NECCHI 720-100

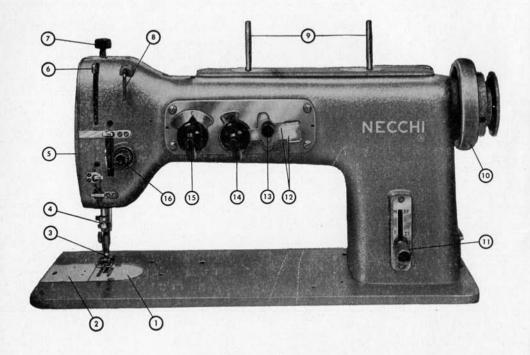
Instructions for the use and maintenance



NECCHI720-100

Instructions for the use and maintenance





- 1 Needle plate
- 2 Slide plate
- 3 Presser foot
- 4 Needle bar
- 5 Front plate
- 6 Thread take-up lever
- 7 Presser foot pressure regulating knob
- 8 Upper thread guide

- 9 Spool pins
- 10 Balance wheel
- 11 Stitch length regulating knob
- 12 Zig-zag limiting levers
- 13 Zig-zag lever fasten knob
- 14 Zig-zag width regulating knob
- 15 Needle positioning knob (three positions)
- 16 Upper thread tension

1. MAIN FEATURES

Transmission of the upper shaft movement to the lower shaft by means of a toothed belt, internally armoured with steel wires which make it inextensible.

Needle bar support with pendulum movement.

Rotary hook with horizontal axis, perpendicular to the longitudinal axis of the machine.

Roller bearings keyed on the balance wheel and on the lower shaft back bushing.

Operation: treadle drive with large balance wheel and ordinary bobbin winder; motor drive with small balance wheel, table bobbin winder, spool holders, and knee-lifter.

2. TECHNICAL DATA

Bed-plate dimensions	475×178 mm. (1	18.701 " \times "	7.008")
Under-arm space	275×130 mm. (1	0.827"×	5.118")
Maximum stitch length	5 mm. (0).197")	
Maximum zig-zag width	4.5 mm. (0).177")	
Maximum thickness to be	sewn 7 mm. (0.276") (a	according to material)
Maximum speed	stitches/minute	2500 (a	according to material)
Motor	manifold W	200	
	asynchronous W	250	

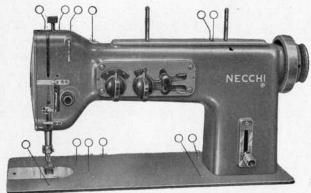
3. SPEED

The NECCHI 720-100 machines may be operated at a maximum speed of 2500 stitches per minute, according to the thickness and to the nature of the material to be sewn, as well as to the zig-zag width and to the thread in use. But, to start with, for at least 100 hours, it is advisable to use the machine at a maximum speed of 2000 stitches per minute, in order to run it in and obtain a perfect smoothing up of the moving members as well as a good bedding of all parts.

When sewing hard or stiff material, we recommend to further reduce the

speed so that overheating of the needle should be avoided.

4. OILING



Oiling is indispensable for the good preservation of the machine.

Fig. 1



It should be carried out using special high-quality oil for machine, avoiding particularly olive oil or other vegetable oils.

Fig. 2

Oil points indicated in figs. 1, 2, 3.

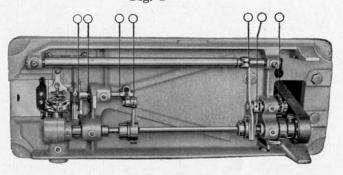


Fig. 3

The rotary hook must be very often lubricated. For so doing, a few drops of oil should be poured in point "A" indicated by fig. 4, so that it runs in the relevant housing race.

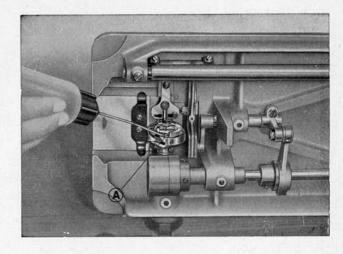


Fig. 4

stopper

spout

cap

container



5. HOW TO USE THE OIL CAN

To oil, unscrew the stopper and slightly press the plastic container.

Fig. 5

6. NEEDLES AND THREADS

Use needles of syst. 134, and in particular the following ones:

Syst. 134 R - round-pointed for sewing on fabrics.

Syst. 134 LR - right-hand cut needle for working on skins in general.

Syst. 134 Lack - special needle for polished leathers.

Syst. 134 P - pearl-pointed needle with normal short groove.

Syst. 134 S - spade-pointed needle for long straight stitches.

Syst. 134 Vr - needle with right-hand rhomboidal point; may replace the

134 P and 134 S needles.

According to the quality of the material to be sewn, different types of thread must be used as specified in the table on the right.

The selection of the thread quality is most important for insuring perfect running of the machine.

Needle size		Quality of material	Thread	
			cotton	silk
65 70	7	Very fine linen Extra light materials	100 120	00
70 80	7 8	Fine linen Very light materials	70 80	0 - A
80 90	8 9	Light linen Fine materials	60	A - B
90 100	9	Clothing in general Medium materials	50	B - C
90 100	9 10	Medium clothing Medium heavy materials	40	C - D
100 110	10 11	Heavy clothing Heavy materials	30	E
110 120	11 12	Heavy and hard materials Medium skins Skins for shoe vamps	20	_

It is necessary to use always threads matching the material and suitable for the work to be done. They must have a uniform thickness and paraffined threads should be absolutely avoided.

Fig. 6

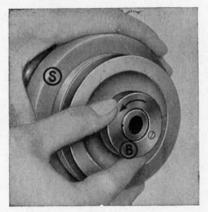
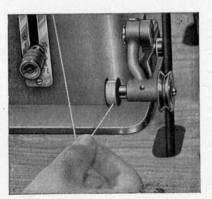


Fig. 7



7. TO INSERT AND REMOVE NEEDLE

To remove needle:

- Bring needle bar to its highest position by turning the balance wheel towards you.
- Release needle clamp screw and remove needle.

To insert needle:

- 1) Check whether the long groove of the needle faces you.
- Push needle into the clamp as far as it will go and then tighten the needle clamp screw.

If you do not insert the needle properly you may have some difficulties as for instance breaking of needle, uneven stitches or breaking of thread.

8. TO WIND EMPTY BOBBIN

On treadle driven machines:

Disconnect balance wheel «S» by holding same with the left hand (fig. 7), while with the right hand you turn knurled knob «B» in the direction of the arrow. Wind a few inches of the free end of thread around bobbin and then place the latter on the spindle.

Push the small wheel against the belt, by

lowering the spindle holder arm. Start the pulley through tread

Start the pulley through treadle operation, taking care to guide thread by hand, as shown in fig 8, in order that bobbin should be evenly filled.

Fig. 8

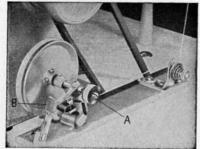
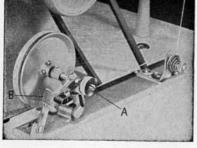


Fig. 9



On motor driven machines:

This operation may be carried out during normal sewing.

Insert thread as indicated in fig. 9, winding a few inches of the free end around bobbin and place the latter on spindle « A. »

Press lever « B » which brings the pulley against the belt and start the machine.

When the bobbin is full the bobbin winder stops automatically.

9. TO INSERT BOBBIN INTO BOBBIN CASE

Bring needle to its highest position by turning balance wheel toward you. Insert the filled bobbin into bobbin case exactly as shown in fig. 10.

Insert bobbin case into bobbin case holder by lifting the latch.

Release the latter and push the bobbin case until perfect fitting is insured. Leave about 4 inches of thread hanging out of the bobbin case.

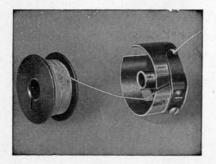
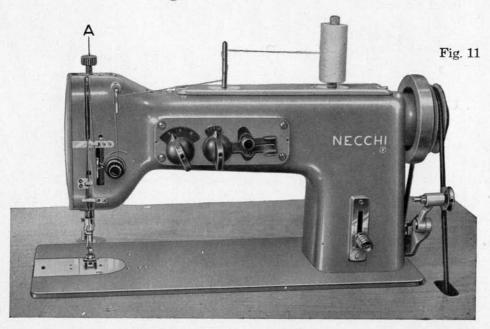


Fig. 10



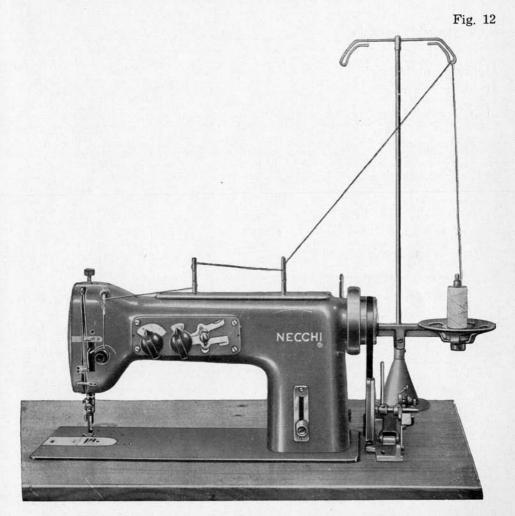
10. UPPER THREADING

The thread can reach the needle either from the spool pin fitted on the machine head (treadle driven machines) or from the table spool holder (motor driven machines).

Thread should be inserted as shown in figs. 11 & 12 (for thread size see

table page 4).

Thread needle from the front to the back of the machine, bearing in mind that when the thread take-up lever is in its highest position, the thread should hang out of the needle eye for about 4 inches.



11. TENSION REGULATION

A perfect regulation of both the upper and lower threads is required for a perfect running of the machine.

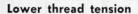
If you have to sew light materials, tensions should be rather loose.

Increase tensions according to the thickness of the material to be sewn.



Upper thread tension is increased by turning knob « A » (fig. 13) toward the right.

It is decreased by turning same toward the left



Adjustment is made by releasing or tightening screw « C » (fig. 14).

12. TO REGULATE STITCH LENGTH AND SEWING DIRECTIONS

- 1) Loosen stitch regulating knob «A» (fig. 15) and move it along the graduated scale until its index «B» indicates the desired length of stitch.
- Stop the knob in such a position turning it toward the right until it is secured.
- With the knob in this position you will obtain forward sewing; by moving it upwards, you will have reverse sewing.

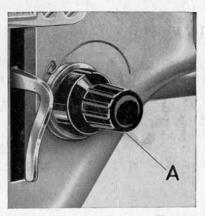


Fig. 13

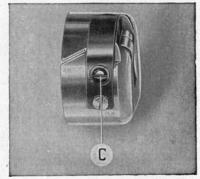


Fig. 14

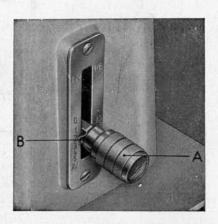


Fig. 15

13. TO REGULATE PRESSER FOOT PRESSURE

Pressure of presser foot is regulated by means of knob «A» (fig. 11). This knob has to be turned toward the right if you wish to increase the pressure and toward the left if you wish to decrease same.

Pressure is to be increased according to the thickness of the material in use.

14. TO START SEWING

- 1) Holding with the left hand the thread hanging out of needle eye, turn slowly balance wheel toward you for one revolution, with the right hand.
- 2) When the needle goes up again, slightly pull the upper thread, so that the lower thread comes out of needle plate hole.
- 3) Place fabric under presser foot, lower the latter, and run machine by holding both threads for the first 4 or 5 stitches.
- 4) Check evenness of stitches.

15. STRAIGHT SEWING

For straight sewing move knob " A " (fig. 16) so that its index is on the " 0 " (that is on the right) which is marked on the graduated scale "B". Lower index stop levers " H" and " I" and tighten knob " F".

You can sew straight in the centre, right or left positions by placing knob « E » (fig. 16) in position « C » « D » or « S » marked on the plate.

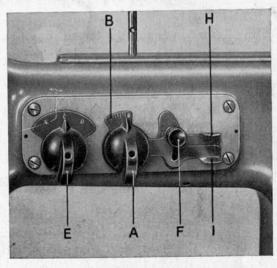


Fig. 16

16. ZIG-ZAG SEWING

For zig-zag sewing operate as follows:

- Place index of knob « E » (fig. 16) in position « C ».
- 2) Regulate stitch length by following the instructions given in para. 14.
- 3) Holding index stop levers between thumb and forefinger (fig. 17), move knob «A» until it reaches the desired stitch width, then secure knob «F».
- 4) Start sewing by following the instructions of para, 14.

By combining the operations of knobs «A» and «E», stitches are obtained as shown in fig. 18. For each type of stitch indicated in this figure was proven above.

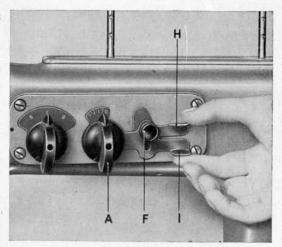


Fig. 17

in this figure, you may choose the stitch length you wish.

The zig-zag index stop levers may also be used separately according to whether the limitation is required from " θ " to the maximum zig-zag width or viceversa.

For the limitation from «0 » toward the maximum operate as follows:

- a) Place knob « A » in position « 0 » and the two index stop levers completely down.
- b) Hold with the right hand lever «I» in this position and, with the left hand, put knob «A» in the desired position.
 By so doing, index stop lever «H» will also move to its right position.
- c) Secure knob «F». Under this condition knob «A» will move between «0» and the desired position.

To limit the zig-zag from the maximum width toward « 0 », operate as follows:

- a) After having loosened knob «F» place knob «A» in the maximum zigzag width position (index on the left) and the two levers completely up.
- b) Hold with the right hand lever « H », and with the left hand move knob « A » until it is in the desired position.
 By so doing, lever « I » will also be in position.

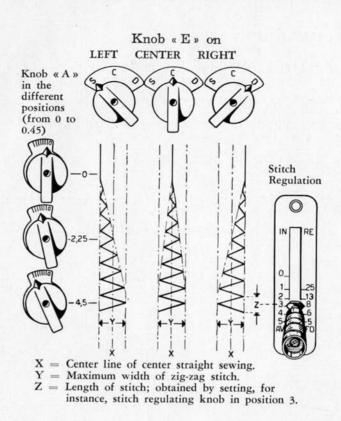


Fig. 18

c) Secure knob «F». In this condition knob «A» will have a movement limited between the maximum zig-zag width and the predetermined position.

17. TO INSURE PERFECT FUNCTIONING OF MACHINE

Always follow instructions concerning the relation between needle, thread and material to be sewn (table on page 4).

Do not operate threaded machine when there is no fabric under presser foot. Presser foot should always be raised when there is no fabric between same and needle plate.

When the machine is not in use, presser foot should be kept resting on feed dog with a piece of cloth in between.

Always turn balance wheel toward you.

Never try to help feeding by pulling fabric since this action may bend or break needle, and damage also needle plate hole. The machine automatically feeds the fabric without assistance.

18. ORDINARY MAINTENANCE

The machine should be used with the maximum care and kept in a dry place. Ordinary maintenance comprises basically oiling which is to be carried out according to instructions mentioned under para.: « Oiling ».

Machine should be oiled at regular intervals corresponding to about 8 hours of continuous operation and not more than 15 days in case of intermittent use or complete inactivity.

19. SPECIAL MAINTENANCE

It consists mainly of grease changing and bobbin case holder disassembly and reassembly.

You should check whether the grease contained in the special carter is sufficient for lubricating the gears.

For so doing proceed as follows:

1) Remove screws « A » (fig. 19) and then cover « B ».

2) Check whether the grease contained is sufficient and if not, fill the container.

It is advisable to use always a good quality grease suitable for lubricating as for instance « Stuffer » grease.

3) Fit cover « B » again and tighten screws « A ».

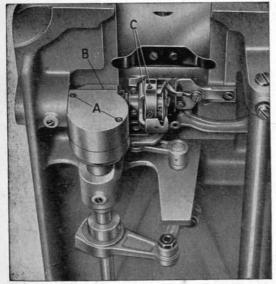


Fig. 19

As regards the bobbin case holder, it should be disassembled only in case a piece of thread, which usually provokes heavy running or jamming of machine, has been caught in the race, or when the machine is to be cleaned.

To carry out this operation, proceed as follows:

- Bring needle to its highest position and remove bobbin case.
- 2) Loosen the 3 screws « C » (fig. 19) and remove the pointed sector closing the race.
- 3) Rotate bobbin case holder, holding it with the left hand by its centre spindle until it is set free from the hook.

- 4) Clean the race carefully, removing dust and pieces of thread, then oil it. In case you should loosen the screws fixing the toothed pulleys of the transmission belt, the operation for timing the machine is to be carried out as follows:
- a) Bring needle bar to its highest position.
- b) See that the two guide lines marked on the feed dog eccentrics coincide.
- c) Tighten the fastening screws of the pulleys. In this position, the machine members are perfectly timed.

20. HOW TO USE ACCESSORIES

a) Straight guide

It is used together with the normal presser foot or with the quilting foot when you have to sew as close to the edge of the fabric as possible, or to keep the stitches at a uniform distance from the edge.

It is attached to the bed-plate of the machine by means of 1 or 2 screws (fig. 20).

b) Quilting guide

It is used for quilting wadded fabrics, thus allowing to obtain regular checks without having to trace them first.

It is attached to presser bar together with the normal presser foot as indicated in fig. 21.



Fig. 20

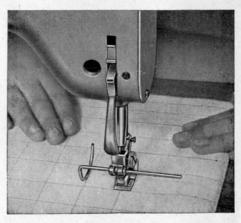


Fig. 21



Fig. 22



Fig. 23

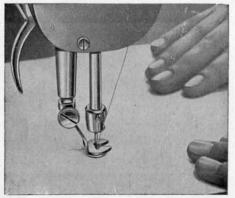


Fig. 24

c) Needle plate and presser foot for straight stitching

For straight stitching, the normal presser foot should be replaced by the one shown in fig. 22 and needle plate by the round-holed one contained in the standard equipment of the machine.

d) Shell hemming presser foot

For shell stitching replace normal presser foot by shell hemming foot (fig. 23).

When starting to hem, turn over the fabric by running it through the scroll of presser foot.

The zig-zag stitch is to cover the whole width of hem.

e) Button sewing foot

For sewing on buttons, follow the operations hereunder:

- Replace the normal foot by the special one and set the stitch regulating knob on « 0 ».
- Place button under foot and regulate the zig-zag width in order that the needle passes in the centre of each one of the button holes.

Make the five or six stitches which are required for sewing on the button (fig. 24).

When you have to attach a four-hole button, operate as mentioned above, then move the fabric and the button so that the needle passes in the centre of the second couple of holes. Then make the 5 or 6 stitches required.

We are now illustrating some of the most requested attachments, suitable for special works, and which are not included in the standard accessories of the machine

21. BLINDSTITCHING PRESSER FOOT

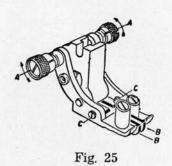
The presser foot for blindstitching is fitted to the presser bar by means of the relevant screw and washer.

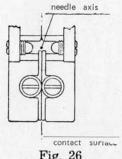
This patented NECCHI attachment, unlike all the other similar ones, is provided with two distinct adjustments for the tongues guiding the fabric.

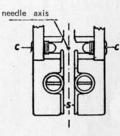
Instructions for blindstitching

- 1) Lift presser bar lever and replace ordinary foot by blindstitching foot. The latter is to be fitted to presser bar by means of the appropriate screw and washer supplied with said foot.
- 2) Set needle positioning knob in centre position.
- 3) Set zig-zag regulating knob on «0».
- 4) By turning balance wheel toward you, lower needle until it enters slightly needle plate hole.
- 5) Adjust the two knurled knobs « A » (fig. 25) until needle axis is exactly passing through contact plane of the two plates « B », as shown in fig. 26.
- 6) By adjusting again the two knurled buttons « A » in the direction of the arrows (fig. 25), increase the distance between the two plates « B » up to the desired width, depending on the desired zig-zag stitch width that varies generally with the thickness of the fabric in use.

Width is increased according to the thickness of the material to be sewn.



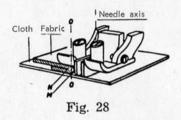


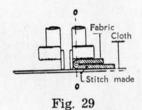


Further to this operation, needle axis must always be on centre line of space «S» (fig. 27).

- 7) Raise needle from needle plate by turning balance wheel toward you.
- 8) Adjust zig-zag regulating knob and, by turning balance wheel, make sure that stitch width suits your requirements and that needle, when going down, does not hit screws « C » (figs. 25-27).
- 9) Set stitch regulating knob on the desired length.
- 10) In order now to reach a final adjustment of this special foot before starting to work, operate as shown in fig. 28. Place a scrap of fabric similar to the one on which you wish to make the blindstitching, on a cloth stretched on bed-plate of machine.

This scrap of fabric is to be folded until outer edge of fold is against the outer part of left plate. Naturally, the fabric can also be folded to the right and in this case it will have to be set against outer part of right plate (fig. 29).





- 11) Lower foot, and start sewing making a few stitches for trial. When needle goes down, two conditions may occur:
- a) needle goes over point « N » and in this case you will not obtain blind-stitching;
- b) needle does not reach point "M" in the fabric and therefore the seam will not sew together the two parts of fabric.

To correct condition a), turn left knurled knob « A » (fig. 25) in the direction opposite to that of the arrow.

To correct condition b), turn same in the direction of the arrow until needle enters the correct position 0-0 (fig. 28), thus being exactly in the middle of the fabric thickness.

It is recommended to make slight adjustments and to try out first with a few stitches.

12) If this gives the desired result, sew about ten stitches.

Then, leaving needle in the cloth (but not in the folded fabric), raise presser foot — without breaking threads — and turn flatwise the fabric of 180°, that is of half a turn.

13) Make a new fold in fabric at the distance you wish from first seam, slightly pulling threads if necessary; the new fold of fabric should touch lightly right plate — if you have started on the right (fig. 29).

You will just have to repeat operations described under point 11 in order to obtain also adjustment of right knurled knob.

14) Go through three or four times alternately on right and left to make sure that presser foot is perfectly adjusted in both directions.

You can now start working definitively since no more adjustment is required, unless you change thickness of fabric.

NOTES

- A) When sewing fabrics which are particularly thin, in order to avoid that needle, further to any slight deviation toward right or left, makes stitch visible, you will have to loosen or tighten the two screws « C » (fig. 27) of foot in order that needle touches them lightly when coming down; they act as a safety guide for this type of sewing.
- B) The fabric which runs under presser foot (fig. 30) must always be guided towards guide plates « B » (fig. 25) so as to make it slide against the latter during operation.

Presser foot is provided on its lower face with appropriate convergent grooves (fig. 31) which also help to always keep fabric against plates.

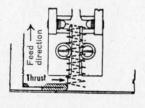


Fig. 30

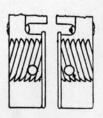


Fig. 31

22. ATTACHMENT FOR MAKING TAILORED BUTTONHOLES

For buttonholing, you should have the accessories listed hereunder:

- foot « D » which replaces the ordinary presser foot;
- cutter « M » for cutting buttonhole in fabric.

To make buttonholes, operate as follows:

- 1) Fit onto machine foot « D » (fig. 32).
- 2) Set index of knob «E» completely to the right, that is on letter «D» (fig. 34).
- Loosen knob «F» and set lever «I» completely downwards and lever «H» completely upwards.
- 4) Move knob «A» so that its index should be in position 2 or 2.5, thus corresponding to the minimum zig-zag width you wish to have for the buttonhole.
- 5) Push upwards lever « I » until it stops against inner clamp of knob « A »

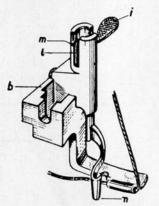
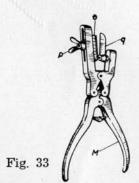


Fig. 32

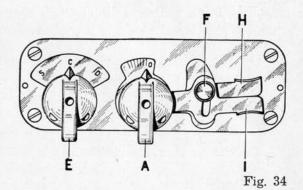


- 6) Hold lever « I » in such a position with the right hand, and with the left turn knob « A » until its index is in the position suitable for making the bar tacks; that is index must show a value double of the one mentioned under above point 4: position 4-4.5.
- 7) Push downwards lever « H » until it also stops against inner clamp of knob « A », and secure knob « F ».

If you wish to obtain even buttonholes, you should not vary any more this adjustment, which allows to fix the limits of the zig-zag width as follows: smaller: index of knob « A » on the right;

larger: index of knob « A » on the left (for making the bar tack).

8) Raise presser bar lever, lift tongue "i" of foot "D" and rotate it clockwise until its upper lug "l" rests on step "m" (fig. 32). By releasing tongue "i", the coupling will remain raised and to the rear. 9) Cut buttonholes in fabric, in required position, by means of cutter « M » (fig. 33). Cutting length can be varied between 17 mm. (0.66") and 40 mm. (1.57") and to obtain the desired value it is sufficient to set accordingly graduated scale « O » operating on wing nut « P ».



To make an eyelet buttonhole, move graduated scale «O» downwards (fig. 36a) so that round blade «n» enters the fabric thus making the eyelet. In order to obtain a tapered buttonhole, move graduated scale upwards (fig. 36b).

10) Place fabric under foot so that buttonhole cutting should have its eyelet or tapered end turned towards the operator (fig. 38).

11) Lower presser bar lever.

12) Move lever « i » counterclockwise; round blade « n » will be lowered and enter buttonhole cutting (fig. 32).

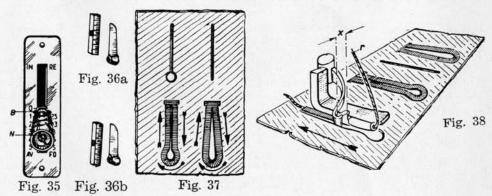
13) Insert gimp «r» in the appropriate groove and leave about one inch

hanging free from opposite end of groove (fig. 38).

14) Set index of knob «A» completely to the right (smaller zig-zag width) and start sewing. Direction of sewing is indicated by the arrows of fig. 37.
15) When you have completed the buttonhole profile, make the bar tack, by

setting index of knob « A » to the left (larger zig-zag width).

16) In order to insure a perfect execution of the buttonhole bring stitch regulating lever «N» with its index «B» slightly under the zero (fig. 35) — so as to have a small feed and that zig-zag stitches should



all be in contact — and make sure that lower tension is very light, by regulating accordingly bobbin case spring.

Note:

For making special buttonholes, it might be necessary to vary distance " X " (fig. 38) between coupling and foot. Bear in mind that in this case, there is, in the back part of the foot, an appropriate screw which allows adjusting this distance.

23. CAUSES OF MINOR DIFFICULTIES

Upper thread breaks

Machine improperly threaded: follow instructions of para. 10.

Upper tension too tight: regulate tensions (para. 11).

Needle and thread are of wrong quality for fabric in use: see table of para. 6.

Thread has knots: replace thread with another of better quality.

Needle plate hole is damaged: replace plate.

Needle is inserted incorrectly: follow instructions of para. 7.

Take-up lever spring breaks: replace same.

Lower thread breaks

Bobbin case is wrongly inserted into bobbin case holder: follow instructions of page 6.

Needle plate hole is damaged: replace plate.

Needle breaks

Needle is bent: it is to be replaced.

Material is pulled or pushed by hand to help feeding: replace the needle and do not pull the fabric. Machine feeds the fabric automatically.

Uneven stitches

Tensions are not correctly regulated: follow instructions of para. 11.

Needle is not properly threaded: follow instructions of para. 10.

Thread is of wrong size for needle used: see table of para. 6.

Bobbin is not well inserted into bobbin case: follow instructions of para. 9.

Needle is blunt: change it.

Irregular feeding

Insufficient pressure of presser foot (particularly when heavy fabrics are to be sewn): regulate presser foot pressure as explained in para. 13.

SUB-CLASSES

The features of these machines are similar to those of the 720-100.

NECCHI 720-103

Provided with special 5 rows feed dog and needle plate.

It is particularly intended for sewing

lingerie.

This machine is supplied together with a presser foot for making shell hems (fig. 24).

NECCHI 720-118

- twin-needle clamp (fig. 39),
- double tension,
- three special plates for ridging with or without gimp,
- two special feet with grooves under base of same.

The foot with small grooves is used with the small winged plate. The foot with large grooves can be used either with the plate provided with medium wing or with the plate provided with hole for introduction of gimp.

It is particulary intended for making darts on bras and for ridging with or without gimps, vamps, gloves etc.

NECCHI 720-119

- special grooved needle plate (fig. 40),
- special feed dog,
- foot with narrow grooves,
- double tension (fig. 39).

It is particularly intended for ridging on chamois or light leather gloves.

NECCHI 720-120

Provided with twin needle clamp. It is particularly intended for pleating on linen, light clothing, gloves.

NECCHI 720-121

- bobbin case for buttonholing,
- device for making tailored buttonholes (fig. 41),
- double tension (fig. 39).

This machine is particularly intended for dressmakers.

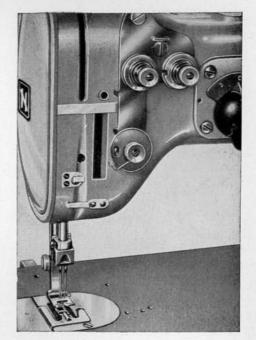


Fig. 39

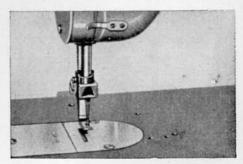


Fig. 40

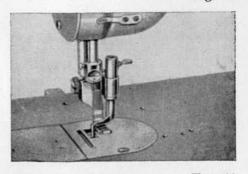


Fig. 41

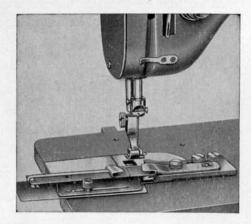


Fig. 42

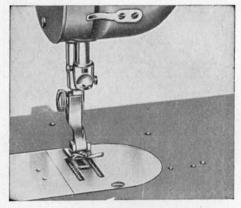


Fig. 43

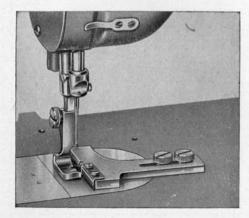


Fig. 44

NECCHI 720-122

 attachment for inserting whale bone gimps into hat bands (fig. 42), complete with special presser foot, needle plate and feed dog.
 Intended for inserting whale bone gimps into hat bands.

NECCHI 720-123

- special guide (fig. 44),
- special foot,
- special needle plate,
- special feed dog.

It is intended for joining tubular belts.

NECCHI 720-124

Provided with two special grooved feet, of which one for 1.5 mm. cord and the other for 2 mm. cord (fig. 43).

This machine is particularly intended for sewing cord on the outer part of vamps, etc.

NECCHI 720-125

Provided with grooved foot for piping vamps.

NECCHI 720-132

Provided with a special adjustable binder and additional puller. It is particularly intended for binding wool blankets.



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