

Zone 77024

NECCHI

instructions

for the use and maintenance
of the

NECCHI LELIA

515 automatic
with built-in buttonhole device

514 automatic

513 zigzag
with built-in buttonhole device

512 zigzag



NECCHI Società per Azioni - Pavia (Italy)

Symb. 5571840 ind. 21

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zig zag - Lock width and needle on 2 - need at left for deeper bight.

closer - shorten stitch

narrower - push zig zag control toward as long as keep 3.3. control on 0 - will see straight

for satin stitch - use plastic foot set 3.3. control on 5, stitch reg. on 5

use discs - use plastic 3.3. tool

put needle pos. at right - drop disc in and push needle to left to loc

buttonholes

put on button hole foot (quage on it)
mark pos. of button hole,
needle at left.

width on 0

st. reg. at .5 □

turn knob to 1 - 2-3 stitches

switch to 2 - run off length

put " turn to 3 - stop at bar

needle " " 4 -

when up turn to 5 - bar tack - 1-2 - back to

switching knob 0 to tie thread

Bring zip - 6-7" to practice

Monday at 2 - Mrs. Baron

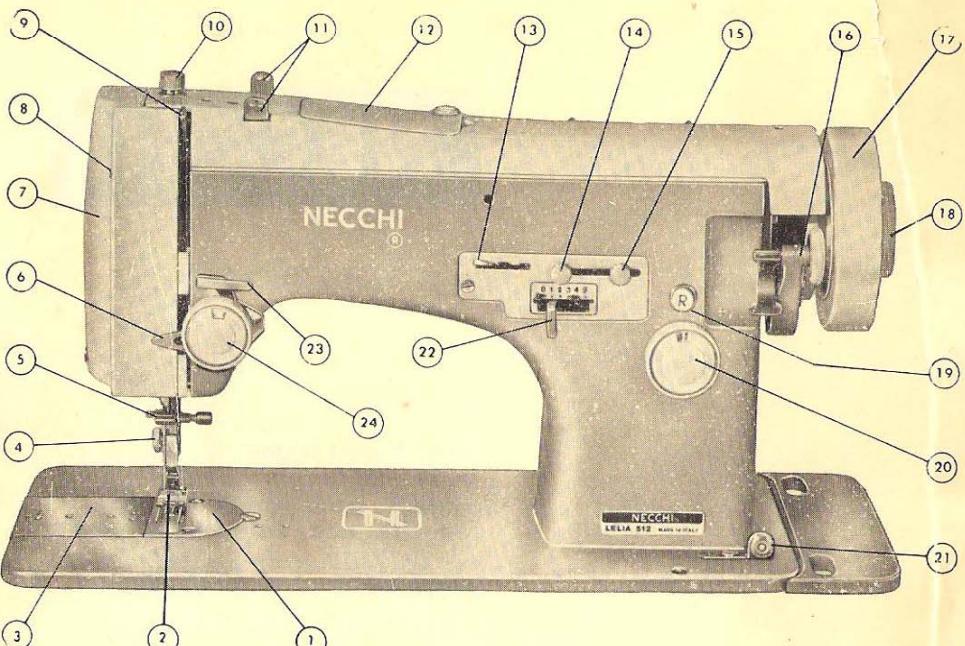


Fig. 2

LELIA 514 - NAME OF PARTS

- | | |
|-------------------------------------|---------------------------------------|
| 1 - Needle plate | 13 - Needle position lever |
| 2 - Presser foot | 14 - Index stop nut (left) |
| 3 - Slide plate | 15 - Index stop nut (right) |
| 4 - Presser foot thumb screw | 16 - Bobbin winder |
| 5 - Needle clamp | 17 - Balance wheel |
| 6 - Thread guide | 18 - Balance wheel disconnecting knob |
| 7 - Face plate | 19 - Reverse sewing push-button |
| 8 - Presser foot pressure indicator | 20 - Stitch length regulating knob |
| 9 - Take-up lever | 21 - Bobbin winder thread guide |
| 10 - Pressure regulating knob | 22 - Zigzag stitch lever |
| 11 - Thread guides | 23 - Guiding hook |
| 12 - Lid | 24 - Thread tension knob |

Chapter 1

GENERAL INSTRUCTIONS

NOTE: minor innovations to the sewing machine mechanisms against the description given in this book may depend on continuous improvements in the production cycles.

1. TO ENSURE PERFECT FUNCTIONING OF MACHINE

Always bear in mind the following rules:

- Balance wheel must always be turned towards the operator.
- Do not try to help feeding by pulling fabric, since this action would bend needle. The machine automatically feeds the fabric without assistance.
- Do not operate machine with presser foot resting on feed dog unless there is cloth in between.
- 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.
- Always bring presser bar lever to its lowest position before starting to sew.

2. RECOMMENDED NEEDLE AND THREAD SIZES

NECCHI machines use Syst. 15 x 1 or Syst. 705 needles

The table on the right shows the various sizes and types of needles and threads in accordance with materials to be sewn.

	Sizes of thread		Sizes of needles	
	mercerized cotton	silk	syst. 15 x 1	syst. 705
Muslin - Batiste - Fine linens - thin fabrics	80 to 150	0 and 00 twist	10	70
Shirtings - Sheetings - Heavy silks	80 to 60	A & B twist	12	80
Heavy weight linens - Woollen goods	60 to 40	C twist	14	90
Heavy weight woollens - Woven coating	40 to 30	D twist	16	100
Heavy fabrics in general	30 to 24	E twist	18	110

3. TO INSERT NEEDLE

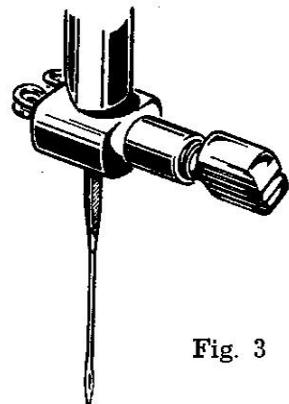


Fig. 3

- Bring the needle bar to its highest position by turning the balance wheel toward you.
- Loosen screw (Fig. 3) and insert the needle into the groove pushing it up as far as it will go.

Make sure that the flat side of the needle shank is toward the right.

4. TO THREAD 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 the balance wheel toward you.
- Place the spool of thread on the spool pin.
- Run spool thread through the holes of the thread guides « A » on the upper cover plate.
- Insert thread into guiding hook « B ».
- Draw thread down, then insert it from right to left in slot of tension discs housing « C ».
- Hold thread with thumb of right hand between tension housing « C » and thread guide « A » on machine arm, then pull thread with left hand towards the right, until check spring « M » leads thread behind hook « D » and a slight click is heard.
- Insert thread into guiding hook « B ».
- Bring thread from right to left through eye « E » of the thread take-up lever.
- Hold thread with both hands and pull thread behind guide « F »: continue pulling it sideways towards the right until it clicks into a small channel inside guide « F » which secures thread.
- Draw thread into the slot between the face plate and the machine arm.
- Pass it through the hook of the needle clamp « G » and, finally, thread it from left to right through the eye « H » of the needle, leaving a loose end of about 4 inches.

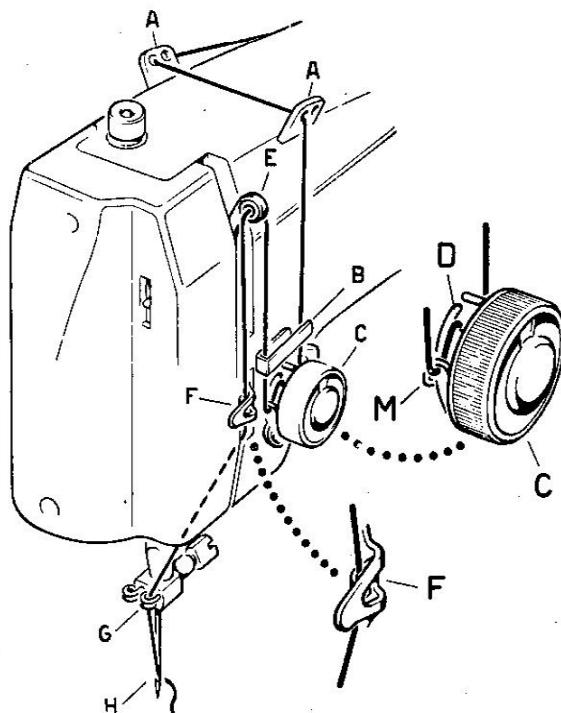


Fig. 4

5. HOW TO USE THE NEEDLE THREADER

- Bring needle to its highest position.
- Place threader as shown in Fig. 5a, so that its hook passes through needle eye.
- Pass thread under hook (Fig. 5b).
- Gently swing threader upwards; the hook will draw thread through needle eye.

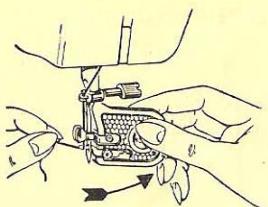


Fig. 5a

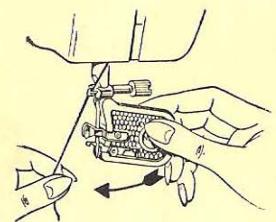


Fig. 5b

6. TO WIND EMPTY BOBBIN

- Disconnect balance wheel « P » by turning button « Q » in the direction of the arrow (Fig. 6).
 - Pass thread through points shown in the illustration and insert thread through one of the two holes of the bobbin flange from the inside to the outside leaving about 4 inches of loose thread.
 - Insert the bobbin, with its flange provided with holes, toward the left, on spindle « E » and press lever « F » against the bobbin.
 - Hold with the left hand the end of the thread hanging from the flange hole and run machine: after a few turns, the thread, held by the hand, will be cut.
- As soon as the bobbin is filled, the bobbin winder will automatically stop.

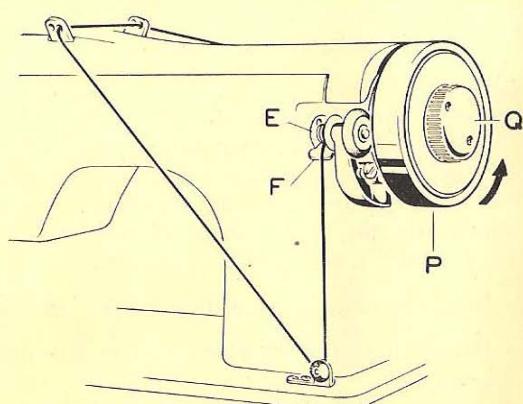


Fig. 6

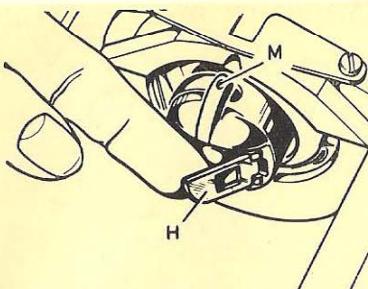


Fig. 7

7. TO REMOVE BOBBIN CASE

- Bring needle to its highest position and move slide plate to the left.
- Remove bobbin case by lifting latch « H » and pulling it to the left (Fig. 7).

NOTE: The bobbin will drop out when latch is released.

8. To INSERT BOBBIN AND BOBBIN CASE

a) bobbin into bobbin case :

- Insert bobbin into bobbin case: thread must be wound around bobbin as indicated in Fig. 8a.
 - The bobbin flange provided with holes must be turned toward the outside of the bobbin case, in order that the right direction of rotation should be ensured.
 - Insert thread into groove of bobbin case.
 - Lift latch « H » so that bobbin is blocked and draw thread under tension spring as indicated in Fig. 8b.
- Leave about 4 inches of thread hanging out.

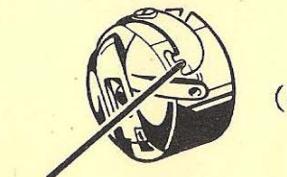
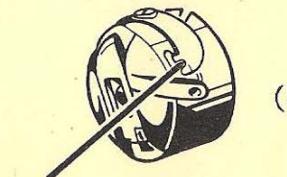


Fig. 8



b) bobbin case on shuttle :

- Bring needle to its highest position and move slide plate to the left.
- Insert bobbin case by latch « H » (Fig. 7) and place it on centre stud of shuttle. Finger « M » must go into notch of shuttle ring.
- Release latch « H » and press on bobbin case until a click is heard.
- Leave about 4 inches of thread hanging out.

9. TO ADJUST TENSIONS

— To loosen the upper thread tension, turn button « T » (Fig. 9) in the direction of the arrow. By turning button « T » in the opposite direction the tension will be increased.

NOTE: The normal adjustment of the upper thread tension is indicated on the knob by a small red disc.

— The lower tension is increased by tightening screw « G » (Fig. 10); it is decreased by loosening same.

a) The upper and lower threads must lock in the centre of the fabric (Fig. 11), that is, their tensions must be even. In this condition, two faults may occur:

1) Even tensions, too loose. The stitches are loose. It is then necessary to increase both tensions.

2) Even tensions, too tight. The fabric ruffles or the thread breaks. It is necessary to loosen both tensions.

b) If the upper tension is tighter than the lower, the upper thread will lie flat on top of fabric and the lower thread will be pulled to the upper surface (Fig. 12) and be visible there in small knots. Adjust tension by tightening the lower tension and loosening the upper one.

c) If the lower tension is too tight, the lower thread will lie flat on the underside of the fabric (Fig. 13); therefore tighten the upper tension and loosen the lower.

NOTE: When sewing on hard or thick fabrics, it is advisable to loosen screw « E » (Fig. 9) and slightly move small plate « P » in the direction opposite to that of the arrow.

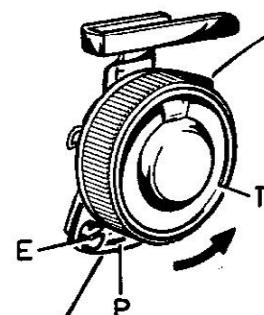


Fig. 9

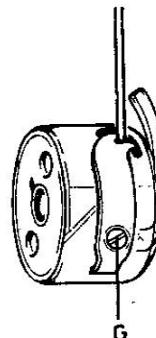


Fig. 10



Fig. 11



Fig. 12



Fig. 13

10. TO REGULATE STITCH LENGTH

— Turn button « D » (Fig. 14); the stitch length expressed in mm. is visible through small window « F ».

The normal stitch length is no. 2.

The stitch length normally required for satin stitch (see para. 21) is indicated by a red square mark.

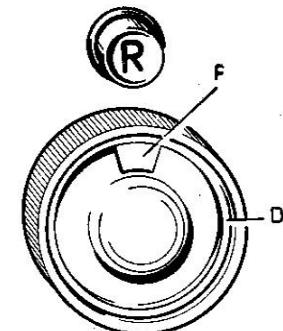


Fig. 14

To reverse direction of sewing

— Push button « R » completely (Fig. 14); the machine will sew in reverse with the stitch length regulated by button « D ».
— The machine resumes sewing forward as soon as button « R » is left free.

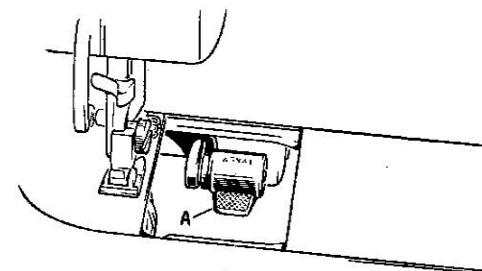


Fig. 15

11. TO DROP FEED DOG

The feed dog must be dropped for hoop embroidery, darning and sewing on buttons.

— Move slide plate to the left.
— Press lever « A » (Fig. 15).

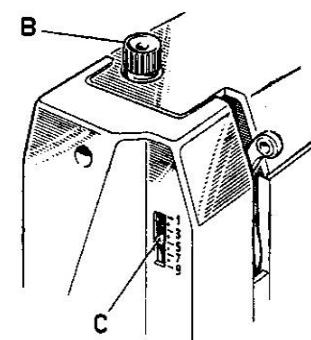


Fig. 16

12. TO REGULATE PRESSURE OF FOOT ON FABRIC

The pressure on the fabric can be regulated by turning button « B » (Fig. 16) and is indicated by the gauge « C ».

For normal sewing, keep the gauge on 3 or 5; for heavy fabrics, increase pressure; for thin fabrics reduce pressure. If pressure is too heavy the fabric may pucker. If too light — uneven stitching may result.

13. TO START SEWING

- Holding the thread hanging out of the needle eye, turn balance wheel to bring needle to its highest position.
- Draw the upper thread; the lower thread will be pulled up through the hole of needle plate (Fig. 17).
- Place both threads behind presser foot.

Start sewing slowly, holding the threads for the first 4-5 stitches.

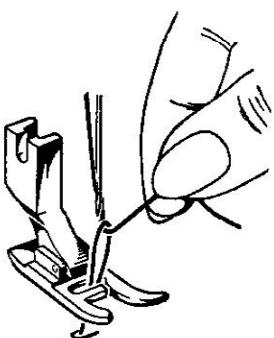


Fig. 17

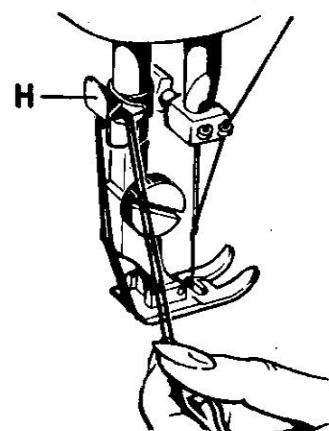


Fig. 18

14. TO REMOVE WORK FROM MACHINE

- Bring needle and thread take-up lever to their highest position and raise presser foot.
- Draw fabric away from presser foot and draw threads, keeping them taut, through thread-cutter « H » (Fig. 18).
- Cut threads and remove fabric.

The ends of both threads will be held by the thread cutter and the machine will be ready to perform another seam without requiring that the threads be held by the operator during the first 4 or 5 stitches.

15. LIGHTING AND ELECTRICAL RUNNING OF THE MACHINE

- Plug cord into wall outlet.
- To run machine, press the rheostat knob.
- To put the light on, move switch « Z » towards the right, (fig. 19).

If you wish to run the machine electrically without putting the light on, leave the switch « Z » on the left.

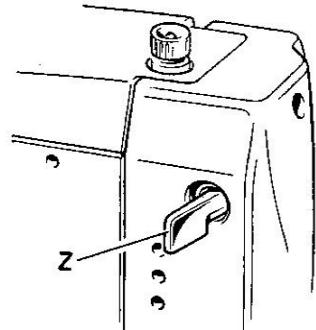


Fig. 19

16. MAINTENANCE OF MACHINE

a) Oiling

When the machine is new or when it is used after long periods of inactivity, it is advisable to lubricate it abundantly before use. Oiling is indispensable in order to secure smoothness and a trouble-free running of the machine which, if used continuously, should be oiled every two days.

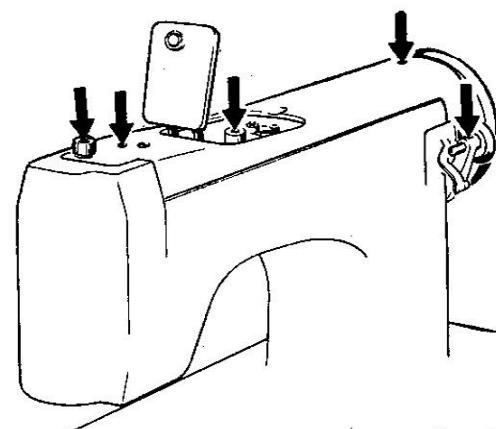


Fig. 20

The oiling points are indicated in Fig. 20 and 21.

From time to time also oil shuttle rim and shuttle race (see para. 16 c).

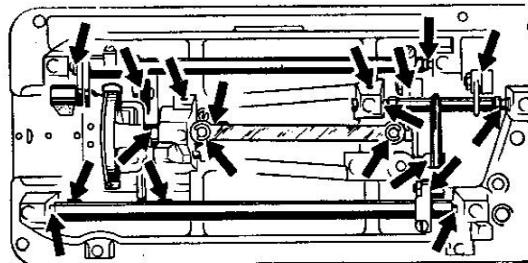


Fig. 21

b) To clean feed dog and needle plate seat

- Remove needle plate.
- Clean feed dog teeth and needle plate with a small brush.

c) To remove and replace the shuttle

If machine runs hard or jams slightly, this may be due to a piece of thread which has been caught in shuttle race.

To correct this condition, proceed as follows:

- Bring needle to its highest position.
- Tilt machine back on its hinges and extract bobbin case.
- Push spring « Z » sideways with thumb of right hand (Fig. 22).
- Turn race plate « T » around its hinge.
- Extract shuttle « R ».

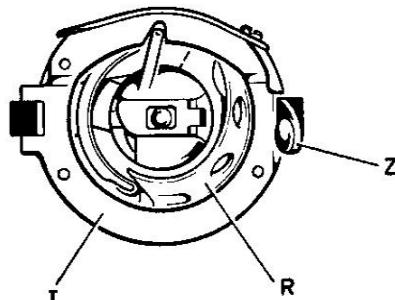


Fig. 22

- Carefully clean with a small brush and put a drop of oil in the shuttle race. Also oil the rim of the shuttle.
- Replace shuttle.
- Fit race plate onto the two short studs on the shuttle race and press it until spring blocks it in its housing.
- Replace bobbin case and lower machine to working position.

d) To replace light bulb

- Remove the screw « V » and also the front plate;
- Push bulb « L » (Fig. 23) upwards, turn it toward the left and pull it downwards;
- Insert the new bulb in the lamp holder « P », push it upwards and turn it toward the right;
- Fasten the front plate by means of screw « V ».

Use only NECCHI bulbs.

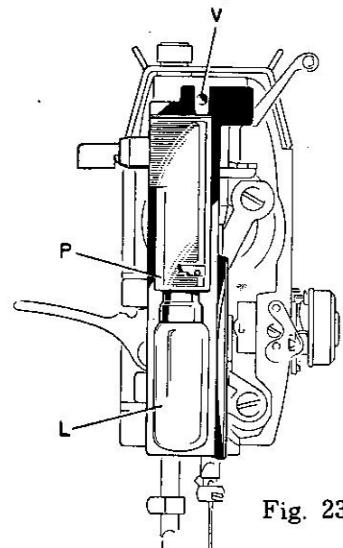


Fig. 23

e) To disassemble and reassemble upper thread tension

To disassemble tension:

- Place knob « A » (Fig. 24) on « 0 ».
- Pull it out so that hook « B » comes out of hole « C ».
- Turn it counterclockwise, unscrewing it from machine.
- Disassemble parts as in Fig. 25.

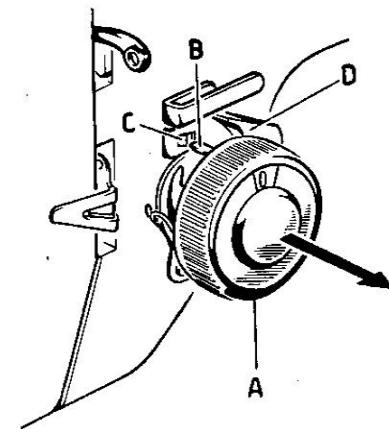


Fig. 24

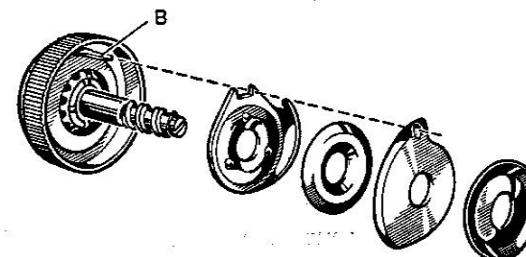


Fig. 25

Carefully clean all the surfaces of parts.

To reassemble tension:

- Assemble parts exactly as shown in Fig. 25 and in such a way that the « 0 » mark will be visible on knob.
- Screw the device onto the machine (press slightly and turn it counterclockwise; when a click is heard, turn it in the opposite direction).
- When small hook « B » comes into contact with chrome plated plate, draw it toward you and turn it again, bringing small hook into hole « C ».

17. CAUSES OF MINOR DIFFICULTIES

Needle thread breaks

- Needle is inserted incorrectly
- Upper tension is too strong
- Machine is improperly threaded
- Thread is not suitable for fabric
- Thread has knots
- Needle eye is rough or sharp
- Needle point is damaged, bent or blunt
- Needle plate hole is damaged
- Machine is started at full speed
- Sewing is started with thread take-up lever not in its highest position
- Bobbin case is damaged, due to being hit by needle
- Shuttle race is damaged

Needle breaks

- Fabric is pulled by hand in such a manner that needle hits needle plate
- Needle is bent or blunt.

Lower thread breaks

- Lower thread tension is too tight
- Bobbin is not evenly filled
- Bobbin is too full and does not rotate into bobbin case
- Dirt or lint in bobbin case.

Skip stitches

- Needle is inserted incorrectly
- Needle is bent or blunt
- Thread is too heavy for the size of needle
- Needle is of wrong size for thread in use.

Uneven stitches

- Presser foot does not rest fully on fabric
- Pressure of presser foot is insufficient

In case you cannot adjust the trouble, call for a mechanic at your local NEC-CHI Dealer.

ficient

- Feed dog is set too low
- Fabric is pulled by hand
- Stitch is too short
- Needle is too fine for thread in use.

Machine does not sew straight stitch

- The discs have not been removed.
- Lever « B » (Fig. 1) is not on the left.

Heavy turning or jamming of machine

- A loose piece of thread has been caught in shuttle race
- Motor belt is too tight (adjust it by loosening the motor fastening screws).
- Machine is not lubricated
- Needle has blunt point.

Light does not go on

- Line has no current (check fuses and master switch)
- Plug is not well inserted in its receptacle
- Filament of bulb is broken.

Motor turns too slowly

- A piece of thread is caught in shuttle race
- Motor belt is too tight
- Machine is not lubricated

Overheating of motor, foot-control and/or bed plate

All electrical appliances heat up when running without causing damage. Excessive heating can only be due to overloading or heavy turning of machine. It can be eliminated by running machine more easily.

Chapter 2

SEWING WITHOUT AUTOMATIC MECHANISM

NOTE: To execute the sewing works described in this chapter, it is necessary to remove cams from LELIA 514 and LELIA 515.

18. STRAIGHT SEWING

Zigzag stitch lever « B » (Fig. 1): on the left.

Stitch length knob « C »: set for desired stitch length. Normal length is on no. 2.

19. BASTING

Proceed as for normal sewing, but set knob « C » (Fig. 1) for the maximum stitch length and loosen upper thread tension « T » (Fig. 9). This makes it possible to effect long and loose stitches which can be easily unraveled.

20. ZIGZAG SEWING

Presser foot: use hinged foot for zigzag stitch or transparent foot for embroidery.

Needle position lever: set it according to the desired position of the sewing line (left, centre, right).

Zigzag width lever « B »: set for desired zigzag width.

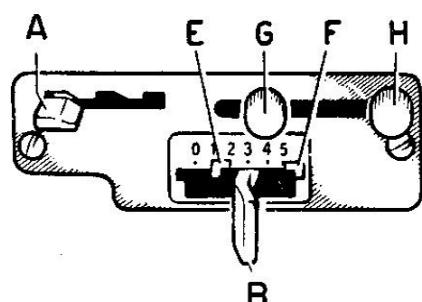


Fig. 26

21. ZIGZAG EMBROIDERY

NOTE: the small plates « E » and « F » which make it possible to limit the displacement of the zigzag width lever, can be shifted by loosening and shifting the two buttons « G » and « H ».

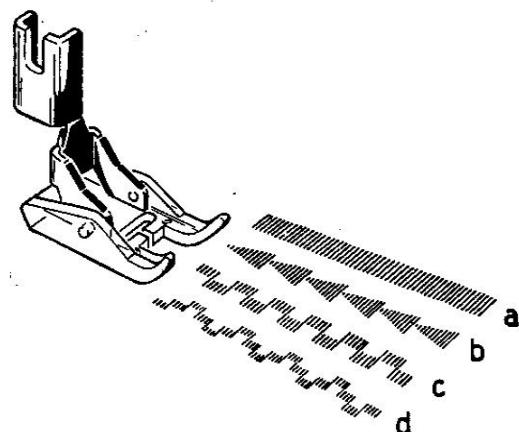


Fig. 27

Fig. 27 shows a few motifs of zigzag embroidering, but you can vary them at will.

Set machine as follows:

Presser foot: transparent foot for embroidery.

Tensions: upper tension rather loose and lower rather tight. The upper thread must be visible on the lower side of fabric.

Stitch length knob « C » (Fig. 1): near the red square mark so that the fabric is fed just enough to keep stitches close but not piled up.

Use embroidery thread no. 50.

The length of the designs b, c, d, naturally depends on the speed at which the levers are operated.

a) (SATIN STITCH)

Lever « B »: (Fig. 26) set for desired zigzag width.

b)

Lever « A »: in centre notch.

Slowly move lever « B » from 1 to 5 and flip it back quickly to 1.

c)

Lever « B »: on 2.5. Small plate « E » on 2.5.

Press down lever « A » and move it from left to right and vice versa without stopping in the centre notch.

d)

Lever « B »: on 1.5. Small plate « E » on 1.5.

Move lever « A » rapidly from left notch to centre notch, then to right notch and vice versa.

22. CIRCULAR SEWING

— Insert small rubber stopper « B » (Fig. 28) in one of the holes « H » of slide plate « A ».

— Fix centre of fabric on rubber stopper « B » by means of pin « C ».

— Keep a finger on pin so that the fabric revolving around the centre point of design does not slip or become detached.

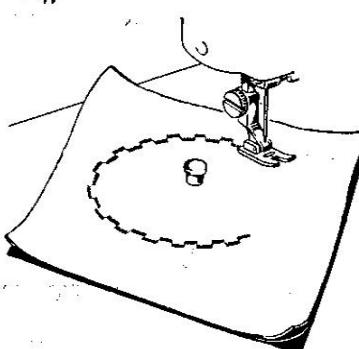


Fig. 28

By moving slide plate « A », circles of various sizes can be obtained.

Circular sewing should be done only with material possessing a certain consistency. With lighter materials, use an embroidery hoop or place a piece of tissue paper under fabric.

23. TWIN NEEDLE

The twin needle makes it possible to sew with two threads of the same colour or of different colours.

The twin needle is to be inserted in the same manner as the normal one (Fig. 29) with the flat side of its shank towards the right.

Presser foot: for twin needle.

Needle plate: for twin needle.

Lower thread: it must pass by the hole of bobbin case as indicated in fig. 30. Its tension should be rather loose.

Thread must pass by points indicated in fig. 29.

Fig. 31 a, b, c, shows some of the decorative stitches which can be made with the twin needle.

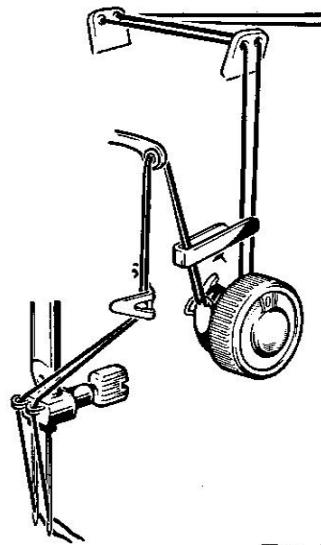


Fig. 29

Fig. 30

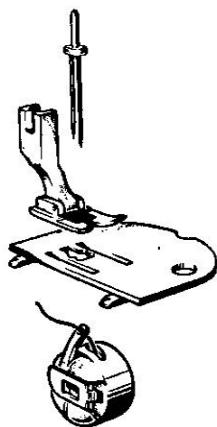


Fig. 31



a)

Lever « A » (Fig. 1): in centre notch.

Lever « B »: on 5.

Knob « C »: on 3.

b)

Lever « B » (Fig. 1): on 2.5.

Knob « C »: on red square mark.

Press down lever « A » and move it from left to right and vice versa without stopping in the centre notch.

c)

Lever « B » (Fig. 1): on 1.

Knob « C »: on red square mark.

Move lever « A » slowly from left to right and vice versa.

24. ADJUSTABLE STITCHING GUIDE

This guide makes it possible to keep the stitches at a uniform distance from the edge of fabric. It is fitted on machine at the desired distance from needle (see fig. 32).

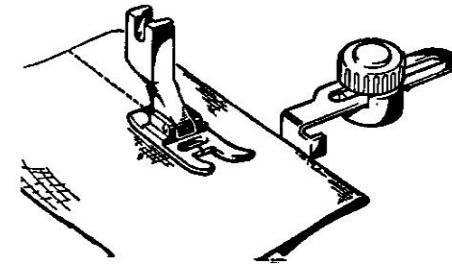


Fig. 32

25. QUILTING

Lever « B » (Fig. 1): on the left.
Knob « C »: set for desired stitch length.

Upper tension: normal.

Presser foot: use zigzag stitch hinged foot and attach it to machine together with adjustable quilting guide (Fig. 33, special accessory upon request and against payment).

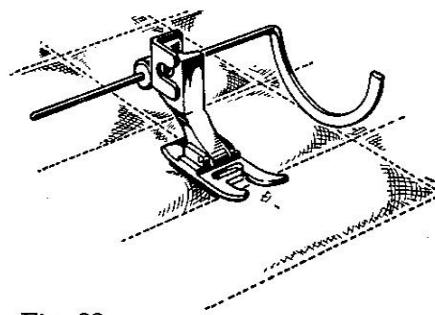


Fig. 33

Regulate position of quilting guide in accordance with the desired distance between two parallel lines of stitches.

Sew first left line, then move fabric towards the right so that guide bar is directly over first line.

26. RAISED STITCH APPLIQUE

Lever « A » (Fig. 1): in centre notch.

Lever « B »: according to thickness of cord being used.

Knob « C »: on red square mark.

Upper tension: rather loose.

Presser foot: zigzag stitch cording foot (Fig. 34, special accessory upon request and against payment).

Insert cord into the hole of cording foot; then guide it from front to back underneath presser foot. Commence sewing and follow the design carefully.

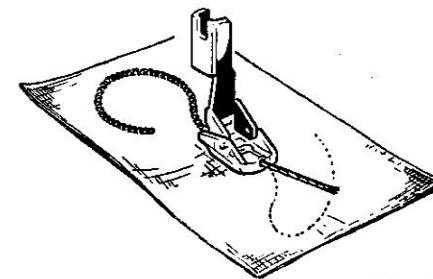


Fig. 34

27. HEMMING

- Fold over edge of fabric about $1/8"$ and insert the fold from beneath into the scroll of presser foot.
- Move fabric back and forth until hem forms itself into the scroll.
- Lower presser foot and commence sewing, guiding fabric by hand in order to help its introduction in the scroll.

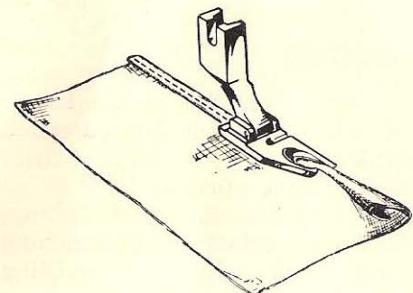
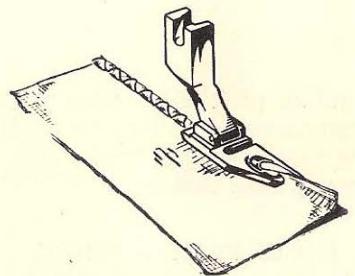


Fig. 35

a) STRAIGHT STITCH HEM (Fig. 35)

Lever « A » (Fig. 1): in centre notch.
Lever « B »: on the left.
Knob « C »: between 3 and 4.
Upper tension: normal.
Presser foot: straight stitch hemming foot.



b) NARROW ROLLED EDGES
(Fig. 36)

Lever « A » (Fig. 1): in centre notch.
Lever « B »: between 2 and 3.
Knob « C »: between 1 and 2.
Upper tension: normal.
Presser foot: zigzag hemming foot.
(special accessory upon request and against payment).

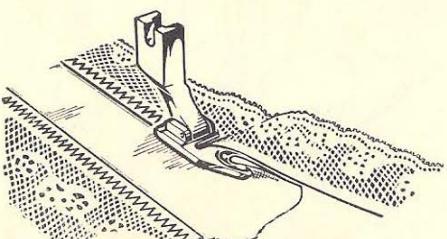


Fig. 37

c) HEMMING AND SEWING ON LACES (Fig. 37)

Set machine as for narrow rolled edges.
After having made the first stitches, raise hemming foot and insert end of lace into scroll of hemming foot. Needle must always stitch both through lace and hem.

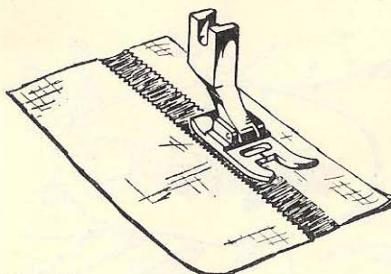


Fig. 38

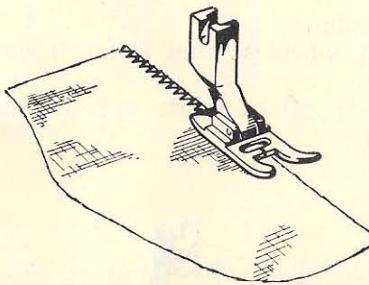


Fig. 39

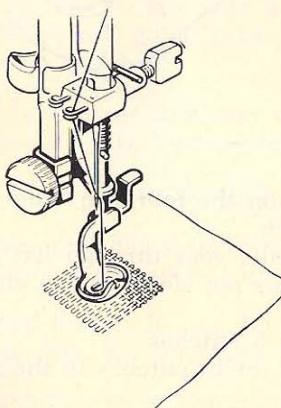


Fig. 40

First, move fabric from right to left and vice versa, then backward and forward until the hole is fully darned.

28. HEMSTITCHING WITH DRAWN THREADS

Lever « A » (Fig. 1): in centre notch.
Lever « B »: between 1 and 2.
Knob « C »: between 1 and 2.
Upper tension: normal.
Draw desired number of threads from the fabric to be hemstitched and commence sewing, making sure that the needle bites alternately close to the edge into the undrawn side of fabric and then into the space where the threads have been drawn (Fig. 38). After stitching on one side of the drawn space has been finished, repeat same procedure on the other side.

29. OVERCASTING

Lever « A » (Fig. 1): in centre notch.
Lever « B »: set for desired zig-zag width.
Knob « C »: set for desired stitch length.
Upper tension: normal.
Presser foot: use foot for zigzag sewing.
Needle must stitch into the fabric and out of its edge alternately (Fig. 39).

30. DARNING

Lever « A » (Fig. 1): in centre notch.
Lever « B »: on the left.
Upper tension: normal.
Feed dog: to be dropped (see para. 11).

Presser foot: darning foot (Fig. 40, special accessory upon request and against payment). The hole which is on the front of presser foot can be used to pass a reinforcement thread.

31. EMBROIDERY AND MONOGRAM WITH HOOP

For this type of work, use nylon or silk thread or mercerized embroidery thread.

Lever « A » (Fig. 1): in centre notch.

Lever « B » on the left.

Knob « C »: near « 0 ».

Upper tension: rather loose.

Feed dog: to be dropped (see para 11).

— Remove presser foot and clamp fabric in hoop.

— Slightly pulling upper thread, turn balance wheel so that lower thread is pulled up to upper surface of fabric.

— Move hoop slowly, but only when needle is out of fabric and holding both threads for the first stitches (Fig. 41).

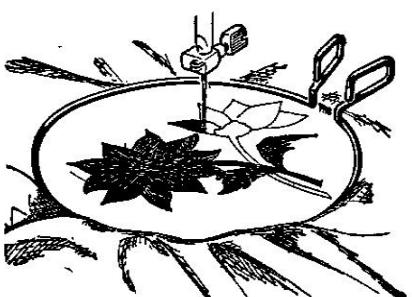


Fig. 41

32. SEWING ON BUTTONS

Lever « A » (Fig. 1): in left notch.

Lever « B »: between 4 and 5 according to distance between holes of button.

Presser foot: button sewing foot (Fig. 42).

Feed dog: to be dropped (see para. 11).

a) TWO-HOLE BUTTONS

— While lowering presser foot, place the button on the fabric in order that its holes are in proper position for zigzag stitch.

— Turn balance wheel slowly, checking that needle goes through left hole, then through right hole of button; if needle does not clear button, change the position of lever « B » (Fig. 1).

— Run machine at medium speed making about 5 stitches.

— Bring lever « B » to the left and make a few straight stitches in the same hole to tie up zig-zag stitches.

b) FOUR-HOLE BUTTONS

Proceed as for two-hole buttons.

After stitching between first two holes, raise button sewing foot slightly and line up remaining two holes with needle.

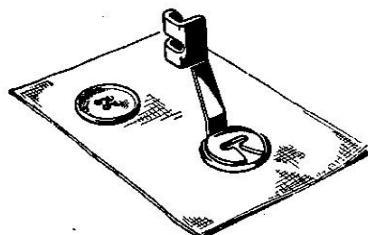


Fig. 42

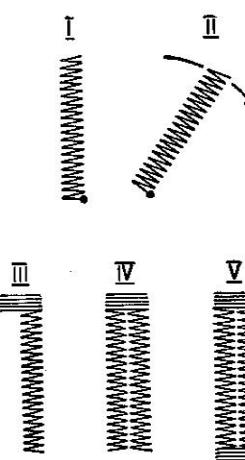


Fig. 43

33. HAND OPERATED BUTTONHOLES

a) RAISED BUTTONHOLES

Lever « A » (Fig. 1): in left notch.

Lever « B »: its movement must be limited between 1.5 and 3; (see note on bottom of para. 20).

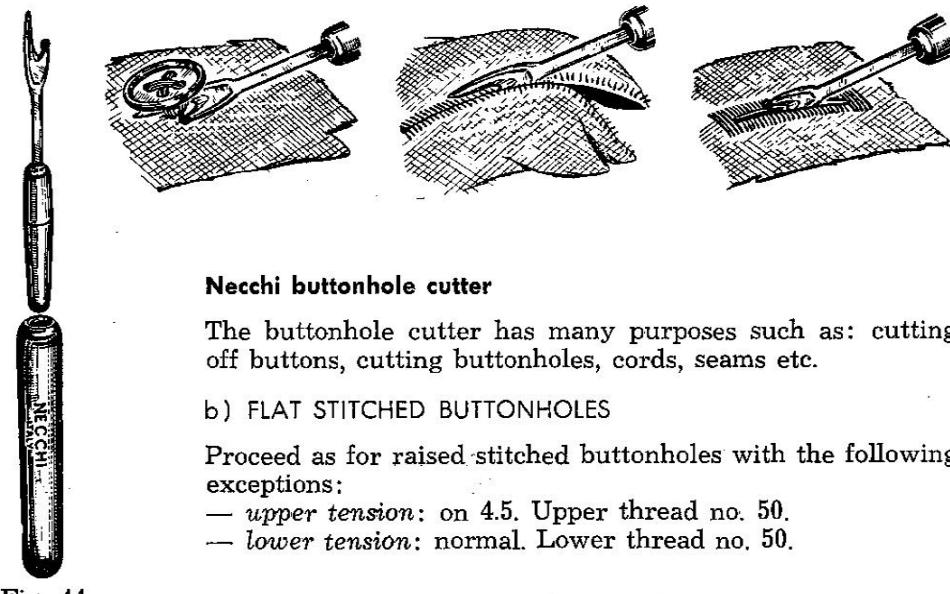
Knob « C »: on red square mark, check right position by trying out on a piece of fabric similar to that used to make button-hole.

Presser foot: transparent buttonhole foot provided with guide. Regulate position of guide according to desired length of button-hole.

Upper tension: rather tight; use mercerized cotton no. 40.

Lower tension: rather loose; use mercerized cotton no. 50.

- Bring lever « B » (Fig. 1) on 1.5 and make first row of stitches (Fig. 43, Operation I) going as far as to reach the limit marked by the guide. Leave needle in fabric.
- Raise presser foot and turn fabric half a turn around needle (Fig. 43, Operation II). Lower presser foot.
- Raise needle from fabric and bring lever « B » on 3.
- Make first bar tack with 3 or 4 stitches (Fig. 43, Operation III) and stop sewing with needle out of fabric.
- Bring lever « B » on 1.5 and make second row of stitches as long as the first (Fig. 43, Operation IV). Stop sewing with needle out of the fabric.
- Bring lever « B » on 3 and make second bar tack (Fig. 43, Operation V).
- Remove work and knot threads on the under surface of fabric.
- Cut fabric between the two rows of stitches with NECCHI buttonhole cutter (Fig. 44).



Necchi buttonhole cutter

The buttonhole cutter has many purposes such as: cutting off buttons, cutting buttonholes, cords, seams etc.

b) FLAT STITCHED BUTTONHOLES

Proceed as for raised stitched buttonholes with the following exceptions:

- **upper tension:** on 4.5. Upper thread no. 50.
- **lower tension:** normal. Lower thread no. 50.

Fig. 44

**34. SEMI AUTOMATIC BUTTONHOLES
(only for LELIA 513 and LELIA 515)**

Machine Setting :

Insert regulating knob for execution of buttonholes as illustrated by Fig. 45. Place mark « O » in line with mark « D ». (The knob can be inserted and removed only in this position).

Presser foot: Use the transparent button-hole foot provided with the guide which is included in the accessory box.

Needle position lever: In left notch.

Zigzag stitch lever: Extreme left.

Stitch length knob: At the red mark; check right position by trying out on a piece of fabric similar to that used to make buttonhole.

Needle: for light fabrics: n. 70; for heavy fabrics n. 90.

Upper thread: mercerized cotton n. 40 or 50.

Lower thread: mercerized cotton n. 40 or 50.

Upper tension: at the red dot (normal setting).

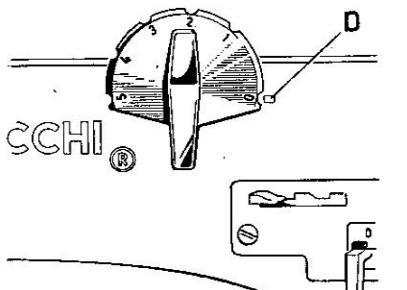


Fig. 45

Procedure :

- a) Mark the length of buttonhole desired directly on garment. Place the fabric under the presser foot and adjust the graduating guide according to the desired length of the buttonhole. Measure distance from the needle to the guide to get correct length for buttonhole.
- b) With the needle at its highest position, turn buttonhole knob to the right so that mark « 1 » is brought into line with mark « D ».
- c) Make the upper bar tack with 3 or 4 stitches (Fig. 46 - 1) and stop with the needle off the fabric.
- d) Turn buttonhole knob until mark « 2 » is brought into line with mark « D » and make the left row of stitches (Fig. 46 - 2) until the upper bar tack reaches the limit marked by the guide. Stop with the needle off the fabric.

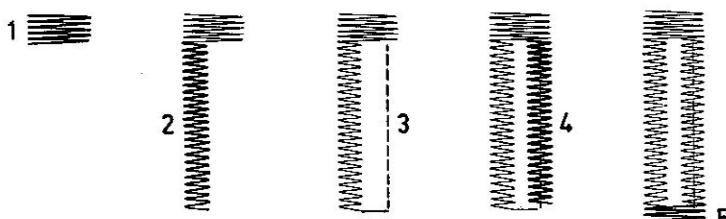


Fig. 46

- e) Turn buttonhole knob until mark « 3 » is brought into line with mark « D ». The machine will sew straight stitches in the reverse direction (Fig. 46 - 3).
 - f) When the needle arrives at the upper bar tack, turn buttonhole knob until mark « 4 » is brought into line with mark « D » and make the right row of stitches (Fig. 46 - 4) until the upper bar tack reaches the limit marked by the guide. Stop with the needle off the fabric.
 - g) Turn buttonhole knob until mark « 5 » is brought into line with mark « D », make the lower bar tack with 3 or 4 stitches: the buttonhole is then completed (Fig. 46 - 5).
 - h) Raise the presser foot, cut the two threads leaving 2-2½ inches and remove the fabric. Pull the lower thread and with the aid of an ordinary needle draw the upper thread through the fabric in order that both ends are on its wrong side. Then knot the two threads together.
 - i) Finally cut the fabric between the two rows of stitches with the special NECCHI buttonhole cutter (Fig. 44).
- NOTE:** After some practice all the operations described above can be made continuously without having to stop the machine each time to raise the needle from the fabric and turn the buttonhole knob.

35. BLINDSTITCHING

Blindstitching makes it possible to sew hems almost invisibly by machine. Prepare the machine. The hinged zigzag presser foot should be in place. Loosen the presser foot screw and place the upright clamp of the black guide over the shank of the presser foot and then tighten the screw with a screw driver.

Place needle position lever in center notch. Set zigzag lever on 2 for average fabrics. On 3 for heavy fabrics. Stitch length should be at 4. Tension normal.

Procedure:

Fold over the edge of the part to be hemmed $\frac{1}{4}$ " to wrong side, and make a second fold the desired width of the hem. Pin fold to hold. Place the garment or skirt wrong side up and turn hem back under so that the right side of the hem lays against the right side of the skirt, Fig. 48.

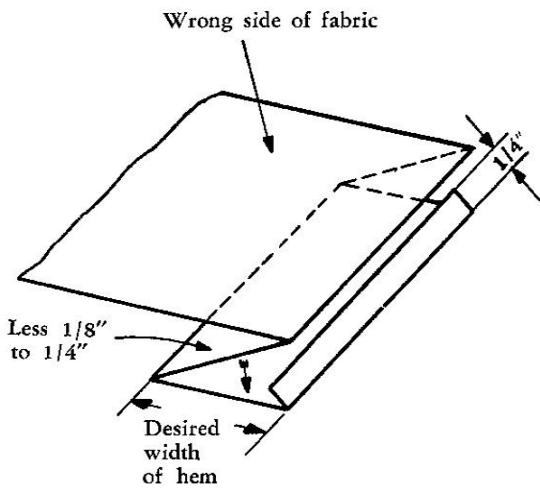


Fig. 48

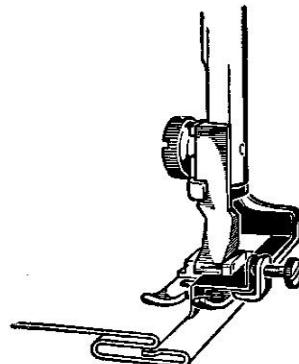


Fig. 47

Lift the presser foot and place the fabric under the needle in such a manner that the exposed edge faces upwards, and is at the right of the needle. The fold of the skirt at the left side of the needle should slide along the guide and on top of the tiny lip of the guide. Adjust the position of the guide with the small regulating screw, Fig. 47. As you sew, the zigzag stitches will form on the one-eighth inch fold and the left point of each stitch will catch into the skirt fold. Sew slowly and keep the fold against the guide as you sew. When the hem is finished, press on the wrong side. Tiny vertical stitches will scarcely be visible on the right side.

Chapter 3

AUTOMATIC SEWING

MECHANISM (for LELIA 514 and LELIA 515)

36. AUTOMATIC SEWING

With the aid of the Automatic Sewing Mechanism it is possible to perform automatically a very large variety of decorative stitches and embroidery designs. This is done by means of specially shaped discs (cams), which are inserted in the machine.

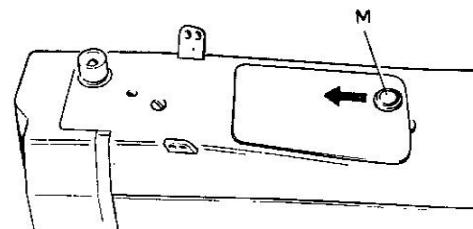


Fig. 49

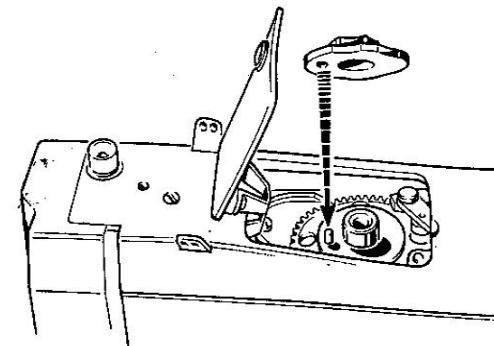


Fig. 50

37. HOW TO INSERT CAM IN MACHINE

Proceed as follows:

- Move button « M » (Fig. 49) toward the left, that is in the direction of the arrow.
 - Lift up the lid.
 - Insert desired cam onto the rotary shaft so that the mark pivot slips into the corresponding hole of the cam (Fig. 50).
- For this operation, it is necessary to set lever « A » (Fig. 1) in right notch.
- Lower the lid and move button « M » to the right.

38. TO REMOVE CAM

- Move button « M » (fig. 49) toward the left.
- Lift up the lid.
- Move lever « A » (Fig. 1) toward the right and remove cam.

By changing the needle position « A », or the zigzag lever « B », or the stitch length « C » it is possible to make four different designs from each of the twelve cams.

9661400				9661410			
A	•	•	•	•	•	•	•
B	0	0	0	1	0	0	0
C	■	0,5	■	■	■	0,5	■

9661440				9661980			
A	•	•	•	•	•	•	•
B	0	0	1	0	0	1	1
C	■	0,5	■	■	■	■	■

9661420				9661430			
A	•	•	•	•	•	•	•
B	1	2	0	1	0	1	1
C	■	■	■	■	■	■	0,5

9661990				9662020			
A	•	•	•	•	•	•	•
B	0	0	1	1	0	0	2
C	■	0,5	■	■	■	0,5	■

See Fig. 1

9662060				9662070				
A	0	0	1	1	0	1	2	3
B	0,5	1,5	0,5	1,5	1,5	1,5	1,5	1,5
A								

9662080				9662100				
A	0	1	2	0	0	1	3	0
B	0,5	■	■	■	1,5	1,5	1,5	1,5
A								

See Fig. 1

39. SMOCK STICH

For this type of work, use light materials like satin.
Set machine as for sewing with twin needle.

- Cam: No. 9962070.
- Lever « A »: in left notch.
- Lever « B »: on the left.
- Knob « C »: about on 0.5.
- Thread: use embroidery thread no. 50.

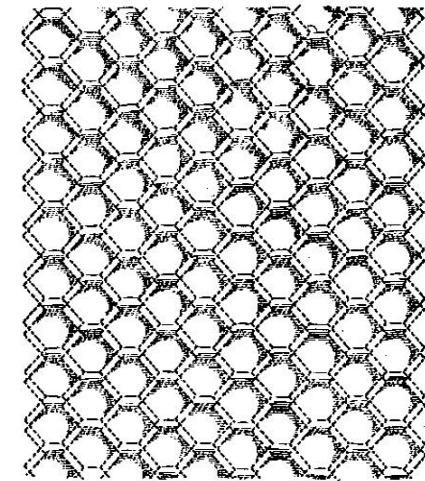


Fig. 51

Sew parallel lines of stitches so that the point of every line is always in correspondence with the point of the preceding one (Fig. 51). Possibly modify direction of sewing, guiding the fabric by hand.