

PFAFF[®] **3336**

Service Manual

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Service manual for the Pfaff 3336

Tools, gauges and other items needed for adjustment

Set of screwdrivers with blades from 2 to 10 mm wide

Set of open-ended spanners, 7 to 14 mm

Open-ended spanner, 22 mm

Set of allen keys, 1.5 to 6 mm

Metal rule

Needle rise gauge, No. 08-88013616 (for 2.8 and 3.2 mm)

C-clamp, No. 08-880137-00

Gauge, No. 08-880136-01 (for 1.6; 1.8; 2.0; 2.2 and 2.4 mm)

Packet of needles, System 34 for A and B version, or system 332 for in C version

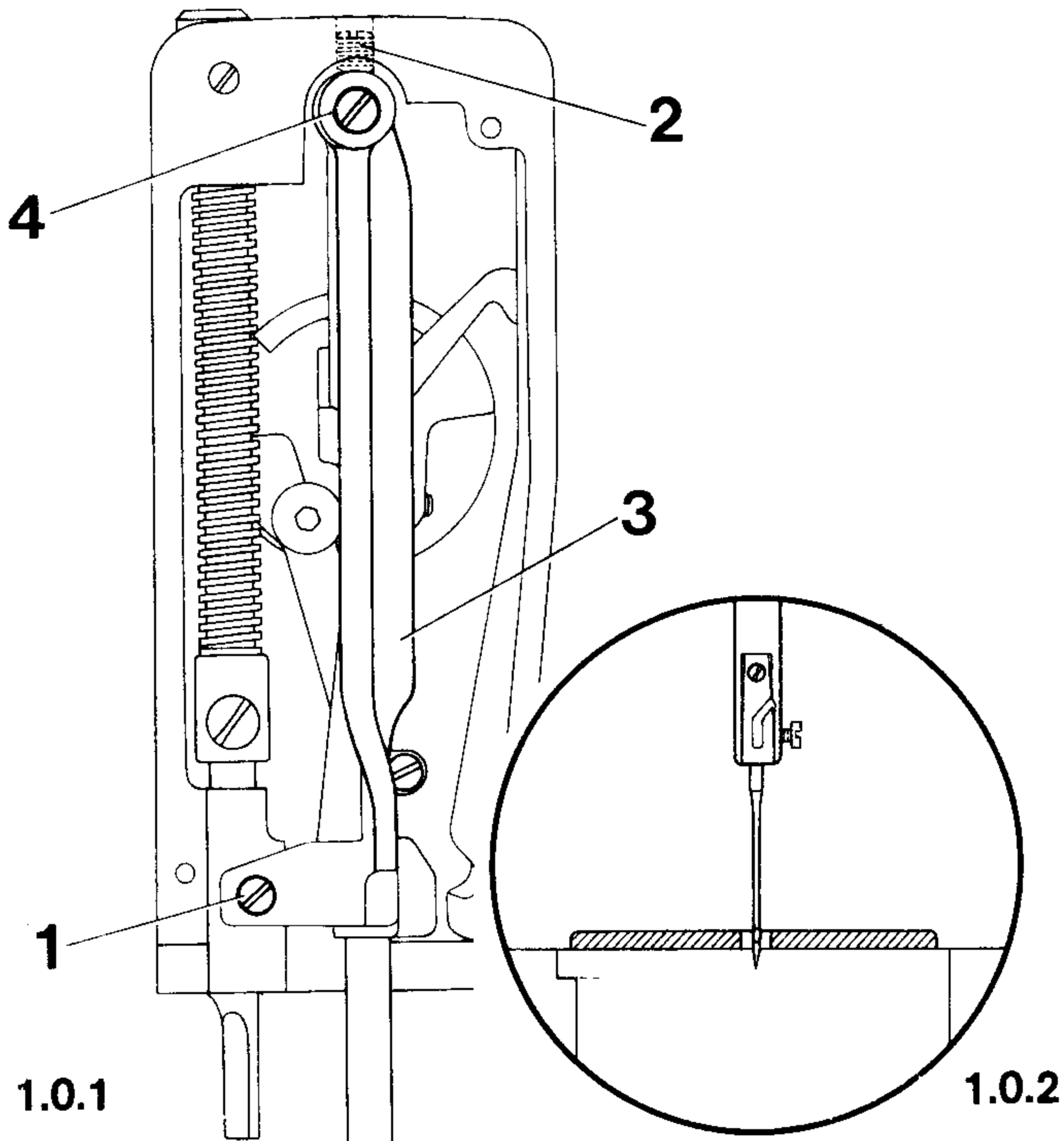
Sewing thread and fabric for sewing off

1

Needle position in needle hole

Correct setting:

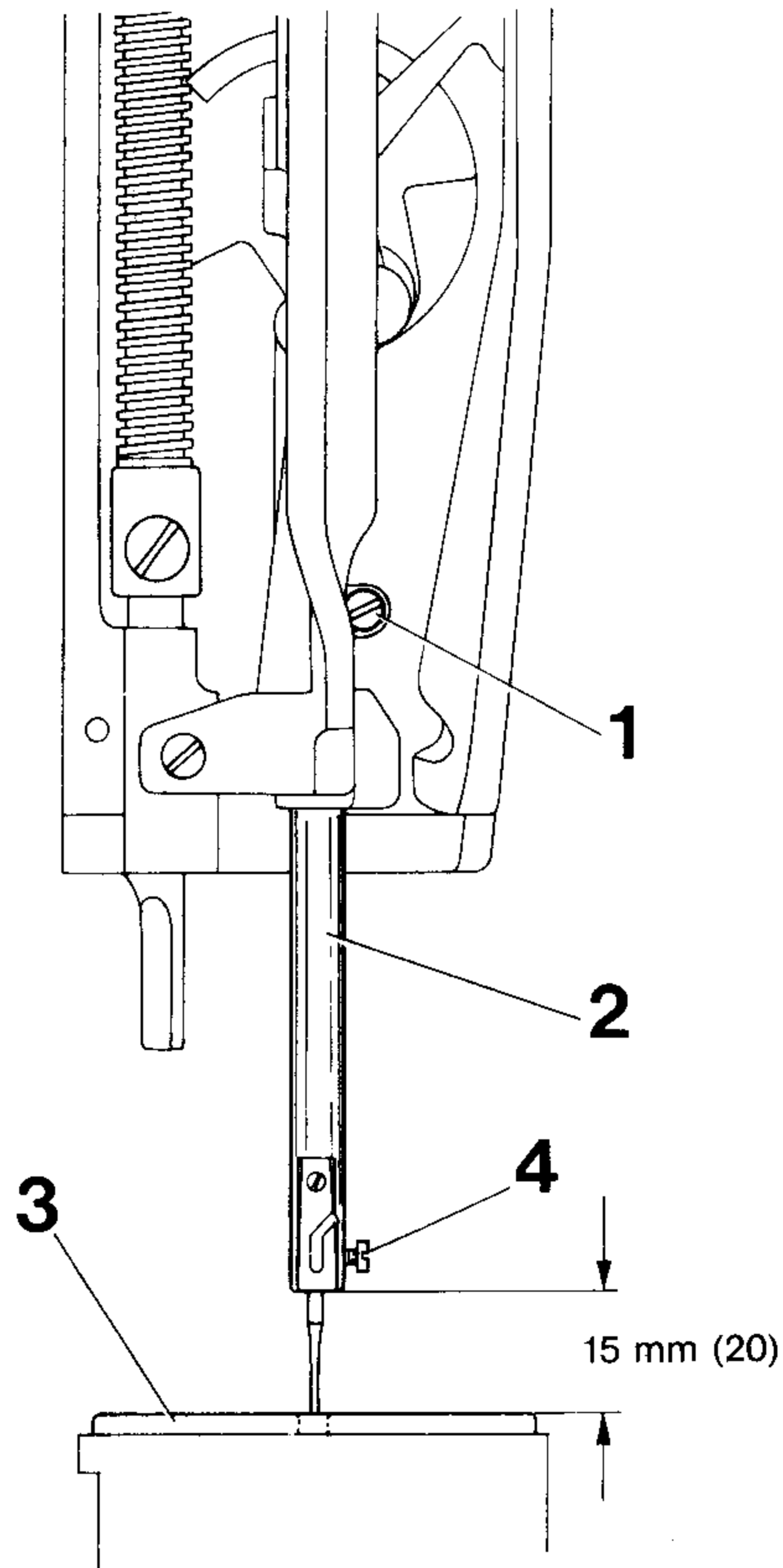
A straight needle must enter the needle hole exactly in the middle.



- Condition: Master switch off, stop motion mechanism disengaged, knife in resting position.
- 1.1 Remove the face plate and take off the belt guard at the back of the machine.
 - 1.2 Loosen screws 1 and 2.
 - 1.3 Insert a new needle.
 - 1.4 **Turn the V-belt pulley to lower the needle, and centre the needle in its hole by re-positioning needle bar frame 3.**
 - 1.5 In this position tighten screw 1.
 - 1.6 Turn the V-belt pulley to move the needle bar up and down a few times so that pin 4 can position itself in relation to the lower needle bar guide.
 - 1.7 Tighten screw 2, making sure that no binding occurs in the needle bar.
 - 1.8 Carry out a check (see correct setting).

Correct setting:

With needle bar **2** at bottom dead centre there must be a clearance of about 15 mm between the bottom edge of the needle bar and needle plate **3** when a system 34 needle is used, or of 20 mm when a system 332 needle is used.



2.0.1

Condition: Master switch off, stop motion mechanism disengaged.

2.1 Loosen screw 1.

2.2 Turn the V-belt pulley to move needle bar 2 to bottom dead centre.

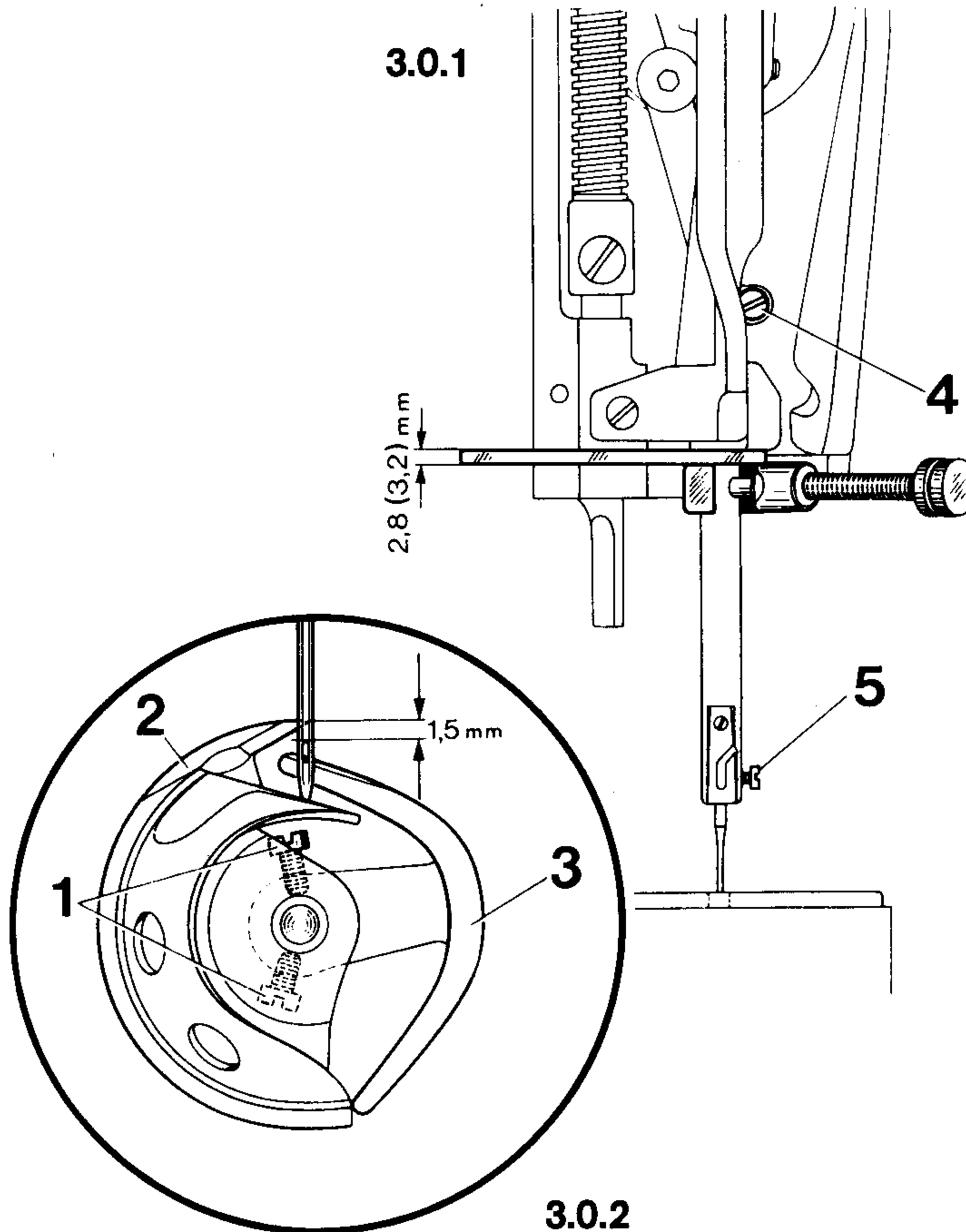
2.3 **Maintain this position and push needle bar 2 so that there is a clearance of 15 mm (or 20 mm) between its bottom end and the needle plate.**

2.4 In this position, tighten screw 1, making sure that screw 4 is facing exactly to the right.

3 Final adjustment of needle bar height and shuttle clearance
3.1 Adjusting needle bar height and needle rise

Correct setting:

With the needle bar positioned 2.8 mm past bottom dead centre on model A and B machines, or 3.2 mm past bottom dead centre on model C machines, the top of the needle eye must be positioned about 1.5 mm below the shuttle point.



Condition: Master switch off, stop motion mechanism disengaged.

3.1.1 Loosen the two screws **1**.

3.1.2 Turn the V-belt pulley to move the needle bar to bottom dead centre, making sure that the needle does not strike shuttle **2** or driver **3**.

3.1.3 Maintain this position and place the 2.8 mm (or 3.2 mm) feeler gauge with its cutout underneath the needle bar bearing, then move the C-clamp up against the feeler gauge and screw it tight.

3.1.4 Remove the feeler gauge and turn the V-belt pulley in sewing direction to move the C-clamp up against the needle bar bearing.

- 3.1.5 **Turn driver 3 on its shaft so that the shuttle point is at the centre of the needle, making sure that there is a thread clearance between shuttle 2 and driver 3 at the point of the shuttle.**
- 3.1.6 In this position tighten screws 1.
- 3.1.7 Remove the C-clamp from the needle bar.
- 3.1.8 Loosen screw 4.
- 3.1.9 **Make sure that the shuttle point is at the needle centre and adjust the height of the needle bar so that there is a clearance of 1.5 mm between the top of the needle eye and the point of the shuttle.**
- 3.1.10 Tighten screw 4, making sure that in this position screw 5 is facing right.
- 3.1.11 Carry out a check (see correct setting).

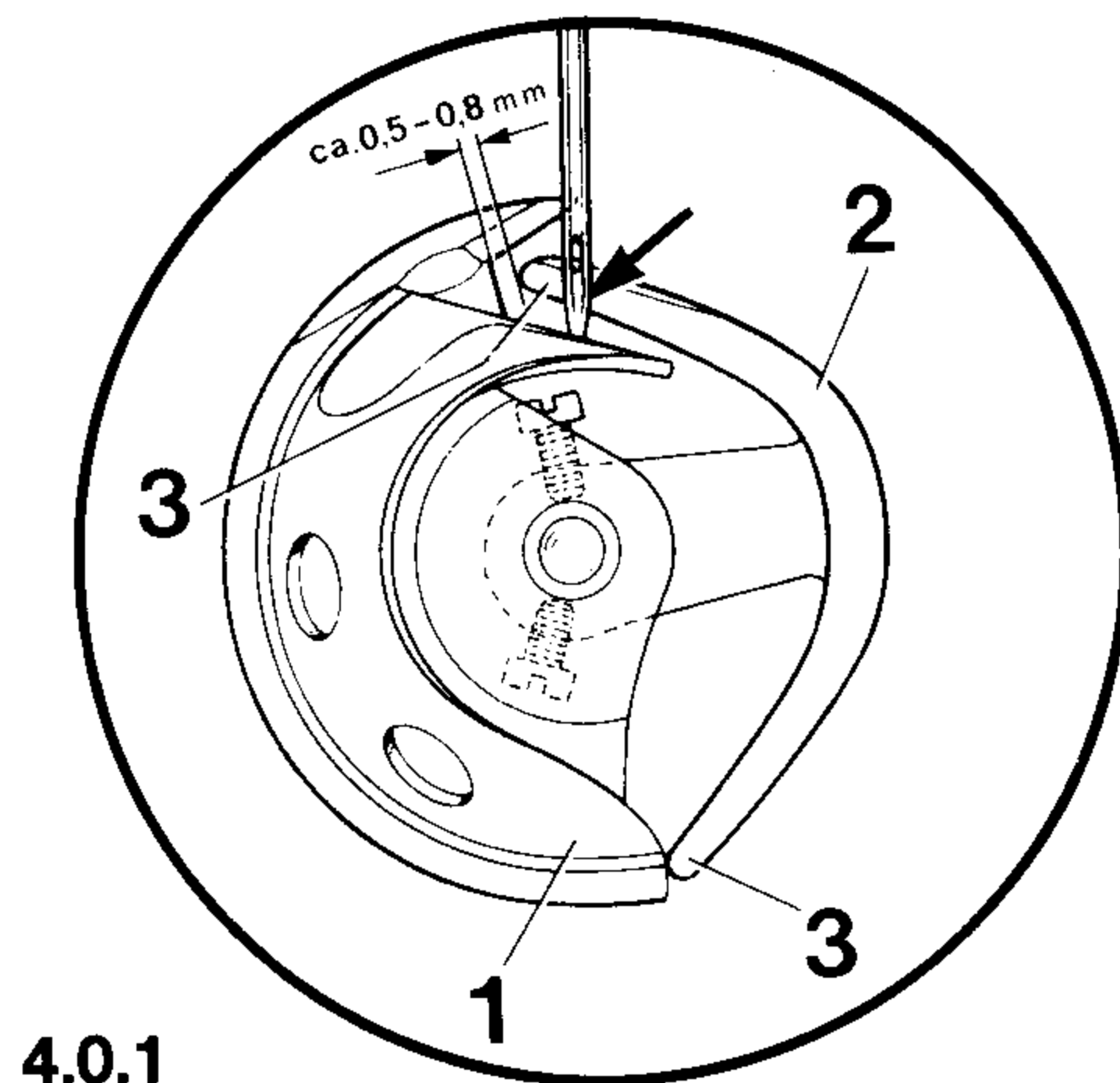
3.2 Shuttle-to-needle clearance

Correct setting:

When the shuttle point is at the centre of the needle there must be a clearance of 0.1 mm between needle and shuttle point.

Note:

If necessary, the clearance between shuttle point and needle can be adjusted by fitting an appropriate spacer between the shuttle race ring and the adjacent surface.



4 Shuttle driver (needle guard)

Correct setting:

When the point of shuttle 1 is at the centre of the needle, shuttle driver 2 must cover the eye of the needle by not more than half and rest lightly against the needle (see arrow in Fig. 4.0.1). The thread clearance between shuttle 1 and driver 2 must be a little more than thread thickness (0.5 to 0.8 mm) in all positions of the driver (Fig. 4.0.1). Also driver finger 3 must be exactly at the middle of the contact surface of shuttle 2 and must not touch the shuttle race ring in any position.

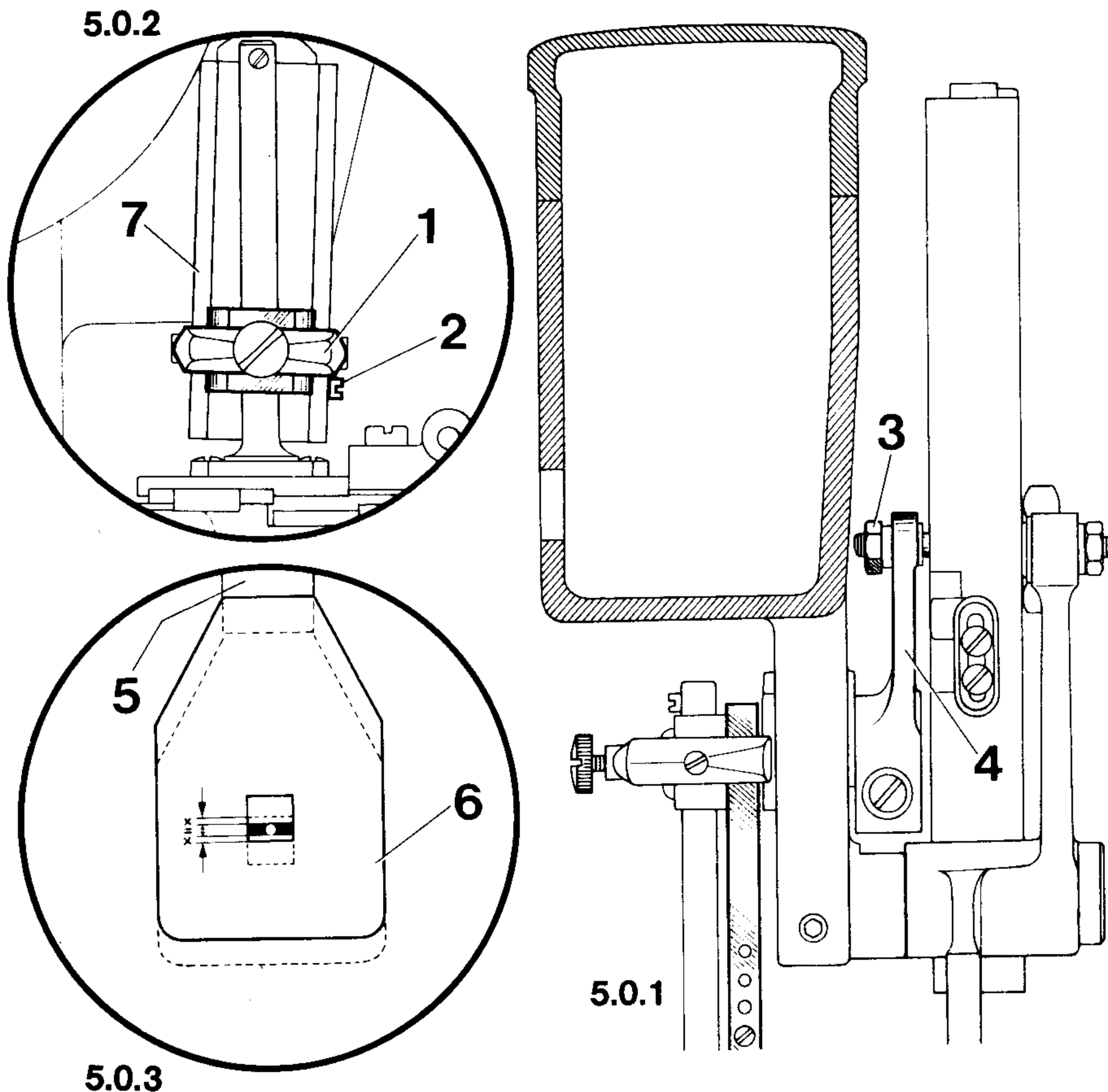
4.1

Adjustment is made by carefully bending driver 2. While doing so, make sure that the shuttle race is not damaged, and that the rounded section of the driver and the driver points are not bent.

5 Feed mechanism
5.1 Feed bar in arm lengthwise direction

Correct setting:

At the longest arm-lengthwise movement of feed bar 5 the cutout in feed plate 6 must be the same distance from the needle hole, both in the front and the rear position (see $X = X$ in Fig. 5.0.3).



Condition: Master switch off, stop motion mechanism disengaged.
 Also, the roller of lever 4 should be at the same height as worm wheel shaft 17 (Fig. 5.0.4). If necessary, loosen the screws, remove the eccentric bearing of lever 4, turn it through 180° and replace it.

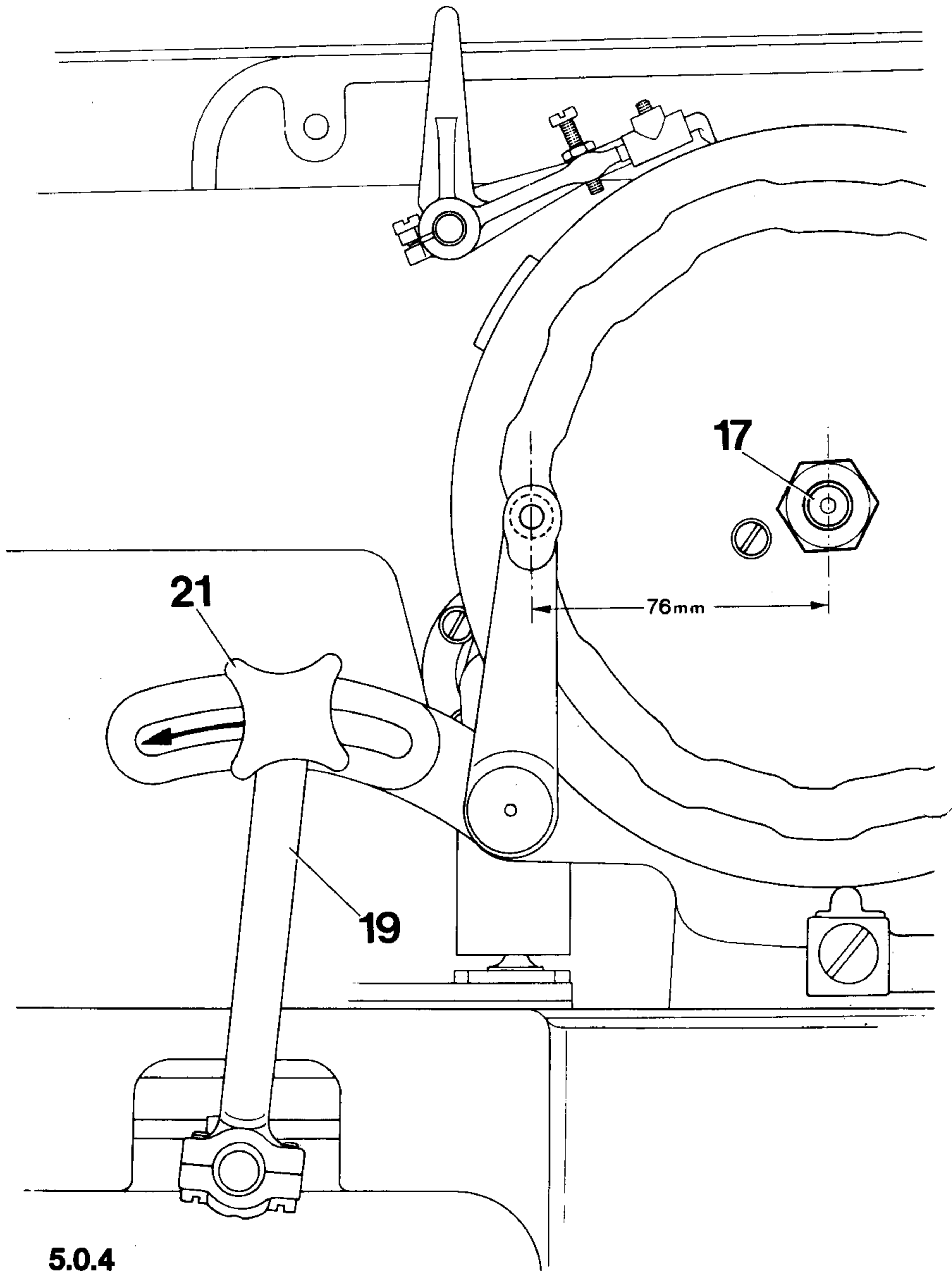
- 5.1.1 Remove the cover at the right side of the machine.
- 5.1.2 Move retainer yoke 1 up against screw 2.
- 5.1.3 Loosen nut 3.
- 5.1.4 **Push lever 4 or feed bar 5 to a position in which the cutout in feed plate 6 is at the same distance from the needle hole in its front and back positions.**
- 5.1.5 In this position tighten nut 3.
- 5.1.6 Carry out a check (see correct setting).

5.2

Feed bar in arm crosswise direction

Correct setting:

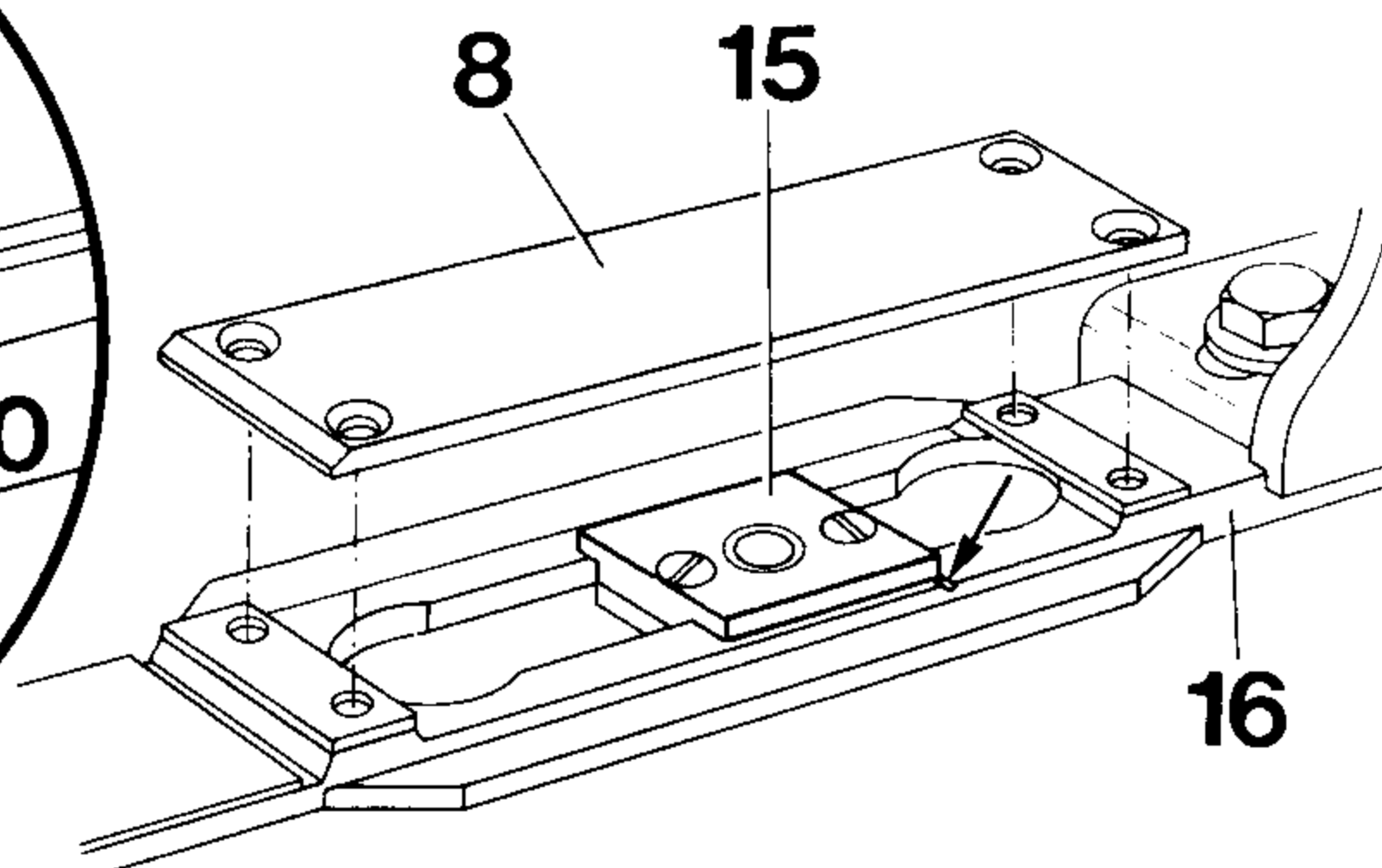
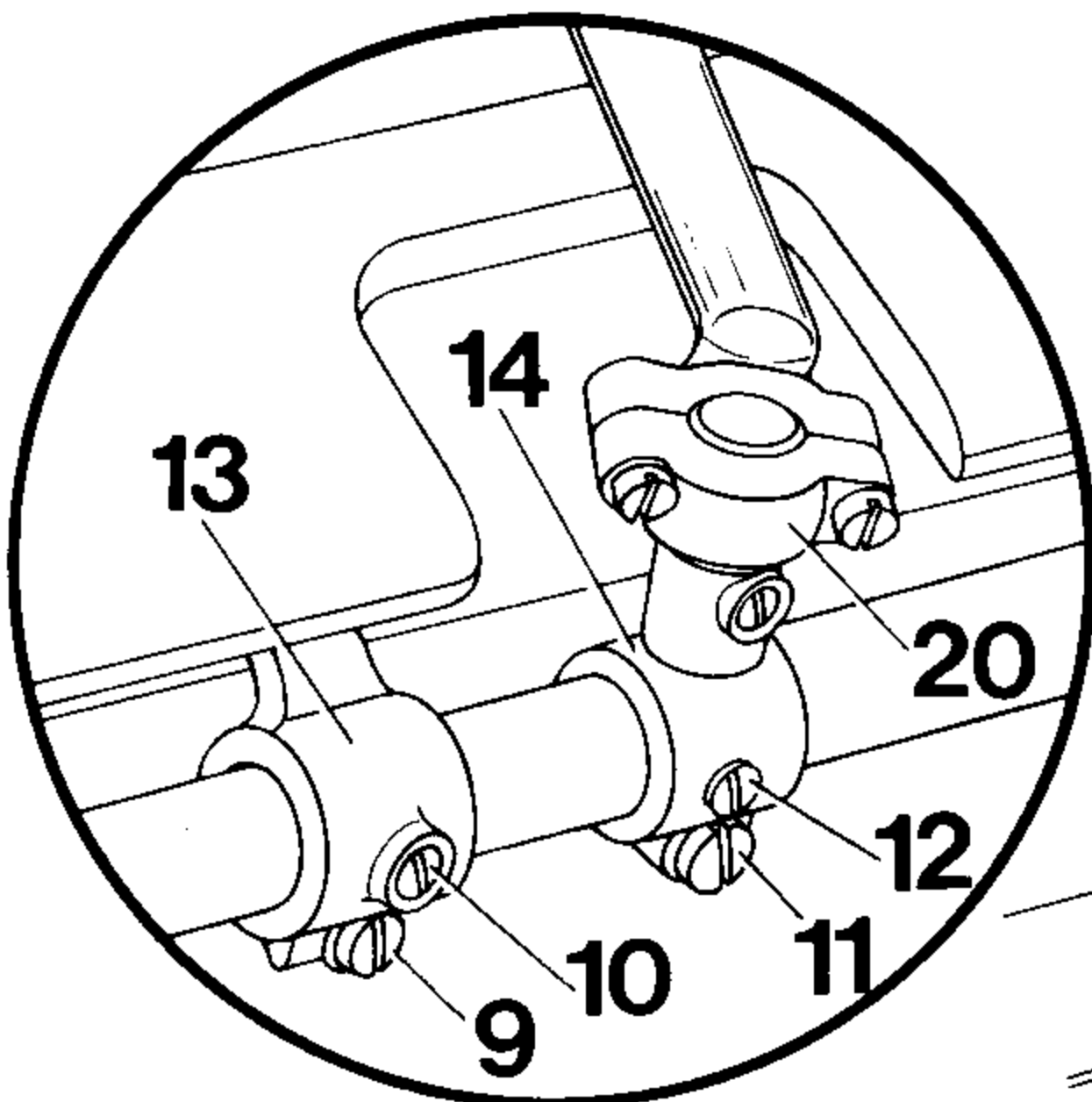
The lateral distance between the needle hole and the edges of the feed plate cutout must be the same in the farthest right and left positions. This applies for the smallest and largest crosswise strokes.



5.0.4

- Condition: Master switch off, stop motion mechanism disengaged.
- 5.2.1 Take out the four screws of cover **8** and remove the cover.
 - 5.2.2 Loosen screws **9**, **10**, **11** and **12**.
 - 5.2.3 Re-tighten screws **9** and **11** a little so that clamp cranks **13** and **14** can just be moved.
 - 5.2.4 Turn the V-belt pulley to position feed regulator **7** (Fig. 5.0.2) vertical.
 - 5.2.5 **Maintain this position and push clamp crank 13 so that the back edge of slide block 15 is positioned at the mark on feed bar 16 (see arrow in Fig. 5.0.6).**
 - 5.2.6 In this position tighten screws **9** and **10**.
 - 5.2.7 Turn the V-belt pulley until there is a centre-to-centre clearance of **76 mm** between worm wheel shaft **17** and roller stud **18** (Fig. 5.0.7).
 - 5.2.8 **Maintain this position and position clamp crank 14 so that when connecting rod 19 is moved lower ball joint 20 remains perfectly motionless.**
 - 5.2.9 In this position tighten screws **11** and **12**.
 - 5.2.10 Move locking screw **21** in the direction of the arrow as far as it will go and tighten it.
 - 5.2.11 Loosen screws **9** and **10** a little, making sure that the position of clamp crank **13** is not disturbed.
 - 5.2.12 **Adjust the position of the feed plate so that the right and left edges of its cutout are equidistant from the needle.**
 - 5.2.13 In this position firmly tighten screws **9** and **10**.
 - 5.2.14 Replace cover **8** on feed bar **16** and screw it down.
 - 5.2.15 Carry out a check (see correct setting).

5.0.5



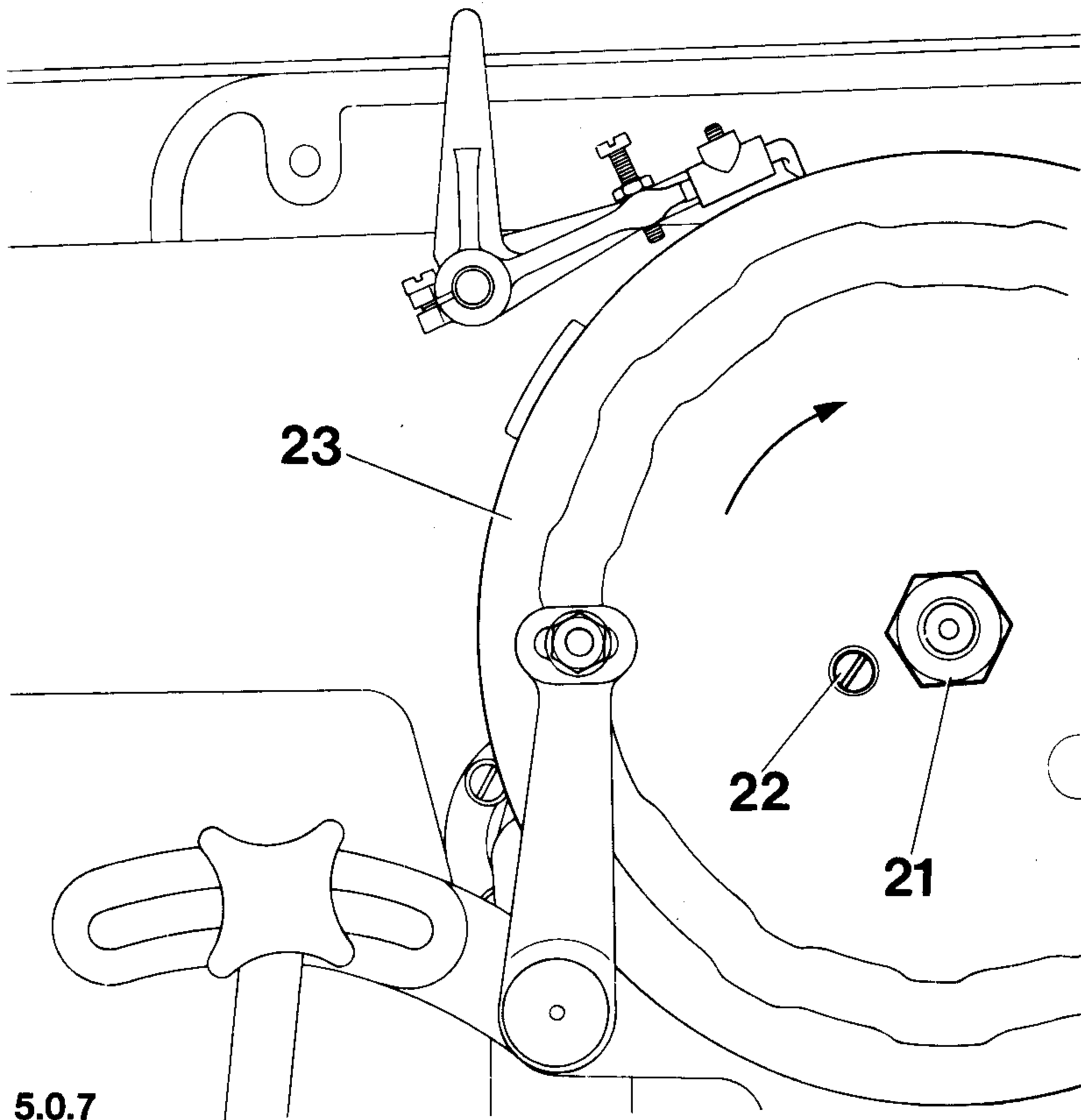
5.0.6

5.3

Feed motion

Correct setting:

The feed motion must be finished when the point of the needle enters the fabric and must not begin again until the needle point has risen clear of the fabric.



5.0.7

Condition: Master switch off, stop motion mechanism disengaged.

5.3.1 Place a piece of fabric under the clamp feet.

5.3.2 Loosen nut 21 and threaded pin 22.

5.3.3 **Adjust control cam 23 radially on the worm shaft in such a way that the feed motion is finished when the needle enters the fabric and does not begin again until the needle has risen clear of the fabric.** To set the feed motion earlier (advance) turn cam 23 clockwise (see arrow), to set it later, turn the cam in the opposite direction.

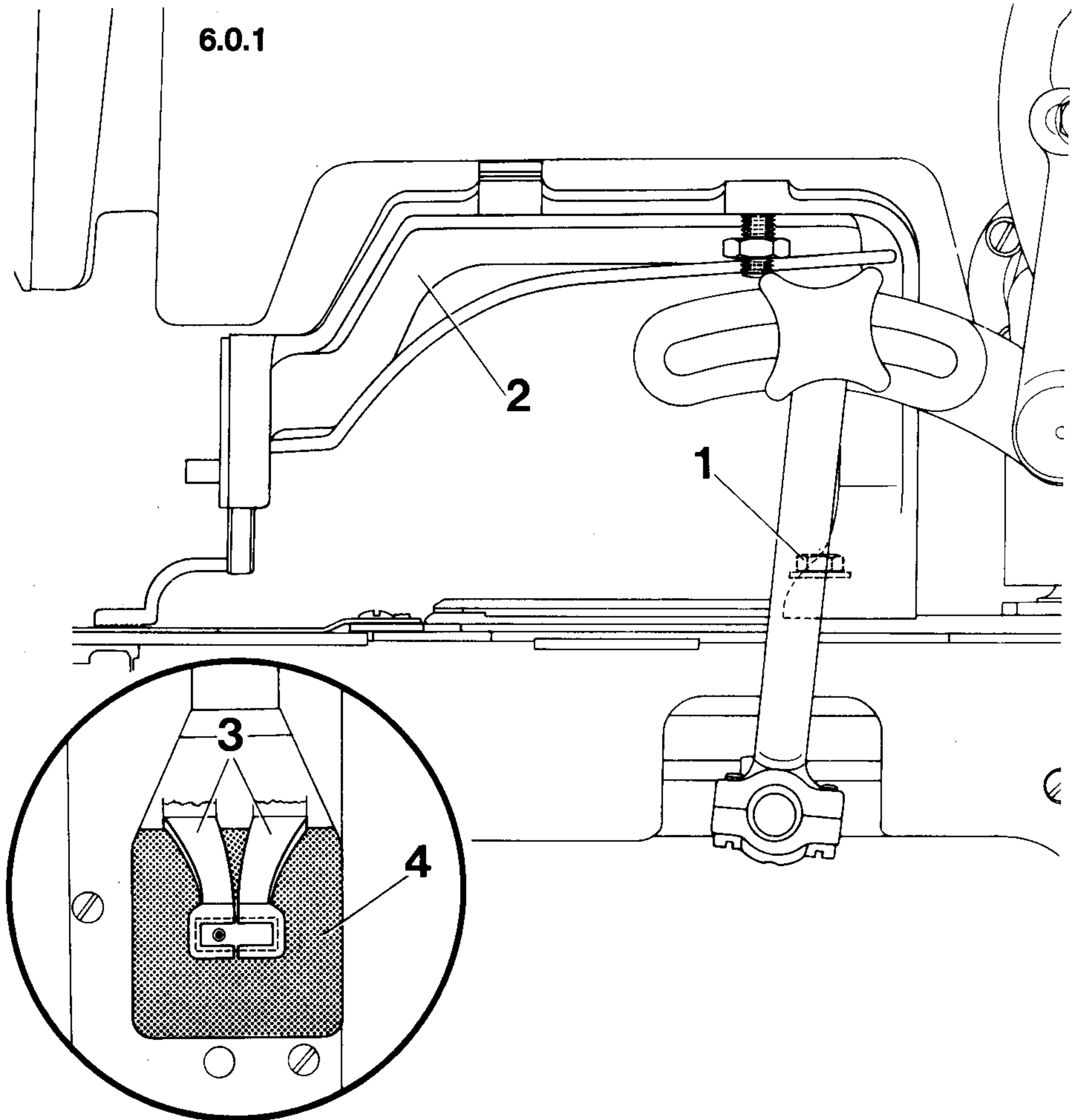
Note: The play between worm and worm wheel should be as little as possible, and there must be no binding.

5.3.4 After the adjustment first tighten threaded pin 22, then nut 21.

5.3.5 Carry out a check (see correct setting).

Correct setting:

The inside edges of clamp feet 3 must be centred in relation to the edges of the cutout in feed plate 4.



6.0.2

- 6.1 Loosen screw 1.
 6.2 **Position work clamp 2 arm-lengthwise so that the inside edges of clamp feet 3 are centred in relation to the edges of the cutout of feed plate 4 (Fig. 6.0.2).**
 6.3 In this position tighten screw 1.
 6.4 Carry out a check (see correct setting).

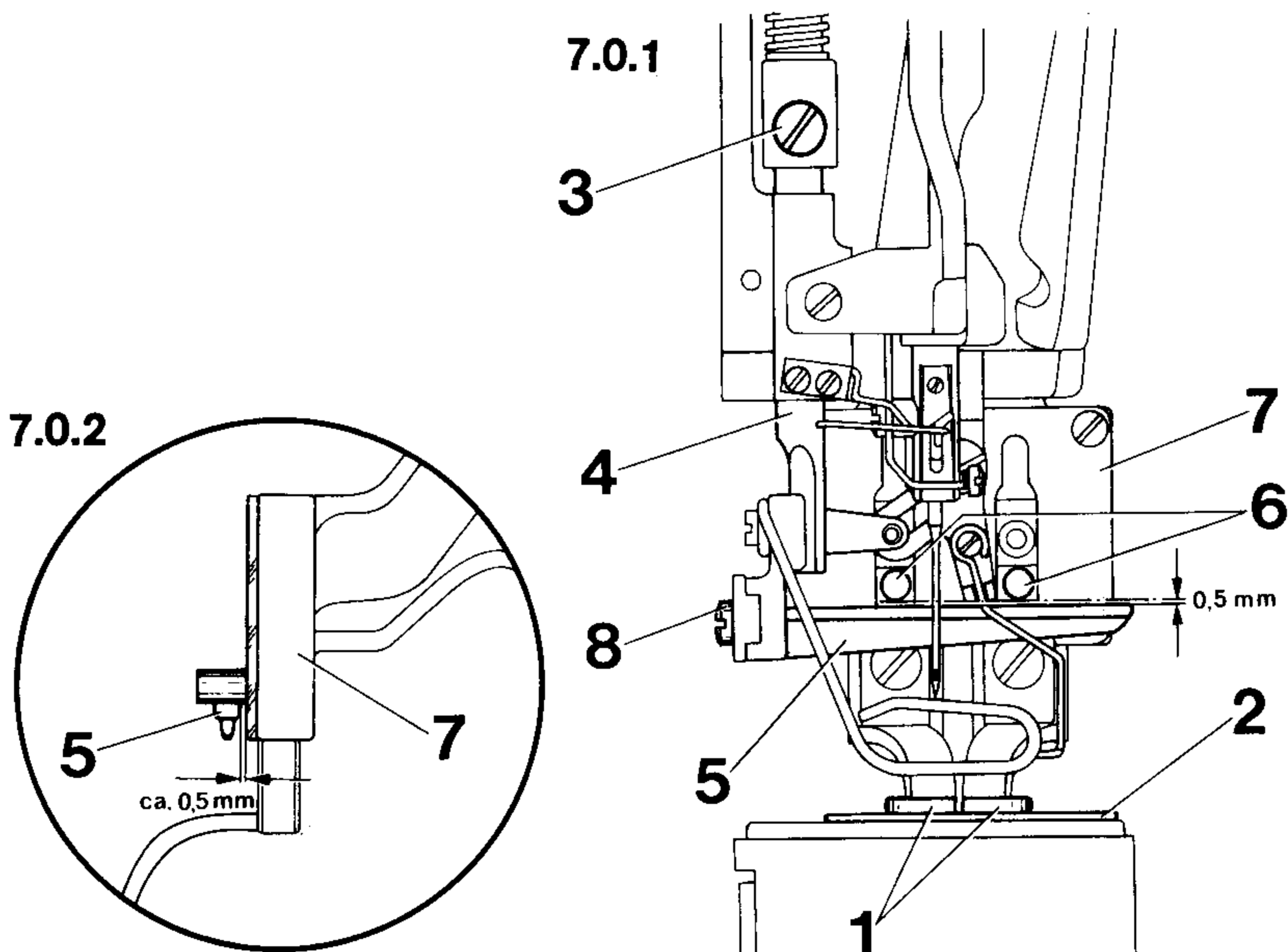
7 Work clamp lift

Correct setting:

With the machine at the end of its cycle and clamp feet 1 resting on feed plate 2 (without material) there must be a clearance of 0.5 mm between lifting bracket 5 and lifting pins 6.
When the feed plate is in its extreme forward position, there should be a clearance of 0.5 mm between the front of work clamp 7 and lifting bracket 5.

Note:

The smaller the tack-size setting lengthwise of the arm, the greater the distance between the front of clamp 7 and lifting bracket 5.



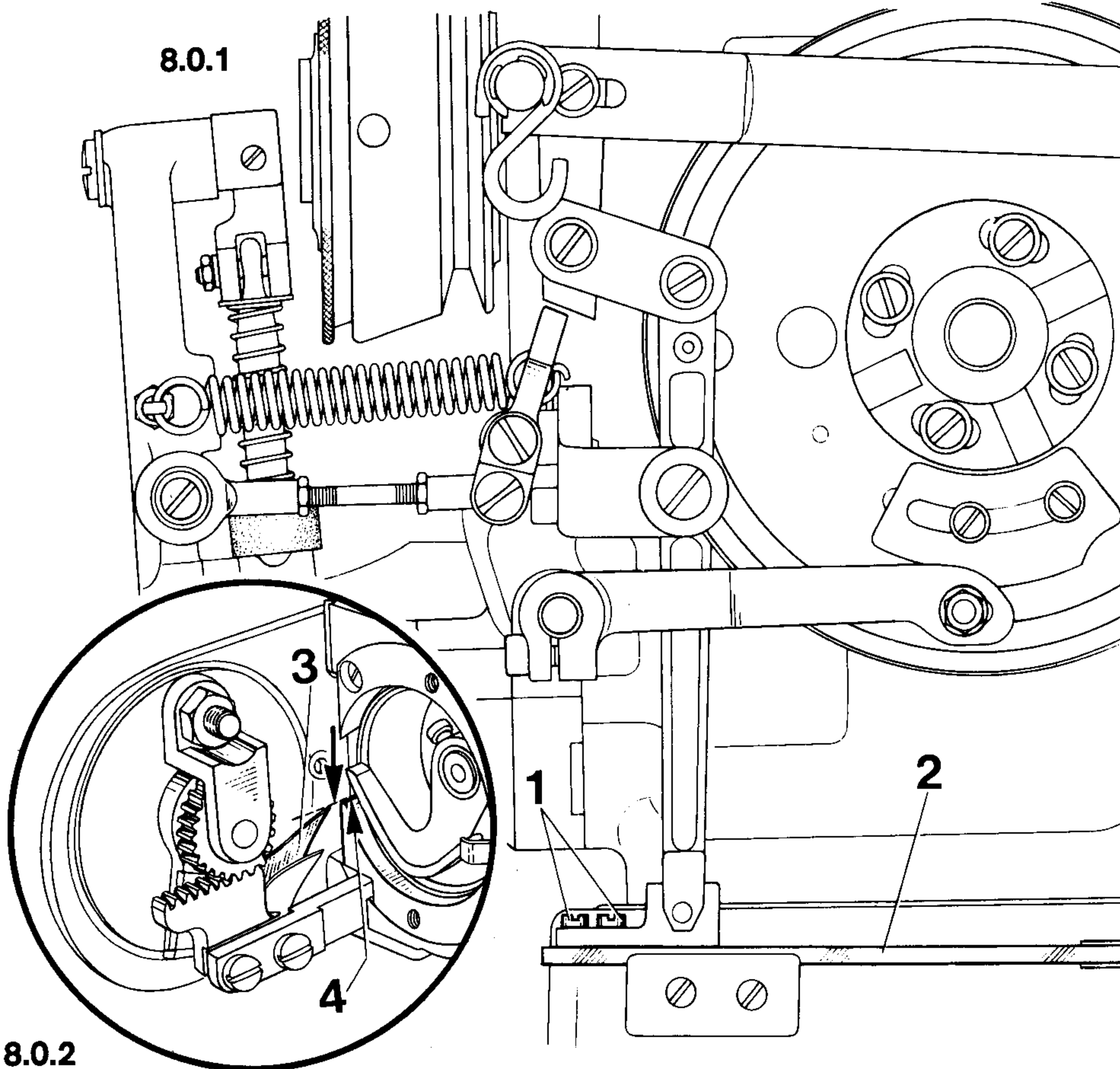
Condition:

Machine at end of cycle, master switch off.

- 7.1 Loosen screw 3, making sure that clamp feet 1 are resting on the feed plate.
- 7.2 **Adjust the height of lifting bar 4 so that there is a clearance of 0.5 mm between lifting bracket 5 and lifting pins 6.**
- 7.3 In this position, tighten screw 3, making sure that lifting bracket 5 is at right angles to the machine.
- 7.4 Disengage the stop motion mechanism and turn the V-belt pulley until work clamp 7 is in its extreme forward position (for longest arm-lengthwise movement).
- 7.5 Loosen screw 8.
- 7.6 By positioning lifting bracket 5 lengthwise of the arm set a clearance of 0.5 mm between the lifting bracket and the front of work clamp 7.
- 7.7 In this position tighten screw 8.
- 7.8 Carry out a check (see correct setting).

Correct setting:

When the knives (for top- and bottom threads) have fully completed their return stroke (rear resting position) the tip of bottom thread knife 3 must be level with the edge of shuttle race ring 4.

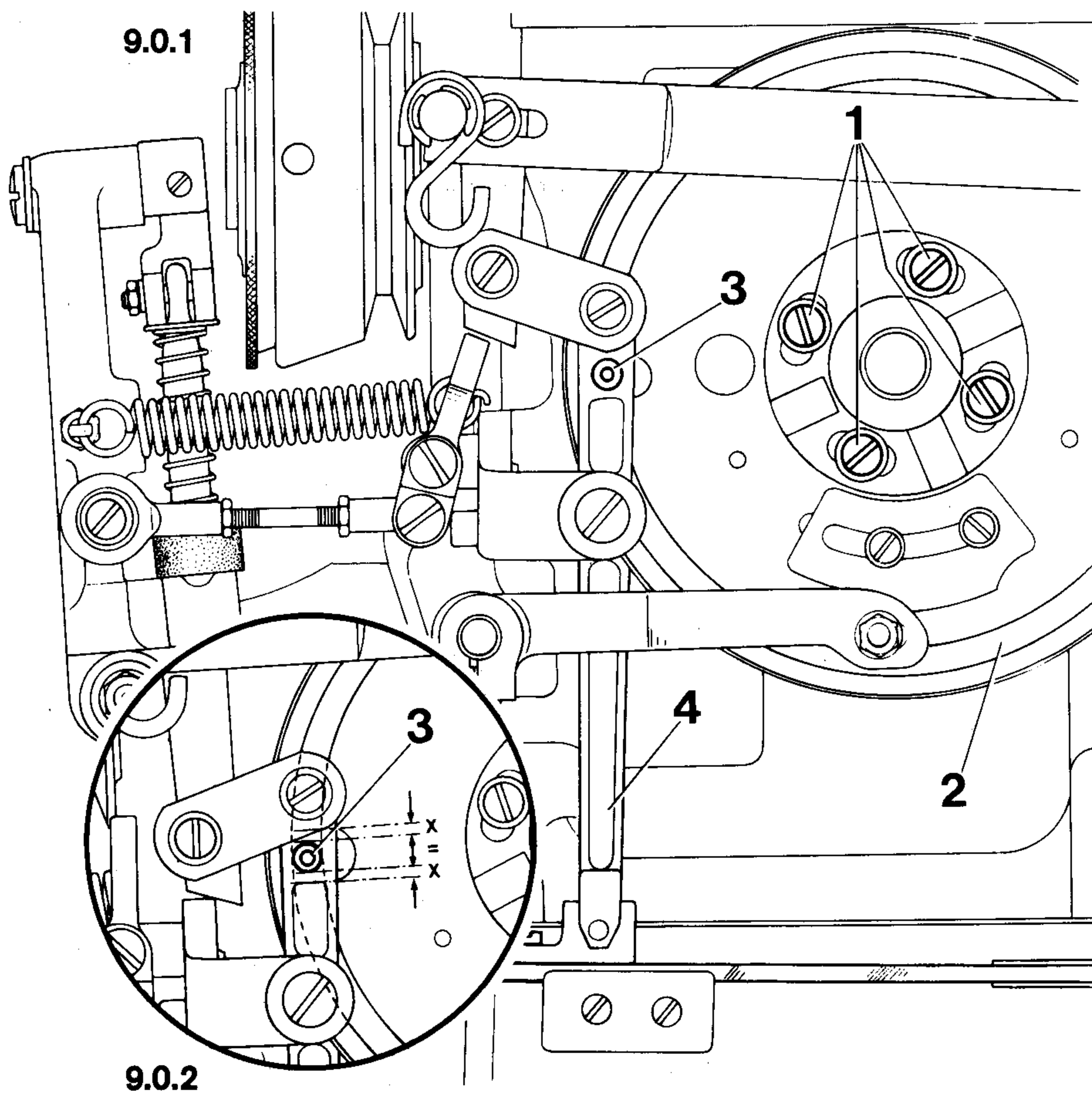


8.0.2

- Condition: Machine at end of cycle, master switch off, stop motion mechanism disengaged.
- 8.1 Turn the V-belt pulley from the beginning of the cycle to the end of the fourth stitch.
 - 8.2 Loosen the two screws 1.
 - 8.3 **Move knife bar 2 so that the tip of bottom thread knife 3 is level with the edge of shuttle race ring 4.**
 - 8.4 In this position tighten the two screws 1.
 - 8.5 Carry out a check (see correct setting).

Correct setting:

With the clamp feet raised, roller 3 must be positioned at about an equal distance from the two edges of the recess in the cam track (see $X = X$ in Fig. 9.0.2).



Condition: Machine at end of cycle, clamp feed raised.

9.1 Loosen screws 1.

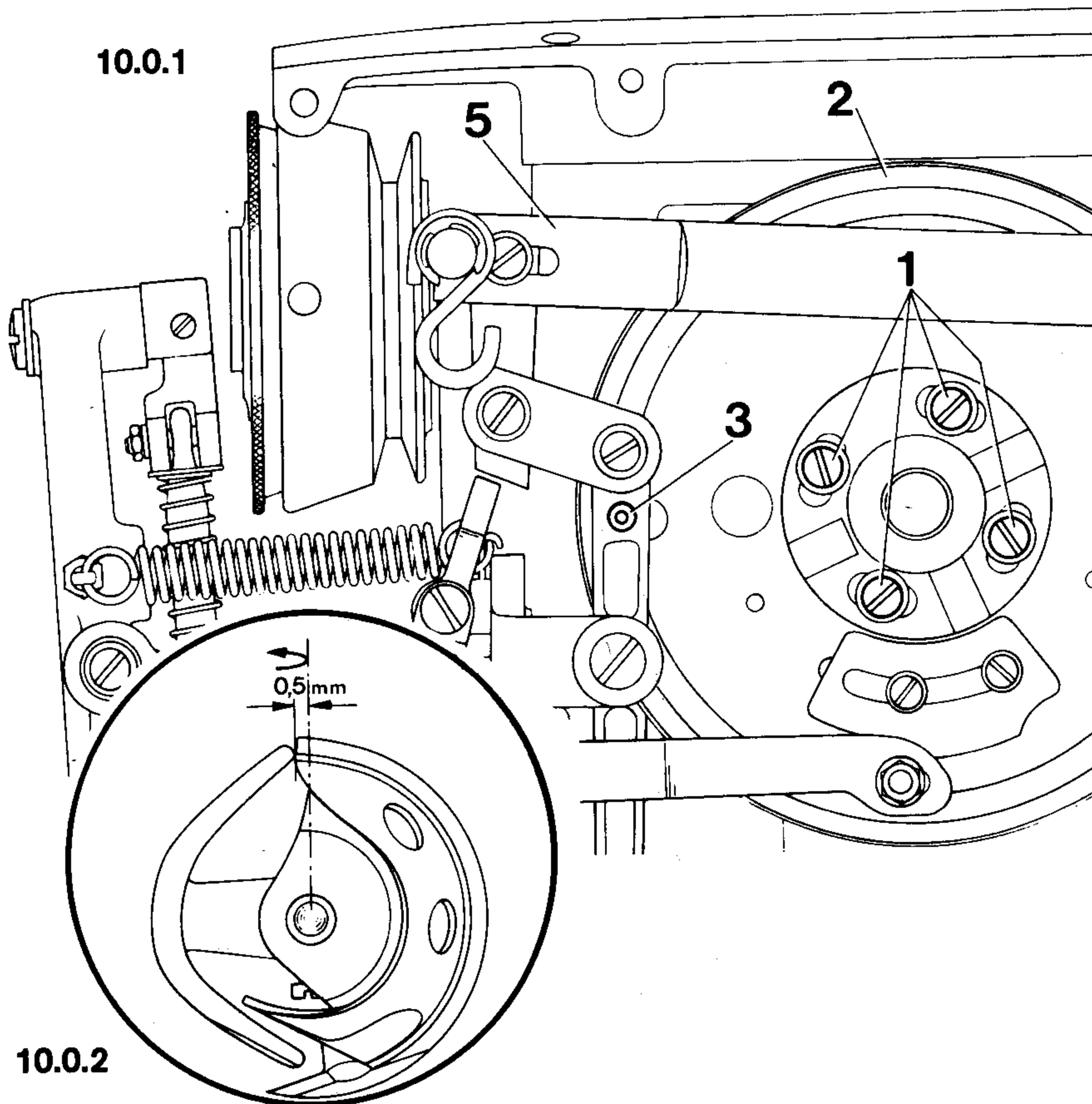
9.2 **Position knife control cam 2 on its flange so that roller 3 of knife control lever 4 is the same distance from the edges of the recess in the cam track.**

9.3 In this position tighten screws 1.

9.4 Carry out a check (see correct setting).

Correct
setting:

The movement of the knife must begin when the shuttle driver turns clockwise at the last stitch of the sewing cycle and is 0.5 mm before its point of reversal (Fig. 10.0.2).



Condition: Master switch off, stop motion mechanism disengaged.

10.1.1 Turn the V-belt pulley until the shuttle driver has moved clockwise to a position 0.5 mm before its point of reversal at the last stitch of the sewing cycle (see Fig. 10.0.2).

10.1.2 Maintain this position, loosen screws 1 and set control cam 2 earlier or later.

10.1.3 Tighten screws 1.

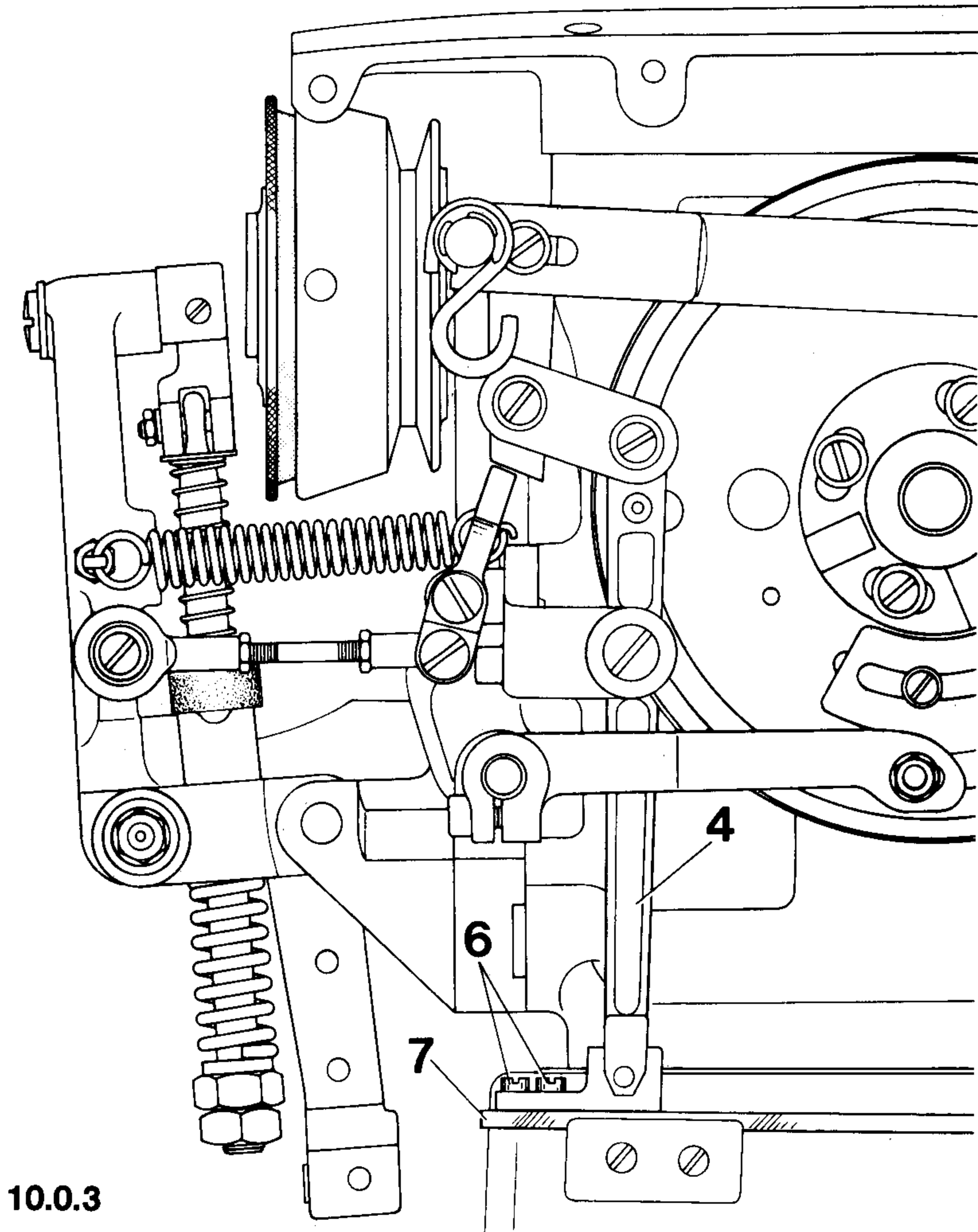
Note: When advancing or retarding the cam make sure that roller 3 does not touch the edges of the recess in control cam 2. To check this, move lifting lever 5 through its full stroke; control cam 2 must then not move.

10.2

Knife bar

Correct
setting:

The knives must not touch the needle in any position.



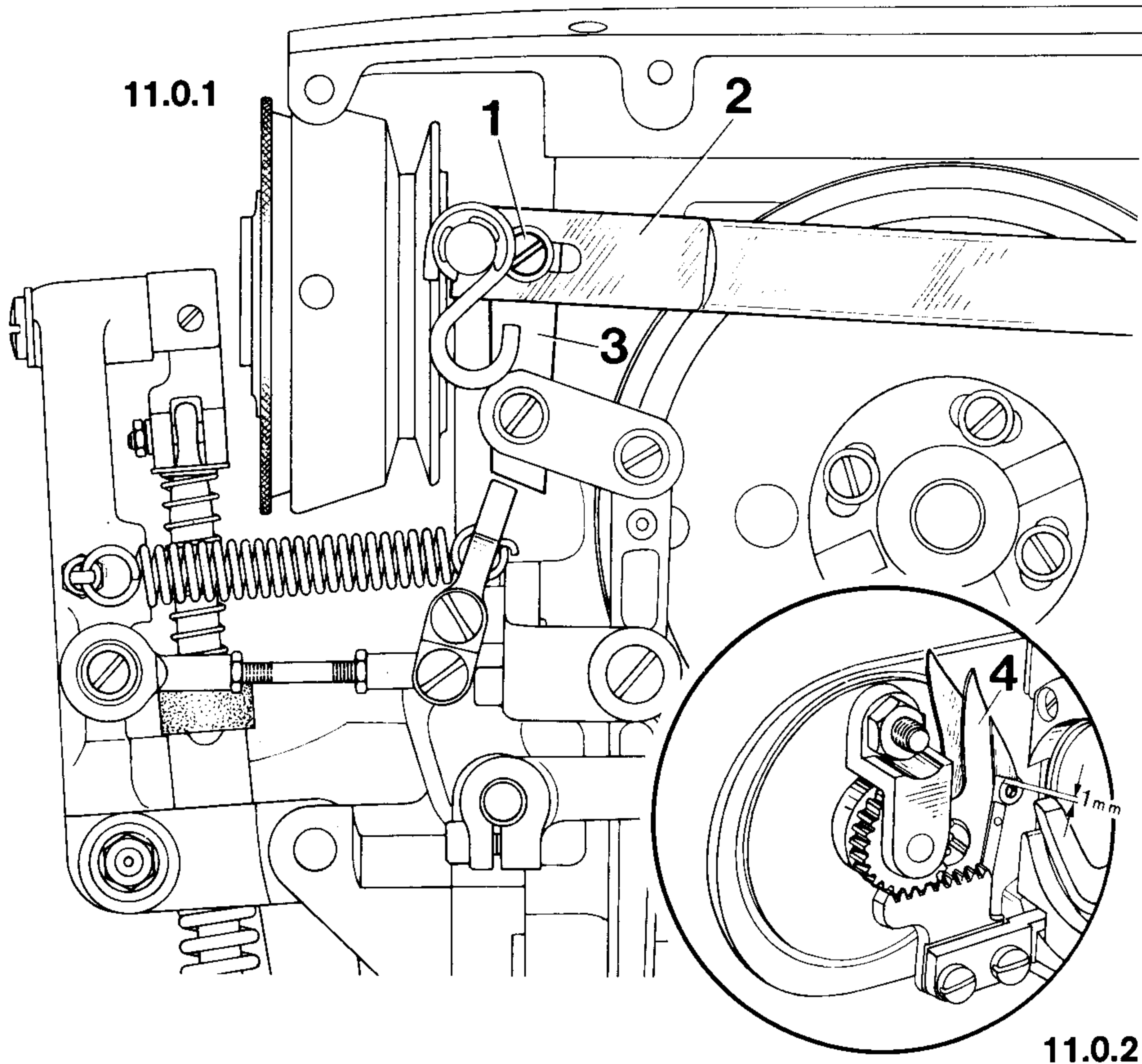
10.2.1
10.2.2

To adjust, loosen screws 6 and move knife bar 7 forwards or backwards.
Tighten screws 6 again.

11 Cutting stroke

Correct setting:

With clamp lifting lever 2 fully operated, there should be a clearance of about 1 mm between the rear edge of upper thread knife 4 and the edge of the needle hole.



Condition: Machine at end of cycle, stop motion mechanism engaged.

11.1 Loosen screw 1.

11.2 **With clamp lifting lever 2 fully operated, adjust link 3 so that there is a clearance of about 1 mm between the rear edge of upper thread knife 4 and the edge of the needle hole.**

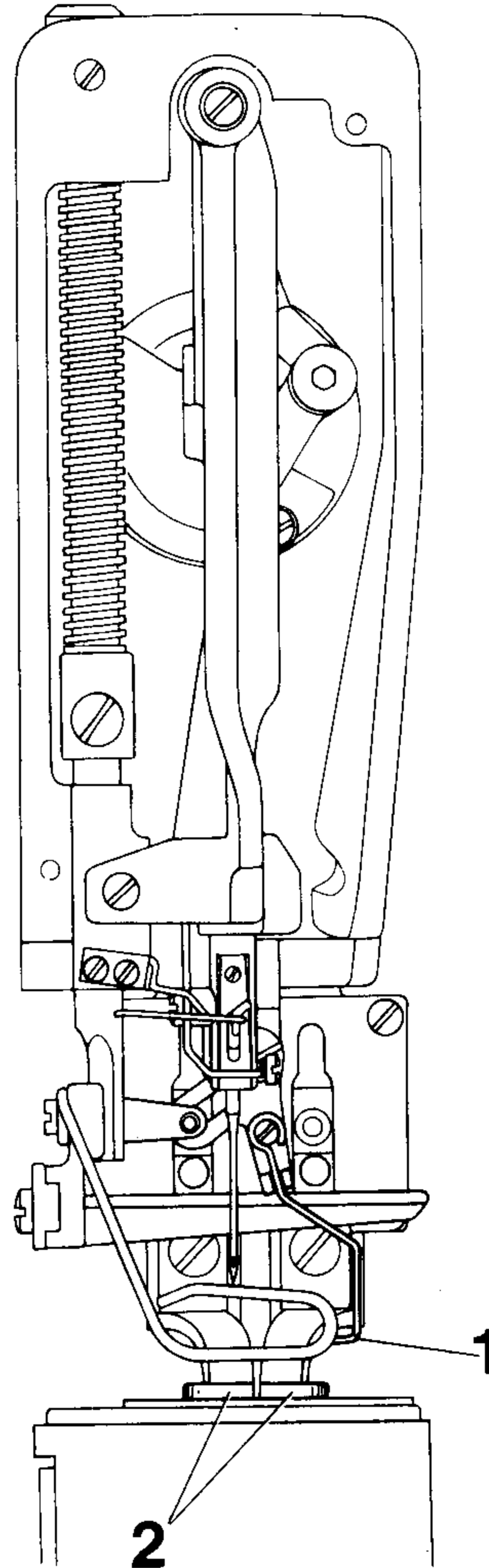
11.3 In this position, tighten screw 1.

11.4 Carry out a check (see correct setting).

Note: Following any adjustment of link 3, check the clearance of 0.5 mm between lifting bracket 5 and lifting pins 6 (Fig. 7.0.1) and re-adjust, if necessary (Section 7).

Correct
setting:

Thread wiper 1 must begin to pull the thread from the workpiece when the threads are cut.
Thread wiper 1 must also pass between the needle point and the raised clamp feet 2 with a sufficient clearance.



12.0.1

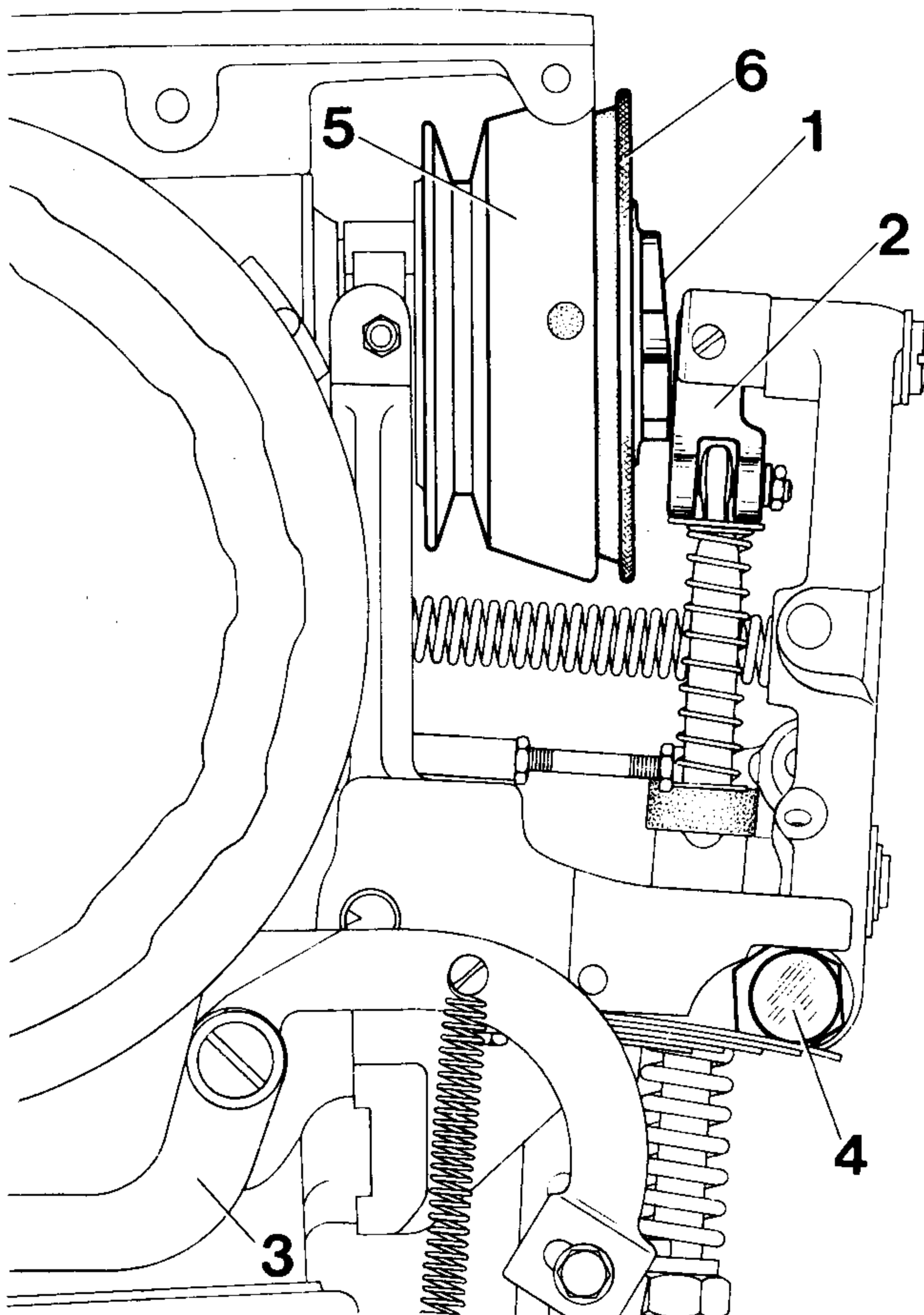
Condition: Machine threaded, fabric placed under clamp feet 2, master switch off, machine positioned immediately before cutting position.

12.1 Check setting by slowly raising the lifting lever. If necessary, bend or straighten thread wiper 1 accordingly.

13 Stop motion mechanism
13.1 V-belt pulley

Correct setting:

When stop link 2 is at the highest point of stop motion cam 1, V-belt pulley 5 must just be released from drive pulley 6.



13.0.1

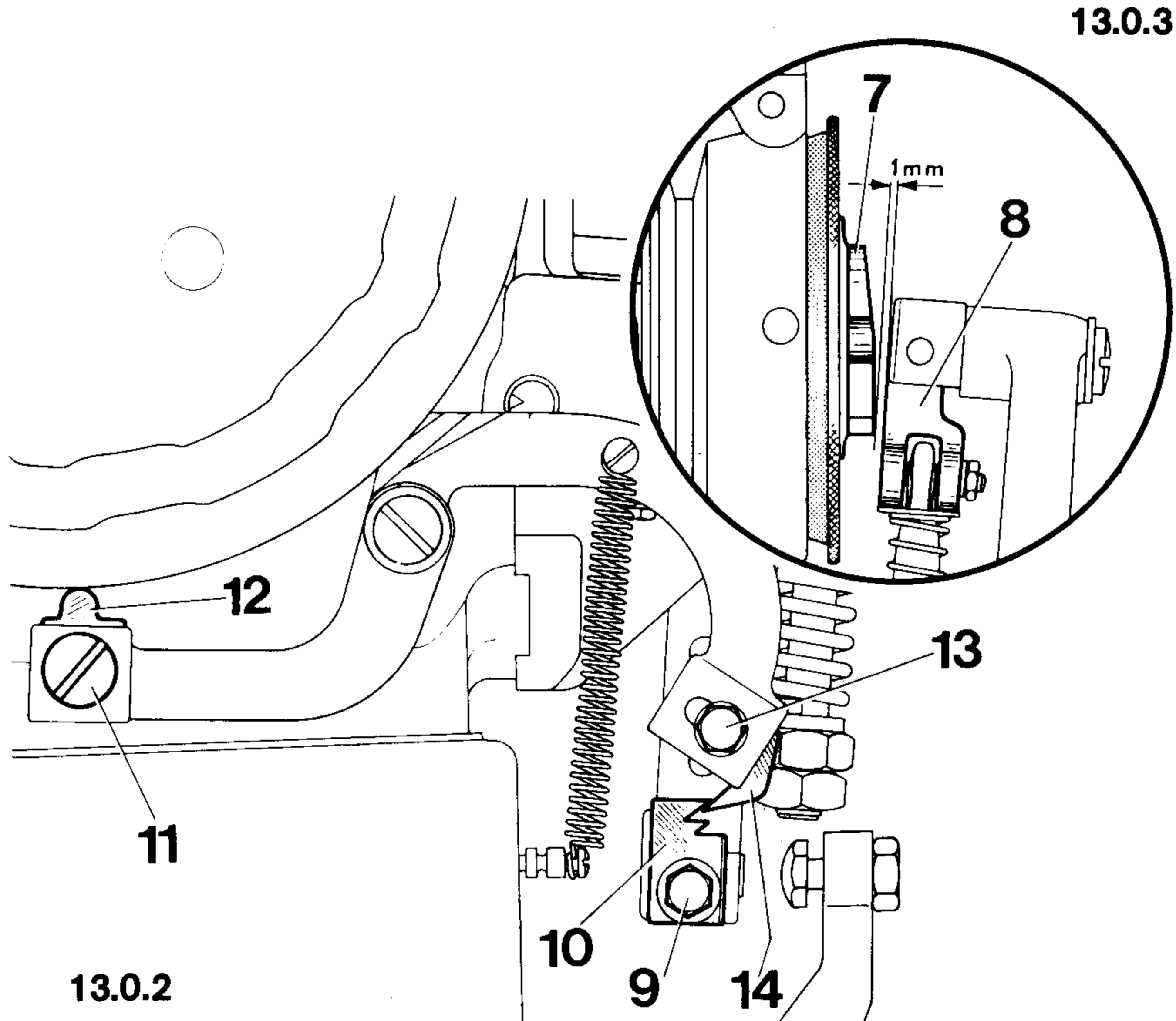
Condition: Master switch off, stop motion mechanism disengaged.

- 13.1.1 Turn the V-belt pulley in sewing direction until the highest point of stop motion cam 1 is at stop link 2.
- 13.1.2 Operate lever 3 so that stop link 2 engages stop motion cam 1.
- 13.1.3 **After loosening its locknut turn eccentric 4 so that V-belt pulley 5 is just released from drive pulley 6.**
- 13.1.4 In this position tighten the locknut of eccentric 4.
- 13.1.5 Carry out a check (see correct setting).

13.2 Clearance between stop link and stop motion cam

Correct setting:

With the stop motion mechanism disengaged the clearance between the highest point of stop motion cam 7 and stop link 8 must be about 1 mm.



Condition: Master switch off.

13.2.1 Engage the stop motion mechanism.

13.2.2 Insert the 1.6 mm feeler gauge between stop motion cam 7 and stop link 8 (results in clearance of 1 mm).

13.2.3 Loosen screw 9 and position catch 10 so that screw 9 is positioned in the middle of the elongated hole.

13.2.4 Tighten screw 9.

13.2.5 Loosen screw 11 and push trip 12 downwards.

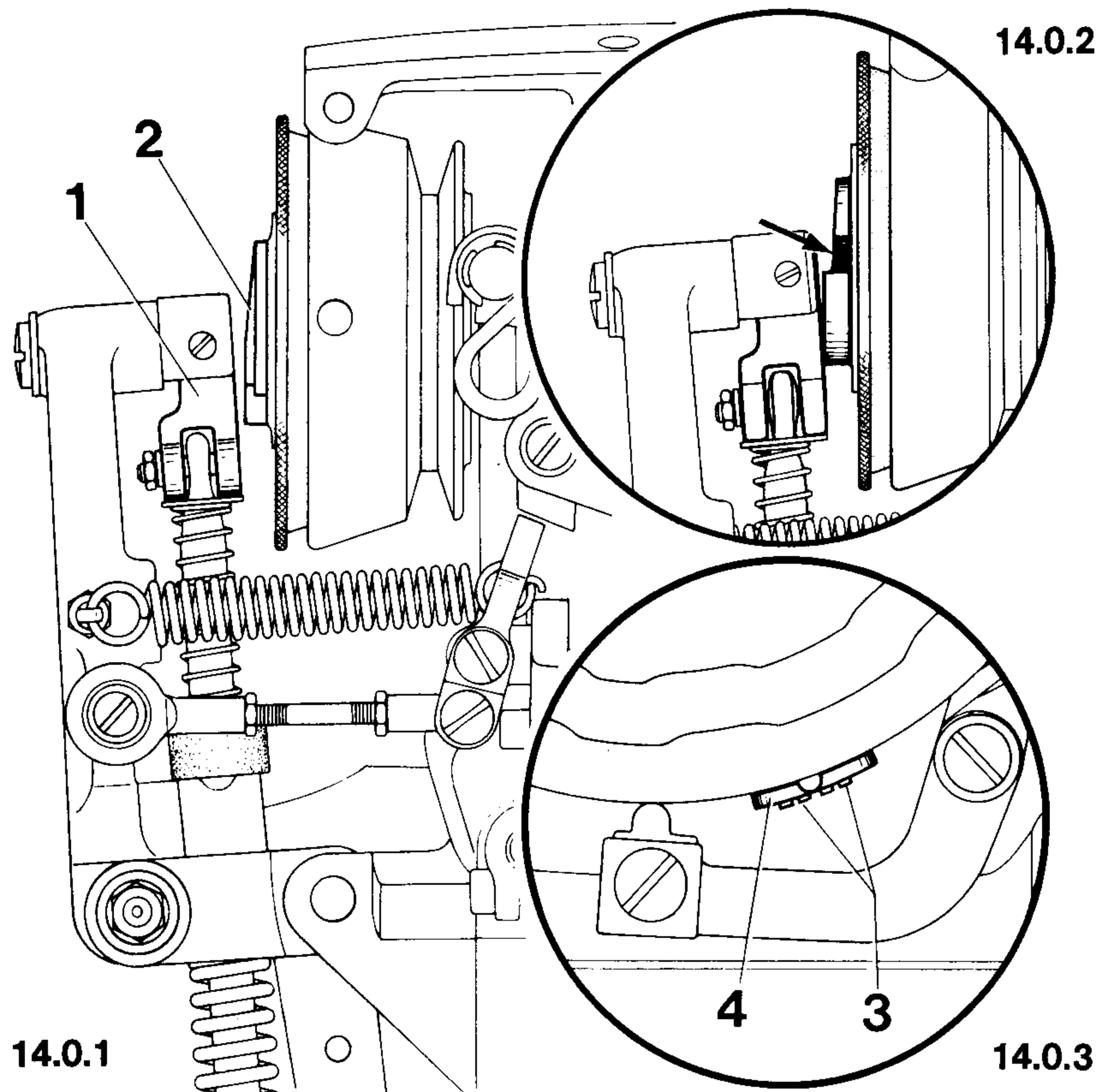
13.2.6 Loosen screw 13 and position trip 14 so that it is halfway in the top segment of catch 10. In this position tighten screw 13.

13.2.7 Move trip 12 into contact with the control cam and tighten screw 11.

13.2.8 Remove the feeler gauge and carry out a check (see correct setting).

Correct setting:

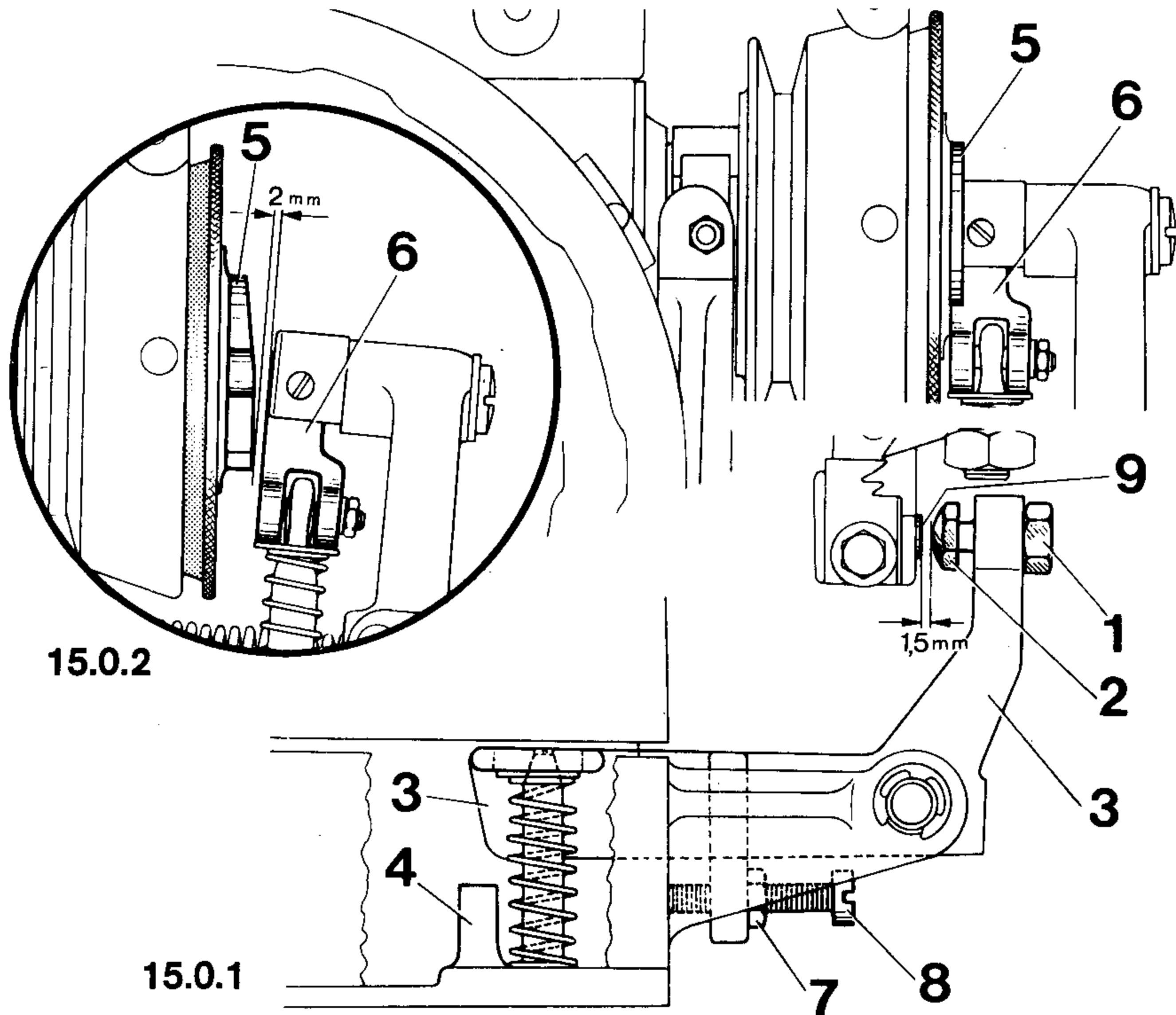
From the point when the stop motion mechanism is triggered (by the stop motion trip segment) to the engagement of stop link 1, stop motion cam 2 must make 3/4 of a turn.



- Condition: Master switch off, machine at end of cycle, stop motion mechanism engaged.
- 14.1 Disengage the stop motion mechanism.
- 14.2 Turn the V-belt pulley contrary to the sewing direction until the stop motion mechanism is engaged.
- 14.3 Disengage the stop motion mechanism again and turn the V-belt pulley in sewing direction until stop link 1 drops against stop motion cam 2.
- 14.4 In this position, check the position of stop motion cam 2 (Fig. 14.0.2).
- 14.5 **To adjust, loosen screws 3 and re-position trip segment 4 accordingly.**
- 14.6 **Tighten screws 3 again.**
- 14.7 Carry out a check (see correct setting).
- Note: On machines with several stop tripping segments each has to be adjusted separately.

Correct setting:

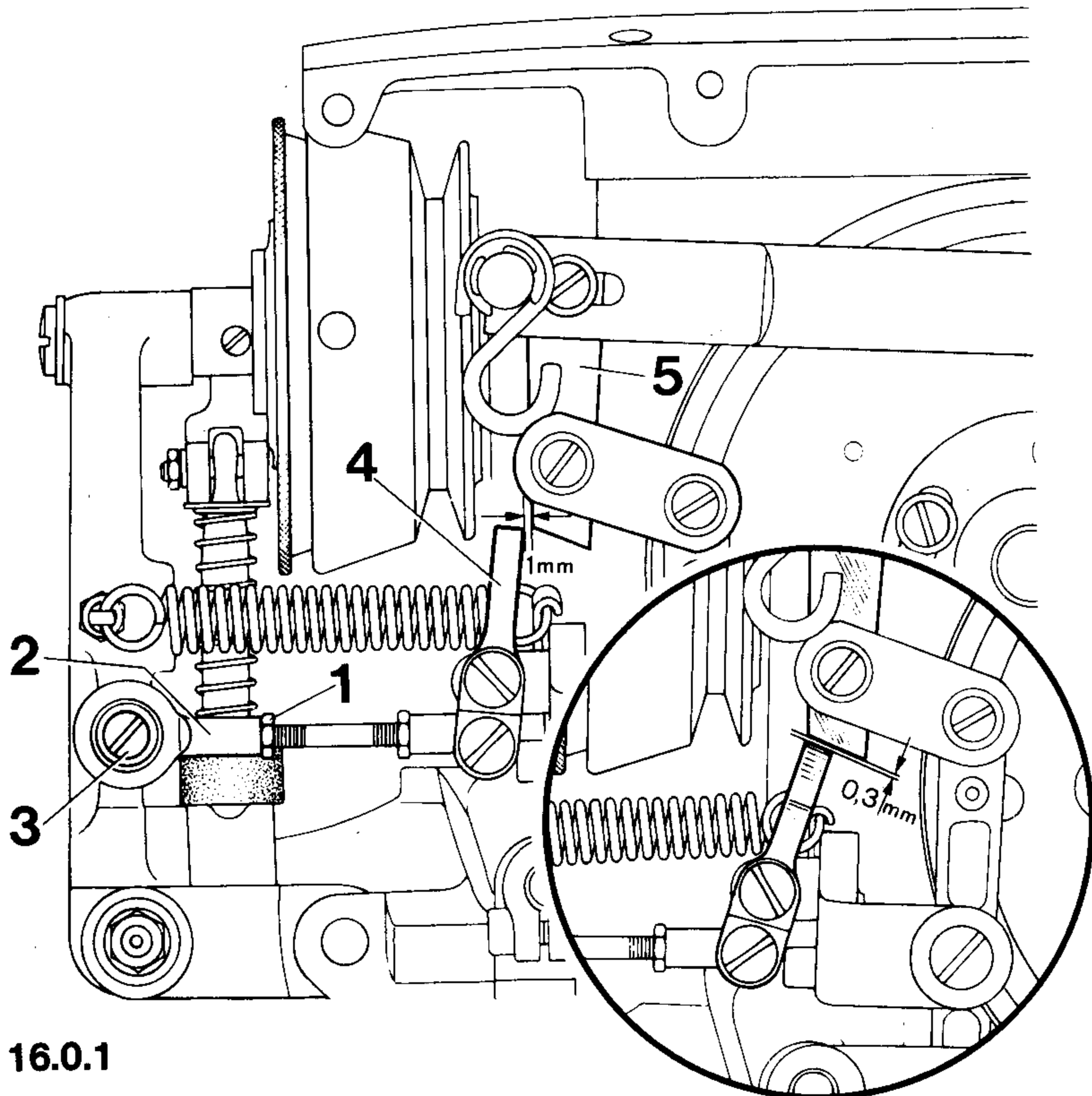
With engaging lever 3 contacting stop 4 there must be a clearance of about 2 mm between the highest point of stop motion cam 5 and stop link 6 (Fig. 15.0.2). In the end-of-cycle position and with the stop motion mechanism engaged there must be a clearance of 1.5 mm between screw 2 and abutment 9 (Fig. 15.0.1).



- Condition: Master switch off, machine at end of cycle, stop motion mechanism disengaged.
- 15.1 Loosen locknut 1 and turn screw 2 fully back.
 - 15.2 Move lever 3 against stop 4 and hold it there.
 - 15.3 Turn the V-belt pulley in sewing direction until stop link 6 is at the highest point of stop motion cam 5.
 - 15.4 **Turn screw 2 to set a clearance of about 2 mm between the highest point of stop motion cam 5 and stop link 6 (Fig. 15.0.2).**
 - 15.5 In this position tighten lock nut 1.
 - 15.6 Release lever 3 and engage the stop motion mechanism.
 - 15.7 Loosen lock nut 7.
 - 15.8 **Turn screw 8 to set a clearance of 1.5 mm between screw 2 and abutment 9.**
 - 15.9 In this position tighten lock nut 7.
 - 15.10 Carry out a check (see correct setting).

Correct setting:

With the stop motion mechanism engaged there must be a clearance of 1 mm between locking lever 4 and stop 5. With the stop motion mechanism disengaged there must be a clearance of 0.3 mm between locking lever 4 and stop 5.



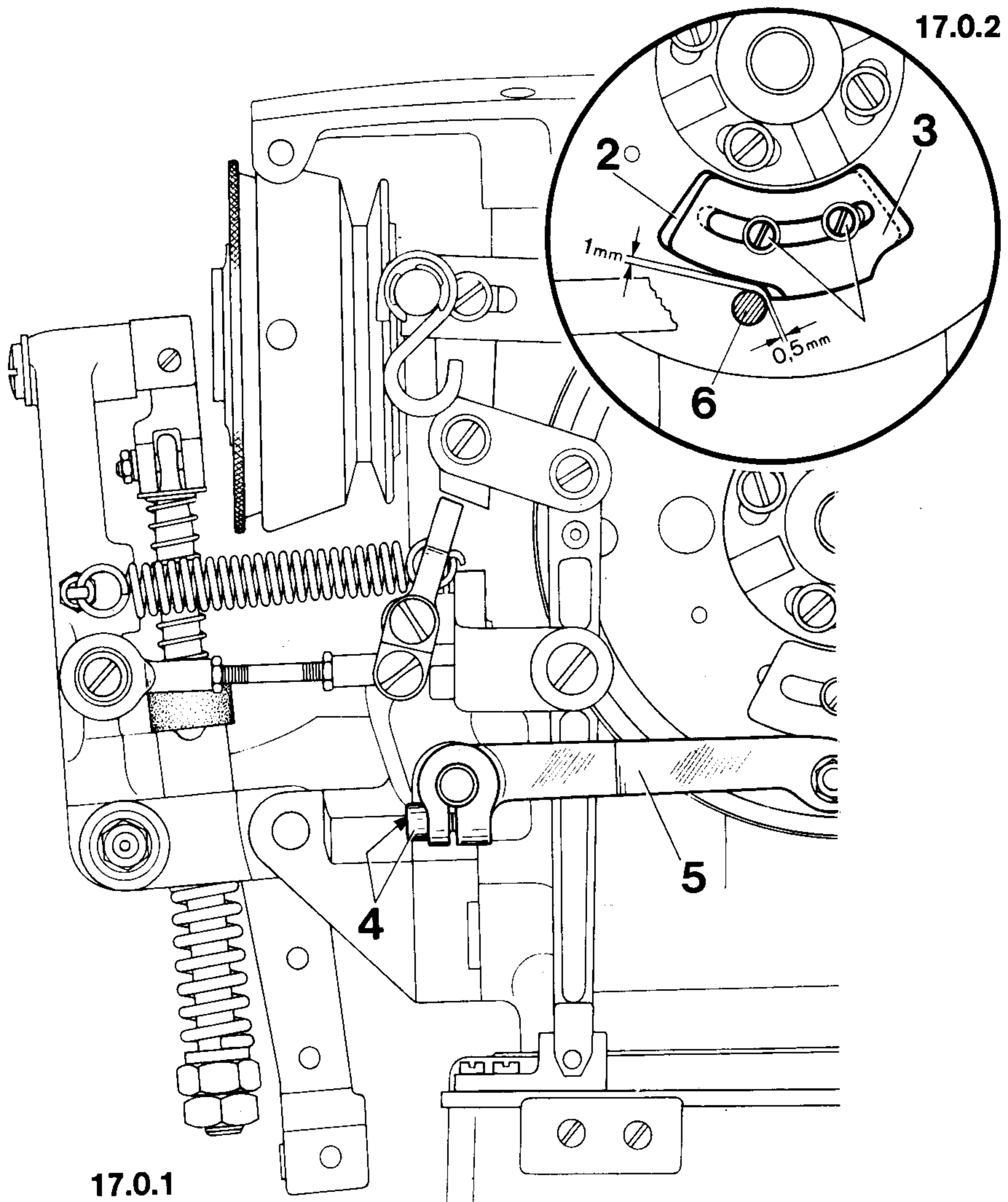
16.0.1

16.0.2

- Condition: Master switch off.
- 16.1 Engage the stop motion mechanism and loosen nut 1.
 - 16.2 Take out screw 2.
 - 16.3 **Set a clearance of 1 mm between locking lever 4 and stop 5 by turning ball joint 3 accordingly.**
 - 16.4 Maintain this position and replace screw 2; make sure that ball joint 3 is positioned vertically, then tighten locknut 1.
 - 16.5 Disengage the stop motion mechanism. In this position there must be a safety clearance of 0.3 mm between locking lever 4 and stop 5.
 - 16.6 Carry out a check (see correct setting).

Correct
setting:

The V-belt pulley must be released from the drive pulley 1 1/2 to 2 stitches before the end of cycle. In the end-of-cycle position and with the stop motion mechanism disengaged there must be a clearance of about 1 mm between roller 6 and segments 2 and 3. In this position, the clearance between the lug of segment 2 and roller 6 must be 0.5 mm (Fig. 17.0.2).



- Condition: Master switch off, machine at end of cycle, stop motion mechanism engaged.
- 17.1 Disengage the stop motion mechanism.
- 17.2 Loosen screws **1** a little and adjust segments **2** and **3** so that screws **1** are centered in the elongated holes.
- 17.3 Tighten screws **1**.
- 17.4 **Loosen screws 4 and turn stop motion lever 5 so that there is a clearance of 1 mm between roller 6 and segments 2 and 3 (Fig. 17.0.2).**
- 17.5 In this position tighten screws **4**.
- 17.6 **Loosen screws 1 and adjust segment 2 so that there is a clearance of 0.5 mm between its lug and roller 6 (Fig. 17.0.2).**
- 17.7 In this position tighten screws **1**.
- 17.8 Turn the V-belt pulley in sewing direction until the lug of segment **3** contacts roller **6**.
- 17.9 Continue turning the V-belt pulley until it is released from the drive pulley. In this position, the machine must be 1 1/2 to 2 stitches before the end of cycle.
- 17.10 If this is not the case, proceed as follows:
- 17.10.1 Making sure that the position of inner segment **2** is not disturbed, loosen screws **1** and move outer segment **3** forwards or backwards accordingly.
- 17.10.2 Tighten screws **1** again.
- 17.11 Carry out a check (see correct setting).
- Note: On control cams with several stop tripping points, this adjustment has to be carried out on each segment.
- Important: If soft declutching cannot be ensured by the setting specified above, the next largest stop tripping segments must be used.

Stock No.	Length of lug
91-132 637-15	2 mm
91-132 638-15	4 mm
91-132 432-15	8 mm
91-132 433-15	17 mm

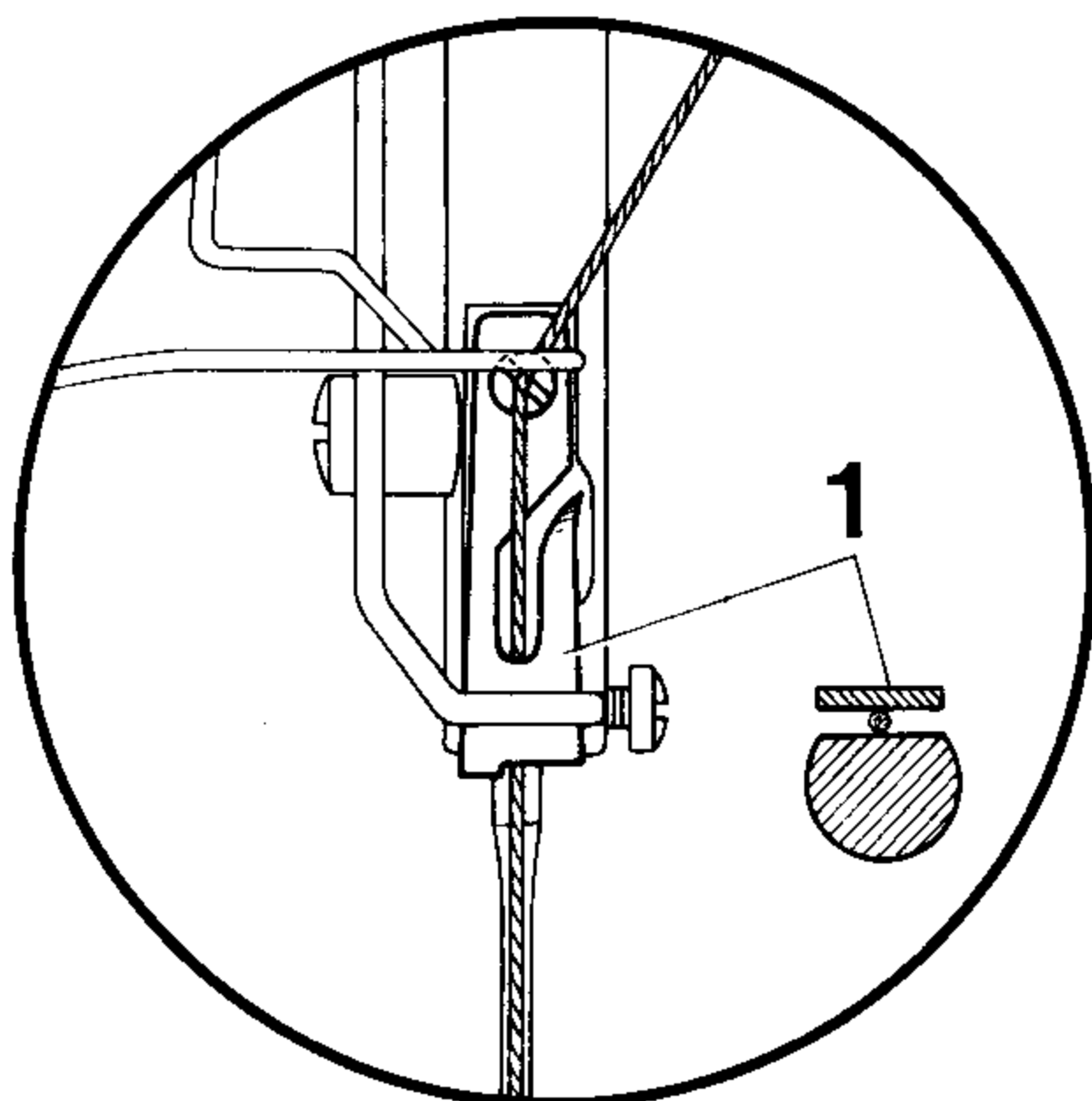
The new stop tripping segments are to be set provisionally as indicated above.

Making sure that the position of inner segment is not disturbed, adjust outer segment **3** so that soft declutching is ensured.

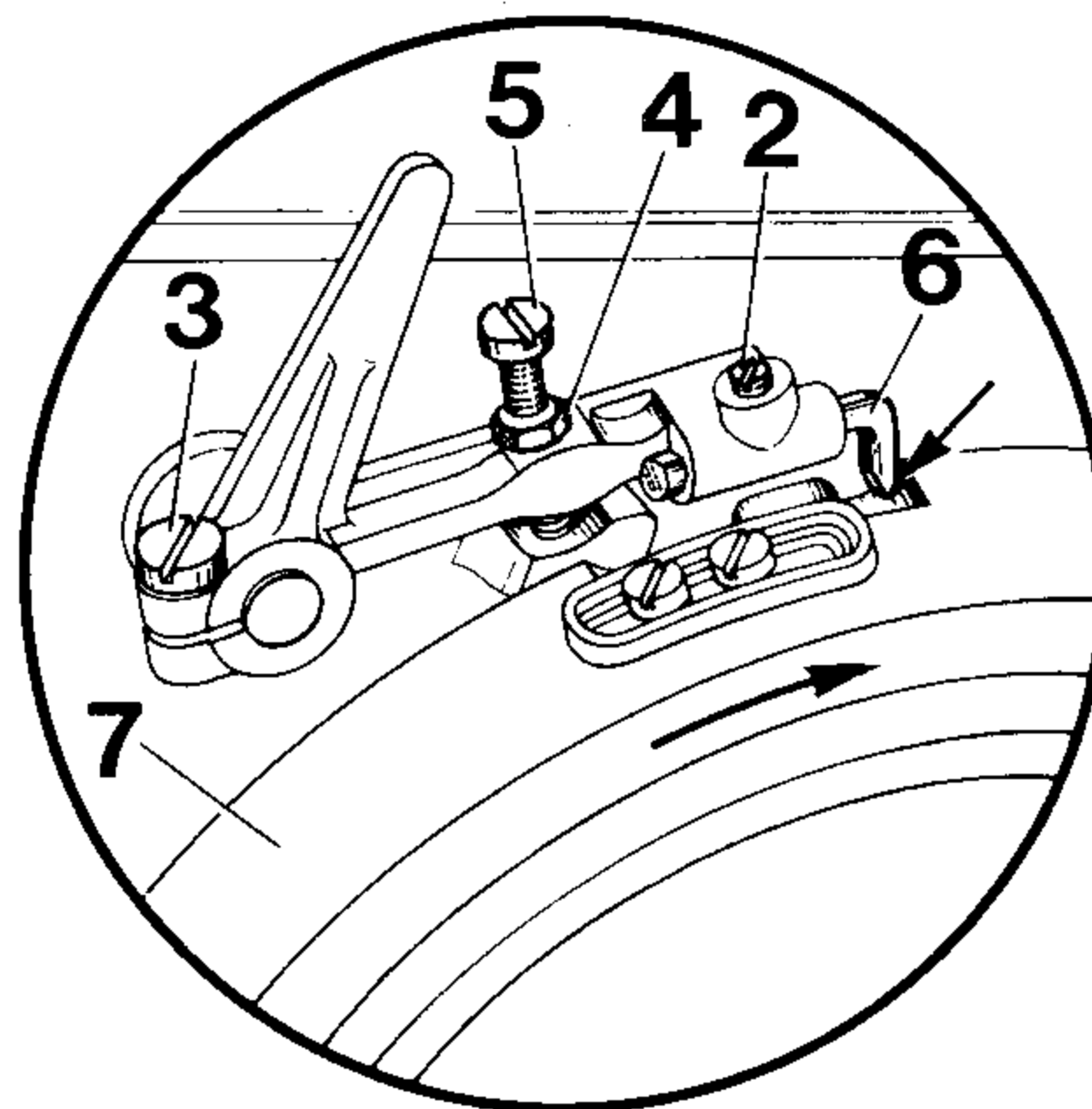
18 Thread nipper
18.1 Actuating finger

Correct setting:

At the end-of-cycle position actuating finger 6 must be positioned at the beginning of the cutout in control cam 7 (as seen in the normal direction of cam motion; see arrow in Fig. 18.0.2), and the needle thread must be held firmly.



18.0.1



18.0.2

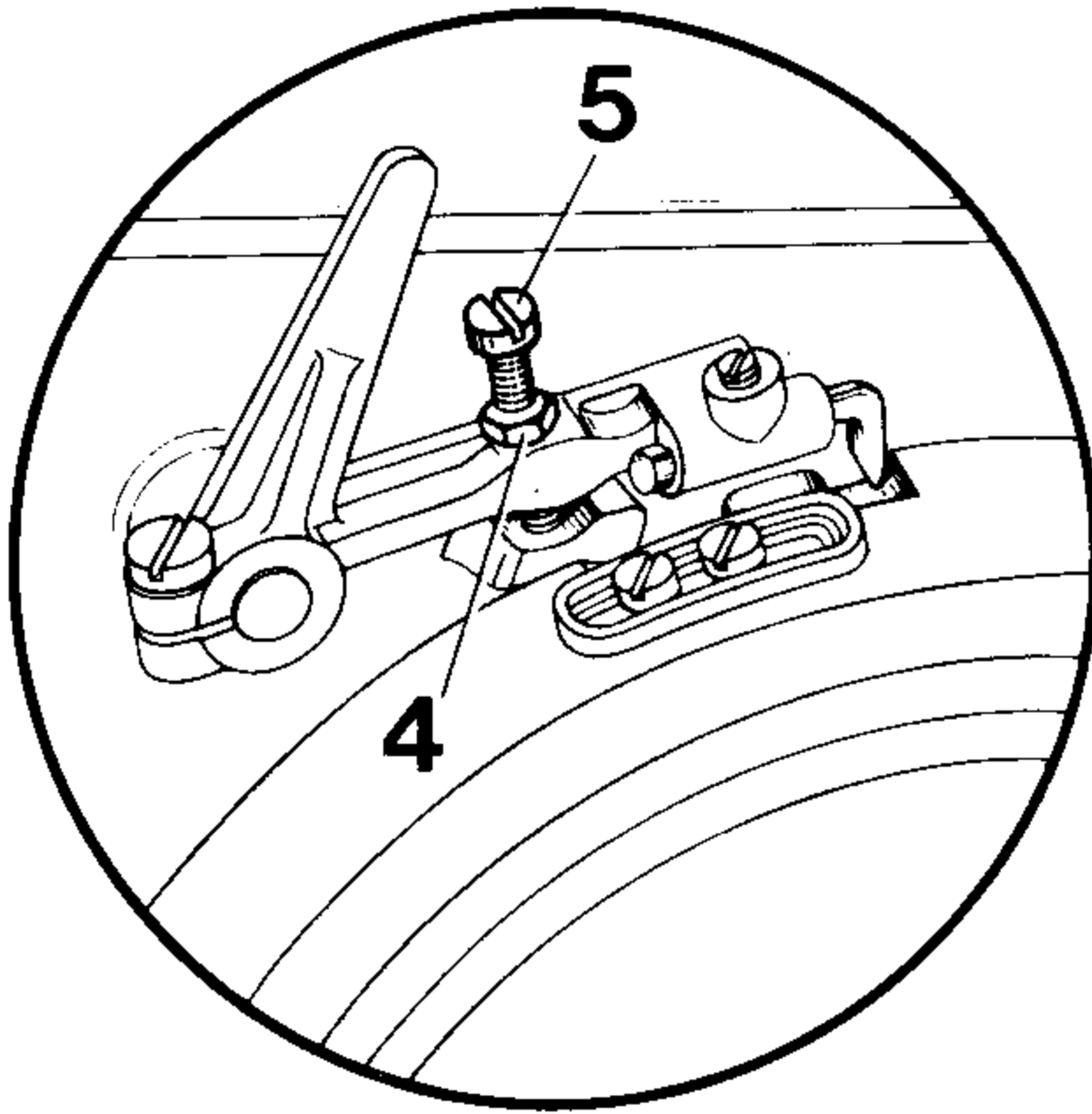
Condition: Master switch off, machine at end of cycle, stop motion mechanism engaged. When relaxed, nipper spring 1 (Fig. 18.0.1) must be positioned absolutely parallel to the needle bar surface.

- 18.1.1 If necessary, unscrew nipper spring 1 and adjust it accordingly.
- 18.1.2 Loosen screws 2 and 3 as well as nut 4.
- 18.1.3 Unscrew the arm cover.
- 18.1.4 Turn out screw 5 until actuating finger 6 contacts the bottom of the cutout.
- 18.1.5 **Adjust actuating finger 6 so that it is positioned at the beginning of the cutout in control cam 7 (see arrow in Fig. 18.0.2).**
- 18.1.6 In this position tighten screw 2.
- 18.1.7 Lift actuating finger 6 off control cam 7 by about 10 mm and in this position tighten screw 3 a little.
- 18.1.8 Push actuating finger 6 downwards against the bottom of the cutout. In this position tighten screw 3, eliminating the play.
- 18.1.9 Carry out a check (see correct setting) and check the setting described in Section 19.

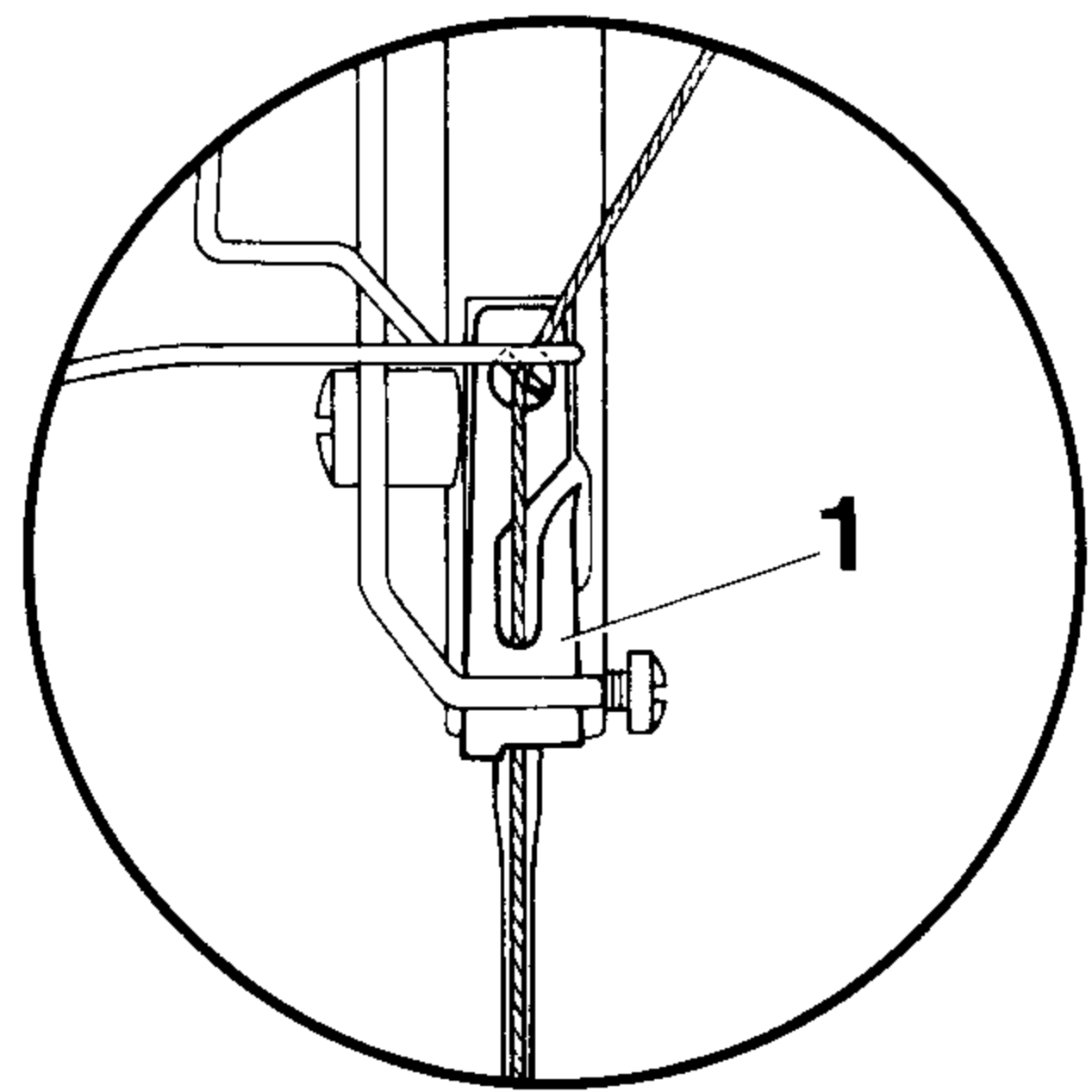
18.2 Nipping pressure

Correct setting:

With the machine at the end of its cycle, it must be possible to pull the needle thread through thread nipper 1 against a slight retarding resistance.



18.0.3



18.0.4

Condition: Master switch off, machine at end of cycle, stop motion mechanism engaged.

18.2.1 Loosen nut 4.

18.2.2 Turn adjusting screw 5 so that the needle thread can be readily pulled through thread nipper 1 against a slight resistance.

18.2.3 In this position tighten nut 4.

18.2.4 Carry out a check (see correct setting).

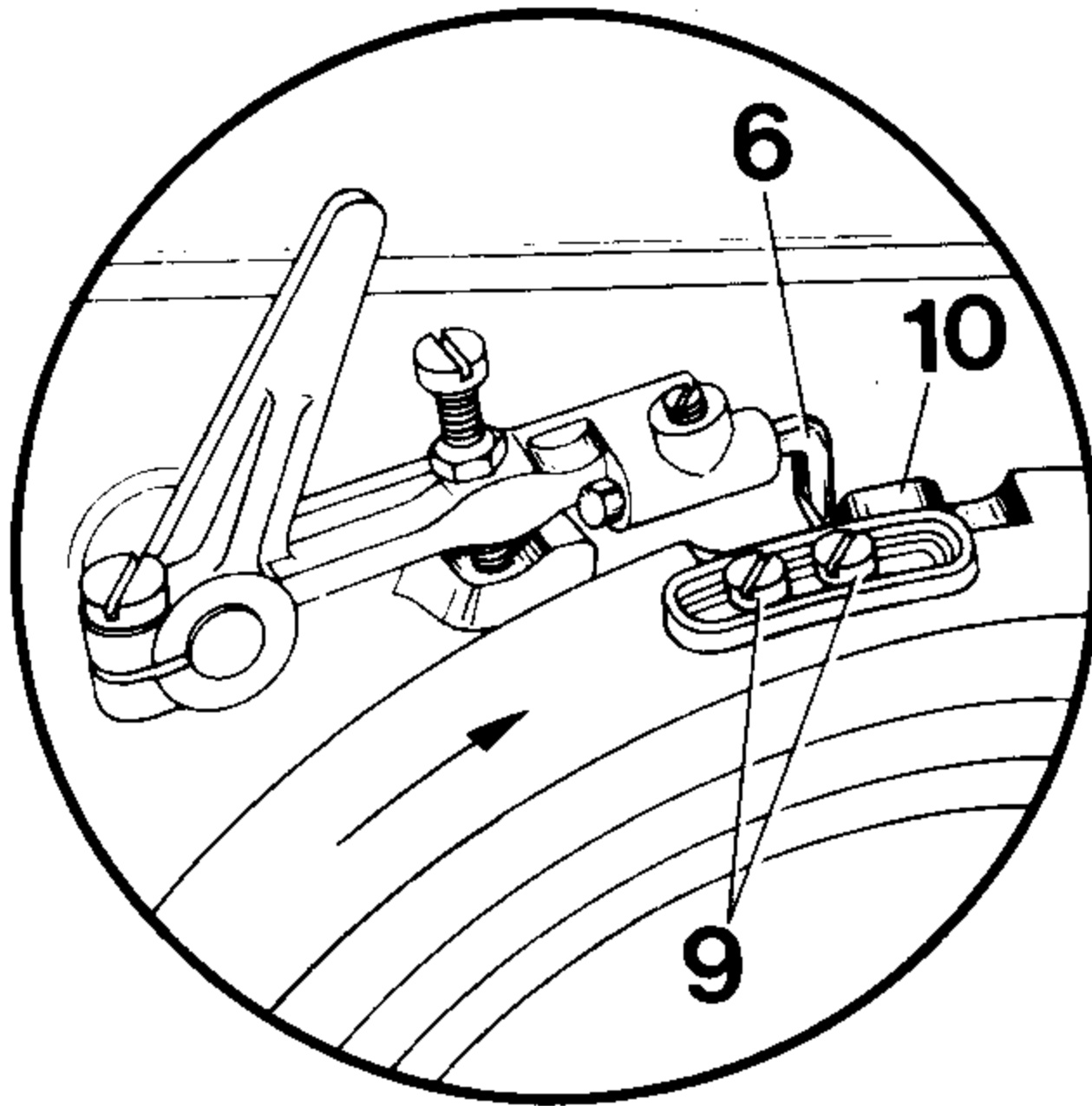
Note: Following any change in the setting of screw 5 check Section 19.

18.3

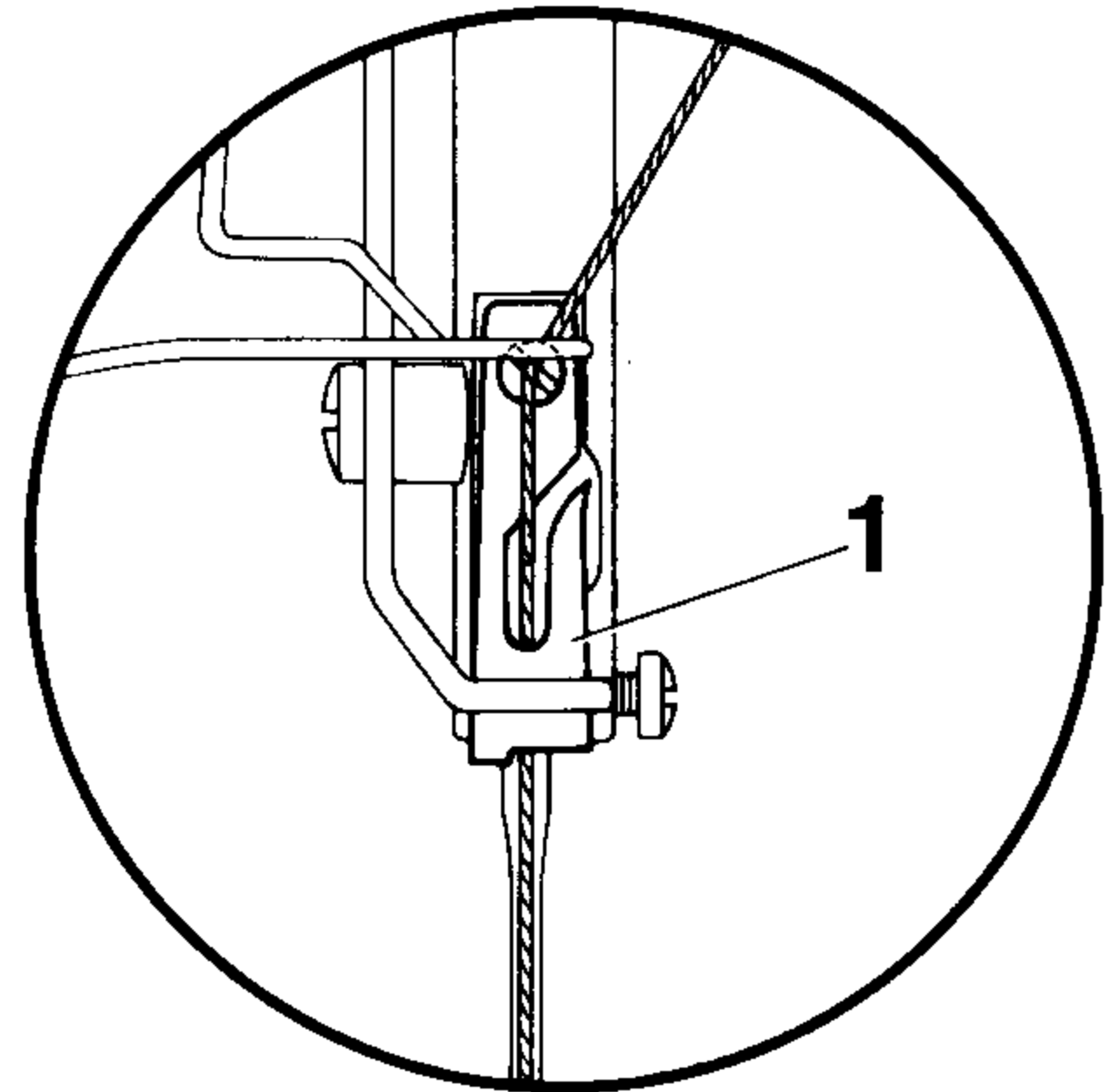
Thread nipper segment

Correct setting:

Thread nipper spring 1 must start acting again when the take-up lever has reached a point between 2 and 10 mm before the top of its stroke (see note below).



18.0.5



18.0.6

Condition: Master switch off, machine at end of cycle, stop motion mechanism disengaged.

18.3.1 Turn the V-belt pulley in sewing direction until the take-up lever has reached a point about 10 mm before the top of its stroke as the machine makes the first stitch.

18.3.2 **Maintain this position and loosen screws 9. Then set segment 10 so that its end (seen in sewing direction) contacts actuating finger 6.**

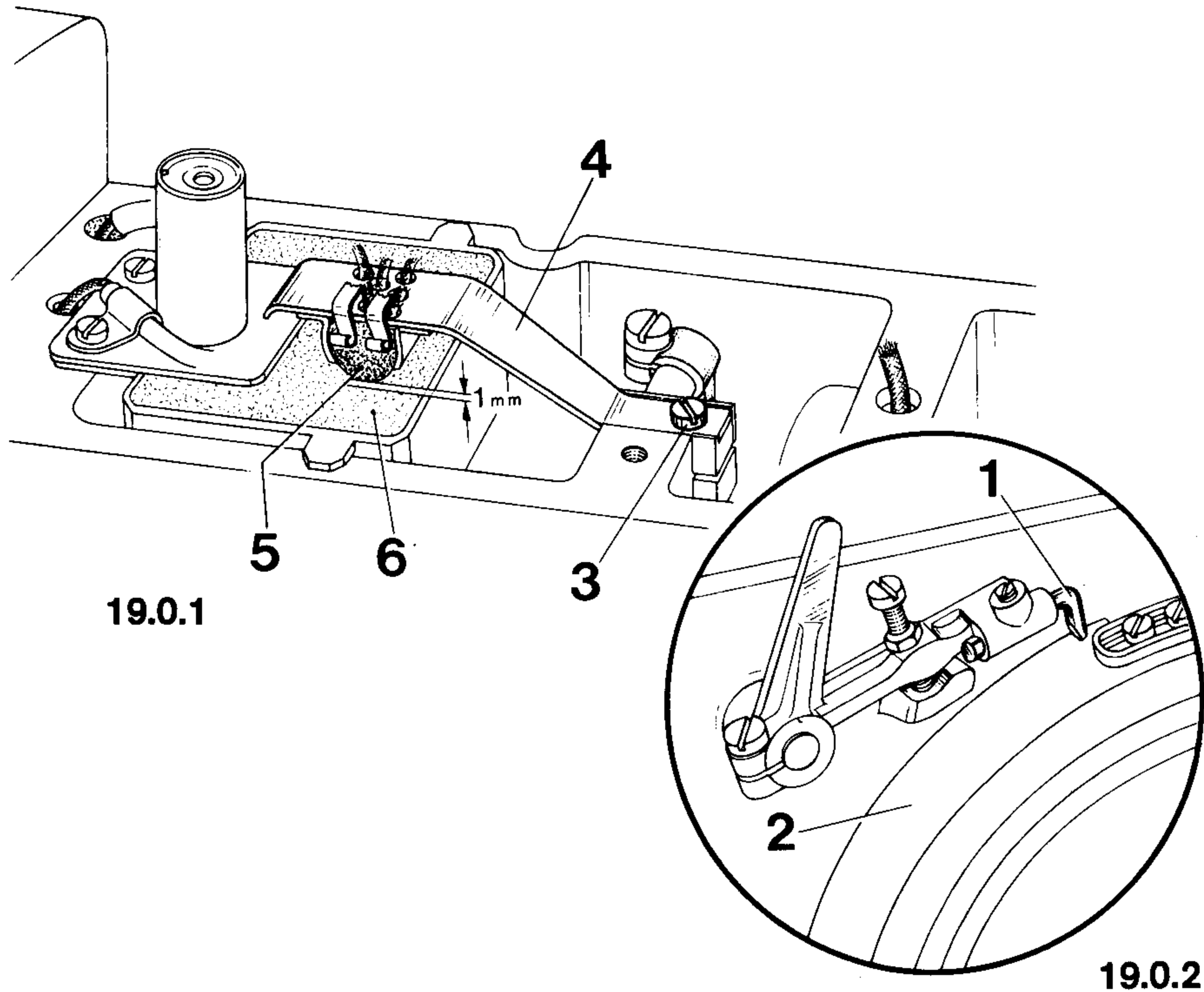
18.3.3 In this position, tighten both screws 9. On control cams with several nipper segments, each segment has to be adjusted separately.

Note: The length of segment 10 depends on the gear ratio of the control cam. If segment is set too early, nipper spring 1 closes too early so that a longer thread end is provided with which to start the seam. If the thread end is too long, however, this may lead to thread jamming in the shuttle race.

If segment 10 is set too late, the starting thread end will be too short so that it will not interlock with the bobbin thread. Also, the needle may unthread at the beginning of the sewing cycle.

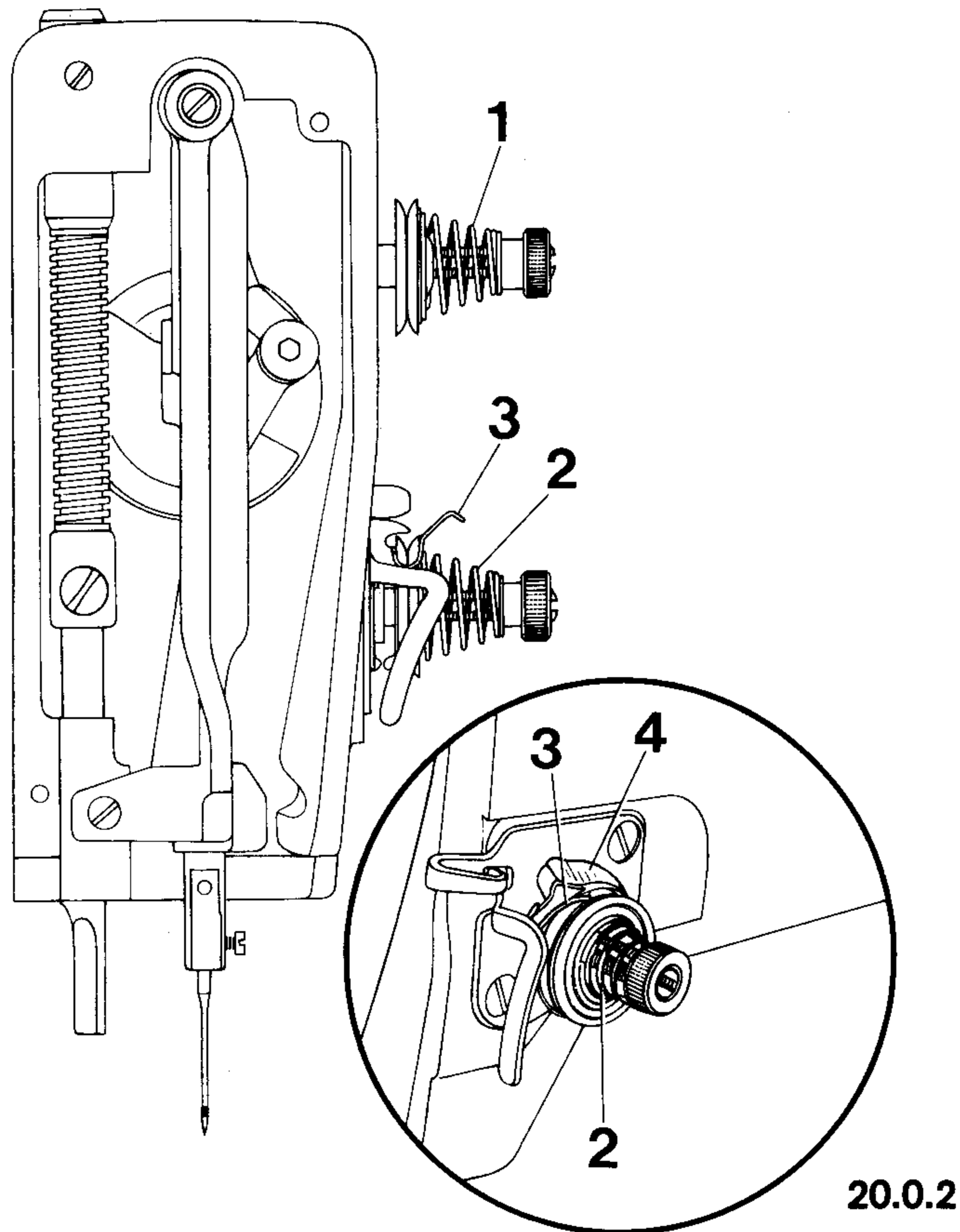
Correct
setting:

When the machine is at the end of its cycle there must be a gap of about 1 mm between upper felt 5 and lower felt 6. During the sewing cycle the two felts must touch.



- Condition: Master switch off, machine at end of cycle, stop motion mechanism disengaged.
- 19.1 Turn the V-belt pulley until actuating finger 1 contacts the rim of control cam 2.
- 19.2 **Loosen screw 3 and turn bracket 4 so that felt 5 is resting on felt 6 of the oil reservoir.**
- 19.3 In this position tighten screw 3.
- 19.4 Turn the V-belt pulley to set the machine at the end of its cycle.
- 19.5 **Bend bracket 4 so that there is a gap of about 1 mm between felt 5 and felt 6.**
- 19.6 Carry out a check (see correct setting).
- 19.7 Finally replace the arm cover, the right and left covers and the belt guard.

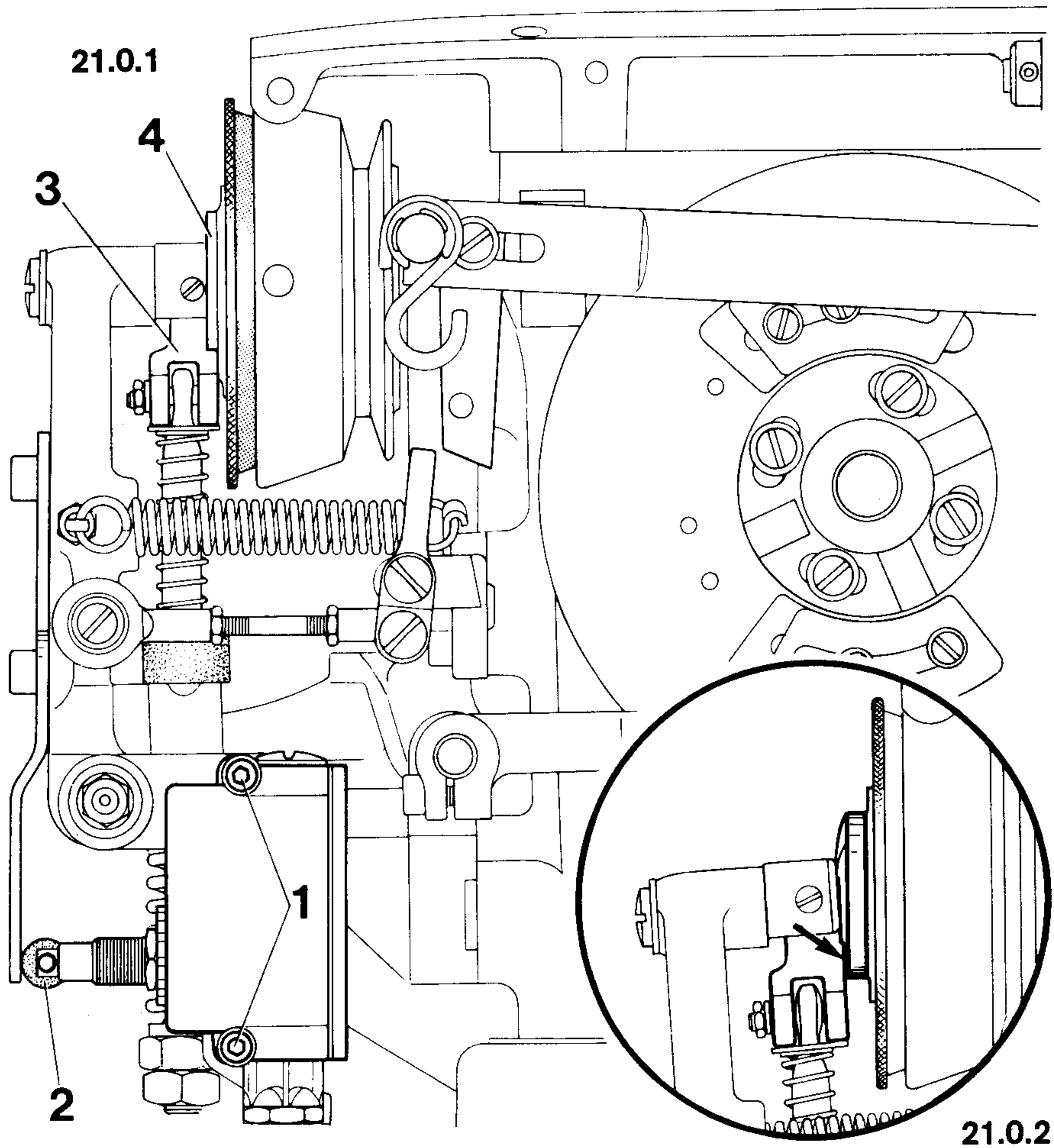
20.0.1



- 20.1 Make sure the needle and bobbin case are properly threaded, place material under the clamp feet and carry out a sewing test.
- 20.2 Set primary tension 1 for the needle thread so that when main tension 2 is released the bobbin thread is pulled only lightly into the material.
- Note: If the primary tension is too tight the needle thread will be cut too early and too short.
- 20.3 Adjust main tension 2 so that the top and bottom threads interlock in the centre of the fabric.
- 20.4 When setting the bobbin thread tension make sure that the bobbin thread is pulled into the fabric properly. If the tension is too weak, the bobbin thread may not be properly cut.
- 20.5 Thread check spring 3 should have a short stroke and not too much tension. After loosening the screw (accessible by removing the tension discs) turn stop 4 so that when the needle enters the fabric the check spring has completed taking up the slack needle thread.

Correct
setting:

When stop link **3** is at the lowest point of stop motion cam **4** (see arrow in Fig. 21.0.2) limit switch **2** must just be actuated.
When the stop motion mechanism is engaged the switch must just be released.



- Condition: Master switch off, stop motion mechanism engaged.
- 21.1 Loosen screws **1** and adjust switch **2** accordingly.
 - 21.2 Tighten screws **1**.
 - 21.3 Carry out a check (see correct setting).

22

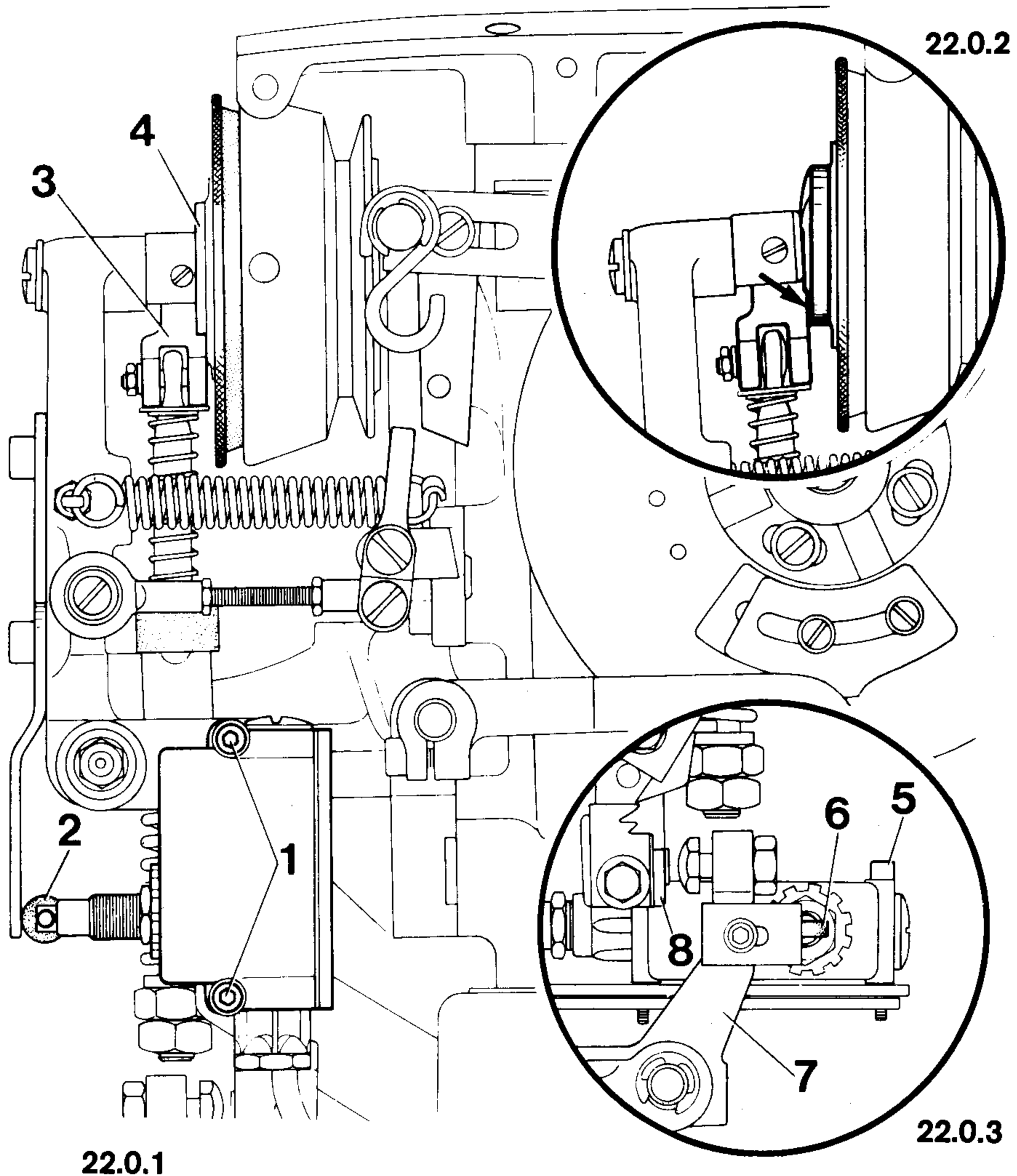
Setting the limit switches on subcl. -966/13 machines

22.1

Upper switch

Correct setting:

When stop link **3** is at the lowest point of stop motion cam **4** (see arrow in Fig. 22.0.2) limit switch **2** must just be actuated. When the stop motion mechanism is engaged the switch must just be released.



22.1.1

Loosen screws **1** and adjust switch **2** accordingly.

22.1.2

Tighten screws **1**.

22.1.3

Carry out a check (see correct setting).

22.2

Lower stitch

Correct
setting:

When engaging lever **7** is at rest switch **6** must just be actuated.
When engaging lever **7** contacts thrust member **8** switch **6** must just be released.

- 22.2.1 Loosen screws **5** and adjust switch **6** accordingly.
- 22.2.2 Tighten screws **5**.
- 22.2.3 Carry out a check (see correct setting).

