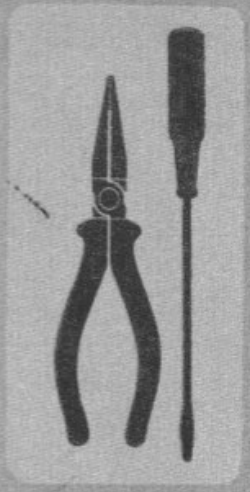


INSTRUCTIONS
for servicing the

NECCHI

supernova Julia

automatic

DISTAC

INSTRUCTIONS
for servicing the

NECCHI*

supernova Julia *

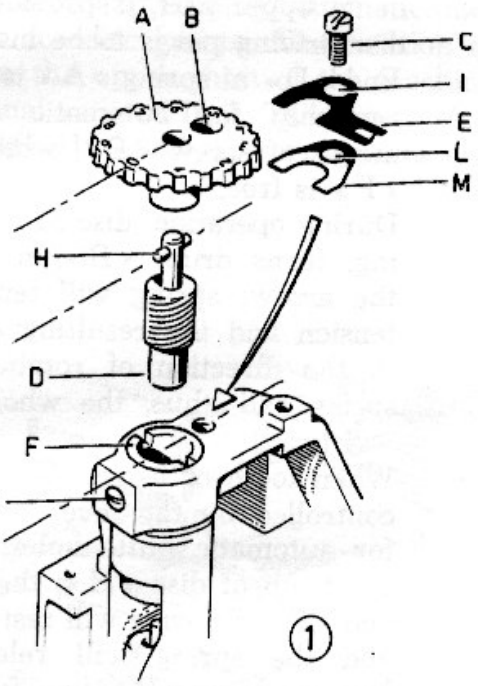
automatic

The instructions contained herein are to be integrated with those of the Service Manual for the NECCHI SUPERNOVA.

PRESSER FOOT PRESSURE

Pressure of presser foot is adjusted by means of parts shown in fig. 1.

Disassembly of pressure regulating knob unit



— Remove upper cover.
— Open front plate.
— Set the « 0 » of knob « A » to your left, in order that through hole « B » you may see completely screw « C ».
— Unscrew and remove said screw.
— Turn knob « A » counterclockwise until you remove completely five-threaded rod « D ».
— Remove knob from rod and both springs « E » and « M » from knob.

Reassembly of pressure regulating knob unit

— By means of knob « A », screw the threaded rod « D » into bushing « F » until lower surface of said knob skims the upper surface of bushing. When this condition is met, the cap of presser bar spring will have to press slightly against rod « D », and presser foot pressure should correspond to the lower pressure values usually required. In case spring should not be pressed, screw again rod « D » down a few turns.
— Remove knob from rod, without turning it any more.
— Loosen set screw « G » and, by means of a 2-tooth key, inserted into grooves of bushing « F », turn the latter until pin « H » of rod « D » is set in the position indicated in fig. 1, that is parallel to the axis of upper shaft of machine. When proceeding, take care that bushing should neither slip downwards nor come upwards. If this should eventually occur, set it to its correct position by means of a hammer and a brass punch.
— Tighten set screw « G ».
— Insert both springs « E » and « M » in their appropriate grooves on lower surface of knob « A », in such a way that holes « I » and « L » match hole « B ».
— Secure screw « C » to arm through holes B, I, & L.

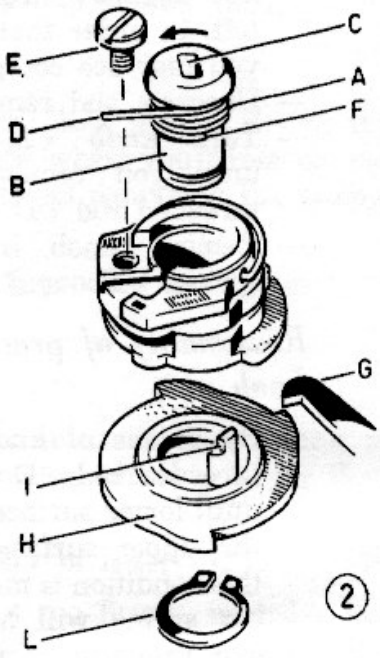
In order to make sure whether the above procedure has been carried out correctly, check that:

1) When closing front plate, it should not touch knob « A ».
2) Knob « A » can be turned for almost one complete revolution without there being any friction against upper part of bushing « F ».

DISC-ASSEMBLY FOR AUTOMATIC BUTTONHOLES

Cylindrical spiral spring « A » (fig. 2), is wound around drum « B » which, in its upper part, is provided with slot « C » through which upper part of disc driving pin is to be inserted.

End « D » of spring « A » is secured on disc-assembly for automatic buttonholes, by means of screw « E », while the other end « F » is free.



During operation, disc driving pin, by rotating, turns drum « B » in the direction of the arrow; spring will tend to tighten its tension and the resulting action will drive in the direction of rotation end « D » of spring and, thus, the whole disc assembly will turn.

When tooth of lever « G », Fig. 2, which is controlled by the lever of the special foot for automatic buttonholes, engages one of the teeth of disc « H », the latter will stop, end « F » of spring will rest against step « I » and the spring will release its tension, leaving drum « B » free from rotation.

The main point to bear in mind when adjusting this disc-assembly is that once it is assembled, disc « H » should have a back-lash (movement under tension) of about 2 to 3 mm. (5/64" to 1/8") in order that end « F » of spring should not be engaged by step I, during resting position.

Should the back-lash (movement under tension) be more or less than 2-3 mm. when turning disc « H » by hand, you will have to move very slightly of about 1 mm (1/32") end « D » of spring, by proceeding as follows:

— sligthly loosen screw « E »,
— turn slightly drum « B » in the direction opposite to that of the arrow, holding it with two fingers placed on top and bottom of same (actually drum « B » is turned while holding rest of cam in place).
— secure screw « E » firmly.

Make sure that disc « H » should have the clearance mentioned above. If this condition is not met, repeat the operation.

The disassembly of this unit is very easy. For so doing, proceed as follows:

— remove screw « E »,
— extract locking washer « L »,
— remove the various parts as shown in fig. 2.

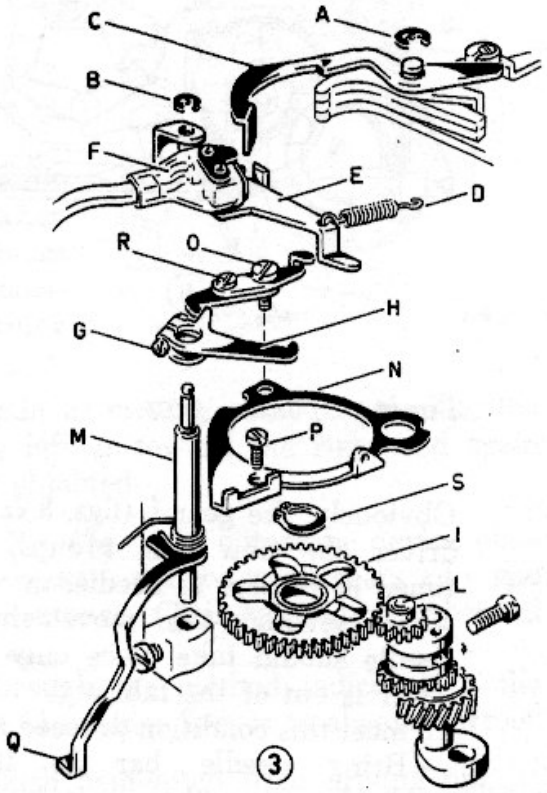
AUTOMATIC MECHANISM UNIT

A new automatic device with constant ratio has been added to the automatic unit normally assembled on the AUTOMATIC SUPERNOVA machines of the previous series. This new device allows making Turkish hemstitch, Paris stitch, Shell stitch, blindstitch, etc.
In the new version, the disc driving pin of the preceding automatic mechanism is used exclusively as a pivot pin for disc groups. The rotation of these groups is now directly obtained from the upper shaft of the machine by means of a set of gears which have a final ratio of 10:1. This means that to every 10 revolutions of the upper shaft (10 stitches) corresponds one revolution of the disc group.

To disassemble automatic unit

Proceed as follows (fig. 3):

— Remove upper cover.
— Set stitch length regulating lever to zero.
— Release hooked rod of automatic stitch regulating lever.
— Pull automatic disc stop motion lever (« D », fig. 9) against machine arm.
— Remove benzing ring « A ».
— Remove benzing ring « B ».
— Remove lever « C ».
— Remove spring « D ».
— Extract upwards lever « E » with its micro-switch « F ».
— Loosen screw « G ».
— Extract upwards lever « H ».
— Remove the four screws (fig. 5) wich secure the plate for automatic device to arm.
— Extract the whole unit, taking care, during operation, to maintain plate in horizontal position.



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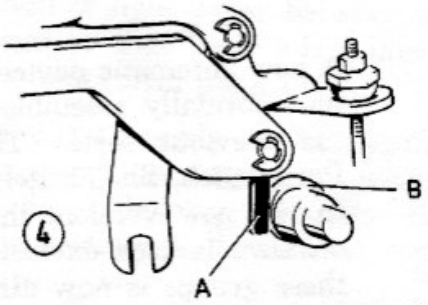
To reassemble automatic unit

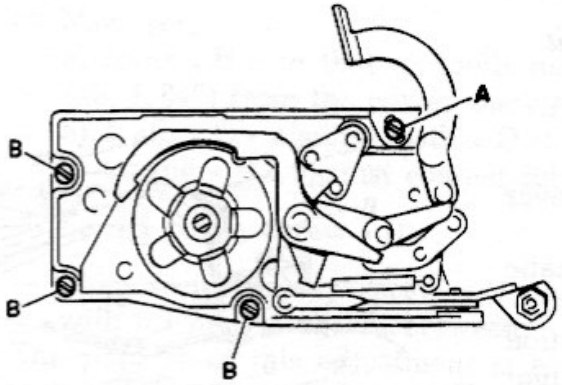
— Set eccentric for automatic control (green nylon eccentric) on upper shaft collar with its smaller radius towards you.

— Set zig-zag lever to the left, and needle position lever in left notch.
— Set design graduating knob between 4 and diamond-shaped mark.
— Set knob for micrometric adjustment of design to vertical position (zero).
— Maintaining the two pins of swivel plates for both needle positioning and zig-zag control levers against their contact fingers, respectively, insert the whole unit into machine arm, making sure that lever « A » places itself to the left of eccentric « B » (Fig. 4). Pressing the whole unit against machine arm, make sure that it has been inserted correctly.



④

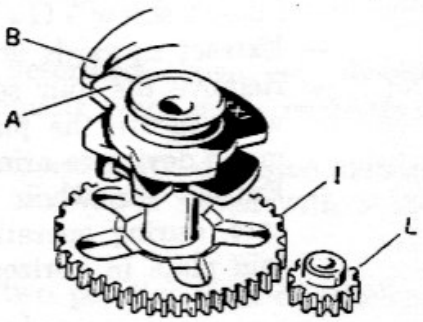
You can check this condition by shifting zig-zag and needle positioning levers which are to move, in turn, the upper levers of this unit.
— Now install, without tightening it, (just hand tight) only screw « A » (fig. 5) of plate.



⑤

Timing of main gear

Obviously, the gear I (figs. 3 & 6), which drives the new disc groups, must be timed in respect to needle, in order that, when sewing, the movement of the needle should take place only when the latter is out of the fabric.
To meet this condition proceed as follows:
— Bring needle bar to its lowest dead center, that is in such a position where it does not move when you set needle positioning lever in left notch and when you shift zig-zag width lever from 0 to 5.



⑥

— Loosen slightly the two screws O and P (fig. 3).
— Hold down automatic device while you push back disc stop motion lever « D », fig. 9.

— Place onto disc driving pin the disc-assembly for Turkish hem-stitch. (≠ XXXI).

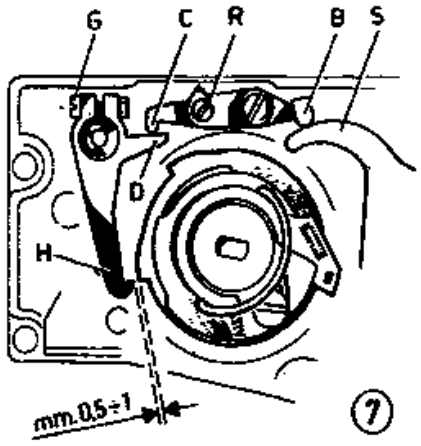
— Push the whole plate toward the left and to the back of the machine, until the two gears « I » and « L » fig. 3, part so that gear « I » can turn freely. Gear « I » can be turned by rotating Turkish Hemstitch Cam (≠ XXXI).

— Turn this gear with its disc-assembly mounted, until the center of the smaller prong of upper disc « A » is in line with the tip of the contact finger « B », as shown in fig. 6.

— Set plate of automatic device to its normal position, so that gear « I » engages gear « L ».

It is now necessary to check timing. For so doing, proceed as follows:

1. Turkish hemstitch cam remains in machine.
2. Place fabric under presser foot.
3. Pull disc stop motion lever « D », fig. 9, in flush with back of the machine.
4. Turn balance wheel by hand: needle should not move sideways, neither when it enters the fabric, nor when it comes out of same. (Keep left hand on automatic device to hold in place when turning wheel).



If this condition is not met, proceed again as mentioned above, turning the main gear one tooth, either toward the left or toward the right and again engage the gears until correct setting is obtained.

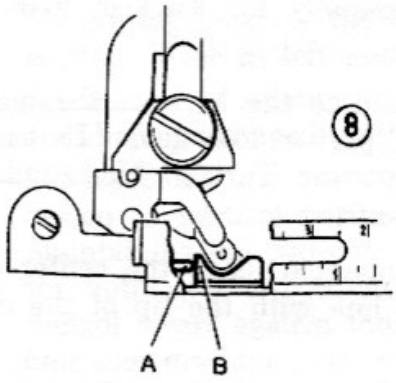
— Insert now the other three screws « B » (fig. 5) of automatic device plate and, before securing them firmly, make sure that between gears « I » and « L » there should be a very slight clearance. (This can only be checked without the cam in machine).
At this point you should check, through the method indicated in the Service Manual, that the adjustment of contact fingers is always correct.

— Now, remove disc-assembly for Turkish hem-stitch from driving pin.

— Pull automatic stop motion lever « D », fig. 9, so that it is flush with machine arm.

— Insert lever « H » onto pivot pin « M » (fig. 3), and tighten screw « G » slightly.

— Make sure that, so far, lever « H » remains at a very slight height from ring plate « N ».



In order to make this easier, you may place a piece of light paper between the two surfaces so that lever « H » should not be in contact with plate « N ».

— Now place disc-assembly for buttonholes onto driving pin, setting in it position shown in fig. 7, leaving automatic disc stop motion lever open, that is away from machine arm.

— Be sure that presser bar is *down* when adjustments below are made.

— Loosen screw « R ».

— Now, set:

a) lever « H » so that its tooth should be at a distance of ½ or 0.5 mm. (ab. 1/64") from the corresponding tooth of disc;
b) tooth « C » against tooth « D »;
c) tongue « B » against contact fingers « S ».

— Secure firmly screw « R ».

— Then secure firmly screw « G » while holding lever « H » against cam with 0.5 mm. gauge in between.

The purpose of this adjustment is to insure that when automatic disc stop motion lever is open, lever « H » sets free the disc-assembly for automatic buttonholes.

— Close disc stop motion lever by bringing it against machine arm.

— Fit buttonhole foot to presser bar, raise this foot by means of presser lever, and make sure that prong « A » (fig. 8) of sliding base of foot has been returned by the spring against back part « B » of fixed base of foot. Prong « A » can be seen when sole of buttonhole foot is moved toward rear of machine.

Now, to sum up: through the operations described above you should obtain the following results if above adjustments were made correctly:

1) lever « H » must free the discs, when you push automatic disc stop motion lever away from machine arm or when presser bar is raised with automatic buttonhole foot.

2) buttonhole foot must allow performing the two parallel rows of stitches correctly, during its forward and reverse strokes.

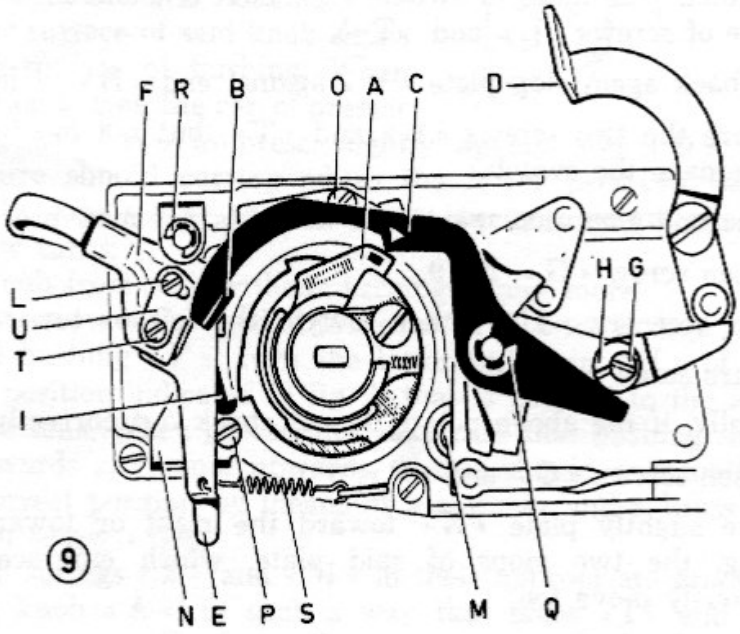
NOTE:

It is possible to go over buttonholes twice only after cutting the slot and raising the presser foot.

MICRO-SWITCH

The machine has been provided with this switch for two purposes.
The first one being that of cutting off the current, thus stopping the machine, every time the disc group — conveniently provided with appropriate prong — completes one full revolution. The second purpose is that of impeding the machine from starting, when lever « D » is in position shown in fig. 9, away from machine arm.
This micro-switch is connected in series with the motor circuit and operates therefore with the same voltage and the same intensity of current, which is quite low.
When disc-group completes one revolution, its position is as shown in fig. 9: tooth « A » of upper disc of group faces towards lever « C » which, through its end « B », presses on the micro-switch, thus cutting off the current.
To restart machine, it will be sufficient to move lever « E » toward the left. The switch, when not pressed by lever « C » closes the circuit and machine will resume operation.

Lever « E » will have to be kept on the left until tooth « A » of disc-group is released completely by lever C.



Adjustment of the micro-switch

— Assemble on their pivot pins levers « E » and « C » respectively, fig. 9.
— Assemble on their pivot pins benzing rings « Q » and « R ».
— Mount spring « S ».

— Bring lever « D » away from machine arm and place buttonhole disc-assembly onto disc driving pin, setting it in position shown in fig. 9.

— Set back lever « D » flush with machine arm.

First condition

Supply current to the machine and press on the rheostat: machine must not operate; but if you move lever « E » to the left and then you release it, machine should then operate and therefore disc-group should turn.

Second condition

Push lever « D » (fig. 9) away from machine arm. Hold lever « E » to the left. In these conditions, machine must not operate when you press on the rheostat. This is absolutely necessary in order to avoid damaging the sewing job when removing or inserting the disc-group.

If the first condition mentioned above is not met, proceed as follows:

— Loosen the two screws « L » and « T ».

— Move stop plate « U » towards the left.

— Move switch « F » through slight movements until correct setting is obtained (the holes of switch « F » have a diameter which is larger than those of screws « L » and «T »).

— Set back again stop plate « U » against end « B » of lever « C ».

— Secure the two screws « L » and « T », but not too firmly, in order not to damage the switch.

If the second condition mentioned above is not met, proceed as follows:

— Loosen screw « G », fig. 9.

— Turn eccentric « H » either toward the left or toward the right.

— Secure screw « G ».

Eventually, if the above points do not check out correctly:

— Loosen screws « O » and « P ».

— Move slightly plate « N » toward the right or toward the left; by so doing, the two stops of said plate, which embrace lever « E » will obviously move too.

— Secure firmly the two screws « O » and « P ».

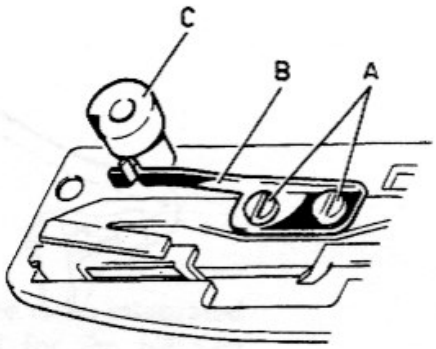
Please bear in mind that the micro-switch, for a 0.8 mm. (1/32") total stroke of its switch, has a working stroke of 0.1 mm. only, for closing or opening the circuit.
The adjustment of the micro-switch is therefore *quite delicate* and should be carried out *accurately*.

CHECKING ADJUSTMENT OF CAM RELEASE LEVER I, Fig. 9

— Place automatic buttonhole cam in machine with the red mark on cam lined up with that on lever « C ».
— Set elongation knob on no. 1.
— Push lever « Q », fig. 3, to rear (momentarily).
— Push toward the left lever « E », fig. 9, while the rheostat is engaged.
— The machine will keep running but the buttonhole cam will stop with red mark at 9:00 o'clock.
— Push lever « Q » again and this time the cam will stop at approximately 3:00 o'clock.
— With machine still running move lever « Q » (fig. 3) once more and the cam will stop at its starting position and shut off the current stopping the machine automatically.
— If the machine does not perform as described above, then adjustments on levers in fig. 7 have to be rechecked.

DEVICE FOR MICRO-KNOB ADJUSTMENT OF DESIGNS

This device is controlled by means of a knob fitted to the zig-zag plate and connected, inside the machine arm, to an eccentric «C», fig. 10. The position « zero » of this knob — corresponding to the vertical position of its black mark — is insured, inside the arm, by tooth of spring « B » which engages a notch provided in the eccentric ring.
When turning the knob, the characteristic click you hear corresponds to the clamping of spring « B » by eccentric « C ».
Through a long usage, this spring might lose partially its efficiency;



⑩

To restore the tension of spring « B », proceed as follows:

— Remove zig-zag plate.
— Loosen screws « A ».
— Push spring « B » against eccentric ring.
— Tighten the two screws « A ».

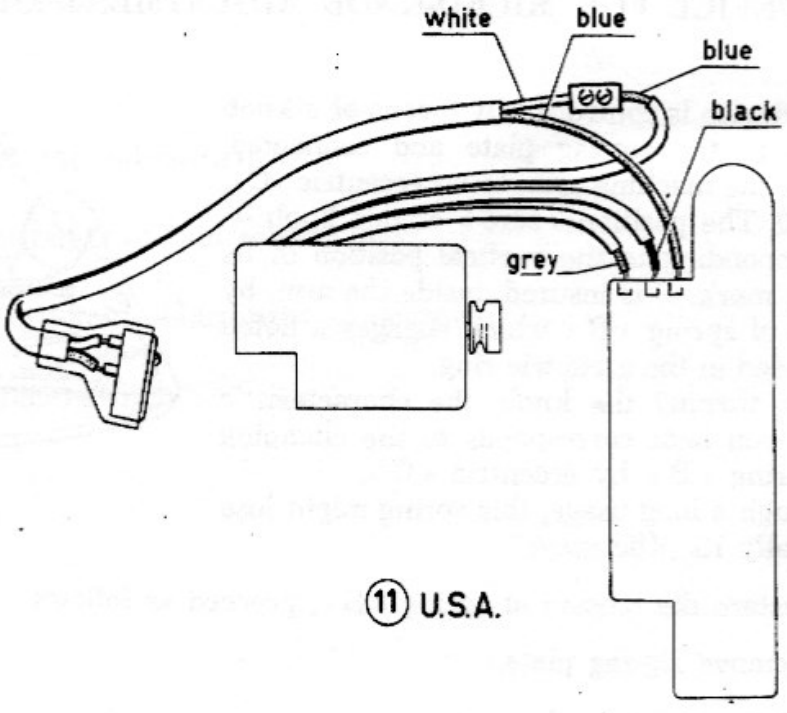
NOTE - A plastic tab is supplied with the accessories which should be attached to lever « Q », fig. 3, when demonstrating the machine without the automatic buttonhole foot. This tab permits movement of this lever more easily.

Demonstration:

When demonstrating this machine at Fairs, Shows, etc., it would be advisable to use the plastic buttonhole foot throughout the demonstration to show simplicity of operation. When making buttonholes proceed in same way outlined for checking adjustment of cam release lever. The first step makes the right row of the buttonhole — the second step makes the bottom bartack and the left row — the last step makes the upper bartack plus a few stitches on the right row — the machine stops automatically and is ready for the next buttonhole.

TO CONNECT MICRO-SWITCH

Fig. 11 shows the wiring of micro-switch.



(11) U.S.A.

NECCHI

S.p.A. Macchine per cucire

PAVIA (Italy)

Simb. P 655/USA

Printed in Italy - M. P. - Pavia