INSTRUCTION BOOK

for
ELNA Supermatic
with free arm and with carrying case

and
ELNA Plana Supermatic
to be used with a cabinet or a wooden base

Useful Hints

Preparing the Elna

Opening the Case and Unpacking

Loosen the 4 screws (fig. 3) which are in the bottom of the case so that the machine may be removed from the case.

Open the flap as shown in fig. 4.

Remove the free side of the case as shown in fig. 5.

Take out the machine, the cord, the knee lever or foot control and the accessory box.

Placing the Work-Table

The free side of the case can be used as work-table. Place it as shown in fig. 6.

Closing the Case

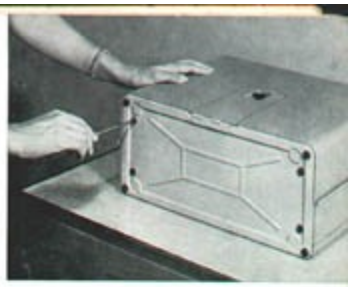
To put the machine away, proceed exactly in the opposite sense, holding the fixed part of the case with the left hand at the top. Then, with the right hand, put the free side in place, holding it in the opening for the free arm.

These instructions do not concern flat bed machines, which are not supplied with a carrying case.

Normal Accessories

The accessory box contains:

1 presser foot (already on machine)
1 hemmer foot no. 4 (5/32")
1 darning foot
1 darning plate
1 cording foot
1 buttonhole foot
1 button foot
1 button plate
1 buttonhole knife
5 bobbins
1 assortment of 10 needles
3 twin needles
6 single « Elna-discs »
4 double « Elna-discs » The « Elna-disc » 03 is already in the Elnagraph regulating device
1 large screwdriver
1 small screwdriver
1 cleaning brush
1 empty oil can (to be filled with Elna oil)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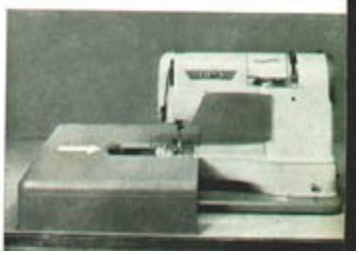
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Electrical Equipment and Speed Control

Voltage

Check voltage indicated on switch plate (fig. 7). Make sure that this **voltage** (Volts) is the same as that indicated on the **electric meter** or on the **light bulbs.**

If these indications should not correspond do not connect the machine but notify your ELNA Service. (Markings on the plugs are irrelevant fig. 7.)

7

Knee Control Lever and Electric Cord

Insert the knee control lever in the bayonet catch and connect the electric cord (fig. 7).


8

Foot Control Pedal

On machines supplied with a foot control, connect the pedal cord (fig. 8).

Starting the Machine

The more you press against the knee control lever with your right knee, or the more you press the foot control pedal down with your foot, the faster the machine will run.


9

Sewing Light

Never touch the bulb as long as the current is connected. Pull the plug out first.

To replace the bulb, proceed as shown in fig. 9-10. Bayonet socket: push in, turn and remove it.

10

Maintenance and Cleaning

The ELNA will always serve you faithfully, if it is cared for properly.

Remove needle and foot and open the parts of the machine illustrated in fig. 11-12.

To clean out lint and to remove pieces of thread, brush the feed dog and the rotary hook with the cleaning brush (fig. 12). Best results are obtained by moistening the brush with kerosene.

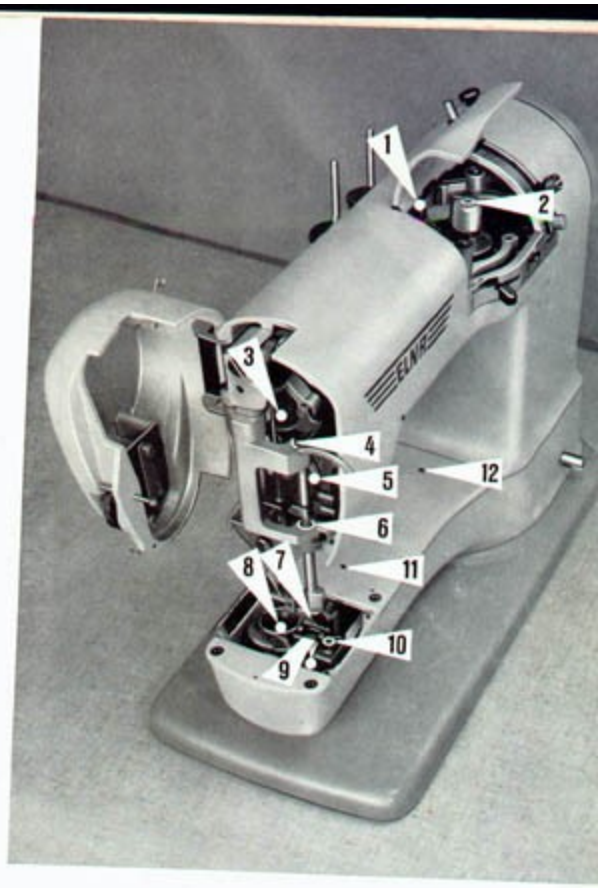
Clean head of machine and Einagraph in a similar manner (fig. 11).

Lubrication

After the machine has been cleaned and **before** it is used, it should be oiled as follows: **One** drop of ELNA oil for each oil hole.

All oil holes are painted red.

In order to oil **point 12, raise** the thread take-up lever.



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In case of extended, uninterrupted use, the rotary hook should be oiled from time to time.

12 Removing the needle plate

13 Insertion of the needle plate

Changing the Presser Feet

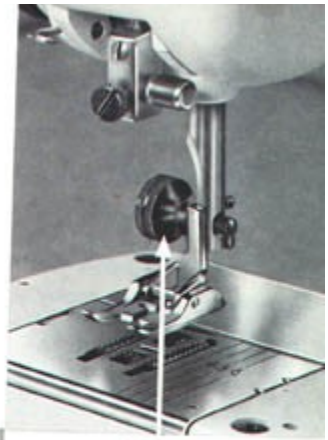
Raise needle bar and presser bar.

The feet are fastened from the front (fig. 14). Tighten the thumb screw with screw driver (fig. 14).

Exception for darning foot:

The darning foot is fastened **from the rear.**

The lever of the darning foot must be placed **on top** of the stud on the needle clamp (fig. 15).



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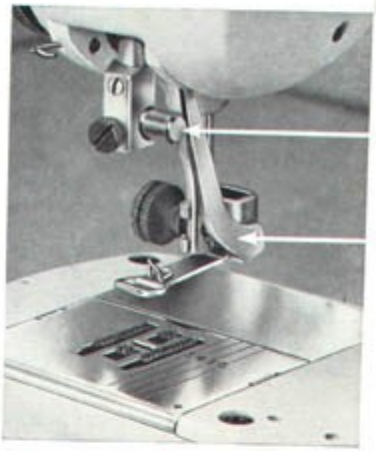

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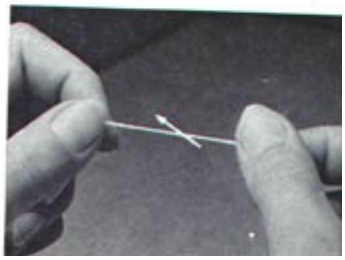
Threads

Do not use glossy threads.
The use of dull thread or mercerized thread is preferable.

For darning, use left twist thread (fig. 16).

When thread is too dry, it becomes brittle; it regains its strength when placed near an open window overnight.



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Needle

Choose threads which are suited to the kind of work to be done and then adapt the needle to the thread.

Needles style 15 x 1 (system 705) Sizes			Thread		Thread local grades	
New	Old	American	Cotton	Silk	Cotton	Silk
60	7- 8	00	140-150	30		
70	9-10	0	100-120	24-30		
80	11-12	B	80-100	24-30		
90	13-14	½	60-80	20		
100	15-16	1	40-60	16-18		
110	17-18	2	30-50	10-12		

17

Needle system used on the ELNA:
15 x 1 (European system 705).

Insert the needle into the needle clamp, the **flat of the needle toward the rear** (fig. 17). Make sure that the needle is pushed up into the clamp as far as it will go, then tighten the screw with the large screw driver. The twin needles are fastened in the same manner.

18

Bobbin Winding

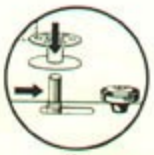
a) Disengage flywheel (fig. 18).

b) Pass thread through thread guide and through one of the bobbin holes (fig. 19). Push the bobbin winder to the right. See detail drawing, showing passage of thread through bobbin hole (fig. 19 a). To make sure that the bobbin will wind and unwind correctly, place always the bobbin with **the holes on top.**

c) Wind a few turns of thread on the bobbin, then cut off the end of thread close to the bobbin.

d) Wind the bobbin while pressing lightly upon the top of the spool with the left hand. The bobbin will stop automatically when it is full.

e) Tighten the flywheel (turn knob in opposite direction: fig. 18). Cut thread and remove bobbin by pushing bobbin winder to the left.



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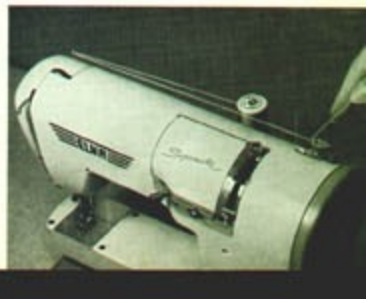

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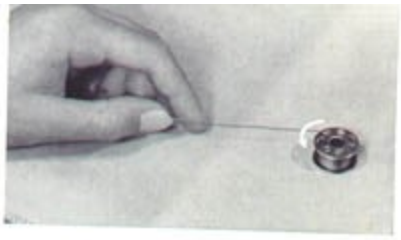

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f) Check whether bobbin unwinds in the direction of the arrow (fig. 20) when the thread is pulled.

21

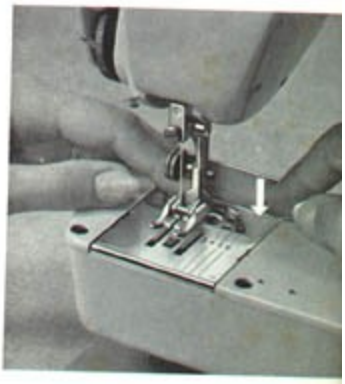
Inserting the Bobbin

a) Drop the bobbin, **holes on top,** into the shuttle ring with the thread unwinding in the direction of the arrow (fig. 21). Press lightly upon the bobbin with the left index finger. With the right hand insert thread into the slot (fig. 21), draw it to the right and press it down (see arrow fig. 22). The thread should then pass under the tension spring with a snap.

b) Check whether the thread is properly inserted by pulling it to the rear. A slight tension should be felt.

c) Pull out about 6 inches of thread.

22a



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Threading the Upper Thread

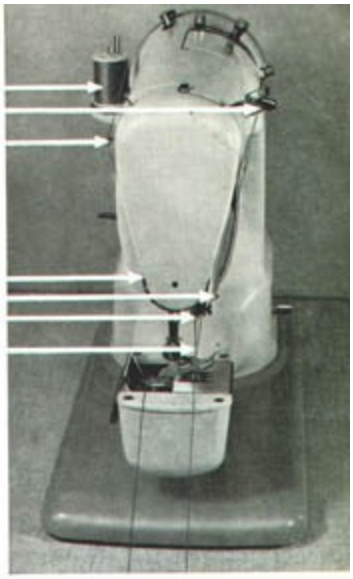
a) Needle bar and presser bar **up** (fig. 23).

b) Place the spool on pin.

c) Pass the thread through the thread guide, then through the slot of the upper tension. Pass it through the thread take-up lever from left to right, then through the thread guides.

d) Thread the needle **from front to back.**

e) Pull out about 6 inches of thread (fig. 24).



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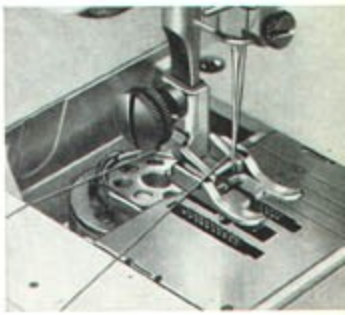
The same procedure is used when threading two threads for twin needle work (fig. 26).

Place the right spool — nearest the bobbin winder — so that the unwinding thread will pass between the spool and the casing. Place the left one so that it will turn in the opposite direction. Make sure that one thread will also pass on either side of the separating disc of the upper tension (fig. 25) and through each eye of the twin needle (fig. 26).



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26

Drawing up the Lower Thread

a) Hold the upper thread with the left hand, without pulling it.

b) Lower and then raise the thread take-up lever by turning the flywheel.

c) Draw up lower thread by pulling upper thread (fig. 27) and separate the two threads by hand.

d) Make sure that the lower thread crosses the bobbin correctly (fig. 28).

e) Close the shuttle cover and pull both threads about 6 inches toward the rear and under the presser foot (fig. 29).

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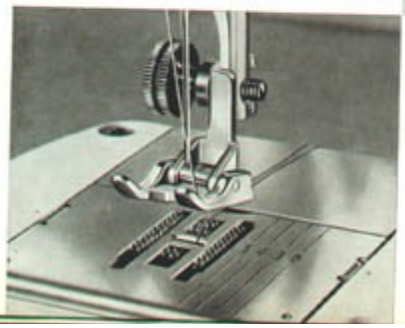

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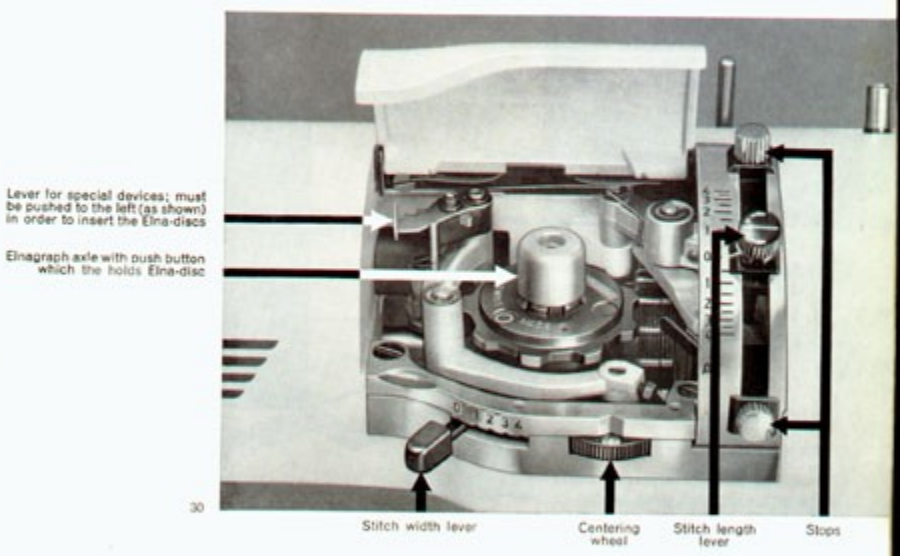
Elnagraph

The Elnagraph is the automatic control of the machine; it consists of



Normal Straight-Stitch Adjustments

Place the material under the presser foot, then proceed as follows:

31

32

Adjusting the Pressure of the Foot

a) Lower the presser bar.

b) The normal pressure adjusted at the factory ensures proper feeding of most materials.

c) Pressure is increased by turning the dial toward "+": mainly used for thick materials (fig. 31).

d) Pressure is decreased by turning the dial toward "—": mainly used for sheer fabrics (fig. 31).

33

Stitch Length

For an even

forward stitch, push the stitch length lever (fig. 32) **up** to the desired stitch length between 0 and 4, leaving the stitch width lever at 0 and the centering wheel at its center position.

For an even

reverse stitch, push the stitch length lever (fig. 33) **down** to the desired stitch length between 0 and 4. The other adjustments do not change.

The two adjustable stops (fig. 34) are used to set a particular stitch length. To place them, set the stitch length lever at the desired position, unscrew the stop and slide it up against the lever and then retighten it.

34

Universal Tension

With the universal tension, most of the usual sewing jobs can be done **without changing the tensions,** i.e.:

Upper tension: White mark (fig. 35) facing black mark.

Lower tension: Red number 1 (fig. 36) facing tip of tension lever.

For certain special jobs the lower tension can be adjusted by turning the graduated screw (fig. 36) with the small screw driver.

As a rule, tension adjustments are made by turning the upper tension disc (see chart on page 32).

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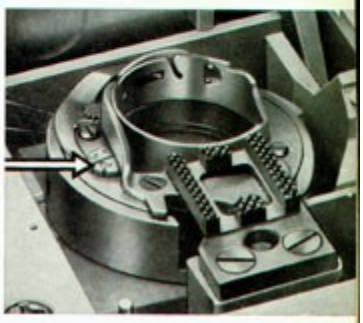

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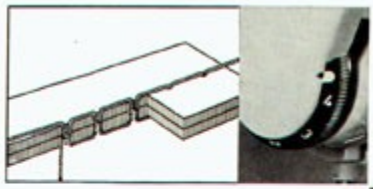
Perfect tension: The threads are locked between the two layers of cloth (fig. 37).



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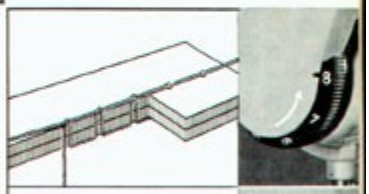
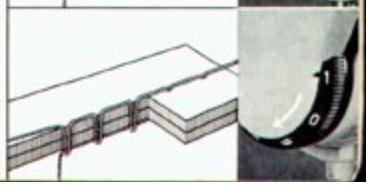
Upper tension too strong: The threads are locked on top of the material (fig. 38). Decrease tension by turning disc in the direction of the arrow.



38

Upper tension too weak: The threads are locked on the **underside** of the material (fig. 39). Increase tension by turning disc in the direction of the arrow.



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Automatic Stitch Adjustments

The Elnagraph and the interchangeable « Elna-discs » enable you to sew automatically.

Single « Elna-discs »

Double « Elna-discs »

Besides the « Elna-discs » supplied with the machine a great number of other « Elna-discs » can be purchased separately (see page 28).

Changing and inserting the « Elna-Discs »

a) Stitch length lever and stitch width lever at 0 (fig. 40).

b) Remove disc from Elnagraph (fig. 40-41).

c) Insert new disc in Elnagraph (fig. 42-43) ; the small white circle (fig. 42) must be placed over the driving pin.

40

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43

Sewing with Elna-Discs

Single « Elna-Discs »

a) Stitch length lever at desired stitch length (fig. 44).

b) Stitch width lever at position 1, 2, 3 or 4 (fig. 44).

c) Centering wheel at center position (fig. 44).

Example:

WIDTH	0	1	2	3	4
DISC 03					

44

Double « Elna-Discs »

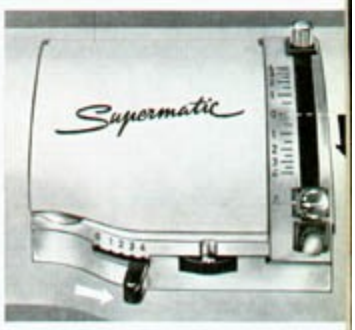
a) Stitch length lever at A (fig. 45).

b) Stitch width lever at position 1, 2, 3 or 4 (fig. 45).

c) Centering wheel at center position (fig. 45).

Example:

WIDTH	0	1	2	3	4
DISC 107					



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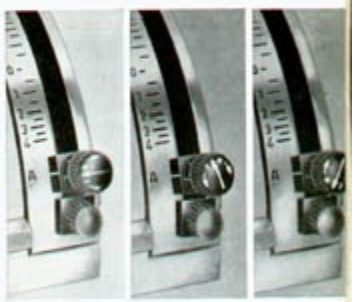
Stitch Tuner

Most automatic stitches made with double « Elna-discs » can be sewn with the arrow on the knob of the stitch length lever in its normal horizontal position (fig. 46). Only for very intricate stitches, it may be desirable to lengthen or shorten the design, in order to adapt it better to the material and thread used.

To lengthen the design, turn the knob toward "+" (fig. 47); to shorten the design, turn it toward "—" (fig. 48).

To remove the stitch length lever from position A, push the knob in and move the lever upward.

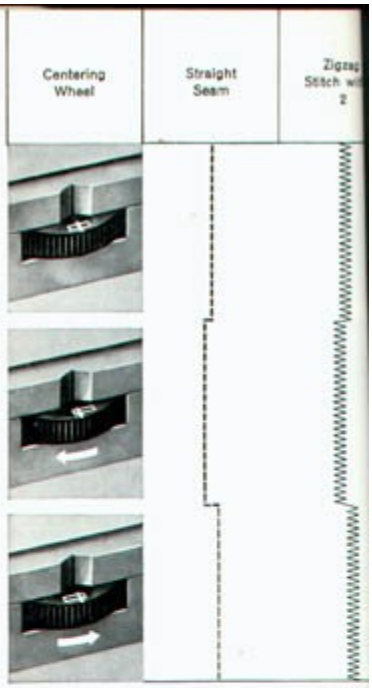

46 47 48

Straight Stitch with an « Elna-Disc » in the Elnagraph

By setting the stitch length lever at the desired length and the stitch width lever at 0 (fig. 32) a straight stitch can be sewn with or without an « Elna-disc » in the Elnagraph.

Centering the Needle

For certain kinds of work such as sewing zip fasteners, bindings, etc. (straight stitch), and buttons, buttonholes, etc. (zigzag), a straight or automatic stitch can be displaced from the center as follows:



49 a

Towards the left — turn centering wheel to the left (fig. 49 b).

Towards the right — turn centering wheel to the right (fig. 49 c).

Or to any position between left and right.

49 b

49 c

To Remove the Material

a) Turn flywheel by hand until the thread take-up lever is in its highest position.

b) Raise the presser bar.

c) Remove the material toward the back and cut the threads (fig. 50).

50

Important:

Always turn the flywheel toward you. Do not run the threaded machine, unless a piece of material is under the presser foot.

Practical Sewing

For preparations and adjustments of the ELNA, see chart on page 32.


51

Normal Sewing

Use ordinary presser foot (fig. 51).

The stitch length must be set in accordance with the kind of work and the thickness of the material used, i.e. short stitches for fine material, long stitches for heavy material.

Darning

a) Attach darning plate and darning foot (fig. 52).

b) Stretch the material tightly and place fingers as close to the darning foot as possible (fig. 53).

c) To darn a hole, sew a screen of long stitches across it from left to right and vice versa, in closely spaced parallel rows (fig. 54).

d) Finish the darn by sewing parallel serpentines forward and reverse. The darn will be softer, more flexible, if the details of fig. 56 are followed accurately.

To reinforce worn-out spots, also sew in serpentines; it is, however, not necessary to sew a screen first.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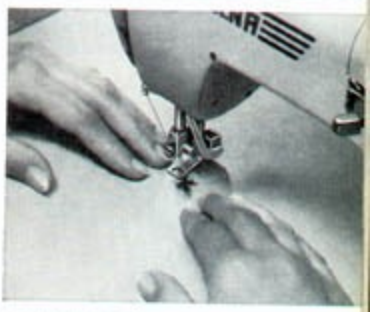
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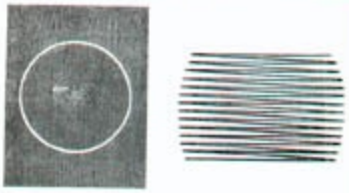
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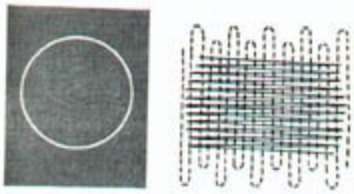
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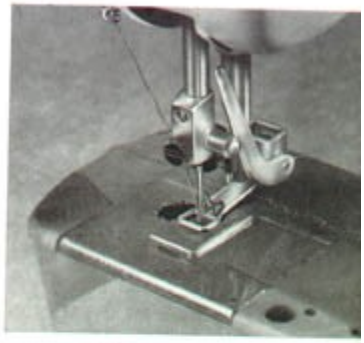
56

57

e) **Worn-out Edges:** Proceed in the usual manner but, when you reach the edge of the material, turn back rapidly to avoid the formation of knots (fig. 57).

f) **Hosiery:** First sew a row of tiny stitches around the hole in order to fasten the meshes (fig. 58). Continue in the usual manner.



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g) **Knitted Woolen Materials:** Attach the button plate. Sew around the hole in order to fasten the meshes. Then use the Elna-Disc 03 (zigzag stitch), stitch width 4.

Pass the woolen yarn through the wool guide. Cover the hole with wool by sewing from right to left and vice versa, and from front to back (fig. 59).

59

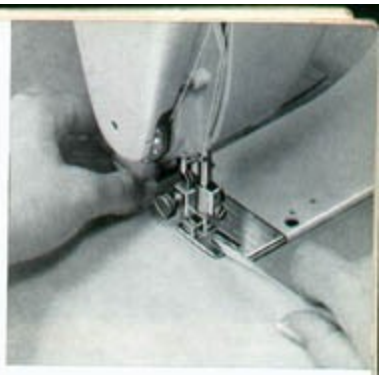
Cut the yarn and fasten it in the usual manner, but with the zigzag stitch (fig. 60).

60

Use a darning hoop to darn socks and stockings on the ELNA Plana Supermatic.

Hemming

To prepare the hem, fold over the edge of the material about 1/8", then fold it again about 5/32". Hold the material (fig. 61) at the fold with both hands, stretch it and introduce the fold into the scroll of the hemmer. Lower the foot. Lower the needle into the beginning of the hem and start sewing. To make a perfect hem, guide the material so that the scroll of the hemmer is always well filled.



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Overcasting

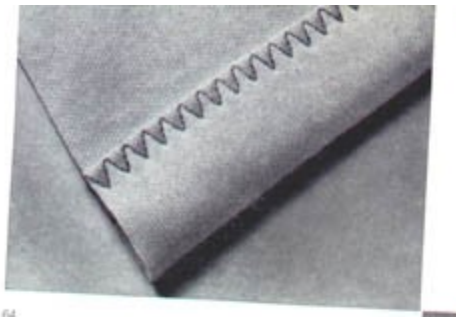
The « Elna-disc » 01 for overcasting produces a zigzag stitch with intermediate stitches, thus making the overcasting particularly durable. Place material as shown in fig. 62.

62

Edge to Edge Sewing

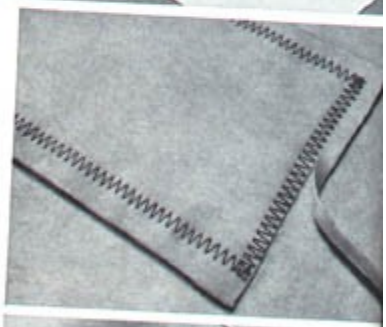
The « Elna-disc » 02 can be used for edge-to-edge sewing (fig. 63). It is best to join two selvedges.

63



64

65



66

67

Sewing Jersey Material

« Elna-disc » 02

a) **For hems,** see fig. 64.

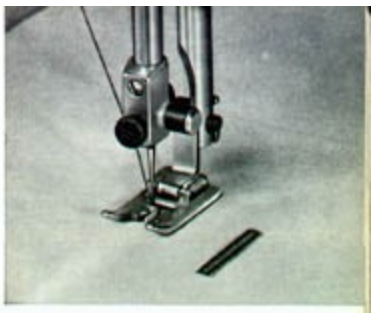
b) **For inserting a patch,** cover the damaged part with a patch (fig. 65), sew with a serpentine stitch about ¼" from the edges of the patch (fig. 66). Cut the loose edges of the patch close to the serpentine stitch, turn the material and cut out the defective portion.

The serpentine stitch remains soft and strong (fig. 67).

Buttonholes

« Elna-disc » 03

It may be preferable to make a trial buttonhole first on a scrap of material.



68

Buttonhole 31/16" (4 mm) Wide

a) Turn centering wheel to extreme left position.

b) Set the stitch width lever at 2 and sew the first row of stitches of the buttonhole (fig. 69). Having reached the end, lower the needle into the material at the right side of this row.

c) Raise the foot and pivot the material half a turn around the needle (fig. 70). Lower the foot.

d) Raise the needle, set the stitch width lever at 4 and sew a bartack of about 1/16" (fig. 71).

e) Raise the needle, set the stitch width lever at 2 and sew the second ram of stitches parallel to the first ram but slightly shorter (fig. 72).

f) Raise the needle, set the stitch width lever at 4 and sew for about 1/16", thus finishing the buttonhole (fig. 73).

g) Raise the needle, set the stitch width lever at 0 and fasten the threads with a few stitches, holding the material back by hand so that it will not be fed (fig. 74).

69

70

71

72

73

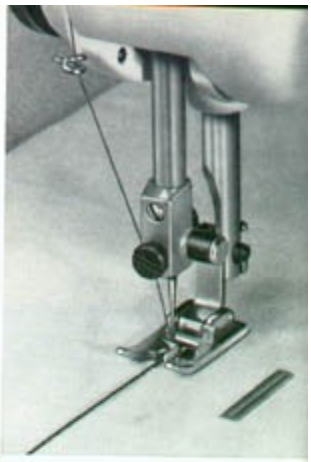
74

Buttonhole 1/8" (3 mm) Wide

Decenter the needle ½ to the left. Proceed exactly the same as for 3/16" (4 mm) buttonhole but place the stitch width lever at **1½ and 3** instead of 2 and 4.

Reinforced Buttonhole

Insert a soft embroidery cord under the left opening of the buttonhole foot (fig. 75), then proceed in exactly the same manner as for ordinary buttonholes. To finish the buttonhole, slightly pull the protruding ends of the cord and cut them off close to the buttonhole.



75

76

Cutting the Buttonhole

Buttons

« Elna-disc » 03

a) Turn centering wheel to left position.

b) Proceed according to fig. 77 and adjust the stitch width so that the needle will descend in the centre of the two holes of the button. Sew about 6 to 8 stitches. When sewing on four-hole buttons, move the button after having sewn the first two holes and sew the second pair of holes in exactly the same manner.

c) Raise the needle, set stitch width lever at 0 and fasten the threads by sewing a few stitches in the same hole.

Snap buttons as well as hooks and eyes are sewn to the material in the same manner.

77

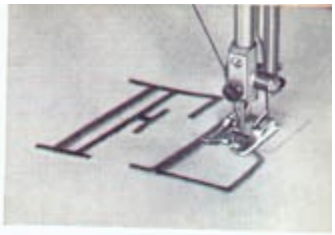
Satin Stitch (Cording Stitch)

« Elna-disc » 03

The satin stitch (cording stitch) is obtained by sewing a zigzag stitch with a very short stitch length.
The cording foot is used mainly for straight satin stitches (fig. 78).

For monogramming or decorative patterns of varied shapes, the use of **the darning foot** is preferable (fig. 79). If possible, stretch the material on an embroidery hoop for monogramming.

To obtain a nice raised effect, it is advisable to cover the first row of stitches, once or twice, using the same stitch width, taking care that each succeeding row covers the previous one. For a narrow satin stitch sewn with stitch width 1, a raised effect can be obtained by sewing over a strand of pearl cotton.



78

79

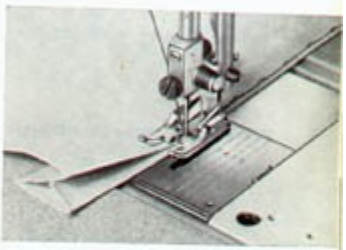
Blind Stitch

« Elna-disc » 10

a) Prepare and place material according to fig. 80.

b) Make sure that only the lateral stitches penetrate slightly into the fold of the material (fig. 80).

c) When the work is finished, unfold it and press (fig. 81).



80

81

Minor Disorders and their Remedies

The Upper Thread Breaks: pages

The upper thread tension is too tight . . 13
The darning thread does not have a left twist 6
The machine is not threaded correctly . . 9
The thread is of poor quality, or it is knotted.
The thread has become too dry due to long storage 6
The thickness of the thread is not suitable for the kind of material 7
The needle is not of the style 15 x 1 (system 705); it is of poor quality, poorly polished or bent.
The needle has not been inserted correctly 7
The machine needs cleaning 5

The Lower Thread Breaks:

The lower thread tension is too tight . . 13
The thread has not been wound evenly on the bobbin 7
The thread has not been brought up correctly above the needle plate 10

The Machine Skips Stitches:

The machine is incorrectly threaded . . . 9
The needle is not of the style 15 x 1 (system 705); it may be bent 7
The needle is not fully inserted in the needle clamp 7
The needle has been incorrectly inserted 7
The thread is too thick for the size of the needle 7

The Stitches Are Uneven:

The two threads do not link in the center of the material; check the tensions . . . 13
Either of the two thread tension devices are clogged (with pieces of thread) 13
The machine is incorrectly threaded (check upper and lower thread) 8-9
The lower thread has not been properly wound on the bobbin 7
The bobbin does not unwind counter-clockwise 8
The needle does not suit the size of thread or the type of material 7

The Material Is Fed Unevenly or Insufficiently: pages

The needle plate has not been inserted properly 5
The feed dog is clogged with dirt (teeth should be cleaned) 5
The pressure of the presser foot is not correct 12

The Needle Breaks:

The material has been pulled during sewing; the needle, being bent, hits against the needle plate, close to the stitch hole.
The needle has been incorrectly inserted, or it is bent 7
The needle size is too fine for the type of fabric or thread 7
The thread is knotted.
The upper thread tension is too tight . . 13
The needle is poorly centered and strikes the needle plate or darning plate 16

The Machine Runs Slowly:

The machine has not been oiled for quite some time 5
Lint and pieces of loose thread have collected underneath the needle plate and in the rotary hook. 5
The machine is too cold (should be placed in a warm room for a while before being used)

The Rotary Hook Is Noisy:

The rotary hook is too dry (should be lubricated with oil) 5
The rotary hook is clogged (with remains of thread or lint) 5

The Machine (Rotary Hook) Is Blocked:

A loose piece of thread may have become stuck in the rotary hook. Turn the flywheel by hand in both directions, despite the stiff resistance, in order to cut the thread. Remove the remains of the thread. Oil the rotary hook and run the machine without thread for a short while 5

The «Elna-Disc» Cannot Be Inserted:

Set the stitch length and stitch width regulating levers at "0". The lever for special devices must be pushed to the left . . . 11

Chart: How to Prepare the ELNA for Different Sewing Jobs

Work	«Elna-disc»	Sewing Foot	Small Plate (Accessory)	Needle			Upper Thread Tension	Lower Thread Tension	Stitch Length	Stitch Width	Centering Wheel	Work described on Page
				European 705		American 13×1						
				New	Old							
Normal Sewing	—	Presser f.	—	80/90	11/14	B / ½	1 - 5	1	1 - 3½	0	centre	12
Seams with Decentered Needle	—	Presser f.	—	80/90	11/14	B / ½	1 - 9	1	1½ - 2½	0	left-right	16
Darning	—	Darning f.	Darning pl.	60/70	7/10	00 / 0	1 - 5	1	0	0	centre	17-18
Hemming	—	Hemmer f.	—	80/90	11/14	B / ½	1 - 6	1	2½ - 3½	0	centre	19
Work with Single «Elna-Discs»:												
Darning with wool	03	Darning f.	Button pl.	70 80	9/12	0 / B	1 - 2	1	0	4	centre	18
Overcasting	01	Presser f.	—	70/80	9/12	0 / B	1 - 5	1	½	2 - 4	centre	19
Sewing on Jersey	02	Presser f.	—	60/70	7/10	00 / 0	1 - 5	1	¾ - 3½	4	centre	20
Buttonholes	03	Buttonhole f.	—	70/80	9/12	0 / B	1 - 5	1	¾ - 3½	2 - 4	at left	21
Buttons	03	Button f.	Button pl.	70/80	9/12	0 / B	1 - 5	1	0	dep. on But.	at left	22
Blind Stitch	10	Cording f.	—	70/80	9/12	0 / B	1 - 5	1	1 - 3	1 - 4	centre	23
Cord Stitch	03	Cording f.	—	70/80	9/12	0 / B	1 - 5	¾ - 1	¾ - 3½	1 - 4	centre	23
		Darning f.	Button pl.	70/80	9/12	0 / B	1 - 5	¾ - 1	0	1 - 4	centre	23
Work with two needles	optional	Cording f.	—	70/80	9/12	0 / B	1 - 5	1	¾ - 1	2	centre	24
Work with Double «Elna-Discs»:												
Turkish Hemstitch	101	Cording f.	—	110	17/18	2	1 - 5	1	A	2 - 3	centre	24
Work with two needles	optional	Cording f.	—	70/80	9/12	0 / B	1 - 5	1	A	2	centre	24
Working with Nylon:												
Straight Seams	—	Presser f.	—	70	9	0	1 - 5	0	2 - 3	0	centre	—
Darning	—	Darning f.	Darning pl.	60	7	00	0 - 3	0	0	0	centre	—

Almost all of the above sewing tasks can be accomplished with the Universal Tension to satisfy normal domestic needs.