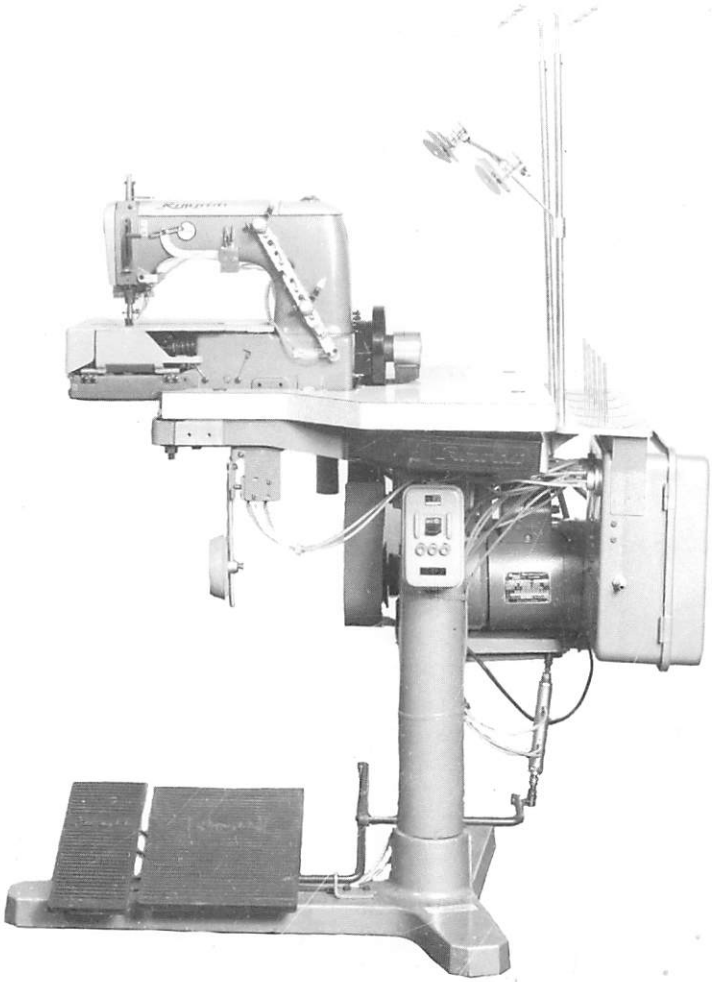
Rimoldi



SETTING ADYUSTMENTS TESTING OF

THE: 507 - 508 - 509 - 510

511 - 512 - 513 - 514

THREAD CUTTING ATTACHMENTS

n.41

CAT. N. 652030510 del 2/70

Attachment	Description
507	Pneumatically controlled attachment for cutting the looper and needle threads, below needle plate at the end of seam. Immediately after cutting operation, the threads of looper and needles are gripped under needle plate and afterwards the latter ones are gripped above needle plate being picked-up from lower gripping position for allowing the removal of partly made-up article and the beginning of a new seam without stitch skipping. At beginning and at end of seam the operator lifts the presserfoot by means of mechanical pedal control. The attachment must always be synchronized with a motor for positioning of needle.
508	Same as 507 attachment but with automatic pneumatic control, depending from the cutting cycle, of presserfoot lifter at the end of the seam. This attachment is fitted with an additional pneumatic knee press control for lifting the presserfoot when introducing the partly made-up article, at beginning of seam, as well as when seaming, if necessary (handling of article).
509	Same as 507 attachment but with automatic pneumatic control, depending from cutting cycle, of presserfoot lifter at end of seam. It is also fitted with an additional pneumatic pedal control for lifting the presserfoot when introducing the partly made-up article, at beginning of seam, as well as when seaming, if necessary (handling of article).
510	Pneumatic attachment obtained with combination of: 502 device (for closing-up stitches with pneumatic pushbutton control) 507 device (for thread cutting)
511	Pneumatic attachment obtained with combination of: 502 device (for closing-up stitches with pneumatic pushbutton control) 508 device (for thread cutting with automatic presserfoot lifter fitted with additional knee-press control for lifting presserfoot at beginning of seam).
512	Pneumatic attachment obtained with the combination of: 502 device (for closing-up stitches with pneumatic pushbutton control) 509 device (for thread cutting with automatic pneumatic control, fitted with additional pedal control for lifting the presserfoot at beginning of seam).
513	Pneumatic attachment obtained with the combination of: 503 device (for closing-up stitches with pneumatic knee-press control) 509 device (for thread cutting with automatic pneumatic presserfoot lifter, fitted with additional pedal control for lifting the presserfoot at beginning of seam).
514	Pneumatic attachment obtained with the combination of: 503 device (for closing-up stitches with pneumatic knee-press control) 507 device (for thread cutting).

SETTING OF THE HEAD ON THE STAND

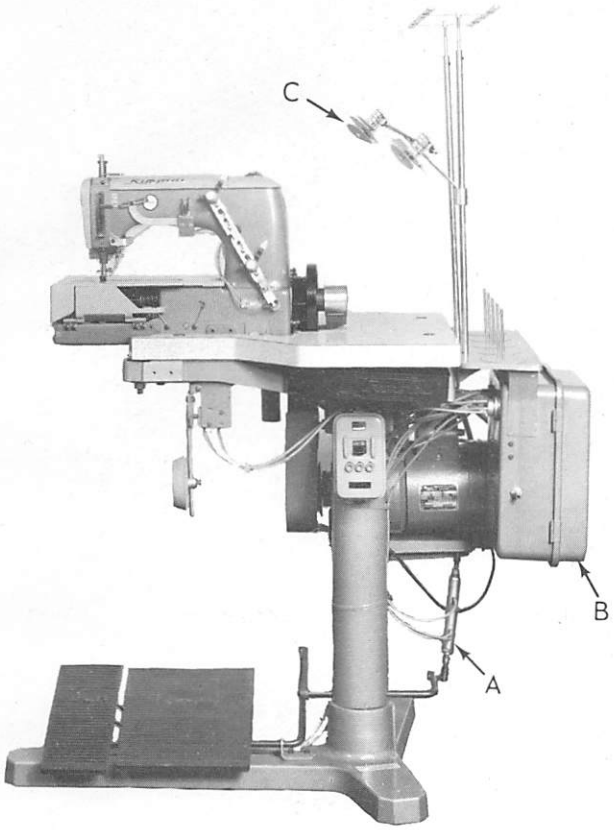


fig. 1

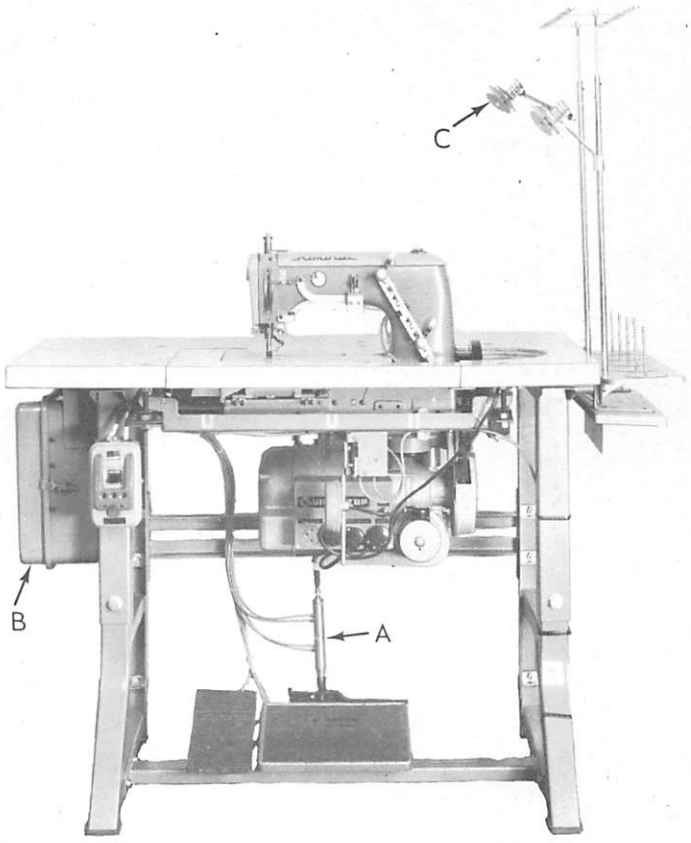


fig. 2

In order to set the stand as shown on figure 1 (column stand) and on figure 2 (adjustable stand), we need to proceed as follows:

1) Correctly place the Quickstop motor in connection to the wheel groove of the machine. The motor will be having one only position (needle at the top) for two or more needle machines and having two positions (needle at the bottom and at the top) for one needle machines.
2) Mount the tie rod complete with control valve and pin A fig. 1 and fig. 2 between the treadle and the motor lever.
3) For 508-509-511-512-513 attachments only, mount the presserfoot lifting device. The piston is shipped already connected to the knee-press control group (attachments 508-511) or to the treadle (attachments 509-512-513).
4) For 509-512-513 attachments only.
   Mount the presserfoot lifter treadle locking it in the most adequate position. When necessary, adjust the inclination by means of screw A fig. 3.

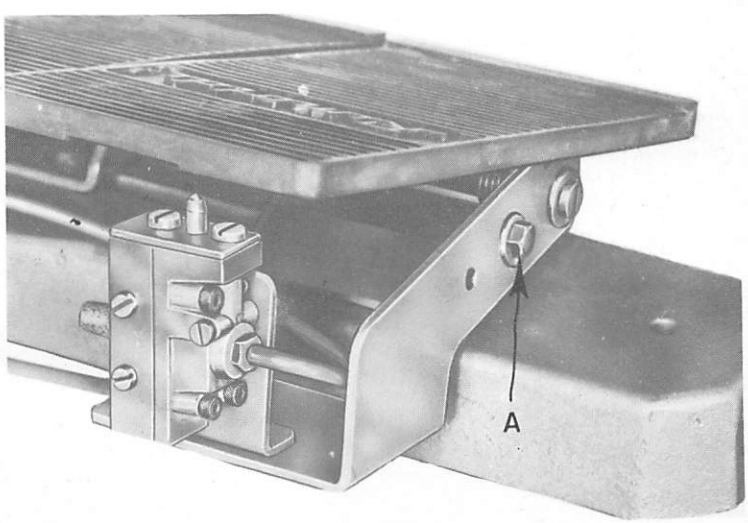


fig. 3

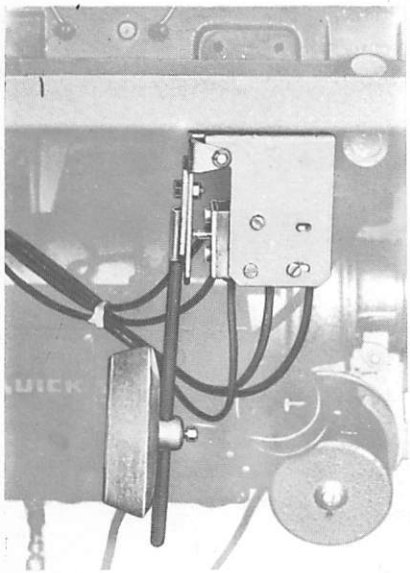


fig. 4

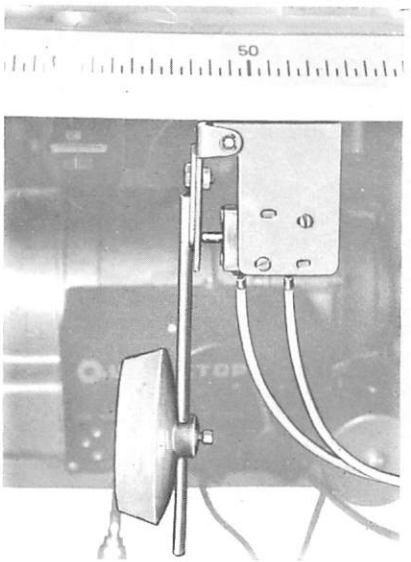


fig. 5

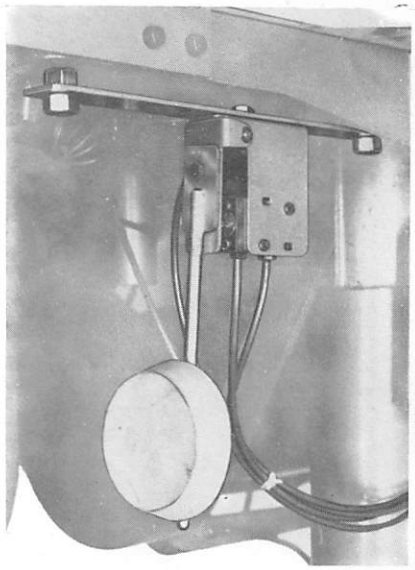


fig. 6

5) For 508-511 attachments only For submerged adjustable stand mount the presserfoot lifting knee-press on the front cross brace fig. 4.
For normal adjustable stand mount the knee-press on the table fig. 5
For column stand mount the knee-press on the head support fig. 6
6) For 513-514 attachments only
Mount the stitch closing-up control knee-press following the procedure as per point 5.
7) Carry out the mounting of the presserfoot lifter piston fixing same with the relative screws
To the crossbrace supporting the machine for setting on adjustable stands or similar ones (fig. 7 submerged edition) (fig. 8 normal edition).
To the bracket fig. 9 for setting on column stands.
8) Mount the control box B fig. 1 and 2 fixing it to the bobbin holder (column stand) or to the table (adjustable stand).

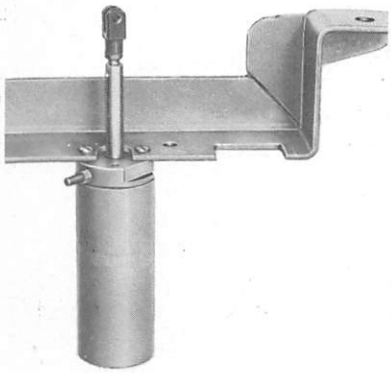


fig. 7

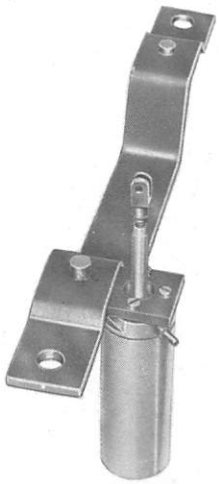


fig. 8

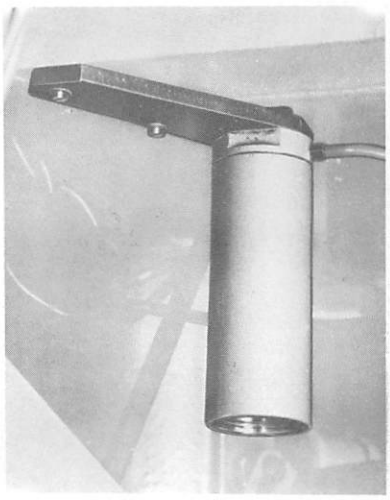


fig. 9

9) Fix in the corresponding hole on the table pin A by means of flange B figure 10.

10) Connect the various pins to the box taking care not to bend or entangle the air tubes. For connection of the pins, instructions indicated on the rear part of the box are to be followed.
Tighten well the locking screw of the pins in order to avoid useless loss of air. Before connecting every single pin make sure that the orifices for the passage of air are carefully cleaned and that every single connector joined to the tube is equipped with the seal ring, fig. 10.

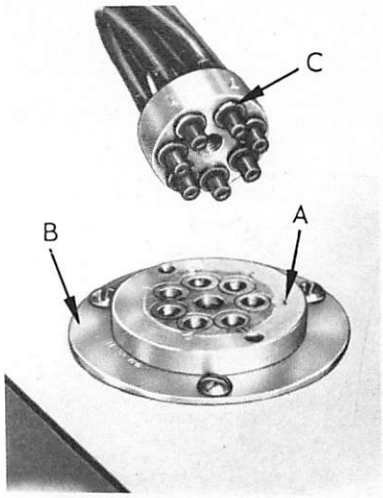


fig.10

11) Place the head on the stand taking care not to damage the above clamping element B fig. 16. Mount the drive belt adjusting tension of same and checking the alignment.
Connect the presserfoot lifting piston to the presserfoot lifting lever by means of the fitted adjustable tie rod.

12) Connect the pins joined to the control unit with the table socket as per point 10.

13) Mount on the bobbin-holder shaft the 'C' thread lockings, fig. 1 and fig. 2. The thread locking will be proportioned according to the type of yarn used. A greater locking is required for yarns with tendency to get entangled, a minor locking for stable yarns.
The adjustment is carried out by actioning lever A, fig. 11.

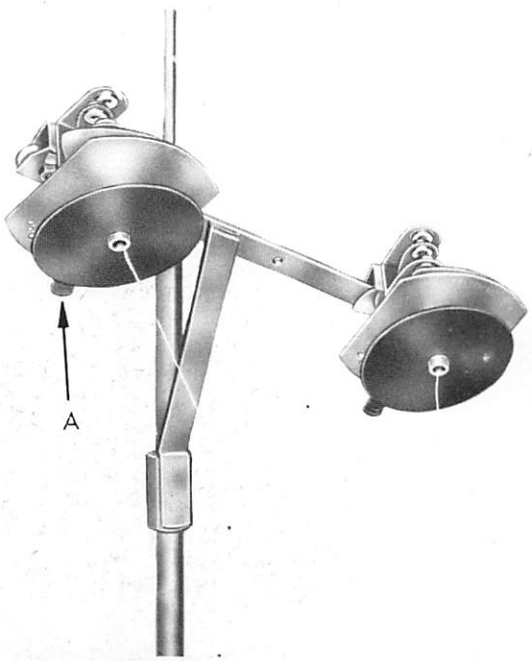
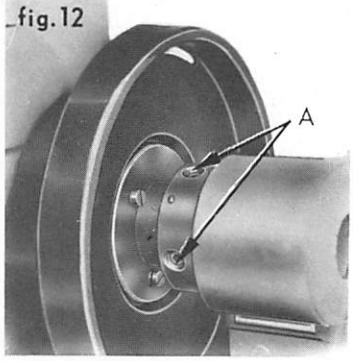


fig.11

fig.12



1) Adjust the setting-off of the needle positioning motor by operating the motor positioner. In the case of the Quickstop motor operate by means of dowels A, fig. 12. The positioning is to be effected in a way so to have, when pressing the treadle backwards, the motor stop the machine with the needles at the upper dead point.
Having a correct setting off, the yielding pin A, fig. 14, of the consenting control unit should be able to go freely inside the wheel groove placing itself nearly at the center.

2) Adjusting of the upper clamping element B, fig. 16. With the machine being threaded and with the fabric under the presserfoot, check the correct clamping of the needle thread. In its initial stroke from right to left the clamping element has to bend the needle threads fig. 17 so to assure the gripping of the threads themselves during the return stroke. The deflection of the threads is not to be excessive in the aim of avoiding breakage of same.
After having bent the last thread, the hook must continue its stroke to left until the correct gripping of the thread is assured. Check that there is no interference between the needles and the clamp hook and between the presserfoot and the hook when the latter is completely outside. This checking must be executed with the yielding pin of the control unit inserted in the wheel groove in the three positions of figures 13 - 14 - 15.
On fig. 16 you can see the push-button valve A for the stitch closing-up control for machines equipped with the '511' device, this control needs no adjustment.

fig.13

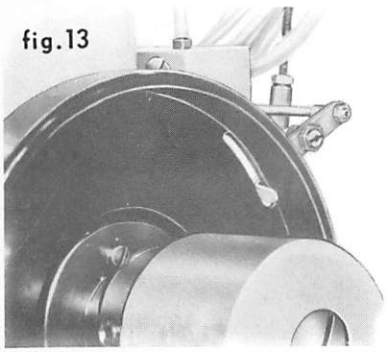


fig.14

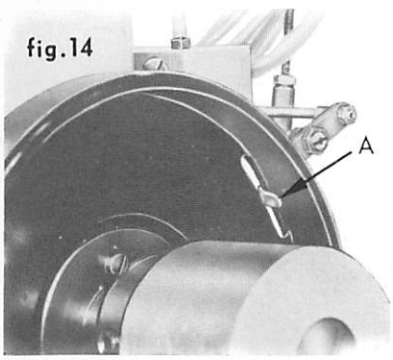
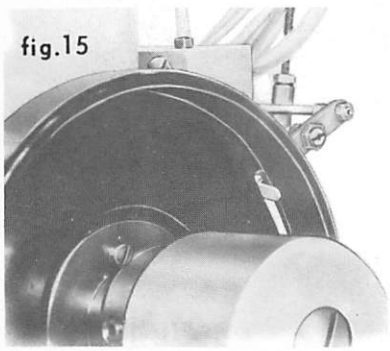


fig.15



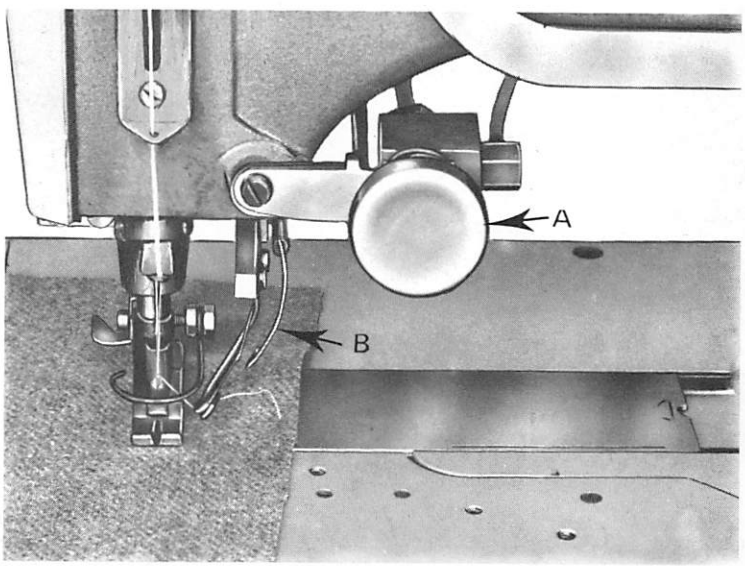


fig.16

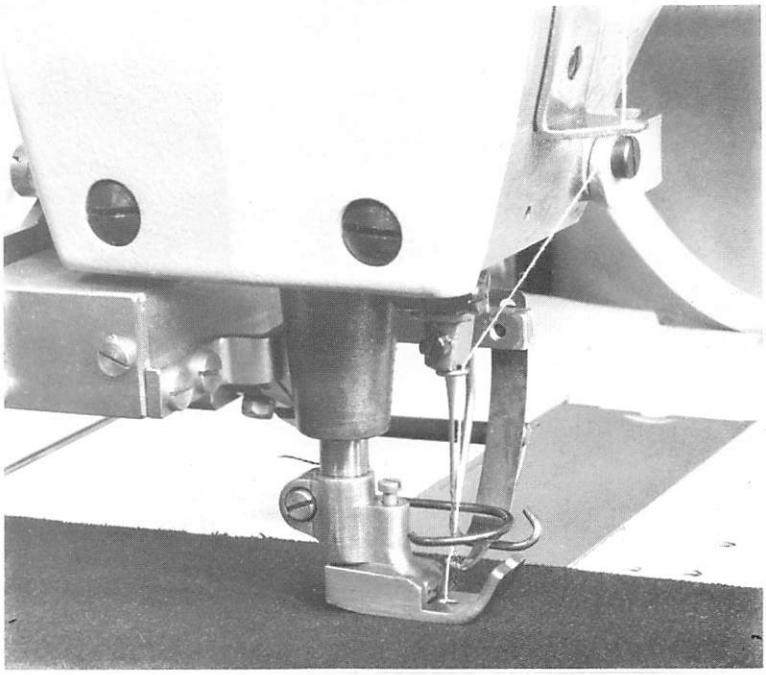


fig.17

In order to obtain the vertical displacement of the clamping element operate on screws A fig. 18.
In order to obtain the horizontal displacement of the clamping element operate on screws B fig. 18.
In order to obtain the correct positioning of the hook in respect to the threads operate on dowel A fig. 19.

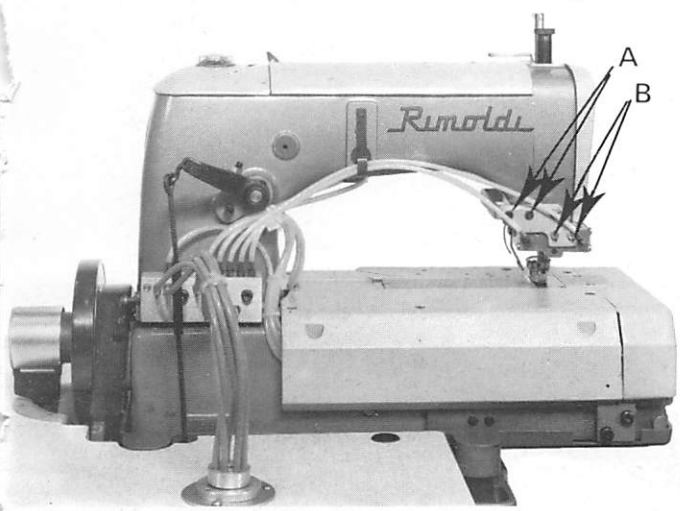


fig.18

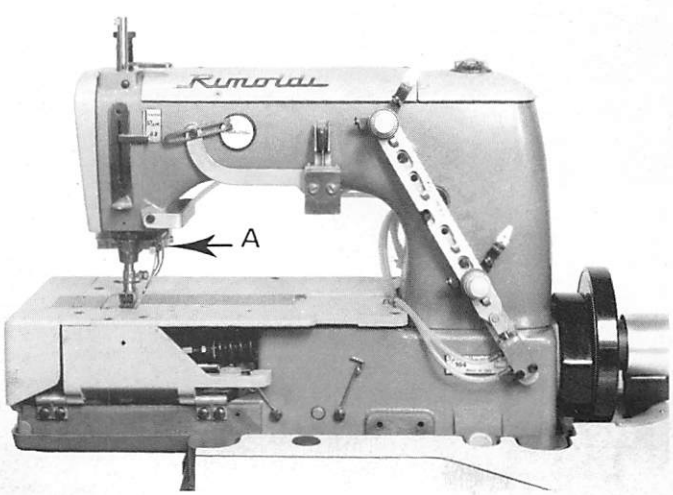


fig.19

CONNECTION OF THE ATTACHMENT TO THE COMPRESSED AIR LINE FIG. 20

1) Connect the attachment to the compressed air line or to the compressor. Check that the work pressure of the attachment is 4,5 - 5 Atm. This pressure is indicated by the manometer A.
Should the pressure be different from the one abovesaid, operate on screw B in order to get the pressure to the required level.
N.B. When necessary to diminuish the pressure, you should release first the air of the circuit and then loosen metal ring 'C' and adjustment screw B.

2) Fill lubricator 'D' up to the indicated maximum level with oil VR 604 (ESSO STANDARD TERESSO 43). This filling is carried out removing screw E.
N.B. In order to fill the lubricator, it is necessary to disconnect the attachment from the compressed air line.
After having completed the testing of the machine, check that the oil inflow, visible from the lubricator small done F, is of 1 drop every 30 - 50 complete trimming cycles. Such an adjustment is obtained by operating on screw G.
At least one a week proceed with the condensate discharge which gets accumulated inside filter H.
The condensate level must never be exceeding metal ring I.
The condensate discharge is carried out by operating on push-button A fig. 21 placed at the bottom of the filter.
Once every 6 months, proceed with the cleaning of the sintered bronze filter L fig. 20 by means of petroleum washing and subsequent blast of compressed air. For this operation, it is necessary to disassemble the body of the filter by unscrewing the knurled metal ring O fig. 20 (the filter and lubricator cups 'H' and 'D' are not to be cleaned with gasoline or derivatives).
Fig. 20 control box for 508-509-511-512 and 513 attachments.
N.B. For the 507-510-514 attachments the control box fig. 20 will be lacking of the components R.T. and of the 'PRESSERFOOT LIFTER' grip with the relative connections.

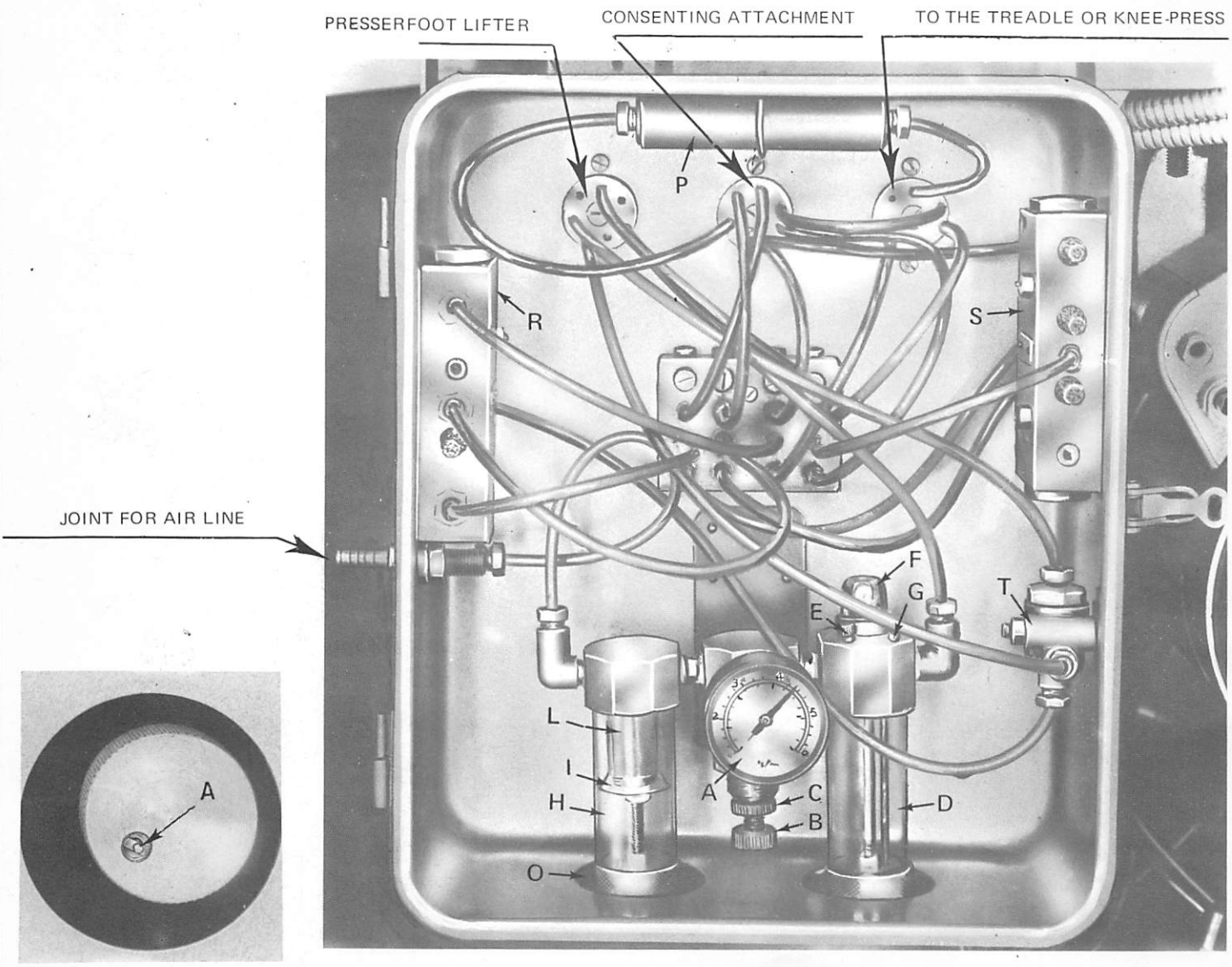


fig.20

fig.21

ADJUSTMENTS TO BE CARRIED OUT WITH ATTACHMENT UNDER PRESSURE

(It is advisable to remove the needles, before proceeding with the above adjustments).

1) Adjustment of the consenting control unit (fig. 22).

The consenting control unit has a double function:

a) It permits the trimming cycle only when the motor has stopped the machine with the needles in the upper part (upper dead point); only under these conditions, the yielding pin A fig. 22 fits in the wheel groove (fig. 14). If the yielding pin does not fit in the wheel groove (fig. 23) the trimming of threads cannot take place.

b) with the slow exit of the piston A (fig. 23), the control unit allows the machine to completely stop before effecting the trimming operation.

It is, therefore, necessary to adjust the piston exit by operating on screw C (fig. 22). By turning this screw in, the piston is slowed down; whilst by turning the screw out, the piston is accelerated. The optimum speed is when the exit time coincides to the machine stopping time. In order to carry out this adjustment, you have to start the machine getting it to the rating speed and quickly stop it by pressing backwards the treadle.

Check that the yielding pin gets into the loop only when the wheel is not running. The return speed is very high and needs no adjustment.

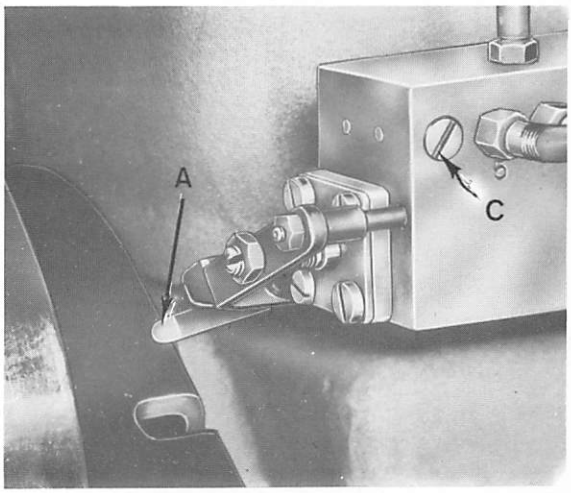


fig.22

2) Adjustment of the valve mounted on the tie rod (fig. 24)

The valve mounted on the motor actioning tie rod has a triple function:

a) by pressing forth the treadle to start the machine, an air passage is created and same charges bag P fig. 20 contained in the box.

b) by pressing backwards the treadle, after the consent of the control unit, the air contained in bag P fig. 20 which controls the trimming cycle is released.

c) it does not permit the repeating of the cutting cycle unless a seam of at least a few stitches has taken place. This condition is necessary to avoid the danger of the needles and the looper unthreading. This valve, in order to perform function C, is to be adjusted according to the type of setting and to the greater or minor resistance opposed by the motor clucth. In fact, in the aim of getting the perfect performance of the attachment, it is essential that the valve charges bag P (fig. 20) only when the machine has started to sew.

By loosening nut A (fig. 24) on side with numbers 6-1 and by unscrewing or screwing shaft guiding bushing B (fig. 24), the stress necessary to operate valve fig. 24 is increased or diminuished. For the valve adjustment and control, you should proceed as follows:

I) press forth the treadle having the machine started slowly and executing about ten stitches: by pressing subsequently backwards the treadle, a complete cutting cycle ought to take place.

If this cycle does not occur, it means that the valve requires an excessive stress and it is, therefore, necessary to loosen bushing B (fig. 24).

II) push forth the treadle without, however, reaching the stage of having the machine run. By, subsequently, pressing the treadle backwards no cutting cycle should take place. Should this cycle occur, it means that the valve requires a too little stress and it is, therefore, necessary to screw bushing B (fig. 24).

The balance between point I) and point II) is to be found through several trials.

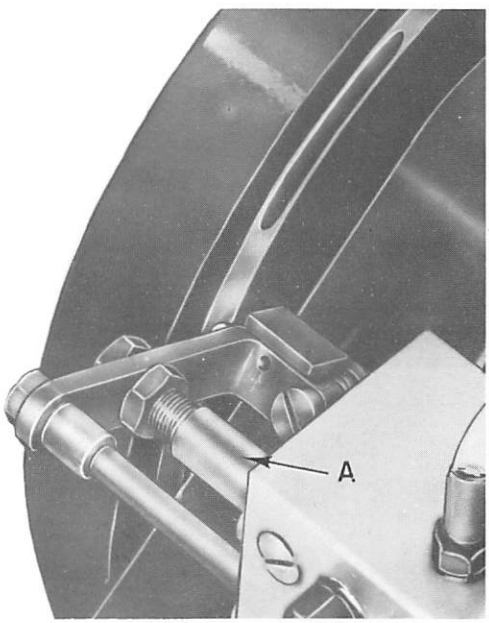


fig.23

fig.24

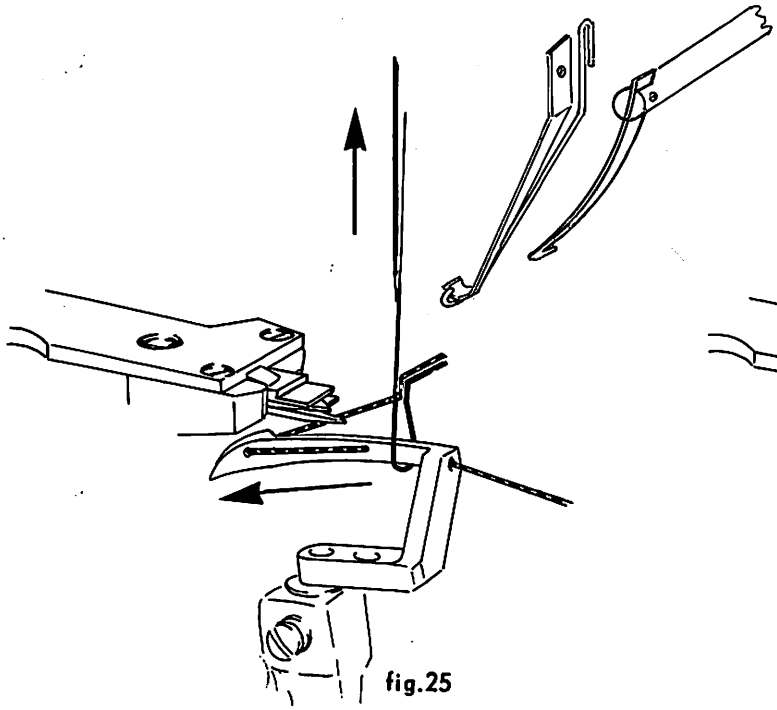


fig.25

I)
Correct positioning of the needle and of the looper so as to permit the cutting cycle:
Needle above — Looper totally on the left

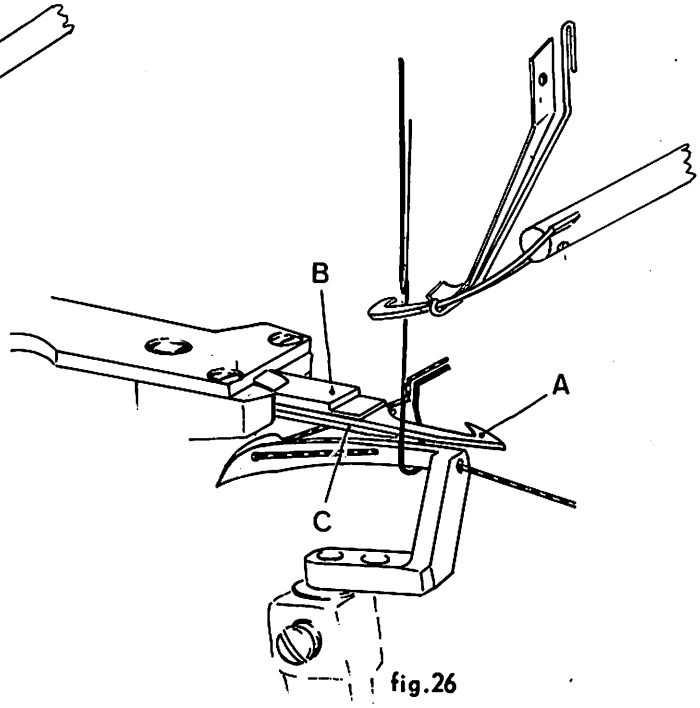


fig.26

II)
Exit of the central knife (A) which passes through the loop formed by the needle thread wound around the looper. Contemporaneous exit of the counter-knife B and of the lower clamping element C which accomplish a reduced stroke.
Rotation of the upper clamp hook D

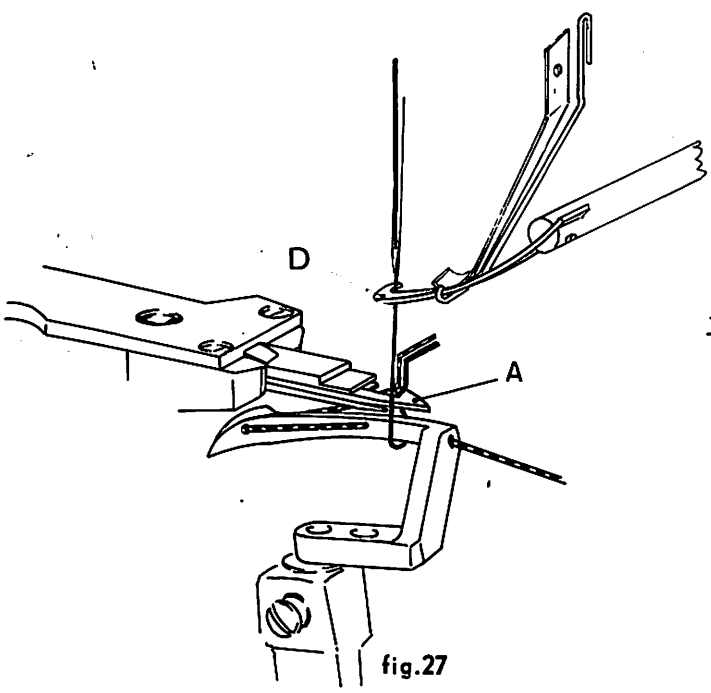


fig.27

III)
Return of the central knife that hooks the looper and the needle thread.
Delayed return of the superior clamp hook D which grips the needle thread above the needle plate.

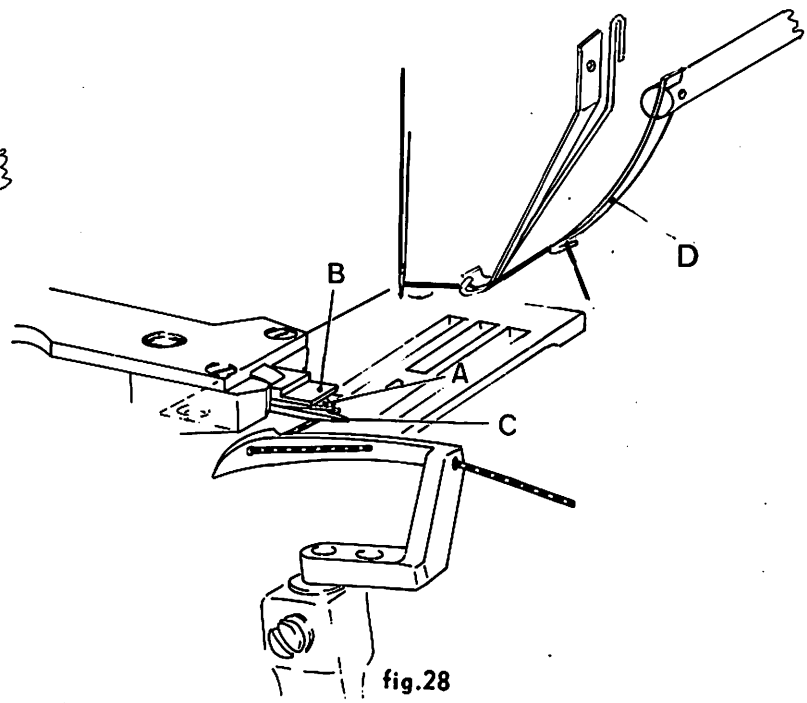


fig.28

IV)
Clamping of the looper thread below the needle plate and return of the three knives A B C to the rest position.
Taking over of the needle thread and clamping of same above the needle plate on the side of clamp D.

ADJUSTMENTS TO BE CARRIED OUT WITH ATTACHMENT UNDER PRESSURE AND WITH THE MACHINE BEING THREADED.

1) Setting-off and threading of the machine. Carefully follow the setting-off and threading instruction sheets enclosed to the machine. A precise setting-off is the guarantee of a good performance and of a perfect seam.
2) Adjust the stitch length which is required during the seam.
3) For 510-511-512-513-514 attachments adjust the stitch closing-up in such a way so to avoid the undoing of the seam. According to the seam exigencies, never exceed in the stitch closing-up.
4) Adjustment and setting-off of the trimming knives (fig. 25-26-27-28).
   In the aim of obtaining a perfect thread trimming, it is necessary to verify that, during the cutting stage, the central small knife A (fig. 26) goes into the loop formed by the thread of the needle or of the needles wound on the looper. Proceed as follows:
   a) cut out the compressed air line from the circuit. In order to cut out the compressed air from the circuit it is sufficient to unhook the presserfoot lifter tie rod and press on the treadle, on the knee-press (509-512-513 attachments) or on the presserfoot lifter knee-press (508-511 attachments).
   b) execute a seam of 4-5 cm.
   c) check, by hand operating on the piston shaft, that the central knife goes perfectly in the loop of the needle thread wound on the looper. Should the mentioned condition fail to occur, shift to the correct position the knives block (fig. 29) loosening the 2 screws A (fig. 29). Repeat the abovesaid setting-up with closed-up stitch for 510-511-512-513-514 attachments.
   N.B. This setting-off can be carried out also with the attachment under pressure. In this case, a greater stress will be needed to get the trimming knife out being the small piston under pressure.

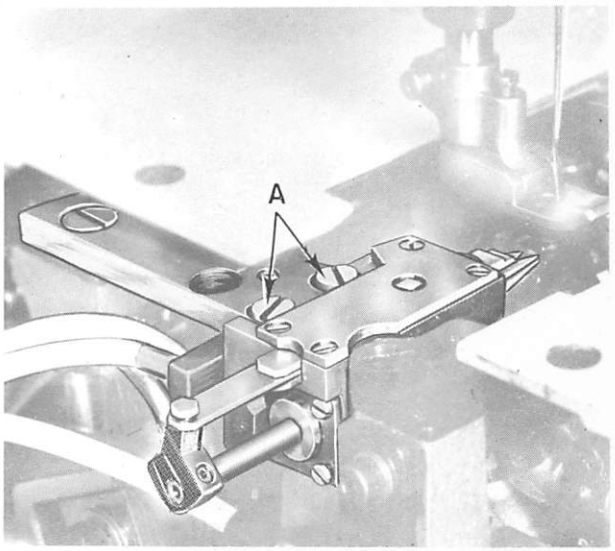


fig.29

5) Adjustment of the needle thread enriching cylinder (fig. 30).
   In the case in which there should be an excess of thread on the right side of the seam executed after the cutting cycle, lower the cylinder by operating on screws A (fig. 30).
   In the case in which there should be an irregular starting of the seam after the cutting cycle with slip stitching, lift the cylinder.
   N.B. By lifting the cylinder (fig. 30), the enrichment of the needle thread is increased whilst by lowering the cylinder, same is diminuished.

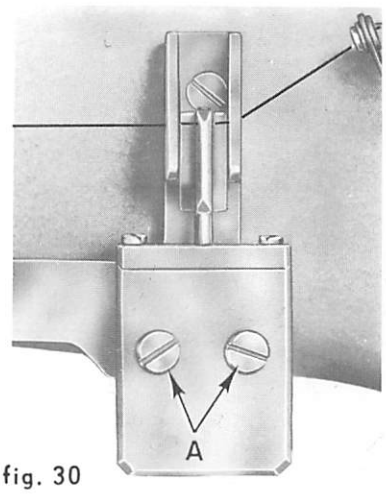


fig. 30

6) Adjustment of the stroke of the looper thread enriching small piston (fig. 31). This adjustment is carried out through shifting of stroke-limiter A, whenever necessary to have a greater initial enrichment of the looper thread, in order to avoid the loss of some stitches at the beginning of the seam.
   The shifting of the stroke-limiter is obtained by operating on screws B.

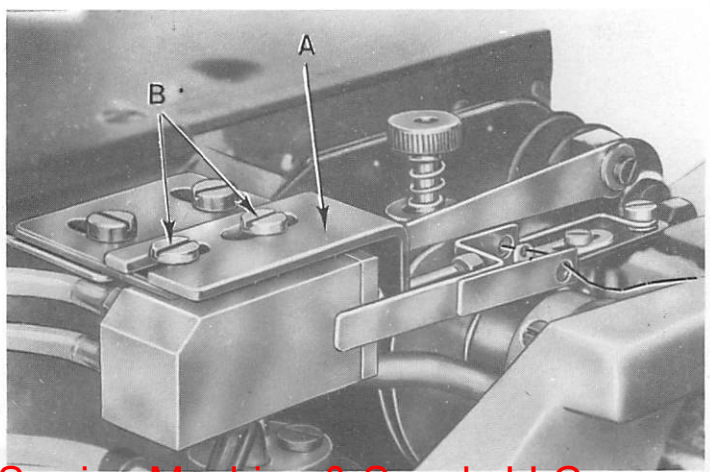


fig.31

7) Adjustment of the tension opening small piston (fig. 32). Should the automatic opening of the tensions be not sufficient or viceversa, should the tensions fail to get perfectly closed, lift or lower the cylinder by operating on screws A.

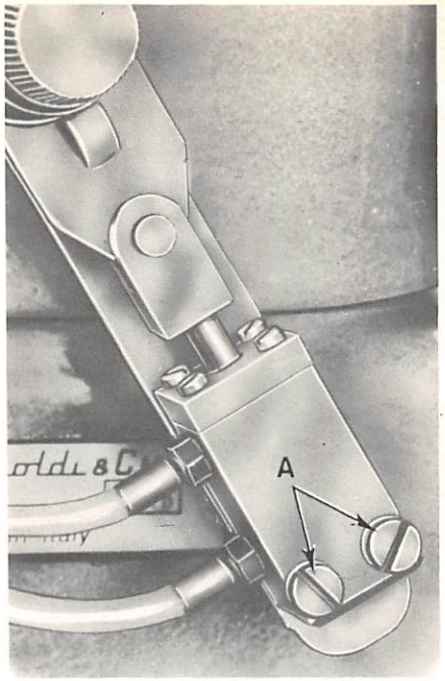


fig. 32

8) Stitch closing-up group (fig. 33) for 510-511-512-513-514 attachments only.
This group is to be adjusted only when varying the degree of closing-up of the stitch and the stitch length.
In case of modification in the degree of the stitch closing-up loosen screw B and rotate of some degrees lever C. With a clockwise rotation the stitch closing-up ratio is diminuished whilst with a counterclockwise rotation same is increased.

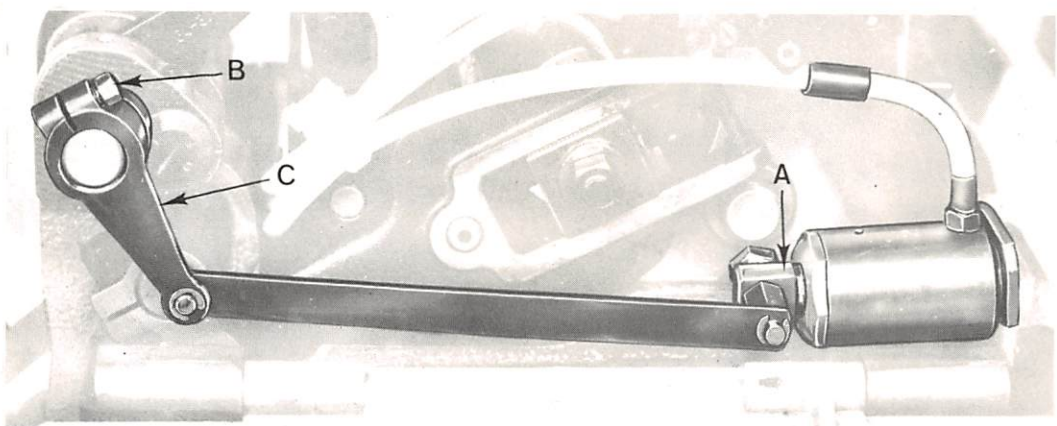
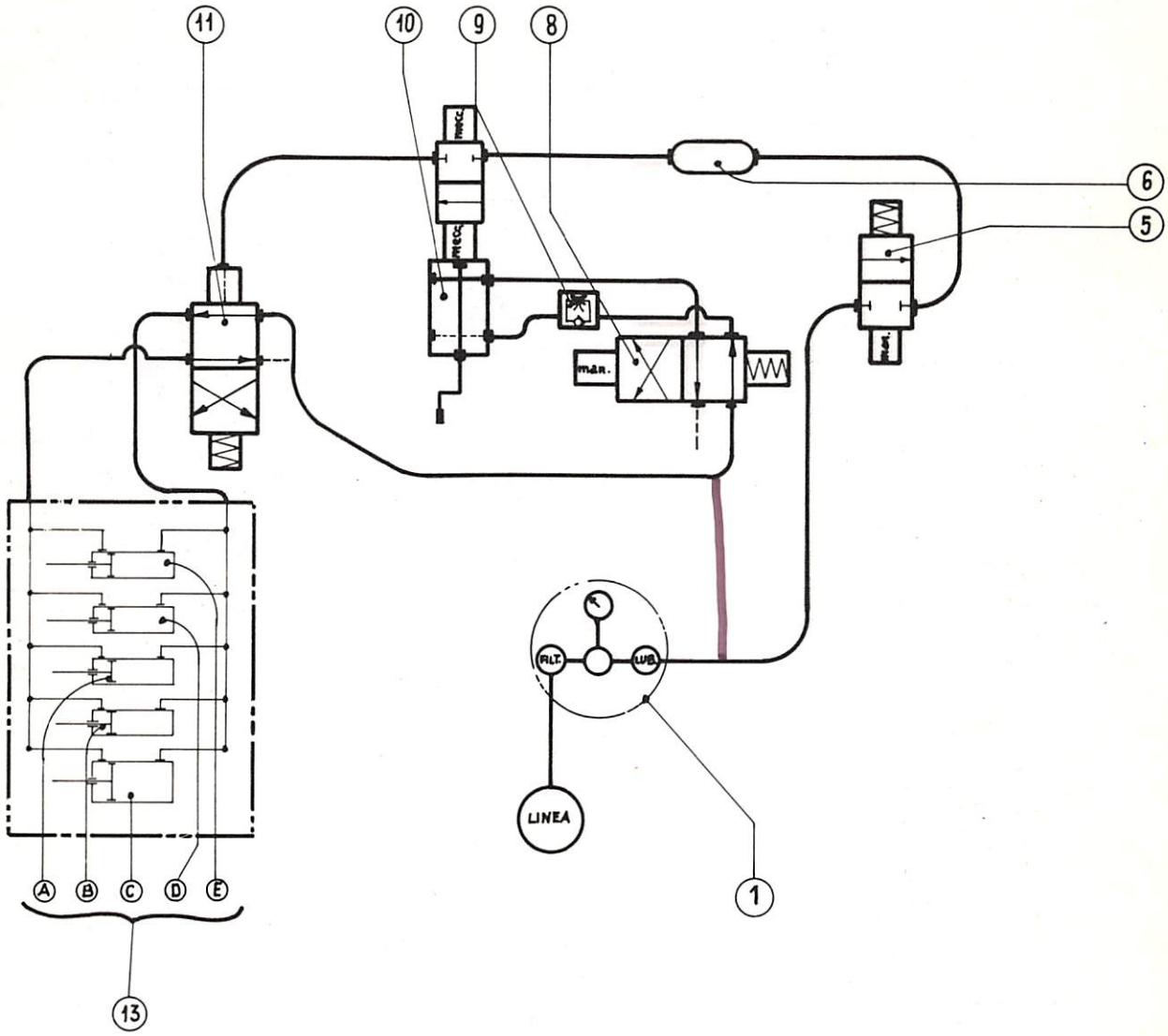


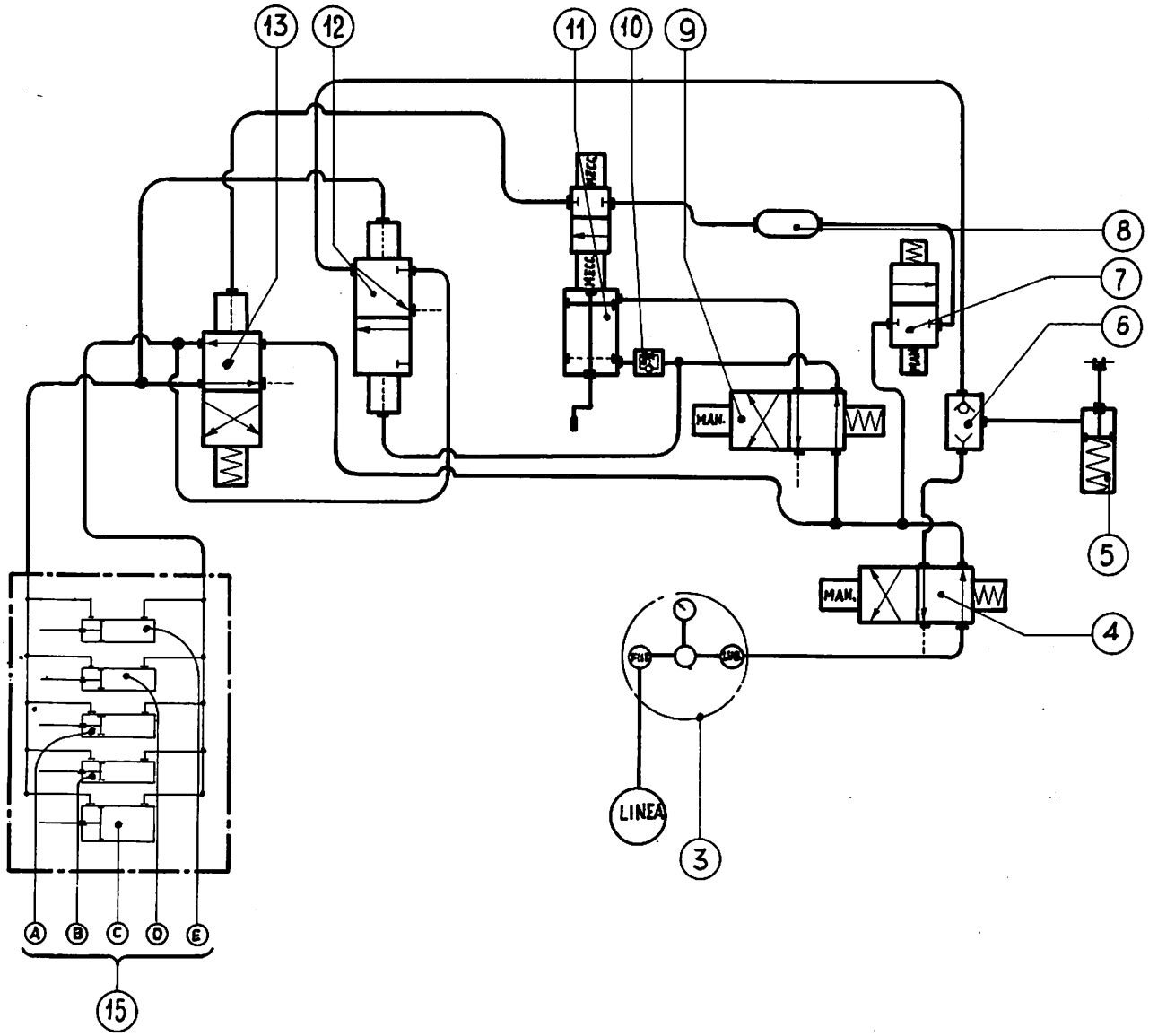
fig. 33

PNEUMATIC SKETCH OF THREAD CUTTING ATTACHMENT 507



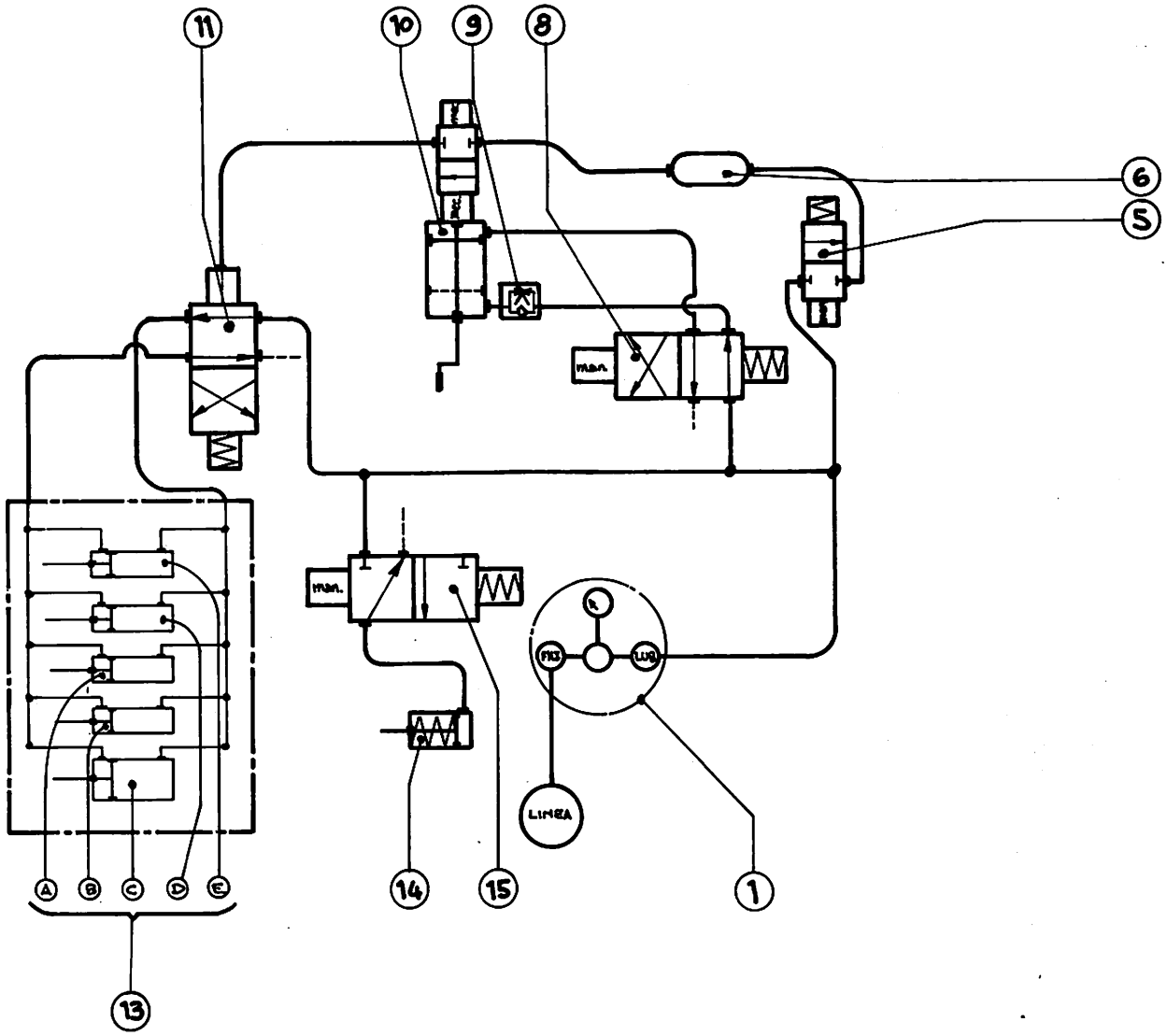
1 – group made up of filter-reducer-manometer-lubricator fig. 20
5 – 2 ways valve controlled by a treadle (with traction) fig. 24 side 6-1
6 – Impulse bag P fig. 20
8 – 4 ways valve controlled by a treadle (with compression) fig. 24 side 3-4
9 – adjustable delaying valve C fig. 22
10 – thread trimming operation consenting device fig. 22-23
11 – 4 ways piston valve controlling spring impulse S fig. 20
13 – Attachment small pistons
A – tension opening piston fig. 32
B – needle threads enriching piston fig. 30
C – knife controlling piston fig. 29
D – looper enrichment piston fig. 31
E – needle threads clamping piston fig. 16

PNEUMATIC SKETCH OF THREAD CUTTING ATTACHMENT WITH PNEUMATIC HAND OR AUTOMATIC PRESSERFOOT LIFTER 508-509



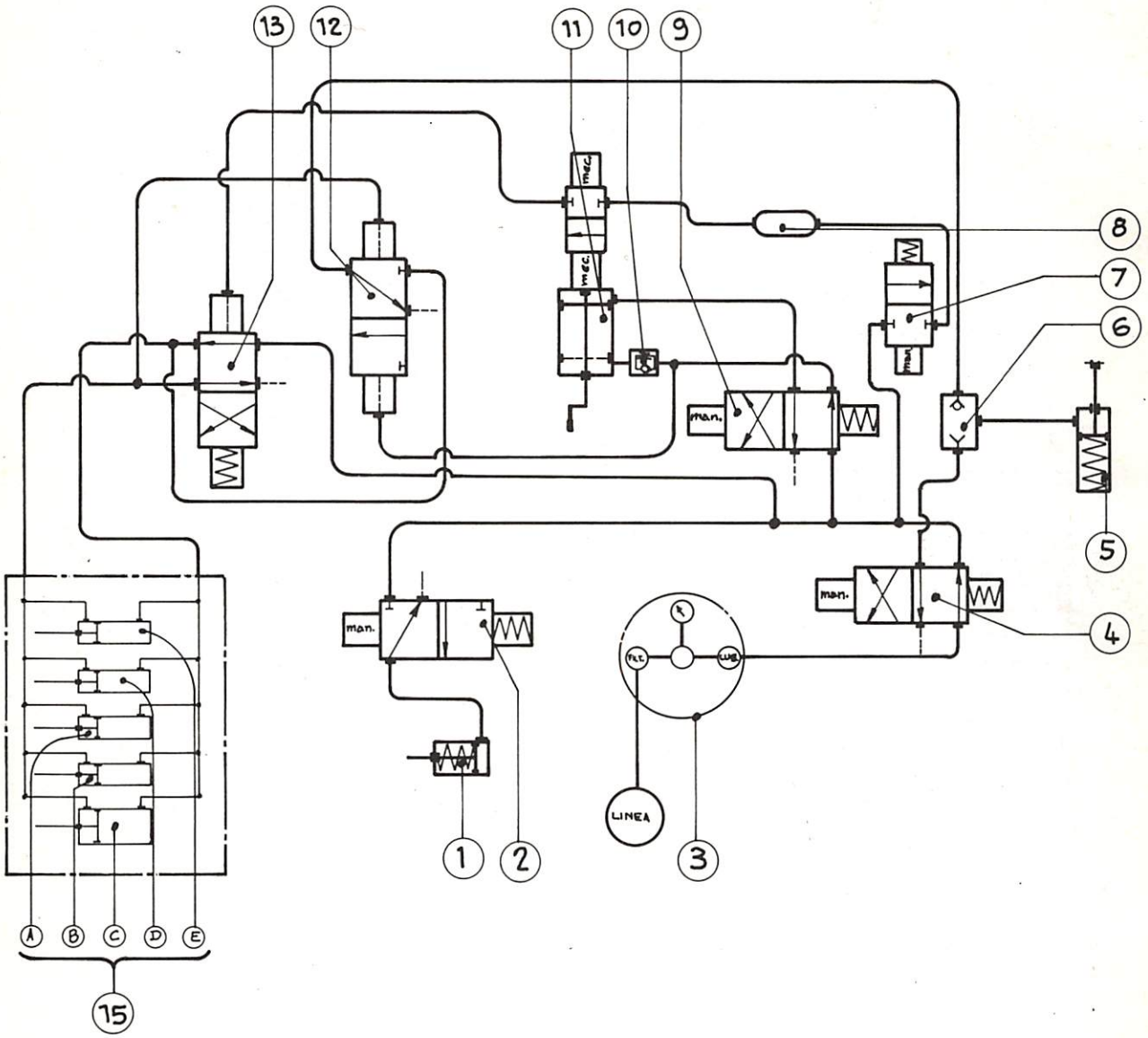
3 – group made up of filter-reducer-manometer-lubricator fig. 20
4 – 4 ways piston valve controlling the presserfoot lifter fig. 3-4-5-6
5 – presserfoot lifting cylinder fig. 7-8-9
6 – commutator valve T fig. 20
7 – 2 ways valve controlled by a treadle (with traction) fig. 24 side 6-1
8 – impulse bag P fig. 20
9 – 4 ways valve controlled by a treadle (with compression) fig. 24 side 3-4
10 – adjustable delaying valve C fig. 22
11 – thread trimming operation consenting device fig. 22-23
12 – 3 ways valve controlled by air for the automatic actioning of the presserfoot lifter cylinder
13 – 4 ways piston valve controlling spring 'S' impulse fig. 20
15 – attachment small pistons
A – tension opening piston fig. 32
B – needle threads enrichment piston fig. 30
C – knives controlling piston fig. 29
D – looper thread enrichment piston fig. 31
E – needle threads clamping piston fig. 16

PNEUMATIC SKETCH FOR THREAD CUTTING ATTACHMENTS WITH PNEUMATICALLY CONTROLLED STITCH CLOSING–UP 510-514



1 – group made up of filter-reducer-manometer-lubricator fig. 20
5 – 2 ways valve controlled by a treadle (with traction) fig. 24
6 – impulse bag fig. 20 part P
8 – 4 ways valve controlled by a treadle (with compression) fig. 24
9 – adjustable delaying valve fig. 22, part C
10 – thread cutting operation consenting device fig. 22-23
11 – 4 ways piston valve controlling spring impulse fig. 20, part S
13 – attachment small pistons
A – tension opening piston fig. 32
B – needle threads enrichment piston fig. 30
C – knives controlling piston fig. 29
D – looper thread enrichment piston fig. 31
E – needle threads clamping piston fig. 16
14 – stitch closing-up controlling piston fig. 33
15 – 3 ways valve controlling the stitch closing-up piston fig. 16 or figures 4-5-6

PNEUMATIC SKETCH FOR THREAD CUTTING ATTACHMENTS WITH HAND OR AUTOMATIC PNEUMATIC PRESSERFOOT LIFTER WITH PNEUMATICALLY CONTROLLED STITCH CLOSING–UP 511-512-513



1 – stitch closing up control piston
2 – 3 ways valve controlling the stitch closing up piston
3 – group made up of filter-reducer-manometer-lubricator (see fig. 20)
4 – 4 ways piston valve controlling the presserfoot lifter (see fig. 3-4-5-6)
5 – presserfoot lifter cylinder fig. 7-8-9
6 – commutator valve T fig. 20
7 – 2 ways valve controlled by a treadle (with traction) see fig. 24
8 – impulse bag P, fig. 20
9 – 4 ways valve controlled by a treadle (with compression) see fig. 24
10 – adjustable delaying valve C fig. 22
11 – thread trimming operation consenting device fig. 22-23
12 – 3 ways valve controlled by air for the automatic actioning of the presserfoot lifter cylinder
13 – 4 ways piston valve controlling spring impulse S fig. 26
15 – attachment small pistons
A – tension opening piston fig. 32
B – needle threads enrichment piston fig. 30
C – knives enrichment piston fig. 29
D – looper thread enrichment piston fig. 31
E – needle threads clamping piston fig. 16

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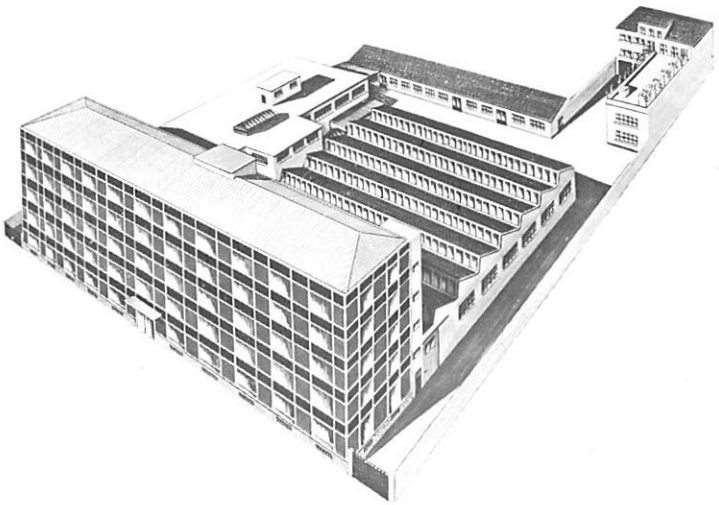
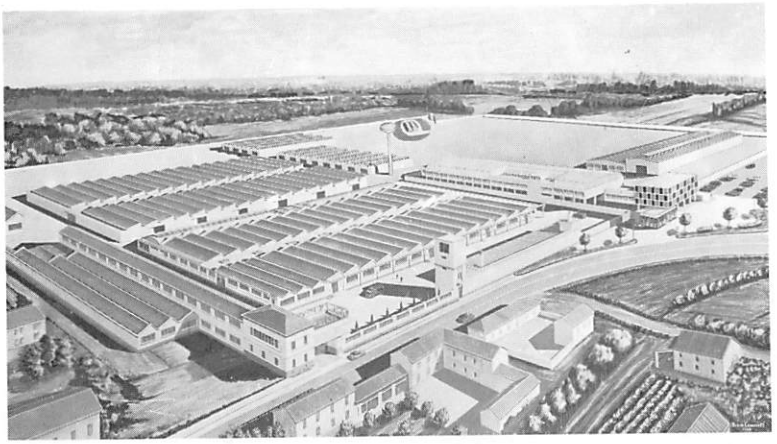


SEDE DI MILANO



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