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Information
Function
Adjustment
Trouble shooting leads

Informations
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Réglages
Indications en cas de panne

Informaciones
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Eliminar pertubaciones

Σ

This booklet is written in three languages. The sequence es English, French and Spanish. Only the illustrations are to be found once at the end of the booklet. In order to facilitate finding the desired language, the first page of each language is marked at the top as follows:

E = at the beginning of the English text (Page 3-12)
F = at the beginning of the French text (Page 13-23)
S = at the beginning of the Spanish text (Page 25-35)

Ce livre est rédigé en trois langues, dans l'ordre suivant. Anglais, Français, Espagnol. Les illustrations pour le trois langues se trouvent représentées une seule fois à la fin de ce livre. Pour que vous puissiez trouver facilement le texte dans la langue qui vous interesse, nous avons mentionné à la première page de celui-ci la designations suivante:

E = Anglais (Page 3-12)
F = Français (Page 12-23)
S = Espagnol (Page 25-35)

Este libro es escrito en tres indiomas y en la sucesión. inglés, francés, español. Solamente las ilustraciones se hallan una vez al fin de este libro. Para facilitar hallar el idioma deseada, hemos marcado la primera página de cada lengua como sigue:

E = al principio del texto inglés (Páginas 3-12)
F = al principio del texto francés (Páginas 13-23)
S = al principio del texto español (Páginas 25-35)

This concise booklet has been compiled for the sewing machine mechanic to assist him in carrying out principal repairs.

We take it for granted that standard assembly and dismantling work and the like forms a basic part of the training of a sewing machine mechanic. Such operations have not been mentioned in this booklet.

The present booklet, therefore, deals only with the peculiarities of the machine and with the necessary adjustments.

The information given has been sub-divided into three headings

- Technical Information
- Functions
- Adjustments

The first two pints have been intended to assist the mechanic through a good knowledge of the data and mechanical functions of the machine to carry out more efficiently and quickly the adjustments and modifications required.

The basis used is a fully mis-adjusted machine. Therefore, when making the various adjustments, also check the settings previously explained.

Sub-classes having different settings are mentioned after the elementary class. The aporopriate figures will be found at the end of the booklet.

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Technical Information

Technical Equipment

Design:	Right-hand arm-type sewing machine
Number of needles:	Single
Type of stitch:	Double-lock straight stitch
Type of feed:	All-directional top feed
Loop catcher:	1 small or large oscillating round shuttle
Thread take-up lever:	Adjustable, patented design
Handwheel:	Releasable in front, or on arm shaft
Lower arm:	Exchangeable

Application

30-1	For any type of shoe repair work
30-5	Especially for orthopaedists and bandagers
30-7	Especially for orthopaedists and bandagers, but for particularly thick material and correspondingly thicker threads.

Technical Data

	30-1	30-5	30-7
Max. stitches/min:	350	350	300
Max. stitch length:	5 mm(3/16")	5 mm(3/16")	5 mm(3/16")
Max. lift of foot:	6 mm(1/4")	12 mm(1/2")	12 mm(1/2")
Needle system and gauge:	332 No.80/200	332 lg. No. 80-200	332 lg. No. 80-200
Max. thread gauge:	60-25/3-ply	60-25/3-ply	60-18/3-ply
Bobbin capacity:	9 metres (28 ft.) art.silkNo.10	9 metres (28 ft.) art.silkNo.10	7,5 metres (24 ft.) 25/3-ply linen thread
Clearance under arm:	470x125 mm (18 1/2x4 7/8")	470x125 mm (18 1/2x4 7/8")	470x125 mm
Length of lower arm:	470 mm (18 1/2")	470 mm 18 1/2")	470 mm (18 1/2")
Power required h.p.	1/3	1/3	1/3
Motor speed:	1400	1400	1400
Motor pulley dia:	63 mm(2 1/2")	63 mm(2 1/2")	58 mm(2 1/4")
Hand wheel pulley dia:	146 mm (5 3/4")	146 mm 5 3/4")	146 mm 5 3/4")
Net weight:	38 kgs. (83 lbs.)	38 kgs. (83 lbs.)	38 kgs. (83 lbs.)
Gross weight:	57 kgs. (125 lbs.)	57 kgs. (125 lbs.)	57 kgs. (125 lbs.)

Functions

Needle Drive

The up and down movement of the needle bar is positive: From the cam disc 1, page 200, to the balancer 2, to the compensating slide 3 and to the needle bar 4. The lift of the needle bar is effected by the eccentric pin 5.

Shuttle

The oscillating movement of the round shuttle is also positive: From the drive pulley 1, page 200, to the arm shaft 6, to the cam 7, this controls the double lever 8, and transmits the movement to the rack 9 and consequently to the round shuttle 10, the incorporation of the pinion 11 and the small rack 12, merely serves to keep the forward and bachward movement of the rack 9 as short as possible with uniform shuttle movement.

As soon as the rack 9, owing to its short travel, slides out of the hook 10, the rack 12 takes over the further movement of the shuttle.

This design has the advantage that due to the amount of space saved in the zylinder the latter can be kept small, thus enabling small corners in the material to be sewn.

Feed and Stitch Regulator

The feed is effected:
From the drive pulley 1, page 201, to the arm shaft 6, to the cam 13, this controls the feed angle 14 and transmits the feed or tilting movement, to the stitch reulator angle 15 which, owing to the connection between the stitch regulator slide 16 with the oscillating foot bar 17, determines the feed movement and transmits it to the upper feed foot 18.
The feed lift is effected:
From the drive pulley 1, to the arm shaft 6, to the roller of the cam disc 13, this eccentrically mounted roller 19, raises the 'ifting lever 20, which, in return, transmits the movement to the regulating lever 21,

raises the presser block 22 with the presser spring 23 and, consequently, the presser guide unit 24 and the upper feed foot 18.

The feed direction is effected:
By manual rotation of the wing handles 25, these wing handles are pivot-mounted in the head about the needle bar and can thus be rotated in any horizontal direction in spite of the oscillating upper feed foot bar 17.

The Stitch Regulator

The point of connection is shifted by moving the stitch regulator slide 16, page 201, upwards or downwards. The maximum feed movement given by the cam disc 13 is consequently controlled by reducing the travel in direction of the foot, i.e. when shifting the slide upwards the travel towards the top will be reduced (thus reducing the foot bar deflection), resulting in a shorter stitch length.

The travel reduction of the upper feed foot 18 con be set on the stitch regulator angle 15 on a millimetre scala.

Adjusting the Needle Bar Height

Required setting gauges: Spacer pin 30 (see figure, page 202)
Dimension block 33
(see figure)

Please note that all machines are proveded at the works with a notch on the needle bar for subsequent adjustment of the needle bar height.

Adjustment with the above-mentioned gauges would then not be necessary. In order to adjust a new or replacement needle bar, the following explanation is therefore necessary:

1. Insert spacer pin 30 into the needle channel up to the top and secure by means of the needle fixing screw 31.
2. Swing aside the throat plate 32.
3. Place the dimension block 33 into the cylinder surface 23.
4. Rotate handwheel to the right until the needle bar has reached its lowest position.
5. In this position, the needle bar or spacer pin should lightly touch the dimension block (see figure). If this is too high or if, as the handwheel is rotated, it moves too low, hold on to the handwheel, turn the eccentric pin 5
   to the right = lower needle bar position
   to the left = higher needle bar position.

For this adjustment it is essential that the eccentric pin 5 has been correctly inserted with the eccentric 35 to the right. See figure.

Adjusting the Thread Take-Up Lever

Required setting gauges: Dimension block 36 (see figure)
page 203.

Please note that all machine have been fitted at the works with correct thread take-up levers. For adjusting a new or a replacement take-up lever the following explanation is therefore required:

1. Place dimension block 36 into the needle bar head 37.
2. Rotate handwheel in a clockwise direction until the take-up lever is in its highest position.
3. The clearance between the take-up lever and dimension block may be 1/10 - 1/5 mm.
4. If the take-up lever is too low
   grind down the lug 38 as shown in the illustration.

Adjusting the Needle Bar Lift (Needle to Shuttle Driver)

Required special tool: Supporting bar 40 (see figure)
page 204.

1. Rotate handwheel in a clockwise direction until the needle bar has reached its lowest position.
2. On further rotation, the needle bar should move upwards by 1.0 mm until the shuttle driver returns.
   In the event of the shuttle driver arriving earlier or both at the same time, the cam 7 on the arm shaft must be shifted as follows:
3. Open rear arm cover 39.
4. Remove one fixing screw from cam 7 and slacken the other.
5. Fit the supporting bar 40 with the lug 41 into the threaded hole of the removed screw and place it on the lower edge of the cover aperture 42.
   It is now impossible for the cam to be moved along during rotation.
6. Rotate drive wheel
   clockwise = needle bar coming later
   anticlockwise = needle bar coming earlier.
7. Remove supporting bar 40, insert screw.
8. Secure all cam screws.
9. Close rear arm cover 39 again.

Adjusting the Shuttle Driver

1. Rotate handwheel in a clockwise direction until the front edge 43, page 205, of the driver wall 44 is centered on the needle hole.
   If edge 43 is too far away rotate eccentric pin 46.
2. Raise machine on drive wheel side.
3. Slacken clamping screw 45.
4. Rotate eccentric pin 46

in a clockwise direction:	Shuttle driver approached needle hole
anticlockwise	Shuttle driver moves away from needle hole.

5. Fix clamping screw 45.
6. Put machine into sewing position.

Please note that this adjustment must be effected at the termination of the first advance of the shuttle driver and not during the second, short follow-up movement.

Adjusting the Needle Clearance

1. Move handwheel in a clockwise direction until the needle has reached its lowest position.
2. Between the needle and the point of the hook there should now be a 1/10 mm clearance. With incorrect clearance adjust the needle clamp as follows:
3. Slacken screw 47 and adjust needle clamp 48:
   to left = greater needle clearance
   to right = smaller needle clearance
4. Tighten screw 47.

Adjustments, Sub-Classes 30-5 and 30-7

Adjusting the Needle Bar Height

Required setting gauges: Spacer pin 30 (see figure) page 206
Dimension block 50

Please note that all machines are provided at the works with a notch on the needle bar for the latter's subsequent adjustment.

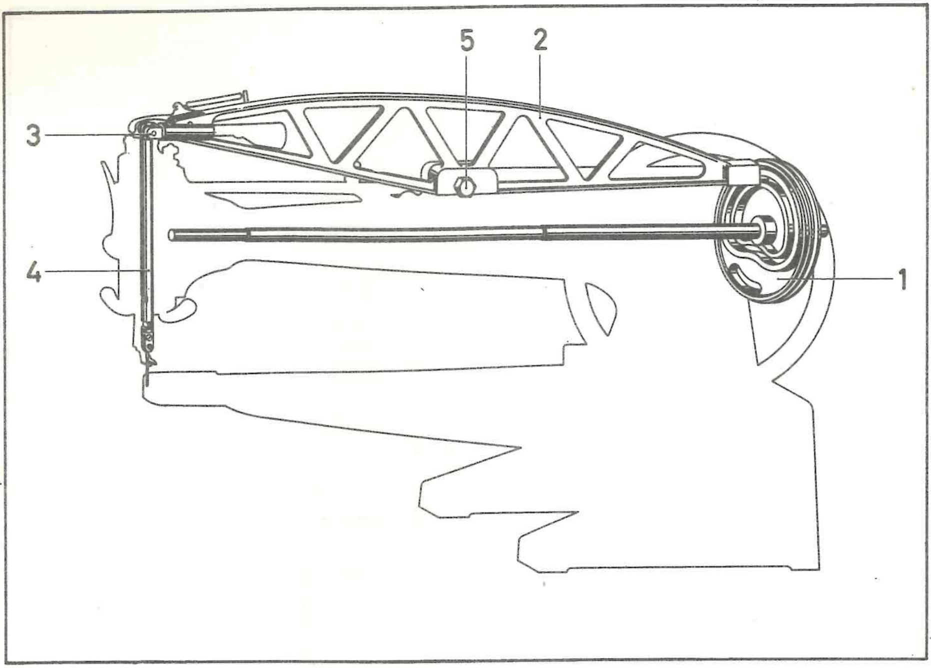
Adjustment with the above-mentioned gauges would then not be necessary.

In order to adjust a new or replacement needle bar, the following explanation is therefore necessary:

All explanations not given here can be found under the preceding basic class 30-1.

1. Insert spacer pin 30 into the needle channel right up to the top and secure by means of the needle fixing screw 31.
2. Swing away the throat plate 32.
3. Place dimension block 47 into the cylinder surface 34.
4. Rotate handwheel in a clockwise direction until the needle bar has reached its lowest position.
5. In this position, the needle bar or spacer pin should contact the dimension block.
   If it is too high or if, when rotating the handwheel, it moves too low:
   hold on to the handwheel and rotate the eccentric pin 35:
   clockwise = higher needle bar position
   anticlockwise = lower needle bar position.

To carry out this adjustment, it is exxential that the eccentric pin 35 has been correctly fitted, with the eccentric to the left. See illustration.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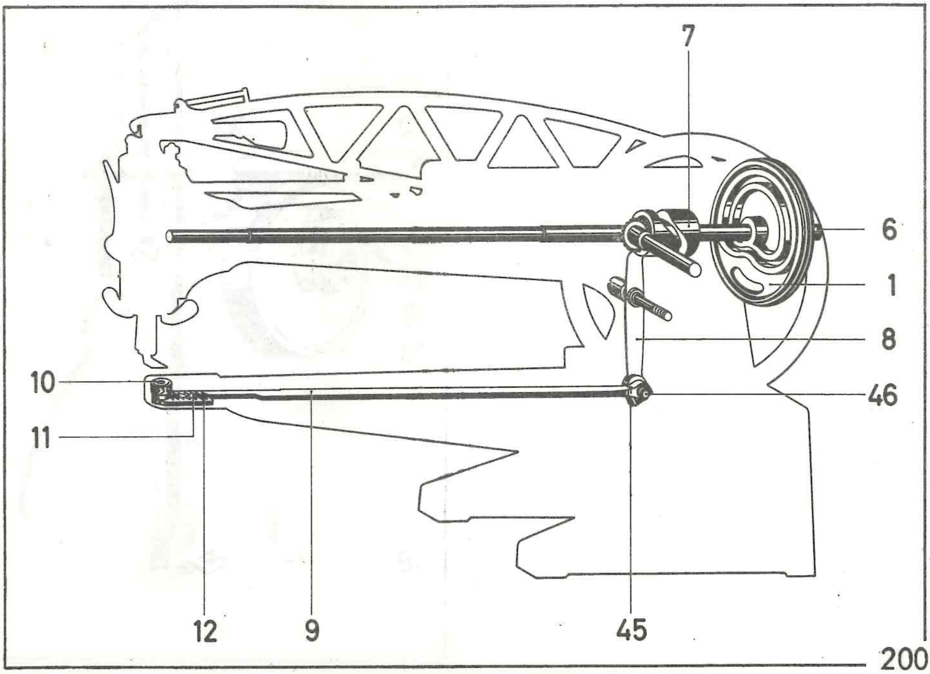
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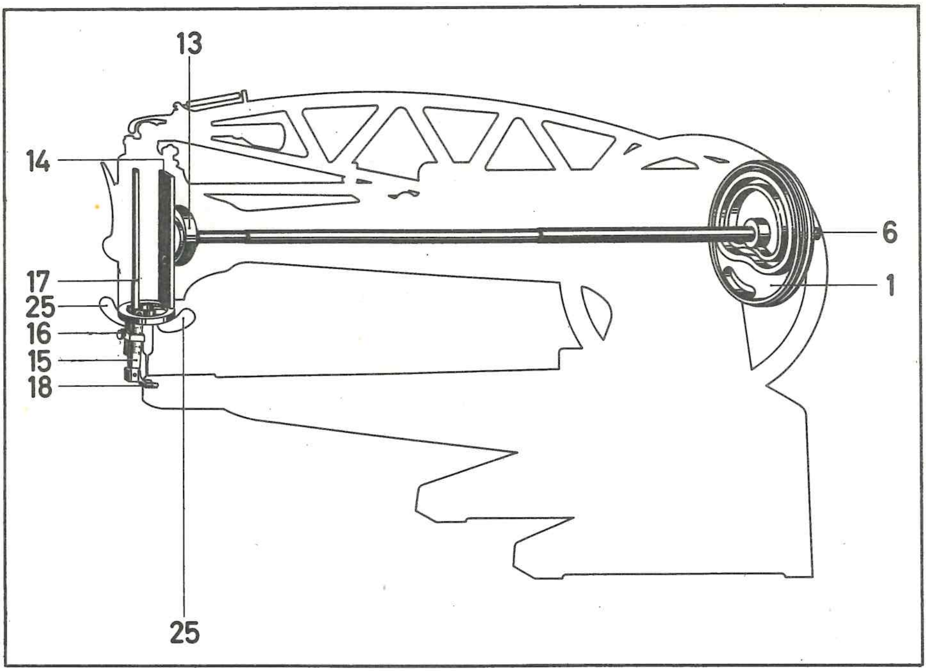
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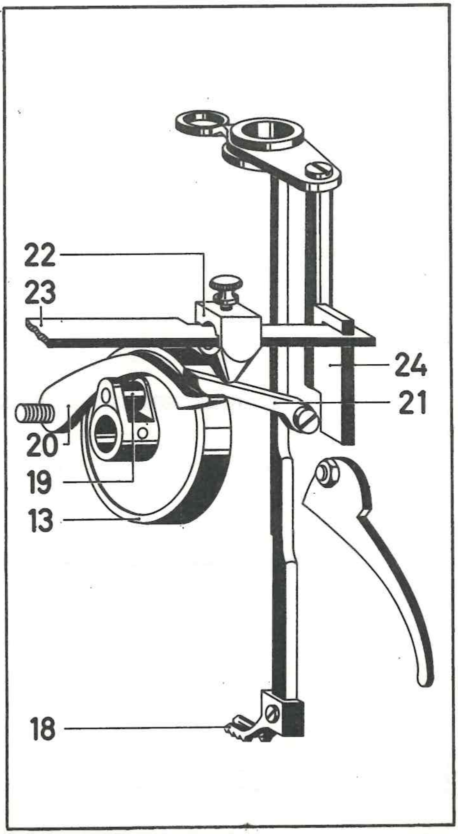
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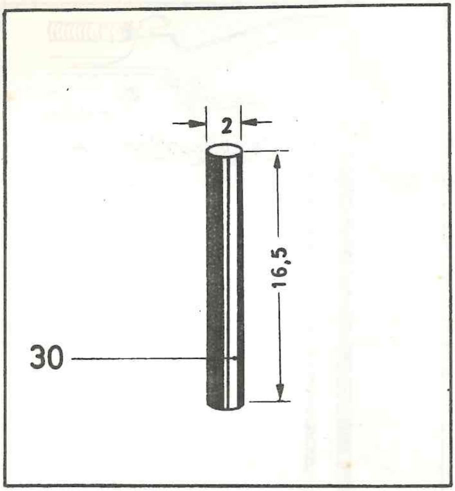
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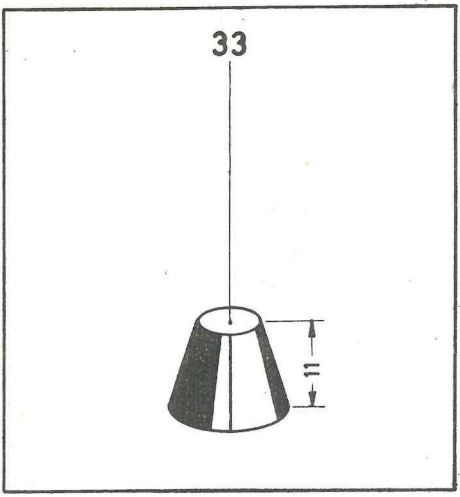
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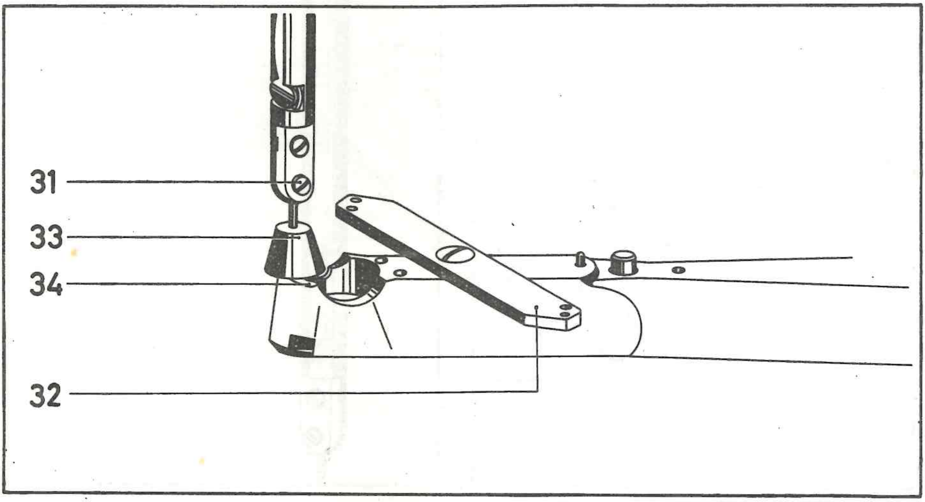
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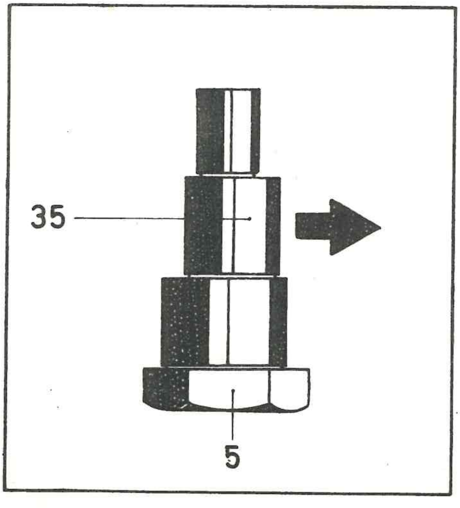
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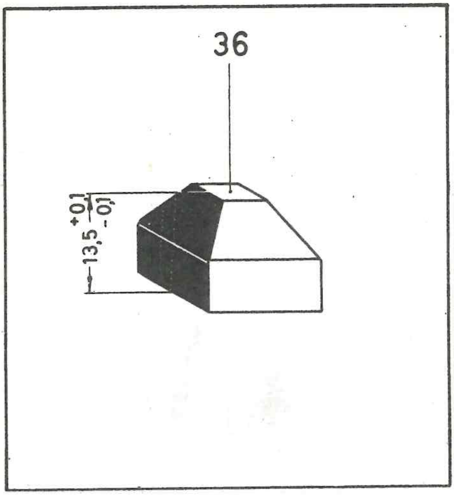
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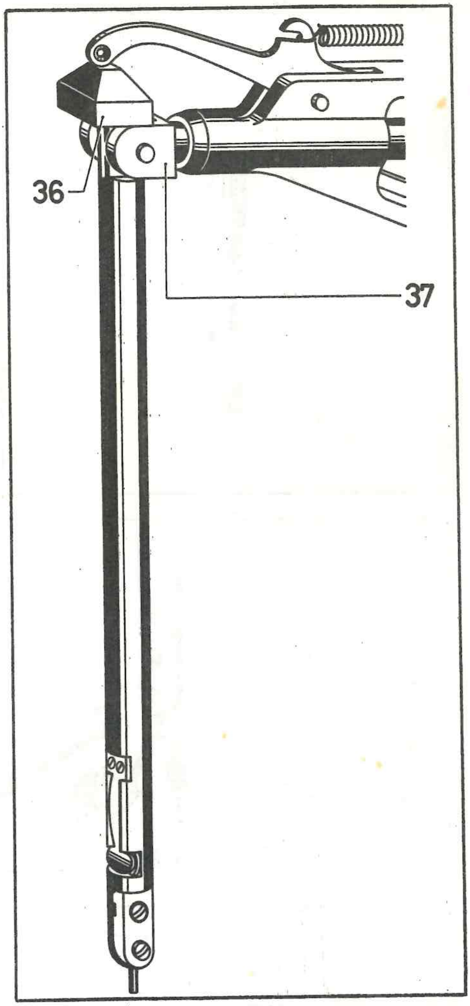
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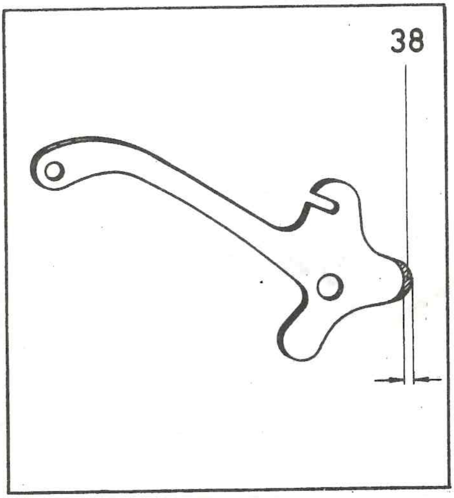
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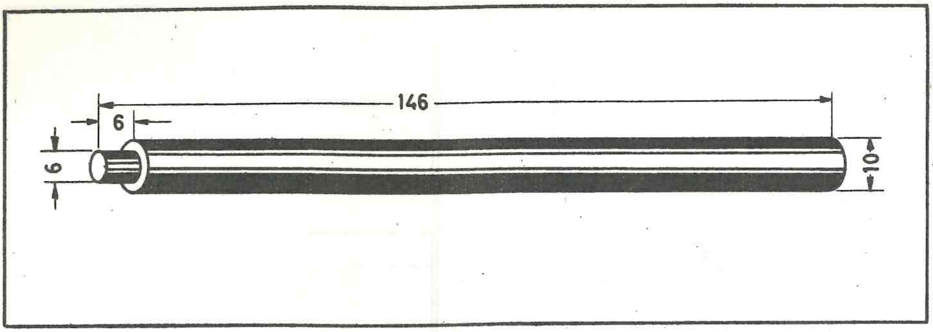
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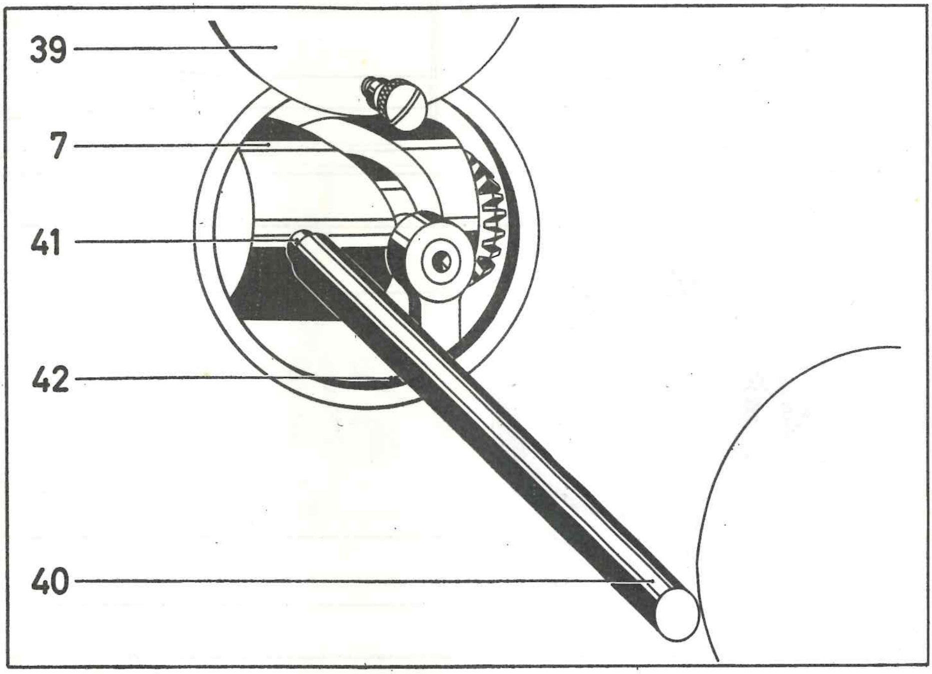
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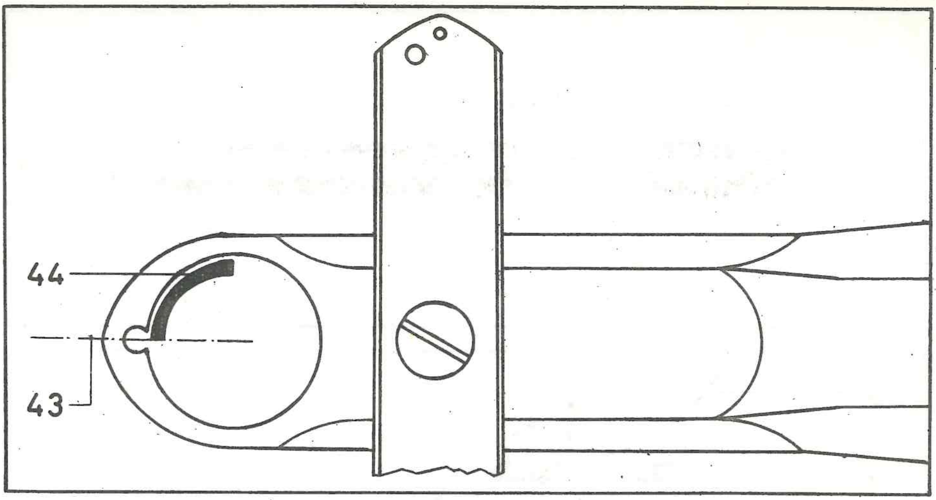
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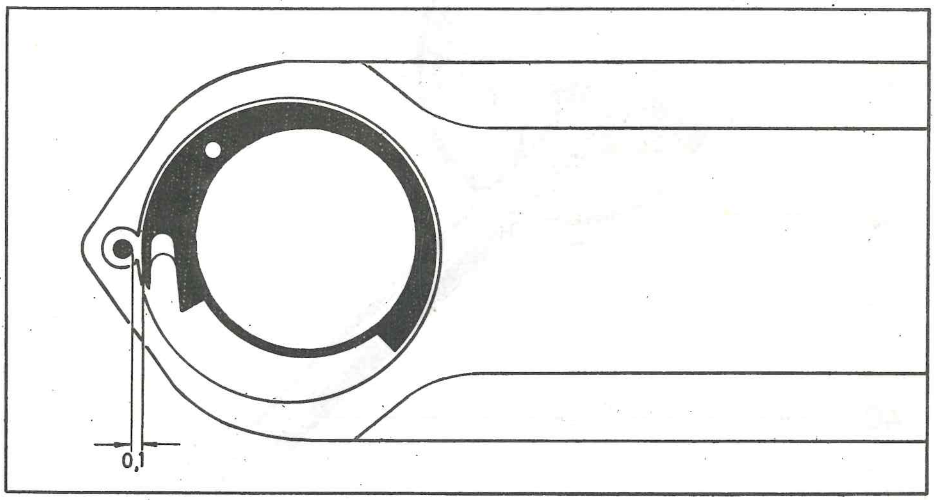
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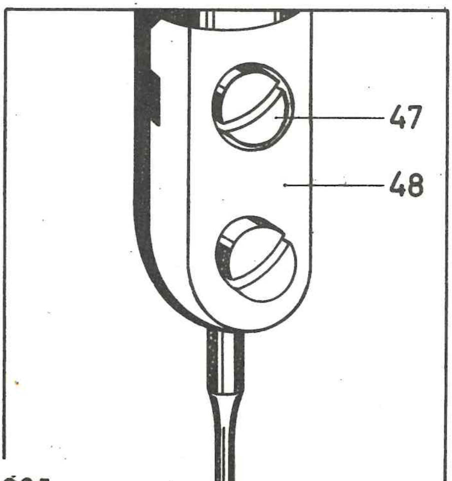
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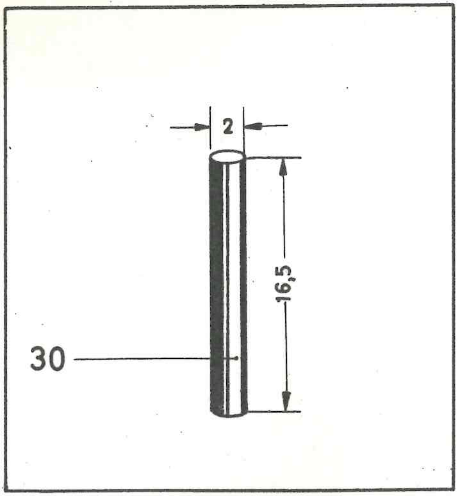
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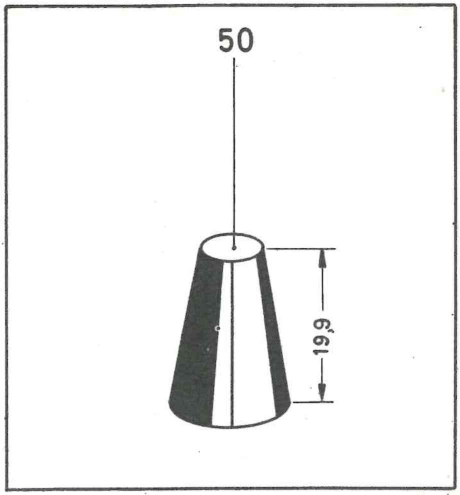
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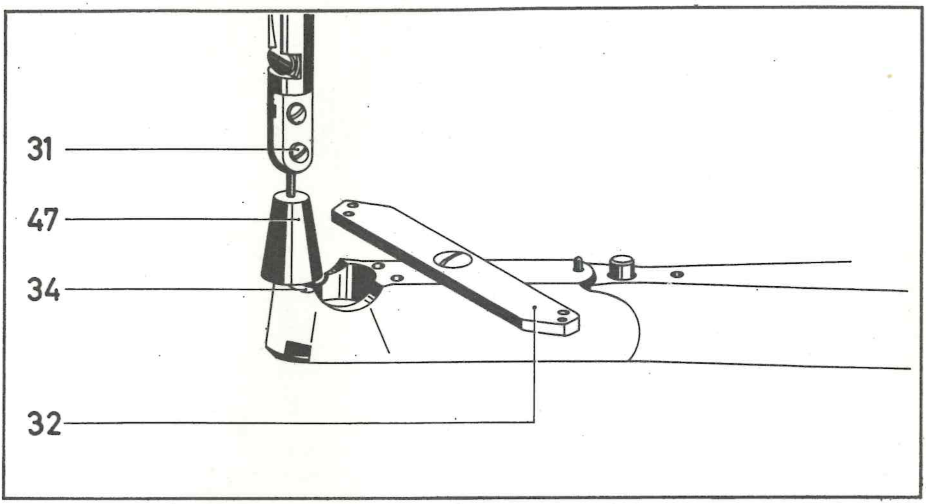
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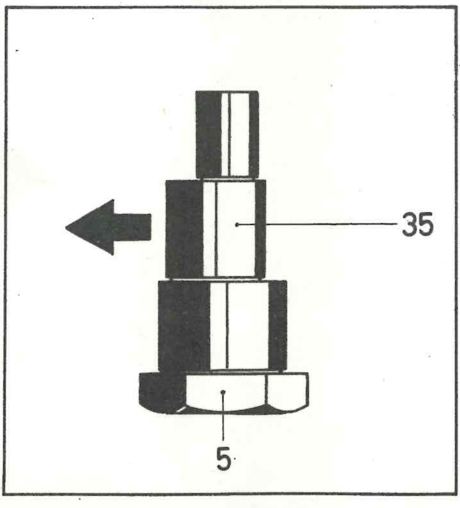
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