

NECCHI

Instructions
for the use
and maintenance
of your
NECCHI
Supernova

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 are in the habit of doing business with only authorized NECCHI dealers, all of whom prominently display the NECCHI Service Circle insignia somewhere in their place of business.

It is only through the use of 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 dealers be called in to adjust or repair your machine on the infrequent occasions when such adjustments or repairs 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, 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 machine which the Bond accompanied, provide the said machine is used only for household sewing and is given reasonably good care in accordance with the accompanying printed instructions.

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

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

For your protection the guarantee is valid only when:

1. Authorized NECCHI dealers stamp bearing the franchisee number appears on reverse of the Bond and on attached mailing card.
2. Mailing card is filled in by purchaser and verified no later than 10 days after purchase to NECCHI SEWING MACHINE SALES CORPORATION

IMPORTANT – Purchaser should retain this bond and present it when service is required.

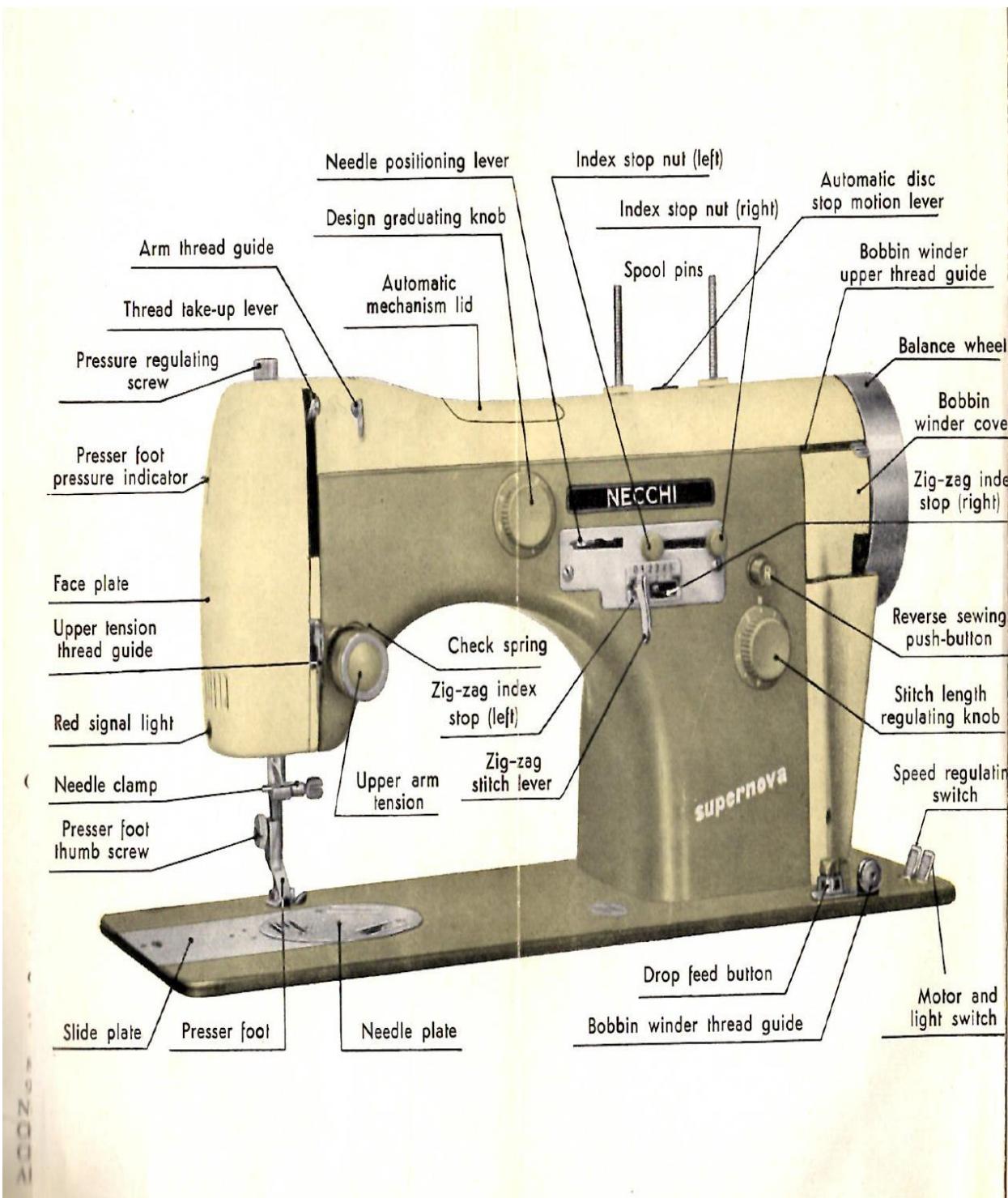
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FOREWORD

Your magic NECCHI AUTOMATIC SUPERNOVA Sewing Machine marks the third great achievement in the recent history of sewing machines.

In 1948 NECCHI introduced to the world the first household zig-zag machine. With this machine, any homemaker could produce beautiful embroidery designs as well as many other everyday sewing jobs without attachments, simply by moving a lever.

In 1952 NECCHI devised the first appliance which made the sewing machine semi-automatic. This extraordinary device extended the scope of the machine enormously, and simplified the work of the homemaker who was then able to produce a variety of designs without even having to move a lever.

And now, the NECCHI AUTOMATIC SUPERNOVA marks the third and most outstanding advancement in the history of modern sewing machines – and the third great advancement again introduced by NECCHI.

The NECCHI AUTOMATIC SUPERNOVA opens up the completely new era of automatic embroidery – the secret of the sewing skill and outstanding ability is built right into the machine.

Why?

Because the NECCHI AUTOMATIC SUPERNOVA moves the fabric back and forth while the needle goes from side to side. Only a machine which is capable of perfect synchronization of both these basic movements is truly automatic.

What does this mean to you?

It means that now you can make the most intricate, seemingly handmade designs perfectly, all with the utmost ease – and this is impossible on semi-automatic machines.

Simply by moving a lever, you can sew perfect buttonholes of any size or shape. The range of designs which this wonderful machine offers you is practically infinite.

With your AUTOMATIC SUPERNOVA – unlike other machines which have only a few basic discs, you receive 5 basic sets plus 14 assorted discs – you can select the combination you prefer – each combination corresponds to a different design.

And here's the latest great news:

With a special knob, you can vary the length of your designs at will. So why not encourage your creative imagination to the full – the results will be a revelation even to you!

And don't imagine that to apply a set of discs to the machine is a complicated job – nothing could be easier – or faster. You just slip the discs on to the proper pin as you slip a ring on your finger.

Even if you've never sewn before ... even if you don't think you have any natural aptitude for sewing ... you can sew as well as any professional, because the NECCHI AUTOMATIC SUPERNOVA is so simple to use, even a child can operate it!

Here are a few of the most important features you'll find in your NECCHI AUTOMATIC SUPERNOVA:

- Simple knob for stitch length variation

- Another for design length variation
- A third for control of forward and reverse sewing.
- Another for lowering the feed dog; this is necessary for sewing on buttons, embroidering monograms, darning and tacking.
- A rotary needle plate. With other machines you must use a different needle plate for each type of sewing, but in the NECCHI AUTOMATIC SUPERNOVA there is a 3-position needle plate so that the same plate can be used for all types of sewing.
- An automatic (self-releasing) bobbin winder which has the exclusive feature of being built into the machine.
- An elegant line. You can easily see the care and attention the designers of the NECCHI AUTOMATIC SUPERNOVA have lavished on its streamlined appearance. Even the main parts were built into the machine frame – to give it a smooth elegant line. The harmony of the colour scheme makes this machine a decorative asset anywhere.
- An intermediate position of presser foot lever to facilitate darning, embroidering, etc. allows presser foot to be raised without releasing thread tension.
- Push button for fast or slow sewing. Merely by pushing the button to Max or Min you can run the machine at high or low speed for as long as you desire. This feature is especially convenient for beginners who are not accustomed to the higher speeds of the machine, or when doing special intricate work.
- Motor control by means of rheostat which you can use as a knee control or, if you prefer as a foot control.
- 12 Volt light right over the sewing area – so there's no glare. And because of the specially low voltage, the light bulb will last for years, and the operator need have no cause for anxiety.
- Plastic guard ring surrounding the bed plate – serves to prevent paint chipping and acts as shock absorber.
- And here are some additional outstanding features, also designed to save you time and effort:
 1. Thread tension, calibrated to make adjustment of thread tension simplifier.
 2. Electric Motor – completely built into the frame of the machine.
 3. Hinged Presser Foot – to permit sewing over pins, seams and various thicknesses of material ... thus eliminating tedious basting.
 4. Snap-out shuttle race – for easy cleaning.
 5. Double spool pins – to permit bobbin winding while machine is in operation.

Congratulations! You've chosen the right sewing machine for *you!*... and the only one which incorporates the latest technological advancements. By reading the following simple instructions before using your NECCHI AUTOMATIC SUPERNOVA, you will derive the maximum pleasure and use from your machine.

Your new NECCHI "Push Button" SUPERNOVA includes the greatest achievements in recent history of sewing machines.

In 1948 – NECCHI introduced to America the first household zig-zag machine. With this machine the homemaker could produce beautiful embroidery designs and many other finishing jobs without attachments simply by moving a lever.

In 1952 – NECCHI introduced the first automatic cabinet machine, the Automatic "Wonder Wheel". With the amazing Wonder Wheel, the homemaker could produce a variety of exciting decorative stitches automatically, without even having to move a lever.

And now the NECCHI "Push Button" SUPERNOVA marks the third and greatest achievement in modern sewing machines – and this third great achievement introduced by NECCHI, the SUPERNOVA brings automatic sewing into a completely new era – because the sewing skill is built right into the sewing machine.

Why do we say the "Push Button" SUPERNOVA has the skill built in?

Because the SUPERNOVA moves the fabric back and forth while the needle goes from side to side. It is the only cabinet machine in the world which has this feature – and only a machine which controls both these basic movements, is truly automatic!

What does this mean to you?

It means that now you can have the most intricate hand-made decorative stitches as easily as tuning your radio! Stitches not possible on semi-automatic machines!

While with previous machines you were limited to embroidering automatically – now with the Push Button SUPERNOVA you can also do basic, everyday sewing automatically. For example .

- Simply by inserting a disc into the SUPERNOVA you can sew perfect buttonholes – of any length – you don't even have to turn the fabric around!
- With another disc, you can mend and darn!
- with yet another, you can blind stitch!
- And with another, you can make exquisite tapered monograms!

Remember, the Push Button SUPERNOVA is the only machine in the world that can do all these sewing jobs completely automatically.

The SUPERNOVA offers you unlimited decorative possibilities. It does not, as many machines, limit you to the few discs built into the machine. A machine with a built-in disc block would actually be comparable to a phonograph with only one built-in long-playing record, when new melodies were recorded you would be unable to play them on your phonograph! On the other hand, with your new SUPERNOVA you receive a set of five basic discs – plus twenty-six, assorted discs. And as new ones are invented, you will be able to use every one of them in your SUPERNOVA.

And here's thrilling news – with your special tuning knob, you can actually lengthen any basic design from 1/8" to approximately 2". So, you see, the variations are limited only by one's imagination.

There's no guesswork in stitch selection, either! You can see the stitch design in advance, because it is engraved tight onto the disc.!

And, changing discs on the SUPERNOVA is so fast and easy, you just slip in the disc as you would slip a ring on your finger!

Imagine! With the SUPERNOVA not only can you sew straight, zig-zag, forward and reverse, as with other machines, but you can embroider, mend, darn, blind stitch and make perfect buttonholes and monograms – completely automatically! So, even if you have never sewn before, even if you always felt you were all thumbs, you can sew beautifully, expertly. And the SUPERNOVA is so simple to use, even a child can operate it!

Yes, with the SUPERNOVA, the skill is truly built in. While you sit like a lady, it sews like a genius

Here are the exclusive revolutionary features you'll find in your NECCHI SUPERNOVA.... All designed with you in mind.

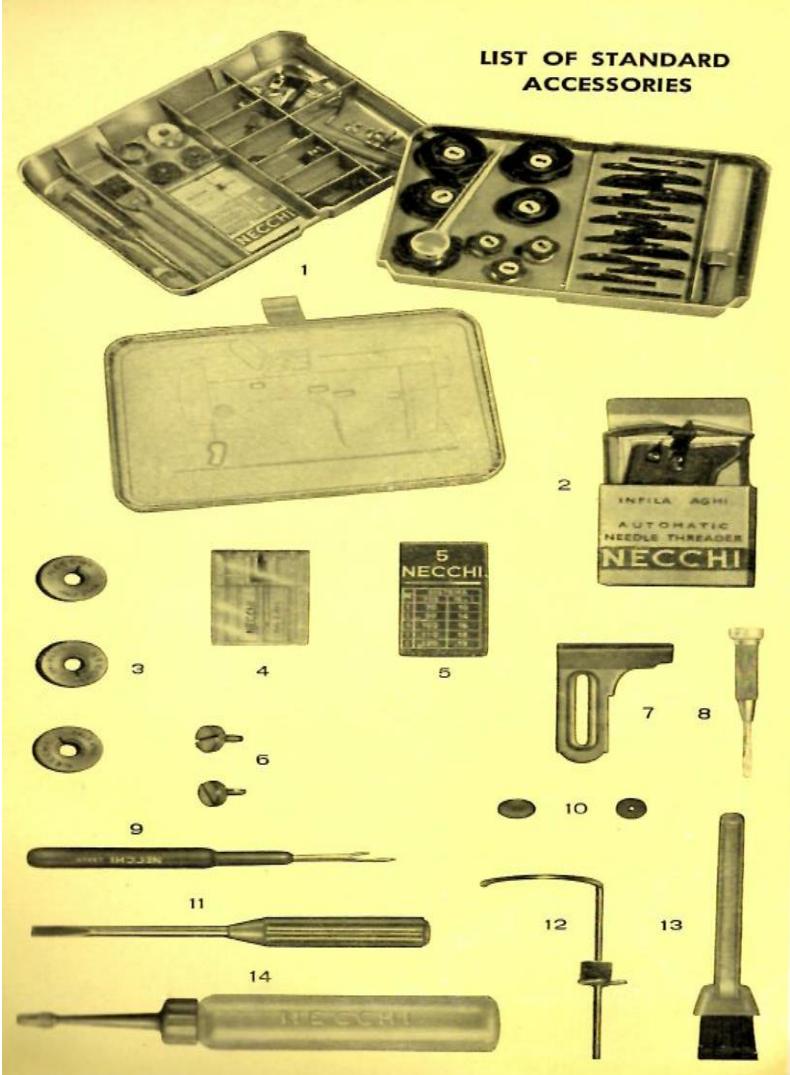
- Simple turning knob for stitch length variation
- Simple turning knob for graduating automatic designs
- Simple push button for instant control of forward and reverse sewing.
- Push button – drop feed adjustment to permit sewing on buttons, special monogramming, darning, quilting, tacking etc.
- Exclusive rotary needle plate – with other machines you must use different needle plates for straight, zig zag and double needle sewing, but in the SUPERNOVA the same needle plate contains 3 positions, so that the same plate can be used for all types of sewing!
- Exclusive Slide plate – with special perforations for circular sewing. Slide plate is simple to open and cannot be removed accidentally
- Automatic self-releasing bobbin winder – built into the frame of the machine – no danger of curious little fingers getting hurt or damaging the machine! NO other sewing machine has a concealed Bobbin Winder.
- Automatic oil distributing system – the Push Button Supernova even oils itself.
- Beautiful Ultra-Modern Appearance, just a glance will tell you that the SUPERNOVA was designed with an eye to looks. The main parts were built into the machine frame – to give it a smooth, unbroken line. And its non-glare, two tone color scheme complements any décor.
- Exclusive third level (intermediate) Position of Presser Foot Lever to facilitate darning, embroidering, etc. – allows presser foot to be raised without releasing thread tension!
- Exclusive Push Button for fast or slow sewing. Merely by pushing the button to Max or Min, you can run the machine at high or low speeds as long as you desire. This feature is especially convenient for beginners who are not accustomed to the higher speeds of the machine, or when doing special or intricate work.
- High Quality, motor control resistance element – which means simple this: the SUPERNOVA contains an ingenious device which you to graduate the speed of the motor very precisely, ,

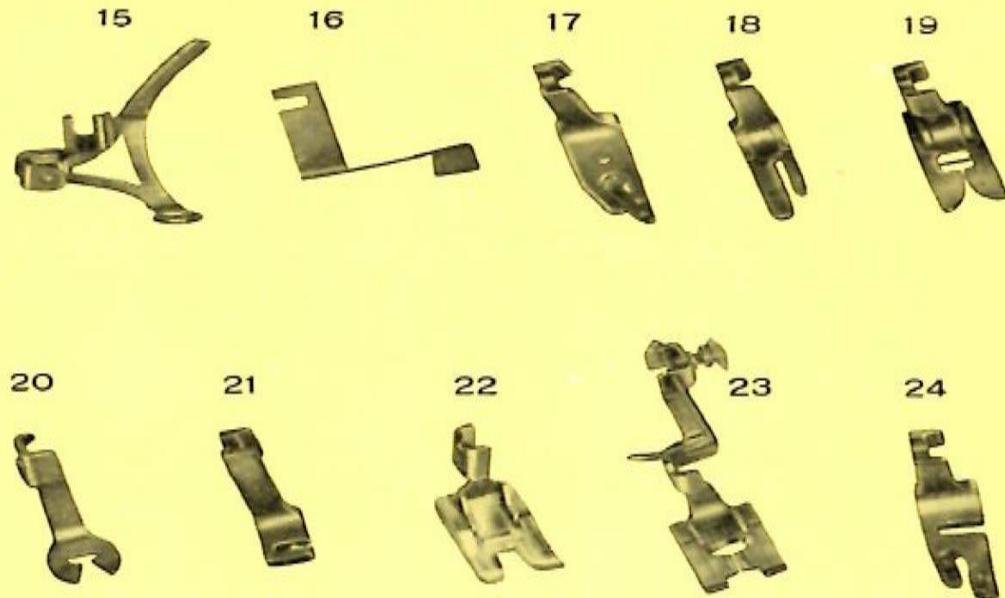
within "Max" or "Min" speeds. Thus, for example, if you wish to increase the speed of the SUPERNOVA from very slow to very fast, you may do so evenly, gradually, accurately.

- Motor control by means of a rheostat which you can use as a knee control or, if you prefer as a foot control.
- 12 Volt light right over the sewing area – so there's no glare. And because of the specially low voltage, the light bulb will last for years and the operator need have no cause for anxiety.
- Plastic guard right surround bed plate – serve to prevent paint chipping and acts as shock absorber
- But here are some additional outstanding features, also designed to save you time and effort:
 1. Thread tension, calibrated to make adjustment of thread tension simpler
 2. Electric Motor – completely built into the frame of the machine.
 3. Hinged Presser foot – to permit sewing over pins, seams and various thicknesses of material .. thus, eliminating tedious basting.
 4. Snap-out Shuttle race – for easy cleaning.
 5. Double spool pins – to permit bobbin winding while machine is in operation, also for use with the double needle.

Congratulations! You've chosen the right sewing machine for you! And the only one which incorporates the latest technological advancements. By reading the following simple instructions before using your NECHI AUTOMATIC SUPERNOVA, you will derive the maximum pleasure and use from your machine.

**LIST OF STANDARD
ACCESSORIES**





- 1 Accessory Box.**
- 2 Needle threader with double hook.**
- 3 Bobbins (3).**
- 4 Double needle.**
- 5 Case with needles.**
- 6 Screws for straight guide.**
- 7 Straight guide.**
- 8 Screw driver, small.**
- 9 Seam ripper and buttonhole cutter.**
- 10 Stopper for circular sewing with thumb tack.**
- 11 Screw driver, large.**
- 12 Quilter wire with clamp.**
- 13 Brush.**
- 14 Oil Feeder.**
- 15 Darning presser foot.**
- 16 Guide for blindstitching.**
- 17 Hemming presser foot.**
- 18 Straight stitch presser foot.**
- 19 Presser foot for double needle.**
- 20 Presser foot for sewing on buttons.**
- 21 Cording presser foot.**
- 22 Transparent zig-zag hinged foot with grooved bottom for Satin stitch.**
- 23 Transparent presser foot for making buttonholes automatically.**
- 24 Presser foot for shell hemming.**

Recommended Needle and Thread Sizes

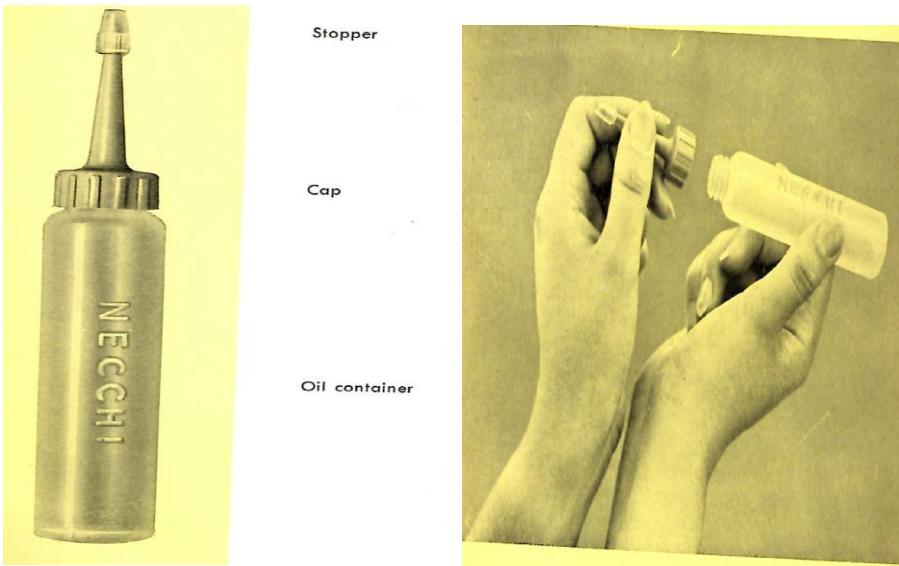
NECCHI machines uses Syst. 15 x 1 or Syst. 705 needles

Types of Fabrics and Classes of Work

Types of Fabrics	Class 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, Calicoes etc.	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 and slip covers
Heavy Tickings and Woolens, heavy woven suiting and coating canvas and sacking.	For heavy clothing in general, such as heavy uniforms, coats, trousers, etc. bedding supplies, bags etc.

Sizes of Thread		Size of Needles	
Mercerized Cotton	Silk	Syst. 15 x 1	Syst. 705
80 to 150	0 to 000, Twist	10	70
60 to 80	A & B Twist	14	90
40 to 60	C twist	16	100
30 to 40	D Twist	18	110
24 to 30	E Twist	19	120

How to use the Oil feeder



To oil, invert the feeder and gently press the sides. When filling, unscrew the cap.

Chapter 1

General Instructions

1. To ensure a perfect functioning of machine
 - a) Balance / Flywheel must always be turned toward the operator, either rotated by hand or motor.
 - b) Do not operate machine with presser foot resting on feed dog, unless there is cloth under presser foot.
 - c) 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.
 - d) Do not operate sewing machine when presser foot lever is raised.
 - e) DO not try to help feeding by pulling fabric, since this action will bend needle. The machine automatically feeds the fabric without assistance.
 - f) Keep slide plate closed when operating machine.

2. To reach the oiling points

To prepare machine for oiling, proceed as follows:

- a) Open the lid A covering the automatic mechanism (figure 1)
- b) Open the face plate (Figure 2) turning it by hand on its hinges

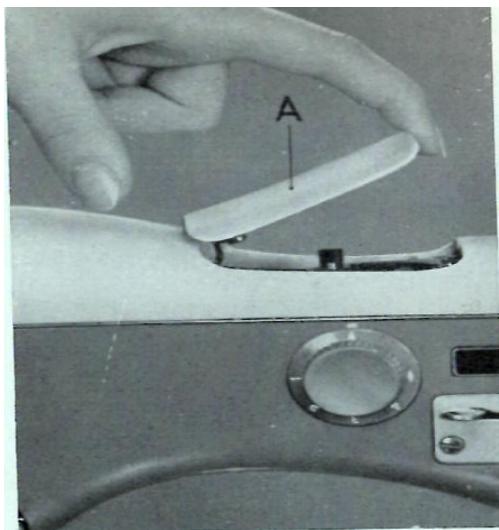


Figure 1

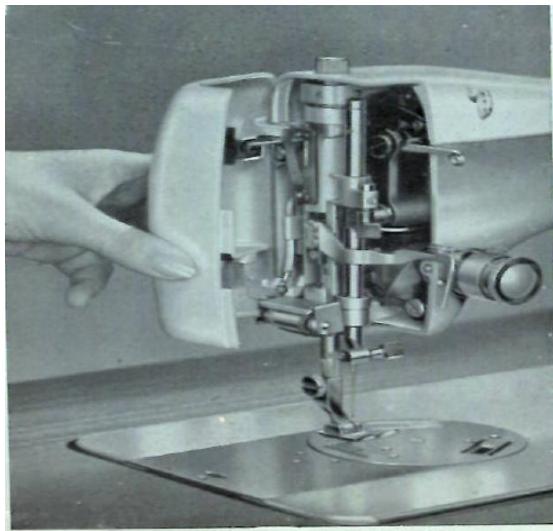


Figure 2

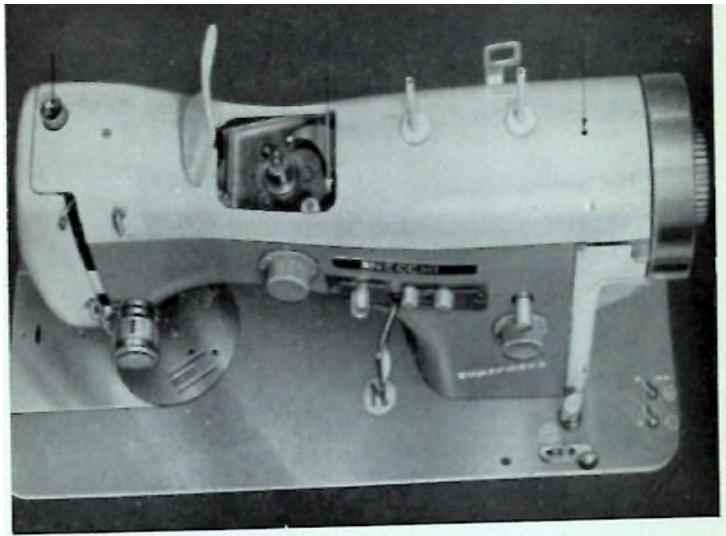


Figure 3

3. To oil the machine

Use NECCHI oil available from your NECCHI dealer, or a good quality light sewing machine oil.

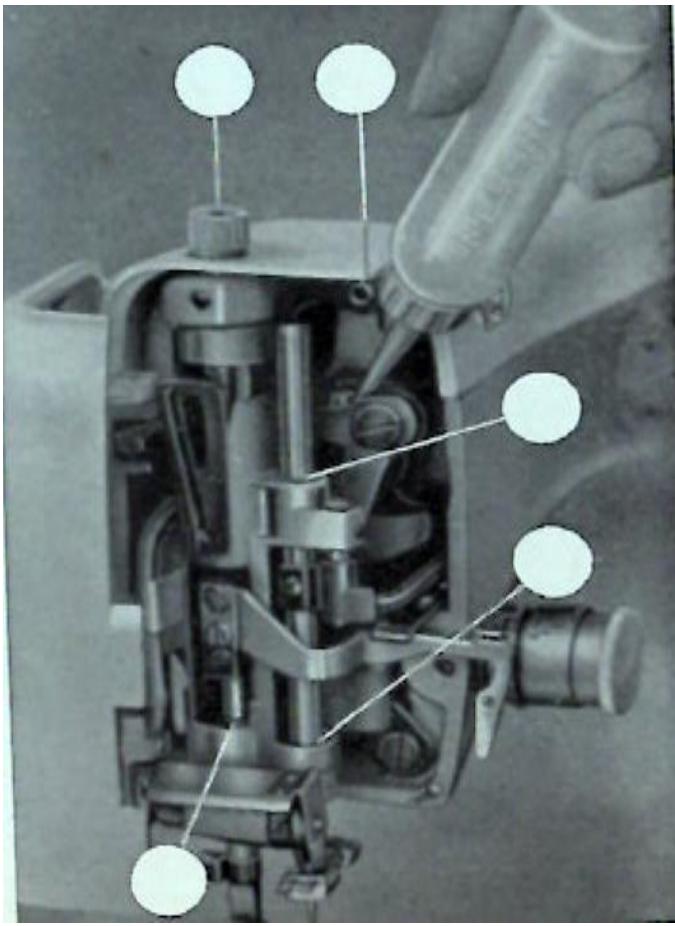


Figure 4

To ensure easy and trouble-free running, the machine requires oiling. If used continuously, it should be oiled every 2 days. For intermittent use (once or twice a week), oil it about once a month.

- a) Let fall one or two drops of oil into the oil-holes indicated in Figure 3. Please remember that not less than about twelve drops are to be put into the first oil hole on the right.
- b) After opening the face plate (figure 2), let fall one drop of oil in each hole and link (figure 4).
- c) Tilt the machine back on its hinges, so that the underside is accessible, and put a drop of oil into all oiling points indicated by pointers in Figure 5.
- d) When the machine is in continuous use, it is advisable to remove the plate and the shuttle occasionally (see Instructions - To remove and replace shuttle on Page 36)

To clean and oil the shuttle bed, use an oil-soaked rag. In replacing, oil only the rim of the shuttle.

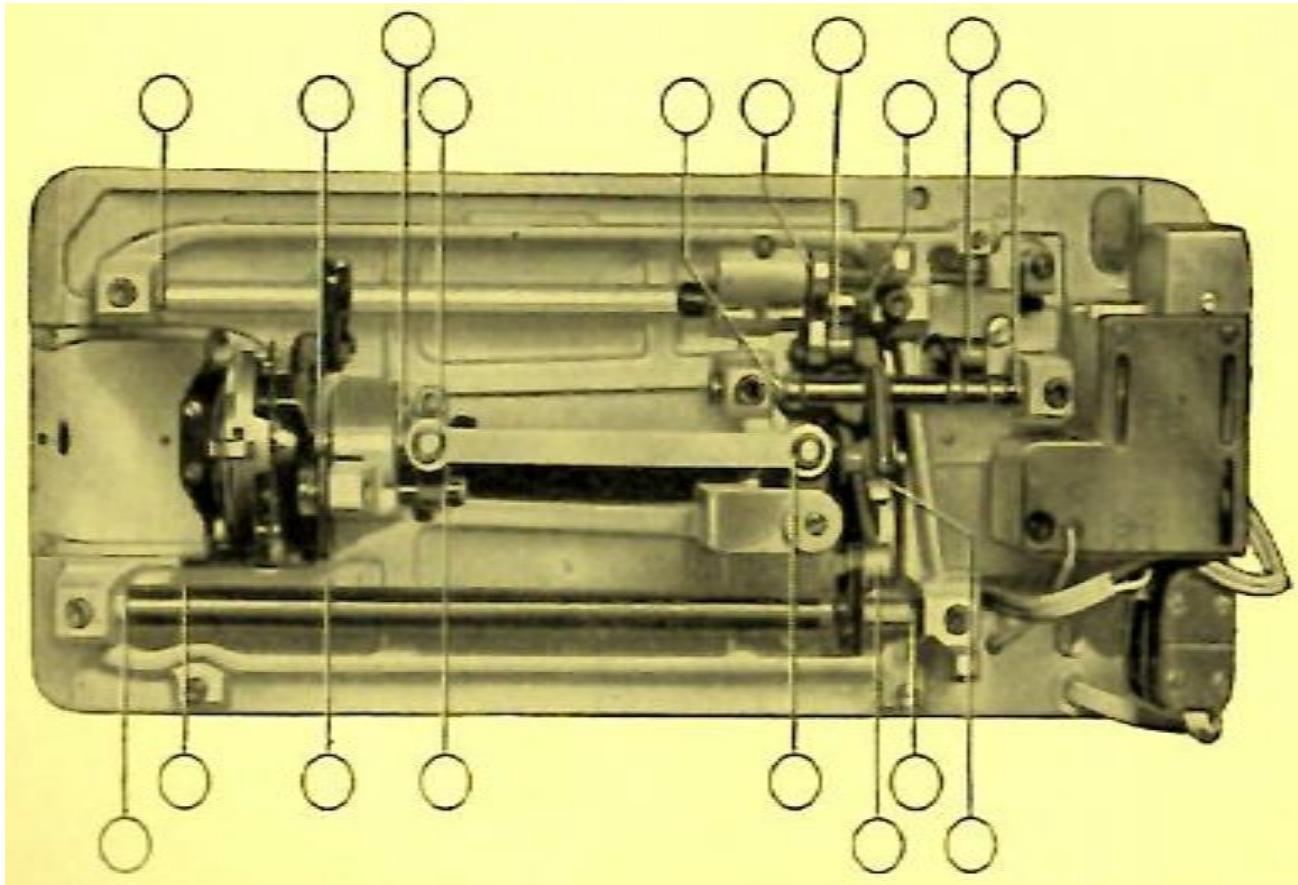


Figure 5

4. To insert a needle

- a) Bring needle bar to its highest position by turning the flywheel towards you.
- b) Loosen needle clamp screw (Figure 6) and insert needle into the groove of the needle. Make sure that the flat side of the needle shank is towards the right.
- c) Push needle up into the groove as far as it will go, then tighten the needle clamp screw firmly with a screw driver. Be certain not to rotate needle while it is being pushed up into the groove.

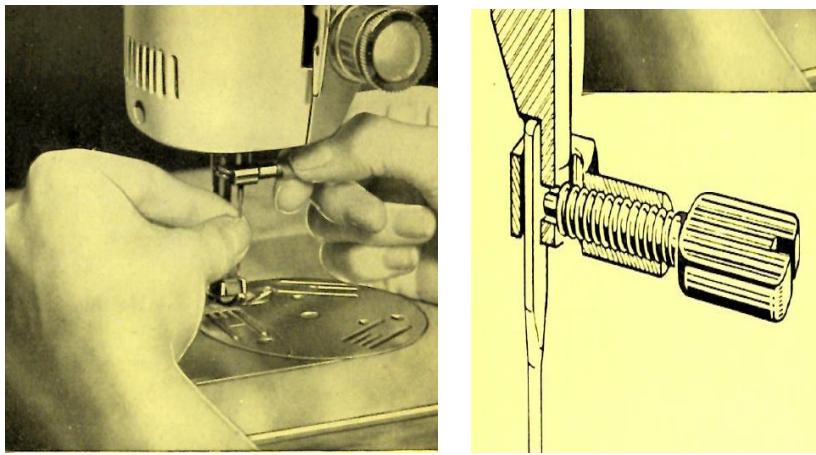


Figure 6

5. To change position of multiple needle plate

The SUPERNOVA machine is provided with a round needle plate which can be fitted in 3 different positions marked U, W, Z (figure 7)

These 3 positions are used as follows:

- U – for straight and zig-zag sewing. Both automatic and with hand control
- W – for straight stitch only, with the needle position lever set in the left notch.
- Z – for sewing with twin needle.

IN order to fit the needle plate in each one of the positions, proceed as follows:

- a) Lower the feed dog, pull out the slide plate as far as possible and bring the needle to its highest position.
- b) Press lever A, the needle plate will automatically lift itself and come out from locating pin B (Figure 7)
- c) Turn needle plate around until the desired cutout is under the needle bar.
- d) Be certain that the locating pin B enter in the corresponding hole of the needle plate. Press center pin C, the needle plate will block itself automatically.
- e) Move the slide plate to normal closed position.

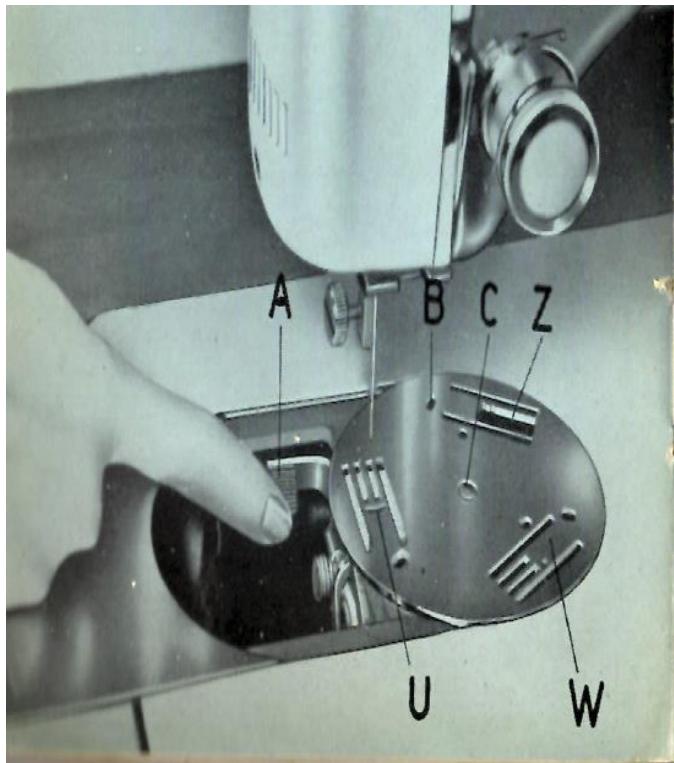


Figure 7

6. To change presser foot

- a) Bring needle to its highest position by turning the flywheel towards you.
- b) Raise presser foot by raising the presser foot lever.
- c) Loosen the presser foot by loosening the presser foot screw.
- d) Bring the foot down and remove it from the presser foot bar by moving it to the left.
- e) Slide the grooved portion of the new presser foot up on the presser foot bar, press it against the bar and tighten the presser foot thumb screw securely.

7. To thread Machine

(see figures 8 and 9)

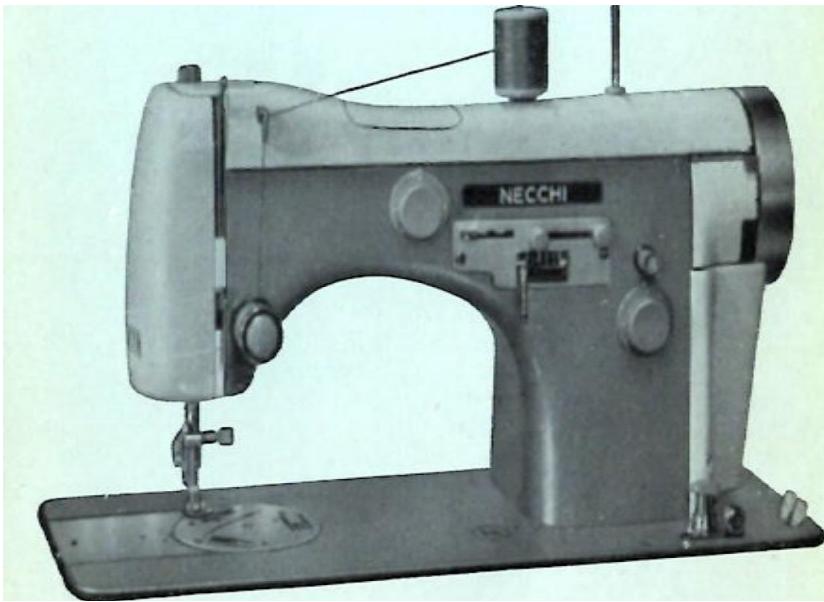


Figure 8

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

- a) Bring needle to its highest position by turning flywheel towards you.
- b) Place the spool of thread on spool pin A
- c) Run spool thread over the machine arm, through 2 holes of guide B
- d) Draw thread down, insert it from right to left in slot of tension discs housing C
- e) Bring thread up and down over the thread take up (check) spring D
- f) Bring thread downwards under the thread guide hook E
- g) Pass thread through the slot F in hook E. Lead thread upwards, passing it from right to left through the eye G of take up lever
- h) Pull thread down and lead it again through the guide E
- i) Draw thread into slot placed between the machine arm and face plate.
- j) Pass thread end through needle clamp guide H and finally pass it from left to right through the eye of the needle I, leaving about 4" of thread hanging free.

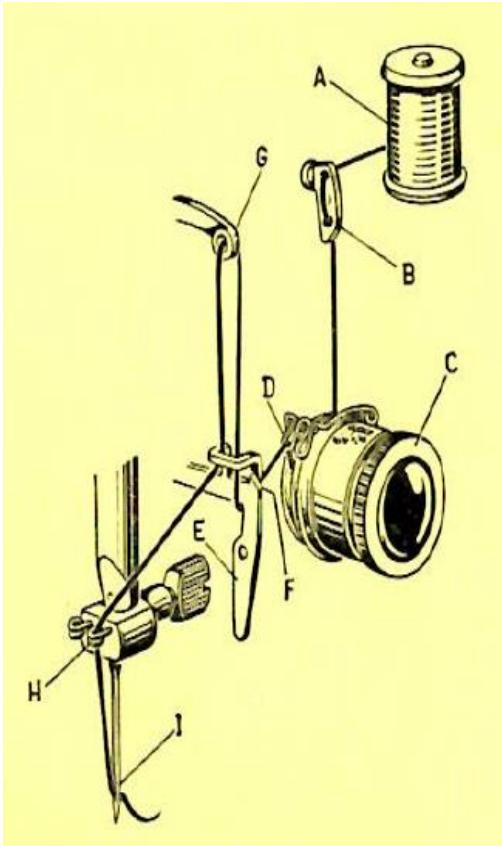


Figure 9

8. To thread needle with NECCHI automatic Threader
(see figure 10 a-d for reference)

- a) Take needle threader between thumb and forefinger of right hand (Figure 10b) and place it against needle so that needle fits in groove B (Figure 10 a) and uppermost portion of plastic body A touches the underside of needle clamp. Slip spring jaws C (figure 10a) over needle, then swing needle threader slightly against needle until threader hook D passes through the eye of the needle (Figure 10 b).
- b) With thumb and fore finger of left hand, pass thread under threader hook and hold it there under tension (figure 10 c)
- c) Gently swing needle threader upwards (see arrow in Figure 10 c) then draw it away from needle (figure 10 d). The threader hook will draw thread through eye of needle.

Each NECCHI Needle Threader is equipped with a double hook which can be easily turned in case of breakage.

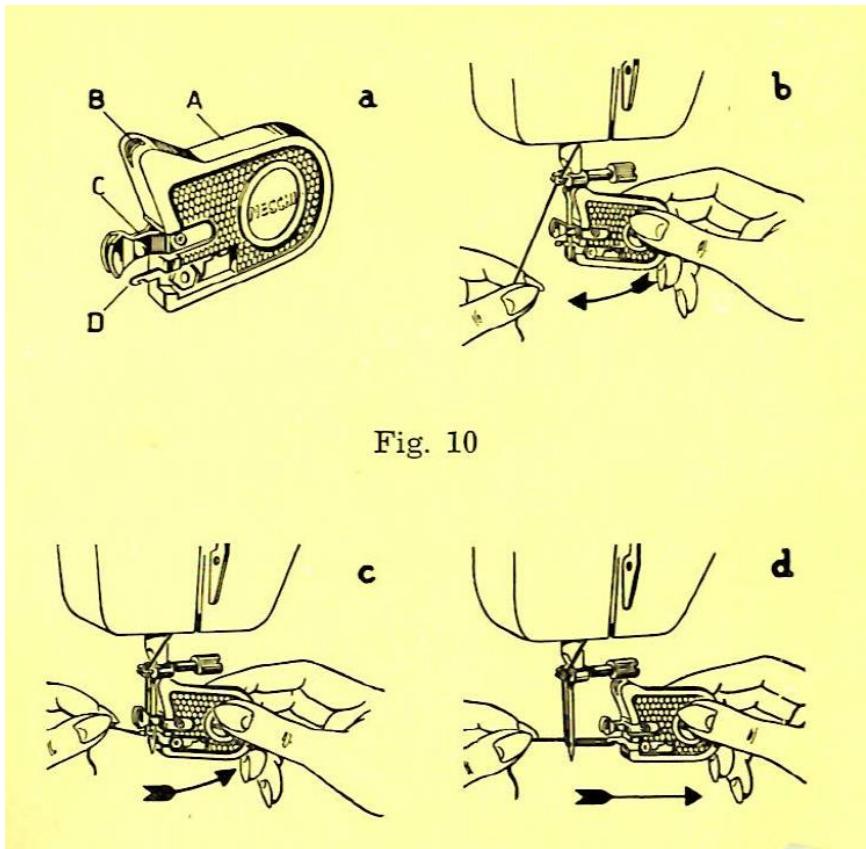


Figure 10

9. To remove Bobbin case

- Raise presser foot by raising presser foot lever.
- Bring needle up to its highest position, by turning flywheel towards you.
- Move slide plate of machine all the way to the left.
- Lift the latch of bobbin case (Figure 11) with thumb and forefinger of the left hand and remove bobbin case by pulling it towards 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 its place.

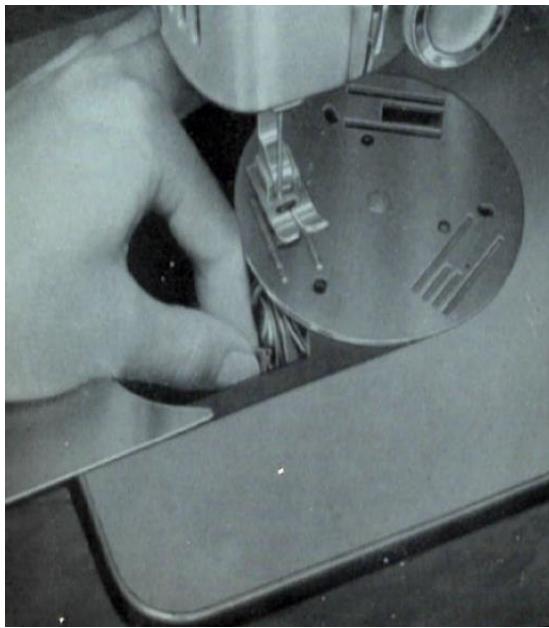


Figure 11

10. To wind empty bobbin

Important: it is necessary to understand the function of the Stop Motion by means of which the flywheel is disconnected from the sewing mechanism, when required, thus permitting the winding of the bobbin, without sewing.

- Disconnect the flywheel B (figure 12) from sewing mechanism by holding the wheel with the left hand and turning the stop motion knob D toward you with the right hand until the knob feels loose.

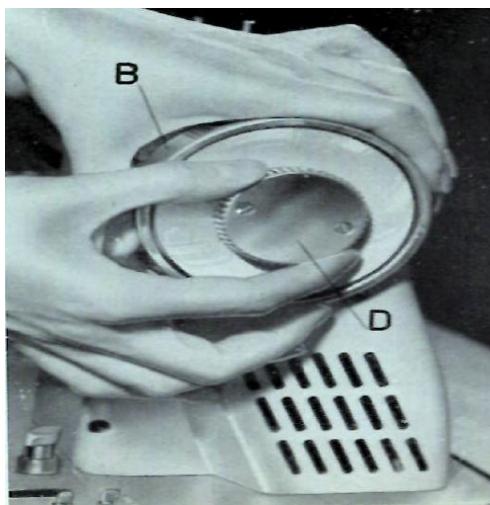


Figure 12

- With the right hand open the Bobbin winder cover F (Figure 13) by pushing it downwards as far as it will go. Keep the cover open. With the finger of the left hand, push the short spindle E

slightly sideways until it comes to a stop. The cover F, when left free, will now remain open.

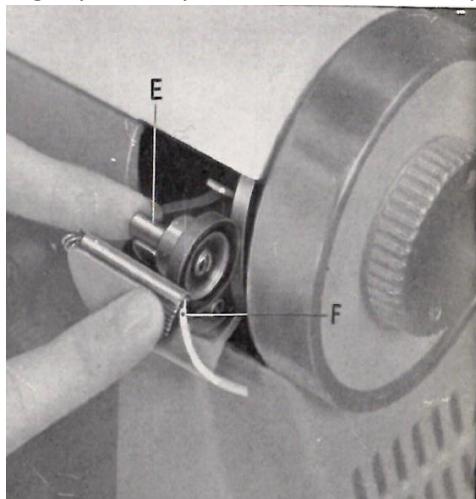


Figure 13

- c) Place the spool of thread on the spool pin A (figure 14). From this spool draw the thread through the thread guide S on the bobbin winder cover in the following manner:
1. Take a certain length of the end of the thread, bring it close to the bobbin winder cover and draw it slightly upward against the thread guide S.
 2. While holding right hand still, make with left hand a circular motion by bringing thread forward and then backward again toward the machine. The thread will thus enter the thread guide S by itself.

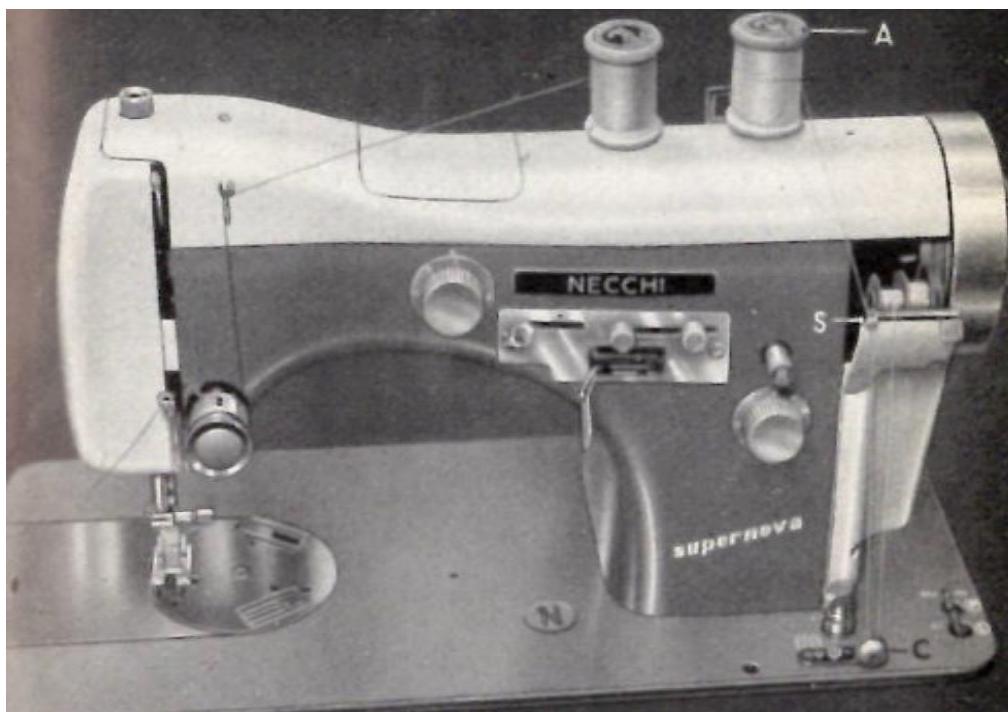


Figure 14

- d) Guide thread through tension device C on the bed plate of the machine.
- e) By hand, wind thread a few times round bobbin from right to left (clockwise).
- f) With the forefinger of the right-hand press down level B (figure 15) (and consequently also the cover F) and keep it down.
- g) Take bobbin with thumb and forefinger of the left hand, place it on spindle E (Figure 15) and push it slightly toward the right, until it reaches its position on the spindle.

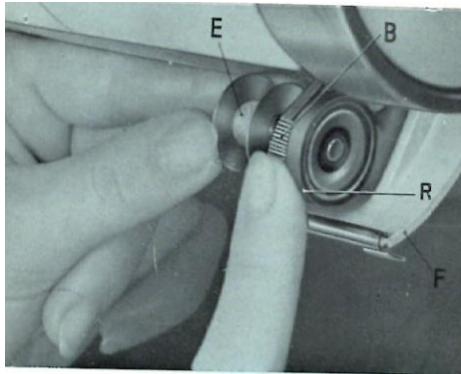


Figure 15

- h) Let lever B free and, by hand, guide the bobbin winder cover slowly upwards until the ring R contacts the flywheel.
- i) Run the machine.
- j) When the bobbin if full, the bobbin winder will automatically stop and the cover will shut.
- k) In order to remove the filled bobbin, proceed as follows:
 1. With the left hand, open the bobbin winder cover as far as it will go and hold it open.
 2. With the forefinger of the right hand, press down lever B and hold it down.
 3. Take the bobbin with the thumb and forefinger of the left hand and move it toward the left.
 4. Let the bobbin winder cover free and it will close by itself.

NOTE: you can operate the bobbin winder with the machine still in full function mode. In that case you don't have to disconnect the flywheel.

[11. To insert Bobbin into Bobbin case](#)

- a) With the 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 sides faces to right as shown in figure 16.
- b) Hold bobbin between thumb and forefinger of right hand, so that thread on top leads from left to right as shown in figure 16.



Figure 16

- c) Insert bobbin into bobbin case, preventing bobbin from turning by holding latch lifted with thumb of left hand and with right hand pull thread into the slot of the bobbin case, as shown in figure 17, then draw it under the tension spring and up to the end of the tension spring (figure 18), leaving about 4" of loose thread.

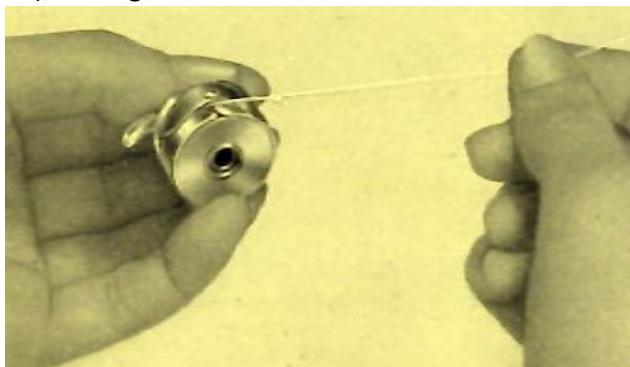


Figure 17

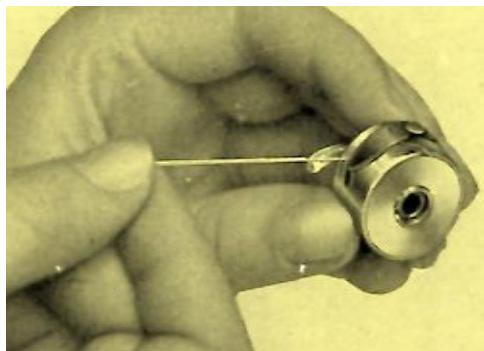


Figure 18

12. To insert bobbin case

- a) Raise presser foot by raising presser foot lever.
- b) Bring needle up to its highest position, by turning flywheel towards you.
- c) Move slide plate of machine all the way to the left.
- d) Insert bobbin into bobbin case (see pages 21 and 22)

- e) With thumb and forefinger of the left hand, take bobbin case (into which full bobbin has been inserted) by the latch A and place it on the center stud B of the shuttle. The position finger C of the bobbin case must go into the notch D on top of the race plate, as shown in Figure 19.
- f) Release latch and press bobbin case into shuttle as far as it will go. Leave about 4" of loose thread hanging down.
- g) Push slide plate to the right, closing it.

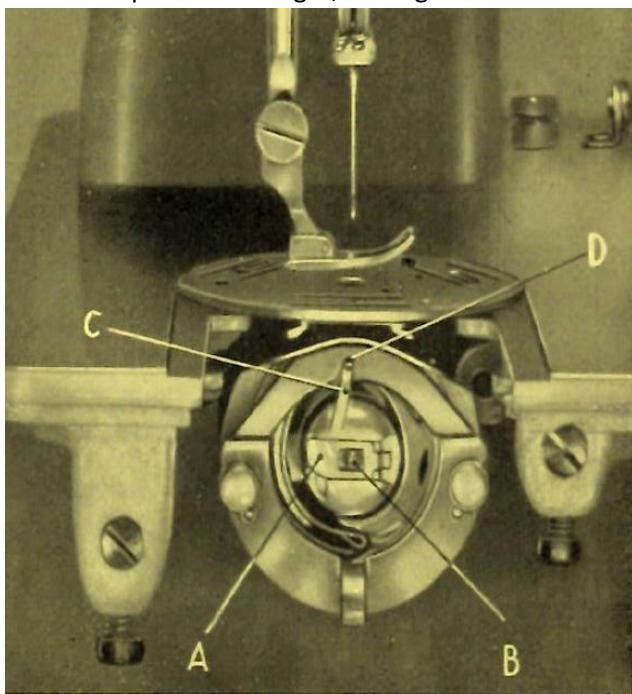


Figure 19

13. To prepare machine for sewing

- a) Hold the end of needle thread with left hand so that thread remains loose.
- b) With right hand, turn flywheel 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 upper thread by hand, lower thread will be pulled up through the stitch hole of the needle plate as shown in Figure 20.
- d) Place the ends of threads, away from you underneath the presser foot. Place fabric between presser foot and needle plate. The machine is now ready for sewing.

Caution: It is important once the machine is threaded, to make certain 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 shuttle and damage or break the needle.

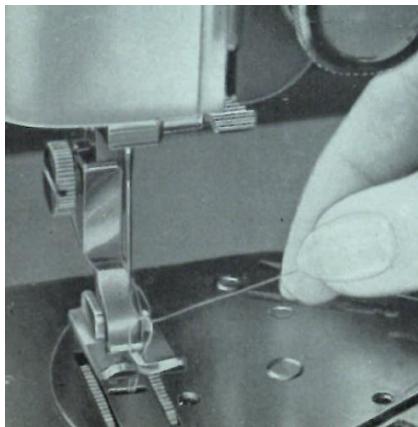


Figure 20

14. To connect machine to the power supply

Tilt the machine back on its hinges and check whether it is provided with the voltage tap-changer covered with a transparent plate as shown in figure 21.

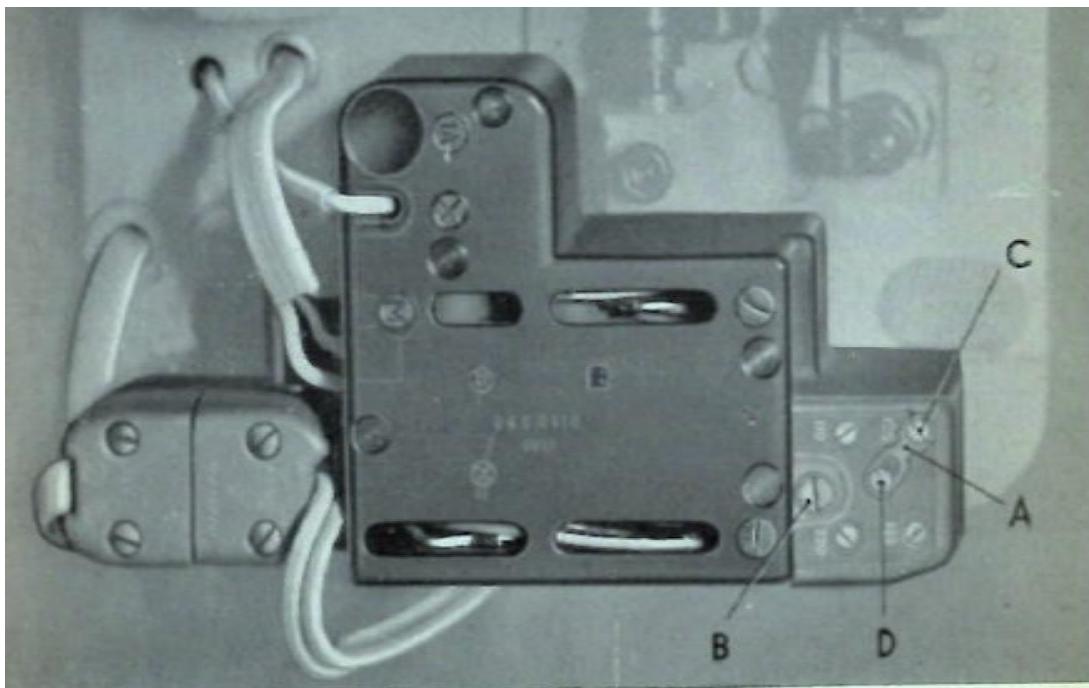


Figure 21

Then before inserting machine plug in the supply current outlet, make certain that the small bridge A (figure 21) of the voltage tap-changer is inserted according to the local supply current. If it is not, proceed as follows:

- 1) Remove the transparent cover plate by loosening screw B.
- 2) Remove screw C and slightly loosen screw D.
- 3) Turn the small bridge A round so that its extremity faces the hole corresponding to the local supply current.

- 4) Tighten screws C and D.
- 5) Replace transparent cover plate by means of screw B.

N.B. – If your machine is not provided with the voltage tap-changer, then just insert the plug into the wall outlet.

[15. To run the machine](#)

- a) Connect the machine to the electric power supply (see Page 24 on how to connect)
- b) Push switch Z (figure 22) towards the right into position L. When switch Z is in position L, a red lamp B (figure 23) situated in the lower half of the face plate, will light up, indicating that current is being supplied to the machine.
- c) Start the machine by means of the control.

With the switch M (figure 22) the speed regulator, a constant reduction of motor speed can be obtained; this is useful for certain types of work and also for beginners.

When switch M is in Max position, the speed of motor will be that as regulated by the rheostat; in the Min position, the range of speed will be constantly reduced.

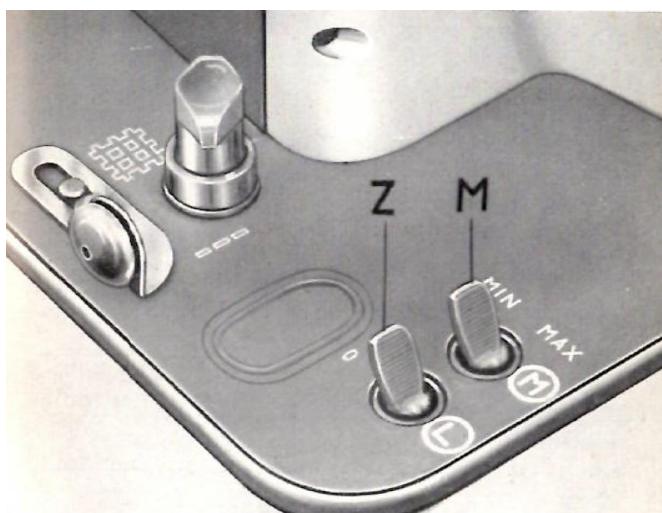


Figure 22

When work is finished, push switch Z towards the left into position O

NOTE: if sewing conditions make the built in light unnecessary, it can be cut out simply by turning with a finger the shade which is controlled by the knurled button A (see figure 23) under the face plate. The red signal light B however will continue to glow.

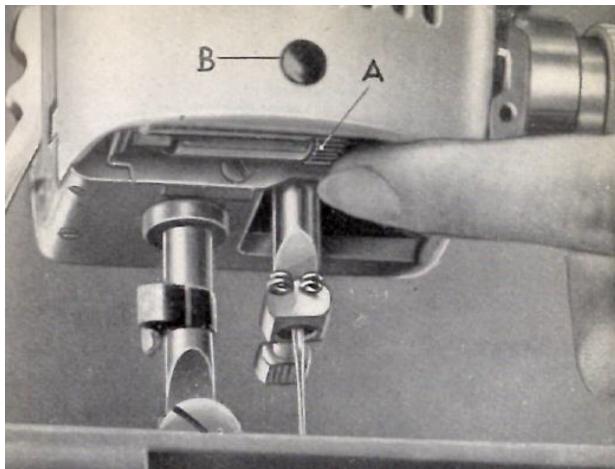


Figure 23 To commence sewing

16. To Commence Sewing

- a) Place fabric between presser foot and needle plate.
- b) Lower presser foot by pushing presser foot lever down.
- c) Turn flywheel toward you until take-up lever is at its highest point and set machine in motion by pushing knee control (or stepping on foot control).
- d) Hold both threads with left hand, for about 3 or 4 stitches, to prevent tangling of the threads or clogging of shuttle.
- e) You may now proceed with sewing as you see fit.

17. To adjust tensions

- a) When the tensions of needle thread and bobbin thread are nearly equal, the stitches on both sides of the fabric will look alike. This means that the 2 threads are locked in the centre of the fabric thickness, in other words, the tensions are even (Figure 24)



Figure 24

In this condition, 2 faults may occur:

1. Even tensions, too loose:
The stitches are too loose. Tighten the needle thread tension knob (figure 25) by turning it clockwise. The screw A (figure 26) on the bobbin case must be turned in the same direction with a screwdriver.
2. Even tensions, too tight.
The fabric tends to ruffle or the thread breaks. Loosen both tensions by turning in the opposite direction to that described in 1 above.

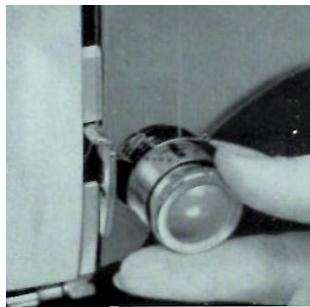


Figure 25

18. To regulate Length of stitch

The length of stitch is regulated by means of knob A (figure 26) on which is a graduated scale C showing the various stitch lengths from 0 to 4. In order to set a definite length of stitch, turn knob A until the number corresponding to the required stitch length is facing the alignment mark B on the machine. Naturally, the stitch length increases 0 (minimum length) to 4 (maximum length). Normal stitch length corresponds to the number 2.



Figure 26

19. To regulate Length of Stitch for reverse stitching

- Regulate the length of stitch as for forward (see above)
- Push button R (figure 30) as far as it will go. The machine will then sew in reverse with the same stitch length as previously regulated. Button R is to be pressed down with a finger all the time during which reverse sewing is desired. As soon as button R is left free, the machine resumes sewing forward with the same stitch length.



Figure 27

20. To drop feed dog

- Turn the Drop feed dog button A (figure 28) either clockwise or counter-clockwise so that one of the 2 prongs on either side of the button is facing the square alignment mark B on the bed plate of the machine.
- Push button A down (figure 28). The button will remain down and one of its side prongs will rest on the square alignment mark B on bed plate.

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 buttons. In order to raise the feed dog, turn the button A so that one of its side prongs is facing the opposite alignment mark on the bed plate. The button A will come out by itself.

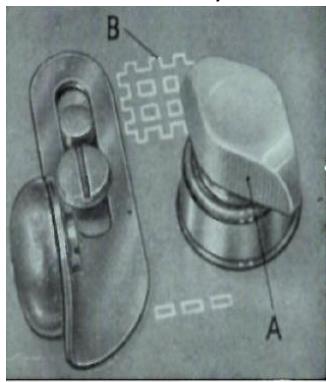


Figure 28

21. To drop the feed dog from time to time

- Set Button A in such a way that one of its prongs is facing the lineal alignment mark C on the bed plate (Figure 29)
- At the desired moment in sewing, push down button A and hold it down with a fingertip until the desired number of stitches has been sewn (maximum 15 to 20 stitches).
- Release button and it will return to normal position by itself.

Operations b and c can be repeated at will.

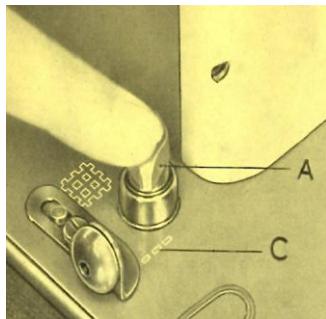


Figure 29

22. 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.

23. To remove work from the machine

- Turn flywheel towards you until take-up lever reaches its highest position.
- Raise presser foot by raising presser foot lever to its highest level.
- Draw fabric back (away from you) about 4 inches.
- Draw threads, keeping them taut through thread cutter H (figure 30) cut them and remove the fabric.

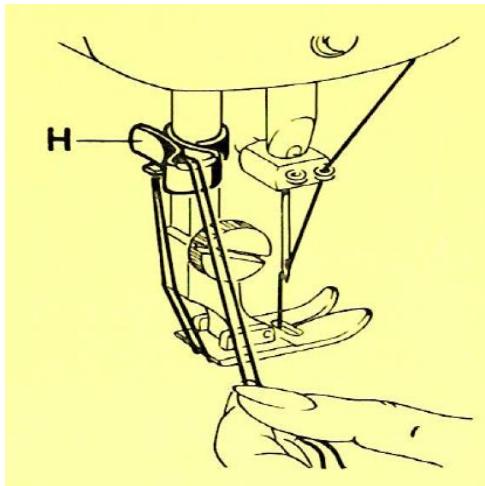


Figure 30

By following these rules, the ends of both threads will be held by the thread cutter in such a way that the machine is ready to perform another seam without requiring that the threads be held by the operator during the first 4 stitches.

24. To remove and replace the shuttle

If the machine flywheel turns heavily or jams slightly, it may be due to a piece of loose thread which has been caught between shuttle and race. To correct this condition, proceed carefully as follows:

- Bring needle up to its highest position by turning flywheel slowly towards you.

- 2) Tilt machine back on its hinges, so that bobbin case is in full view, and remove it.
- 3) Snap out pins by spreading them apart, and with left hand, remove race plate by turning it away from the race (Figure 31).

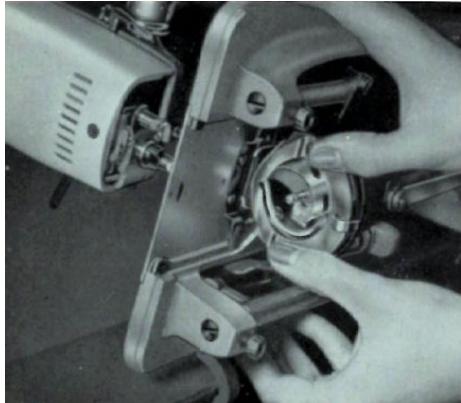


Figure 31

- 4) Remove shuttle by pulling it to the left with thumb and forefinger of left hand (Figure 32). This leaves the shuttle race free for cleaning.
- 5) Remove lint and pieces of thread with the small lint brush contained in the accessory box, then put a drop of oil into the race and oil the rim of the shuttle only.

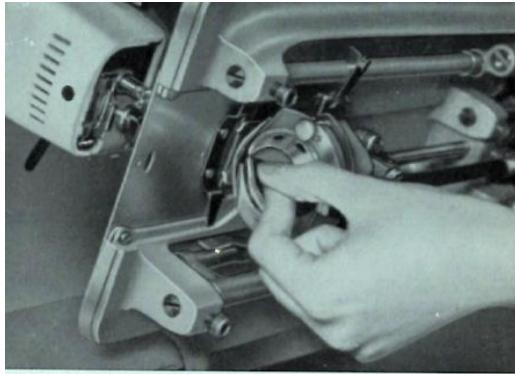


Figure 32

- 6) To replace shuttle, hold it with left thumb and forefinger and without forcing, insert into race fitting it opposite to shuttle carrier (figure 32)
- 7) Fit race plate onto the 2 short studs on the shuttle race and snap pins bac into place (figure 31).
- 8) Reinsert bobbin case, then lower machine to working position.

25. To clean feed dog and needle plate seat

- a) Bring needle to its highest position by turning flywheel slowly toward you. Move slide plate of machine all the way to the left.
- b) Disengage needle plate by means of lever A as shown in figure 7.
- c) Remove needle plate from machine.
- d) Clean the feed dog teeth and the section of the base on which the needle plate is set, by using a small brush.

- e) Replace the needle plate and press lever A (figure 7) in order to insert pin C at the right position to be engaged.
- f) Block needle plate by pressing on pin C.

26. To remove and replace light bulb

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

- a) Open face plate of machine.
- b) Carefully remove old light bulb B (figure 33) by pulling it, together with its shade A downward and out of the lamp holder P. If necessary, slightly spread the wall portion R of the lamp holder to make removal of the light bulb easier.
- c) Remove old bulb from shade and insert new bulb. In both cases slight pressure must be exerted at one end of the bulb.
- d) 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.
- e) Close face plate again.
- f) USE ONLY NECCHI light bulbs.

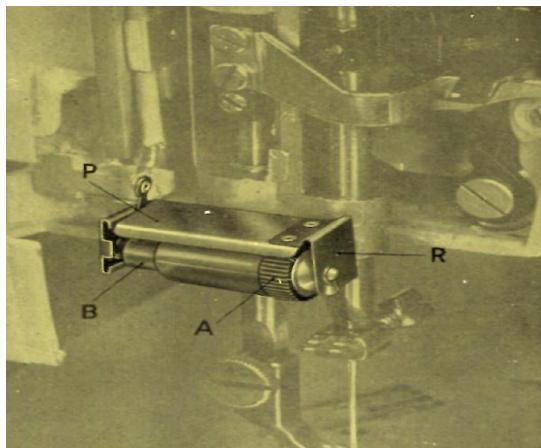


Figure 33

27. Driving the machine

For machines fitted on cabinets for dual operation (both treadle and electrical).

Instructions for changing from treadle drive to motor drive –

- 1) Remove the 2 screws A (figure 34) and the cover B.
- 2) Slightly loosen the 2 screws E.
- 3) Unscrew the stop motion knob F turning it in the direction of the arrow.
- 4) Move the flywheel G slightly and consequently its counterweight disc H as much as necessary to remove the leather belt and insert the rubber one in the groove of the flywheel. If you wish to remove the leather belt completely, unthread an end of the belt from its clip.
- 5) Push stop motion knob and flywheel back into place.
- 6) Insert the rubber belt in the groove of the motor pulley

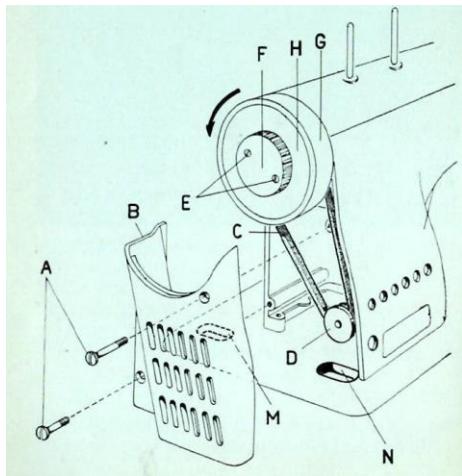


Figure 34

N.B – When doing this, bear in mind that the protrusion I of the counterweight must go into the slot L of the upper shaft (figure 35).

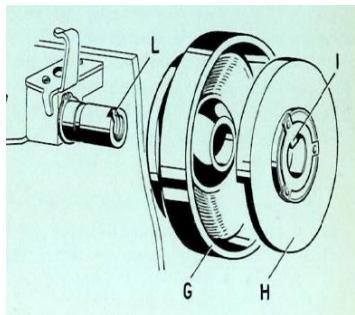


Figure 35

Instructions for changing over from motor-drive to treadle drive

- 1) Remove the 2 screws A (figure 34) and the cover B.
- 2) Remove the belt C from the motor pulley D.
- 3) Slightly loosen the 2 screws E.
- 4) Unscrew the stop motion knob F turning it in the direction of the arrow.
- 5) Move the flywheel G slightly and consequently its counterweight disc H as much as necessary to remove the rubber belt and insert the leather one in the groove of the flywheel after having passed it through the 2 slots M and N on the bed plate of machine.
- 6) Follow the contrary procedure to reassemble.

N.B – In reassembling, bear in mind that the protrusion I of the counterweight must go into the slot L of the upper shat (figure 35).

28. Causes of minor difficulties

Needle (upper) thread breaks

- a) Needle may not be inserted correctly.

- b) Needle thread is not properly threaded.
- c) Needle thread tension is too tight.
- d) Needle thread is of wrong quality for fabric.
- e) Needle thread has knots.
- f) Needle eye is rough or sharp.
- g) Point of needle is damaged (bent over) or blunt.
- h) Stitch hole in needle plate is rough or sharp.
- i) Needle is too fine for thread in use.
- j) Machine is started at full speed.
- k) Machine is started with thread take-up lever not in its highest position.
- l) Bobbin case has rough spot due to being hit and damaged by needle.
- m) Shuttle has rough or sharp spots.

Needle breaks

- a) Pulling fabric to or from you in such a manner that needle strikes needle plate.
- b) Needle is bent or has blunt point.

Bobbin (lower) thread breaks

- a) Bobbin thread tension is too tight.
- b) Bobbin is wound unevenly.
- c) Bobbin is too full and binds in bobbin case.
- d) Dirt or lint in bobbin case.

Skipped stitches

- a) Needle is inserted incorrectly
- b) Needle is bent or blunt.
- c) Thread is too heavy for the size of needle.
- d) Needle is of wrong size for fabric.

Uneven Stitches

- a) Presser foot not resting evenly (fully) on fabric.
- b) Insufficient pressure on presser foot.
- c) Feed dog is set too low.
- d) Pulling fabric instead of allowing it to be fed by machine.
- e) Stitch is too short.
- f) Using too fine a needle with too coarse or uneven thread.

Heavy turning or jamming of machine (flywheel!)

- a) Loose piece of thread has become wedged between shuttle and race (see instruction for cleaning shuttle and race)
- b) Transmission belt between motor and flywheel is too tight (adjust it by loosening the screws which fix the motor to the machine)
- c) Machine is not lubricated.
- d) Needle has blunt point.

In case you cannot find or adjust the trouble, get your machine serviced.

Machine does not sew straight stitch

This may happen only if the discs have not been removed from automatic mechanism. (How to stop the motion of the Automatic Sewing Mechanism on page 81)

Light does not go on

- a) Line has no current (check fuses and master switch)
- b) Plugs are not well inserted into receptacles.
- c) Filament of light bulb is broken.
- d) Voltage tap-changer and/or four-way plug is not well inserted.

Light is too bright or too dim

May be due to the voltage tap-changer, located under the transformer, being in wrong position (see general instruction on how to set it for your local voltage).

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

Chapter 1

Sewing without the Automatic Mechanism

The following work can be done on the machine without using the automatic mechanism:

- a) Normal straight stitching.
- b) Zig-Zag stitching
- c) Fancy stitches, corded appliques, ordinary appliques, monograms, etc.
- d) Button sewing
- e) Hemming
- f) Blind stitching
- g) Circular sewing
- h) Sewing with twin needles

Important – all types of work described in this chapter are performed without Automatic Mechanism.

To Disconnect the Automatic Mechanism from the Machine

- a) Remove any discs in the cam stack
 - Move the automatic cam stop motion lever 8 which is at the rear of the machine arm, towards the face plate until cannot be moved any further.
 - Open the automatic mechanism lid on top of the machine and remove the cams. Close the lid
 - Push automatic cam stop motion lever back until it rests against the machine arm.
- b) Stop Automatic Mechanism motion
 - Turn the design graduating knob clockwise until the diamond design on this knob coincides with the white square mark on the machine arm.
 - Rotate the balance wheel through at least one complete revolution.
 - Again, turn design graduating knob in a clockwise direction until the triangular design on it coincides with the white square mark on the machine arm.

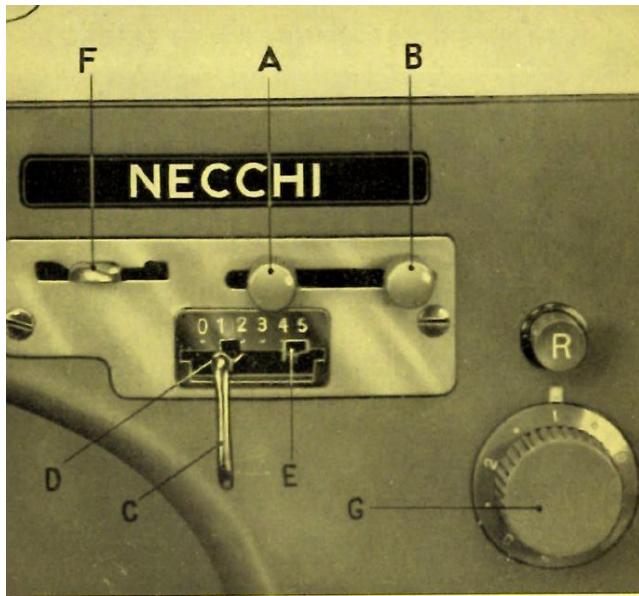


Figure 36

1. Straight Sewing

Settings –

- Needle Plate – turn needle plate so that the slot position W is above feed dog and below needle (see figure 7)
- Needle position lever F (figure 36) – In left notch
- Zig Zag Stitch Lever C – at extreme left, to move this lever press down lightly and guide by hand.
- Stitch length knob – set for desired stitch length.

2. Tacking

Tacking – a series of quick forward and backward stitches for reinforcement and finishing of seams.

- Stitch length knob – for desired stitch length.
- Push button R (figure 36) as explained for sewing in reverse.

3. Basting

- Set stitch length knob for maximum stitch length
- Decrease needle thread tension by setting tension indicator between 0 and 3

This permits long and loose stitches to be made, which can easily be removed later.

4. To set machine for Zig Zag stitching

Settings:

- Turn needle plate so that slot position U is above feed dog and below needle (figure 7)
- Loosen the 2 buttons A and B (figure 36)
- Move the zig zag stitch lever C, along the graduated scale until it reaches the desired width and hold it by hand in this position.

- d) Shift button A so that the index stop D rests against the zig zag stitch lever on its left side. To fix the zig zag stitch lever in this position, push the index E against it.
- e) Tighten nuts A and B firmly.

5. Zig Zag stitching

- f) Needle Position lever – in center notch
- g) Zig-Zag Stitch lever – set for desired length
- h) Stitch length knob – set for desired length.

6. Embroidery

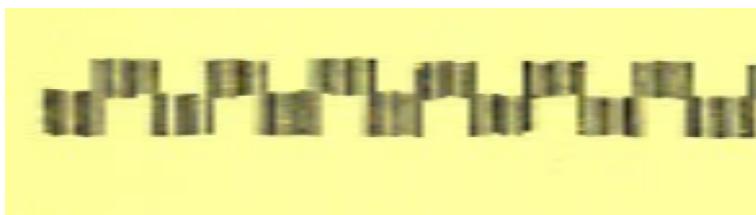
- i. Satin Stitch
 - a) Needle Position Lever – center notch
 - b) Zig-Zag Stitch lever – Set for desired Stitch width
 - c) Stitch Length Knob – set at close to zero mark as possible, so that the fabric is still being fed freely and the stitches don't pile up.
 - d) Threads – use embroidery thread no. 50 for the needle and no. 50 for the bobbin.
 - e) Thread tensions – use fairly loose upper tension (between 0 and 1) and a rather tight lower tension. This will cause the lower thread to exert the proper pull on the upper thread. The upper thread will lie flush on the upper side of the fabric and part of it will be visible on the lower side of fabric. The lower thread should appear on underside of fabric as a seam which is almost straight.
 - f) Presser foot – use hinged grooved satin stitch foot.
 - g) Commence sewing. Follow above procedure for all fancy embroidery work (decorative stitches) in which the satin stitch is the basic stitch for all straight running designs.

ii. Triangular Satin stitch



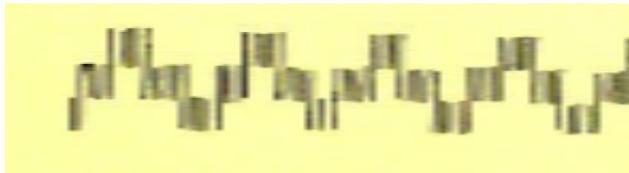
- a) Needle Position lever – center notch
- b) Zig Zag Stitch lever – set at mark 1, also loosen nut B (figure 36) and move it to the right until the index stop is at the extreme right. Then tighten nut B again.
- c) Stitch length knob – set at close to zero mark as possible, so that the fabric is still being fed freely and the stitches don't pile up.
- d) Commence sewing and move zig-zag lever slowly from 1 to 5 and then flip the lever quickly back to 1. Repeat operation as many times as desired. The length of the design depends on the speed at which the zig zag stitch lever is operated.

iii. Cubed satin stitch



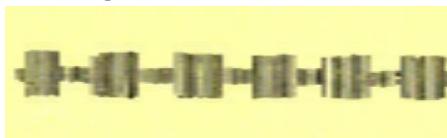
- a) Needle position lever – In left notch
- b) Zig Zag stitch lever – set at mark 2.5
- c) Stitch length knob – set at close to zero mark as possible, so that the fabric is still being fed freely and the stitches don't pile up.
- d) Upper tension - use fairly loose upper tension (between 0 and 1)
- e) Commence sewing and move the needle position lever rapidly from the left notch to the right one and vice versa, without stopping at the center notch. Repeat as many times as desired. The length of the design depends on the time the lever remains in each one of the 2 notches.

iv. Pyramid Satin stitch



- a) Needle Position lever – in left notch
- b) Zig Zag stitch lever – set at mark 1.5
- c) Stitch length knob – set at close to zero mark as possible, so that the fabric is still being fed freely and the stitches don't pile up
- d) Upper tension - use fairly loose upper tension (between 0 and 1)
- e) Commence sewing and move the needle position lever rapidly from the left notch to the right one and vice versa, without stopping at the center notch. Repeat as many times as desired. The length of the design depends on the time the lever remains in each one of the 2 notches.

v. Variegated Satin stitch



- a) Needle Position lever – in center notch
- b) Zig Zag stitch lever – set between marks 1 and 4
- c) Stitch length knob – set at close to zero mark as possible, so that the fabric is still being fed freely and the stitches don't pile up
- d) Upper tension - use fairly loose upper tension (between 0 and 1)
- e) Commence sewing with the zig zag stitch lever at 1 then flip it 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.

Embroidery and monogram with dropped feed

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

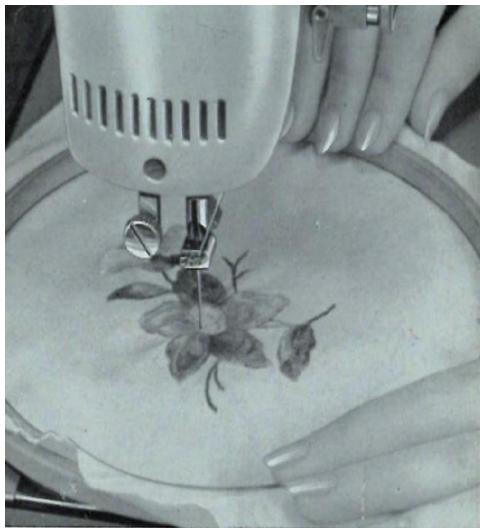
See figure 36 for references to buttons.

- a) Needle Position Lever – in center notch
- b) Zig Zag Stitch Lever – set for desired stitch width

- f) Stitch length Knob – set at close to zero mark as possible, so that the fabric is still being fed freely and the stitches don't pile up
- g) Upper tension - use fairly loose upper tension (between 0 and 1)
- c) Feed dog – proceed as explained in “To Drop Feed Dog” on Page 35

Procedure

- a) Remove presser foot.
- b) Clamp fabric, on which embroidery has been designed, in the hoop.
- c) Bring presser bar lever to its lowest position.
- d) Hold hoop and needle thread with the left hand, and with the right hand turn the flywheel slowly towards you in order to bring the lower thread up through the fabric and out of it.
- e) Hold both thread with left hand and commence sewing slowly while holding the hoop with the right hand.
- f) Move hoop slowly and make certain to move only when needle is out of fabric.



9. Applique work

Includes several kinds such as:

- i. Lace edging –
 - a) Needle position lever – in center notch
 - b) Zig Zag Stitch lever – set at desired stitch width
 - c) Stitch length knob – Set at desired stitch length
 - d) Upper tension – normal
 - e) 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.
- ii. 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 Figure 37.



Figure 37

- a) Needle Position Lever – in center notch
- b) Zig Zag Stitch lever – set width of zig zag stitch in accordance with thickness of cord being used.
- c) Stitch Length Knob - set at close to zero mark as possible, so that the fabric is still being fed freely and the stitches don't pile up
- d) Upper tension - use fairly loose upper tension (between 0 and 1)
- e) Presser foot – zig zag cording foot
- f) Insert cord into the hole in the base of the cording foot, then pull it from front to back through the hose 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.

iii. Contrast work Applique

This type of work is essentially the same as Raised Stitch Applique. To obtain desired contrast, the colour of the cord must be different from the colour of the needle thread.

- a) Needle Position Lever – in center notch
- b) Zig Zag Stitch lever – set width of zig zag stitch in accordance with thickness of cord being used. But in this case set them slightly wider than for Raised Stitch applique to obtain the pleasing contrast of the colors of the cord and needle thread.
- c) Stitch Length Knob - set at close to zero mark as possible, so that the fabric is still being fed freely and the stitches don't pile up
- d) Upper tension - use fairly loose upper tension (between 0 and 1)
- e) Presser foot – zig zag cording foot

iv. Cut-out work

- a) Needle Position Lever – center notch
- b) Zig-Zag Stitch lever – Set for desired Stitch width
- c) Stitch Length Knob – set at close to zero mark as possible, so that the fabric is still being fed freely and the stitches don't pile up.
- d) Threads – use embroidery thread no. 50 for the needle and no. 50 for the bobbin.
- e) Thread tensions – use fairly loose upper tension (between 0 and 1) and a rather tight lower tension. This will cause the lower thread to exert the proper pull on the upper thread. The upper

thread will lie flush on the upper side of the fabric and part of it will be visible on the lower side of fabric. The lower thread should appear on underside of fabric as a seam which is almost straight.

- f) Presser foot – use hinged grooved satin stitch foot.
- g) In doing this type of work, first baste a piece of the material, on which the design is sketched or printed to the article to which it will be sewn. Then place both, design and article under presser foot and embroider along the outline of the design.

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

10. Hem Stitching

i. Hem with drawn threads



Figure 38

- a) Needle Position Lever – in center notch
- b) Zig Zag Stitch Lever – set for narrow width (between 1 and 2)
- c) Stitch length knob – between 1 and 2
- d) Upper tension – normal
- e) Draw desired number of threads from the article to be hemstitched. Place fabric under presser foot, lower presser foot and commence sewing. Make certain that the needle bites alternately close to the edge into the undrawn side of the fabric and then into the space where the threads have been drawn. After stitching on one side of the drawn space has been finished, complete the hemstitching by repeating the same procedure on the other side of the drawn space.

ii. Hemstitching – Picot edge

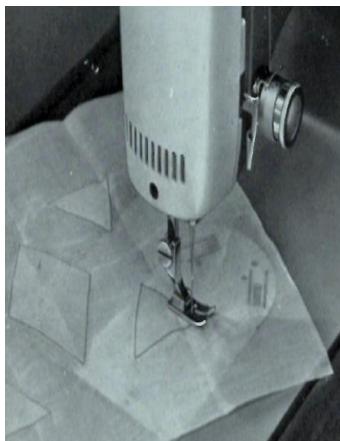


Figure 39

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

- a) Needle position lever – in center notch
- b) Zig Zag stitch lever – set for narrow width (between 1 and 2)
- c) Stitch length knob – between 0 and 1
- d) Upper tension normal
- e) Needle – use size no. 19 (syst. 15 x 1) or no. 120 (syst. 705)
- f) Place fabric, on which design has been sketched or printed, under presser foot. Also place applique to be attached under presser foot. Lower presser foot and commence sewing, following the outline of design (on fabric or applique).
With sharp scissors, cut away surplus 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 the right side (outer holes) of the first row of zig zag stitches. Running the machine slowly, sew all around applique.
To obtain a picot edge cut with sharp scissors between rows of hemstitching.

11. Overlock stitch

(zig zag on raw edge overcasting a raw edge)

- a) Needle position lever – in center notch
- b) Zig Zag Stitch lever – any desired width
- c) Stitch length knob - any desired length
- d) Upper tension – normal
- e) 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.

12. Narrow straight stitch hem

- a) Needle Position lever – in center notch
- b) Zig Zag stitch lever – at extreme left

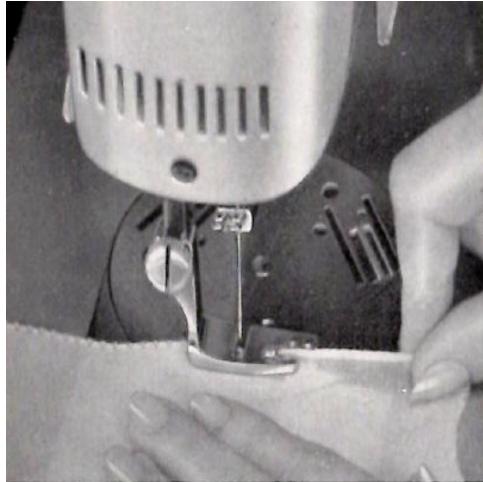
- c) Stitch length knob – between 3 and 4
- d) Upper tension – normal
- e) Presser foot – use straight stitch narrow hemmer foot
- f) Leave hemmer foot in raised position. Fold over edge of fabric about $1/8"$ for length of about 2" and insert the fold form beneath the hemmer foot into the spiral tongue (scroll) of the foot. This scroll turns in the edge of the fabric and forms the hem. Move fabric back and forth until hem forms itself into a scroll, then pull fabric toward you until its end is just below the needle.
- g) Lower hemmer foot and commence sewing. Guide and feed just enough material into hemmer foot to fill out and scroll.

Caution – Do not crowd fabric into scroll and do not leave scroll only partly filled by fabric.

13. Flat filled seams

- a) Needle Position Lever – in center notch
- b) Zig Zag Stitch lever – at extreme left
- c) Stitch length knob – between 3 and 4
- d) Upper tension – normal
- e) Presser foot – use straight stitch narrow hemmer foot. Leave hemmer foot in raised position.
- f) 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 $1/8"$ beyond right edge of top piece. 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 fabric. Use edges of protruding toe of hemmer foot to guide edges of top and bottom pieces of fabric. Open and flatten out fabrics, right sides down with the 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 the scroll of hemmer foot.
Lower hemmer foot and sew. Guide the first row of stitches along the left edge of protruding toe of hemmer foot.

14. Narrow rolled edges



- a) Needle Position lever – in center notch

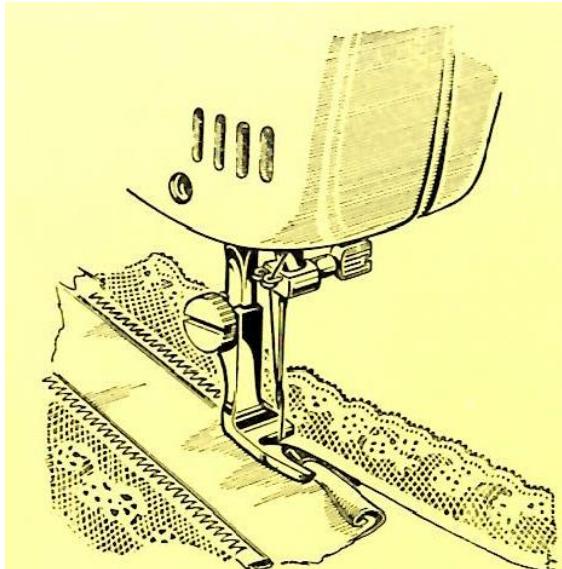
- b) Zig Zag Stitch lever – between 2 and 3
- c) Stitch length knob – between 1 and 2
- d) Upper tension - normal
- e) Presser foot- use presser foot for shell hemming.
- f) Leave hemmer foot in raised position. Insert edge to be hemmed into scroll of presser foot, then carefully slip fabric through scroll until the 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.

15. Hemming and sewing on lace

These 2 operations can be done at the same time.

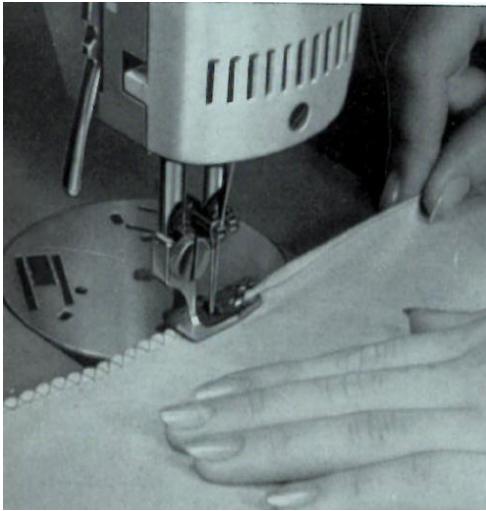
- a) Needle Position lever – in center notch
 - b) Zig Zag Stitch lever – between 2 and 3
 - c) Stitch length knob – between 1 and 2
 - d) Upper tension - normal
 - e) Presser foot- use presser foot for shell hemming.
 - f) Leave hemmer foot in raised position. Insert edge to be hemmed into scroll of presser foot, then carefully slip fabric through scroll until the end of fabric is just below needle. Lower hemmer foot and commence sewing, make several stitches and stop machine. Bring up needle to its highest position. Raise hemmer foot, insert end of lace into the slot on side of hemmer foot and pass 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 the scroll of foot smoothly and evenly.



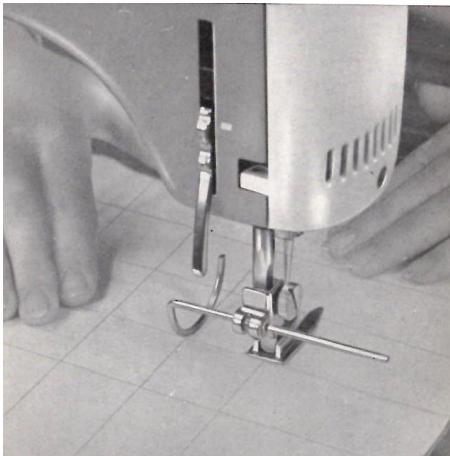
16. Shell stitch

This type of stitch is best done on silk and soft rayon's only.



- a) Needle Position lever – in center notch
- b) Zig Zag Stitch lever – between 2 and 3 (rather wide)
- c) Stitch length knob – between 1 and 2
- d) Upper tension - rather tight. This will cause edge to picot and thus give desired effect of the shell stitch.
- e) Presser foot- use presser foot for shell hemming.
- f) Leave hemmer foot in raised position. Insert edge to be hemmed into scroll of presser foot, then carefully slip fabric through scroll until the 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.

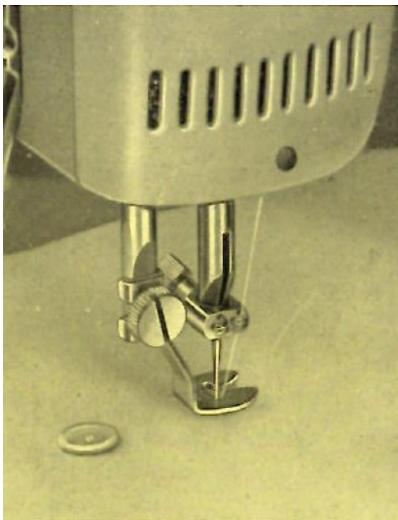
17. Quilting



- a) Needle Position Lever – in center notch
- b) Zig Zag Stitch lever – at extreme left
- c) Stitch length knob – any desired length
- d) Upper tension – normal
- e) Presser foot – zig zag stitch hinged foot

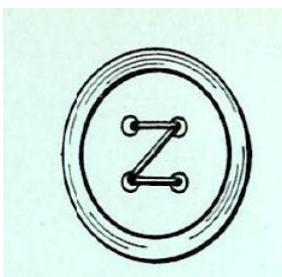
- f) Attach adjustable quilting stitch guide to presser foot bar. Place fabric under presser foot and line it up under needle on line to be stitched. Move curved guide bar to right as far as necessary to mark desired line of parallel stitching line. Stitch first line.
 Move material to right until curved guide bar is directly over the first stitched line. Needle will then be directly over point where the second line of stitching will be made.

18. Button Sewing



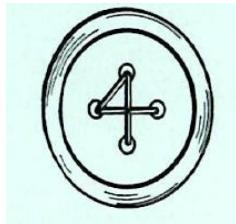
- i. 2-hole buttons
- Needle lever position – in left notch
 - Zig Zag Stitch lever – between 4 and 5 (in accordance with the distance between holes of button)
 - Upper tension – normal
 - Feed dog – should be dropped
 - Presser Foot – use button sewing foot. Leave button sewing foot in raised position.
 - While lowering the foot, place button between presser foot and fabric, so that holes of the button are in line with the zig zag stitch.
 By hand, turn flywheel slowly toward you so that needle goes through left hole of button.
 Continue turning flywheel by hand, making certain that needle enters the right hole of button properly and does not hit button. If needle not clear button, change the throw of needle by adjusting zig zag stitch lever. Run machine at medium speed making about 5 to 6 stitches. Bring zig zag stitch lever to extreme left, making a few straight stitched in the same hole (to tie up the stitch and prevent unravelling).

ii. 4 Hole buttons



- a) Needle lever position – in left notch
- b) Zig Zag Stitch lever – between 4 and 5 (in accordance with the distance between holes of button)
- c) Upper tension – normal
- d) Feed dog – should be dropped
- e) Presser Foot – use button sewing foot. Leave button sewing foot in raised position.
- f) While lowering the foot, place button between presser foot and fabric, so that holes of the button are in line with the zig zag stitch.
- g) By hand, turn flywheel slowly toward you so that needle goes through left hole of button. Continue turning flywheel by hand, making certain that needle enters the right hole of button properly and does not hit button. If needle not clear button, change the throw of needle by adjusting zig zag stitch lever. Run machine at medium speed making about 5 to 6 stitches.
- h) After sewing through first 2 holes, align for the second pair of holes and repeat step g above.
- i) Then lock the stitch by bringing zig zag lever to the left and making a few straight stitches in the same hole.

iii. 4-hole buttons cross stitching



- a) Needle lever position – in left notch
- b) Zig Zag Stitch lever – between 4 and 5 (in accordance with the distance between holes of button)
- c) Upper tension – normal
- d) Feed dog – should be dropped
- e) Presser Foot – use button sewing foot. Leave button sewing foot in raised position.
- f) While lowering the foot, place button between presser foot and fabric, so that holes of the button are in line with the zig zag stitch.
- g) By hand, turn flywheel slowly toward you so that needle goes through left hole of button. Continue turning flywheel by hand, making certain that needle enters the right hole of button properly and does not hit button. If needle not clear button, change the throw of needle by adjusting zig zag stitch lever. Run machine at medium speed making about 5 to 6 stitches.
- h) Lift presser foot slightly, turn fabric at right angles so that remaining 2 holes are in proper position under the needle. Proceed to stitch between the remaining 2 holes, then bring the zig zag stitch lever to the extreme left making a few straight stitched through the same hole to lock.

19. Darning

- a) Needle Position lever – in center notch
- b) Zig Zag stitch lever – extreme left
- c) Upper tension – normal
- d) Feed dog – to be dropped

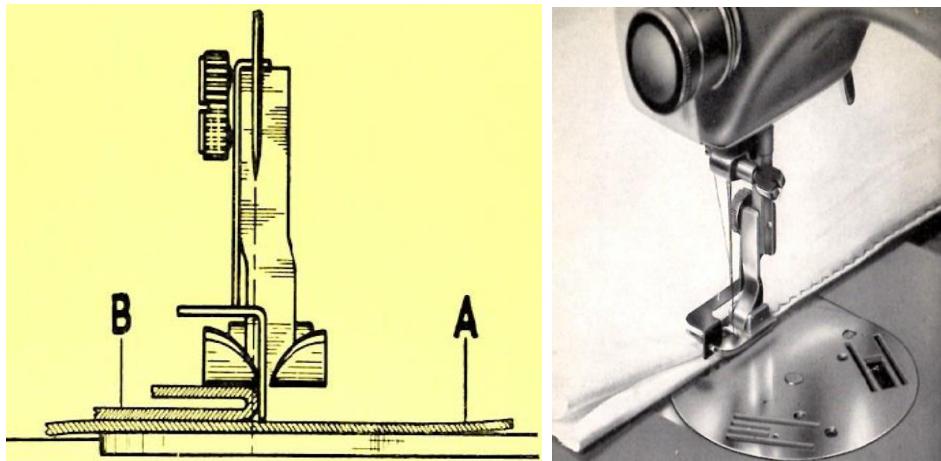
- e) Presser foot – darning foot
- f) Sewing thread – use thread suitable for article to be darned.
- g) Place portion of fabric to be darned under the presser foot and lower foot.



- h) Commence sewing (starting just at the left upper edge of hole) and sew across the hole, moving the fabric from left to right, until the hole is filled with parallel lines. Now again start from the upper left and move the fabric forward and backward until the first lines of stitches are fully covered crosswise with the vertical lines of stitches.
- NOTE- if large tears or very large thread bare areas are to be darned, it is advisable to clamp the fabric in an embroidery hoop.

20. Blind stitching

By means of blind stitching, it is possible to sew together a folded piece of fabric (or 2 pieces of fabric) in such a manner that the seam is not visible on one side of the fabric.



- a) Needle position lever – in center notch
- b) Zig Zag Stitch lever – set between marks 2 and 4, according to thickness of the fabric in such a way that the needle enters in the middle of the folded fabric as show in the picture above.
- c) Stitch length knob – set at 4
- d) Upper tension – normal
- e) Presser foot – normal zig zag, stitch hinged foot with blind stitch guide attached to the presser bar.
- f) Place the first fabric unfolded on bed plate of machine. The seam will appear on the underside of this fabric. Place second fabric, properly folded, above the first fabric, as shown above. Lower

the presser foot and commence sewing, see that the folded edge of the upper fabric is always in touch with the rim of the blind stitch guide.

If the seam appears on both sides of the fabric, decrease stitch width of the zig zag stitch. If needle does not hit the folded edge of the upper fabric., increase the width of zig zag stitch.

How to fold material properly for Blind Stitch

- Needle position Lever -in the right notch
- Zig Stitch Lever – set at 4
- Stitch length knob - set at 4
- Upper tension – normal
- Presser foot – regular zig zag stitch hinged foot.

When using lighter fabrics, linens, cotton, percales etc. fold over aw edge of fabric $\frac{1}{4}$ " toward wrong side of fabric as shown in the first picture below.

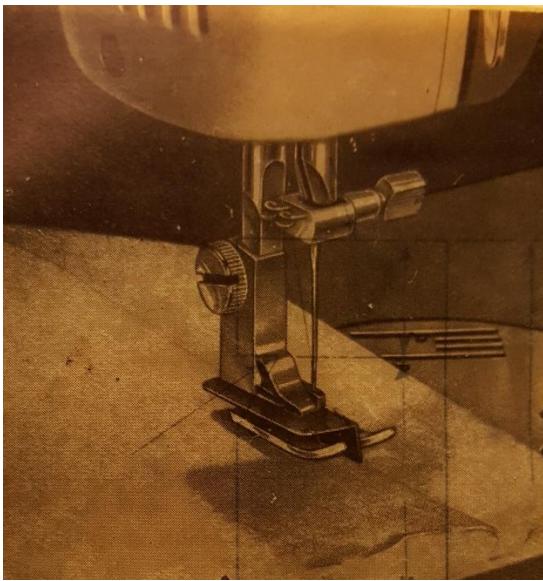
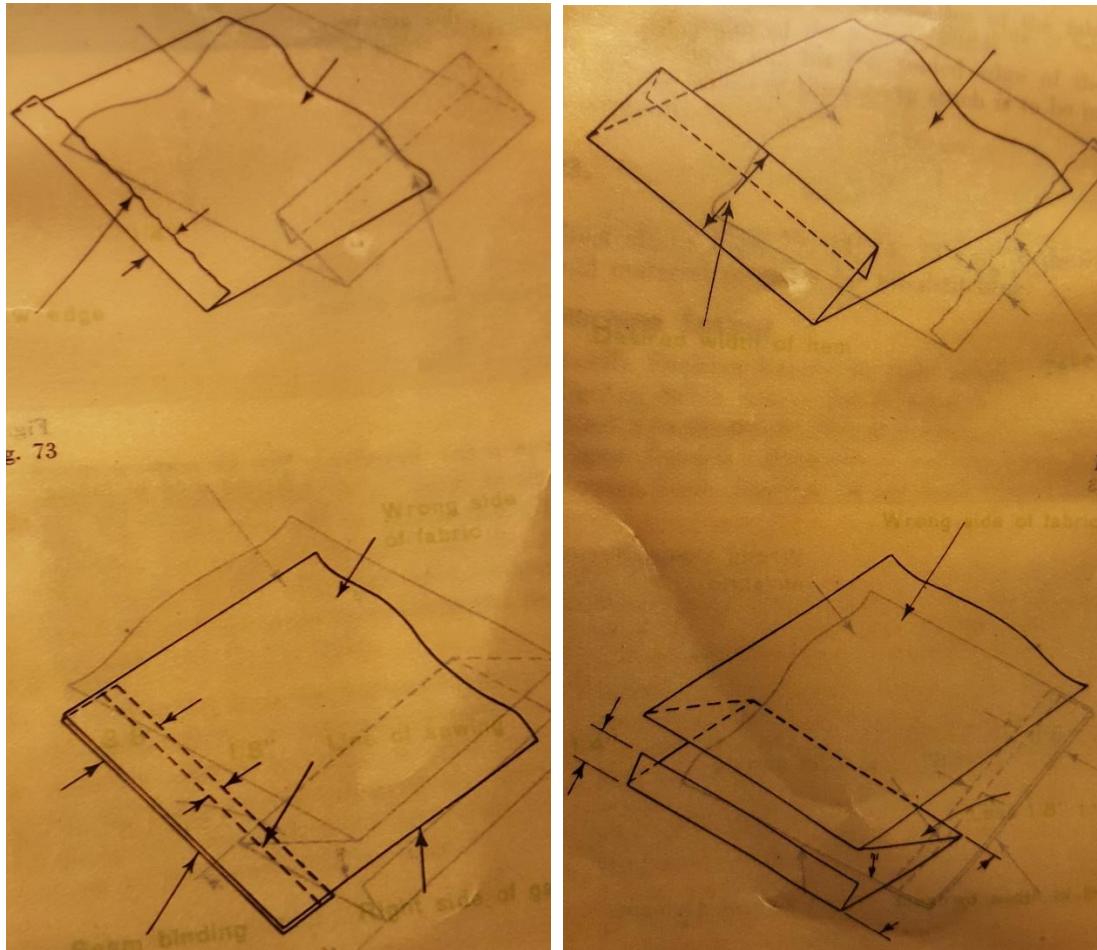
When using heavier fabrics like woolens, rayon etc. seam binding about $\frac{3}{8}$ " wide should be sewn in raw edge at right side of fabric as shown in second picture below, instead of folding over raw edge. Sewing should be done $\frac{1}{4}$ " away from the inside edge of the seam binding.

Fold desired width of hem toward wrong side of fabric, as shown in 3rd picture below. Follow this step for all types of fabrics.

Fold almost the entire width of the hem toward the right side of the garment (see 4th picture below) leaving only about $\frac{3}{8}$ " to $\frac{1}{4}$ " of hem exposed. The blind stitching will then be done on this exposed area.

Lift presser foot and place fabric under the needle in such a manner that the exposed area of hem faces upward and is at the right of the needle (see 5th picture below).

Lower foot and start sewing at a moderate speed. Guide fabric so that the needle when stitching left, just bites into the edge of the fold as shown below.

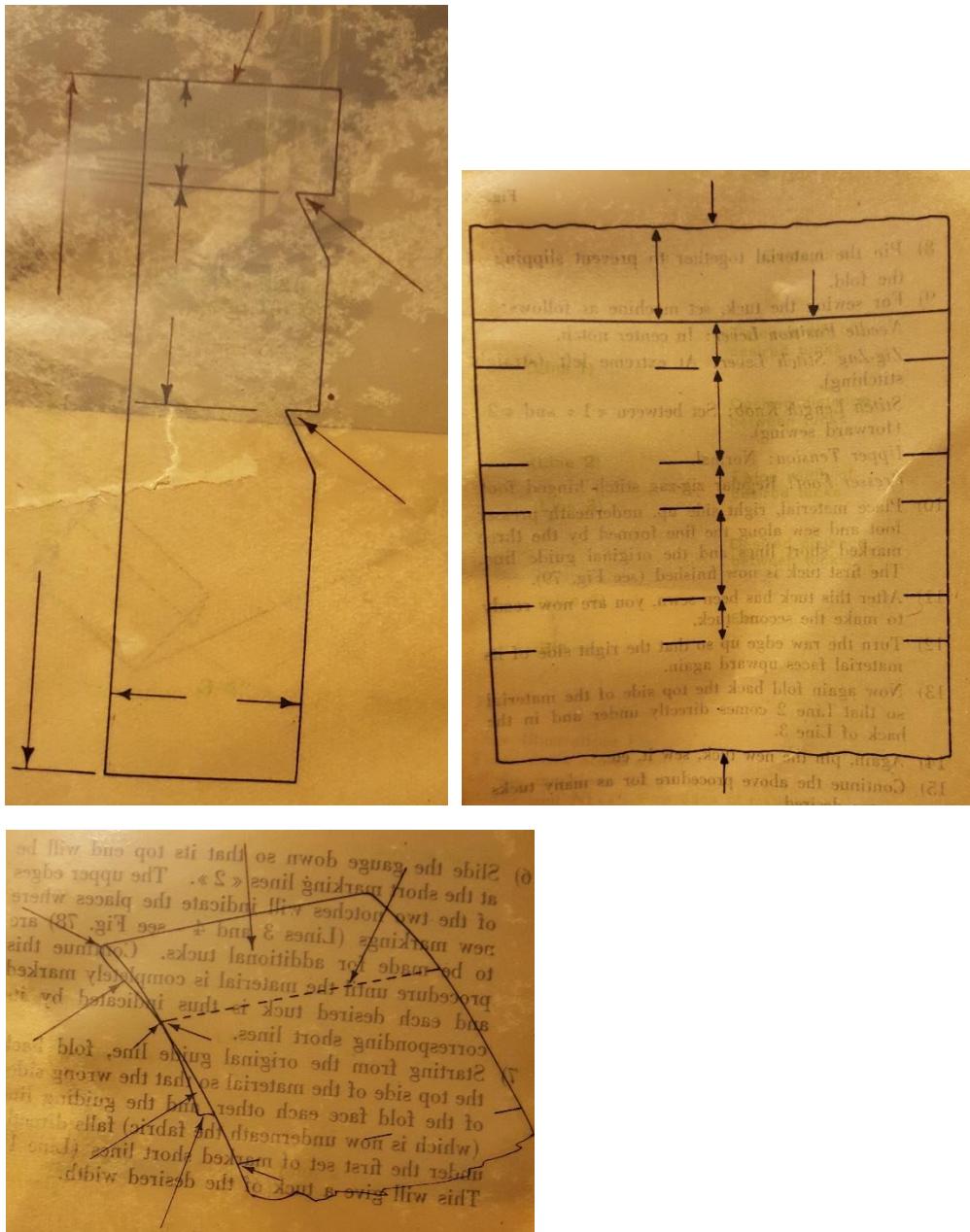


Making tucks in your garments

- From a flat piece of cardboard, cut a strip $\frac{3}{4}$ " wide and approximately 3.5" long, as shown in figure below. This strip will be used as a gauge when marking the tucks to be made on the

material. The length of the strip may vary, depending on the widths of the tucks to be made and the desired distance between the tucks.

- b) At a distance from the top end of the gauge equal to twice width of the desired tuck, cut a notch into the edge of the gauge, as indicated int eh figure below. If, for instance, the width of the finished tuck is to be $\frac{1}{2}$ ", the distance of the notch from the top end of the gauge will be twice $\frac{1}{2}$ " = 1".
- c) Below the first notch, cut a second notch into the gauge at a distance equal to the desired distance between the tucks.
- d) Spread your material, right side up on the work table, mark a guide line on the material 1" away from and parallel with the raw edge of the material. For marking use white tailor's chalk on light materials.
- e) Place the top end of the gauge at the guide line of the material, with the gauge resting flat on eh material and extending below the guide line. Placing the gauge in this manner at the left edge, at the center and at the right edge of the material, draw short marking lines on the fabric, using the upper edges of both notches as guides. Imaginary lines going from the mark at the left edge through the mark in the center, to the mark at the right edge are parallel with the guide line.
- f) Slide the gauge down so that its top end will be at the short marking lines 2. The upper edges of the two notches will indicate the places where new markings (Lines 3 and 4) are to be made for additional tucks. Continue procedure until the material is completely marked and each desired tuck is then indicated by its corresponding short lines.
- g) Starting from the original guide line, fold back the top side of the material so that the wrong sides of the fold face each other, and the guiding line (which is now underneath the fabric) falls directly under the first set of marked short lines (Line 1). This will give a tuck of the desired width.
- h) Pin the material together to prevent slipping of the fold.
- i) For sewing the tuck, set machine as follows:
 - Needle Position Lever – in center notch
 - Zig Zag stitch lever – at extreme left (for straight stitching)
 - Stitch length knob – set between 1 and 2 (forward sewing)
 - Upper tension – normal
 - Presser foot – regular zig zag stitch hinged foot
- j) Place material, right side up, underneath presser foot, and sew along the line formed by the 3 marked short lines and the original guide line. The first tuck is now finished.
- k) After this tuck has been sewn, you are ready for the second tuck. Turn the raw edge up so that the right side of material faces upwards again.
- l) Fold back the top side of the material so that line 2 comes directly under and in the back of line 3. Pin again and sew it.
- m) Repeat for as many tucks as desired.



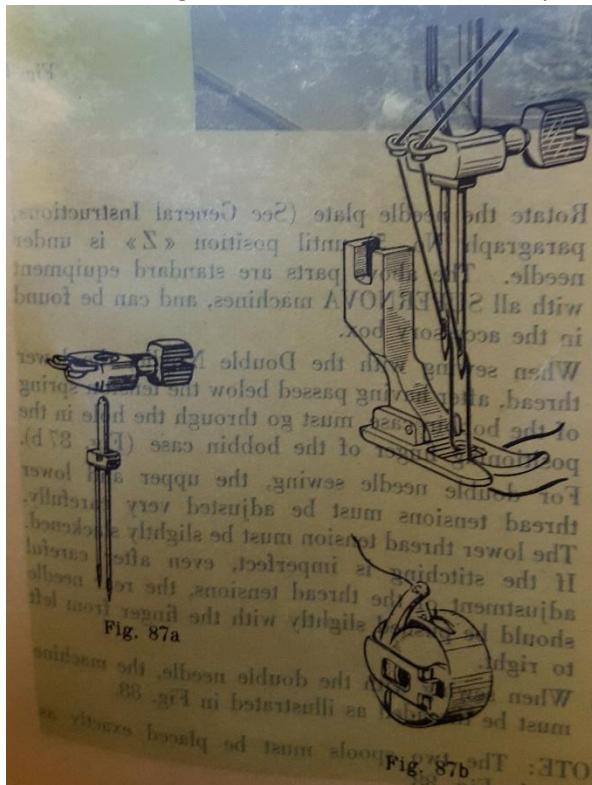
21. Sewing with double needle

The double needle makes it possible to sew on the SUPERNOVA with 2 threads of same color or of different colors, at the same time, increasing the appeal of decorative stitches.

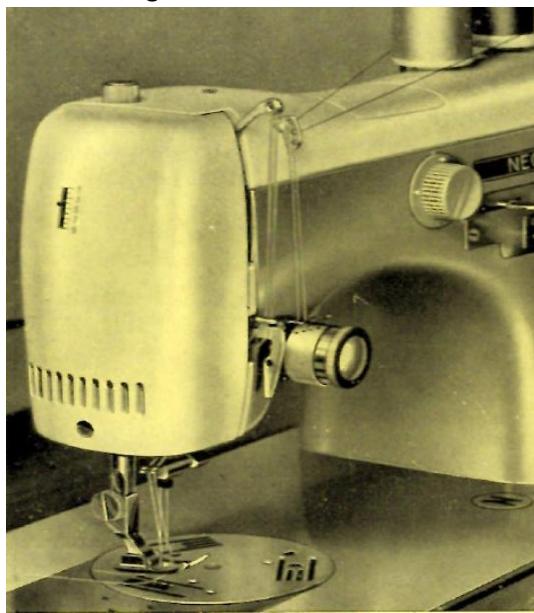
To sew with the double needle, prepare as follows:

- 1) Insert double needle in the same manner as the regular single needle. Bring needle bar to its highest position, loosen needle clamp screw, remove old needle and insert double needle (with flat side of shank toward the right) into groove of needle bar. Push needle into the clamp as far as it will go, tighten the clamp screw. Do not bend needles when inserting them into bar.
- 2) Change presser foot to the double needle presser foot.
- 3) Change the needle plate to double needle setting.

- 4) The lower or bobbin thread, after passing under the tension spring of the bobbin case, must be threaded through the hole in the bobbin case positioning finger



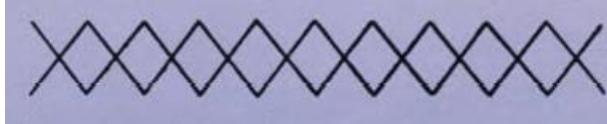
- 5) The upper and lower thread tensions must be adjusted very carefully. The lower thread tension must be slightly slackened.
 6) The threading is done as shown below



Stitches with double needle

Realize that you can use different colored threads for each of the needles to make the designs even more enchanting. Use embroidery thread no. 50 for upper and lower threads.

i. Cross stitch



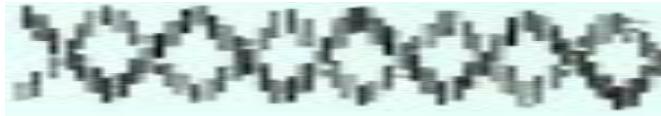
- 1) Needle position lever – in center notch
- 2) Zig zag stitch lever – between mark 4 and 5
- 3) Stitch length knob – on 3

ii. Cubed satin stitch + squares



- 1) Needle position lever – move rhythmically to and fro between right and left notches
- 2) Zig zag stitch lever – set at mark 2
- 3) Stitch length knob – set as for satin stitch

iii. Cross stitch in satin



- 1) Needle Position lever – move regularly from left to right and vice versa.
- 2) Zig Zag Lever – set at 1
- 3) Stitch length knob – set as for satin stitch.

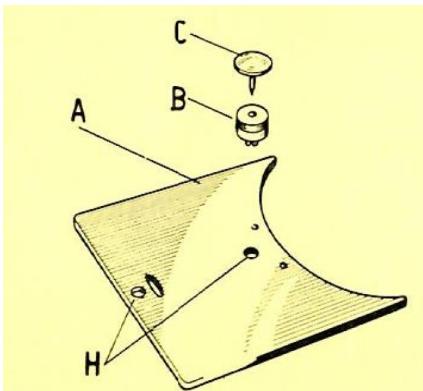
iv. Diamond satin stitch



- 1) Needle position lever – center notch
- 2) Zig zag stitch lever – move slowly and evenly to and fro between left and right notches.
- 3) Stitch length knob – set as for satin stitch

23. Circular sewing

The slide plate A of the machine is provided with 2 holes H, which makes it possible to perform circular sewing.



To do circular sewing –

Insert the small rubber stopper B into one of the 2 holes H of the slide plate. The choice of hole depends on the diameter of the circle to be sewn. The farther away the stopper is from the needle, the larger will be the circle sewn.

Place fabric under the presser foot, then take an ordinary thumb tack C and push it through the center of the circle to be sewn, into the rubber stopper.

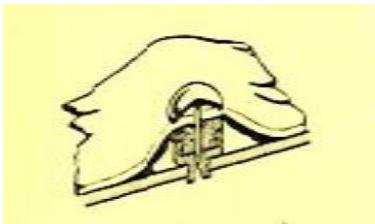


Figure 40

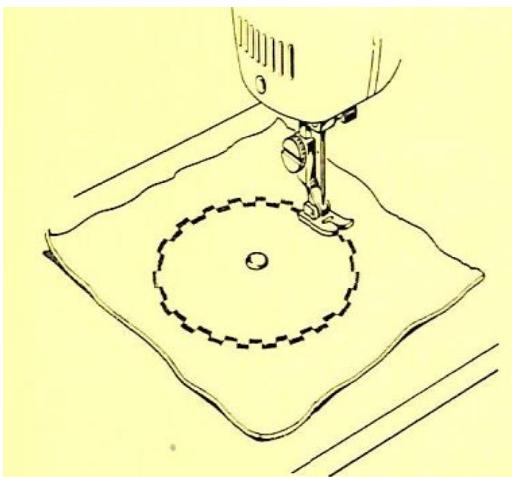


Figure 41

Figures 40 shows a cross section through the fabric to be sewn, the slide plate and a small rubber stopper which is included in the accessory box of the machine.

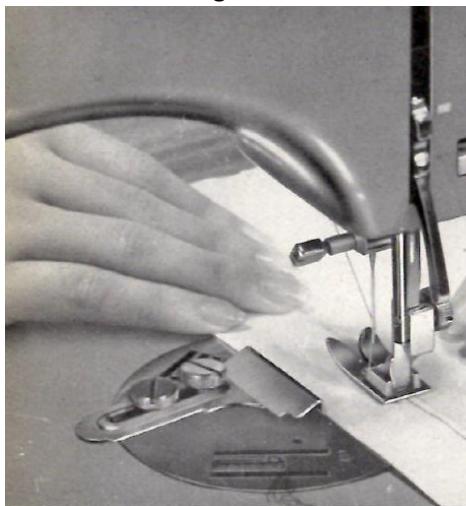
Figure 41 shows the type of work done by circular sewing.

While sewing, keep finger placed on the thumb tack so that the fabric, revolving around the center point of that design, does not slip or become detached (which may cause irregularities in the embroidered design). Circular sewing should be done only with material possessing a certain consistency such as corduroy, stiff woolens, leather etc. Lighter materials, for the purpose of circular sewing should be placed in an ordinary embroidery hoop.

24. Adjustable cloth stitching guide

With the aid of this guide the operator is able to sew as close to the edge of the fabric as desired and to keep the stitches at a uniform distance from the edge.

- 1) Attach cloth guide to needle plate by means of thumb screws which into the screw holes in the bed of the machine.
- 2) After having adjusted cloth guide to desired distance, tighten thumb screws securely and commence sewing.



25. Hand operated buttonholes

i. Raised buttonholes

- 1) Needle Position lever – in left notch
- 2) Zig Zag Stitch lever set to the left index stop on 1.5 and right index stop on 3
- 3) Stitch length regulation knob – near to 0, in order to obtain the correct adjustment, try out on a piece of fabric similar to that used to make the buttonhole. Stitches should neither overlap nor be too far apart.
- 4) Upper tension – set on no. 5
- 5) Lower tension – slightly loose.
- 6) Use no. 40 mercerized cotton thread for upper thread and no. 50 mercerized cotton thread for bobbin thread.
- 7) Presser foot – use transparent buttonhole presser foot provided with guide which is included in the accessory box.
- 8) Place the fabric under the presser foot and adjust the graduated guide according to the desired length of the buttonhole.

- 9) With zig zag stitch lever on the left index stop, make the first row of stitches (figure 42 I), going as far as to reach the limit marked by the guide. Leave the needle in the fabric to the right of the stitching.
- 10) Raise the presser foot and turn the fabric half a turn around the needle (figure 42 II). Lower the presser foot.
- 11) Raise the needle from the fabric and move the zig zag stitch lever to the right index stop (which should be on 3).
- 12) Make the first bar tack with 3 or 4 stitches (Figure 42 III) and stop with the needle off the fabric.
- 13) Move the zig zag stitch lever to the left index stop, which should be at 1.5 and make the second row of stitches as long as the first (figure 42 IV). Stop with the needle off the fabric.
- 14) Move the zig zag stitch lever to the right index stop and make the second bar tack (figure 73 operation V)
- 15) Raise the presser foot, cut the 2 threads leaving 2 to 2.5 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 2 threads together.
- 16) Finally cut the fabric between the 2 rows of stitches with the special Necchi buttonhole cutter.

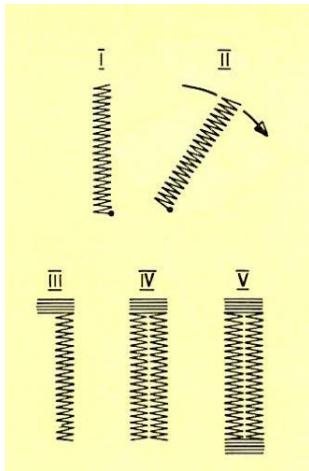
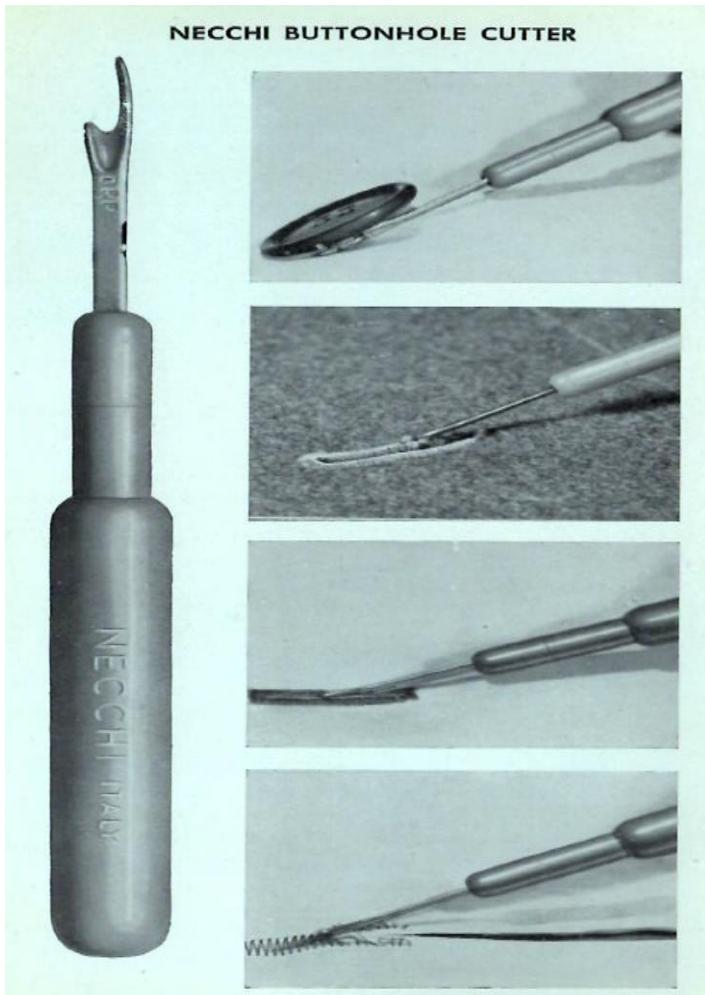


Figure 42



ii. Flat stitched buttonholes

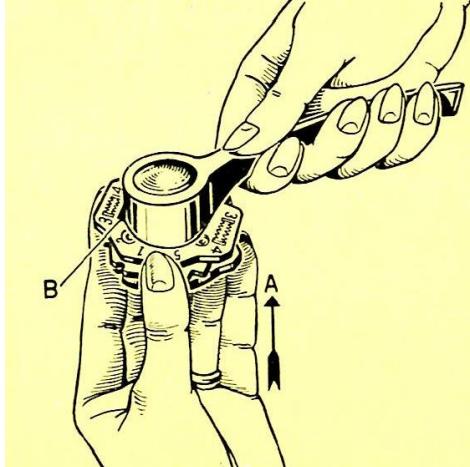
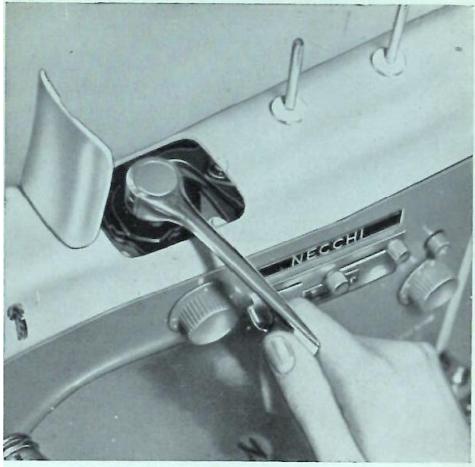
- 1) Needle Position lever – in left notch
- 2) Zig Zag Stitch lever set to the left index stop on 1.5 and right index stop on 3
- 3) Stitch length regulation knob – near to 0, in order to obtain the correct adjustment, try out on a piece of fabric similar to that used to make the buttonhole. Stitches should neither overlap nor be too far apart.
- 4) Upper tension – set on no. 3
- 5) Lower tension – Normal
- 6) Use no. 50 mercerized cotton thread for upper thread and no. 50 mercerized cotton thread for bobbin thread.
- 7) Presser foot – use transparent buttonhole presser foot provided with guide which is included in the accessory box.
- 8) Place the fabric under the presser foot and adjust the graduated guide according to the desired length of the buttonhole.
- 9) With zig zag stitch lever on the left index stop, make the first row of stitches (figure 42 I), going as far as to reach the limit marked by the guide. Leave the needle in the fabric to the right of the stitching.

- 10) Raise the presser foot and turn the fabric half a turn around the needle (figure 42 II). Lower the presser foot.
- 11) Raise the needle from the fabric and move the zig zag stitch lever to the right index stop (which should be on 3).
- 12) Make the first bar tack with 3 or 4 stitches (Figure 42 III) and stop with the needle off the fabric.
- 13) Move the zig zag stitch lever to the left index stop, which should be at 1.5 and make the second row of stitches as long as the first (figure 42 IV). Stop with the needle off the fabric.
- 14) Move the zig zag stitch lever to the right index stop and make the second bar tack (figure 73 operation V)
- 15) Raise the presser foot, cut the 2 threads leaving 2 to 2.5 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 2 threads together.

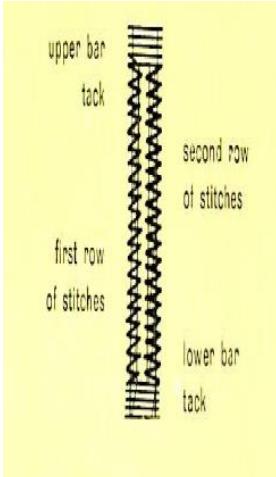
Automatic Buttonholes

- Disconnect automatic mechanism
- Cams – permanent 3 cams group fitted with handle, to be inserted on the drive
The cams group may be turned in respect of the handle and fixed in 2 positions, one for button holes on heavy fabrics and the other for button holes on light fabrics
The change from one position to the other is made in the following manner –
 - a. Hold the cam group with the left-hand fingers, push it upwards keeping firm the handle with the right hand and turn it.
 - b. Stop pushing and turn the cam group until one of the 2 buttonholes engraved in the upper surface is in line with the index marked B
 - c. When it is in the correct position, a click will be heard and the group remains fixed.
- Needle position lever – in the left notch
- Zig Zag Stitch lever – extreme left
- Stitch length regulating knob – near to 0, in order to obtain the correct adjustment, try out on a sample material similar to that used for the actual buttonhole. Stitches should neither overlap nor be too wide apart.
- Needle Thread tension – slightly loose, use a 50 mercerized cotton thread
- Place the fabric under the foot and adjust the graduated guide according to the desired length of the buttonhole.
- With the needle at the highest position, bring the cams group handle to position 1.
- Make the upper bar, tack with 3 or 4 stitches and stop with the needle off the fabric.
- Move the cam group handle to position 2 and make the left row of stitches until the upper tack reaches the limit marked by the guide. Stop with the needle off the fabric
- Move the cam group handle to position 3. The machine will sew straight stitches in the reverse direction.
- When the needle arrives at the upper bar tac, move the cam group handle to position 4 and make the right row of stitches until the upper bar tack reaches the limit marked by the guide. Stop with the needle off the fabric.
- Move the cam group handle to position 3, make the lower bar tack with 3 or 4 stitches. The button hole is then completed.

- Raise the presser foot, cut the threads leaving 2.5 inches spare 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 the wrong side. Knot the 2 threads together.
- Finally, cut the fabric between the 2 rows of vertical stitches with the special buttonhole cutter.



766



Bias Binding



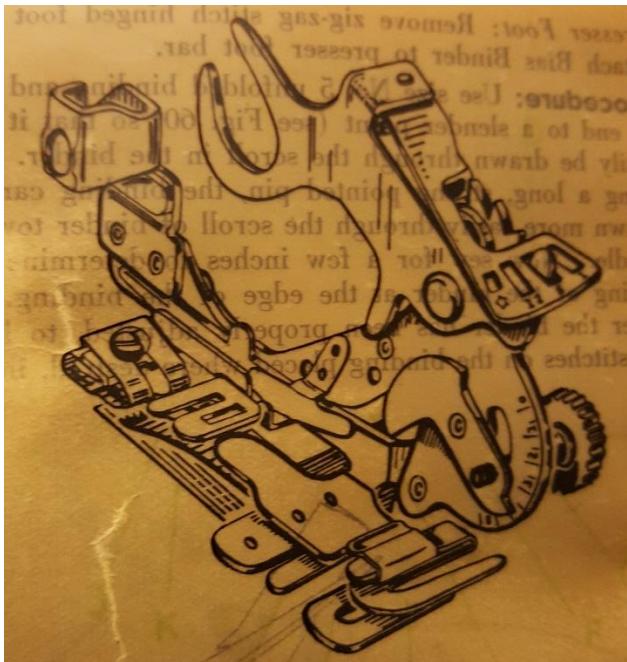
Machine Settings –

- a) Needle Position lever – in left notch
- b) Zig Zag stitch lever – for straight stitch binding move to extreme left, for zig zag stitch binding set in desired width, but not larger than 3x, otherwise needle will hit binder and break.
- c) Upper tension – normal
- d) Switch length knob – set at desired length
- e) Presser foot – Bias Binder foot
- f) Use size No. 5 binder and clip its end to a slender point so that it can be drawn easily through the scroll in the binder (see second figure above). Draw in the binding through the scroll towards the needle using a long strong pin. Sew for a few inches to determine the binder settings at its edge. After adjusting the binder settings to ensure the stitches are on the binding correctly, insert the fabric to be bound between both halves of the binder scroll. (first figure above). Keep the fabric well in the binder, close to the needle (particularly for small scallops and curved edges) Use the 3rd finger of the left hand for thin work and note how simply a curve can be bound while the finger, rests on the fabric above he apron of the binder.

Ruffler

Figure below indicates the principal parts of the ruffle with the use of which the operator should be thoroughly acquainted. These parts are as follows:

- A. SHANK – to be attached to presser foot bar.
- B. FORK ARM – to be placed astride the needle clamp
- C. ADJUSTING SCREW = regulates and then holds



- A. SHANK – to be attached to presser foot bar.
- B. FORK ARM – to be placed astride the needle clamp
- C. ADJUSTING SCREW = regulates and then holds the fullness (size) of gathers and pleats, after pointer F has to be set to the desired position on dial G.
- D. PROTECTION goes through slots in Adjusting Lever E
- E. ADJUSTING LEVER – to set ruffler for gathers or pleats, and for disengaging ruffle when neither pleats or gathers are needed.
- F. POINTER – for setting fullness of gathers or pleats
- G. DIAL – numbered from 1 to 8 and used for setting fullness of gathers and pleats
- H. SEAM GUIDE – guide on bottom part of ruffle containing slots into which edge of material is placed to keep heading of ruffle even, and for separating material to be ruffled and the material to which ruffles are to be attached.
- J. RUFFLING BLADE (FEED BLADE) – the upper blue steel blade with teeth at the end to push material in pleats towards the needle.
- K. SEPARATOR BLADE – the lower blue steel blade without teeth, prevents the machine feed dog from coming in contact with feed blade of ruffler, or with material to which ruffles are being applied.
- L. HEADING GUIDE – can be adjusted to different heading sizes
- M. SLIDING GUIDE – can be adjusted for various widths of seams or headings.
- N. SEPARATOR GUIDE – for separating material to be ruffled from material to which ruffles are to be attached.

Instructions for use

To attach Ruffler to the machine –

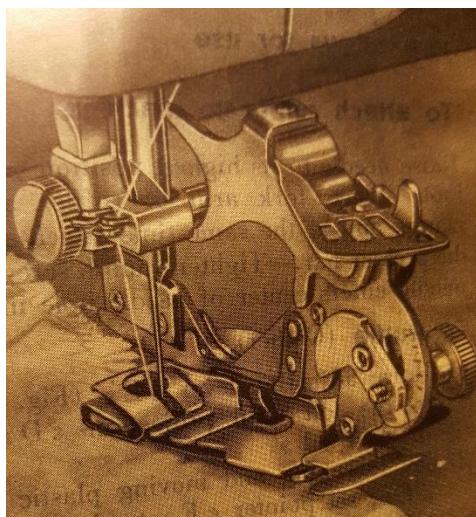
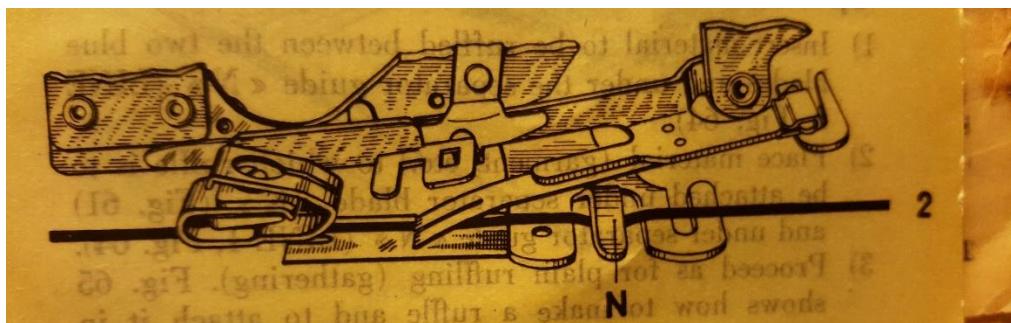
1. Raise needle to highest position and remove presser foot.

2. Place fork arm of ruffle astride the needle clamp and at the same time attach the ruffle to the presser bar. Tighten thumbscrew tightly. Check to make sure needle enters center of the needle hole in the ruffle.

To Ruffle (Gather)

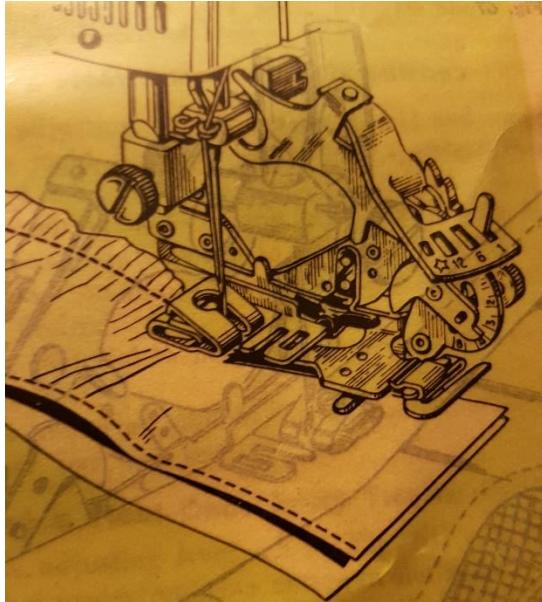
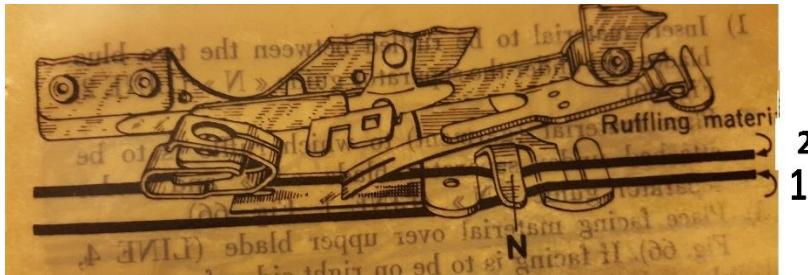
1. Raise adjusting lever E and move it to the left until projection marked D enters in slot marked I
2. By loosening and moving plastic adjusting screw marked C, set pointer F to desired number on dial G to obtain the fullness of ruffle desired.
3. Tighten screw C firmly after the above adjustments.
4. The ruffling blade J will now move forward and back once for every stitch.
5. Insert material to be ruffled between the 2 blue blades. Draw material slightly back from needle, lower presser bar and sew

Tips – set to a shorter stitch for small gathers and to a longer stitch for fuller gathers.



Make Ruffles and attach to garment in one operation

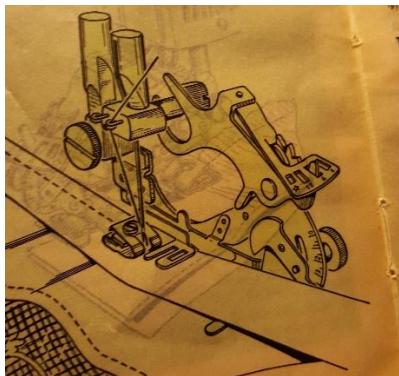
1. Insert the material to be ruffled between the 2 blue blades and under the separator Guide N.
2. Place material (garment or other) to which ruffles are to be attached under the separator blade K and under separator guide N
3. Proceed as for plain ruffling (gathering).



To make Ruffle and attach it with a facing to garment

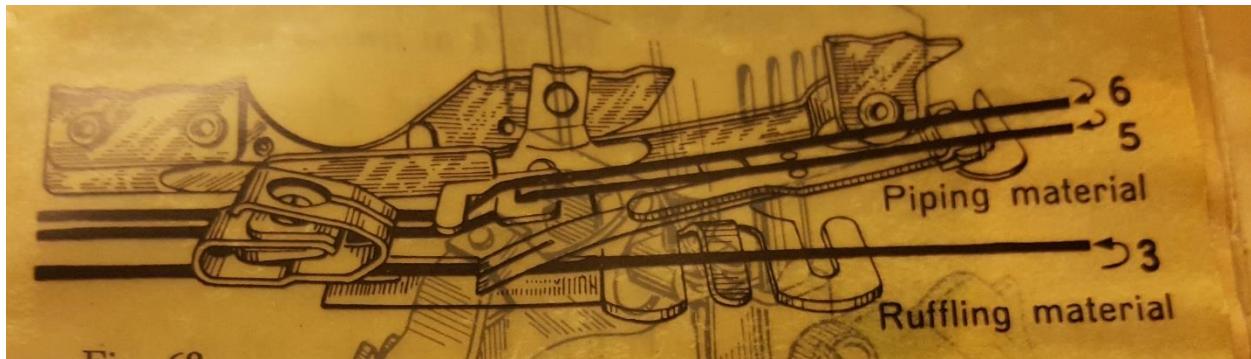
1. Insert the material to be ruffled between the 2 blue blades and under the separator Guide N.
2. Place material (garment or other) to which ruffles are to be attached under the separator blade K and under separator guide N
3. Placing facing material over upper blade Line 4 in the below figure. If facing is to be used on the right side of garment place wrong sides of garment and ruffle together.
4. Lower presser bar and sew.





To pipe a ruffle and attach it to garment

1. Insert the material to be ruffled between the 2 blue blades.
2. Place piping material in ruffle (LINE 5) with folded edge of piping to right.
3. Fold edge of material to which piping and ruffles are to be attached and insert it in ruffle (LINE 6)
4. Lower presser bar and sew.

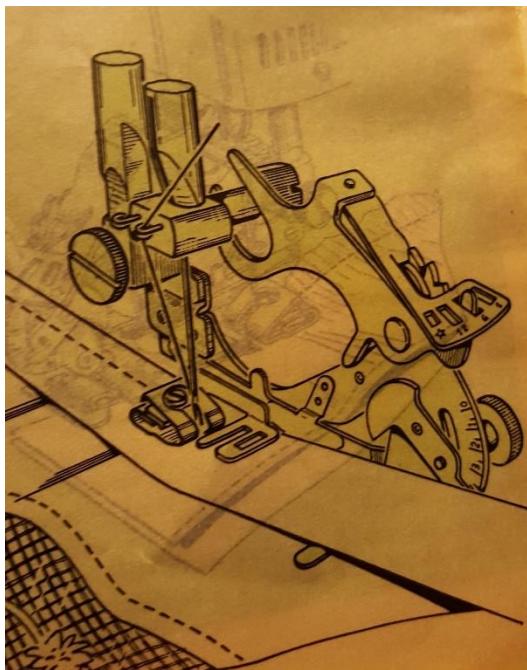


To make a pleat once every 6 stitches

1. Raise adjusting lever E, and move it to the right until projection D enters in the slot marked 6
2. By loosening and moving plastic adjusting screw C set pointer F to a number between 3 and 8 on dial G, depending upon depth of pleat desired.
3. Insert material to be pleated between the 2 blue blades
4. Draw material slightly back from needle, lower presser bar and sew.

To make a pleat once every 12 stitches

1. Raise adjusting lever E, and move it to the right until projection D enters in the slot marked 12
2. By loosening and moving plastic adjusting screw C set pointer F to a number between 3 and 8 on dial G, depending upon depth of pleat desired.
3. Insert material to be pleated between the 2 blue blades
4. Draw material slightly back from needle, lower presser bar and sew.

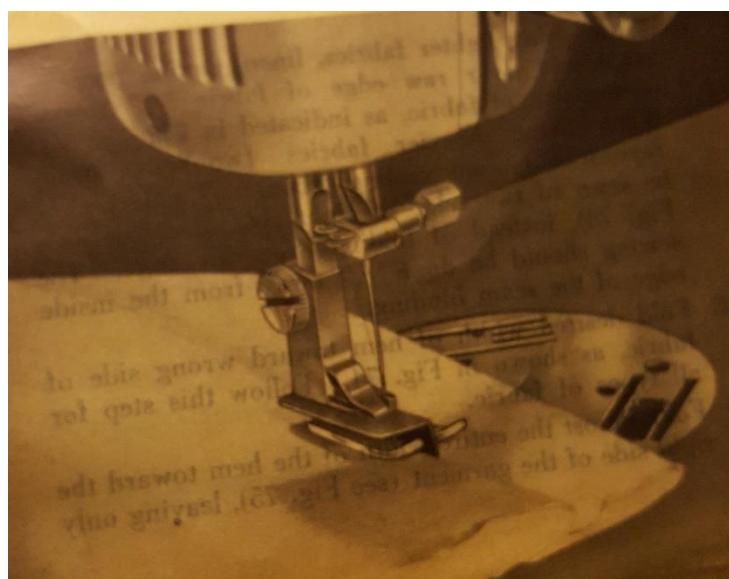
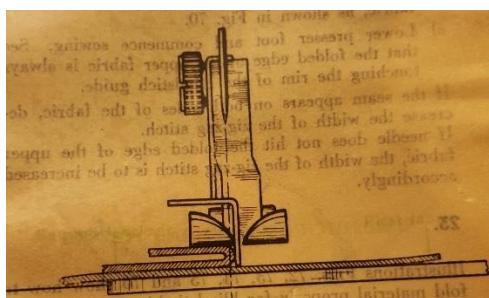


To do group pleating

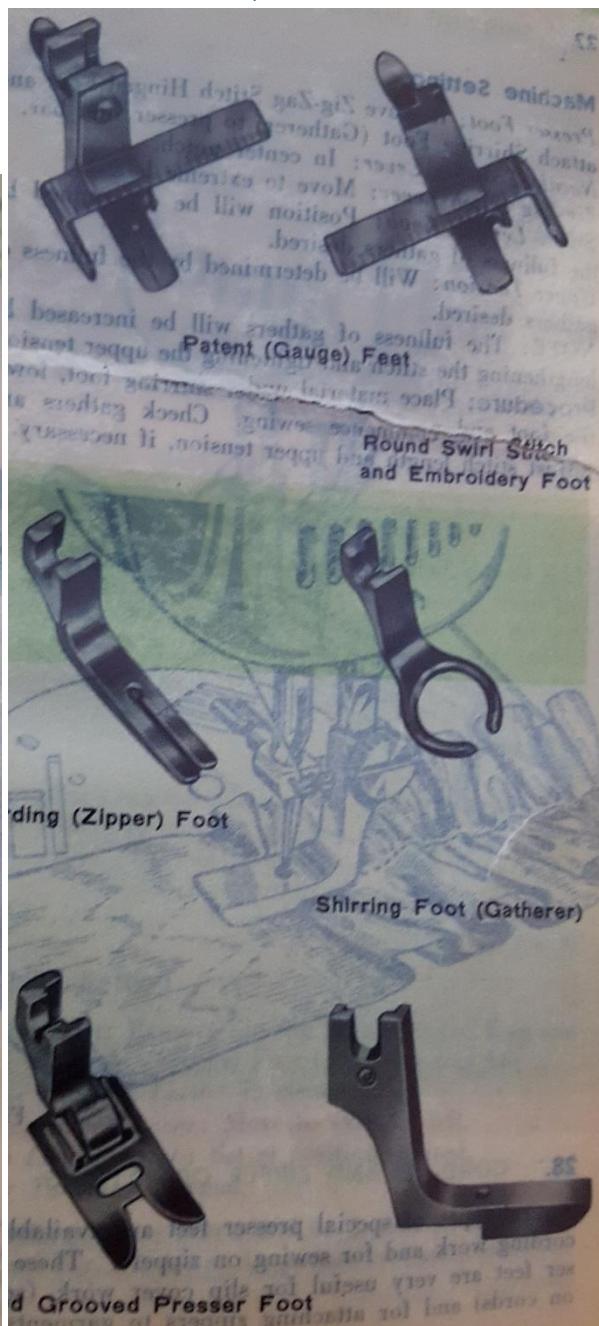
The Ruffler can be adjusted for group pleating by lifting the Adjusting Lever E and moving it to the right until the top of the projection D enters the short slot indicated by a *

This should be done at those sections of the material which it is desired to make a space between the pleats. The ruffle will then stop pleating and only plain stitching will be done.

When the desired space has been made, move the adjusting lever E until the projection D enters either of slots 6 or 12 as desired.



Extra Accessories (doesn't come standard with the machine)

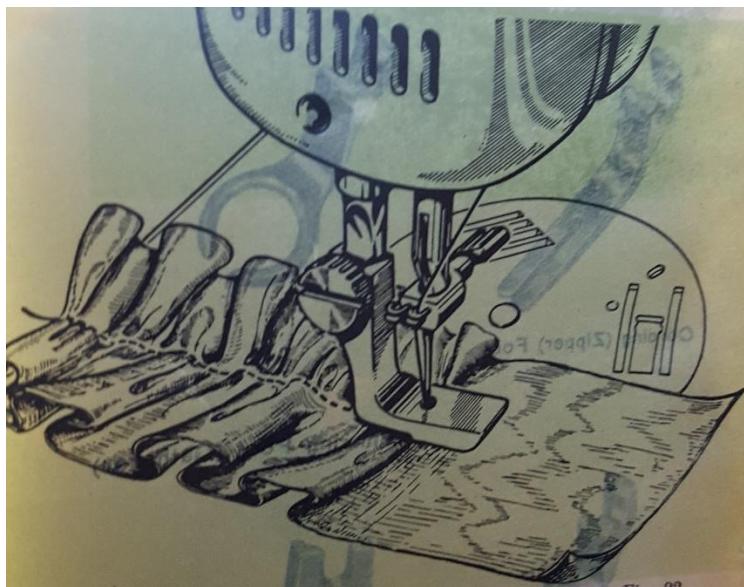


Shirring

- Presser Foot: Remove Zig-Zag stitch hinged foot and attach shirring foot (gathering foot) to presser foot bar.
- Needle position lever – move to extreme left
- Stitch length knob – position will be determined by the fullness of gathers desired.
- Upper tension – determined by the fullness of gathers desired.

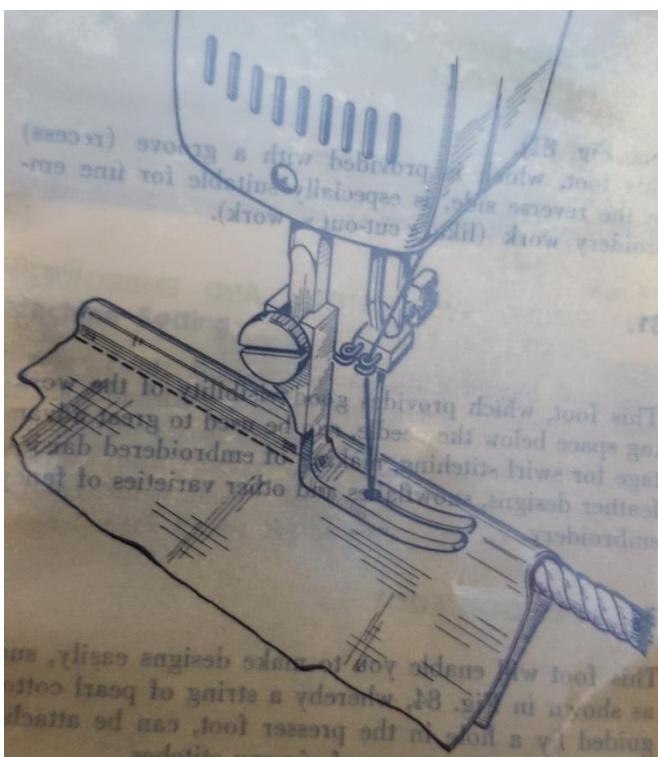
NOTE – fullness of gathers will be increased by lengthening the stitch and tightening the upper tension.

Place material under stirring foot, lower the foot and begin sewing. Check gathers and adjust stitch length and upper tension, if necessary.



Cording (Zipper) Foot

Several types of special presser feet are available for cording and zipper work. These presser feet are very useful for slip cover work (sewing on cords) and for attaching zippers to garments, etc. These feet will enable you to work very close to the cord or zipper, as shown below. Extra accessories picture shows Regular Cording and Zipper foot (right and left) and also the Adjustable Right and Left Cording and Zipper foot.



- Presser Foot – remove Zig Zag stitch hinged foot and attach Cording (Zipper) foot.
- Needle Position Level – in center notch
- Zig-Zag Stitch Lever – move to extreme left
- Stitch Length knob – set at position desired
- Upper tension normal

Place fabric and cord underneath presser foot, lower foot and sew.

[Patent Gauge Foot](#)

The foot is equipped with four adjustable graduated guides and will enable you to sew straight seams parallel to the edge of the material at any distance desired.

[Hinged Grooved Foot](#)

This foot, which is provided with a groove (recess) on the reverse side, is especially available for fine embroidery work (like cut out work).

[Round Swirl stitch and embroidery foot](#)

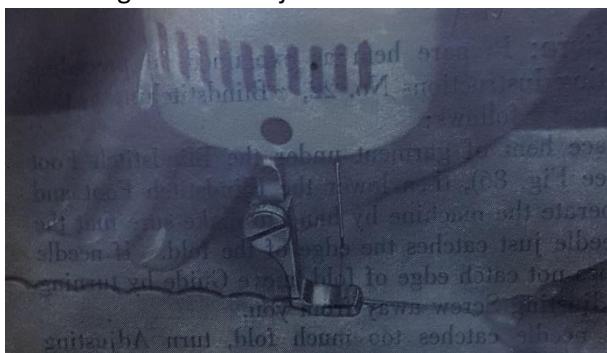
This foot, which provides good visibility of the working space below the needle can be used to great advantage for swirl stitching, making of embroidered daisies, feather designs, snowflakes and other varieties of fancy embroidery.

[Festoon foot](#)

This foot will enable you to make design easily, such as shown below, whereby a string of pearl cotton, guided by a hole in the presser foot, can be attached to the fabric by means of zig-zag stitches.

The design to be followed must first be marked on the fabric.

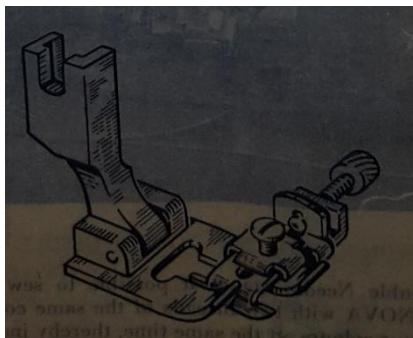
- Needle position – center notch
- Zig-Zag stitch lever – at 1 (thickness of pearl cotton must just be covered by the stitches)
- Stitch length knob – adjusted as for a satin stitch.



[Blind stitch foot](#)

The Necchi Blind stitch foot is a new improved special presser foot, used for sewing invisible hems into garments.

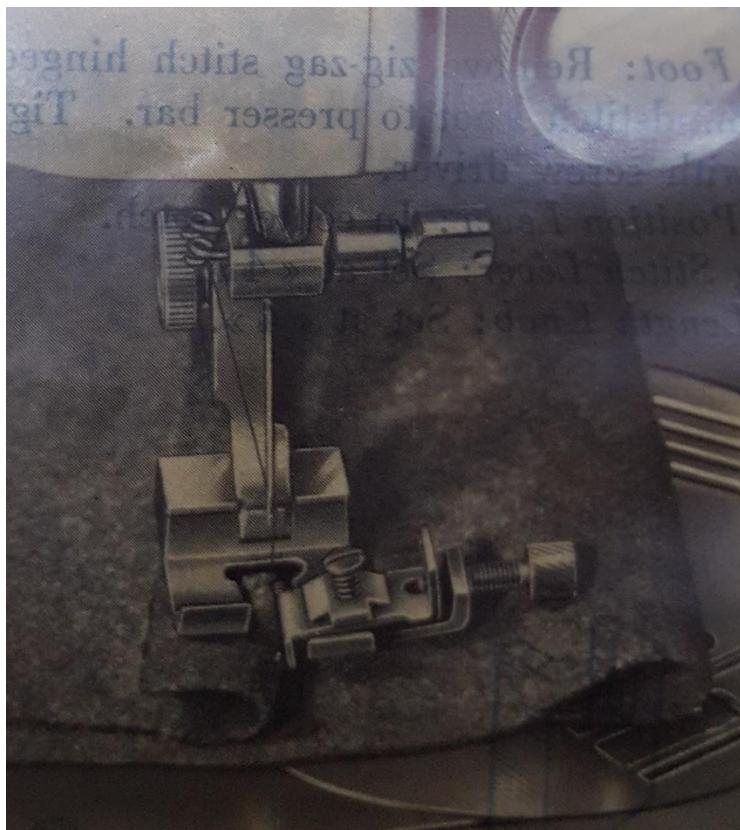
- Needle position lever – center notch
- Zig Zag stitch lever – set at 4
- Stitch length knob – set at 4



Prepare hem as described in Chapter 2, Section 22 (Blind stitching) and

- Place hem of garment under the foot, lower the foot and operate machine by hand to make sure the needle just catches the edges of the fold. If needle does not catch edge of fold, move guide by turning Adjusting screw away from you. If needle catches too much of the fold, move the Adjusting screw towards you.
- After adjustments, continue sewing, while holding fold of fabric against the guide of the foot.

The Blind stitch Foot can also be used as a guide when making Tucks.



Chapter 3

Automatic Zig Zag Sewing Mechanism

Introduction

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, called cams, which are inserted in the machine.

It is possible to use either 3 separate cams (Figure 43 1, 2, 3) which must be assembled into a group by the operator (see figure 43 A) or a three-cam group Figure 43 B which is delivered as such by the factory and must remain assembled permanently.

The three separate cams must be selected in accordance with the desired design (as indicated in the following charts on pages The selected cams are then placed, one above the other (in the order indicated in the design charts), on the cam holder bushing (figure .43. C). A cam fastening nut (figure 43 D) is then placed on top of the cam holder bushing and firmly tightened to hold the 3 separate cams closely together (Figure .43 A). Finally, this cam group is placed on the cam driver pin Figure . of the Automatic Sewing Mechanism, inside the upper portion of the machine arm.

Each side of every separate cam is indicated by a special number, marked on it and refers to a corresponding number in the design chart. In this manner, each desired design can be obtained by combining 3 cams with the recommended numbers in a group, as indicated in the chart of Basic Designs. Besides the various designs listed in the aforementioned chart, it is also possible to combine all the separate cams in many other groups of 3, thus enabling the operator to perform an almost unlimited range of new designs.

Since each face of every separate cam is numbered differently, it is important, when using the design chart, to look carefully at these numbers so as to select exactly the 3 cams required to obtain the desired design.

Each permanently assembled 3 cam group is marked by an emblem, indicated on it, showing the design which can be obtained with this group of cams. One of these permanently assembles 3 cam groups serves to sew buttonholes automatically. This special 3 cam group is equipped with a handle and its use will be explained later on in the booklet.

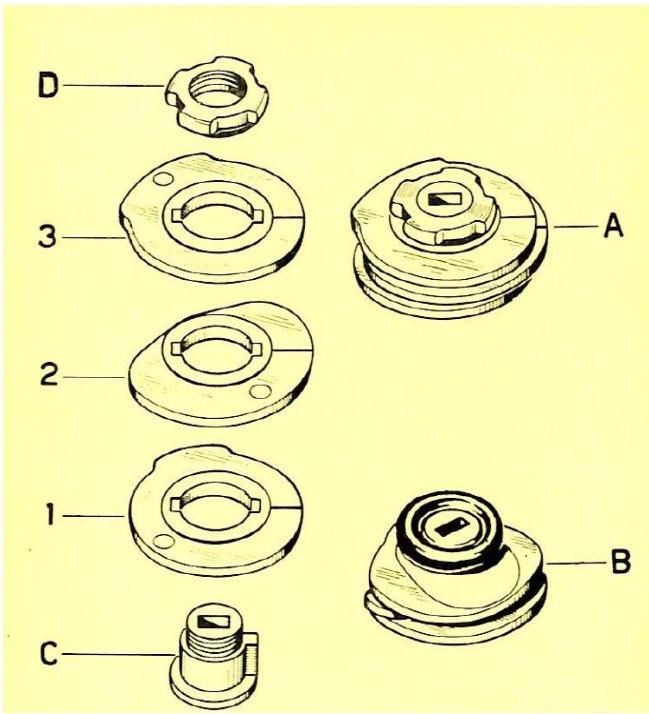


Figure 43

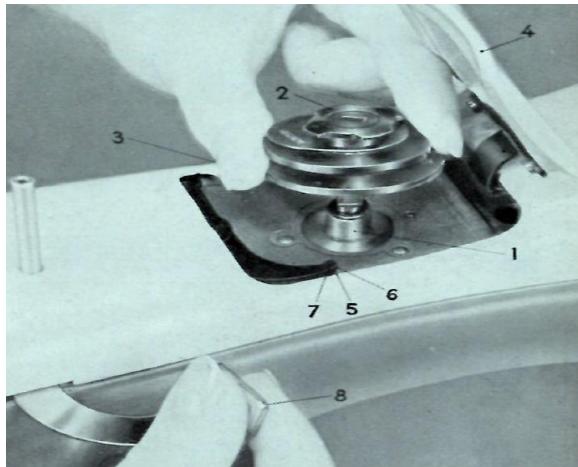
How to place the separate cams on the cam holder bushing

- 1) Place the cam holder bushing on the table.
- 2) Select the first cam face as indicated in column 1 at the right of the desired design in the Design chart.
- 3) Slip the first cam onto the cam holder bushing, making sure that one or the other of the 2 notches, at the hole of the cam slides along the guide bar on the cam holder bushing and the number mentioned on the Design chart is the number on the disc facing upwards.
- 4) Select the second cam face as indicated in column 2 and repeat as for the first disc.
- 5) Select the third cam face as indicated in column 3 and repeat as for the first disc.
- 6) Place the cam fastening nut on the upper threaded end of the cam holder bushing and tighten it firmly.



How to place the filled cam holder bushing in the machine

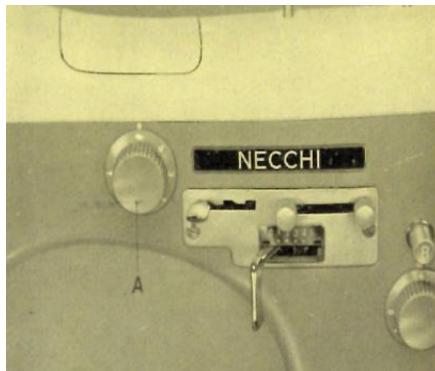
- 1) Move lever 8 to the left as far as it will go.



- 2) Open cover 4 on top of the machine arm.
- 3) Take the cam holder bushing in the such a manner that the cam fastening nut is turned upward and slip it onto the cam driver pin in the machine arm. Make certain that the narrow flat top end of the cam driver pin (no. 1 in the above figure) goes fully through the slot on top of the cam holder bushing. The lower end of the cam holder bushing must rest flush on the bottom in the machine arm so that the top end of the cam driver pin can reach fully into the slot at the top end of the cam holder bushing.
- 4) Move lever 8 back to its working position so that it is flush on the machine arm.

The permanent cam groups are fitted in the machine the same way.

Design graduating knob



Knob A regulates the design length and is marked from 1 to 4. On no. 2 the design length is twice as long as on no. 1, on no. 3 the length is 3 times and so on.

NOTE: it is not advisable to regulate the knob beyond no. 4.

Making the designs shown in chart no. 1

This chart shows the designs obtainable with the automatic sewing mechanism. The chart includes the cam numbers to be included for the design, machine settings, and other details.

For all designs use the 3 cam faces that are indicated in the 3 columns at the right of the desired design. These 3 separate cams must be placed with the indicated face numbers pointing upwards on the cam holder bushing and be tightly pressed together with the aid of the cam fastening nut. Finally, whole assembly must be placed on the cam driver pin of the Automatic Mechanism.

For designs No. 26 to No. 30, the permanently assembled 3 cam groups are to be used. The obtainable design is marked on the top face of each permanent 3 cam group, as explained previously.

The machine setting for each design is indicated in the other columns of these charts. There are given the Needle position lever, zig zag stitch lever, design graduating knob and stitch length regulating knob settings.

The cams adapted to perform first 30 designs, illustrated in this chart can also be chosen with the Selector device on the cover of your accessories box.

Making the designs shown in chart no. 2

This chart gives some designs obtainable with the same cams as in chart no. 1, but with a different setting of the machine.

NOTE: you can make other interesting designs by turning one or 2 of the cams until the guide line on their face reaches a position exactly opposite to the original one. In this case, the guidelines of the 3 cams do not coincide anymore as indicated in the above instructions.

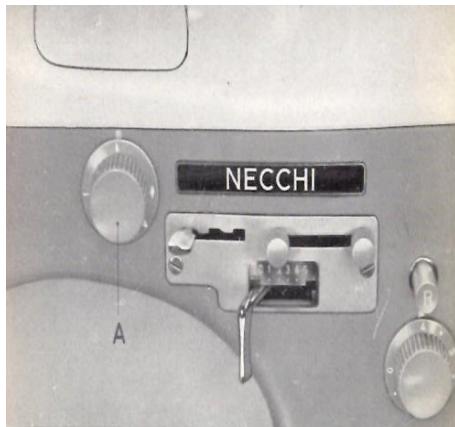
How to remove the cam group from the machine and dismantle it.

- 1) Move lever 8 to the left.
- 2) Open cover 4 on top of the machine arm and lift the cam group from the driver pin.
- 3) If the cam group is not one of the permanently assembled type, unscrew the cam fastening nut and overturn the bushing so that the 3 cams fall out. If necessary gently shake to get them out.

How to stop the motion of the Automatic Sewing Mechanism

When straight or hand operated zig zag stitching is required, it is necessary to remove the cam assembly from the machine and guide the lever 8 back to be flush with the machine arm. Then stop the motion of the cam driving pin.

- 1) Turn the design graduation knob until the white diamond mark on it lines up with the mark on the machine arm.
- 2) By hand, turn the flywheel at least one complete rotation.
- 3) Again, turn the design graduating knob until the triangular white mark on it is aligned with the mark on the machine arm

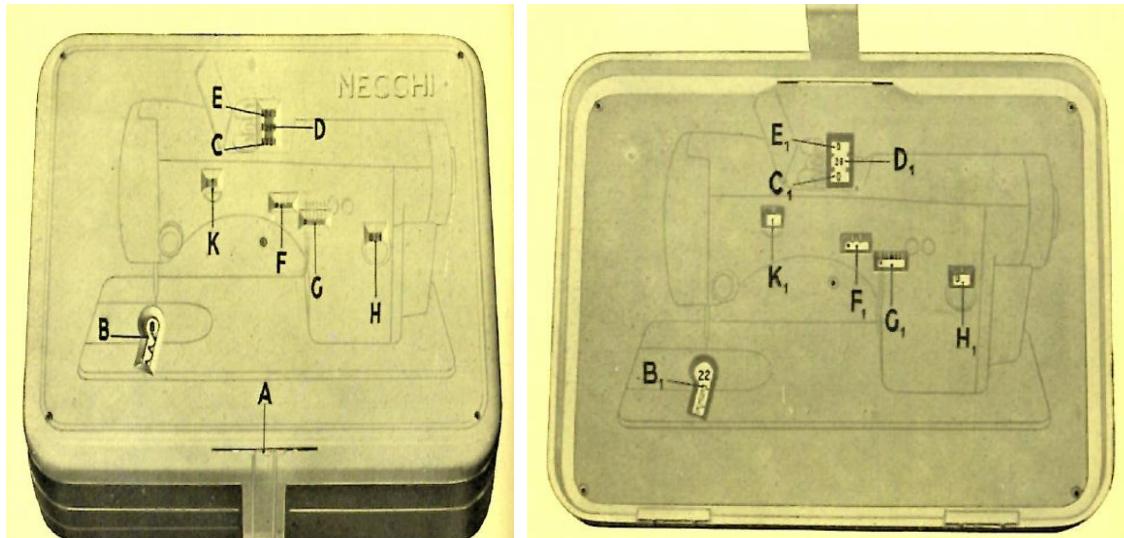


How to use the selector device

An automatic device, incorporated in the cover of the accessory box, serves to select the cams and to indicate the machine setting required for making each one of the first 30 designs shown on the chart no.

1. Here is a procedure for using the Selector Device:

- While the accessory box is closed, turn the knurled dial A with a finger. IN the cut-out window B on the cover will then appear, one by one the Basic designs no. 1 to no. 15 listed in the chart. And designs no. 16 to 30 will appear on the reverse side of the box cover.



To select cams and machine settings, proceed as follows:

- Turn the knurled dial A until the desired design appears in the window B (top side of the box cover) or the window B (underside of box cover). Stop at desired position.
- The numbers that appear in the windows C, D and E indicate the cam faces to be chosen and the order in which they are to be placed on the cam holder bushing. Window C is the cam to be placed first on the bushing, window D shows the next one and E indicates the last of the 3 cams to go on the bushing.
- In Window F, the black mark indicates in which notch (left, center or right) the Needle position has to be set.
- In window G the mark indicates at what line of the graduated scale the zig zag stitch lever has to be set.

- e) In window H the number facing the arrow indicates the position at which the stitch length regulating knob has to be set.
- f) In window K the number facing the arrow indicates the position at which the design graduation knob has to be set.

Automatic Buttonholes

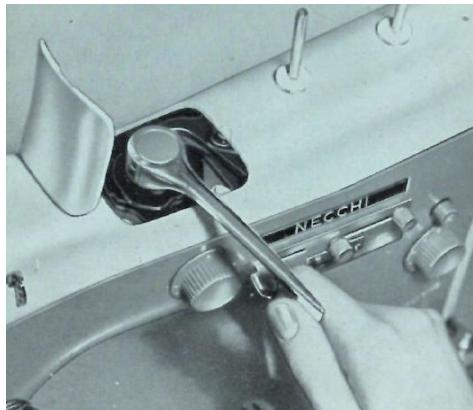
To make buttonholes automatically, please note the following instructions.

Raised buttonholes

Automatic mechanism disconnect (see ??)

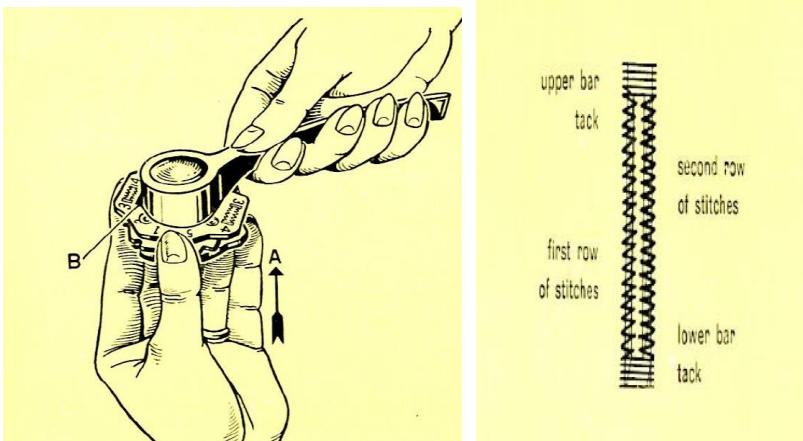
Cams to be used: permanent 3 cam group fitted with handle to be inserted on the driver pin.

The cam group may be turned in respect of the handle and fixed in 2 positions; one for button holes in heavy fabrics and the other for button holes in light fabrics.



The change from one position to another is made as follows:

- Holding the cam group with the left-hand fingers, push it upwards keeping firm the handle with the right hand and turn it.
- Stop pushing and turn the cam group until one of the 2 buttonholes engraved in its upper surface is in line with the index marked B
- When it is in correct position, a click will be heard and the group remains fixed.
- Needle position lever – in left notch
- Zig zag stitch lever – extreme left
- Upper tension – for light fabrics set at no. 5, for heavy fabrics set at maximum; Use no. 40 mercerized cotton thread
- Lower tension – slightly loose; use no. 50 mercerized cotton thread
- Presser foot – use transparent buttonhole presser foot with guide which is included in the accessory box.
- Needle – for light fabrics – use 70 (10) needle; for heavy fabrics use no. 90 (14) needle.
- Stitch length regulating knob – near to 0. In order to obtain the correct adjustment, try out on a piece of fabric similar to that used to make the buttonhole. Stitches should neither overlap nor be too wide apart.



- Make the upper bar tack with 3 or 4 stitches and stop with the needle off the fabric.
- Move the cam group handle to position 2 and make the left row of stitches until the upper bar tack reaches the limit marked by the guide. Stop with the needle off the fabric.
- Move the cam group handle to position 3. The machine will sew straight stitches in the reverse direction.
- When the needle arrives at the upper bar tack, move the cam group handle to position 4 and make the right row of stitches until the upper bar tack reaches the limit marked by the guide. Stop the needle off the fabric.
- Move the cam group handle to position 5, make the lower bar tack with 3 or 4 stitches. The button hole is now complete.
- Raise the presser foot, cut the 2 threads leaving 2.5" spare and remove the fabric. Pull the lower thread and with the aid of an ordinary needle bring the upper thread to the back of the fabric and tie the 2 threads.
- Finally, cut the fabric between the 2 rows of stitches with the special Necchi buttonhole cutter.

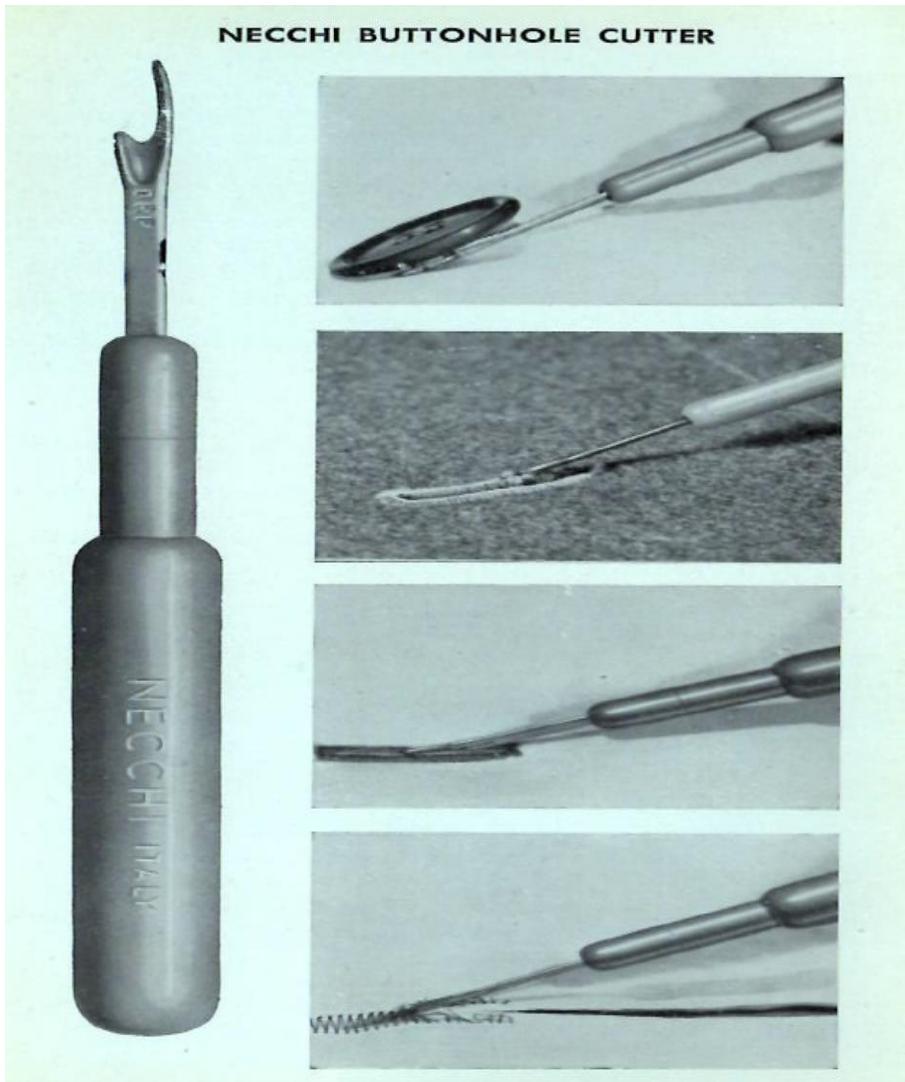
NOTE: after some practice all the operations described above can be made continuously without having to stop the machine each time to raise the needle from the fabric and move the cam group handle.

Flat stitched buttonhole

The machine setting is the same as for Raised buttonholes with the following exceptions:

- a) Upper tension – set at no. 3 and no. 50 thread
 - b) Lower tension – normal, thread no. 50.
- Procedure is exactly the same as for raised buttonholes.

NECCHI BUTTONHOLE CUTTER



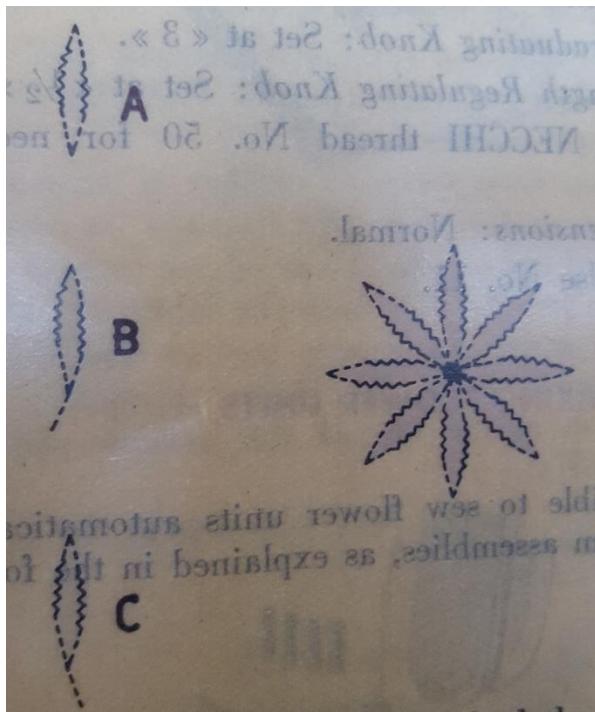
Flower Pattern

Build the flower pattern cam using discs 10 – 20 – 16, making sure to line up the guide lines of the discs on the bushing as follows:

- Cam 10- guide line on cam in direction of guide bar on bushing (guide line and guide bar line up)
- Cam 20 – guide line on cam in opposite direction to guide line bar on bushing.
- Cam 16 – guide line on cam in same direction as cam 10

Machine Settings –

- Needle Position Lever – in the left notch
- Zig Zag stitch lever – at extreme left
- Presser foot – use plastic hinged satin stitch foot
- Threads – use NECCHI thread no. 30 for needle and NO. 50 for bobbin
- Thread tensions – same as for automatic monogram
- Needle – Use no. 11
- Design graduation knob and stitch length regulating knob – some easy experimenting will be required to set those 2 knobs in such a position that the automatically obtainable design unit is closed in itself.



In other words, the machine must feed the fabric the same distance during forward sewing as it does during reverse sewing. Part A above shows a complete design unit for which these 2 knobs are set correctly. While B and C show them off either in the forward or reverse direction. Therefore, some easy adjusting is required to equalize the automatic feeding forward and in reverse. The adjusting of the 2 knobs should be done on a piece of scrap material.

Once the machine has been adjusted to make a closed design unit as explained above, place fabric under the foot and finish one unit. Leave the needle in the fabric (using it to pivot the fabric), lift the presser foot slightly, turn fabric counter clockwise, lower foot and sew next petal, stop at the center with needle down and repeat till all 8 petals have been completed.

There are a number of other combinations of cams that can be used to give this flower designs

Monogramming

To make monograms automatically, please note the following instructions.

Make first the drawing of the monogram on the material in pencil if possible. In the case of thicker fabrics such as towels, draw the monogram on tissue paper and fix it on the fabric with pins. Put the material prepared in this way under the presser foot and fix the monogram with straight stiches with a thread of the color which will be used to make the monogram.

- Use Cam group No. VIII.
- Needle position Lever – set to any of the 3 notches according to the design to be on the right, center or left of the monogram.
- Zig Zag lever position – set to 1
- Stitch length regulating knob – as for satin stitch
- Design graduating knob – position depends on the length, required, by the monogram.
Monograms are generally made keeping the index on 1.
- Thread – use NECCHI thread no. 50 in the needle and bobbin
- Needle – use no. 11
- Tensions – slightly loosen the upper tension (between 0 and 2). Rather tighten the lower tension. The upper thread has to remain on the upper side of the material, slightly appearing on the reverse. The lower thread should appear on the reverse side of the material as an almost straight stitch.

Before beginning to work, it is necessary to make the following test: put a test sample under the foot and run the machine until you can obtain the minimum width of the satin stitch. Stop the machine and remove the sample. You are ready to do it on the actual fabric when the design, obtained with stitch length regulating knob at 4 is as long as the monogram to be made. It is sufficient to put the fabric under the foot and begin work, guiding the fabric in such a way as to make the monogram copy the design drawn in pencil. To obtain, on the contrary, a longer lien, proceed as follows:

- Begin work starting from A and go on as long as you have reached the largest width of satin s
stitch i.e. B
- Of course, you have to guide the fabric, so to make the monogram follow the design drawn with the pencil.
- Stop the machine, stop the motion of the automatic mechanism. Now you can make the stage B -C as long you wish.
- At last to stage C-D, put design graduation knob at 4.

The above operation to be repeated for every part of the monogram.



Scallop

This kind of work which is very useful for attractive decoration on cotton or linen fabrics, can be made with the cam group no. V and one mentioned for monogramming. The stitches obtained with cam group no. V are a guide line for the heavy scallops which have to be done with the other cam group. The heavy scallops made with this cam group follow and cover the work made previously with group no. V

Procedure to obtain a straight stitch line to be used as guide for heavy scallops

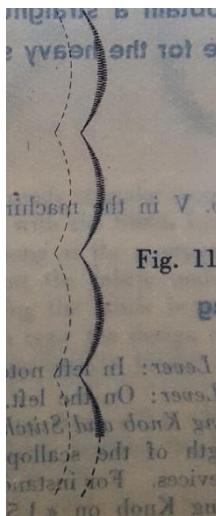


Fig. 11

- CAMS – insert group no. V in the machine
- Needle Position Lever – on the left notch
- Zig Zag Stitch lever – on the left
- Design graduating knob and stitch length regulation knob – the length of the scallops can be obtained with these 2 devices. For instance, putting stitch length regulating knob at 1.5 and design graduating knob at 1, you can obtain scallops suitable for sheet and table linens.

Furthermore, any modification can be easily obtained trying the 2 devices in different positions and combinations.

Procedure for obtaining heavy scallops

- Cams – Group V
- Needle Position lever – in center notch
- Zig Zag position lever – in extreme left
- Stitch length regulating knob – as for satin stitch. The scallops must perfectly cover the stitches previous made (as shown in picture above)

Follow process mentioned in Automatic monogramming

DESIGN CHARTS

Important

In the following we show examples of decorative stitches and embroidery that can be made with the SUPERNOVA AUTOMATIC.

For the use of these charts please read carefully all the instructions provide in the manual.

As previously explained, the designs shown in the Chart No.1 have been obtained by using all available cams in different combinations; the designs shown in Chart No. 2 show some of the variations in embroidery that can be obtained on the basis of the designs in Chart No. 1, by changing the positions of the machine levers.

What is more, the operator will be able to create, without the slightest difficulty, many attractive embroidery designs by combining the cams, three at a time in different ways, revolving one or 2 of them by half turns and varying the positions of the machine levers and knobs. The range of designs that can be obtained in this manner is almost unlimited.

Blind Hemming –

Blind hemming can also be done automatically by inserting the permanently assembled cam group No. VI in the machine. The fabric must eb folded in the same manner as explained in detail for Blind Stitch Hemming and Folding and Blind stitching.

- Needle position lever – in left notch
- Zig Zag Stitch lever – at extreme left
- Design graduating knob – set at 3
- Stitch length regulating knob – set at 4
- Threads – Necchi thread no. 50 for needle and bobbin.
- Thread tensions – normal
- Needle – use no. 11

Chart 1

2/A

3/A

Chart No. 1

Design number

Design



Cams and their positioning
1 2 3



Needle position lever



Zig-zag stitch lever



Design graduating knob



Stitch length regulating knob



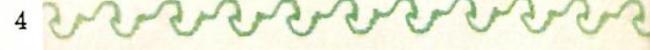
22 20 18 left 0 2,5 4



0 24 0 center 0 1 0,1



0 16 0 » 0 1 0,3



32 20 30 left 0 2 4



32 20 18 » 0 1,5 4



32 20 24 » 0 2,5 0,5



22 20 30 » 0 3 0,3



0 17 25 » 0 2,5 0,1



28 20 10 » 0 2,5 0,3

Chart No. 1

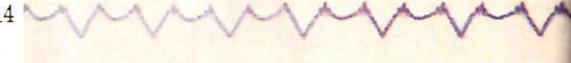
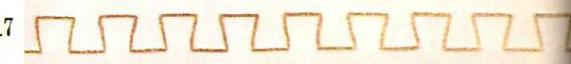
Design number	Design	Cams and their positioning			Needle position lever	Zig-zag stitch lever	Design graduating knob	Stitch length regulating knob
		1	2	3				
10		32	0	10	left	0	1	4
11		14	20	18	»	0	2	4
12		0	24	26	»	0	2	0,1
13		22	20	16	»	0	2,5	0,3
14		0	20	26	»	0	1	0,2
15		0	20	24	»	0	1	0,3
16		22	20	26	»	0	3	0,2
17		22	0	18	»	0	2	4
18		32	16	30	»	0	2	4

Chart No. 1

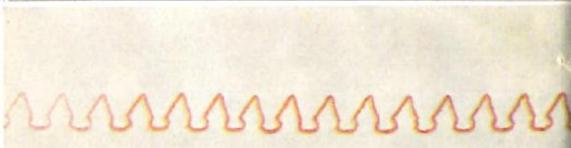
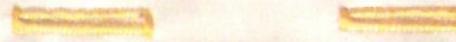
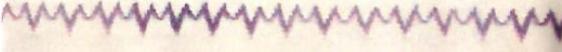
Design number	Design	Cams and their positioning			Needle position lever	Zig-zag stitch lever	Design graduating knob	Stitch length regulating knob
		1	2	3				
19		22	0	24	left	0	1	0,5
20		0	0	30	»	0	1	0,5
21		28	0	16	»	0	1	4
22		0	26	0	»	0	1	0,3
23		32	0	30	»	0	1	4
24		28	0	30	»	0	1	4
25		0	34	24	»	0	1	0,2
26		permanent three cam assembly			»	0	1	4
27		»	»	»	»	2	2,5	0,1

Chart No. 1

Design number	Design
28	
29	
30	
31	
32	
33	
34	
35	
36	

Cams and their positioning 1 2 3	Needle position lever	Zig-zag stitch lever	Design graduating knob	Stitch length regulating knob
permanent three cam assembly	left	2	2,5	0,1
» » »	»	0	1	4
	see Par. « Automatic Buttonholes » on Chapter No. 3			
35 17 20	»	0	1	0,2
35 26 19	»	0	2	0,1
35 20 31	»	0	1	0,3
0 35 26	»	0	1	0,3
18 0 11	»	0	1	1,5
35 0 18	»	1,5	1	0,3

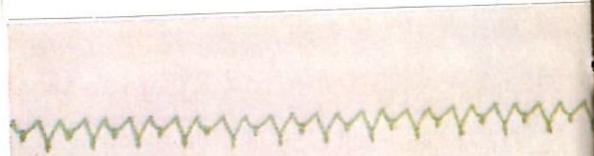
JA

Chart No. 1

Design
number

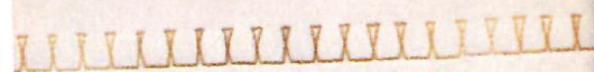
Design

37



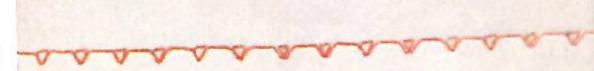
22 21 26 left 0 1 0,7

38



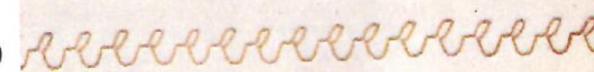
15 0 19 » 0 1,5 0,3

39



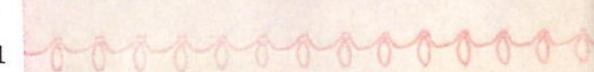
15 0 20 » 0 1 3

40



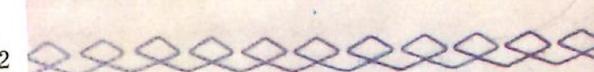
16 0 30 » 0 1 0,4

41



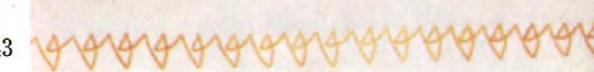
16 0 27 » 0 1 0,5

42



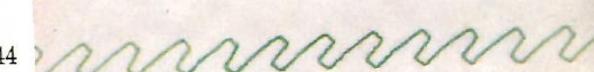
18 0 16 » 0 1 1,2

43



14 0 26 » 0 1 0,5

44



15 0 16 » 0 1 2

45



15 0 11 center 1 1 0,5

	Cams and their positioning			Needle position lever	Zig-zag stitch lever	Design graduating knob	Stitch length regulating knob
	1	2	3				
22	21	26	left	0	1	—	0,7
15	0	19	»	0	1,5	0,3	
15	0	20	»	0	1	3	
16	0	30	»	0	1	0,4	
16	0	27	»	0	1	0,5	
18	0	16	»	0	1	1,2	
14	0	26	»	0	1	0,5	
15	0	16	»	0	1	2	
15	0	11	center	1	1	0,5	

Chart No. 1

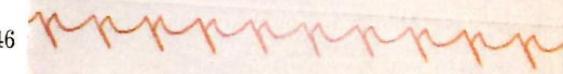
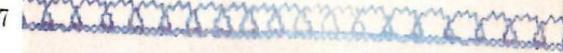
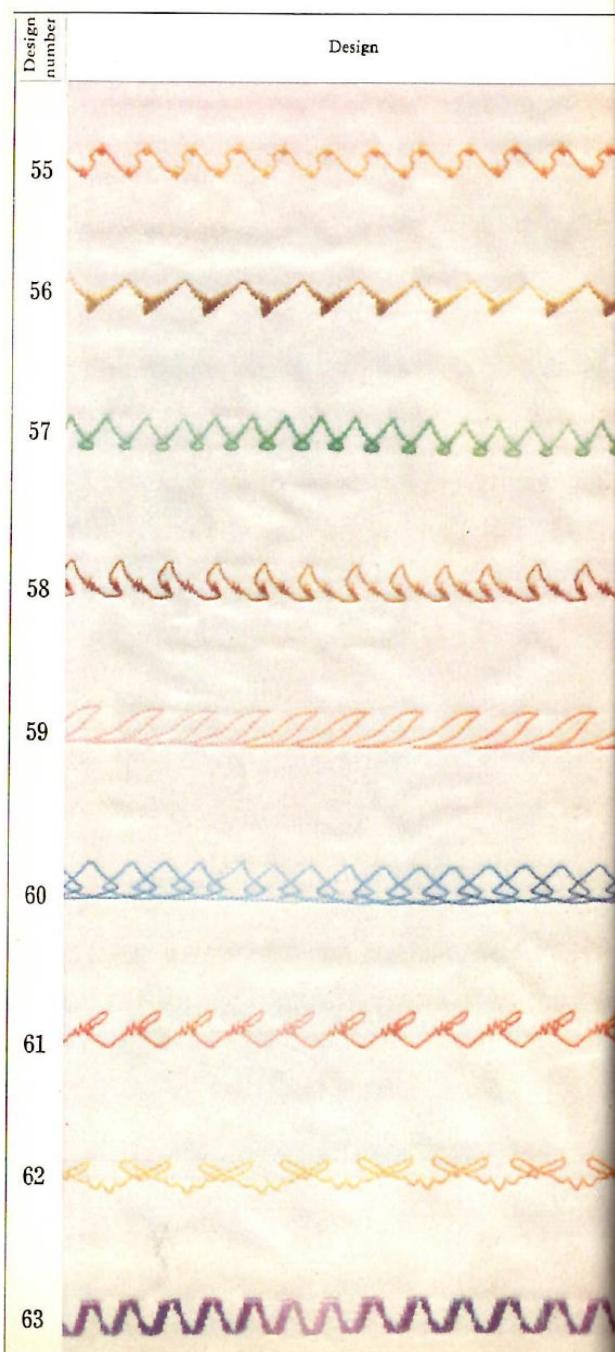
Design number	Design	Cams and their positioning			Needle position lever	Zig-zag stitch lever	Design graduating knob	Stitch length regulating knob
		1	2	3				
46		32	0	27	left	0	1	1
47		25	0	11	"	1	1	1
48		30	0	17	"	0,5	2	0,3
49		28	17	18	"	0	1	0,6
50		28	16	18	"	0	2	0,2
51		11	0	31	"	0	1	1,4
52		10	0	31	"	0	1	1,5
53		14	21	27	"	0	1	0,4
54		14	21	26	"	0	1	0,4

Chart No. 1



	Cams and their positioning			Needle position lever	Zig-zag stitch lever	Design graduating knob	Stitch length regulating knob
	1	2	3				
27	21	17		left	0	2	0,2
33	35	17		"	0	1	0,4
15	0	25		"	0,5	1	0,4
14	20	25		"	0	2	0,4
19	0	10		"	0	1	1
19	0	25		"	0	1	1
31	20	17		"	0	1	0,5
19	21	26		"	0	2	1,3
20	26	18		"	0	2	0,1

Chart No. 1

Design number	Design	Cams and their positioning			Needle position lever	Zig-zag stitch lever	Design graduating knob	Stitch length regulating knob
		1	2	3				
64		29	34	22	left	0	1	1
65		17	34	19	right	0	1	0,5
66		31	0	21	left	0	1	0,5
67		11	0	26	"	0	1	1,5
68		17	0	21	"	0	1	0,5
69		19	0	31	"	0	1	1,3
70		30	0	18	"	0	2	0,4
71		19	0	27	"	0	1	1,5
72		22	34	30	"	0	1	0,4

Design no.	their positioning			position lever	Zig-zag stitch lever	graduating knob	regulating knob
	1	2	3				
73	14	20	16	left	0	1	0,5
74	27	20	16	»	0	1	0,5
75	0	27	25	»	0	2	0,1
76	31	21	17	»	0	1	0,5
77	0	17	31	»	0	2	0,1
78	0	30	0	»	0	2,5	0,1
79	17	20	34	»	0	1,5	0,4
80	0	19	30	»	0	1	0,3
81	0	30	11	»	0	1	0,3

Chart No. 1

Design number	Design	Cams and their positioning			Needle position lever	Zig-zag stitch lever	Design graduating knob	Stitch length regulating knob
		1	2	3				
82		14	17	19	center	0	1	0,4
83		19	0	30	left	0	1,5	0,8
84		27	16	31	*	0	1	0,3
85		16	35	31	*	0	1	0,3
86		0	27	24	*	0	2	0,1
87		15	0	17	*	0	1	0,3
88		15	0	34	*	0	1	0,5
89		15	0	11	*	0	1	0,4
90		30	0	27	*	0	1	0,4

CHART NO. 2

22/A

Chart No. 2

23/A

Design number	Design	Cams and their positioning			Needle position lever	Zig-zag stitch lever	Design graduating knob	Stitch length regulating knob
		1	2	3				
1a		22	20	18	left	0	3,5	0,2
1b		22	20	18	"	2	3	0,2
1c		22	20	18	"	0	4	0,3
1d		22	20	18	center	1	3	0,2
1e		22	20	18	left	2	3	0,2

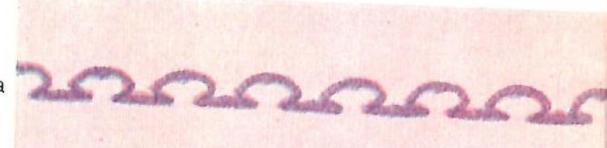
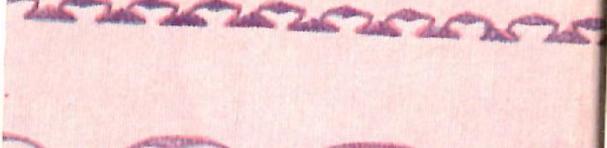
Designs derived from No. 1
(see chart No. 1 page 2/A)

Chart No. 2

Design number	Design	Cams and their positioning			Needle position lever	Zig-zag stitch lever	Design graduating knob	Stitch length regulating knob
		1	2	3				
3a		0	16	0	left	0	1	0,3
3b		0	16	0	right	0	2,5	0,3
3c		0	16	0	center	0	3	0,2
3d		0	16	0	left	0	3	0,2
3e		0	16	0	center	0	1	0,5

Designs derived from No. 3
(see chart No. 1 page 2/A)

Chart No. 2

Design number	Design	Cams and their positioning			Needle position lever	Zig-zag stitch lever	Design graduating knob	Stitch length regulating knob
		1	2	3				
9a		28	20	10	left	1	3	0,2
9b		28	20	10	right	0	4	0,3
9c		28	20	10	center	0	3	0,3
9d		28	20	10	left	0	4	0,3
9e		28	20	10	»	0	3	0,1

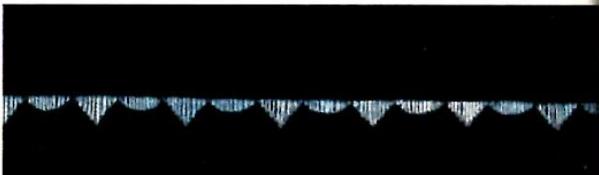
Designs derived from No. 9
(see chart No. 1 page 2/A)

Chart No. 2

Design number	Design	Cams and their positioning			Needle position lever	Zig-zag stitch lever	Design graduating knob	Stitch length regulating knob
		1	2	3				
13a		22	20	16	left	2	2,8	0,3
13b		22	20	16	"	0	4	0,3
13c		22	20	16	center	1	3	0,2
13d		22	20	16	left	1	2	0,2
13e		22	20	16	"	1	3,5	0,2

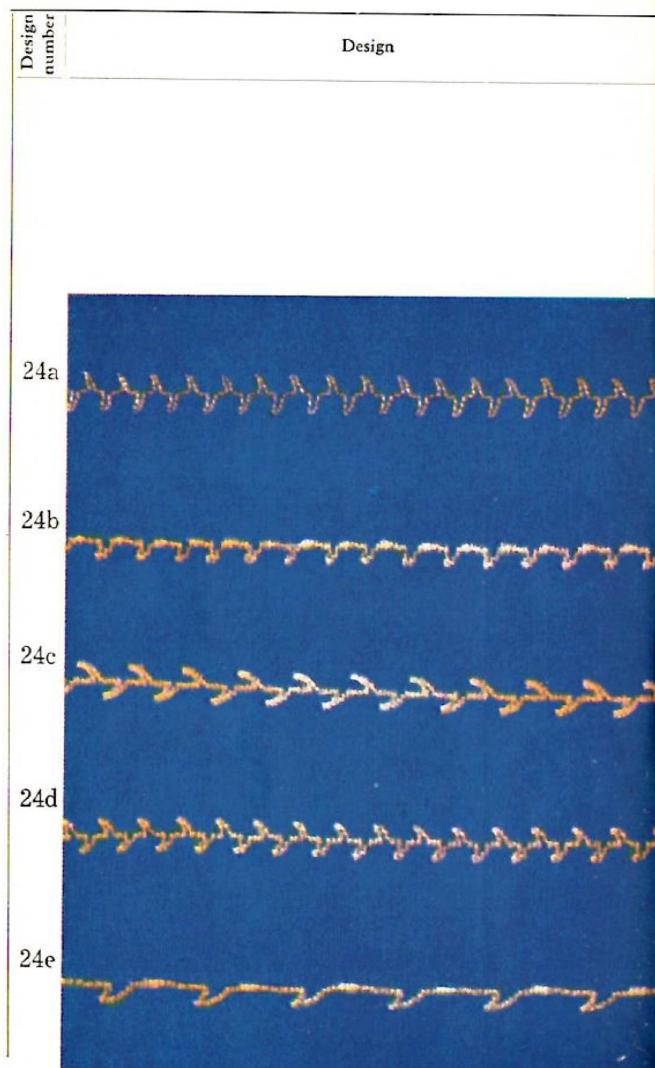
Designs derived from No. 13
(see chart No. 1 page 4/A)

Chart No. 2

Design number	Design	Cams and their positioning			Needle position lever	Zig-zag stitch lever	Design graduating knob	Stitch length regulating knob
		1	2	3				
22a		0	26	0	left	0	3,2	0,1
22b		0	26	0	center	0	3,2	0,1
22c		0	26	0	right	0	3,2	0,1
22d		0	26	0	center	0	1,5	0,1
22e		0	26	0	center	0	1,5	0,5

Designs derived from No. 22
(see chart No. 1 page 6/A)

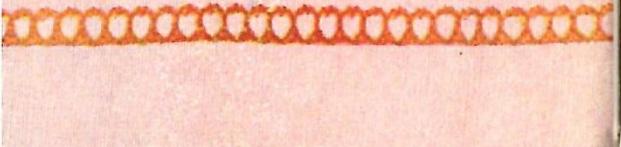
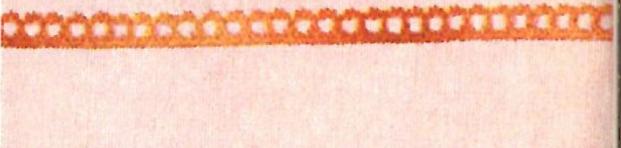
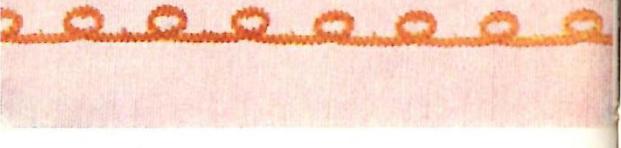
Chart No. 2



Cams and their positioning 1 2 3	Needle position lever		Zig-zag stitch lever		Design graduating knob		Stitch length regulating knob	
28 0 30 left	0		0		1		0,4	
28 0 30 center	1		1		1		0,4	
28 0 30 left	1		1		3		0,4	
28 0 30 »	1		1		1		0,4	
28 0 30 center	1		1		3		0,4	

Designs derived from No. 24
(see chart No. 1 page 6/A)

Chart No. 2

Design number	Design	Cams and their positioning			Needle position lever	Zig-zag stitch lever	Design graduating knob	Stitch length regulating knob
		1	2	3				
26a					permanent three cam assembly	left	0	3,5
26b		»	»	»	»	0	1	0,3
26c		»	»	»	center	0	2,5	4
26d		»	»	»	left	1	1	0,3
26e		»	»	»	»	1	2,5	4

Designs derived from No. 26
(see chart No. 1 page 6/A)

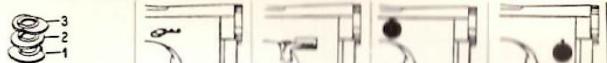
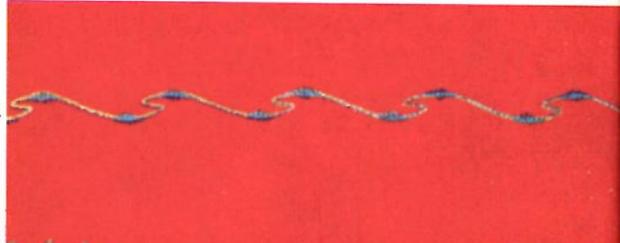
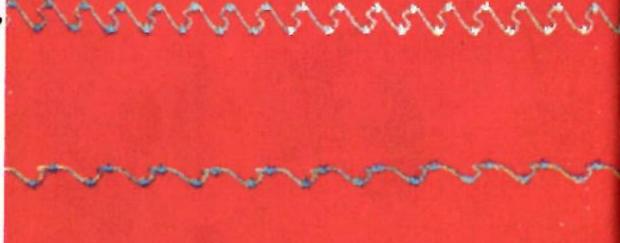
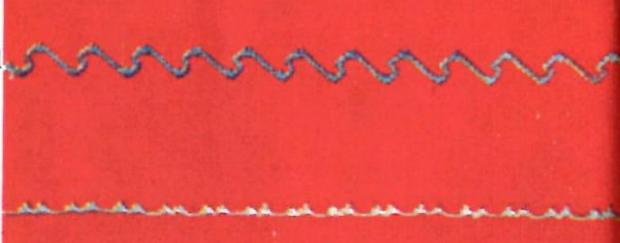
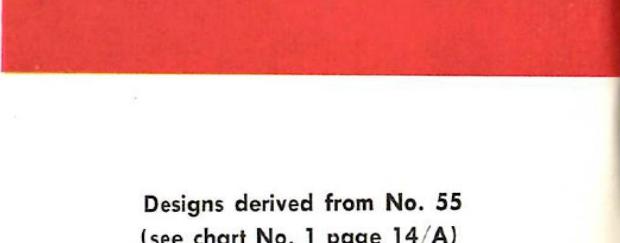


Chart No. 2

Design number	Design	Cams and their positioning			Needle position lever	Zig-zag stitch lever	Design graduating knob	Stitch length regulating knob	
		1	2	3					
29a		"	"	"	permanent three cam assembly	left	0	1	0,6
29b		"	"	"	"	1	1	1	4
29c		"	"	"	center	1	1	1	4
29d		"	"	"	left	1	2	2	0,5
29e		"	"	"	"	1	3	3	4

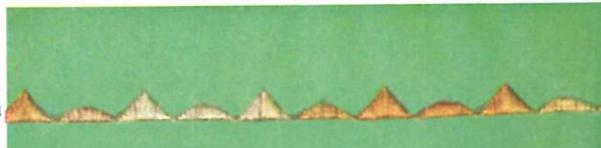
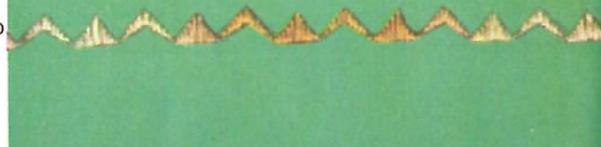
Designs derived from No. 29
(see chart No. 1 page 8/A)

Chart No. 2

Design number	Design	Cams and their positioning			Needle position lever	Zig-zag stitch lever	Design graduating knob	Stitch length regulating knob
		1	2	3				
55a		27	21	17	left	0	3	0,3
55b		27	21	17	"	0	1	0,1
55c		27	21	17	center	0	1	0,3
55d		27	21	17	left	0,5	1	0,3
55e		27	21	17	right	0	1	0,2

Designs derived from No. 55
(see chart No. 1 page 14/A)

Chart No. 2

Design number	Design
86a	
86b	
86c	
86d	
86e	

Designs derived from No. 86
(see chart No. 1 page 20/A)

Cams and their positioning				Needle position lever	Zig-zag stitch lever	Design graduating knob	Stitch length regulating knob	
	1	2	3					
0	27	24	right			0	3	0,2
0	27	24	left			0	2,5	0,2
0	27	24	»			0	1	0,2
0	27	24	»			0	4	0,3
0	27	24	center			0	2	0,2

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