



From the library of Diamond Needle Corp

Service Manual

-900/56

for Pfaff 290 and 1290 series

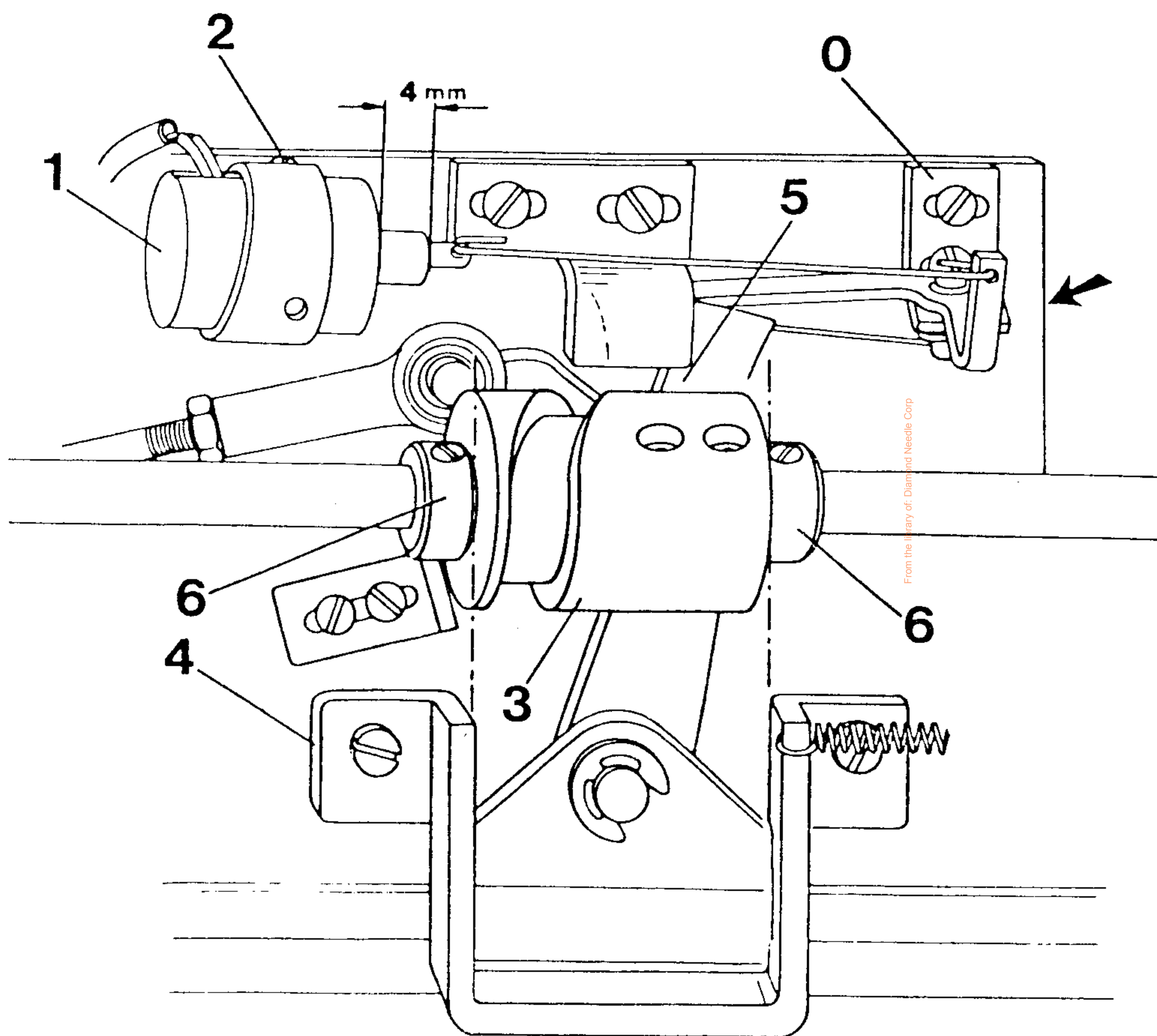
1

Engaging solenoid

Correct
setting:

- (1) Bracket 0 must be set in the middle of its adjustment range with its right edge parallel to the edge of the mounting plate (see arrow).
- (2) When the trimming mechanism is at rest the plunger of solenoid 1 must protrude from the solenoid housing by about 4 mm.

- (1) To adjust, loosen the two screws and move bracket 0 so that the screws are in the middle of the elongated holes.
- (2) To adjust, loosen screws 2 in the mounting clip and adjust the position of solenoid 1 accordingly.



2

Preliminary adjustment of control cam

Correct
setting:

Control cam 3 should be centered above the U-shaped cutout of bracket 4. Also when the take-up lever is at top dead centre, hole 5 must be visible from the front and roughly parallel to the bedplate.

To adjust, loosen the set screws and adjust the control cam by turning and moving it on its shaft and tightening collars 6 accordingly.

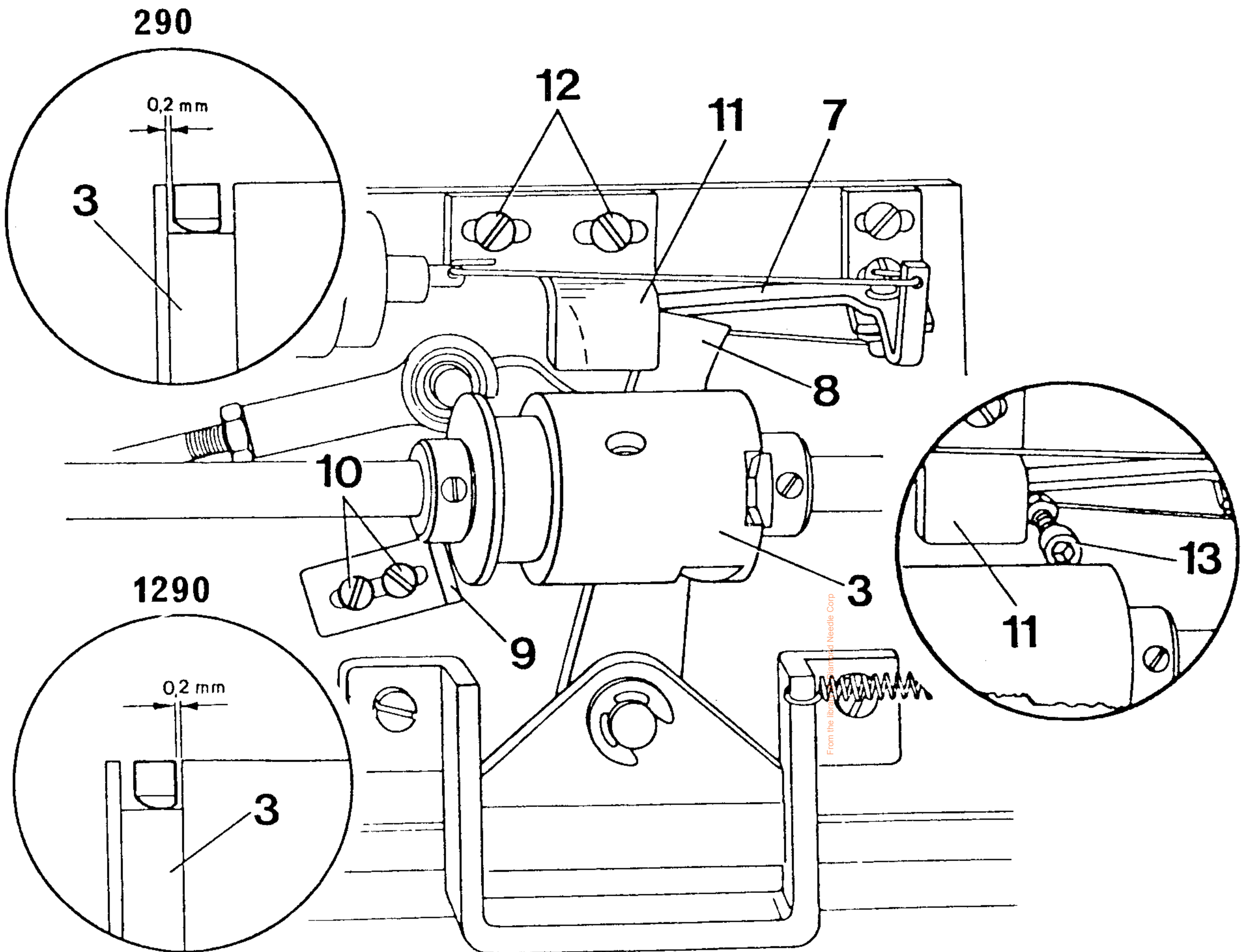
3 Control lever

3.1 Spring loading of control lever

Correct
setting:

When the trimming mechanism is at rest it must be possible to push control lever 8 against spring pressure towards the bedplate by about 1 mm.

To adjust, turn stop screw 13 after loosening the nut.



3.2 Control lever stroke

Correct
setting:

When engaging lever 7 is actuated, the stud of control lever 8 must drop freely into the track of control cam 3. After thread trimming, control lever 8 must easily clear the right edge of angular bracket 11 and drop into the notch of engaging lever 7 behind angular bracket 11.

290 series: There must be a clearance of about 0.2 mm between the stud of control lever 8 and the left wall of the control cam track.

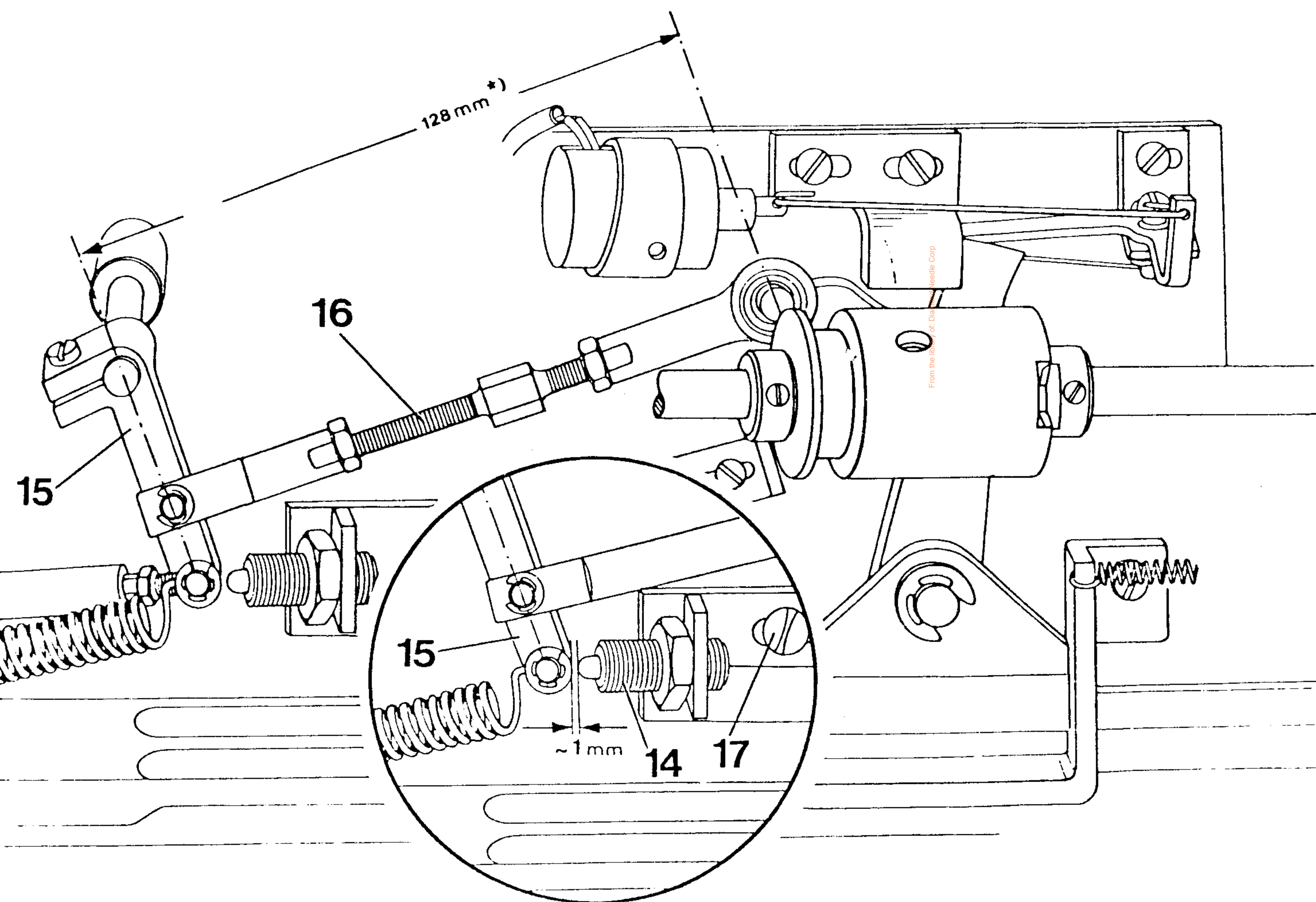
1290 series: There must be a clearance of about 0.2 mm between the stud of control lever 8 and the right wall of the control cam track.

To adjust, loosen the set screw and reposition angular brackets 9 and 11.

Correct
setting:

- (1) On single-needle machines the length of the thread catcher rod 16 must be about 128 mm, i. e. the centre-to-centre distance between the ball stud and the stud in lever 15.
On two-needle machines half the needle gauge of the respective machine has to be deducted from the distance of 128 mm.
- (2) When the trimming mechanism is at rest, there must be a clearance of about 1 mm between threaded stud 14 and lever 15.

- (1) To adjust, loosen the locknuts (right-and left-hand thread and turn thread catcher 16 accordingly.
- (2) To adjust, loosen screw 17 and adjust the position of the threaded-stud bracket in the elongated hole.



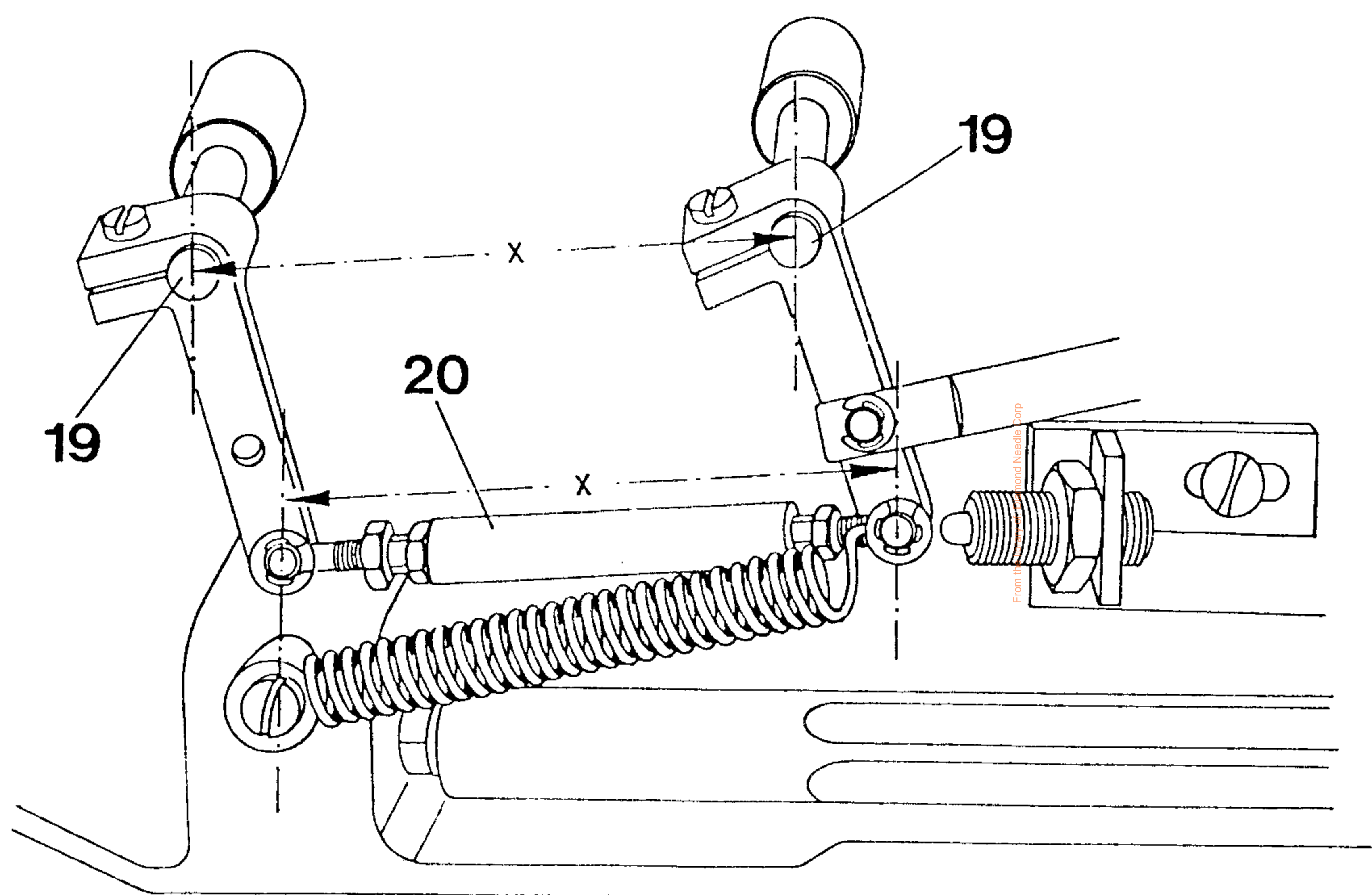
* On two-needle machines half the needle gauge must be deducted from this distance of 128 mm.

Connecting rod
(on two-needle machines only)

Correct
setting:

The length of connecting rod 20 (centre-to-centre distance between studs) must be equal to the centre-to-centre distance between the two thread catcher driving shafts 19.

Adjustment is made by loosening the locknuts and turning the centre section 20 of the connecting rod (right- and left-hand thread).



6 Thread catcher
(On two-needle machines this adjustment must be made twice)

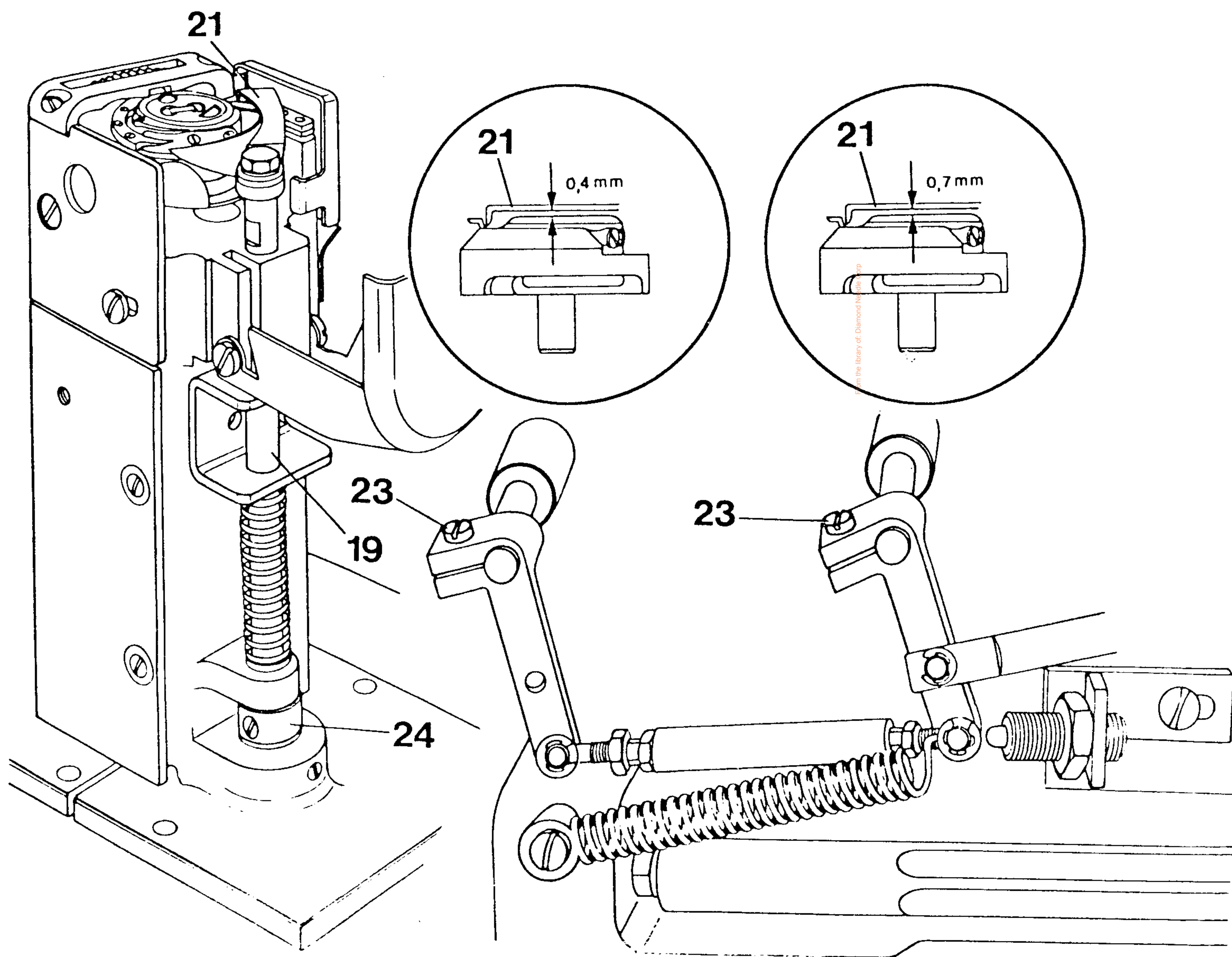
6.1 Thread catcher height

Correct
setting:

290 series: There must be a clearance of about 0.4 mm between the underside of thread catcher 21 and the bobbin case cap.
1290 series: There must be a clearance of about 0.7 mm between the underside of thread catcher 21 and the bobbin case cap.

To adjust, loosen clamp screw 23 and the screws in collar 24 and reposition thread catcher driving shaft 19 accordingly.

Note: Leave clamp screw 23 loose for the subsequent adjustment.



6.2 Thread catcher resting position

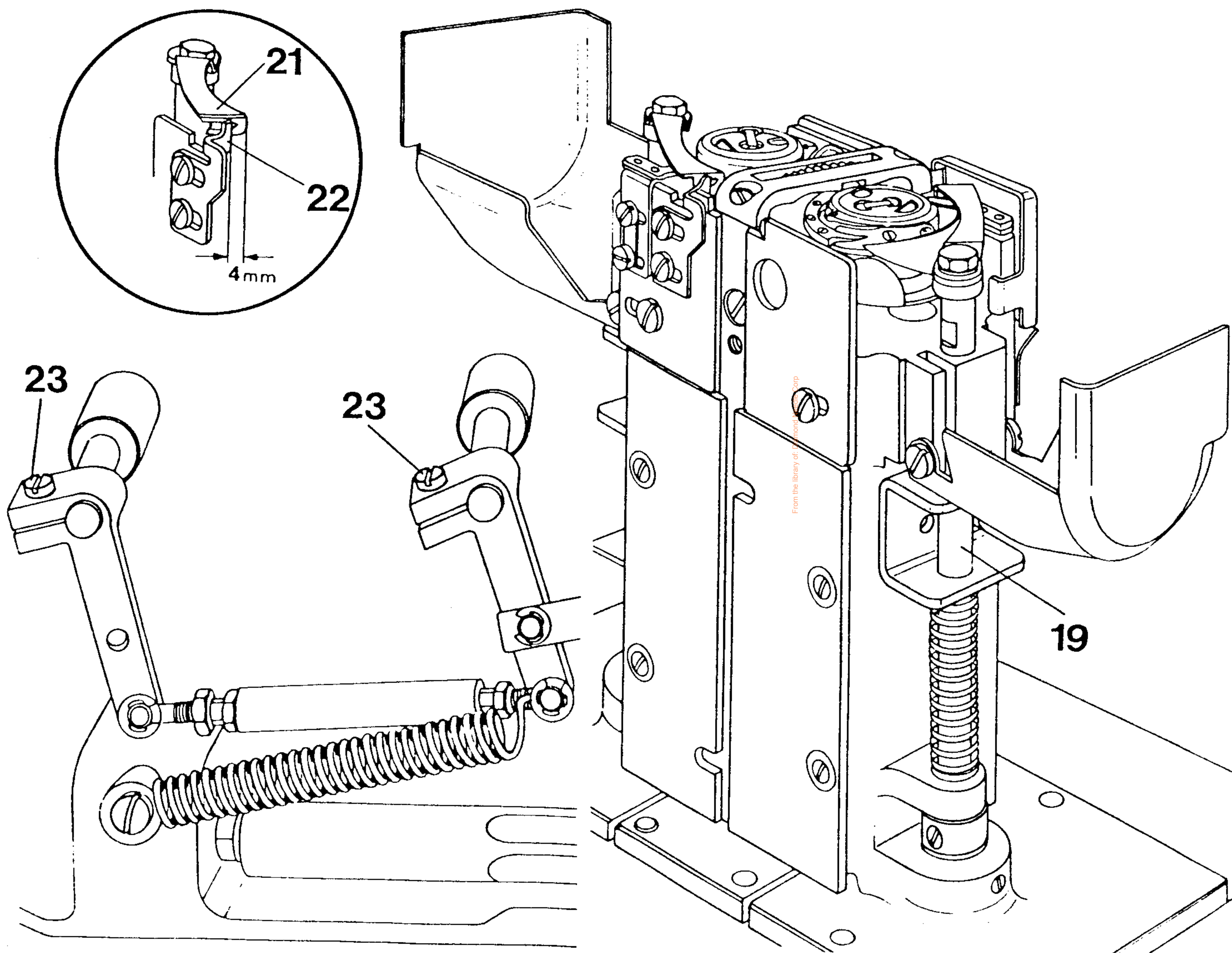
Correct
setting:

When the trimming mechanism is at rest, there must be a clearance of about 4 mm between the rear edge of thread catcher 21 and the cutting edge of knife 22.

To adjust, turn thread catcher driving shaft 19 accordingly (with screw 23 still loose).

Note:

When tightening screw 23 make sure that all parts of the thread catcher drive move freely.



7

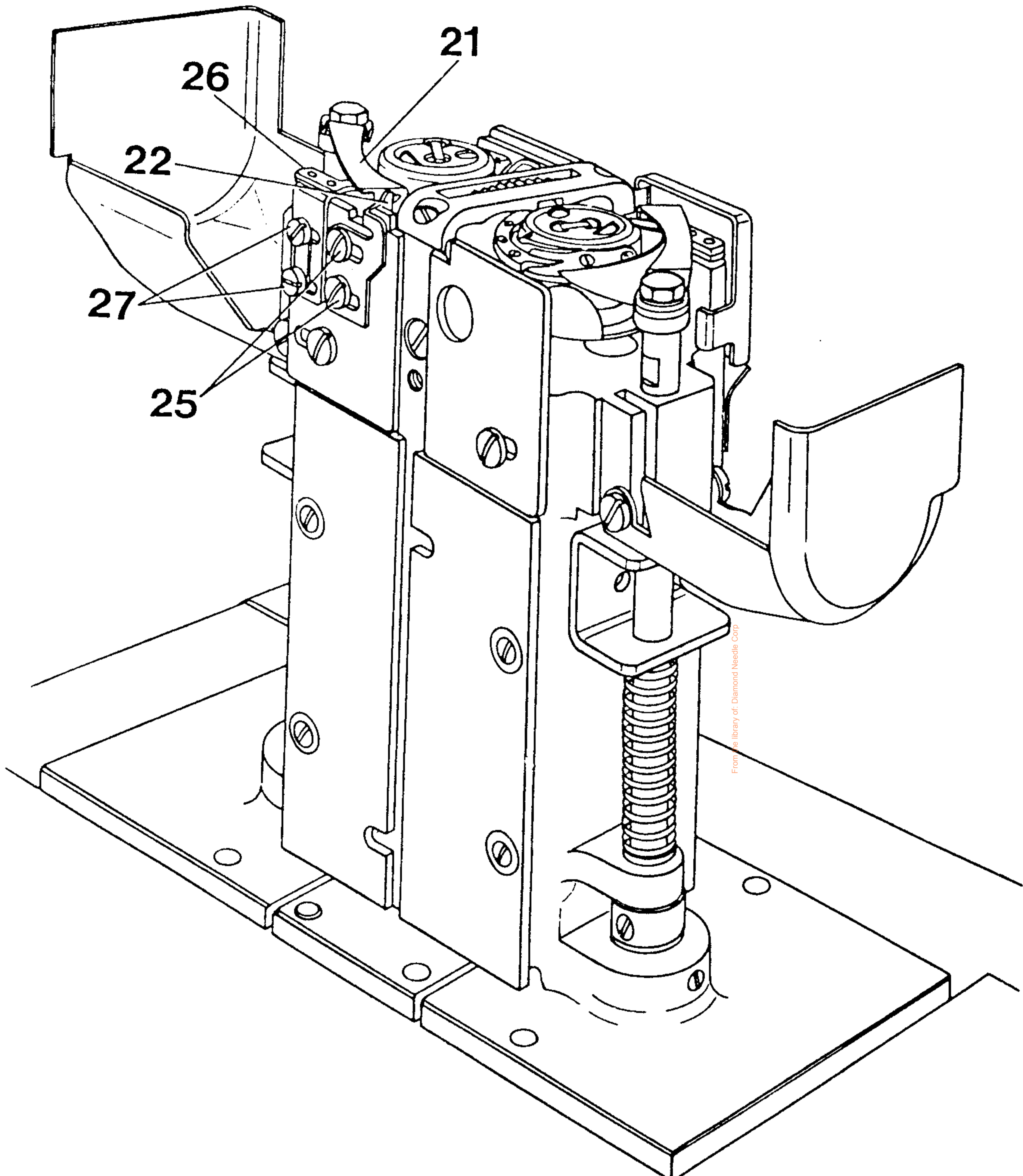
Knife pressure

(On two-needle machines, this adjustment has to be made twice.)

Correct
setting:

When half the front edge of thread catcher 21 has passed the cutting edge of knife 22, the latter must exert light pressure on the thread catcher edge.

To adjust, loosen screws 25 and reposition knife 22 accordingly.



8

Bobbin thread nipper/trapper spring

(On two-needle machines, this adjustment must be made twice.)

Correct
setting:

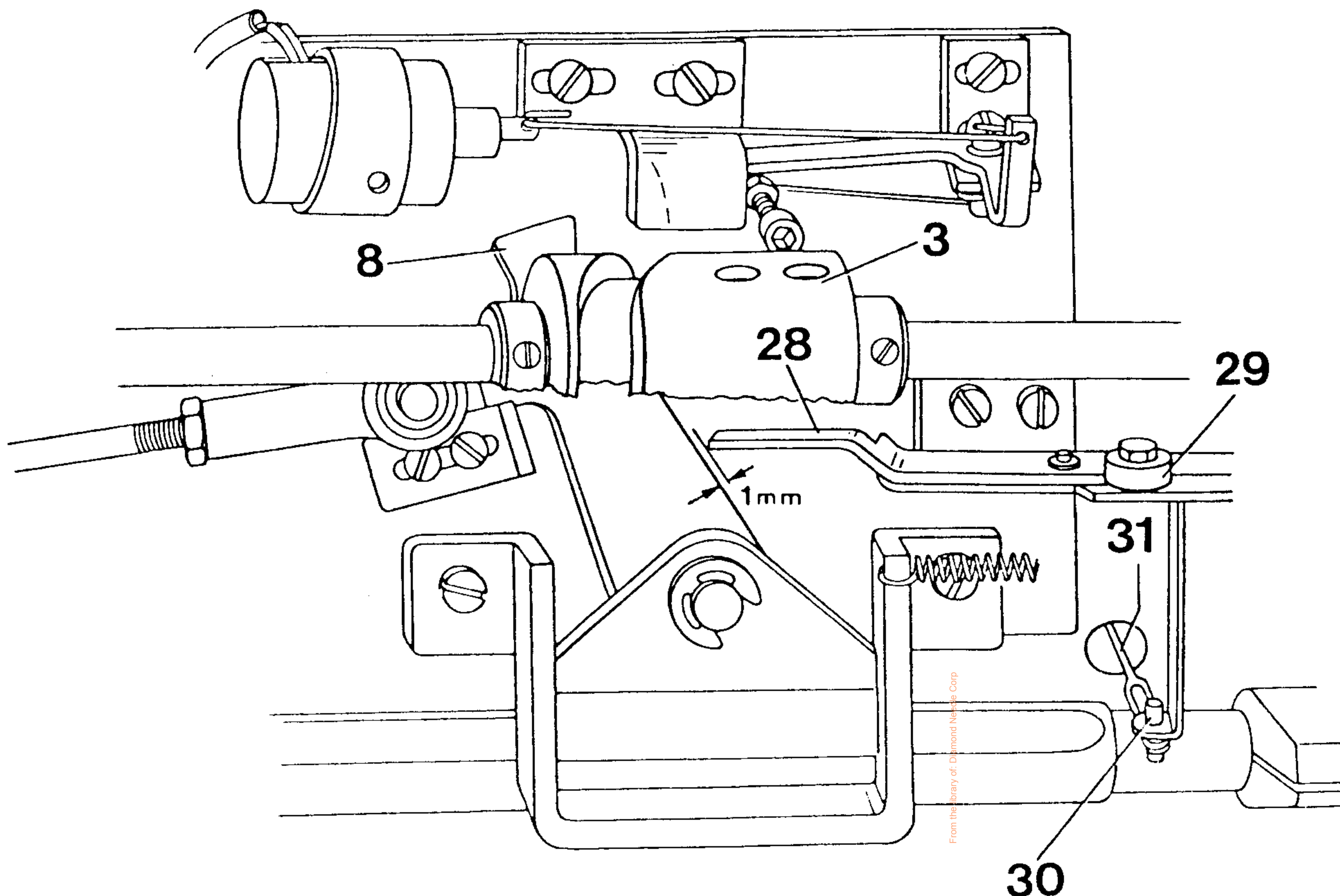
Thread catcher 21 should at no time deflect bobbin thread nipper/trapper spring 26. The bobbin thread should be reliably trapped after the thread trimming action. In addition, easy removal of the bobbin from the sewing hook and its swift replacement should be ensured.

Adjustment is made either by repositioning nipper/trapper spring 26 or by loosening screws 27 and moving the nipper spring bracket sideways.

9 Final adjustment of control cam

Correct setting: The thread trimming action must be completed when the take-up lever is at top dead centre.

To adjust, loosen the appropriate screws and turn control cam 3 accordingly.



10 Tension release mechanism

10.1 Tension release lever

Correct setting: There should be a clearance of about 1 mm between control lever 8 and tension release lever 28 when the stud of control lever 8 has dropped into the cam track and the needle bar is at bottom dead centre. In this position, the thread tension should be activated.

To adjust, loosen the screw of eccentric 29 and turn the latter accordingly.

10.2 Tension release rod

Correct setting: In sewing position, stud 30 of the tension release lever should contact the lower end of the elongated hole of connecting rod 31. In this position the tension discs must not be apart.

Adjustment is made by loosening the screws in the clamping plate behind the machine arm and repositioning connecting rod 31 accordingly.

11 Synchronizer

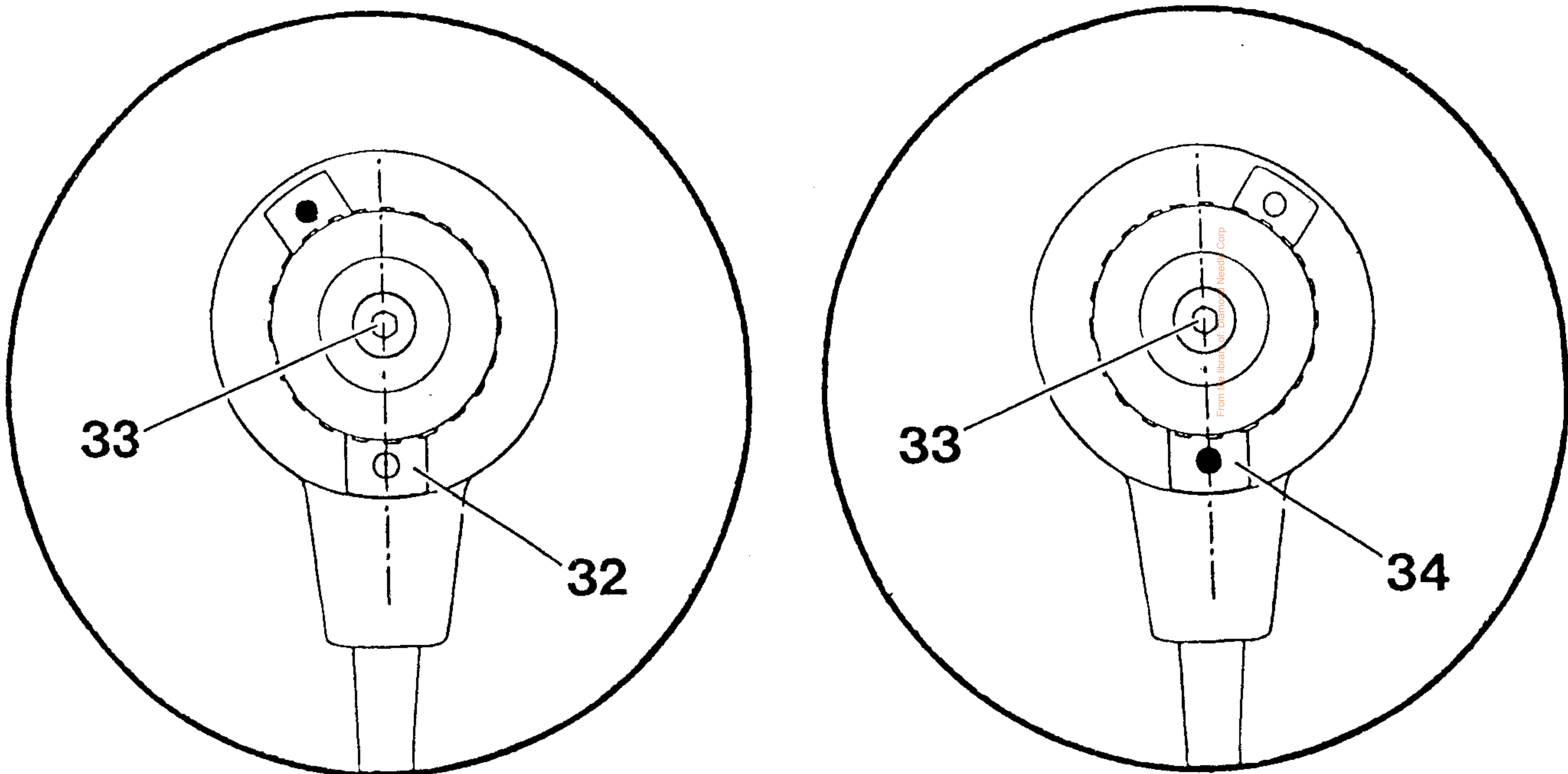
11.1 On single- and two-needle machines with Quick-Electronic-Stop motor, type 800

Correct setting:

When sewing is interrupted, the machine must stop with the needle bar at a position 4 mm past bottom dead centre. After thread trimming, the machine must stop with the take-up lever at top dead centre.

Bring the take-up lever to top dead centre and loosen screw 33. Then set the outer magnet chip 32 with its yellow-marked magnet above the opposite pole at the bottom.

Bring the needle bar to a position 4 mm past bottom dead centre and loosen screw 33. Set the inner magnet chip 34 with its red-marked magnet above the opposite pole at the bottom.



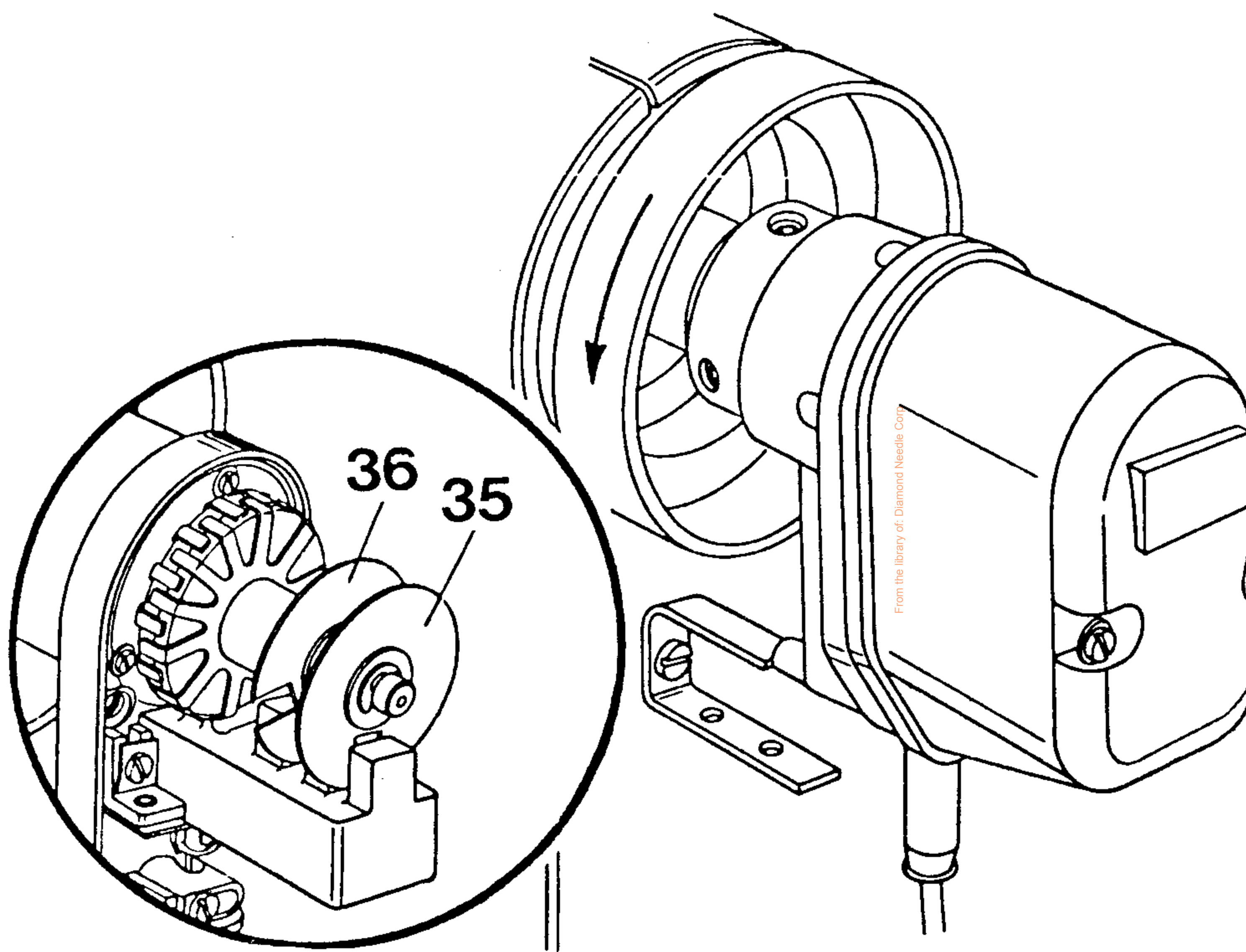
Note: The stopping position of the needle bar 4 mm past bottom dead centre (on two-needle machines) can be cancelled by means of a toggle switch so that the machine will always stop with the take-up lever at top dead centre.

11.2 On single-and two-needle machines with Efka-Vario-stop motor, type V

Correct setting: When sewing is interrupted, the machine must stop with the needle bar at a position 4 mm past bottom dead centre. After thread trimming, the machine must stop with the take-up lever at top dead centre.

Bring the take-up lever to top dead centre and turn the outer control disc 35 until its slot points downwards and is positioned between the projections of the plastic base.

Caution: To avoid the risk of injury replace the synchronizer cover immediately after the adjustment has been made.



Note: The stopping position of the needle bar 4 mm past bottom dead centre (on two-needle machines) can be cancelled by means of a toggle switch so that the machine will always stop with the take-up lever at top dead centre.

11.3 On single-and two-needle machines with Posistop motor,
model POK

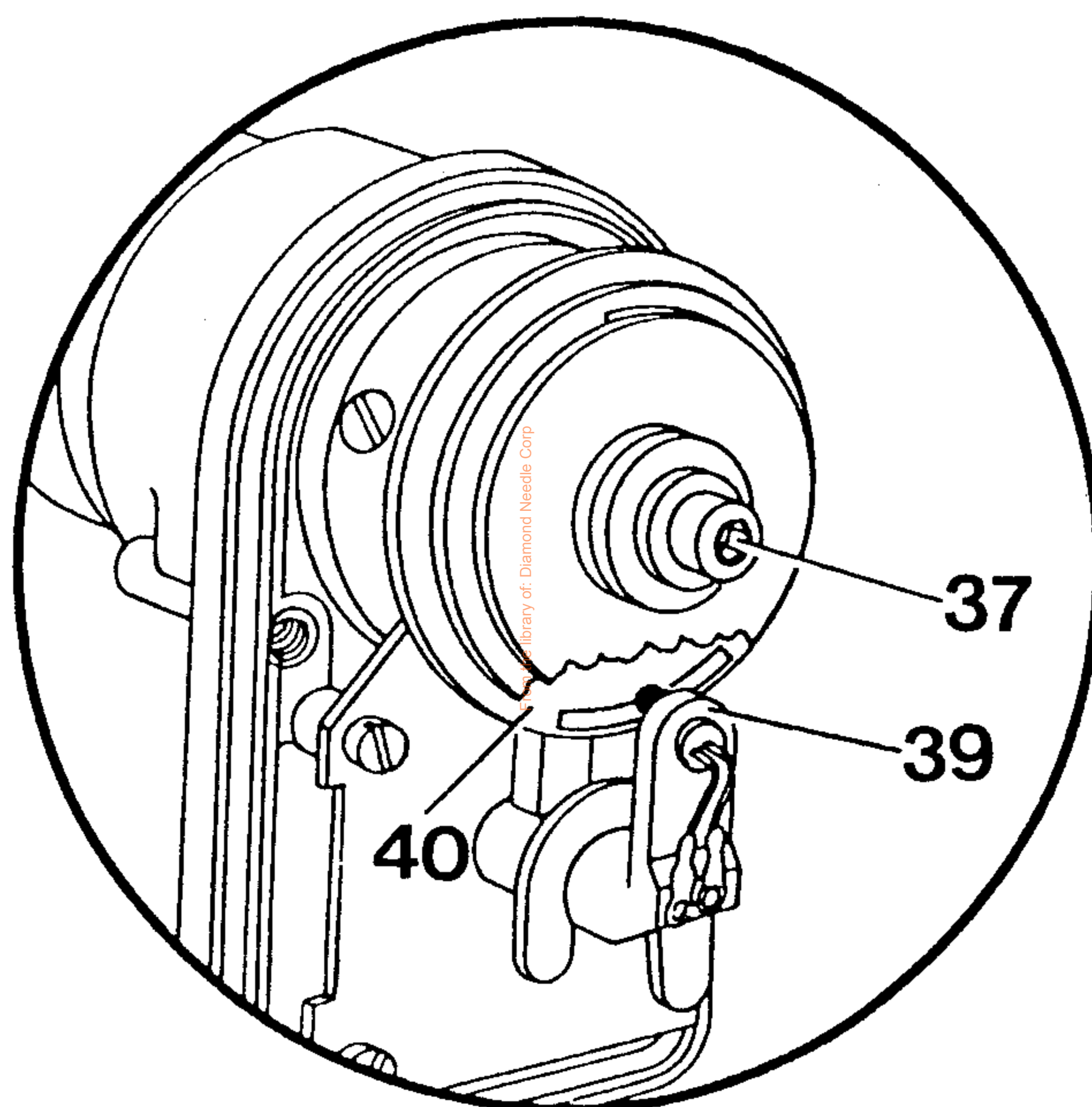
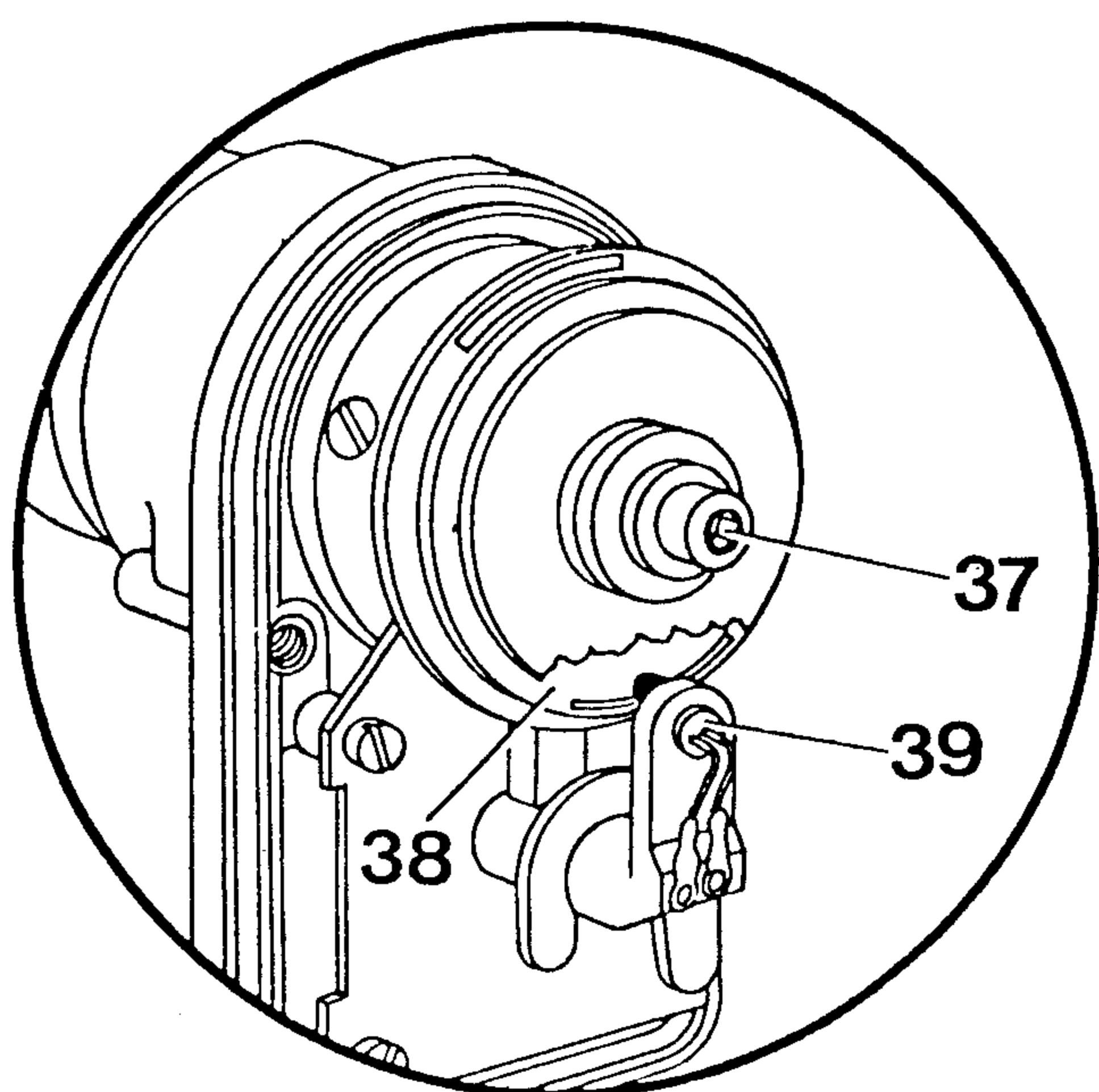
Correct
setting:

When sewing is interrupted, the machine must stop with the needle bar at a position 4 mm past bottom dead centre. After thread trimming, the machine must stop with the take-up lever at top dead centre.

Note:

If the motor is fitted with a toggle switch, set it downwards to position the needle bar 4 mm past bottom dead centre.

Loosen screw 37 and set the middle of the cutout of the small control disc 38 at switching diode 39 with the take-up lever at top dead centre. With the needle bar positioned 4 mm past bottom dead centre, set the middle of the cutout of the large control disc 40 at diode 39 and tighten screw 37.



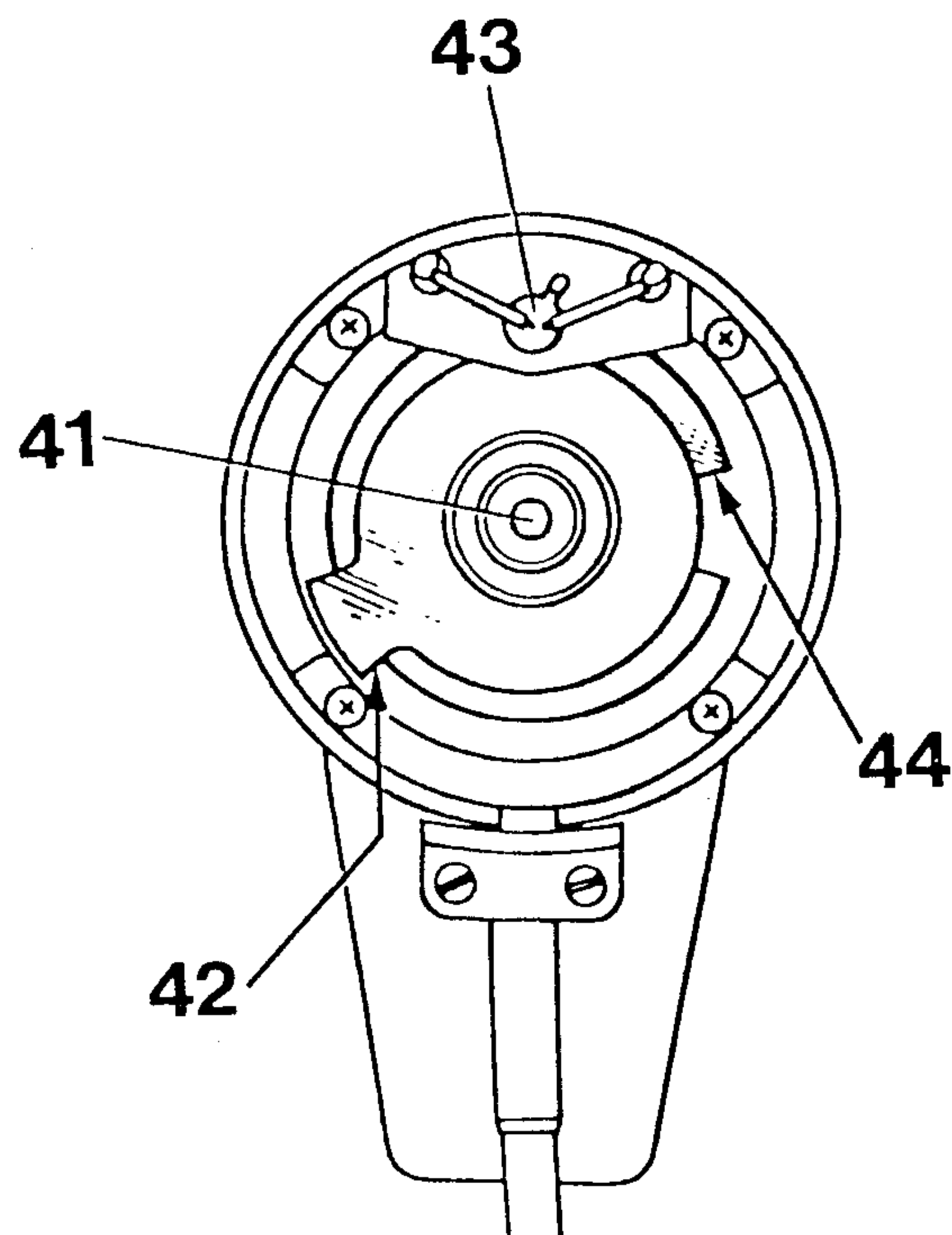
11.4 On single- and two-needle machines with Quick-Electronic-Stop
motor, model 880 M

Correct
setting:

When sewing is interrupted, the machine must stop with the needle bar at a position 4 mm past bottom dead centre. After thread trimming, the machine must stop with the take-up lever at top dead centre.

Loosen screw 41, and set edge 42 (front control disc) behind switching diode 43 with the take-up lever positioned at top dead centre.

With the needle bar positioned 4 mm past bottom dead centre, set edge 44 (rear control disc) behind switching diode 43 and tighten screw 41.



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