedy sewing. Available in various sizes.

Tape Measures — Made of durable material, in different colors, with distinct numerals.

Tracing Wheels — For quick tracing of patterns. Available also with needle point wheels.

Skirt Marker — For easy marking of hems.

Electric Bulbs — Have spare bulb on hand, to be certain your sewing light is always in good order.

Oil — Only first quality special oil should be used for your sewing machine (no heavier oil than No. 20).

Pinking Shears — Gives neat inside finish and prevents raveling of edge of material.

Press Cloth — To aid in pressing seams and finished garments.

Press Mitt — To aid in pressing shoulder seams and inaccessible seams.

Sleeve Board — To simplify the operation of pressing sleeves and collars.

(Buy these supplies from your Authorized NECCHI Dealer)

OPERATING INSTRUCTIONS

Every NECCHI Model BU MIRA Machine is furnished with a Standard Zig-Zag Stitch Needle Plate and Zig-Zag Stitch Hinged Foot, with which the user of the machine can perform:

- a) Straight Stitching
- b) Zig-Zag Stitching
- c) Fancy and Embroidery Sewing, Appliqueing and Monogramming
- d) Button Sewing
- e) Button-Hole Making
- f) Hemming
- g) Blindstitching
- h) Circular Sewing

Special accessories (see pages 10 and 11), for special kinds of work, are furnished with the machine. The appropriate special accessory should be used when *continuous* work along any of these special lines has to be done. For the sake of simplicity in the following explanations, it is assumed that for any of the described sewing operations the Standard Zig-Zag Stitch Needle Plate and Zig-Zag Stitch Hinged Foot are used on the machine.

Should it be desired, to do *straight stitching* only, the aforementioned needle plate and presser foot may be replaced with a Straight Needle Plate and Straight Stitch Hinged Foot which are also furnished with the machine. In this case the needle position lever (see Fig. 30) must be set in the left notch.

1. STRAIGHT STITCH (See Fig. 30)

Machine Setting:

Needle Position Lever: In left notch.

Zig-Zag Stitch Lever: Loosen Index Stop Screw and move it (together with Zig-Zag Stitch Lever) to extreme left, then tighten Index Stop Screw firmly.

Stitch Length Lever: Set for desired stitch length.

Commence sewing as you see fit.

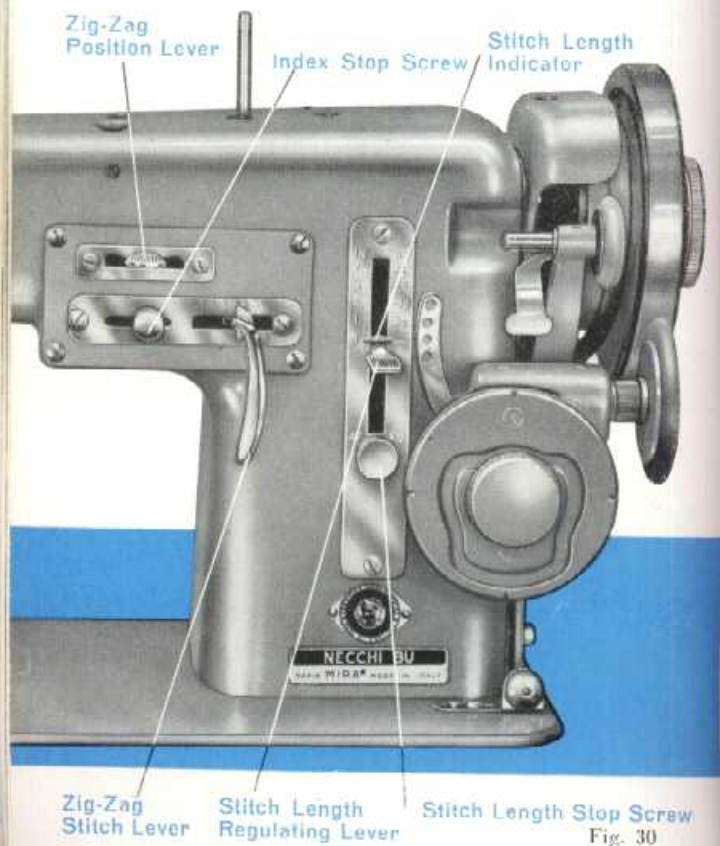


Fig. 30

2. ZIG-ZAG STITCH (See Fig. 30)

Machine Setting:

Needle position Lever: In center notch.

Zig-Zag Stitch Lever: Set for desired stitch width.

Stitch Length Lever: Set for desired stitch length.

Commence sewing as you see fit.

3. EMBROIDERY

a) To make «satin stitch» Fig. 31



Fig. 31

Machine Setting:

Needle Position Lever: In center notch.

Zig-Zag Stitch Lever: Set for desired stitch widths.

Stitch Length Lever: Set as close to zero mark as possible and still allow material to feed (threads must not pile up).

Threads: Use No. 30 for upper thread and No. 50 for lower thread.

Thread Tensions: Use fairly loose upper tension (between «0» and «2») and rather tight lower tension. Upper thread should lay flush on upper side of fabric, and part of it be also visible on lower side of fabric. Lower thread should appear on underside of fabric as a seam which is almost straight.

Presser Foot: Use Hinged Grooved Satin Stitch Foot (No. A. 24/134).

PROCEDURE: Commence sewing. Follow above procedure for all fancy embroidery work in which the «satin stitch» is the *basic* stitch for all straight running embroidery designs.

b) To make design Fig. 32



Fig. 32

Machine Setting:

Needle Position Lever: In center notch.

Stitch Length Lever: Set for «satin stitch».

Upper Tension: Same as for «satin stitch».

Procedure: Commence sewing, and move zig-zag stitch lever quickly from «1» to «4», and back to «1» again. Repeat operation as long as desired. The length of design depends on the speed at which the zig-zag stitch lever is operated.

c) To make design Fig. 33



Machine Setting:

Fig. 33

Needle Position Lever: In center notch.

Stitch Length Lever: Set for «satin stitch».

Upper Tension: Same as for «satin stitch».

Procedure: Commence sewing, and move zig-zag stitch lever slowly from «1» to «4», then quickly flip lever back to «1». Repeat operation as long as desired. The length of design depends on the speed at which the zig-zag stitch lever is operated.

d) To make design Fig. 34



Machine Setting:

Fig. 34

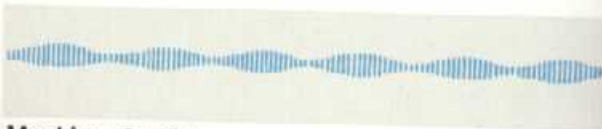
Zig-Zag Stitch Lever: Set between «1» and «2».

Stitch Length Lever: Set for «satin stitch».

Upper Tension: Same as for «satin stitch».

Procedure: Commence sewing, and shift needle position lever continuously and smoothly from left notch to right notch, and back to left notch again, by-passing the center notch entirely. Repeat operation as long as desired. The length of design depends on the speed at which the needle position lever is operated.

e) To make design Fig. 35



Machine Setting:

Fig. 35

Needle Position Lever: In center notch.

Stitch Length Lever: Set for «satin stitch».

Upper Tension: Same as for «satin stitch».

Procedure: Commence sewing, and move zig-zag stitch lever slowly from «1» to «4» and back to «1» again. Continue operation in an even rhythm as long as desired. The length of design depends on the speed at which the zig-zag stitch lever is operated.

f) To make design Fig 36



Fig. 36

Machine Setting:

Stitch Length Lever: Set for «satin stitch».

Upper Tension: Same as for «satin stitch».

Procedure: Set needle position lever in left notch and zig-zag stitch lever between «1» - «2».

Commence sewing and move needle position lever from left notch to center notch, then to the right notch. Leave needle position lever in right notch.

While machine is running, move zig-zag stitch lever to «4». Sew at this position for desired length, then move zig-zag stitch lever back to between «1» and «2». Repeat operation by moving needle position lever from right notch to center notch, then to left notch.

g) To make design Fig. 37



Fig. 37

Machine Setting:

Needle Position Lever: In left notch.

Zig-Zag Stitch Lever: Set at «2».

Stitch Length Lever: Set for «satin stitch».

Upper Tension: Same as for «satin stitch».

Procedure: Commence sewing, and move needle position lever to center notch, then to right notch, and back again, using all three notches. The length of design depends on the speed at which the needle position lever is operated, and on the time during which it is permitted to remain in each notch.

h) To make design Fig. 38

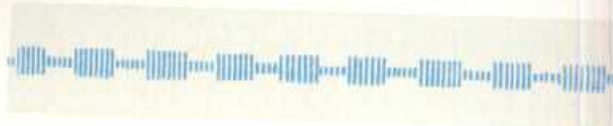


Fig. 38

Machine Setting:

Needle Position Lever: In center notch.

Zig-Zag Stitch Lever: Set at « 1 ».

Stitch Length Lever: Set for « satin stitch ».

Upper Tension: Same as for « satin stitch ».

Procedure: Commence sewing, stitch to desired length, then flip zig-zag stitch lever to « 4 ». Stitch desired length, then flip zig-zag stitch lever back to « 1 ». Repeat operation. The length of design depends on the time the machine is permitted to stitch at each setting of the zig-zag stitch lever.

The above illustrations show only a few of the many different designs that you can make easily, after only little practice, with your BU MIRA Machine by using simultaneously the needle position lever and the zig-zag stitch lever. After a short while of practice with these levers, you will be making your own individual designs.

4. EMBROIDERY AND MONOGRAMMING WITH DROPPED FEED

NOTE: Silk, Nylon or mercerized machine embroidery thread are generally used for this type of work.

Machine Setting:

Needle Position Lever: In center notch.

Zig-Zag Stitch Lever: Set for desired width.

Stitch Length Lever: Set for « satin stitch ».

Upper Tension: Same as for « satin stitch ».

Procedure:

- Remove presser foot.
- Drop feed dog (see instruction, page 19).
- Clamp the fabric, on which the design to be embroidered has been marked, in the embroidery hoop in the following manner:
Place fabric, right side facing upwards, on the larger (outer) ring of the embroidery hoop (so that

design is about in the center of the hoop), then place smaller (inner) ring of embroidery hoop upon fabric and press it with the fabric into the outer ring which is underneath the fabric.

- Place hoop with fabric underneath needle (see Fig. 39).
- Bring presser foot lever down to its lowest position.
- Hold hoop and needle thread with left hand, then,

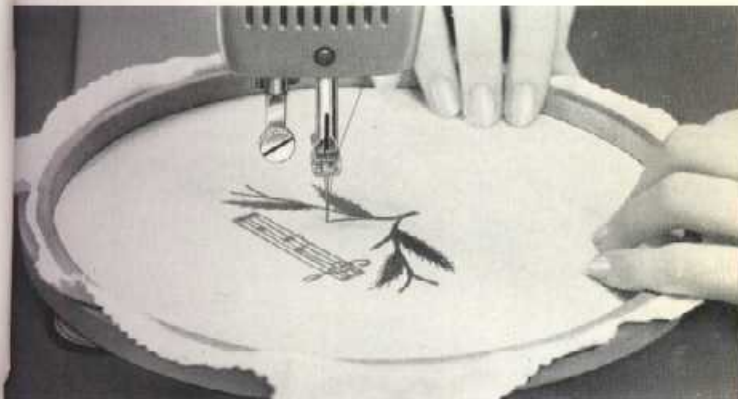


Fig. 39

with right hand, turn balance wheel slowly toward you and bring lower thread up through fabric in the hoop.

- While still holding both threads and hoop in left hand, bring right hand down to hoop and start machine running at low speed. Guide hoop slowly in steady rhythm with movements of needle. It will require some practice until you become skilled in following the various designs.

5. MAKING EMBROIDERED DAISIES

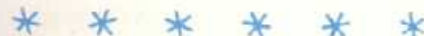


Fig. 40

NOTE: When making above design, clamp fabric in embroidery hoop, as explained in preceding chapter.

Machine Setting:

Needle Position Lever: In right notch.

Zig-Zag Stitch Lever: Set at «4».

Stitch Length Lever: Any position.

Upper Tension: Same as for «satin stitch».

Procedure:

- Drop feed dog (see instruction, page 19).
- Place hoop with fabric underneath presser foot.
- Lower presser foot and start design, making 3 or 4 stitches.
- Turn balance wheel slowly by hand toward you until needle is in fabric on left side of stitching.
- Raise presser foot slightly and, using needle as a pivot, turn fabric counter-clockwise, about 1/8 of an inch from the previous stitching.
- Lower presser foot and make 3 or 4 more stitches. Continue operation, always pivoting around the left side of the stitches.

6. APPLIQUE WORK

This includes several kinds of work, such as:

a) Lace Edging

Machine Setting:

Needle Position Lever: In center notch.

Zig-Zag Stitch Lever: Set for desired width.

Stitch Length Lever: Set for desired length.

Upper Tension: Normal.

Procedure: Raise presser foot and place lace edging to the cleanly cut edge of the fabric to which it will be stitched. Lower the presser foot and commence sewing, making certain that the needle, while zig-zagging, goes through both fabric and lace.

b) Raised Stitch Applique

(Decorative Cord Stitch)

By doing this type of work, a cord (pearl cotton No. 5) is being covered with zig-zag stitches, as shown in Fig. 41.

Machine Setting:

Needle Position Lever: In center notch.

Zig-Zag Stitch Lever: Set width of zig-zag stitch in accordance with thickness of cord being used.

Stitch Length Lever: Set for «satin stitch».

Upper Tension: Same as for «satin stitch».

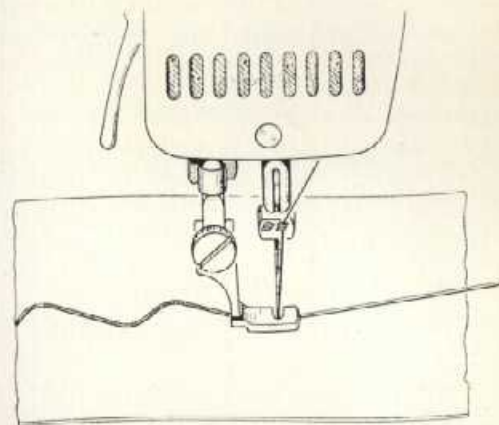


Fig. 41

Procedure: Remove zig-zag stitch hinged foot and attach zig-zag stitch cording foot to presser bar.

Insert cord into hole in base of cording foot, then pull it, from front to back, through the hole and guide it afterwards underneath the presser foot.

Commence sewing, running the machine slowly. Follow the design carefully until you have become accustomed to guiding the fabric.

c) Contrast Work Applique

Machine Setting: Same as for «Raised Stitch Applique», with the exception of the Stitch Length Lever which is set at any desired forward position.

This type of work is essentially the same as «Raised Stitch Applique». To obtain the desired «contrast», the color of the cord is different from the color of the needle thread.

The sewing procedure for Contrast Work is the same as for Raised Stitch Applique, with the exception that for Contrast Work the zig-zag stitches are spaced wider apart so as to obtain the pleasing contrast of the colors of cord and needle thread.

d) Cut-Out Work

Machine Setting: Same as for «satin stitch».

In doing this type of work, first baste a piece of the material, on which the design (flower, etc.) is sketched or printed, to the article (garment, etc.) to which it will be sewn. Then place both, design and article, under the presser foot and embroider along the outline of the design.

Having finished the embroidery work, take sharp scissors and cut away the surplus of the material as close as possible to the outline of the design. The design is thus permanently attached to the article.

7. HEMSTITCHING

a) Hemstitching with Drawn Threads (Fig. 42)

Machine Setting:

Needle Position Lever: In center notch.

Zig-Zag Stitch Lever: Set for narrow width (between «1» and «2»).

Stitch Length Lever: Between «1» and «2».

Upper Tension: Normal.

Procedure: Draw desired number of threads from article to be hemstitched.

Place fabric under presser foot, lower the presser foot and commence sewing. Make certain that the needle «bites» alternately close to the edge into the undrawn

Fig. 42



side of the fabric, and then into the space where the threads have been drawn.

After the stitching on one side of the drawn space has been finished, complete the hemstitching by repeating same procedure on other side of drawn space.

b) Hemstitching - Picot Edge (Fig. 43)

This kind of hemstitching is best done on organdy, or other kinds of sheer materials.

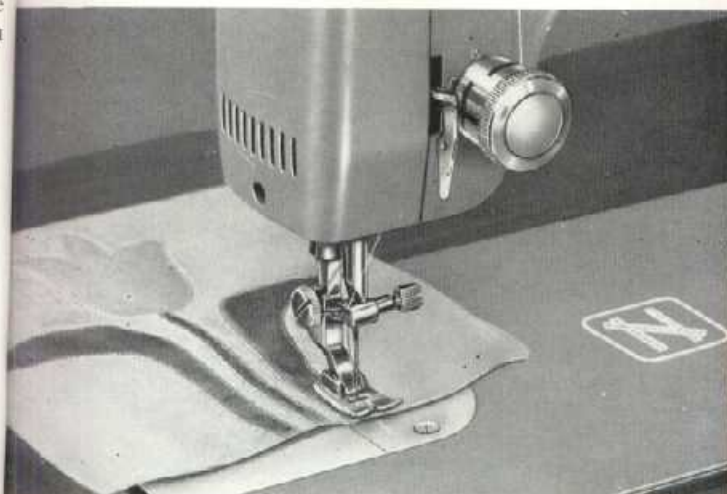


Fig. 43

Machine Setting:

Needle Position Lever: In center notch.

Zig-Zag Stitch Lever: Set for narrow width (between «1» and «2»).

Stitch Length Lever: Between «0» and «1».

Upper Tension: Normal.

Needle: Use Size No. 22.

Procedure: Place fabric, on which design has been sketched or printed, under presser foot, then place also applique, to be attached, under the presser foot. Lower presser foot and commence sewing, following outline of design (on fabric or applique).

With sharp scissors, cut away surplus of material of applique all around design, very close to the zig-zag stitch.

Place fabric with attached applique again under presser foot and make certain that needle stitches exactly into right side (outer) holes of first row of zig-zag stitches. Running machine slowly, sew all around applique.

To obtain a «PICOT EDGE», cut with sharp scissors between rows of hemstitching.

8. OVERLOCK STITCH (Zig-Zag on raw edge - Overcasting a raw edge) (Fig. 44)

Machine Setting:

Needle Position Lever: In center notch.

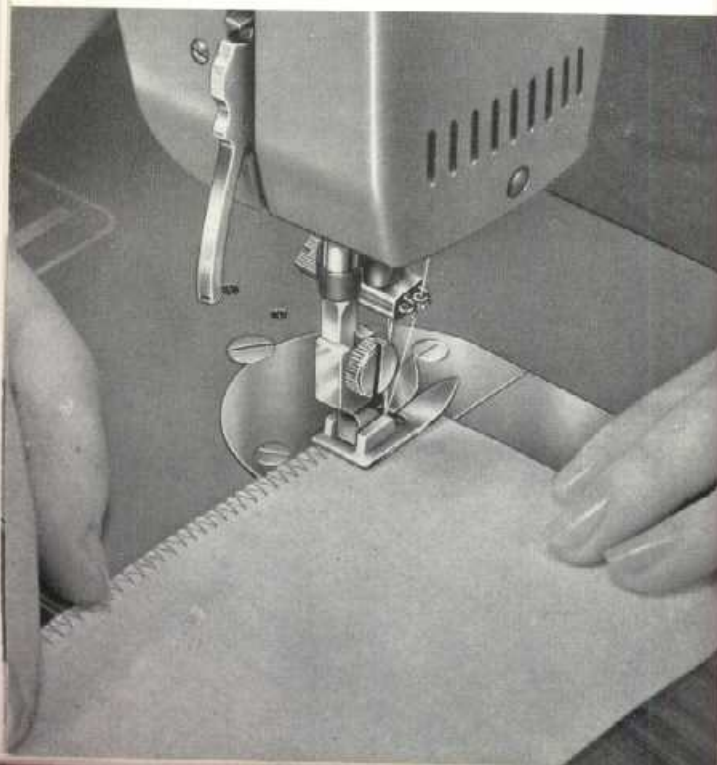
Zig-Zag Stitch Lever: Any desired width.

Stitch Length Lever: Any desired length.

Upper Tension: Normal.

Procedure: Commence sewing, making certain that the zig-zag stitch will «encase» the raw edge of the fabric by «biting», close to the raw edge, into the open space and then into the fabric again.

Fig. 44



9. NARROW STRAIGHT STITCH HEM (Fig. 45)

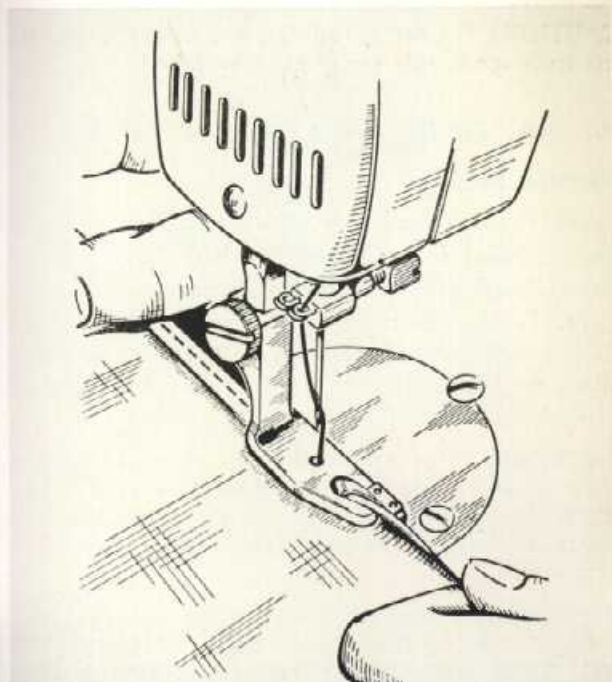


Fig. 45

Machine Setting:

Needle Position Lever: In center notch.

Zig-Zag Stitch Lever: At extreme left.

Stitch Length Lever: Between «3» and «4».

Upper Tension: Normal.

Presser Foot: Remove zig-zag stitch hinged foot and attach straight stitch narrow hemmer foot to presser bar. Leave hemmer foot in raised position.

Procedure: Fold over edge of fabric about one-eighth of an inch, for a length of about two inches, and insert the fold from beneath the hemmer foot into the spiral tongue (scroll) of the foot. This scroll turns in the edge of the fabric and forms the hem.

Move fabric back and forth carefully until hem forms itself in scroll, then pull fabric toward you until its end is just below the needle.

Lower the hemmer foot and commence sewing. Guide

and feed just enough material into hemmer foot to fill out scroll.

CAUTION: Do not crowd fabric into scroll and do not leave scroll only partly filled by fabric.

10. FLAT FELLED SEAMS (Figs. 46 and 47)

Machine Setting:

Needle Position Lever: In center notch.

Zig-Zag Stitch Lever: At extreme left.

Stitch Length Lever: Between « 3 » and « 4 ».

Upper Tension: Normal.

Presser Foot: Remove zig-zag stitch hinged foot and attach straight stitch narrow hemmer foot to presser bar. Leave hemmer foot in raised position.

Procedure: Place a piece of fabric on top of another piece so that their « right » sides face each other. Right edge of bottom piece should protrude about one-eighth of an inch beyond right edge of top piece (Fig. 46).

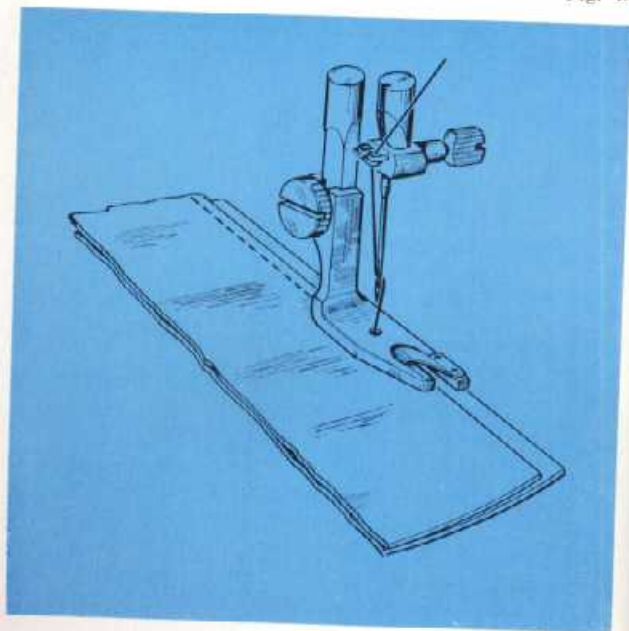


Fig. 46

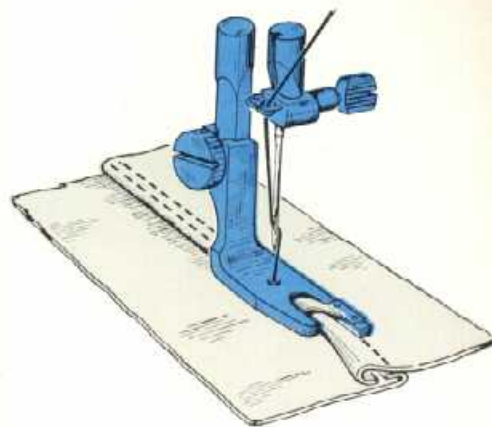


Fig. 47

Using straight stitch narrow hemmer foot as presser foot, lower foot and sew both pieces of fabric together on a line parallel to right edge of top piece of fabrics. Use edges of protruding toe of hemmer foot to guide edges of top and bottom pieces of fabrics (Fig. 46). Open and flatten out fabrics, « right » sides down, with edges of fabrics standing up.

Lift hemmer foot to raised position, then fold over edges of fabric to the left and insert them from beneath into scroll of hemmer foot.

Lower hemmer foot and sew as described in « Straight Stitch Hemming ». Guide first row of stitches along left edge of protruding toe of hemmer foot (Fig. 47).

11. NARROW ROLLED EDGES (Fig. 48)

This type of work simulates « Hand Rolling ».

Machine Setting:

Needle Position Lever: In right notch.

Zig-Zag Stitch Lever: Between « 2 » and « 3 ».

Stitch Length Lever: Between « 1 » and « 2 ».

Upper Tension: Normal.

Presser Foot: Remove zig-zag stitch hinged foot and attach zig-zag stitch hemmer foot to presser bar. Leave hemmer foot in raised position.

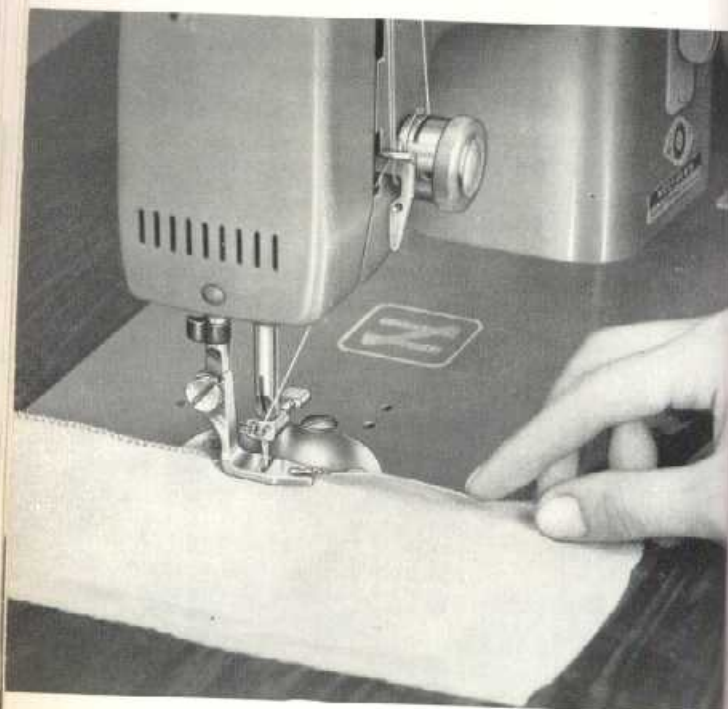


Fig. 48

Procedure: Insert edge to be hemmed into scroll of hemmer foot, then carefully slip fabric through scroll until end of fabric is just below needle.

Lower hemmer foot and commence sewing, guiding and feeding just enough fabric into hemmer to fill out scroll.

CAUTION: Do not crowd fabric into scroll.

12. HEMMING AND SEWING ON LACE (Fig. 49)

These two operations can be done at the same time. Machine setting is same as outlined in preceding Operating Instruction No. 11, «Narrow Rolled Edges».

Procedure: Start hem as described in preceding operating instruction No. 11, make several stitches, then stop machine.

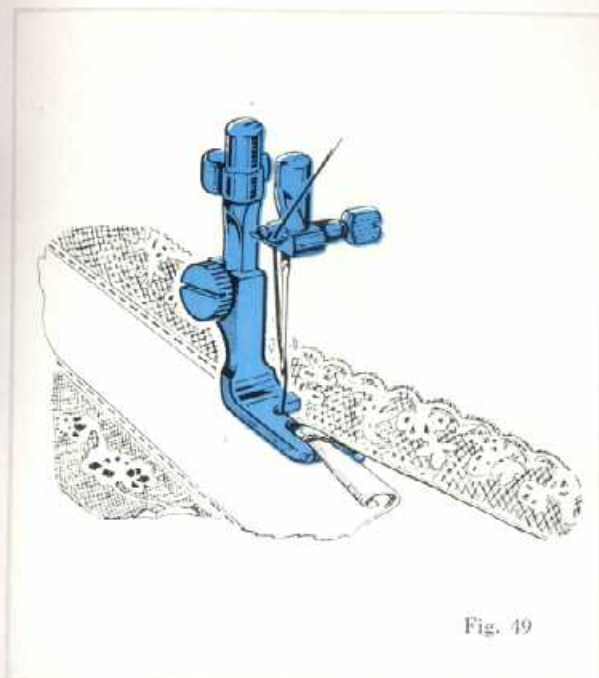


Fig. 49

Bring up needle to highest position.

Raise hemmer foot, insert end of lace into the slot on side of hemmer foot, as shown in Fig. 49, and pass it underneath the hemmer foot to the rear.

Lower hemmer foot and continue sewing.

Guide material, being hemmed, with left hand while guiding lace with right hand to keep it properly in the slot and directly above the hem. Needle must always stitch through both lace and hem.

Make certain that hem runs through scroll of foot smoothly and evenly.

13. SHELL STITCH (Fig. 50)

This type of stitch is best done on silks and soft rayons only.

To make the Shell Stitch, use the same machine setting and follow the same procedure as outlined in preceding Operating Instruction No. 11, «Narrow Rolled Edges», Page 53, with one exception: Tension of upper

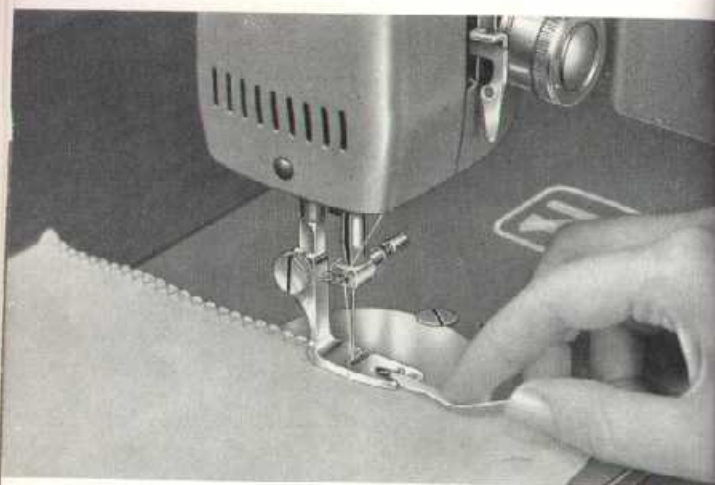


Fig. 50

thread must be rather tight. This will cause edge to picot and thus give the desired effect of the Shell Stitch. The width of the zig-zig stitch for this type of work should be ample and the stitches should be spaced rather widely apart.

14. QUILTING (Fig. 51)

a) Straight Stitch Quilting

Machine Setting:

Needle Position Lever: In center notch.

Zig-Zag Stitch Lever: At extreme left.

Stitch Length Lever: Any desired length.

Upper Tension: Normal.

Presser Foot: Zig-Zag Stitch Hinged Foot.

Procedure: Attach adjustable quilting stitch guide to presser foot bar, as shown in Fig. 51.

Place fabric under presser foot and line it up under needle on line to be stitched. Move curved guide bar to right as far as necessary to mark desired line of parallel stitching.

Stitch first line.

Move material to right until curved guide bar is directly over first stitched line. Needle will then be directly over point where second line of stitching will be made.



Fig. 51

b) Zig-Zag Stitch Quilting

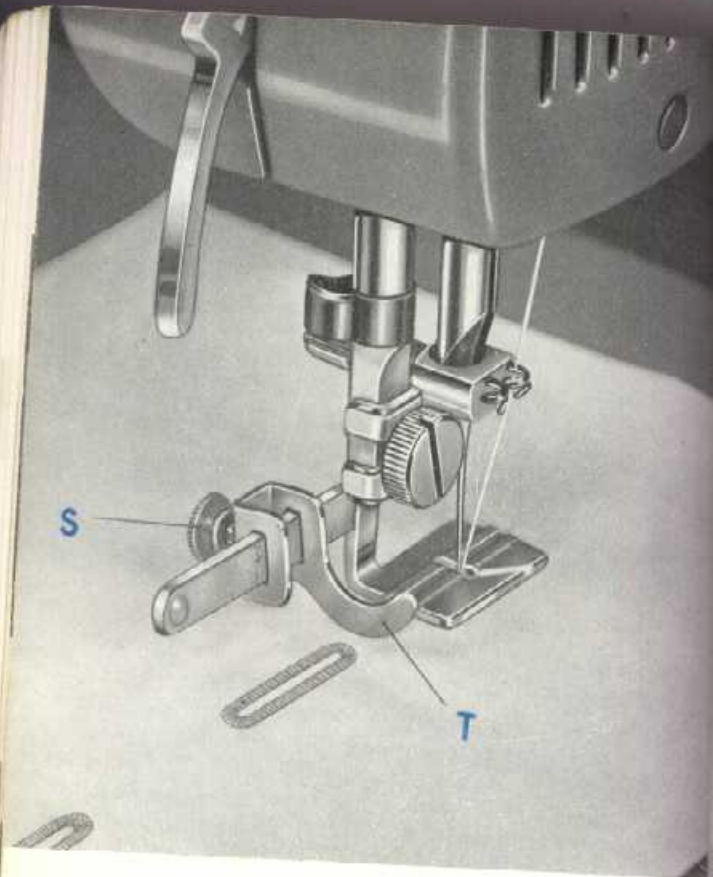
Machine setting and procedure for this type of work are the same as those for «Straight Stitch Quilting», with the exception of the position of the Zig-Zag Stitch Lever which should be set for any desired width of the zig-zag stitch. Pearl cotton may also be used very effectively with the zig-zag stitch, by filling the bobbin with pearl cotton, and working with the right side of the material down. A tighter upper tension is then recommended and is obtained by turning the tension indicator knob (Fig. 16) to the right, to between «6» and «9».

15. MAKING BUTTONHOLES

a) Regular («Pearl Stitch») Buttonhole

To make neat buttonholes, use a fine needle and mercerized thread. When sewing sheer fabrics, reinforce the buttonhole by placing a small piece of firm material between the layers of fabric. Practice on two layers of fabric with matching thread. Do not use a contrasting thread until you can make a perfect buttonhole.

The making of a buttonhole can be easily performed in six successive steps which, for clarity, are indicated by explanations and illustrations later on.



Machine Setting:

Fig. 52

Needle Position Lever: In left notch; for heavy material, set position lever in right notch (this will place both rows of pearl stitches somewhat further apart).

Zig-Zag Stitch Lever: Set at « 2 ».

Stitch Length Lever: Between « 0 » and « 1 » (closer to « 0 ») - Satin Stitch.

Upper Tension: Tight tension required to obtain « pearl stitch » effect. Make several stitches on piece of scrap material to determine proper tension of upper thread. Tighten upper tension by turning tension indicator knob (Fig. 16) to the right. For upper thread use No. 50 mercerized thread.

Lower Tension: Remove bobbin case from machine. Wind a bobbin with No. 70 mercerized thread, then insert full bobbin into the black latch bobbin case (black latch bobbin case is specially adjusted for loose tension of lower thread, required for pearl stitch but-

tonholes). Insert black latch bobbin case into machine and pull lower thread up through stitch hole of needle plate.

Presser Foot: Remove zig-zag stitch hinged foot and attach buttonhole foot to presser foot bar.

Procedure: Measure and mark size of buttonhole on fabric. Place fabric under presser foot and lower presser foot. Loosen thumb screw « S » on buttonhole foot (Fig. 52) and move index « T » either forward or backward to set for desired length of buttonhole. Tighten thumb screw « S ».

Fig. 53

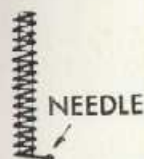


Fig. 54

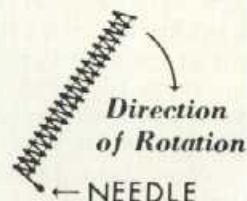


Fig. 55



Fig. 56



Fig. 57



1st Step: Commence sewing and make first row of satin stitches (pearl stitches). Continue sewing until stitches reach index « T » (Fig. 52). Leave needle in fabric at right side of stitches (Fig. 53).

2nd Step: When needle position lever is in *right* notch (as for heavy material), bring needle to the *left* of the stitches, leaving needle in the fabric. Raise the presser foot, and using needle as a pivot, turn fabric half way around clockwise (see Fig. 54) to make other half of buttonhole.

3rd Step: Make first « bar tack » as follows:

Lower presser foot, bring needle up and out of fabric

and move zig-zag stitch lever to «4». Make 5 or 6 stitches to form bar across end (Fig. 55). Hold back fabric to prevent it from moving forward so that the bar tack stitches will be close together.

4th Step: To make second row of satin stitches (pearl stitches), bring needle out of material, then move zig-zag stitch lever back to the left to its previous position and sew now the second row of stitches on the other side of the marking line, as indicated in Fig. 56.

While making second row of stitches, make certain to guide first row of stitches in groove provided for it on bottom face of buttonhole foot. This will space both rows of stitches properly apart and prevent raw edges to show up after the space between these rows of stitches has been cut open.

As you sew the second row of stitches, and just before you reach the finish point, pull the *starting thread* across to the left under the presser foot and use it as a stopping guide.

5th Step: Turn balance wheel by hand and bring needle up and out of fabric, then move zig-zag stitch lever to «4». Make 5 or 6 stitches to form second «bar tack» across end (Fig. 57). Hold back fabric to prevent it from moving forward.

6th Step: Bring needle up and out of fabric, then move zig-zag stitch lever back to the extreme left.

Hold back fabric and make 2 or 3 straight stitches to prevent «bar tack» from raveling.

Lift presser foot and remove fabric (away from you).

Pull loose threads to wrong side and tie ends. Cut buttonhole opening with NECCHI buttonhole cutter.

NOTE: Buttonholes may also be made with the zig-zag stitch hinged foot by following the same procedure as explained above.

b) Buttonhole with Cord (Gimp)

On thick soft fabrics (knitted goods, etc.), where the rows of zig-zag stitches would «sink in», it is necessary to support these rows of stitches by means of a «gimp» (cord) which, in the course of making the buttonholes, is being covered with zig-zag stitches.

The procedure of making «Gimp Buttonholes» (Corded Buttonholes) is, in general, the same as described in «Regular (Pearl Stitch) Buttonholes», with the exception, however, that the tension of the upper thread

is the same as for *regular* sewing, and the regular *bright* latch bobbin case is used in this instance.

To make a gimp buttonhole, use the buttonhole presser foot which has an opening (hole) for the cord. Insert cord into small hole in front of buttonhole foot and draw about one inch through to the back, then stitch over the cord. After having finished second bar tack, pull ends of cord slightly and cut off close to the bar tack.

16. BUTTON SEWING (Fig. 58)

a) Two-Hole Buttons

Machine Setting:

Needle Position Lever: In left notch.

Zig-Zag Stitch Lever: Between «4» and «5» (in accordance with distance between holes of button).

Upper Tension: Normal.

Feed Dog: To be dropped (see instruction, page 19).

Presser Foot: Remove zig-zag hinged foot and attach button sewing foot to presser foot bar. Leave button sewing foot in raised position.

Fig. 58

