

Adjustment instructions for the Pfaff 138

Also applies to Pfaff 130, 230, 238 machines

1. Basic settings of eccentrics A and B

- .1. Position the needle bar to the far right on Cl. 138 machines, to the far left on Cl. 238 machines, by turning eccentric stud A of the slide block. To do this, loosen the setscrew of eccentric stud A. After adjustment tighten the setscrew securely.
- .2. Turn eccentric stud B, joining the forked zigzag connecting rod to the needle-bar frame, so that its eccentric side faces upwards (or downwards). Before adjustment, loosen the setscrew of eccentric stud B. Afterwards, tighten this screw again securely.

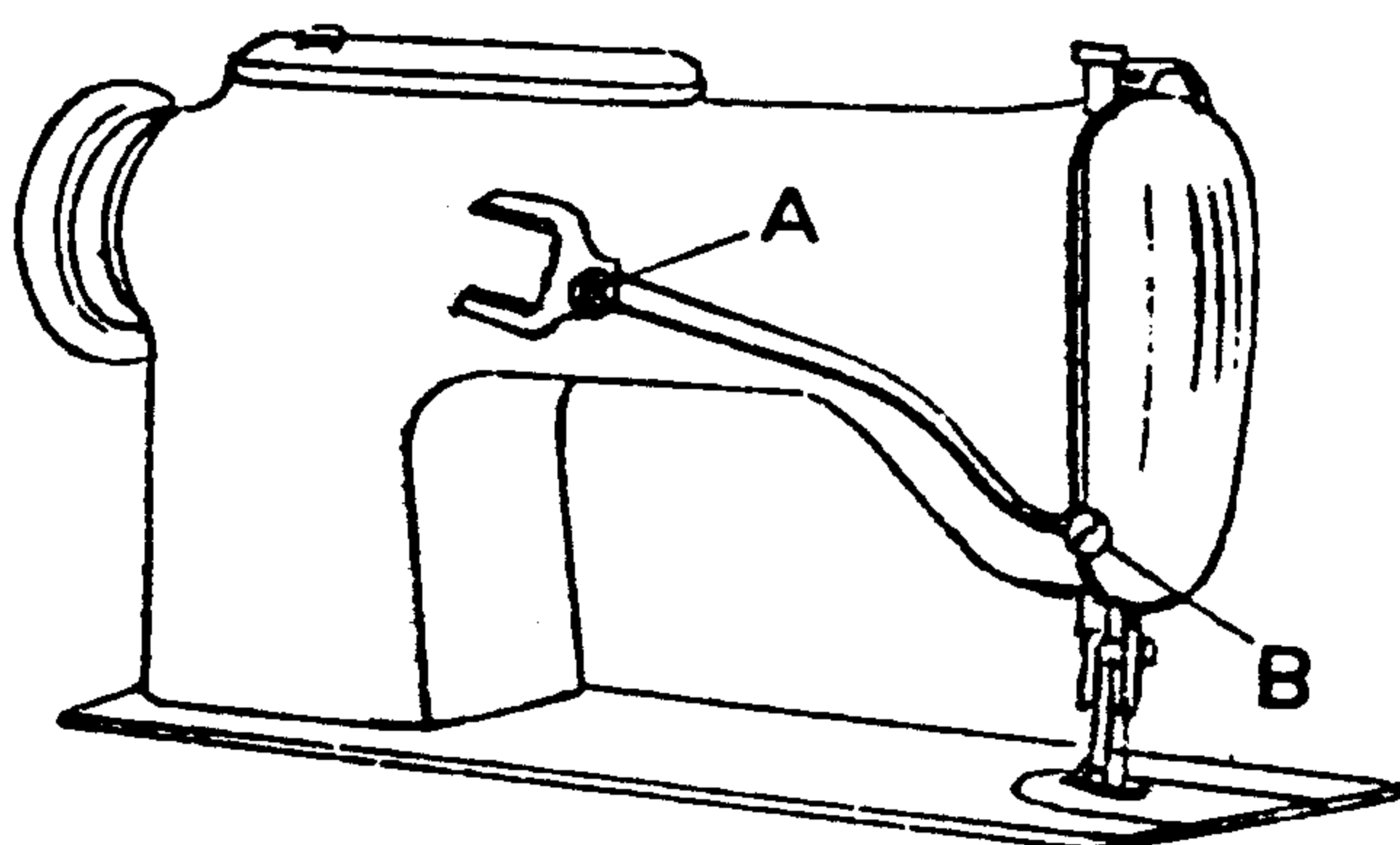


Fig. 1.01

2. Straight stitch (stitch width set at zero)

Requirement: When the stitch width is set at "0" the needle bar must make no sideways motion.

Note: Correction is made by turning the stitch width control shaft D after loosening screw C.

- Sequence:**
1. Move needle-position lever A to the middle position.
 2. Move zigzag selector B to "0" (to the far right).
 3. Loosen setscrew C a little.
 4. Turn the stitch-width control shaft D in the selector knob so that the needle bar no longer makes a sideways motion. Tighten setscrew C again securely.
 5. Check: hold a piece of paper firmly on the needle plate and turn the balance wheel in sewing direction until the needle pierces it. Turn the balance wheel in the opposite direction until the needle pierces the paper a second time. If both punctures are exactly over each other, the adjustment is correct. If necessary repeat the adjustment.
 6. The stitch width control should always move with a slight resistance when adjusted. To obtain this resistance, the selector knob must be pushed onto the shaft as far as it will go before the setscrew is tightened. While doing so, insert a screwdriver through the rear arm opening and push against the slide block from behind. Tighten setscrew C securely, check the adjustment according to the above requirement and re-adjust if necessary.

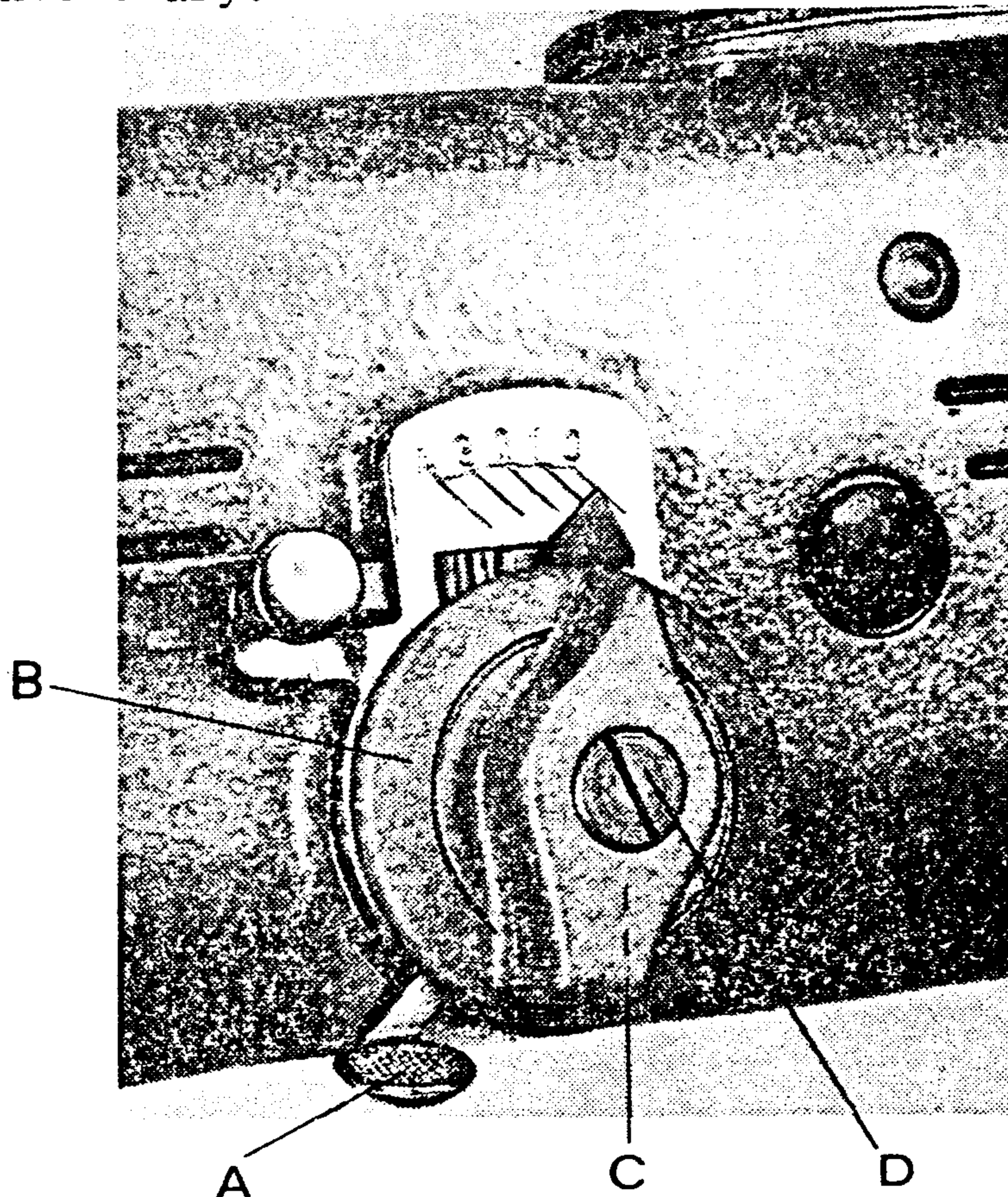


Fig. 2.01

3. Sideways motion of the needle bar

- Requirement:
1. The sideways motion of the needle bar must be completed when the point of the descending needle is roughly 5 mm from the needle plate.
 2. The sideways motion must not begin again until the needle point is clear of the needle plate.

Note: Adjustment is made by turning the small bevel gear B of the zigzag drive on the armshaft.

- Sequence:
1. Set the stitch width control to the widest stitch.
 2. By turnnng eccentric stud A in the needle bar frame (after loosening the setscrew) position the needle bar so that the needle is equidistant from each side of the needle slot on the left and right of its throw.
 3. After the setscrews are loosened the small bevel gear of the zigzag drive must be adjusted on the arm shaft so that the needle bar motion complies with the abovementioned requirement.
 4. Ensure that the marked teeth on the bevel gears are aligned and that the gears are meshed with neither too little nor too much play.
 5. After adjustment, tighten all setscrews securely and check that the machine turns without any binding.

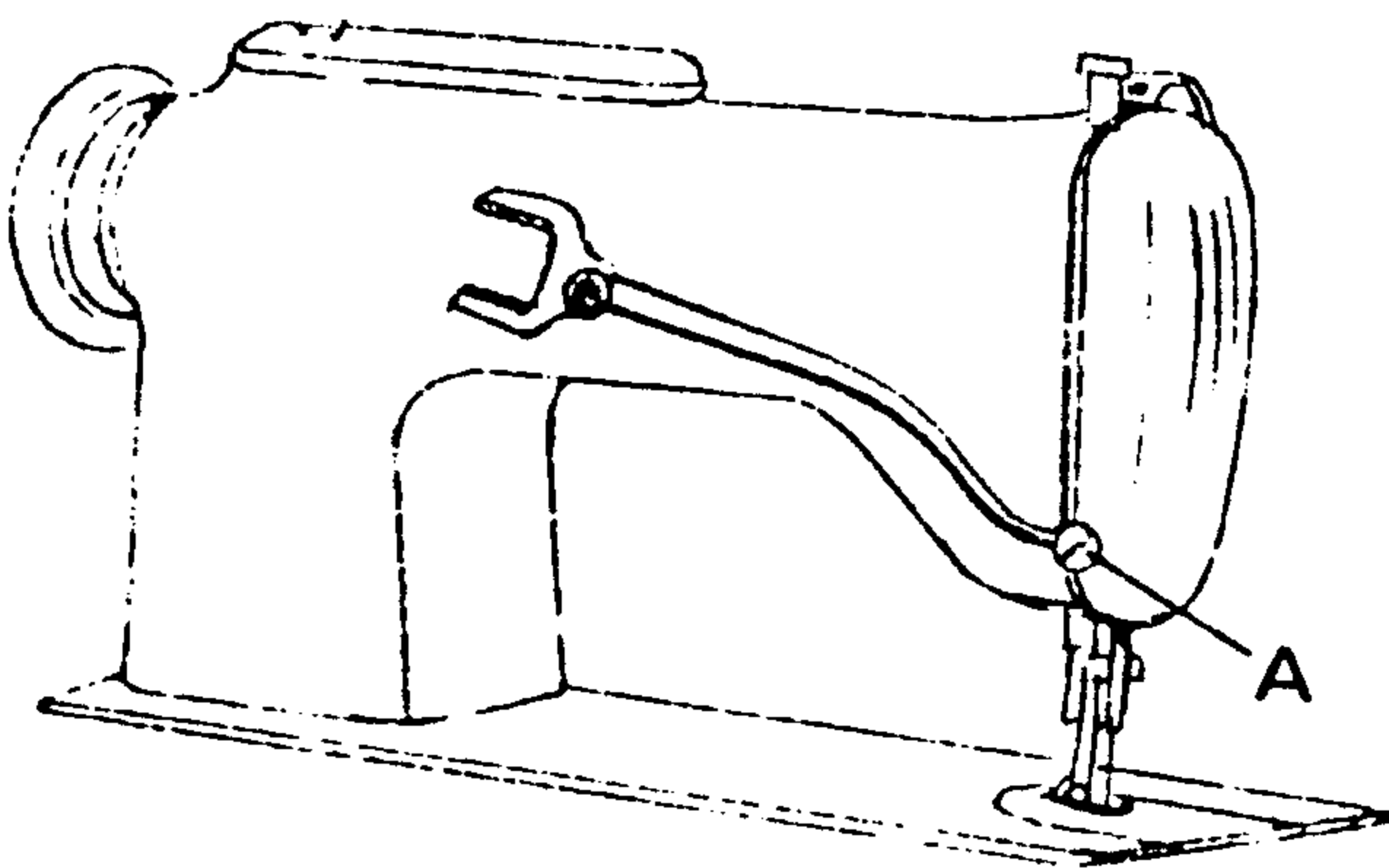


Fig. 3.01

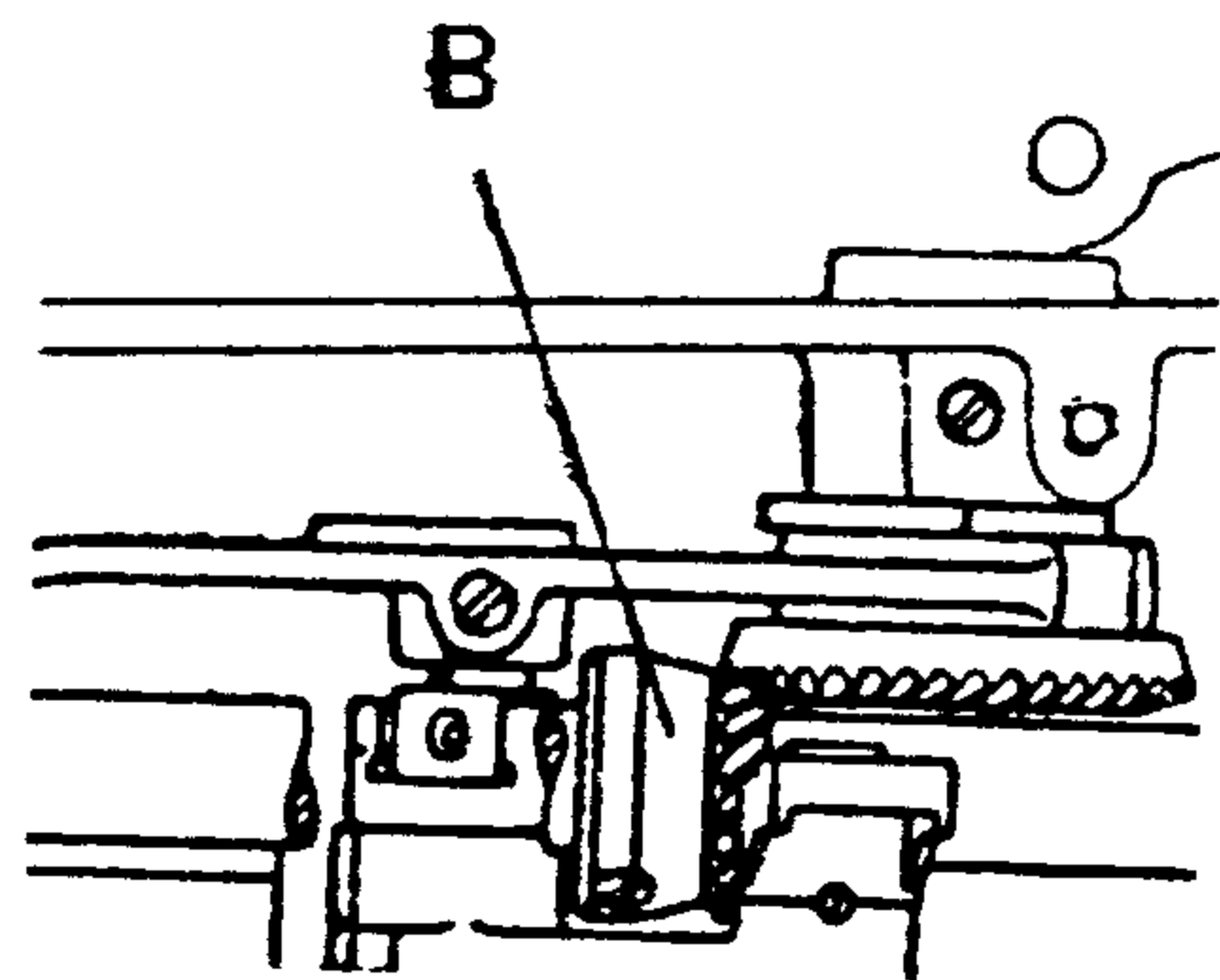


Fig. 3.02

4. Needle penetrations "left, middle, right"

Requirement: The right- and left-hand penetrations of the needle at the largest stitch width should be equidistant from the middle penetration as well as from both edges of the needle slot.

Note: This is adjusted by turning eccentric stud A of the slide block and eccentric stud B (loosen the setscrews a little and tighten them securely again after adjustment).

Check: Set the stitch width control to the widest stitch and the needle-position lever A (fig. 2.01) in middle position.

Mark the needle penetrations made at the widest stitch. Turn the balance wheel of the machine forwards until the needle point penetrates a piece of paper held firmly over the needle plate, then backwards again until it penetrates a second time.

Hold the piece of paper in this position and set the stitch width control to "0".

Also mark the middle position (straight stitch). The straight-stitch penetration should be equidistant from both penetrations at the widest stitch setting, and must be exactly in the middle of the needle slot.

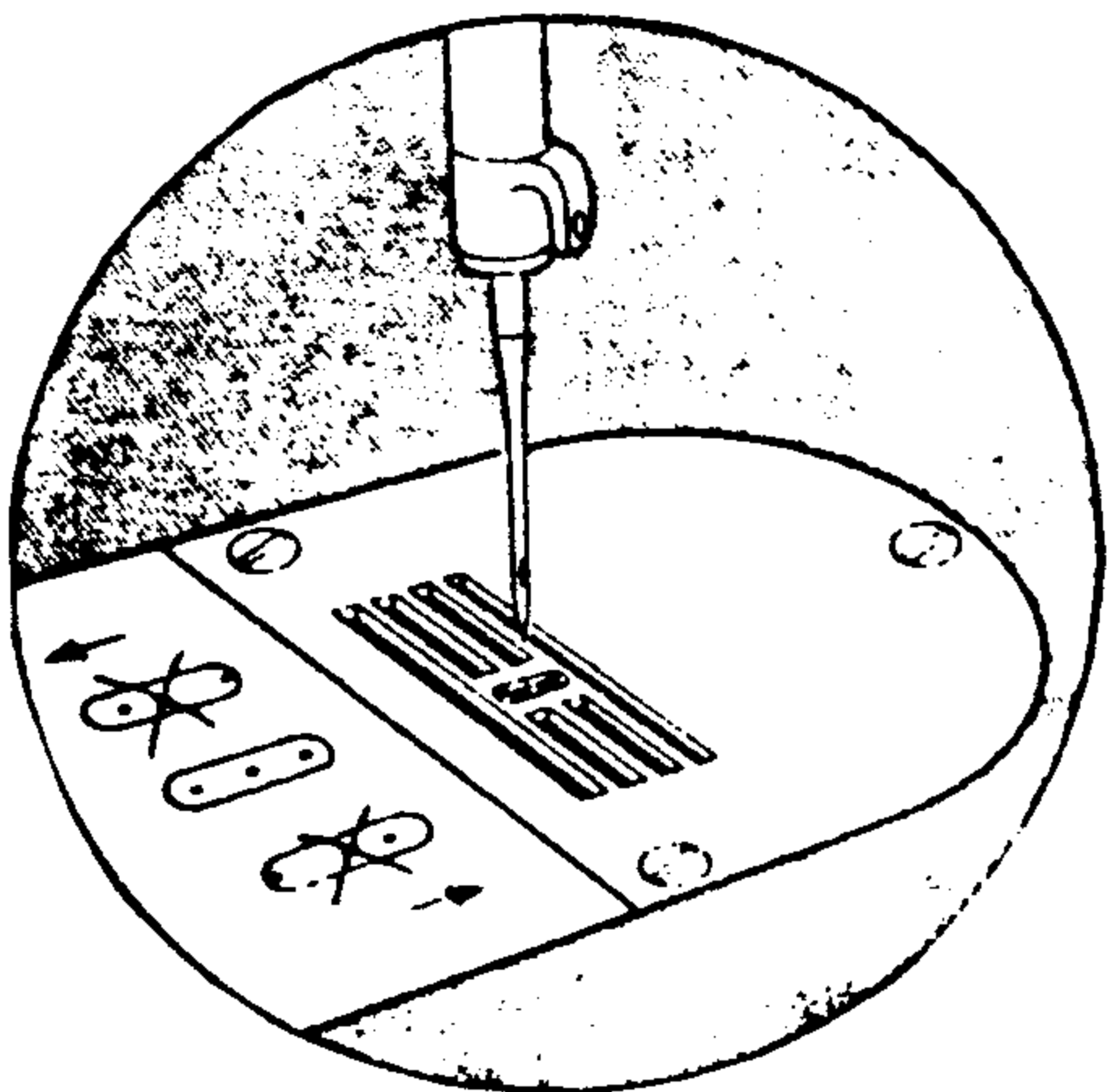


Fig. 4.01

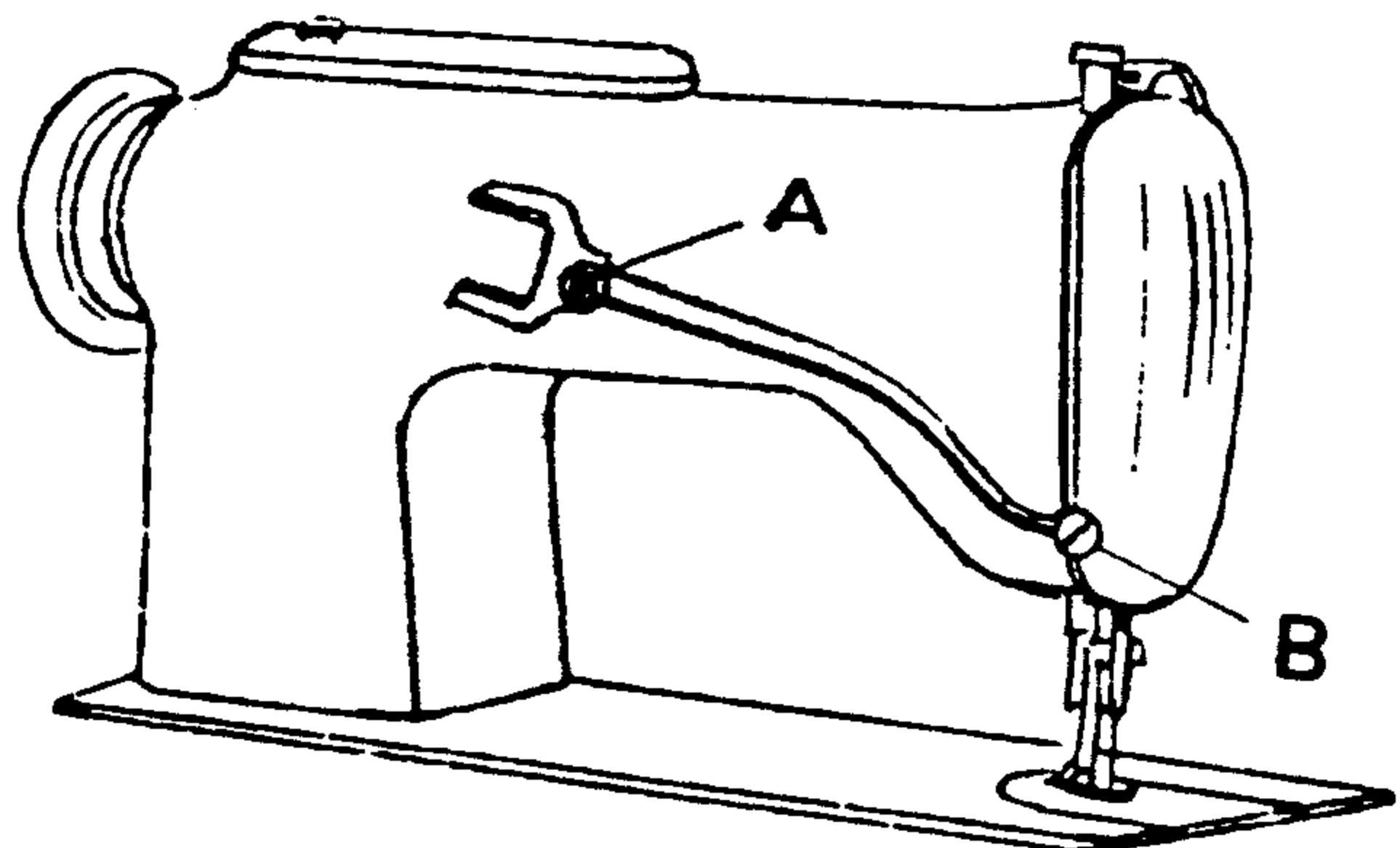


Fig. 4.02

5. Setting the feed dog

Requirement: The feed dog should be accurately centred in the feed slots, and protrude from these by roughly the depth of its teeth when at the highest point of its stroke.

Note: Correction of the feed dog position in sewing direction is made on feed vibrating shaft A, that of the feed dog height is made on feed lifting shaft B of the feed drive.

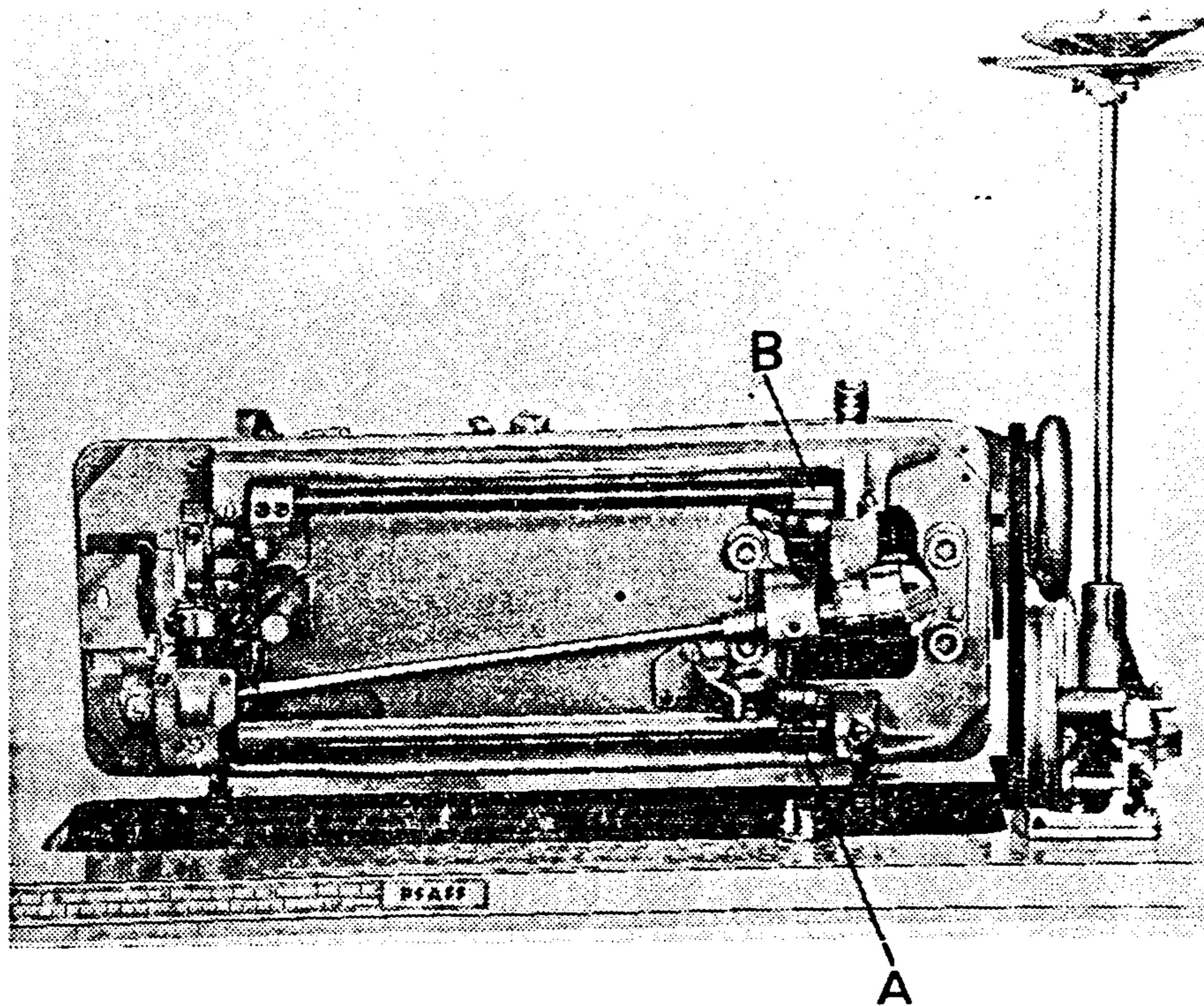


Fig. 5.01

6. Feed motions

6.1. Pushing motion

Requirement: With the needle bar in a position 4 mm past b.d.c. the feed dog must make no feeding motion when the feed reverse control is operated.

Note: Adjustment is made on eccentric A.

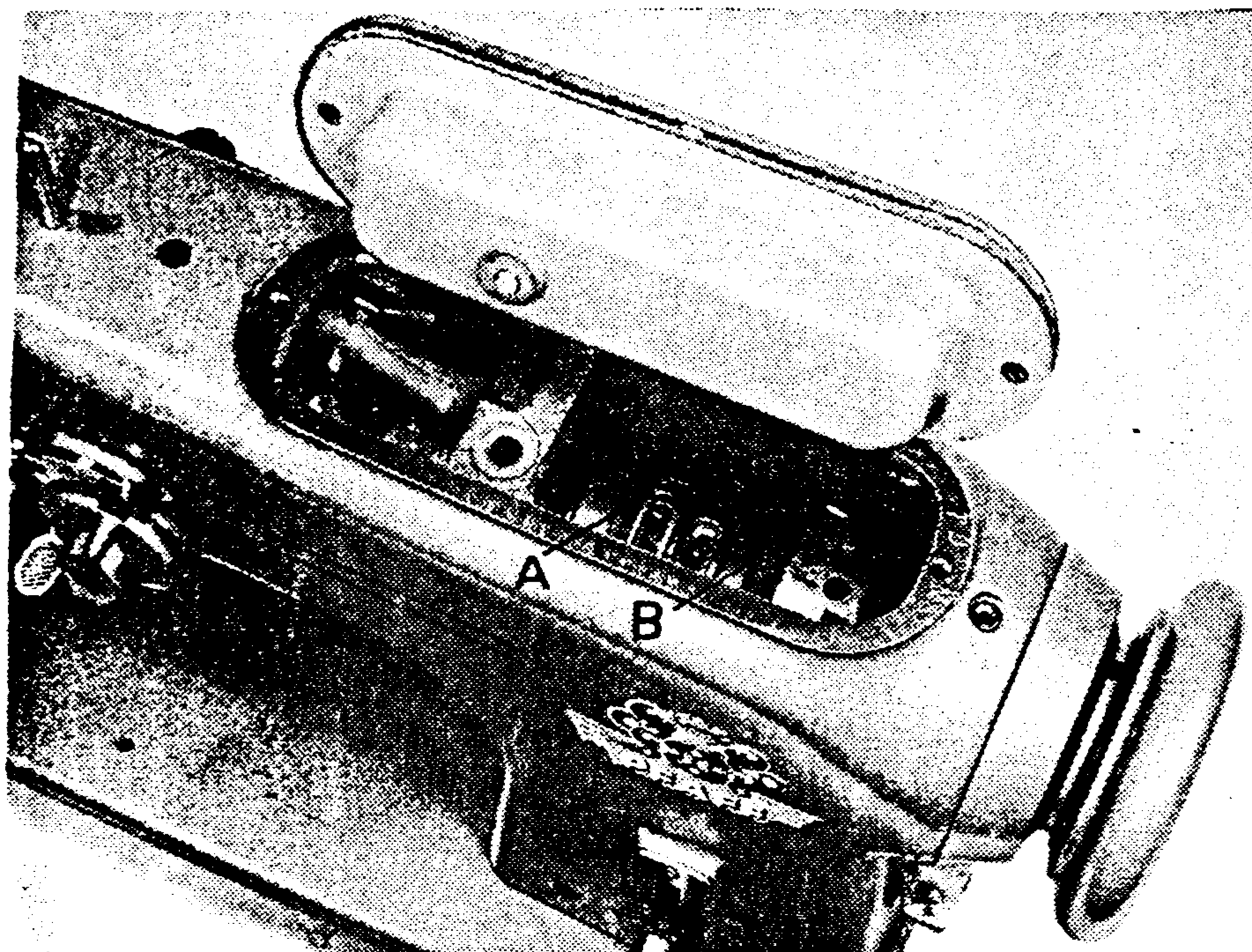


Fig. 6.01

6.2. Lifting motion

Requirement: When the needle bar is at t.d.c. the feed dog must protrude by the highest amount from the needle plate.

Note: On Cl. 138 the lifting motion is positively connected with the pushing motion. When the pushing motion is adjusted correctly the lifting motion is automatically adjusted with it

On Cl. 238 the lifting eccentric B has to be adjusted according to the above requirement. After adjustment the setscrew of the eccentric must be fully tightened.

7. Needle rise

Requirement: The needle rise is 2 mm.

Note: To adjust, set the stitch width control to "0" and the needle to its middle position.

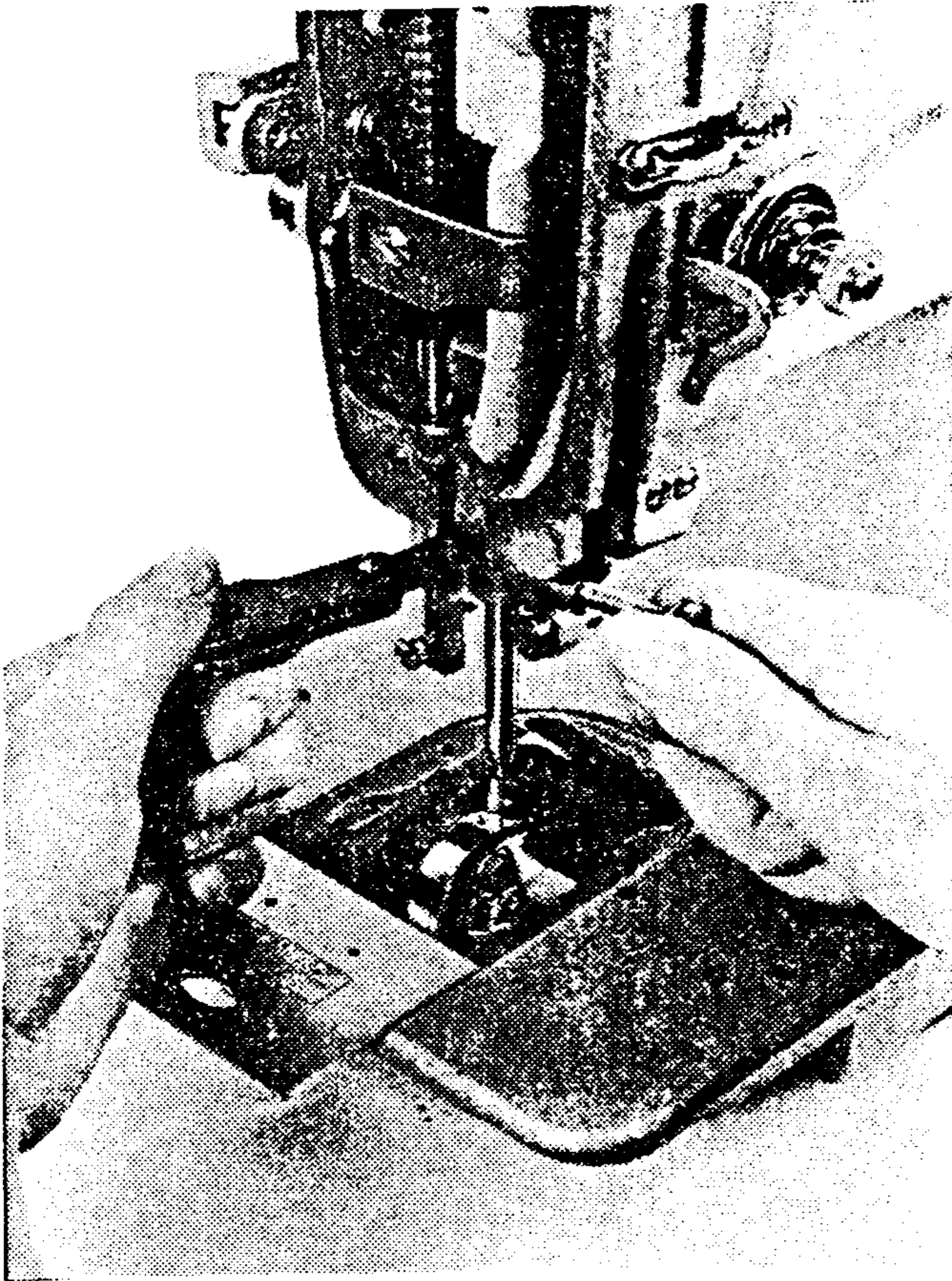


Fig. 7.01

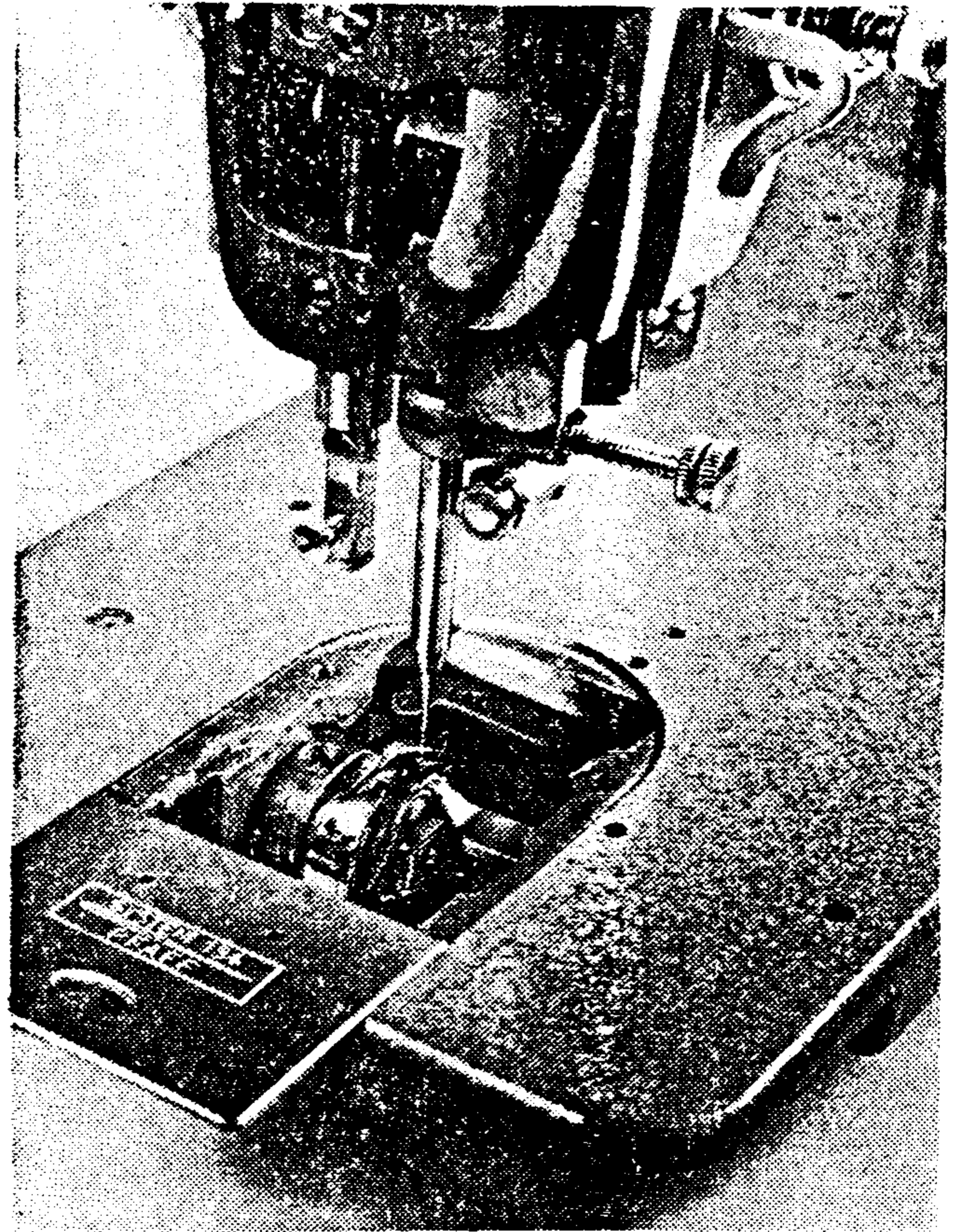


Fig. 7.02

8. Needle height

Requirement: The needle height at the largest zigzag stitch to the left is 0.5 to 1.0 mm.

Note: Adjusted by setting the needle bar higher or lower.

9. Hook clearance

Requirement: At the needle-rise position the clearance between needle and hook tip must be 0.1 mm.

Note: This is adjusted by re-positioning the hook. When doing so, make sure that the needle-rise position is not altered.

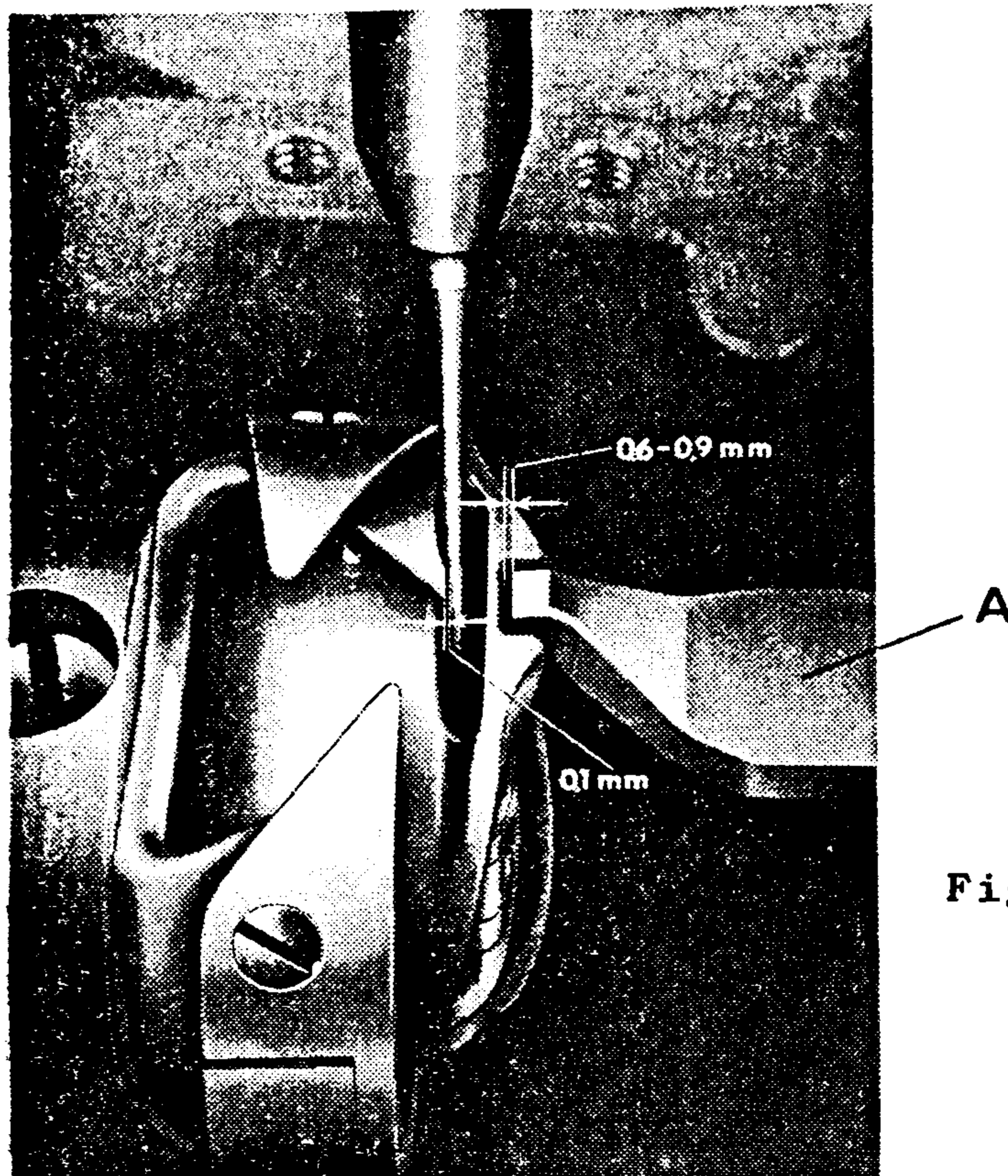


Fig. 9.01

10. Bobbin-case positioning finger

Requirement: The clearance between the bobbin case base and the positioning finger is 0.6 to 0.9 mm (see Fig. 9.01).

Note: This is adjusted by setting the positioning finger A.

11. Fabric clearance

Requirement: The clearance between the needle plate and the raised presser foot should be roughly 7 mm.

Note: This is adjusted by setting the presser bar higher or lower.

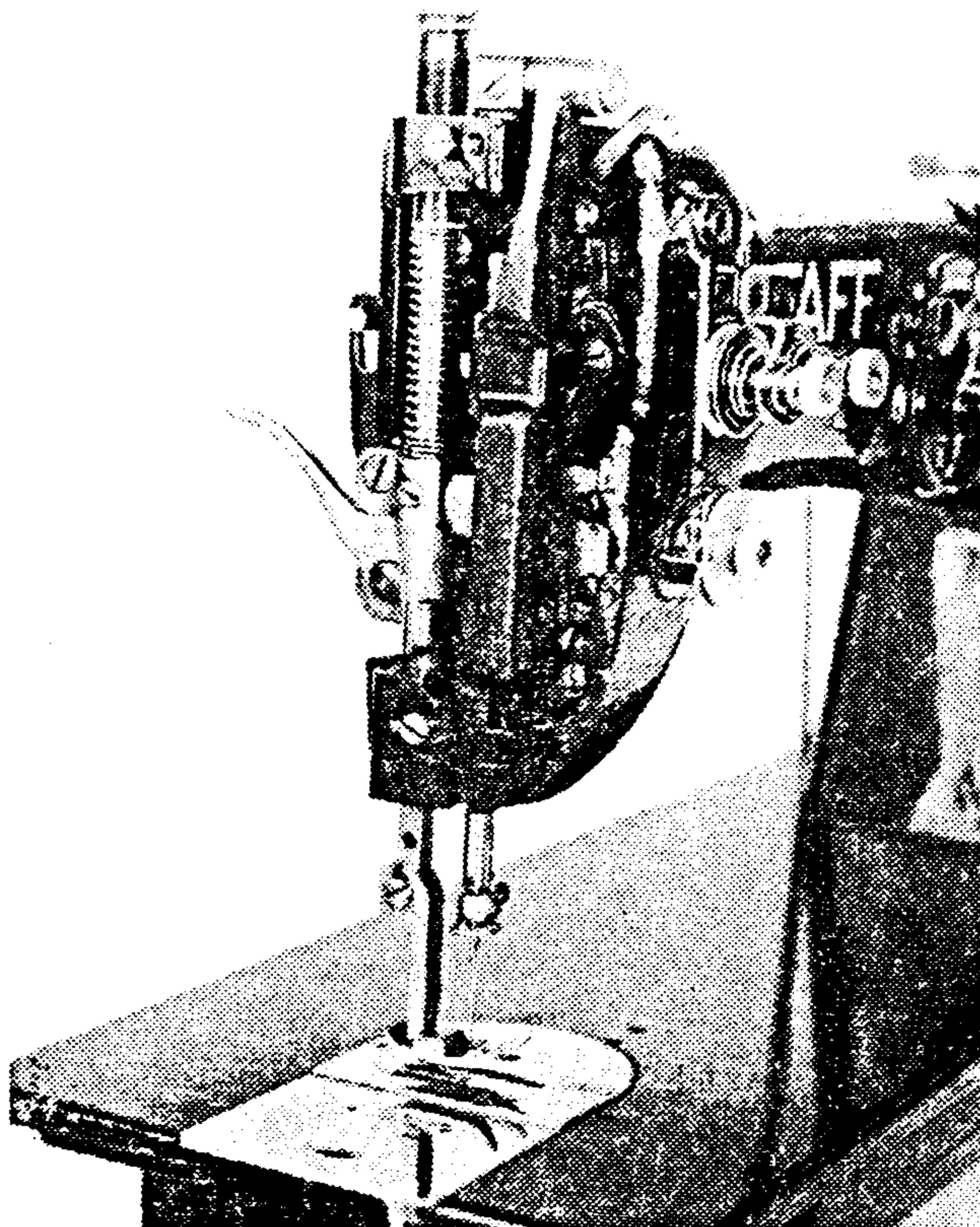


Fig. 11.01