



**MAUSER**  
S P E Z I A L

**MS-591 / MS-571**

Single Needle  
Wheel Feed Lockstitch Sewing Machine

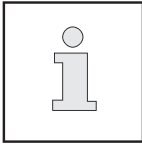
**MS-574**

Double Needle  
Wheel Feed Lockstitch Sewing Machine

**Service Manual**

Courtesy of:





This Adjustment Manual is valid for all models and subclasses listed in the chapter “Specifications”.

For further information and Adjustment manual, please consult the machine venders.

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## 1 Adjustment



Please observe all notes from Chapter 1 Safety of the instruction manual! In particular care must be taken to see that all protective devices are refitted properly after adjustment, see Chapter 1.06 Danger warnings of the instruction manual!



If not otherwise stated, the machine must be disconnected from the electrical power supply. Danger of injury due to unintentional starting of the machine!

### Notes on adjustment

All following adjustments are based on a fully assembled machine and may only be carried out by expert staff trained for this purpose.

Machine covers, which have to be removed and replaced to carry out checks and adjustments, are not mentioned in the text.

The order of the following chapters corresponds to the most logical work sequence for machines which have to be completely adjusted. If only specific individual work steps are carried out, both the preceding and following chapters must be observed.

Screws, nuts indicated in brackets ( ) are fastenings for machine parts, which must be loosened before adjustment and tightened again afterwards.

### 1.01 Tools, gauges and other accessories

- 1 set of screwdrivers with blade widths from 2 to 10 mm
- 1 set of open-ended wrenches with opening sizes from 7 to 13 mm
- 1 set of allen keys from 1.5 to 6 mm
- 1 clamp (Order No. 08-880 137-00)
- 1 metal rule (Order No. 08-880 218-00)
- 1 gauge (Order No. 08-880 136-01)
- Sewing thread and test material

### 1.02 Abbreviations

TDC = top dead center

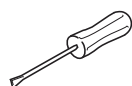
BDC = bottom dead center

### 1.03 Explanation of the symbols

In this adjustment manual, symbols emphasize operations to be carried out or important information. The symbols used have the following meaning:



Note, information



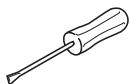
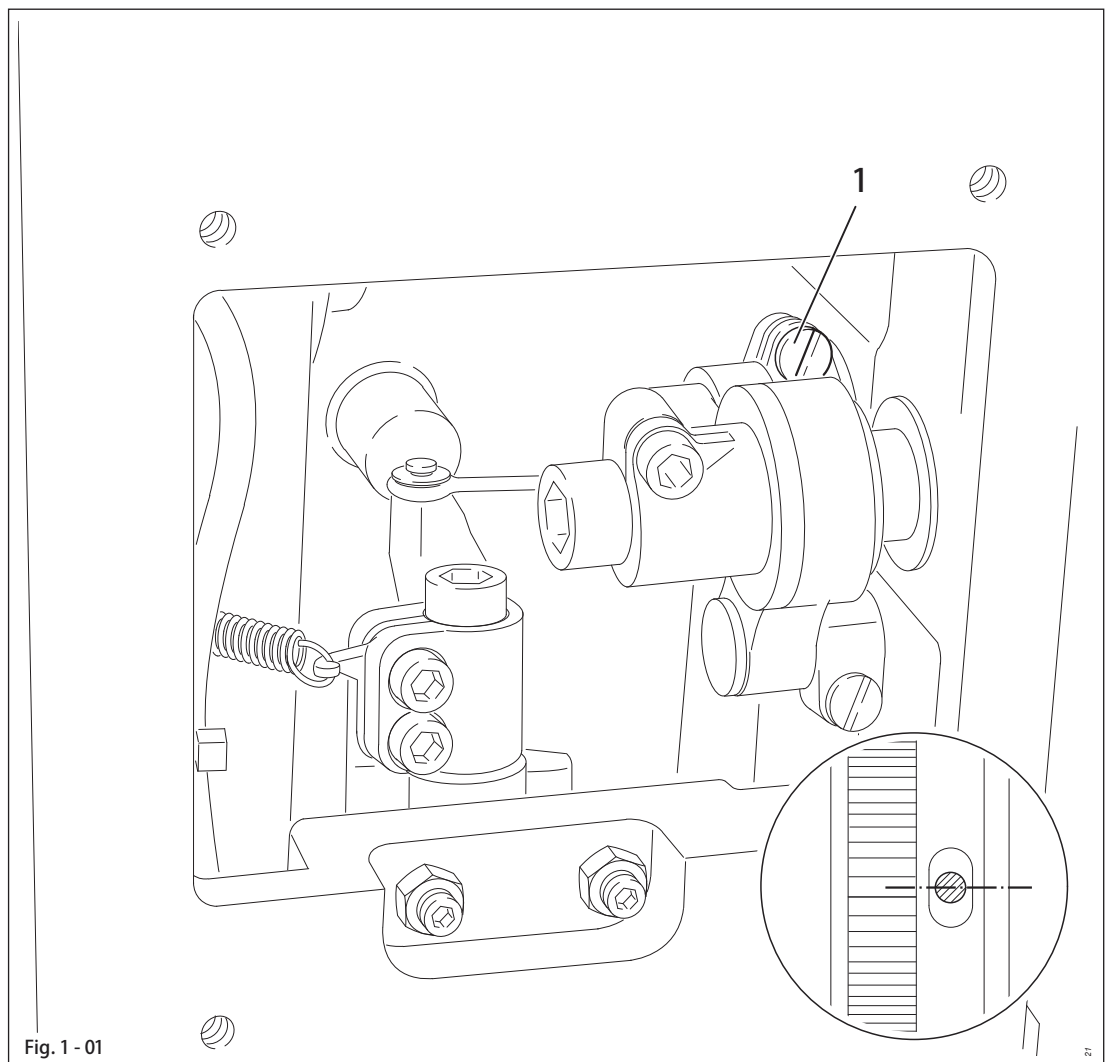
Service, repair, adjustment, maintenance  
(work to be carried out by qualified staff only)

## 1.04 Adjusting the basic machine

### 1.04.01 Needle position in sewing direction (on the model 571 and 591)

#### Requirement

With the stitch length set at its minimum, the needle should be positioned in the centre of the needle hole, as seen in the direction of sewing.



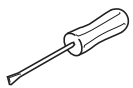
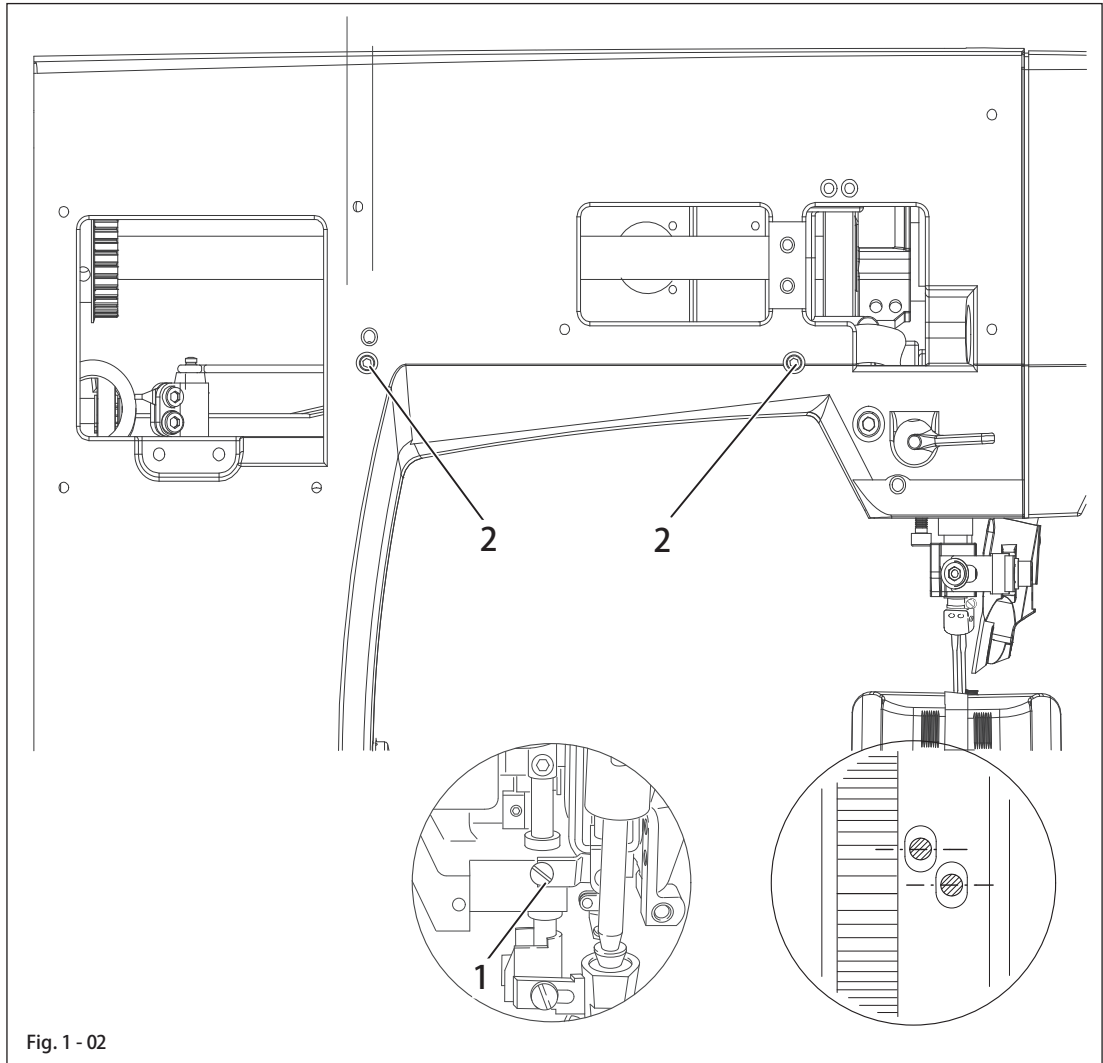
- Set the minimum stitch length.
- Adjust needle bar (screw 1) according to the requirement.

# Adjustment

## 1.04.02 Needle position in sewing direction (on the model 574)

### Requirement

The needle should be positioned in the centre of the needle hole as seen in the direction of sewing.



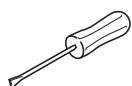
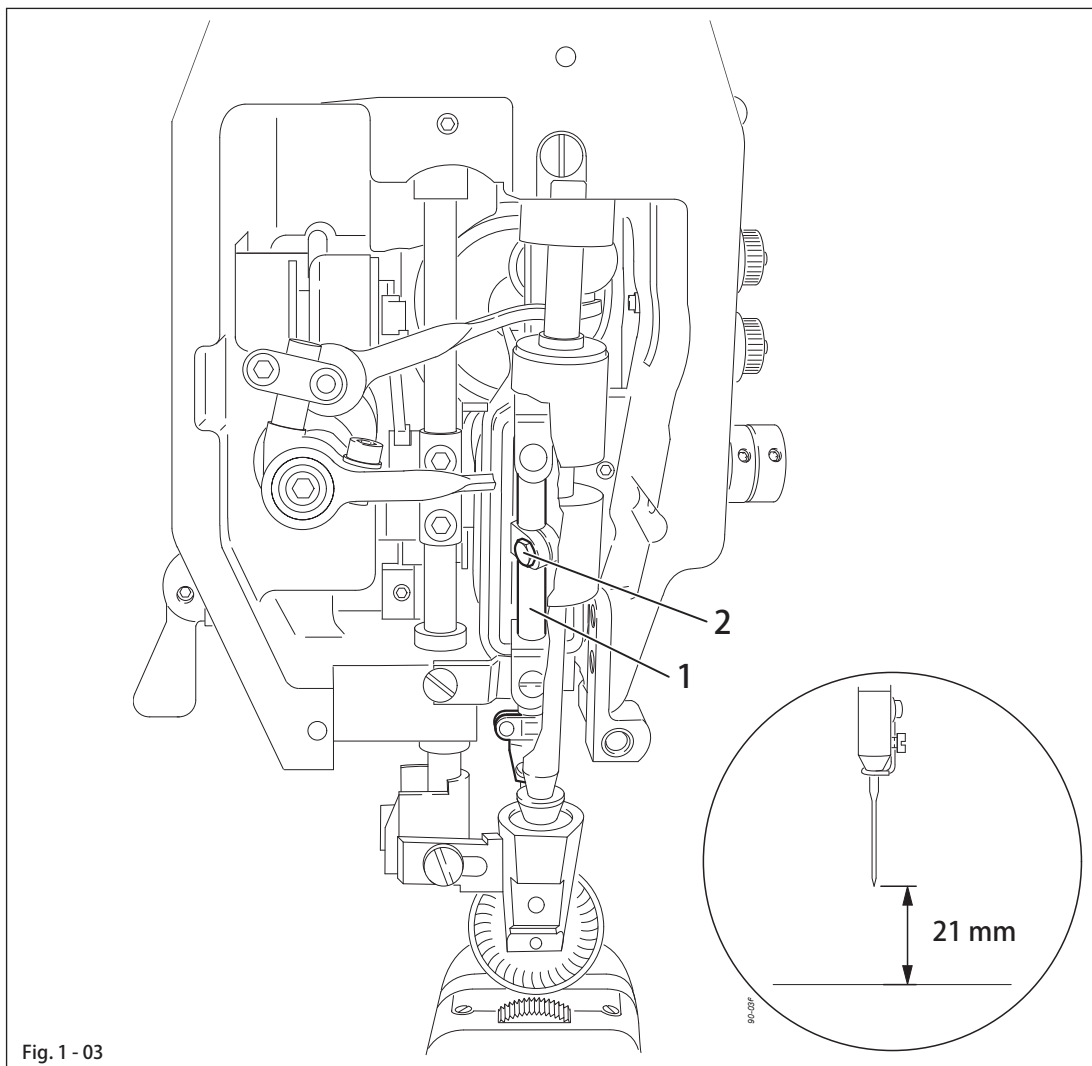
- Adjust needle bar (screws 1 and 2) according to the requirement.



## 1.04.03 Preliminary adjustment of the needle height

### Requirement

When the needle bar is at TDC, there must be a clearance of approx. 21 mm between the needle point and the needle plate.



- Adjust needle bar 1 ( screw 2), without turning it, according to the requirement.

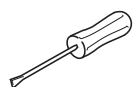
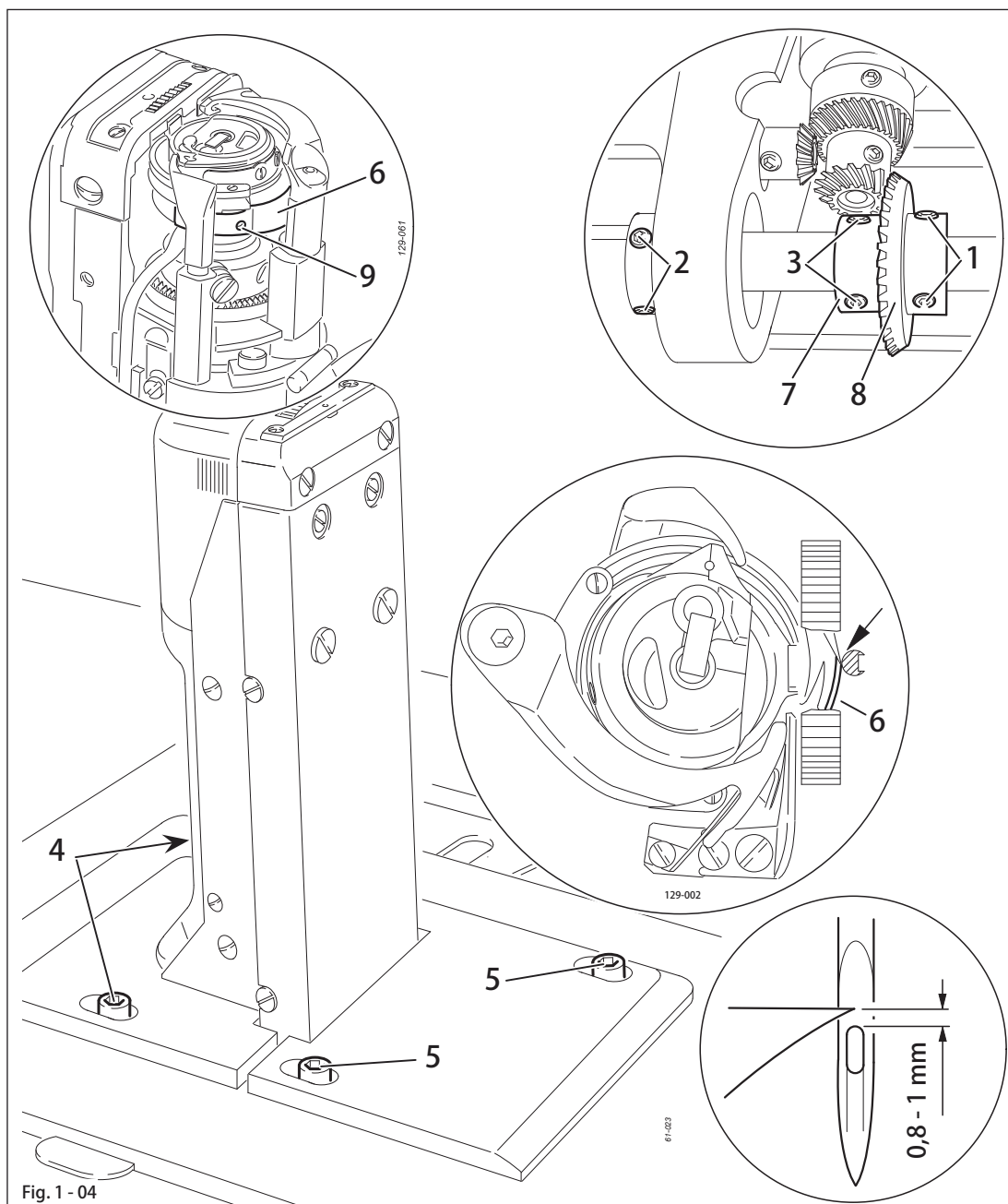
# Adjustment

## 1.04.04 Needle rise, hook clearance, needle height and needle guard (on the model 571)

### Requirement

With the needle bar positioned 2.0 mm after BDC and the stitch length set at " 0 "

1. the hook point must be at needle centre with a hook-to-needle clearance of 0.05 to 0.1 mm;
2. the top of the needle eye must be 0.8 to 1.0 mm below the hook point;
3. the needle guard 6 must touch the needle lightly.

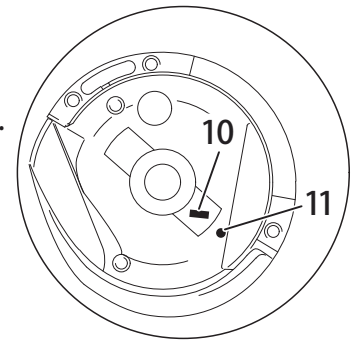


- Set stitch length at " 0 ".
- Loosen both screws 1, 2, 3, 4 and 5.
- Adjust the needle bar positioned 2.0 mm after BDC.

- Set hook point at needle centre, making sure that the needle is not deflected by needle guard 6.
- Adjust needle height according to Requirement 2.
- Adjust hook post according to Requirement 1 and tighten screws 4 and 5.
- Making sure that there is some play in the bevel gear, tighten screws 1.
- With retaining collar 7 touching bevel gear 8 tighten screws 2 and 3.
- Adjust needle guard 6 (screw 9) according to requirement 3.



When the hook is changed, make sure that the markings 10 and 11 are both on one side.



# Adjustment

## 1.04.05 Needle rise, hook clearance, needle height and needle guard (on the model 574)

### Requirement

On both hooks with the needle rise positioned 2.4 mm after BDC of the needle bar.

1. the hook point must be at needle centre with a hook-to-needle clearance of 0.05 to 0.1 mm;
2. the top of the needle eye must be 0.8 to 1.0 mm below the hook points;
3. the needle guard 9 must touch the needle lightly.

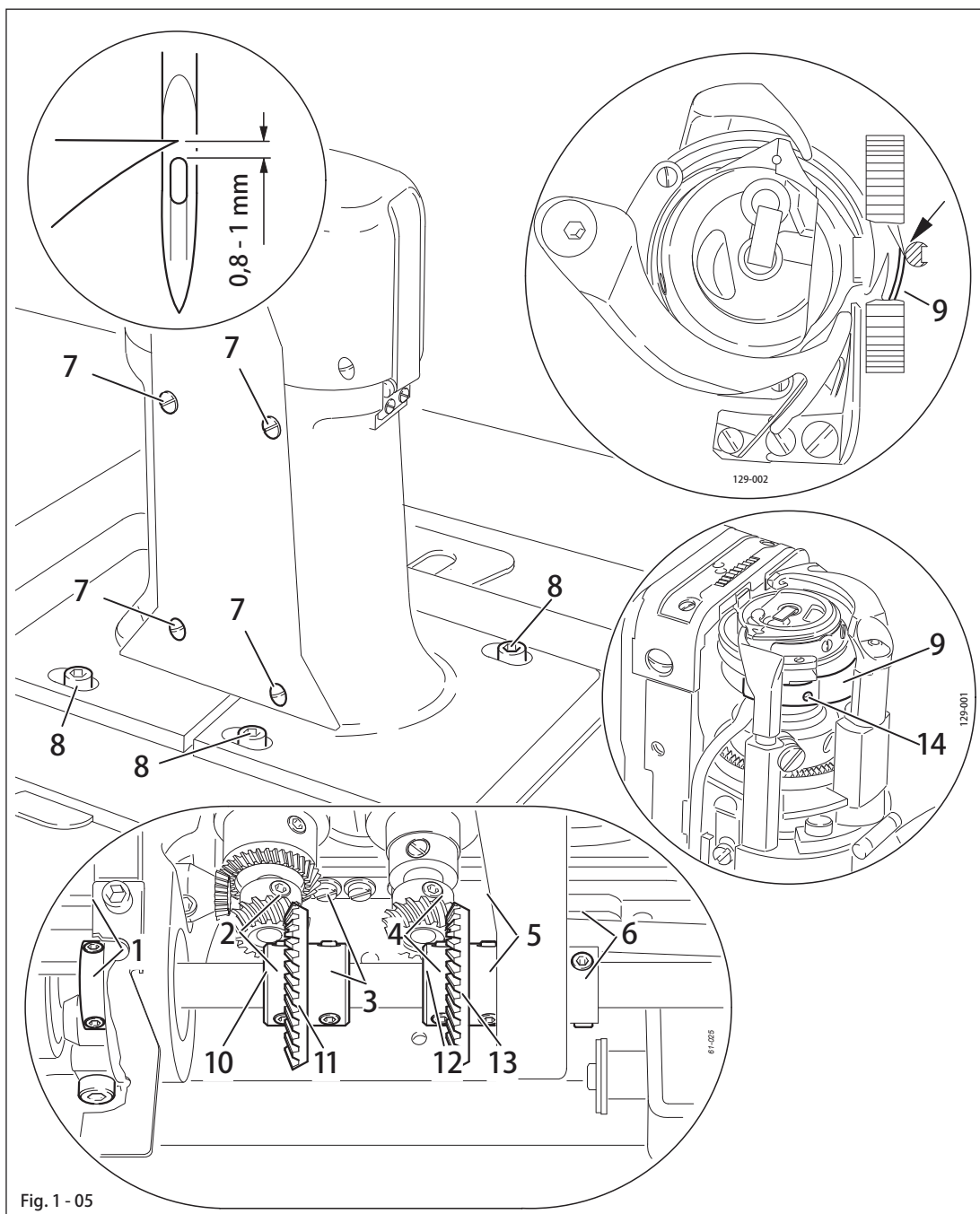
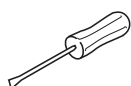


Fig. 1 - 05

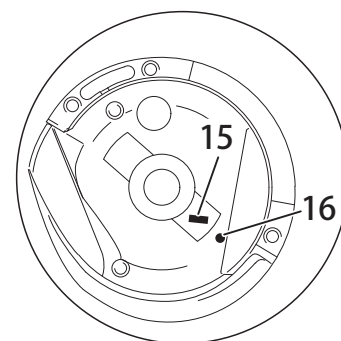


- Loosen screws 1, 2, 3, 4, 5, 6 and 7.
- Loosen screws 8 slightly.
- Adjust the needle bar positioned 2.4 mm after BDC.

- Set both hook points at needle centre, making sure that the needles are not deflected by needle guard 9.
- Adjust needle height according to Requirement 2.
- Adjust both hook posts according to Requirement 1 and tighten screws 8.
- Tighten screws 1 and 6.
- Making sure that there is some play in the bevel gear, tighten screws 3 and 5.
- With retaining collar 10 touching bevel gear 11 tighten screws 2.
- With retaining collar 12 touching bevel gear 13 tighten screws 4.
- Tighten screws 7 on both sides of the post.
- Adjust needle guard 9 (screw 14) on both hooks according to Requirement 3.



When a hook is changed, make sure that the markings 15 and 16 are both on one side.



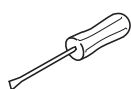
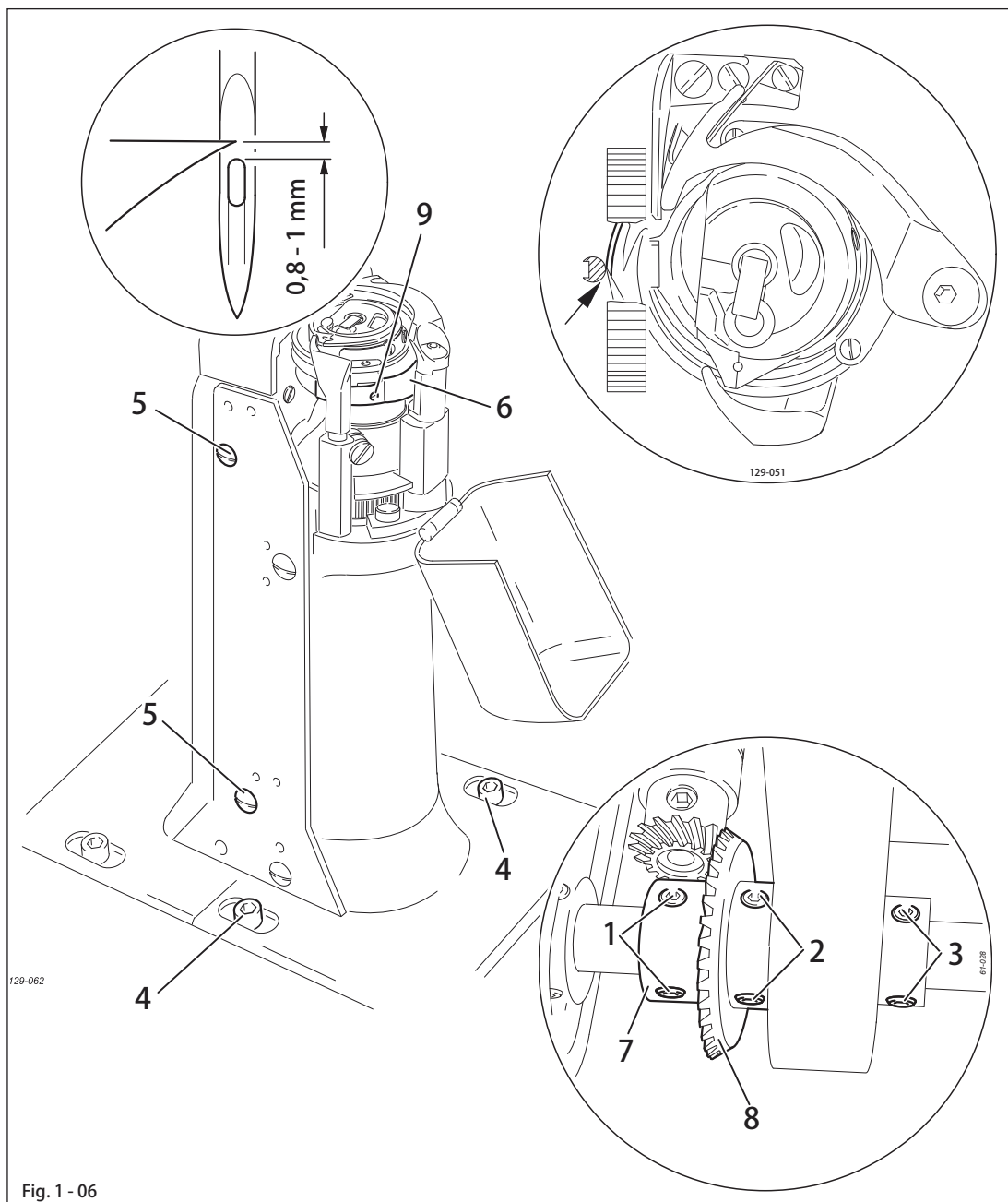
# Adjustment

## 1.04.06 Needle rise, hook clearance, needle height and needle guard (on the model 591)

### Requirement

With the needle bar position 2.0 mm after BDC and the stitch length set at " 0 "

1. the hook point must be at needle centre with a hook-to-needle clearance of 0.05 to 0.1 mm;
2. the top of the needle eye must be 0.8 to 1.0 mm below the hook point;
3. the needle guard 6 must touch the needle lightly.

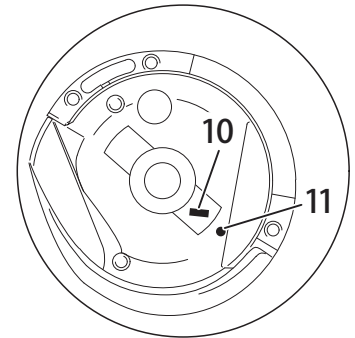


- Set stitch length at " 0 ".
- Loosen screws 1, 2, 3, 4 and 5.
- Adjust the needle bar positioned 2.0 mm after BDC.

- Set hook point at needle centre, making sure that the needle is not deflected by needle guard 6.
- Adjust needle height according to Requirement 2.
- Adjust hook post according to Requirement 1 and tighten screws 4.
- Making sure that there is some play in the bevel gear, tighten screws 2.
- With retaining collar 7 touching bevel gear 8 tighten screws 1.
- Screws 5 remain loosened for further adjustments.
- Adjust needle guard 6 (screw 9) according to Requirement 3.



When the hook is changed, make sure that the markings 10 and 11 are both on one side.

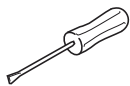
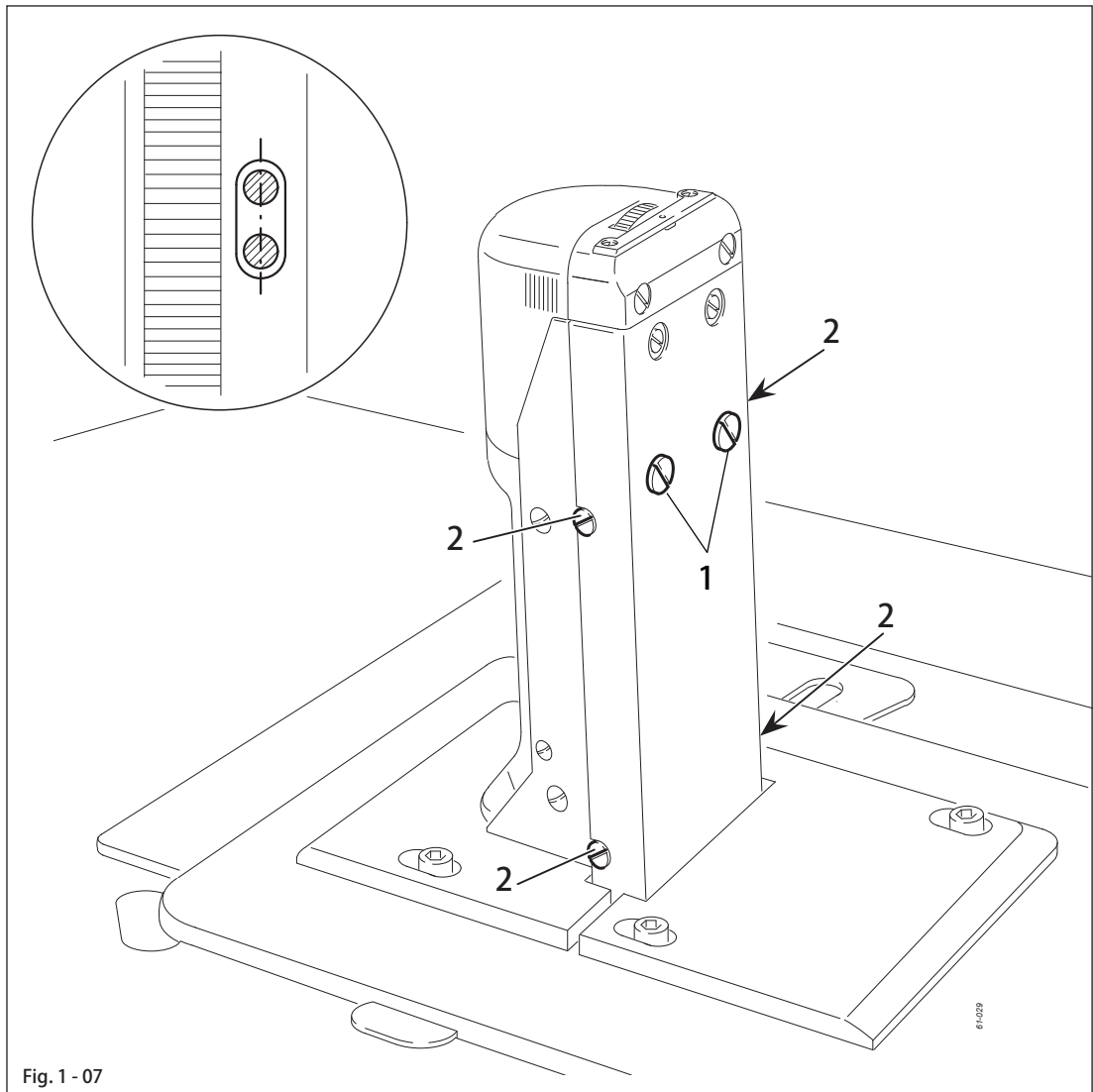


# Adjustment

## 1.04.07 Needle position crosswise to sewing direction (on the model 571)

### Requirement

When the stitch length is set at its maximum, the needle must be positioned in the centre of the needle hole when entering and coming out of the needle plate.



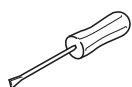
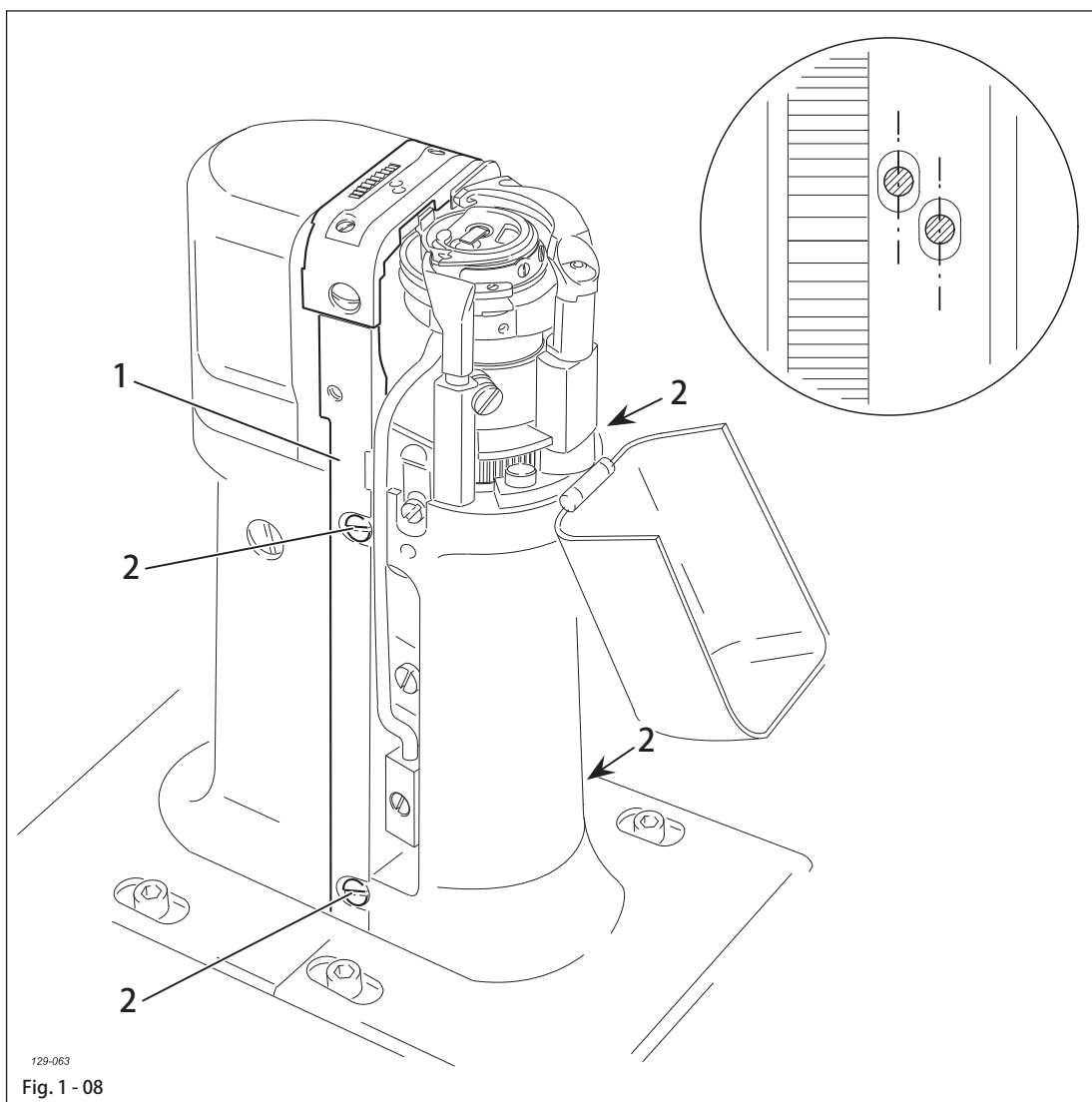
- Turn screws 1 (screws 2, on both sides of the post) according to the requirement.



## 1.04.08 Needle position crosswise to sewing direction (on the model 574)

### Requirement

As seen crosswise to the sewing direction, the needles must penetrate in the centre of their needle holes.



- Shift bearing plate 1 (screws 2, on both sides of the post) according to the requirement.

# Adjustment

## 1.04.09 Needle position crosswise to sewing direction (on the model 591)

### Requirement

As seen crosswise to the sewing direction, the needle must penetrate in the centre of the needle hole.

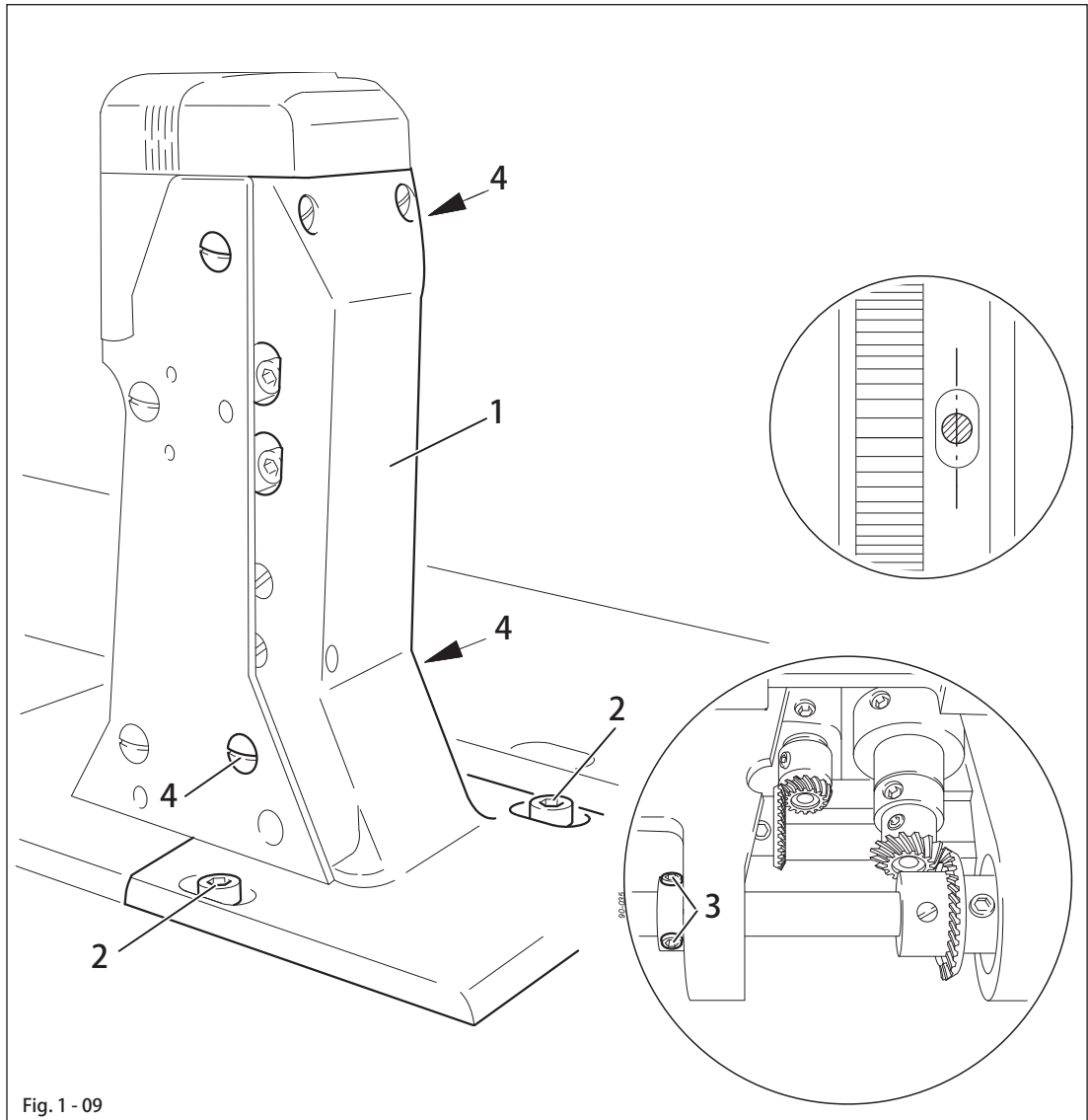
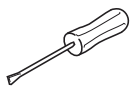


Fig. 1 - 09



- Adjust feed wheel post 1 (screw 2, 3 and 4) according to the requirement.

## 1.04.10 Height and stroke of the bobbin case opener

### Requirement

1. The top edges of the bobbin case opener 1 and bobbin case base 3 should be on one level.
2. When the bobbin case opener 1 has deflected the bobbin case to its furthest point, the catch of the bobbin case should be 0.3 - 0.5 mm from the back edge of the needle plate recess.

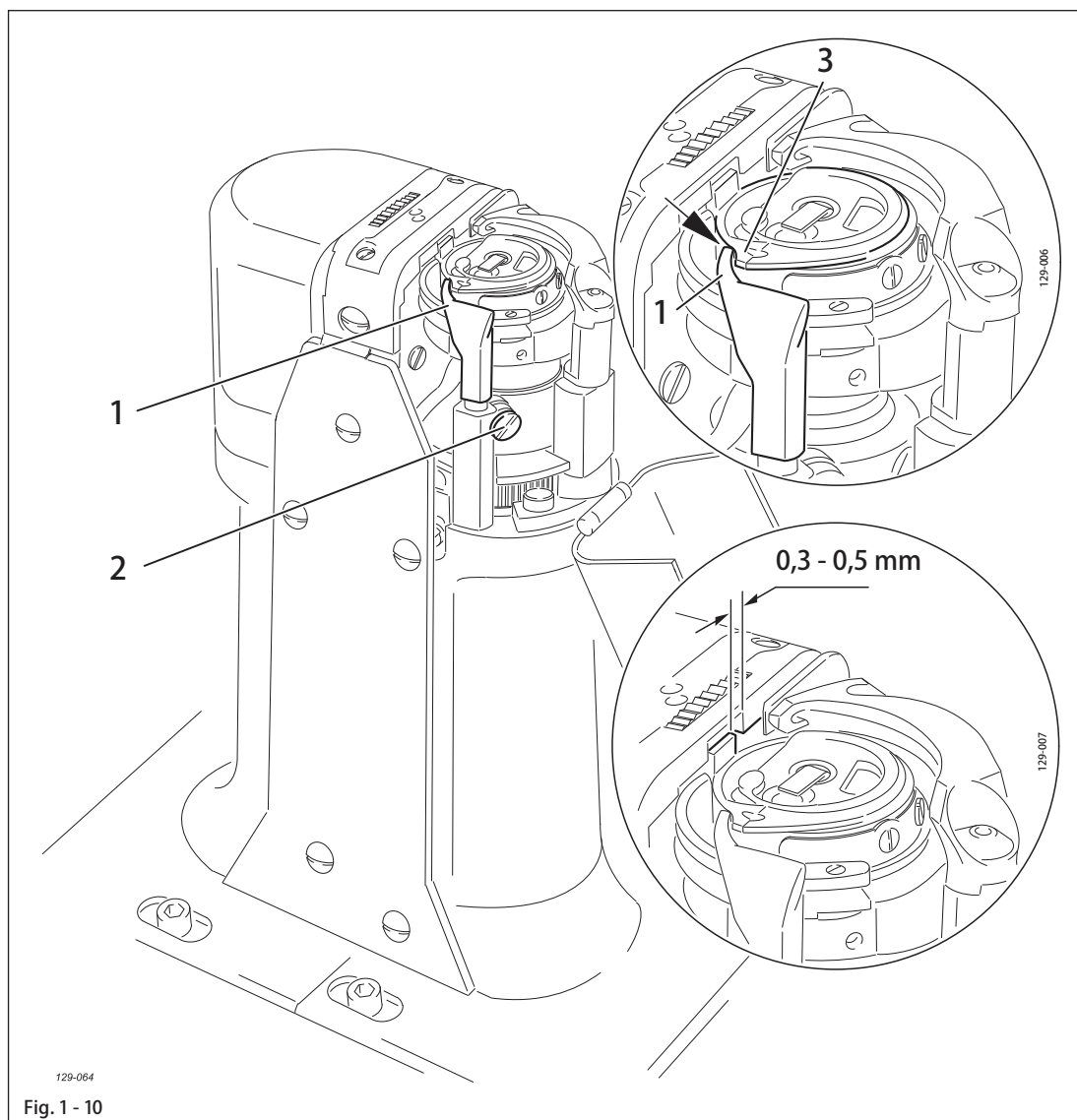
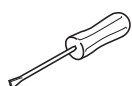


Fig. 1 - 10



- Adjust bobbin case opener 1 (screw 2) in accordance with requirement 1.
- Turn the balance wheel until the bobbin case opener has deflected the bobbin case to its furthest point.
- Adjust bobbin case opener 1 (screw 2) in accordance with requirement 2.



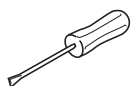
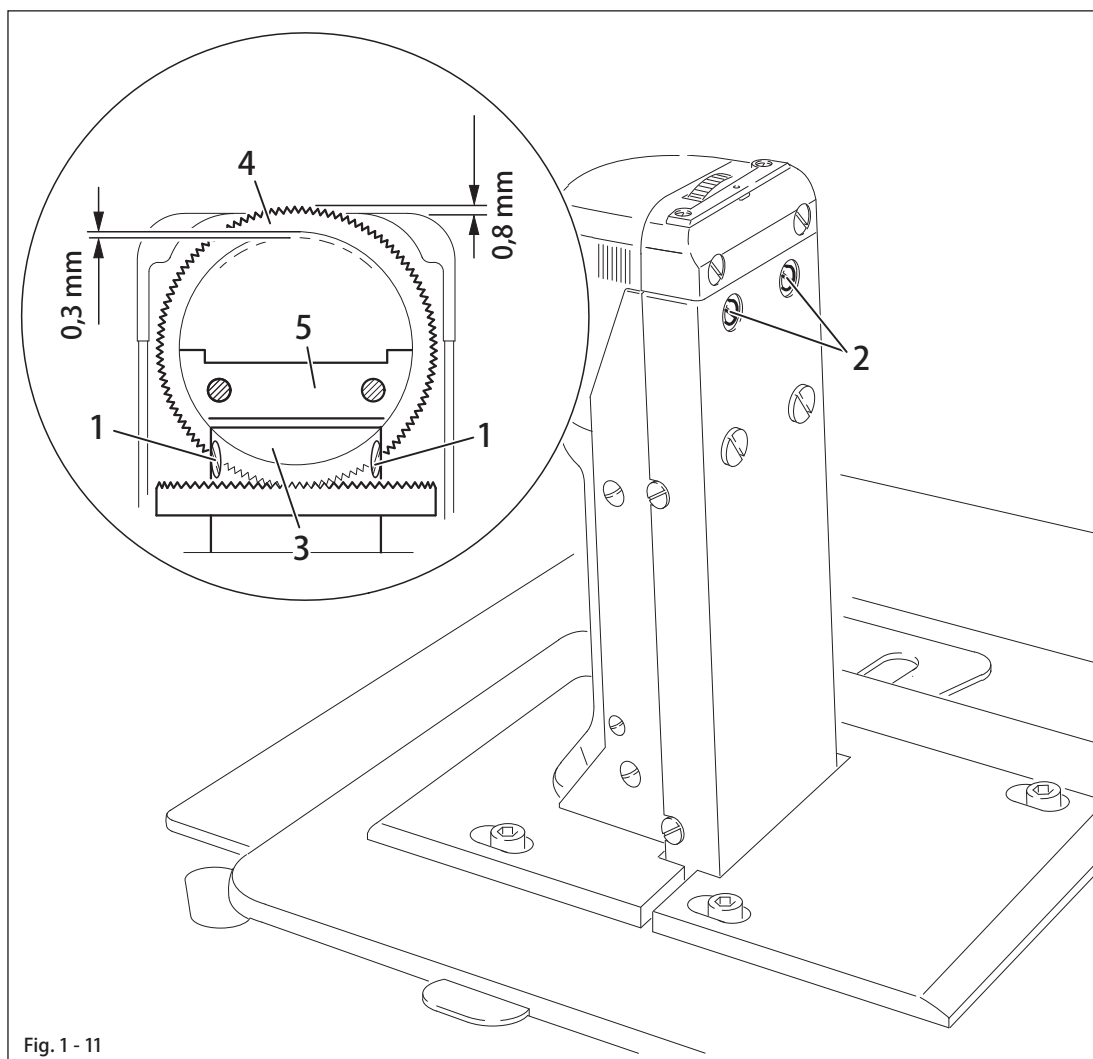
On the model 574 these adjustments must be repeated on the right post. Depending on the thread size, a variation of the setting in Requirement 2 is permitted.

# Adjustment

## 1.04.11 Height of the feed wheel (on the model 571)

### Requirement

1. When pressure is applied to the feed wheel 4, it should protrude from the needle plate by tooth height (approx. 0.8 mm)
2. When no pressure is applied to the feed wheel 4, it should have a vertical play of approx. 0.3 mm.



- Swing out the roller presser.
- Loosen screws 1 and 2.
- Adjust drive wheel 3 according to requirement 1, taking care to see that the teeth of drive wheel 3 and feed wheel 4 lock into each other properly.
- Tighten screws 1.
- Adjust guide 5 according to requirement 2 and tighten screws 2.

## 1.04.12 Height of the feed wheel (on the model 574)

### Requirement

1. When pressure is applied to the feed wheel 4, it should protrude from the needle plate by tooth height (approx. 0.8 mm)
2. When no pressure is applied to the feed wheel 4, it should have a vertical play of approx. 0.3 mm.

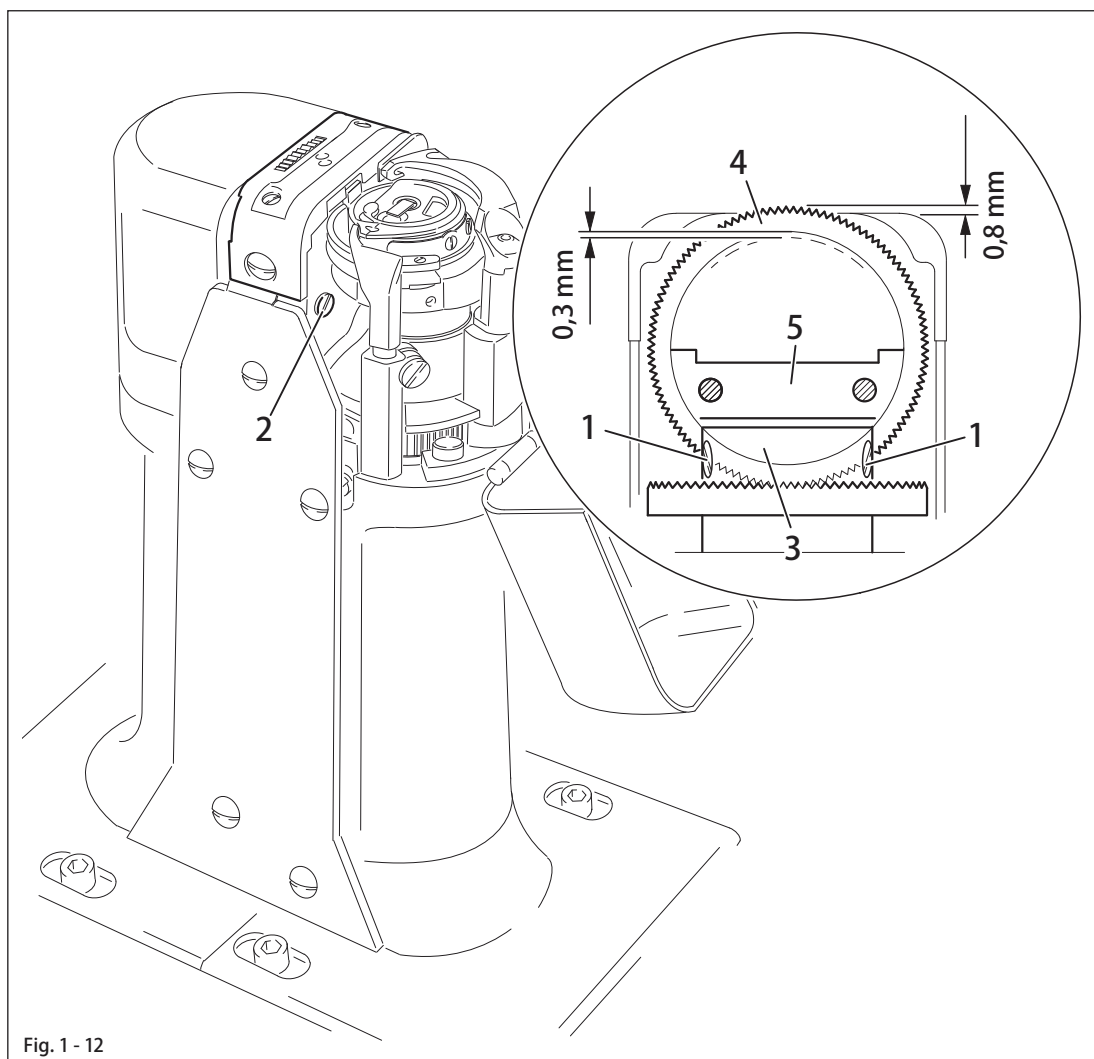
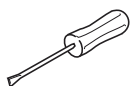


Fig. 1 - 12



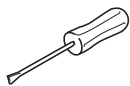
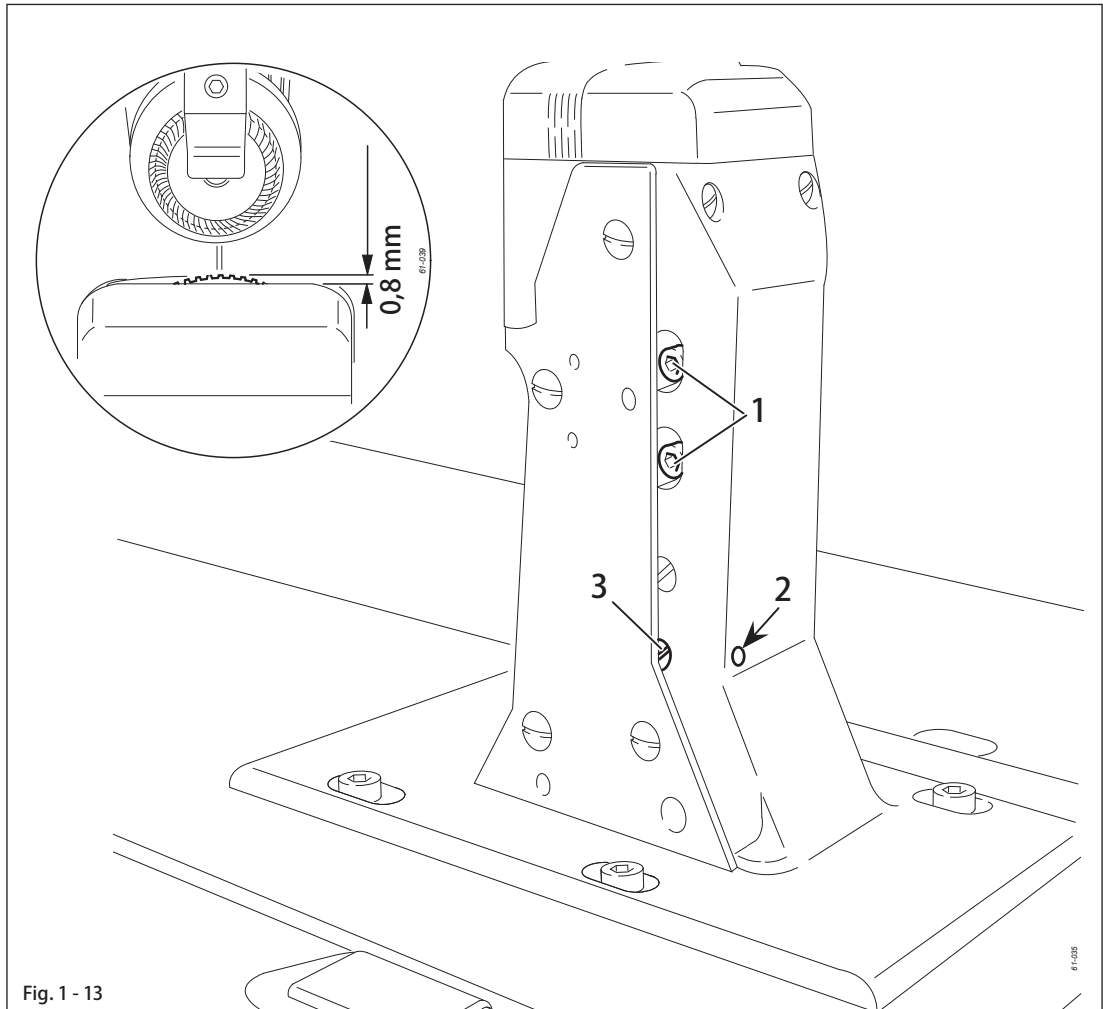
- Swing out the roller presser.
- Loosen screws 1 and 2 (two screws each).
- Adjust drive wheel 3 according to requirement 1, taking care to see that the teeth of drive wheel 3 and feed wheel 4 lock into each other properly.
- Tighten screws 1.
- Adjust guide 5 according to requirement 2 and tighten screws 2.

# Adjustment

## 1.04.13 Height of the feed wheel (on the model 591)

### Requirement

The feed wheel should protrude from the needle plate by tooth height (approx. 0.8 mm)



- Swing out the roller presser.
- Loosen screws 1.
- Adjust eccentric 3 (fastening screw accessible through hole 2) according to the requirement.
- Tighten screws 1.

## 1.04.14 Stitch length control eccentric

### Requirement

When the needle (with maximum stitch length set), coming from TDC, is 3 mm above the needle plate, the crank 3 must have reached its front point of reversal.

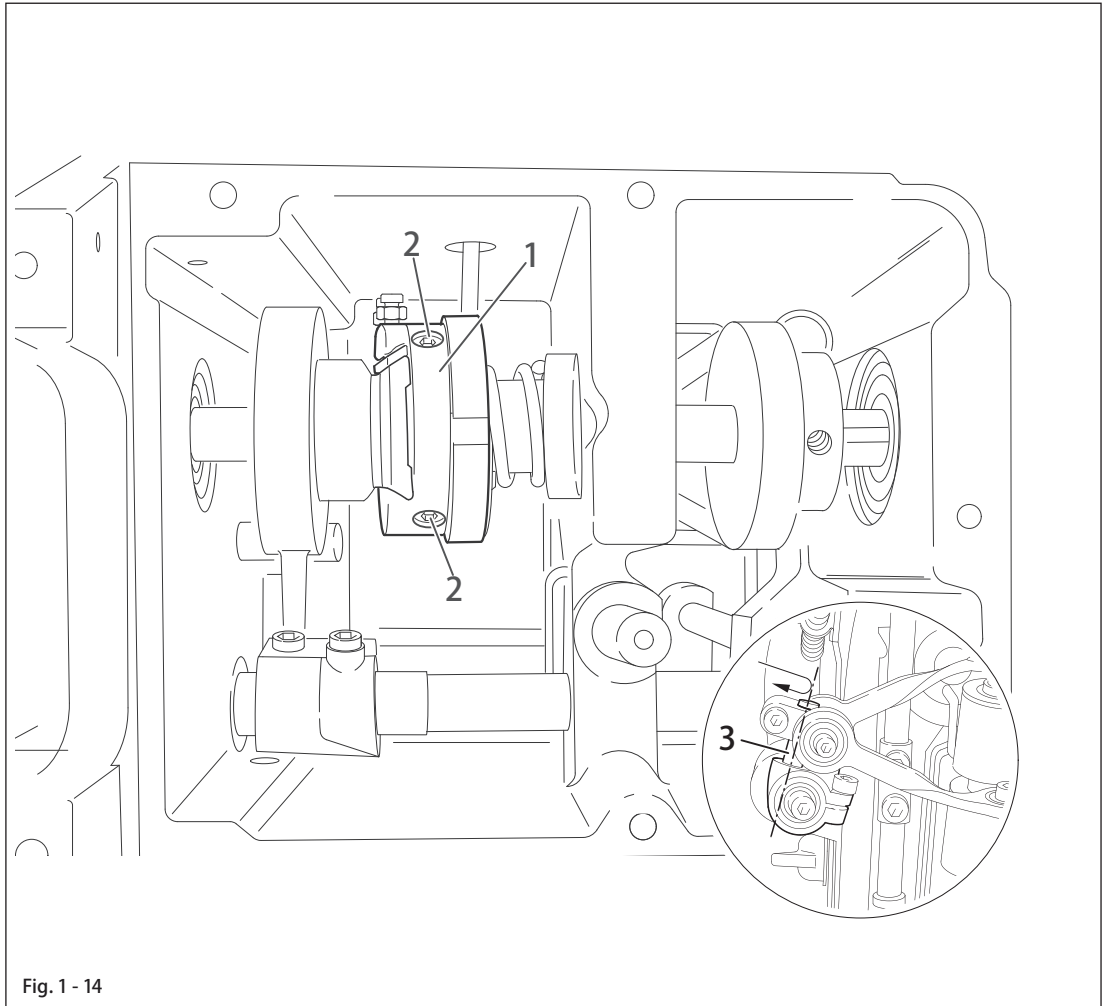
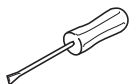


Fig. 1 - 14



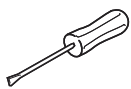
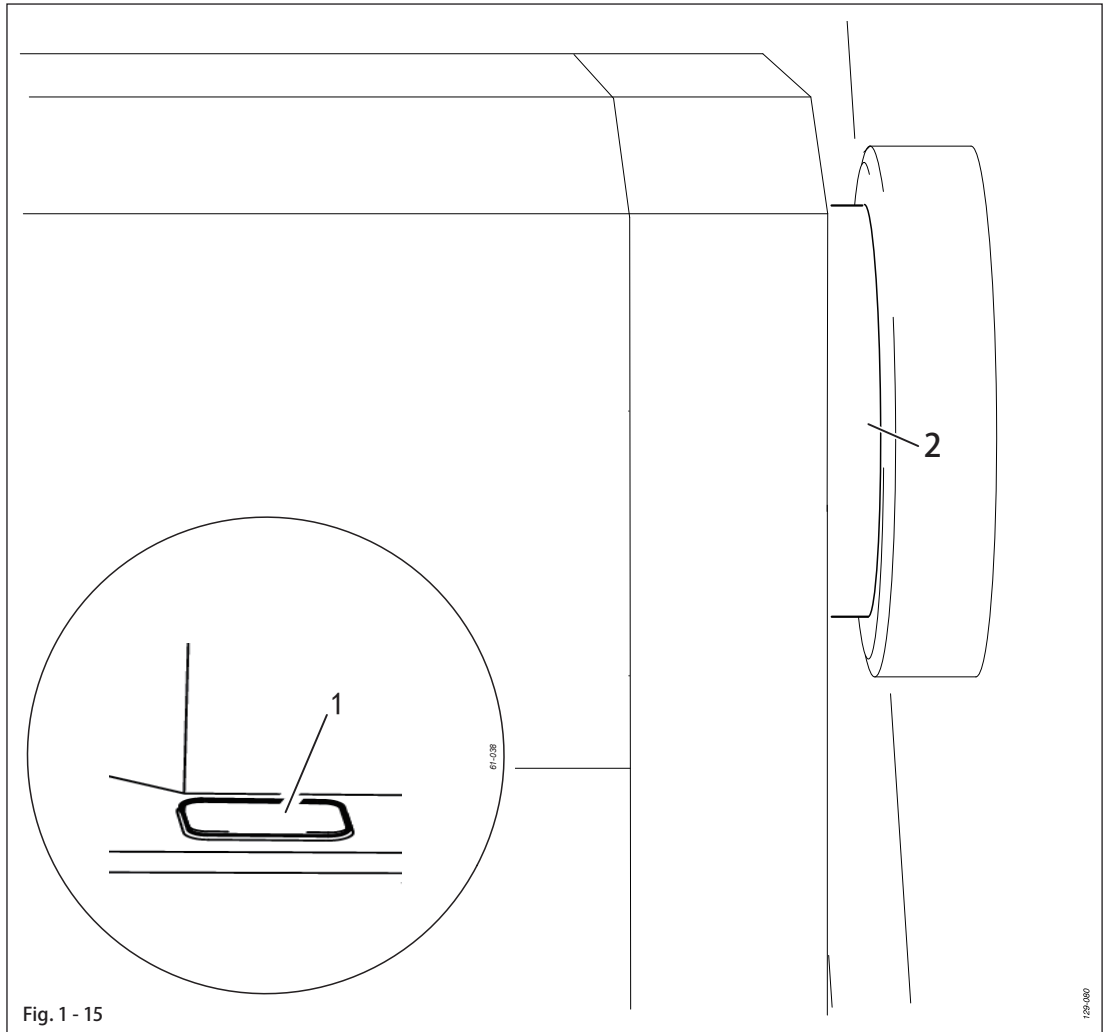
- Set the maximum stitch length.
- Turn stitch length control device 1 (screws 2) according to the requirement.

# Adjustment

## 1.04.15 Set stitch length

### Requirement

The stitch length is set by pressing key 1 and turning the balance wheel 2.



- Hold down key 1 and turn the balance wheel and until reach the stitch length which requirement.



## 1.04.16 Shaft crank to feed wheel drive

### Requirement

When the maximum stitch length is set, the linkage rod 3, or linkage rods 3 and 4 on the models 571 and 591, must be able to move freely when the balance wheel is turned.

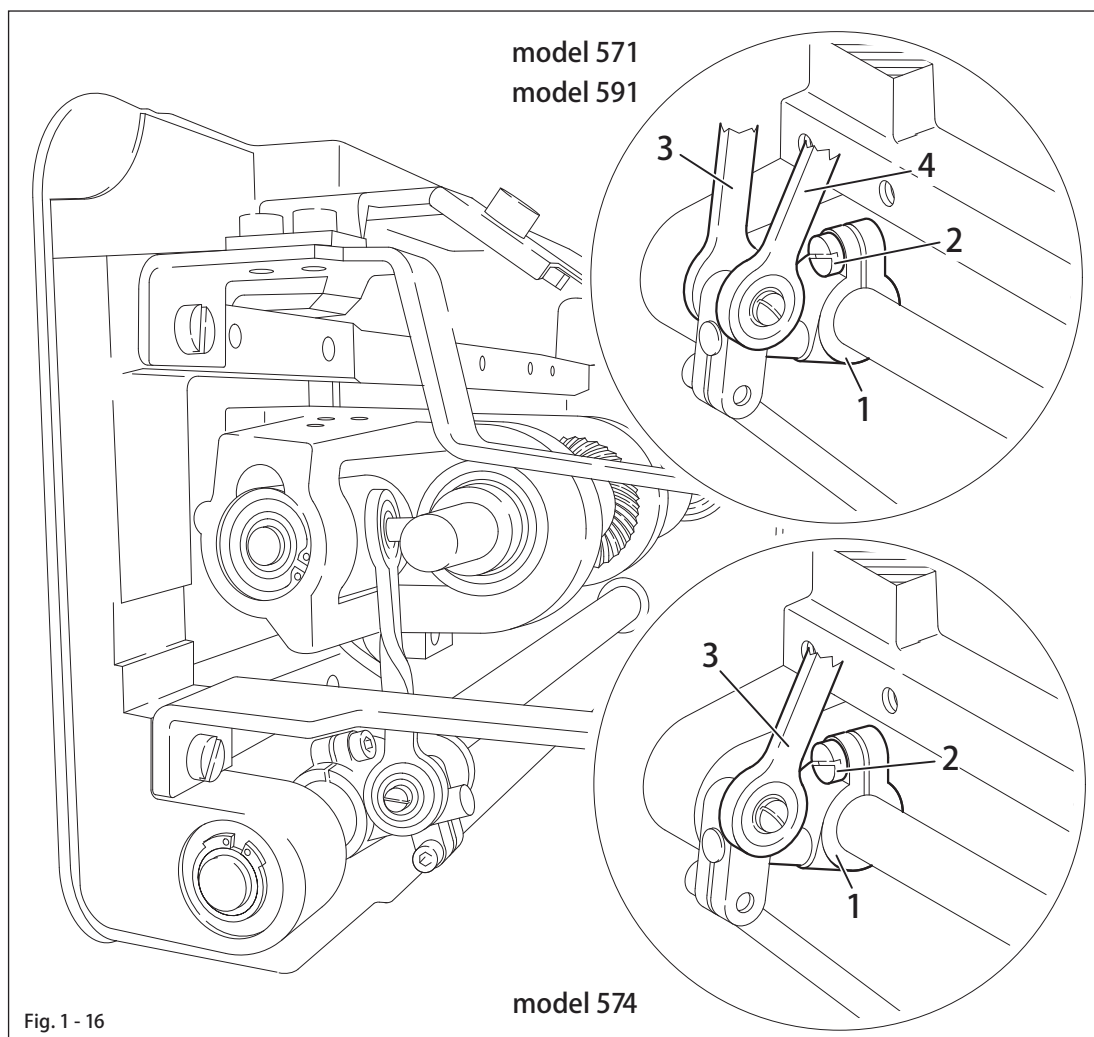
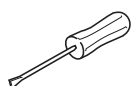


Fig. 1 - 16



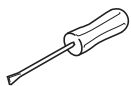
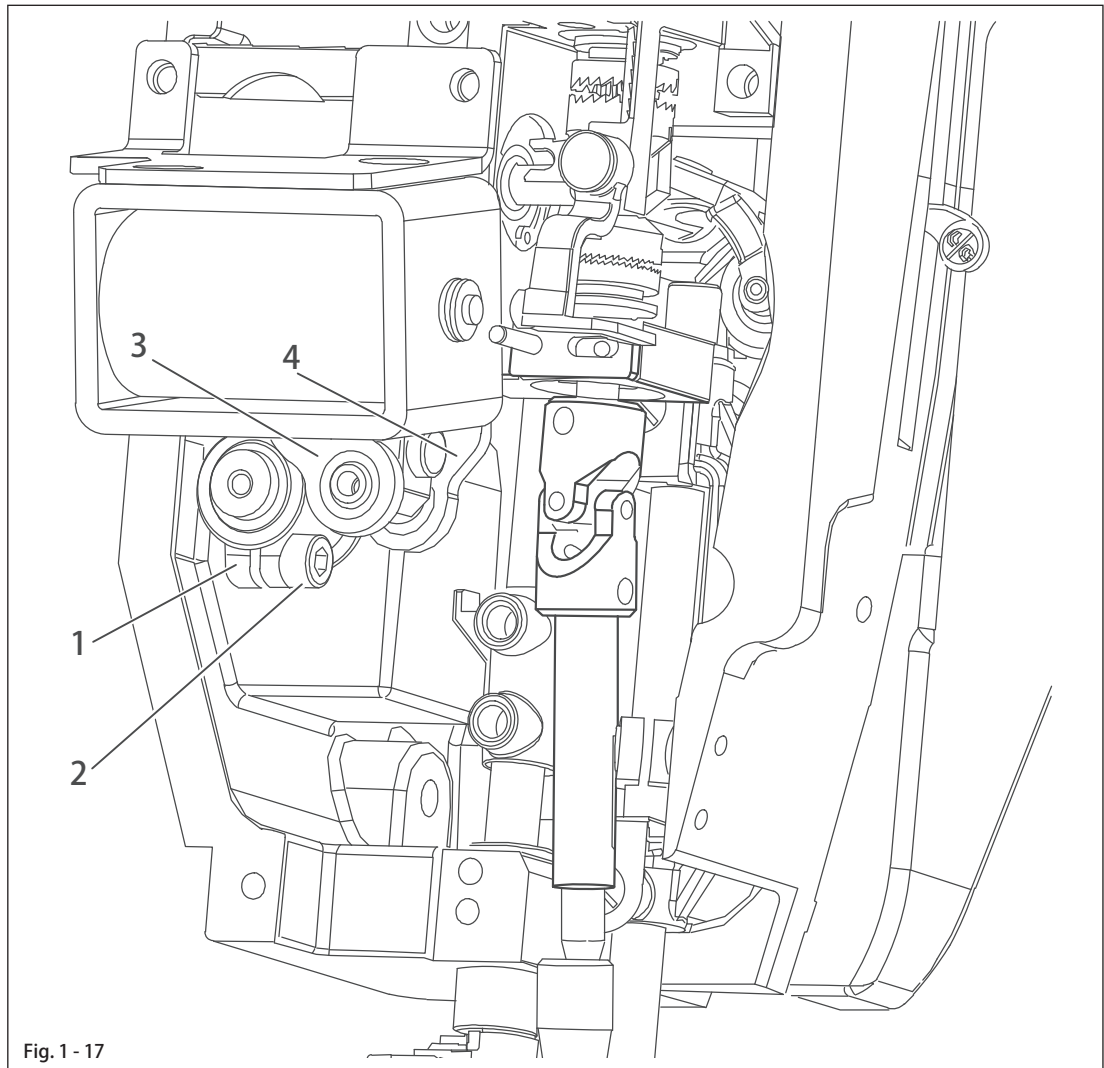
- Set the maximum stitch length.
- Twist or shift the shaft crank 1 (screw 2) according to the requirement.

# Adjustment

## 1.04.17 Shaft crank to roller presser drive

### Requirement

When the maximum stitch length is set, the linkage rods 3 and 4 must be able to move freely at their left and right point of reversal when the balance wheel is turned.

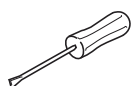
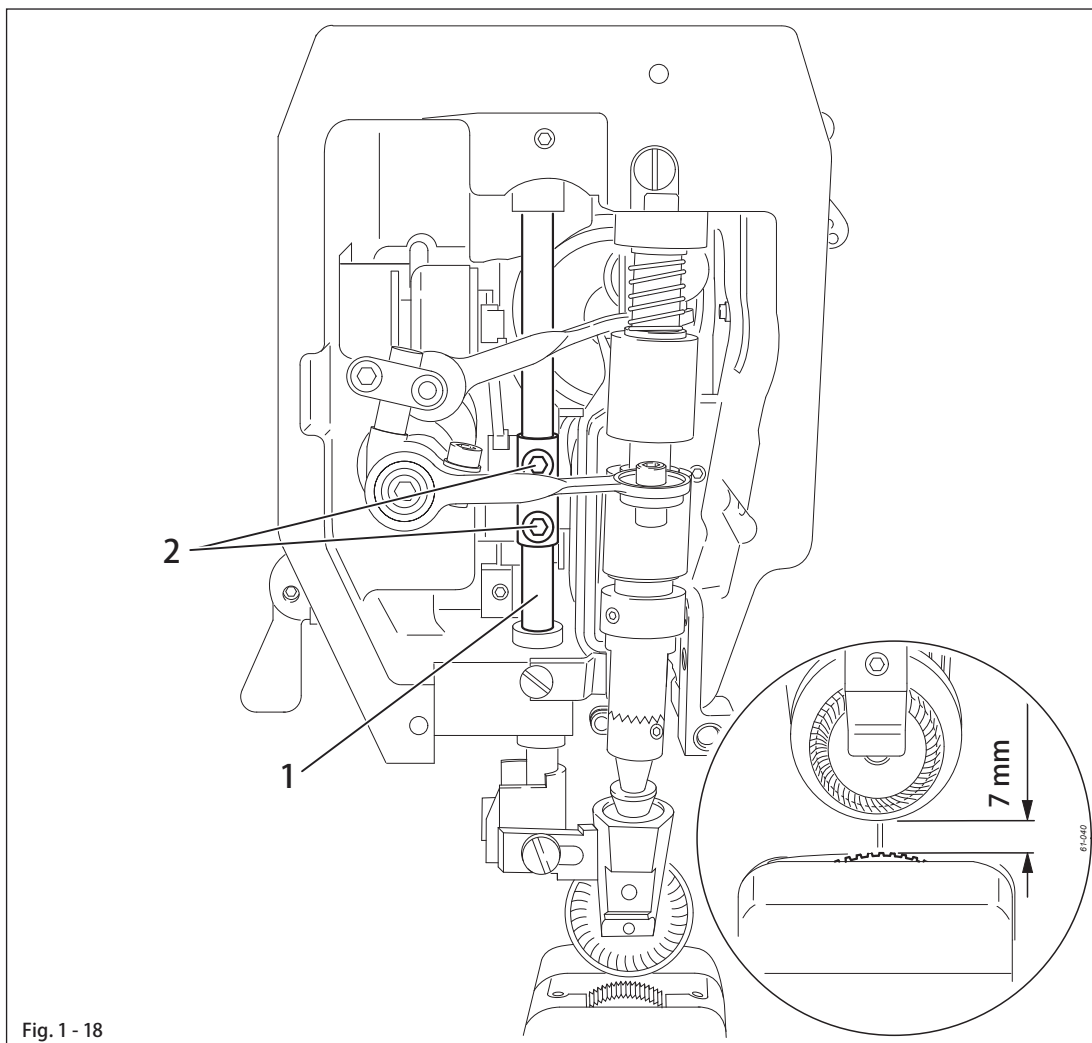


- Set the maximum stitch length.
- Twist clamp crank 1(screw 2) according to the requirement.

## 1.04.18 Clearance between roller presser and feed wheel

**Requirement**

When the presser bar lifter is raised, the clearance between the roller presser and the feed wheel must be 7 mm.



- Raise the presser bar lifter.
- Adjust the presser bar 1 (screws 2) according to the requirement. Make sure that the roller presser is parallel to the feed wheel.

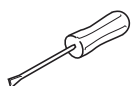
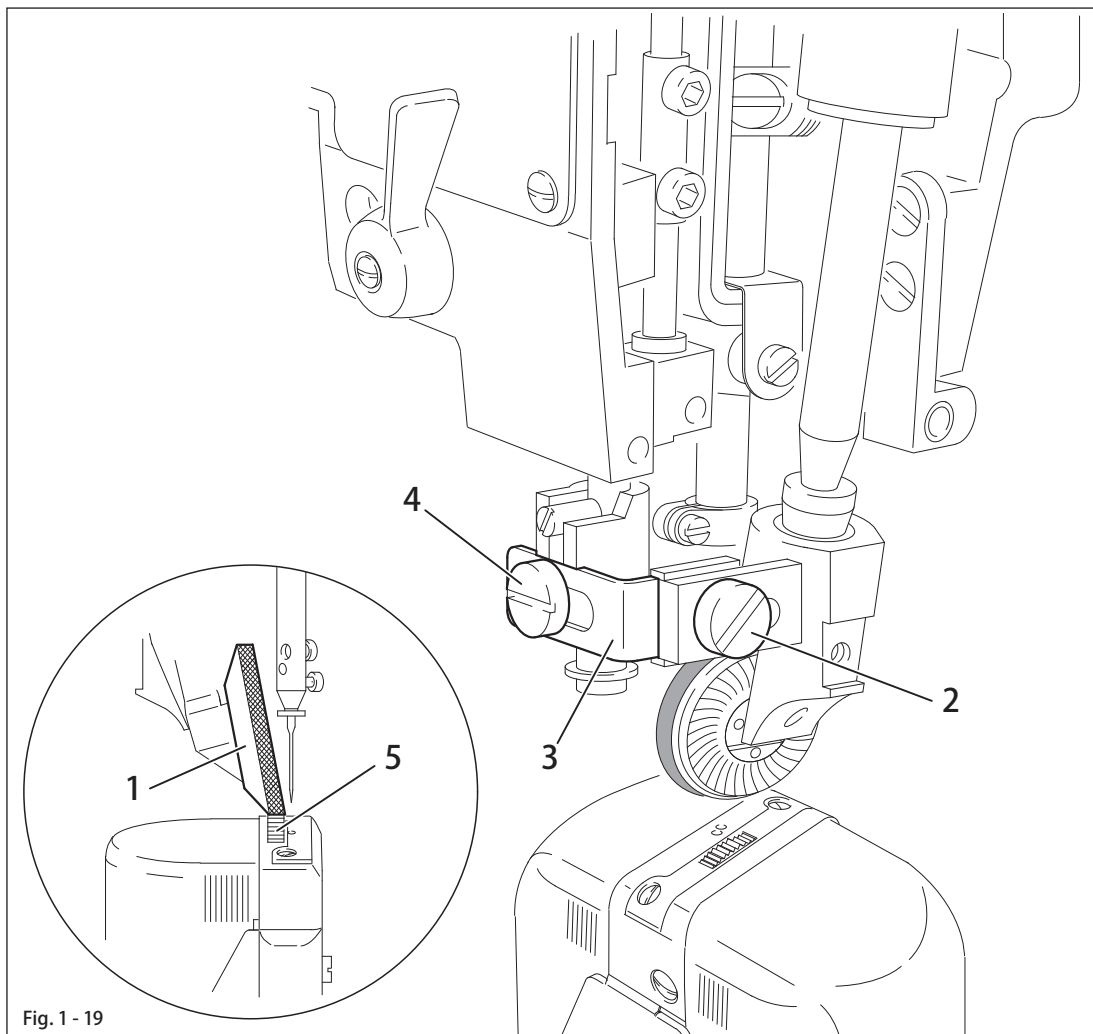
# Adjustment

## 1.04.19 Roller presser

### Requirement

When the roller presser 1 is touching the feed wheel 5 it must

1. be parallel to feed wheel 5, as seen in the direction of sewing,
2. be in the centre of the needle (on model 574 the left needle), as seen in the direction of sewing,
3. be as near as possible to the needle (on model 574 the left needle), as seen crosswise to the direction of sewing.



- Raise the roller presser.
- Always observe requirement 1 for subsequent adjustments.
- Adjust roller presser 1 (screw 2) according to requirement 2.
- Lower roller presser 1 to rest on feed wheel 5.
- Adjust roller presser bracket 3 (screw 4) according to requirement 3.



When sewing very tight curves, the roller presser 1 must be moved a little towards the operator.

## 1.04.20 Stitch length on stitch length scale

### Requirement

When the stitch length is set at " 3 ", and after the needle has entered a strip of leather 11 times, the total length from the first to last needle penetration must be 30 mm.

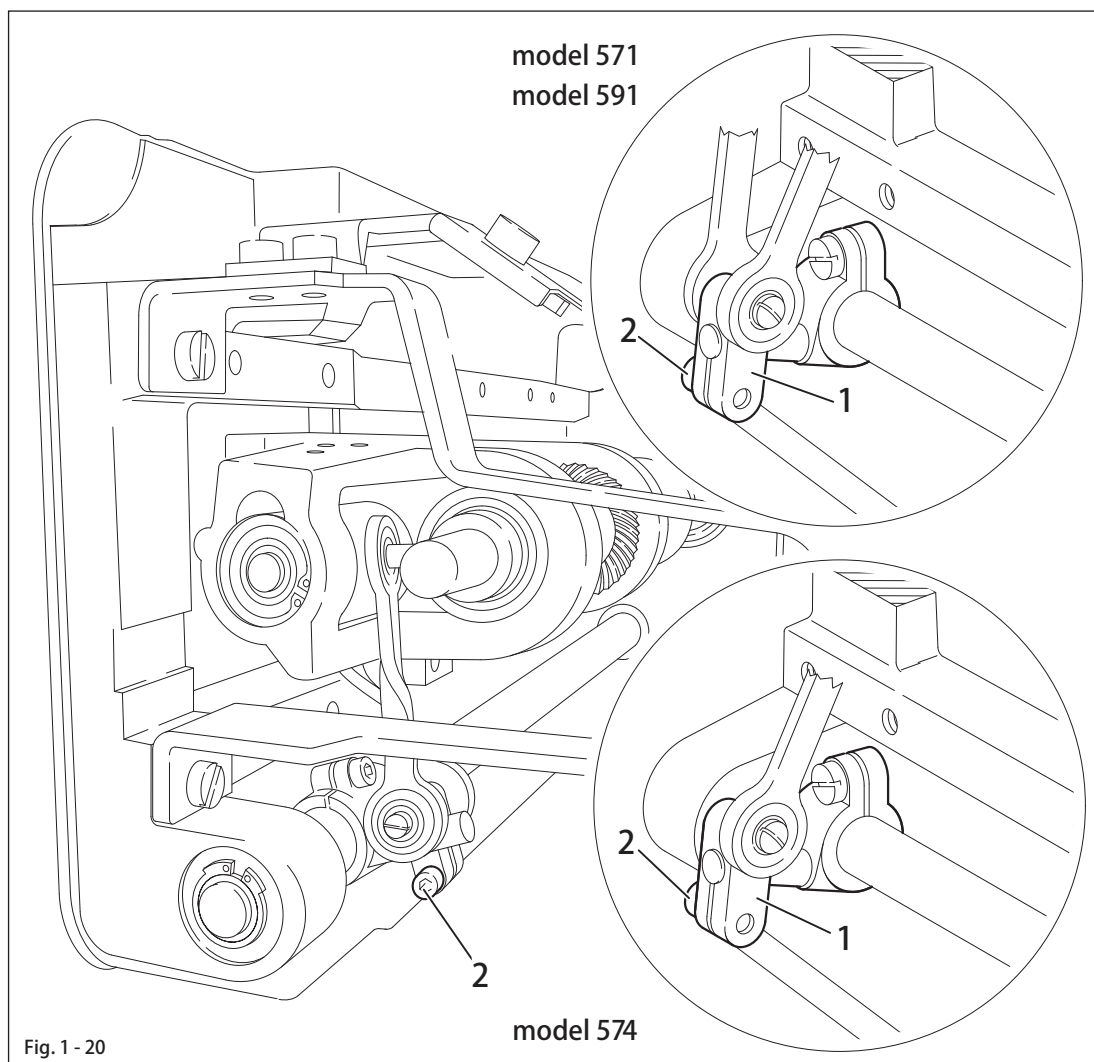
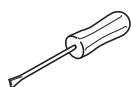


Fig. 1 - 20



- Set stitch length " 3 ".
- By turning the balance wheel, let the needle enter 11 times and measure the total length.
- Adjust clamp 1 (screw 2) according to the requirement.



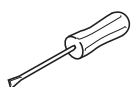
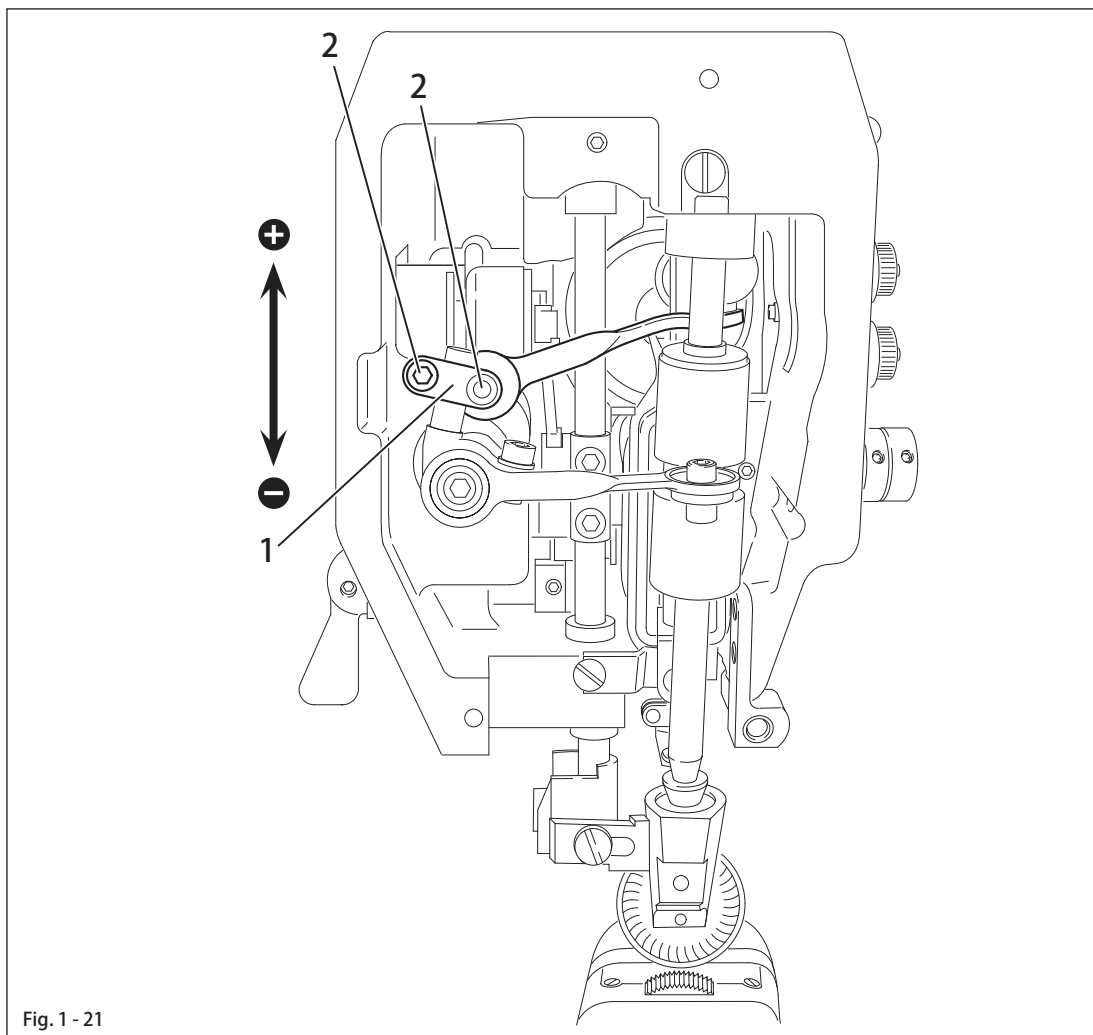
Clamp 1 must not be positioned diagonally to the rock shaft!

# Adjustment

## 1.04.21 Synchronization of roller presser and feed wheel

### Requirement

After 30 needle penetrations in a strip of leather the total length from the first to the last penetration should be the same, both in the lower and the upper leather layer.



- Set stitch length " 3 ".
- By turning the balance wheel, let the needle enter 30 times.
- Compare the total sewn length of the lower and upper leather layer.
- Adjust clamp 1 (screw 2) according to the requirement.



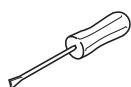
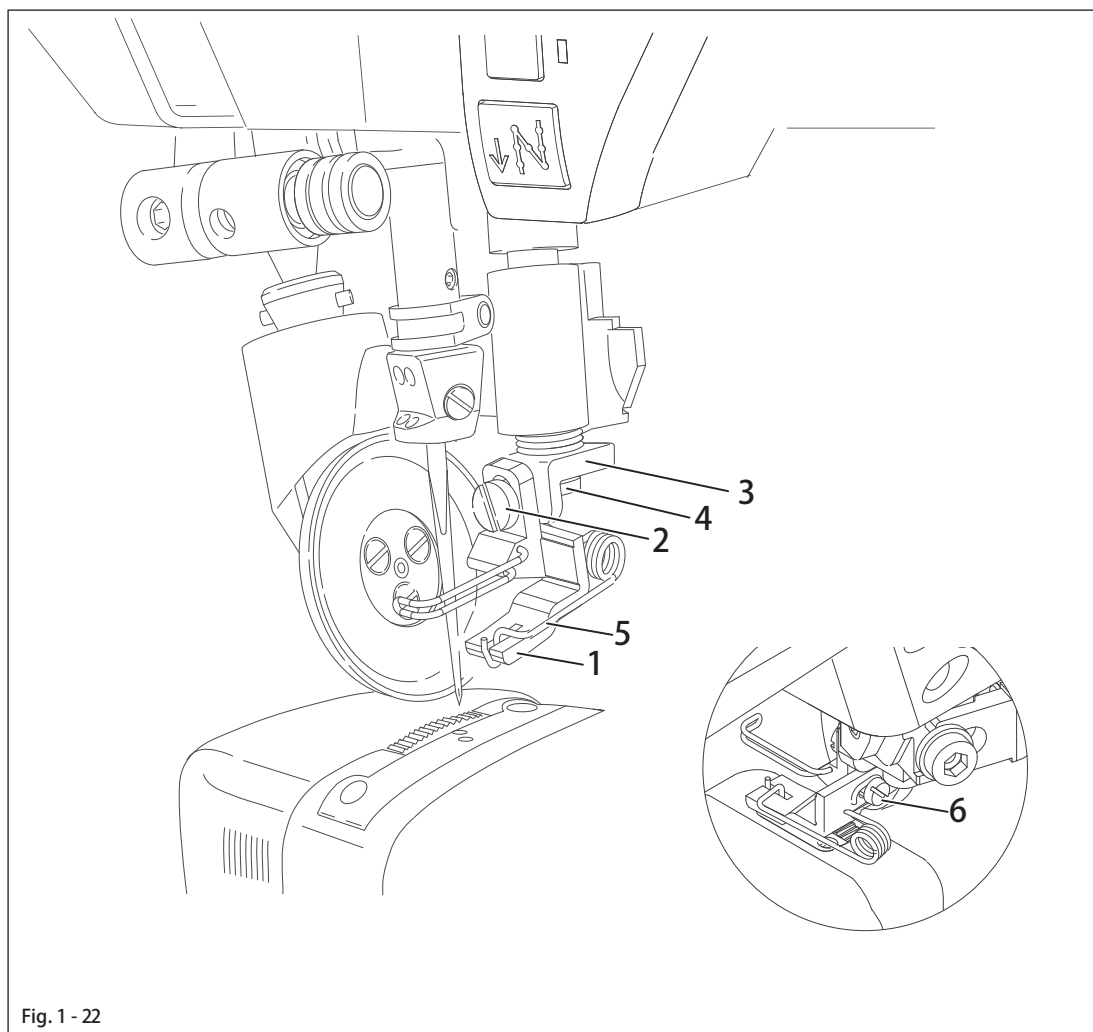
Clamp 1 must not be positioned diagonally to the rock shaft.

## 1.04.22 Retainer (only on model 574)

### Requirement

The retainer 1 must

1. be as close as possible to the needle, as seen in the direction of sewing and
2. be in the centre of the needle, as seen crosswise to the direction of sewing.
3. When the roller presser is lowered, the clearance between the retainer 1 and the sewing material should be 0.2 - 0.3 mm .



- Adjust retainer 1 (screw 2) according to requirement 3.
- Adjust bracket 3 (screw 4) according to requirement 1 .
- Adjust retainer 1 (screw 6) according to requirement 2 .



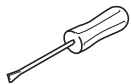
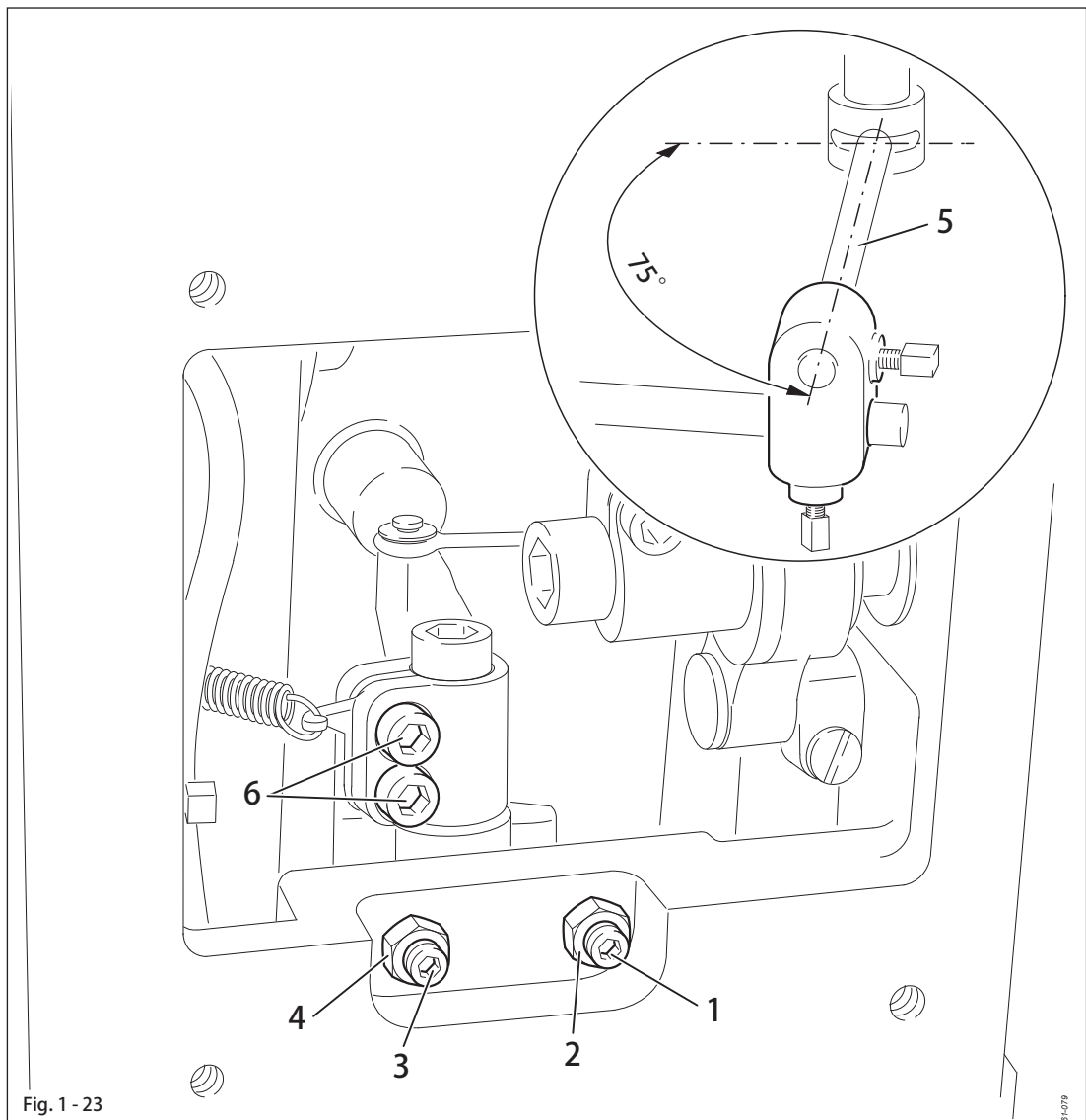
The retainer 1 can be adjusted as required according to requirement 2.

# Adjustment

## 1.04.23 Knee lever

### Requirement

1. Before the roller presser rises, the knee lever must still have a slight play.
2. When the knee lever is raised as far as possible, the lever for the roller presser must drop automatically.
3. Knee lever bar 5 must be at an angle of approx.  $75^\circ$  to the bedplate.



- Adjust screw 1 (nut 2) according to requirement 3.
- Adjust screw 3 (nut 4) according to requirement 2.
- Set bar 5 (Screws 6) according to requirement 3.



## 1.04.24 Needle thread tension release

### Requirement

1. When the presser bar lifter is raised, the tension discs 3 should be pressed at least 0.5 mm apart.
2. When the roller presser is lowered, the tension must be fully effective.

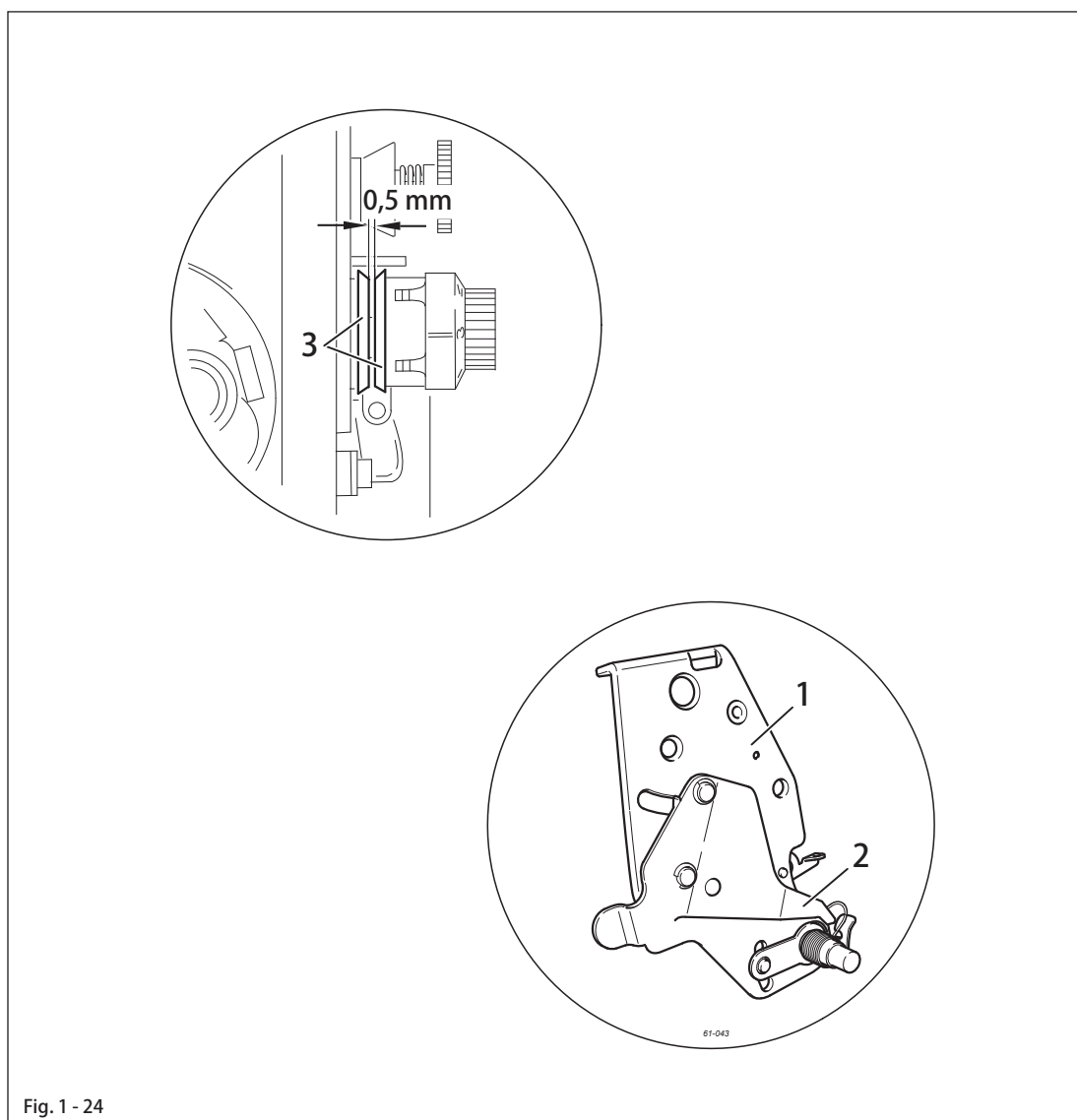
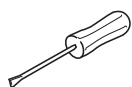


Fig. 1 - 24



- Unscrew the tension mounting plate 1 and align pressure plate 2 according to the requirement.

# Adjustment

## 1.04.25 Thread check spring (model 571 and 591)

### Requirement

1. The movement of thread check spring 7 should be completed when the needle point penetrates the fabric (spring stroke approx. 7 mm).
2. When the largest thread loop is formed while the thread is passed around the hook, the thread check spring 7 should rise slightly from its support

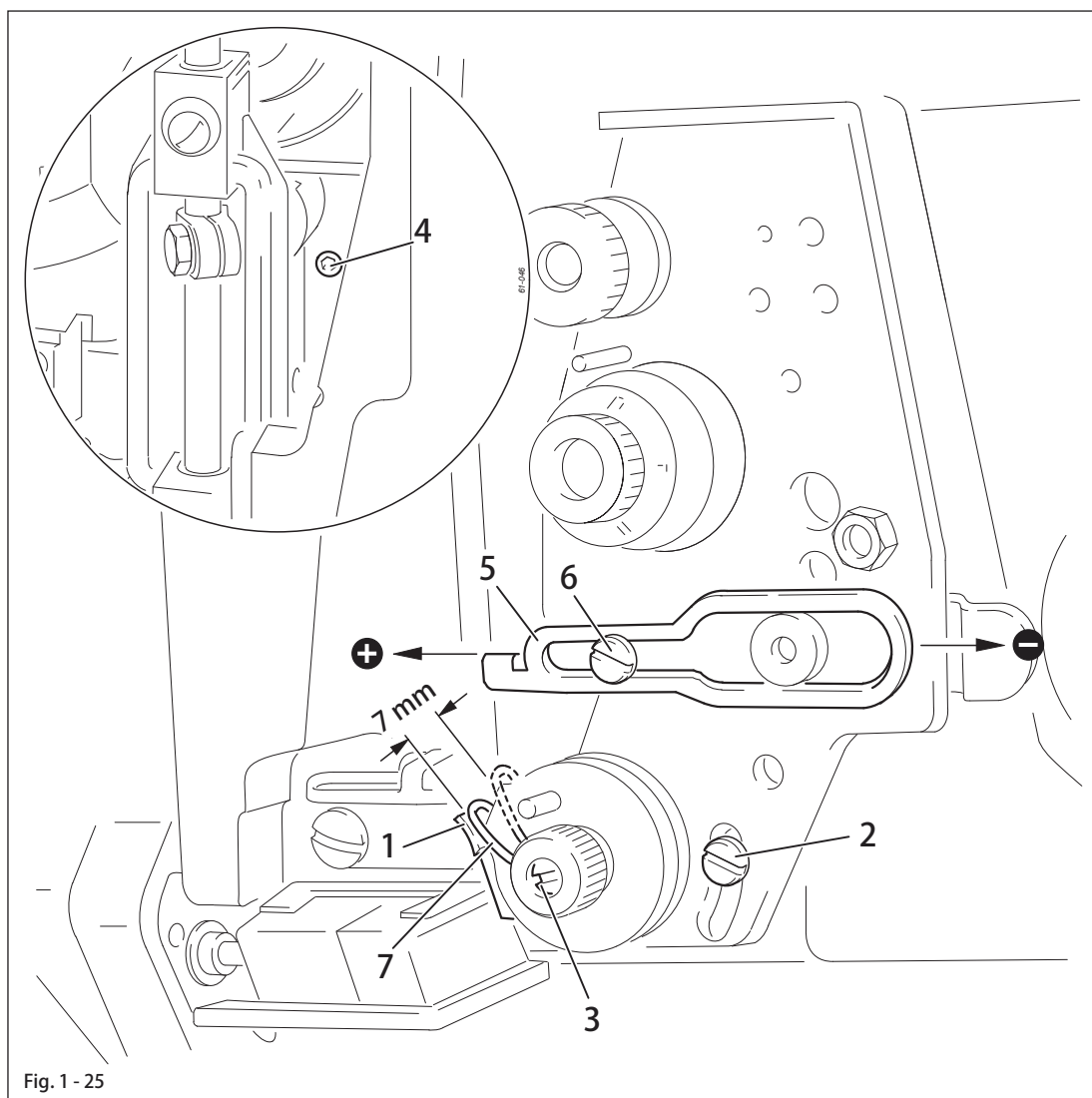
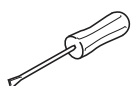


Fig. 1 - 25



- Adjust support 1 (screw 2) according to requirement 1.
- To adjust the spring tension turn screw 3 (screw 4).
- Adjust the thread regulator 5 (screw 6) according to requirement 2.



For technical reasons it may be necessary to deviate from the specified spring stroke or spring tension.  
Move the thread regulator 5 (screw 6) towards "+" (= more thread) or "-" (= less thread).

## 1.04.26 Thread check springs (model 574)

### Requirement

1. The movement of thread check springs 3 and 6 should be completed when the needle points penetrate the fabric (spring stroke approx. 7 mm)
2. When the largest thread loop is formed while the thread is passed around the hook, the thread check springs 3 and 6 should rise slightly from supports 1 and 9.

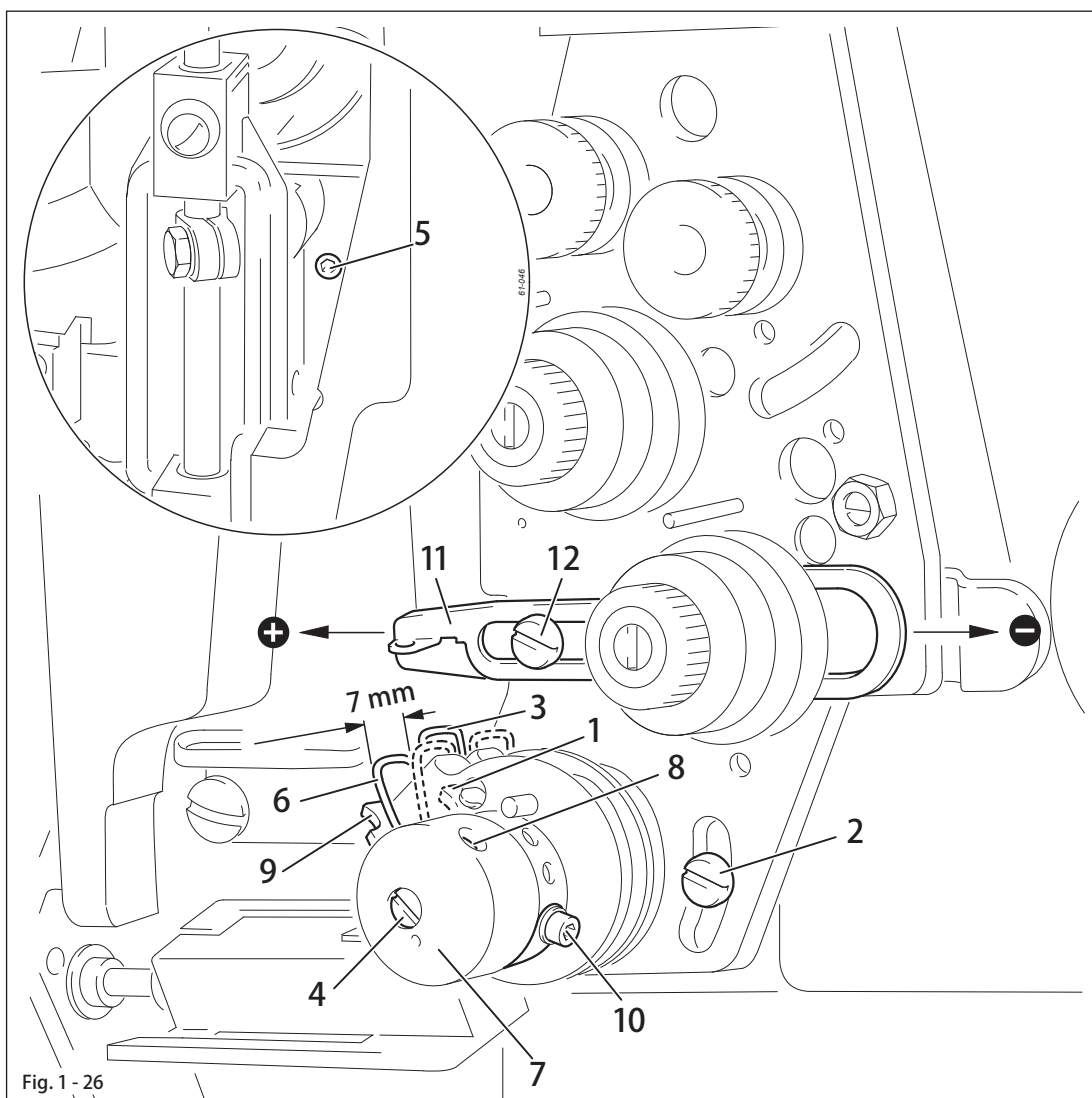
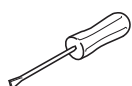


Fig. 1 - 26



- Adjust support 1 (screw 2) according to requirement 1.
- To adjust the spring tension of thread check spring 3 turn screw 4 (screw 5).
- To adjust the spring tension of thread check spring 6 turn bush 7 (screw 8).
- Adjust support 9 (screw 10) according to requirement 1. (If the adjustment range is too low, support 9 can be screwed into another hole).
- Adjust the thread regulator 11 (screw 12) according to requirement 2.



For technical reasons it may be necessary to deviate from the specified spring stroke or spring tension.

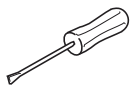
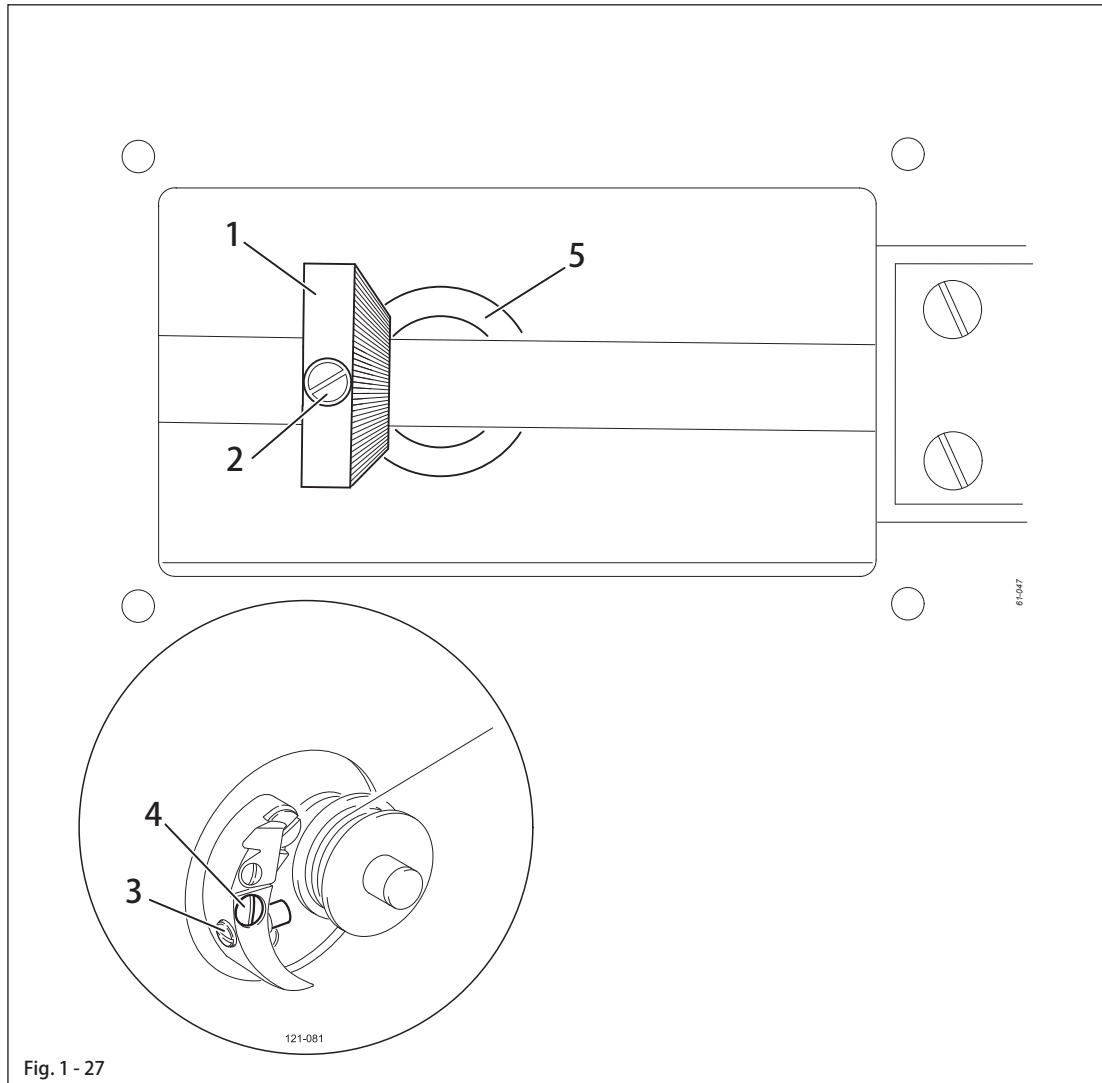
Move the thread regulator 12 (screw 12) towards "+" (= more thread) or "-" (= less thread).

# Adjustment

## 1.04.27 Bobbin winder

### Requirement

1. When the bobbin winder is engaged, the winding spindle must be driven reliably. When the bobbin winder is disengaged, the friction wheel 5 must not be moved by drive wheel 1.
2. The bobbin winder must switch itself off, when the filled thread is about 1 mm from the edge of the bobbin.

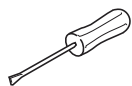
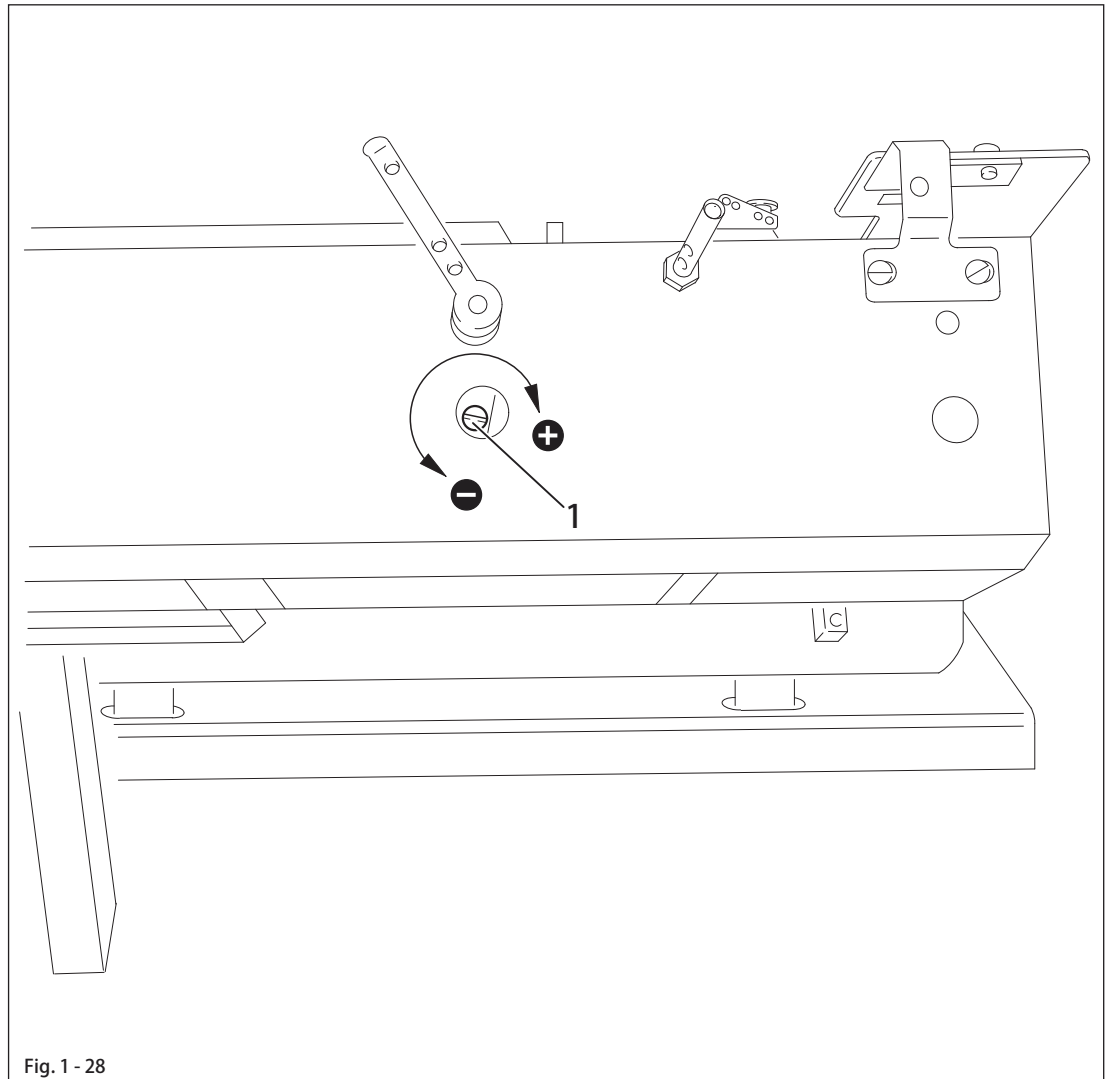


- Position drive wheel 1 (screws 2) according to requirement 1.
- Position bolt 3 (screw 4) according to requirement 2.

## 1.04.28 Pressure of roller presser

### Requirement

The material must be transported properly even at top sewing speed. No pressure marks should appear on the material.



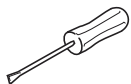
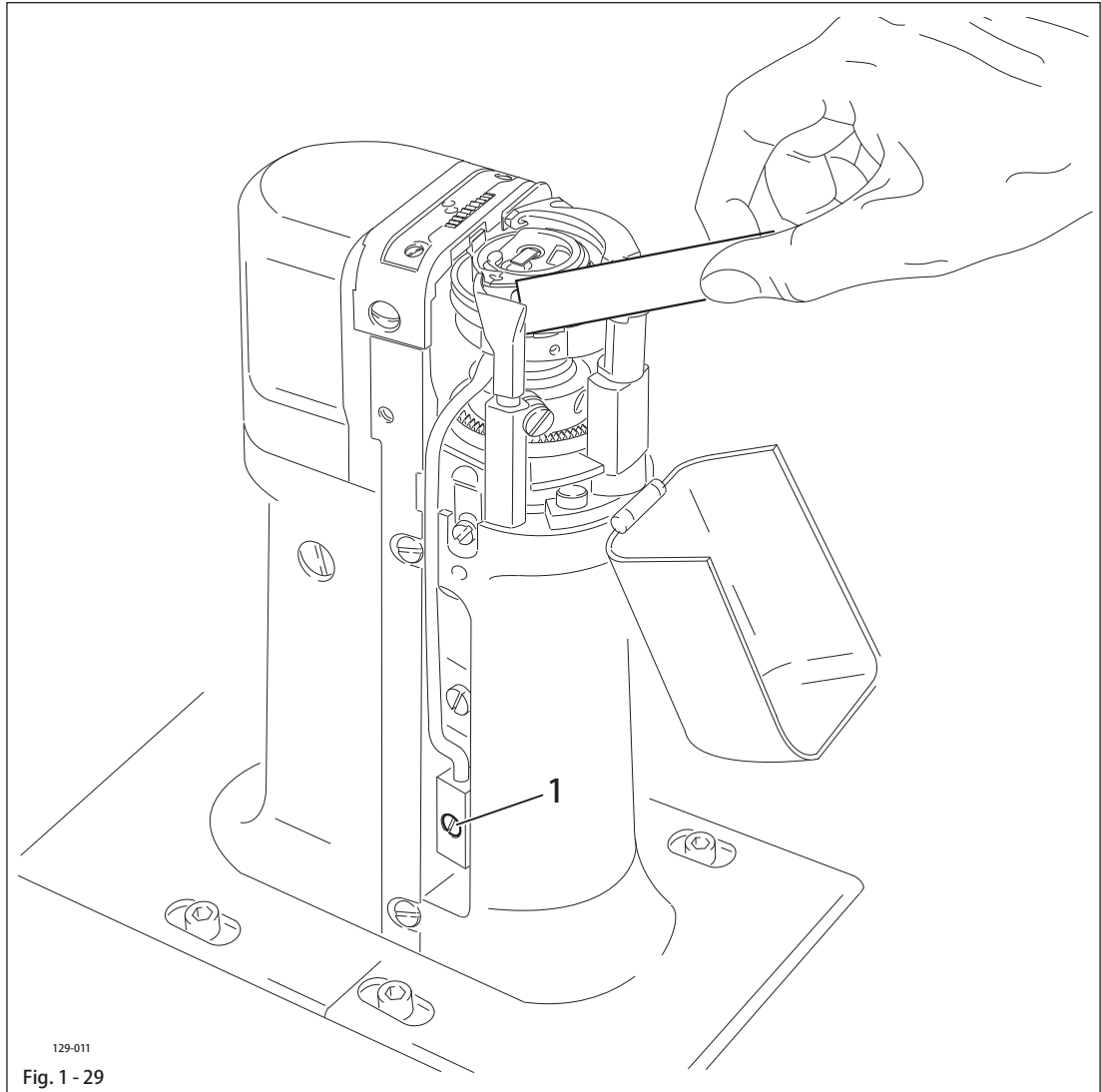
- Adjust roller presser pressure with screw 1 according to the requirement.

# Adjustment

## 1.04.29 Lubrication

### Requirement

After a running time of 10 seconds a fine line of oil should form on a strip of paper held next to the hook.



- Check whether oil has been filled in and that there is no air in the oil lines.
- Let the machine run for 2-3 min.



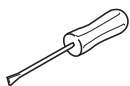
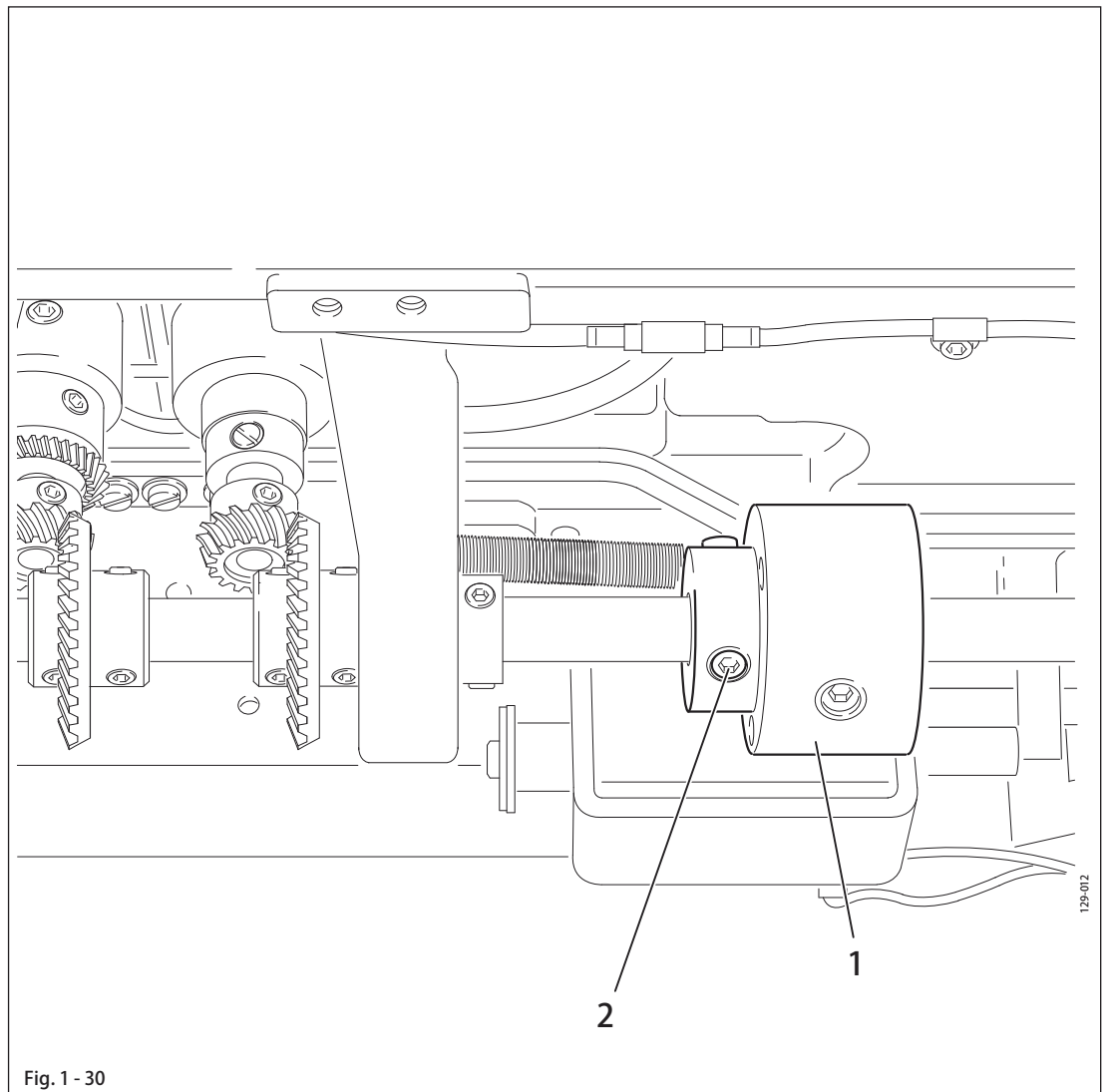
While the machine is running do not place hands in the needle or hook area!  
Danger of injury from moving parts!

- With the machine running hold a strip of paper on the hook and check the requirement.
- If necessary, adjust the oil flow on screw 1.

## 1.04.30 Re-engage safety coupling



The coupling 1 is set by the manufacturer. When the thread jams, the coupling 1 disengages in order to avoid damage to the hooks. A description of how to engage the coupling follows.



- Remove jammed thread.
- Hold coupling 1 with screw 2 and turn the balance wheel, until you feel coupling 1 snap back into place again.

# Adjustment

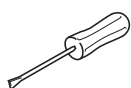
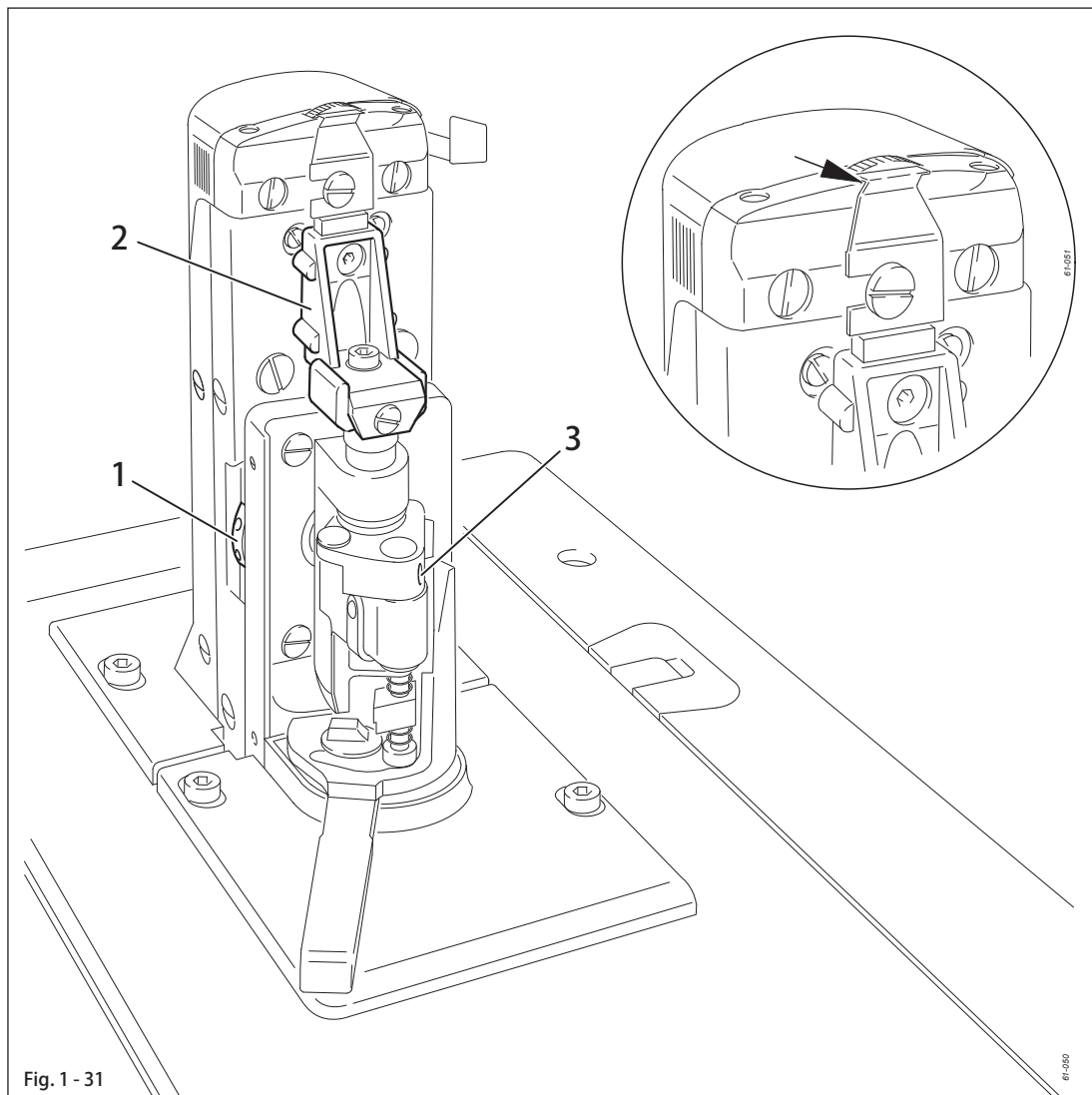
## 1.05 Adjusting the edge trimmer -725/04

### 1.05.01 Position of the knife holder (on model 571)

#### Requirement

When the thread trimmer is engaged and the adjusting wheel has been turned to its highest position

1. the knife holder 2 must be parallel to the post and
2. the top edge of the needle plate must be in the centre of the angular knife opening.



- Turn the adjusting wheel 1 to its highest position and engage edge trimmer.
- Adjust knife holder 2 (screw 3 ) according to the requirements.



## 1.05.02 Position of the knife holder (on models 574 and 591)

### Requirement

When the thread trimmer is engaged, the centre of the angular knife opening must be level with the top edge of the needle plate.

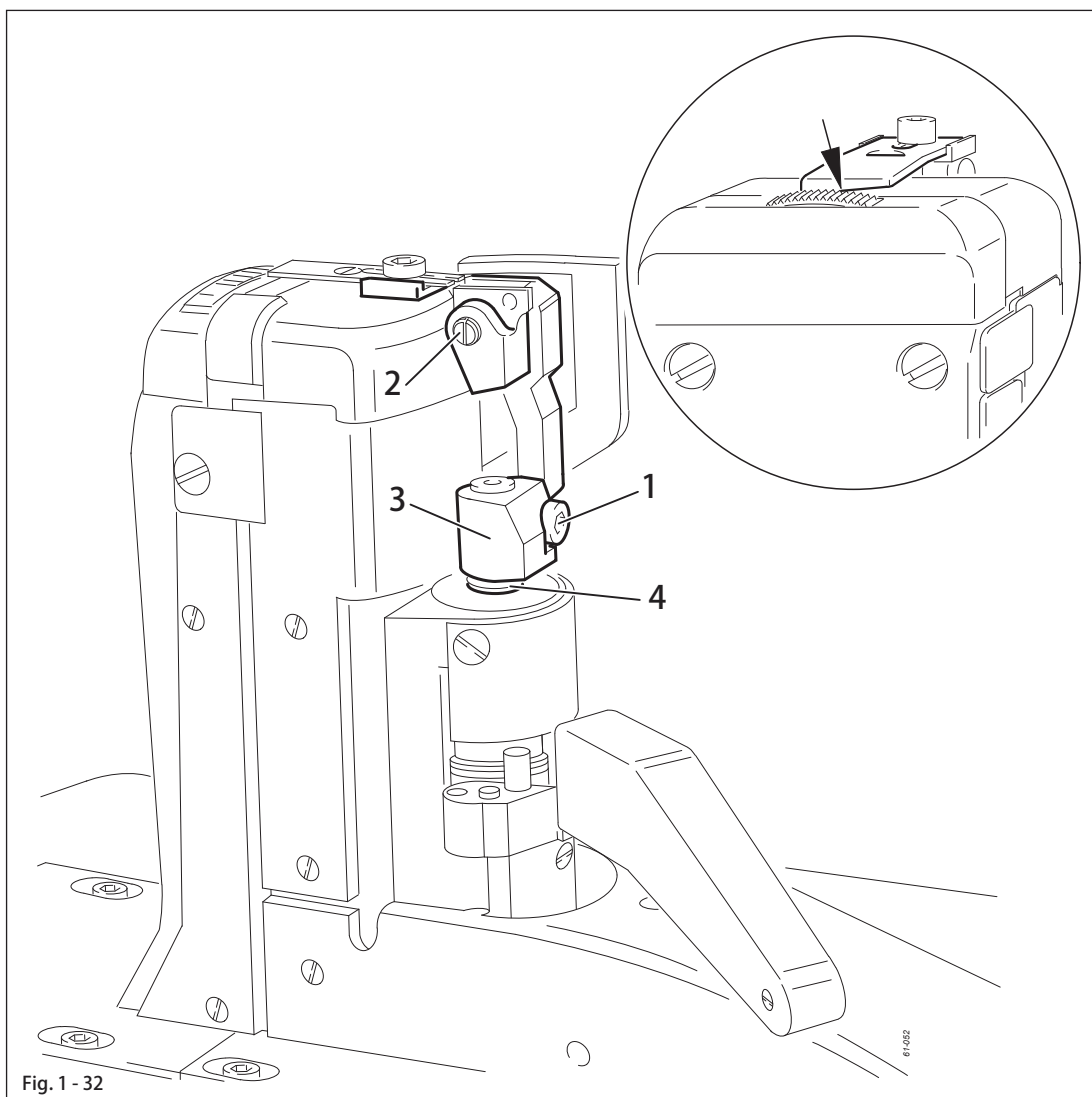
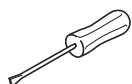


Fig. 1 - 32



- Switch off the machine and engage the edge trimmer.
- Loosen screw 1.
- By turning eccentric 2, position the knife in the centre of its adjustment range.
- Adjust knife holder 3 according to the requirement and tighten screw 1.
- Position locking ring 4 on the knife holder 3.



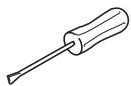
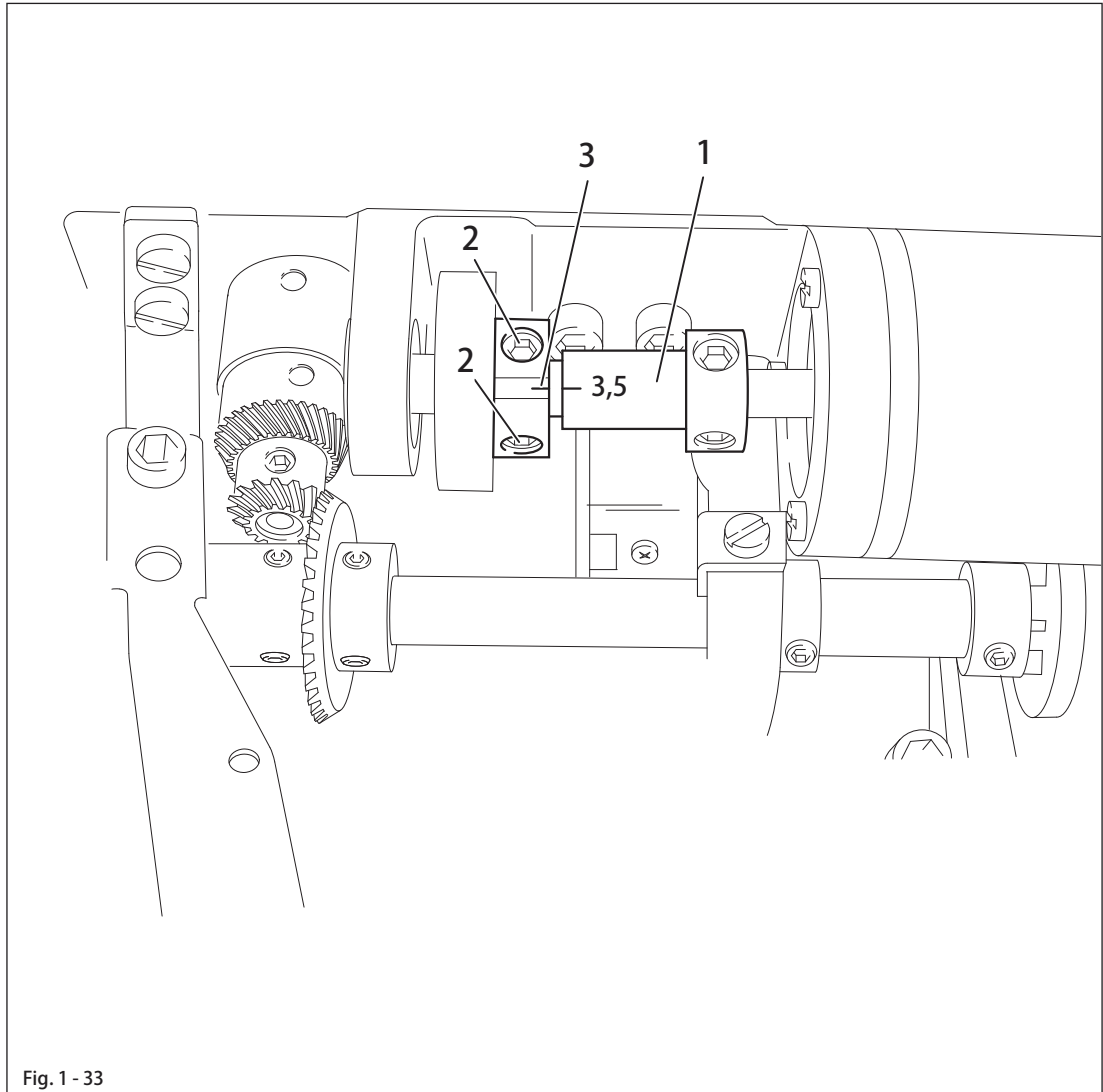
Depending on the material thickness, changes in the basic setting of eccentric 3 are possible.

# Adjustment

## 1.05.03 Knife stroke (on model 571)

### Requirement

The knife stroke can be adjusted over a range from 1.0 to 3.5 mm, allowing the best possible adaption to all materials used.

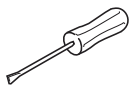
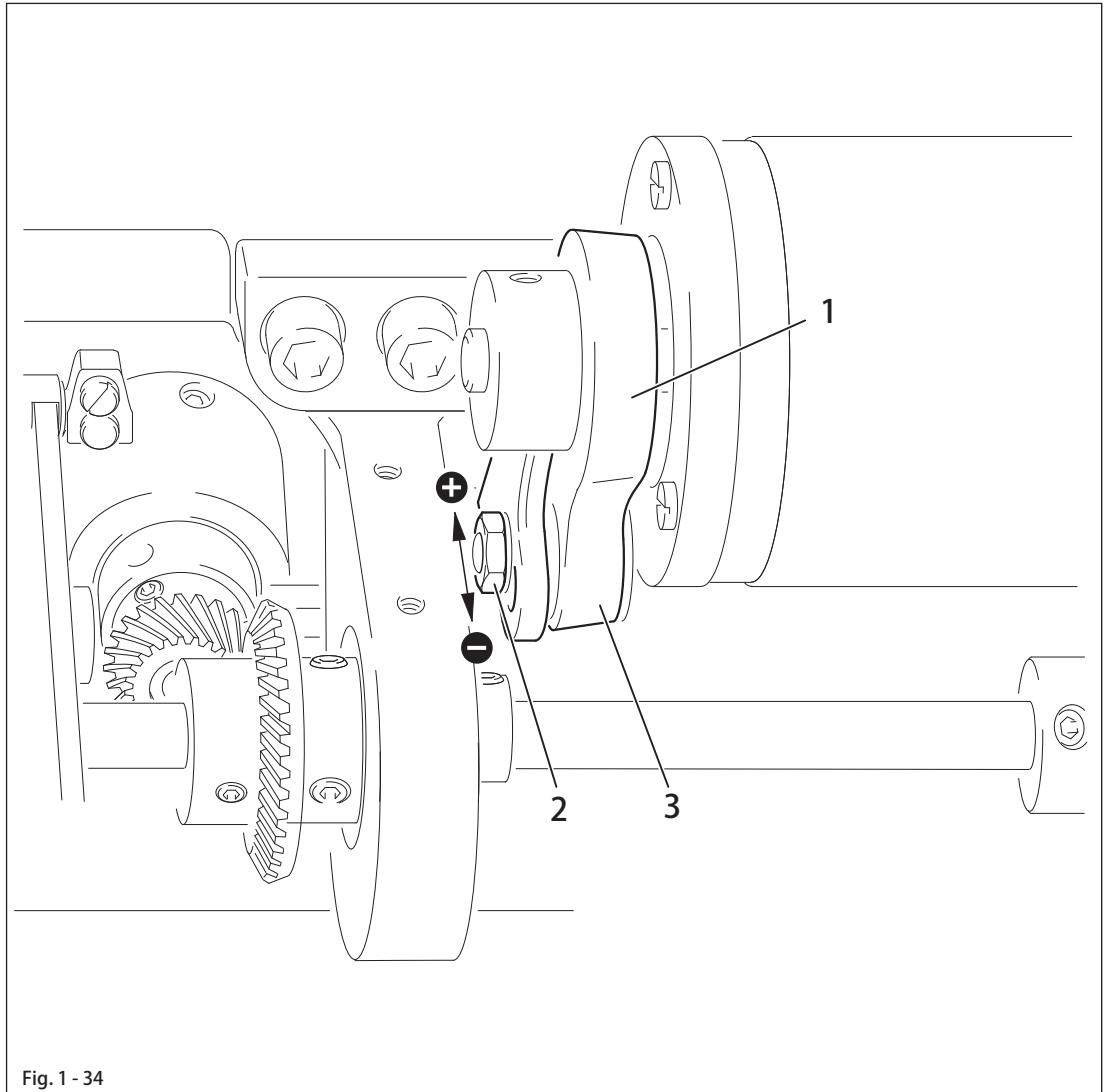


- Turn eccentric 1 (screws 2) so that the marking of the desired cutting stroke is opposite the marking on clamp collar 3.

## 1.05.04 Knife stroke (on models 574 and 591)

### Requirement

The knife stroke can be adjusted over a range from 2.0 to 3.5 mm, allowing the best possible adaption to all materials used.



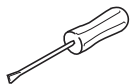
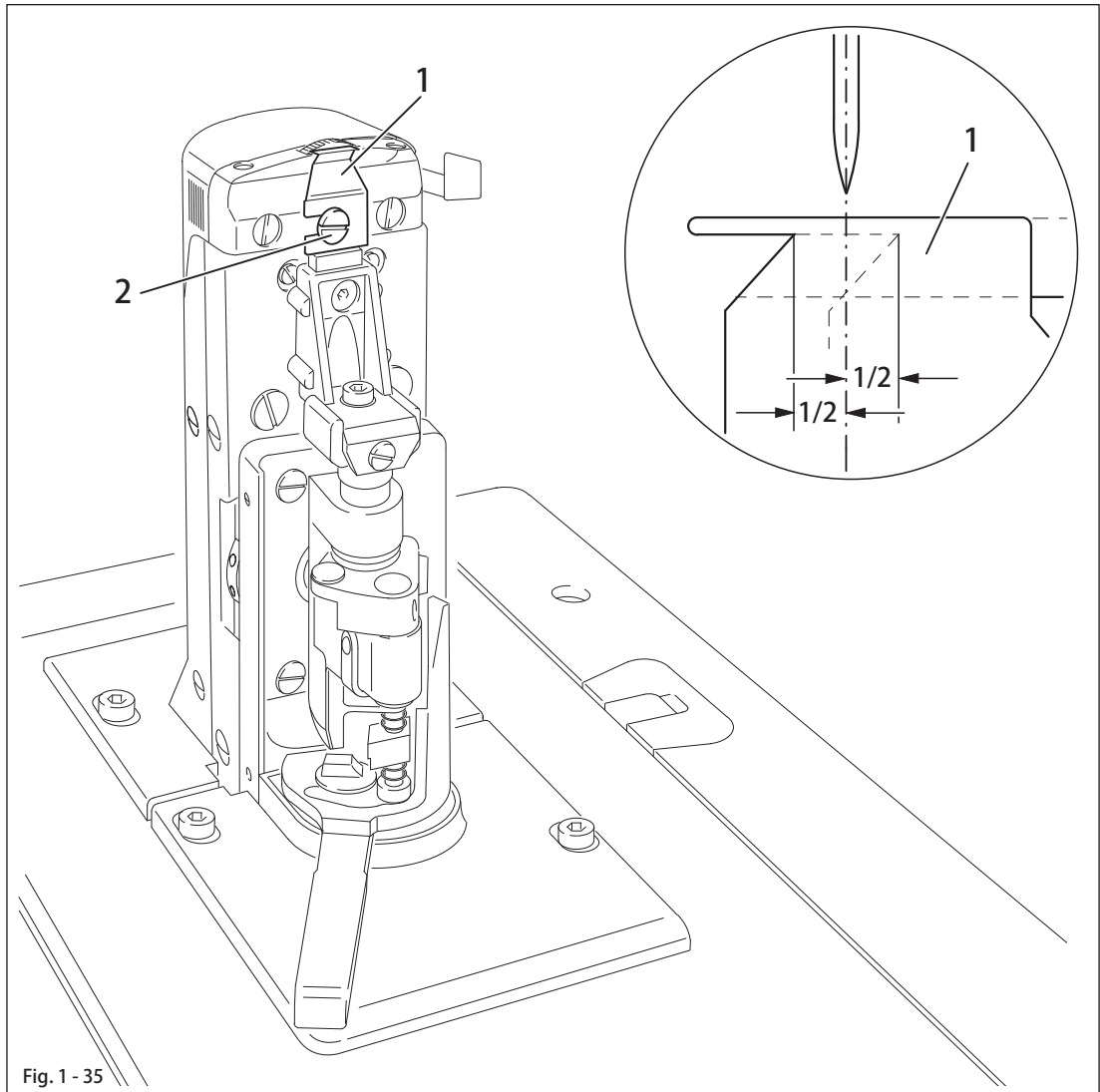
- Adjust crank 1 (nut 2) in slotted lever 3 according to the requirement.

# Adjustment

## 1.05.05 Cutting stroke (on model 571)

### Requirement

When the edge trimmer is engaged and the needle is in the needle hole, the stroke of knife 1 should be half in front of and half behind the needle, when the motor shaft is turned by hand.

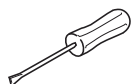
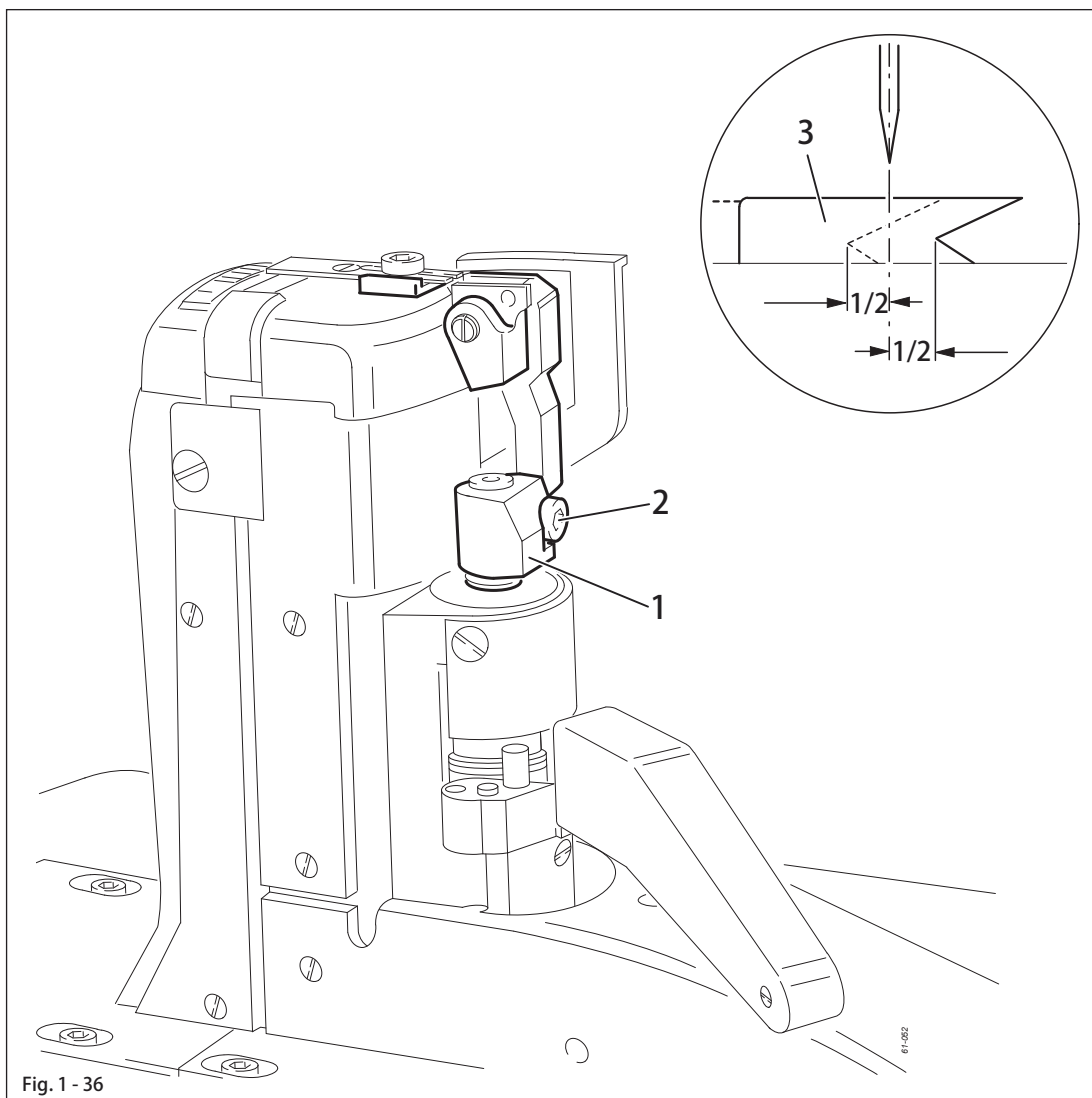


- Switch off the machine and engage the edge trimmer.
- Adjust knife 1(screw 2) according to the requirement.

## 1.05.06 Cutting stroke(on models 574 and 591)

### Requirement

When the edge trimmer is engaged and the needle is in the needle hole, the stroke of knife 3 should be half in front of and half behind the needle, when the motor shaft is turned by hand.



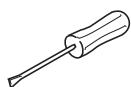
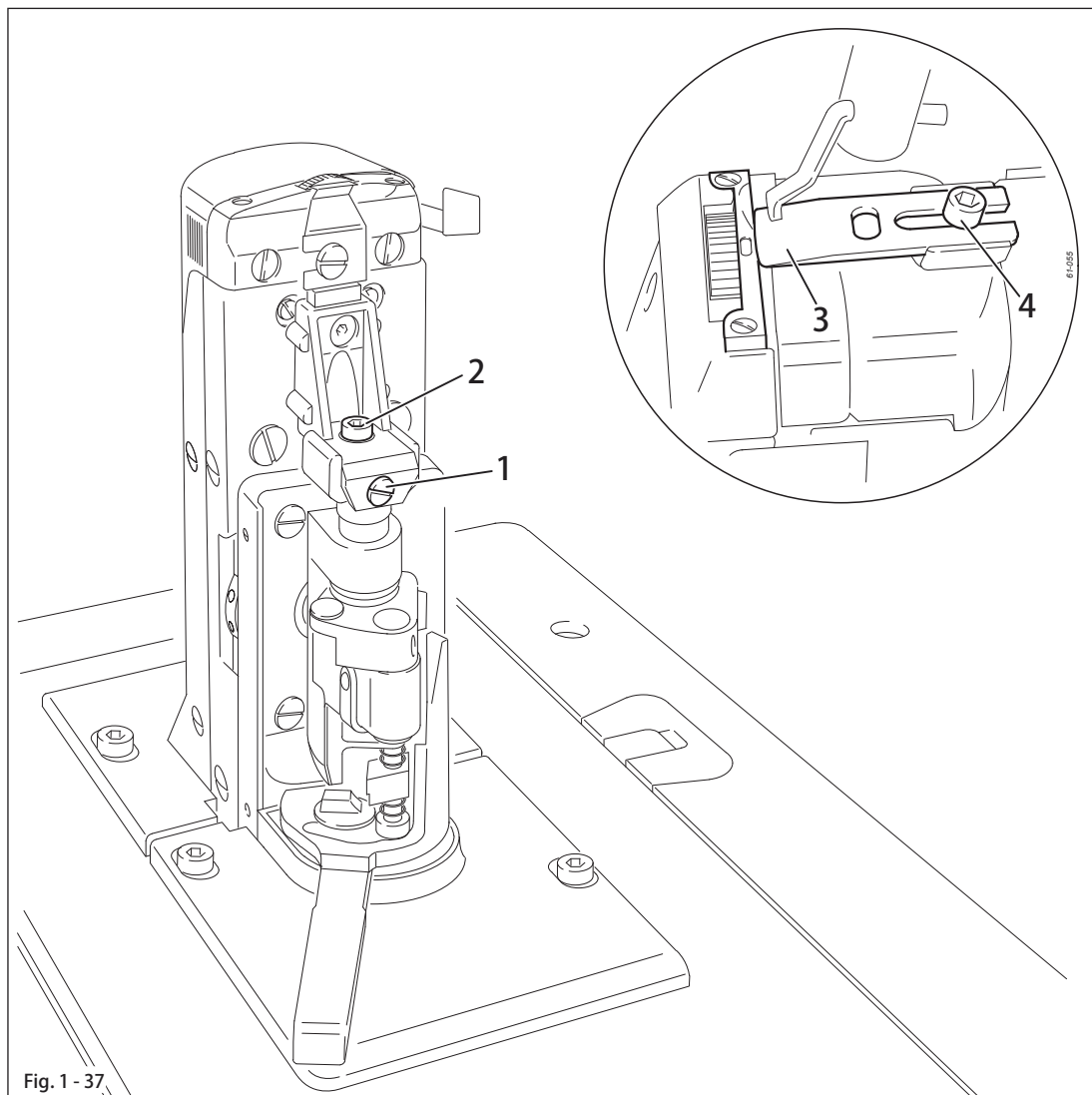
- Switch off the machine and engage the edge trimmer.
- Adjust knife holder 1(screw 2) according to the requirement.

# Adjustment

## 1.05.07 Knife position

### Requirement

When the edge trimmer is engaged, the knife should rest lightly on the needle plate insert, but no whistling sound should occur during trimming.



### model 571

- Adjust screw 1(screw 2) according to the requirements.
- Carry out a cutting test and repeat adjustment if necessary.

### model 574 and 591

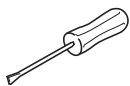
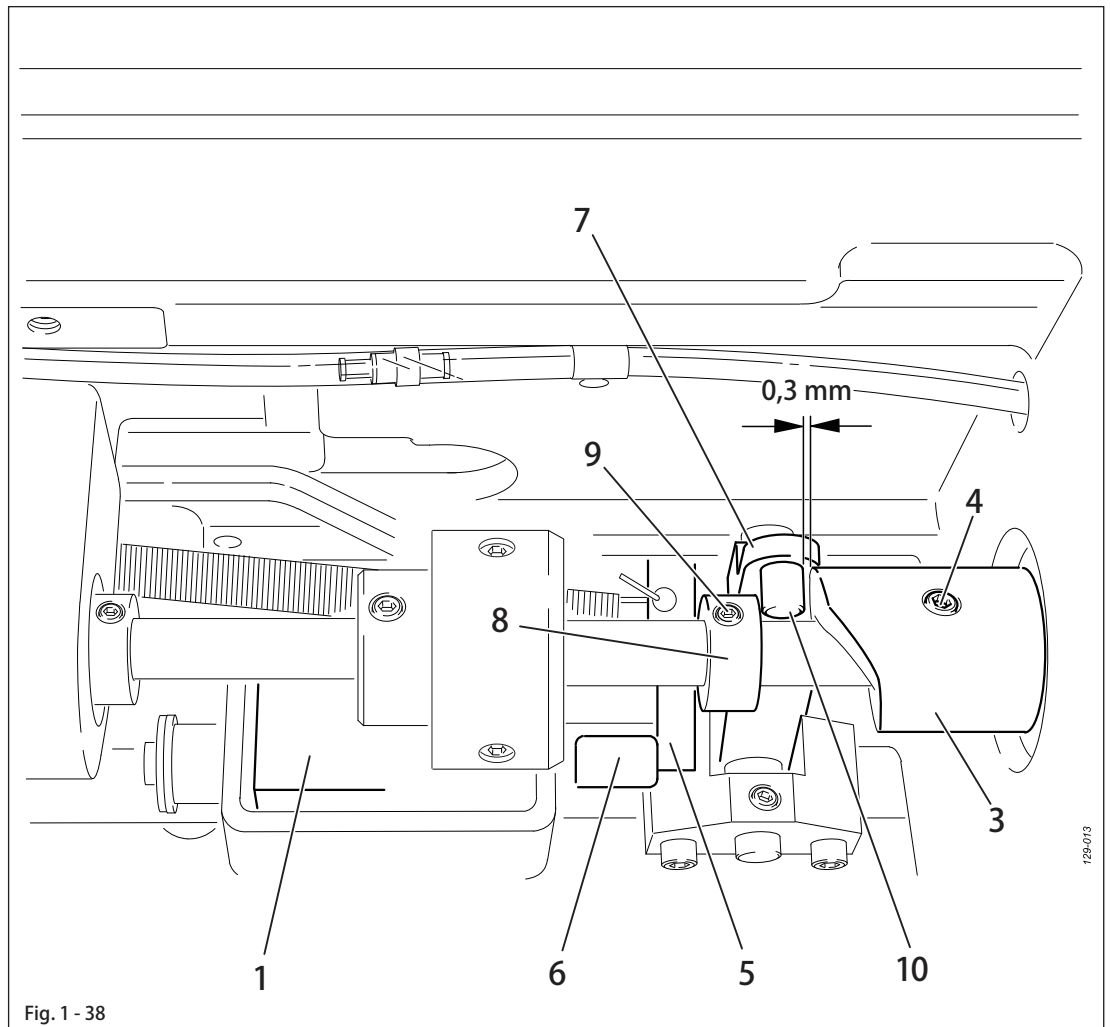
- Adjust knife 3(screw 4) according to the requirements.
- Carry out a cutting test and repeat adjustment if necessary.

## 1.06 Adjusting the thread trimmer -900/83

### 1.06.01 Resting position of the roller lever / radial position of the control cam

#### Requirement

1. When the thread trimmer is in its resting position, lever 5 should be touching piston 6 and the roller of roller lever 7 should be 0.3 mm away from control cam 3.
2. When the take-up lever is at t.d.c., control cam 3 should just have placed roller lever 7 in its resting position and retaining collar 8 should touch the roller 10.



- Having made sure that piston 6 is positioned against the left stop, adjust magnet 1 (2 screws) in accordance with requirement 1.
- Adjust control cam 3 (screws 4) in accordance with requirement 2.
- Attach collar 8 (screw 9) to roller 10.

## 1.06.02 Position of the thread catcher holder

### Requirement

1. There should be a minimum amount of play between toothed wheel 3 and toothed segment 4.
2. The distance between the toothed segment 4 and the outer edge of the thread catcher holder 1 should be the same size (see arrow) in both the neutral position and the front turning point position of the catcher.

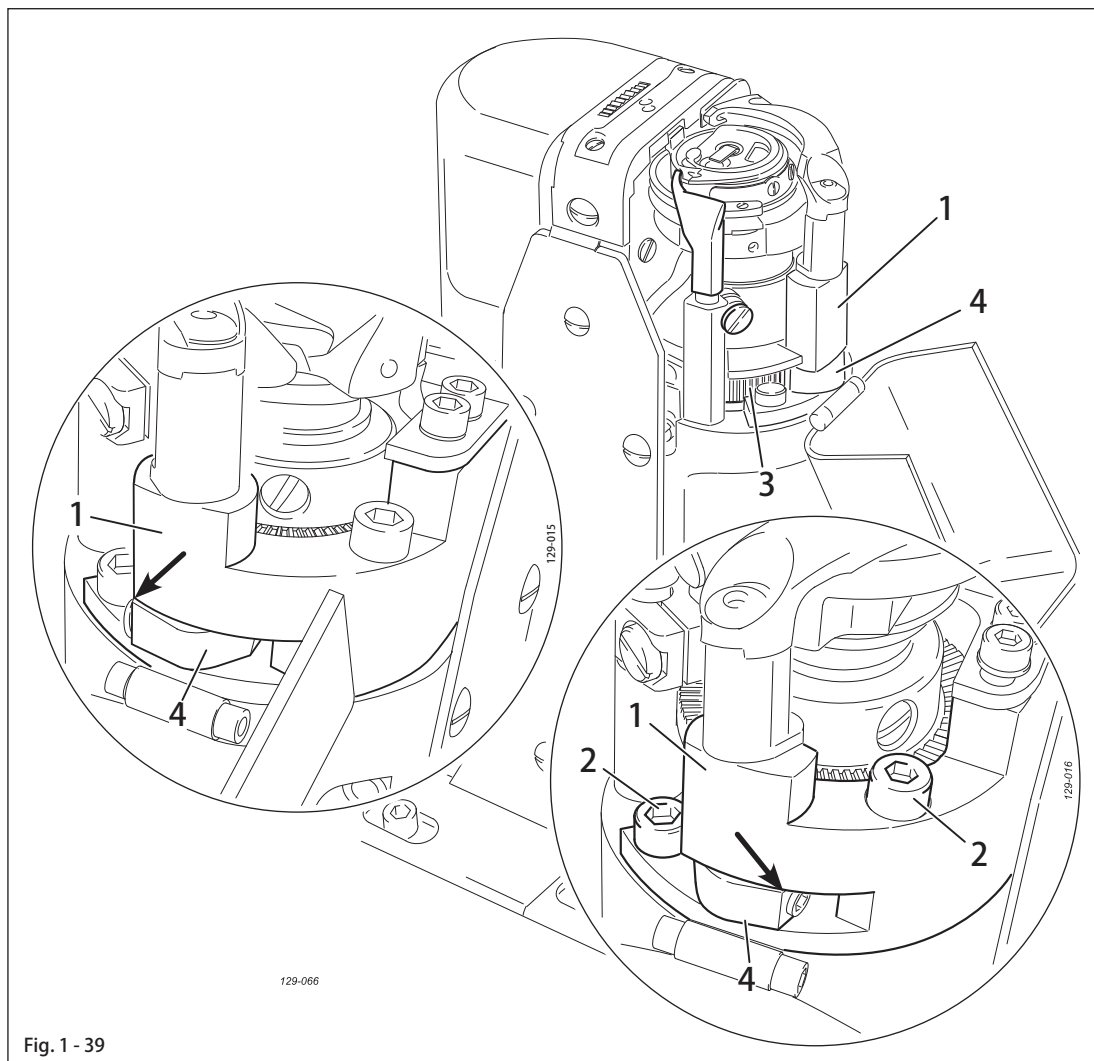
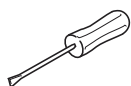


Fig. 1 - 39



- Adjust the thread catcher holder 1 (screws 2) according to the requirements.



If requirement 2 cannot be fulfilled, loosen screw 2 and move the toothed segment 4 by one tooth.



## 1.06.03 Position of the thread catcher

### Requirement

1. The bottom edge of the thread catcher 1 should be at a distance of 0.1 mm from the positioning finger of the bobbin case 5.
2. When the thread trimmer is in its resting position, the rear edge of thread catcher 1 should be positioned behind the edge of knife 2.5mm-3mm.

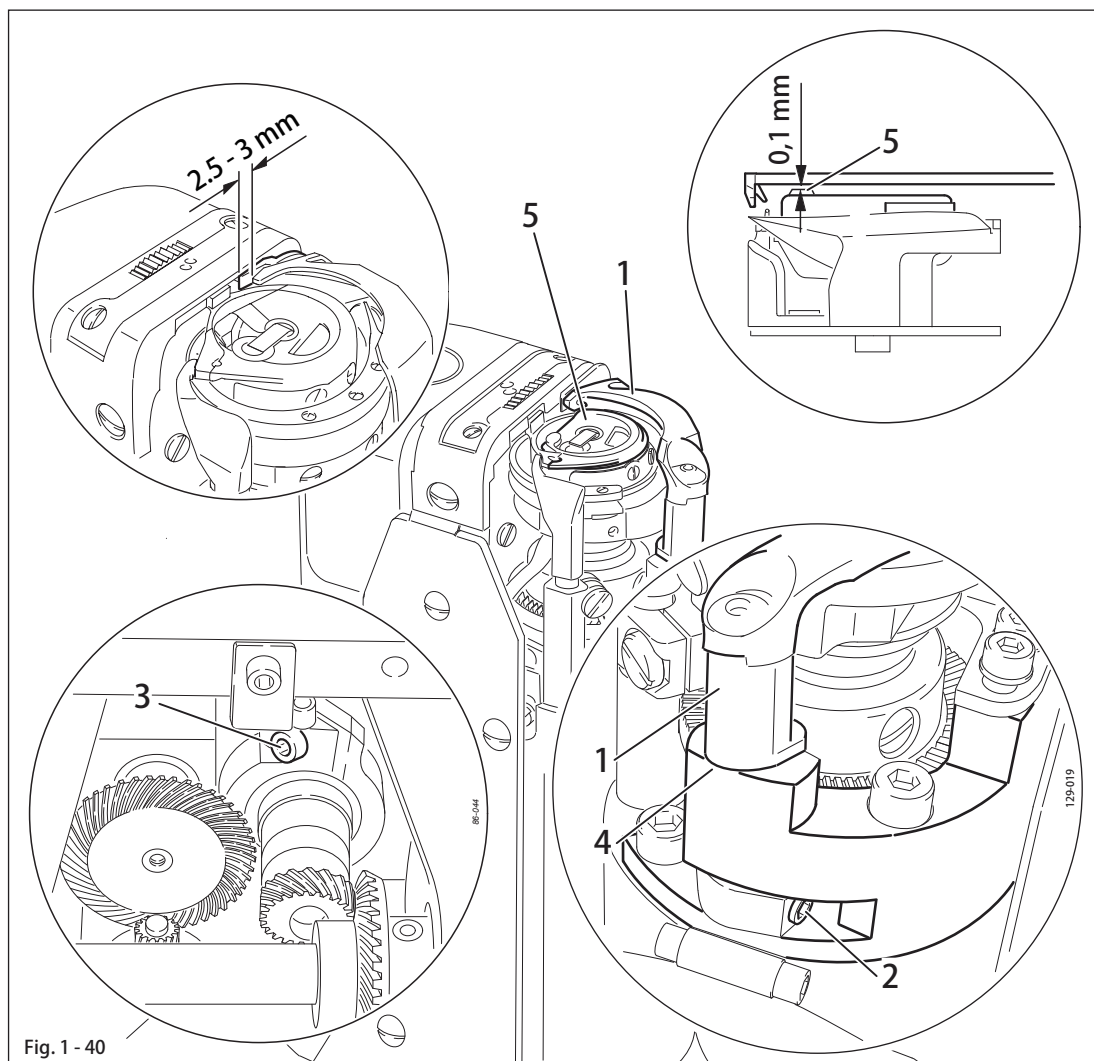
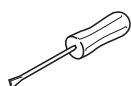


Fig. 1 - 40



- Move thread catcher 1 (screws 2, two screws) in accordance with requirement 1.
- Turn thread catcher 1 (screw 3) in accordance with requirement 2.



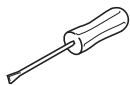
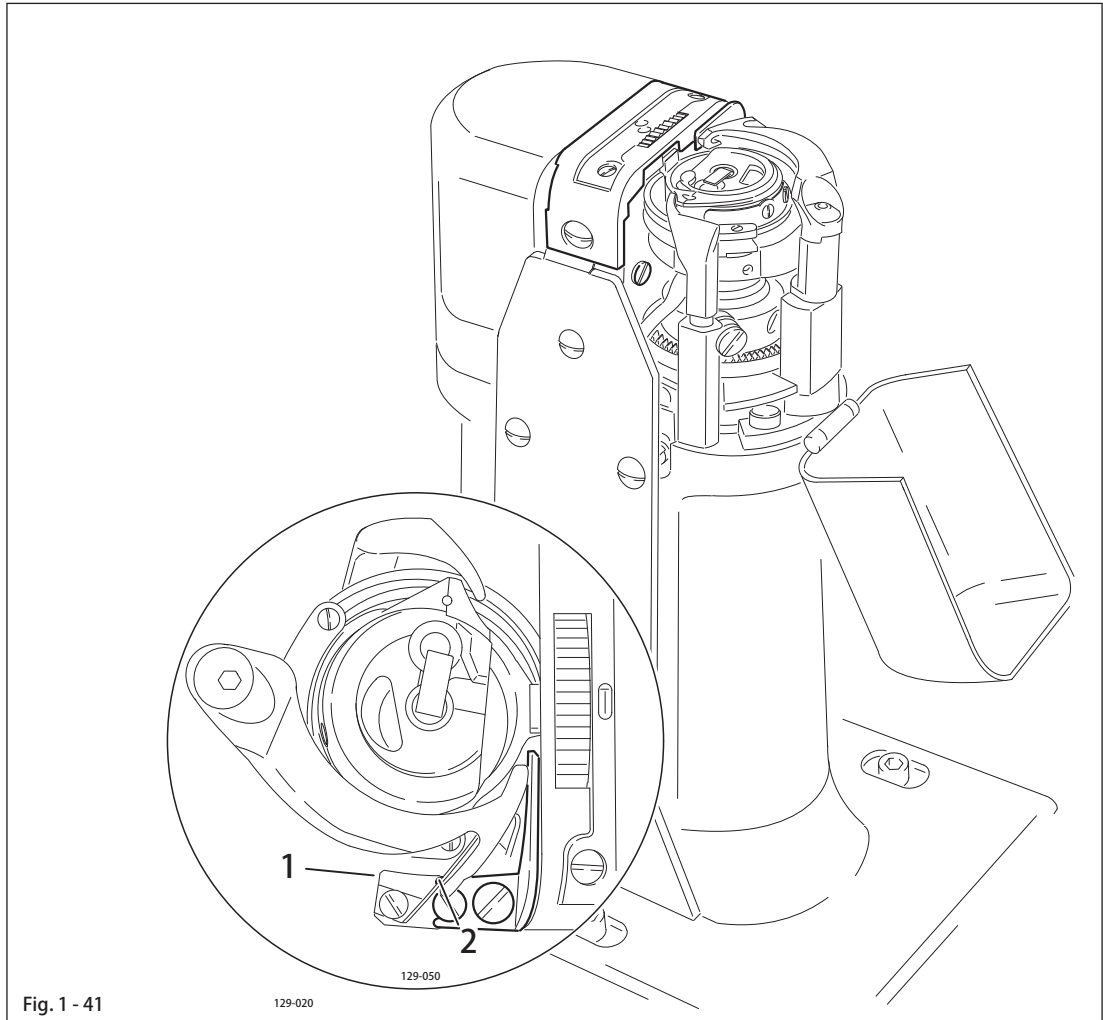
Thread catcher 1 must be parallel to the surface of the thread catcher holder 4.

# Adjustment

## 1.06.04 Knife position and knife pressure

### Requirement

The knife pressure should be set as low as possible but the cutting operation should be completed safely.

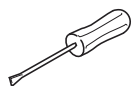
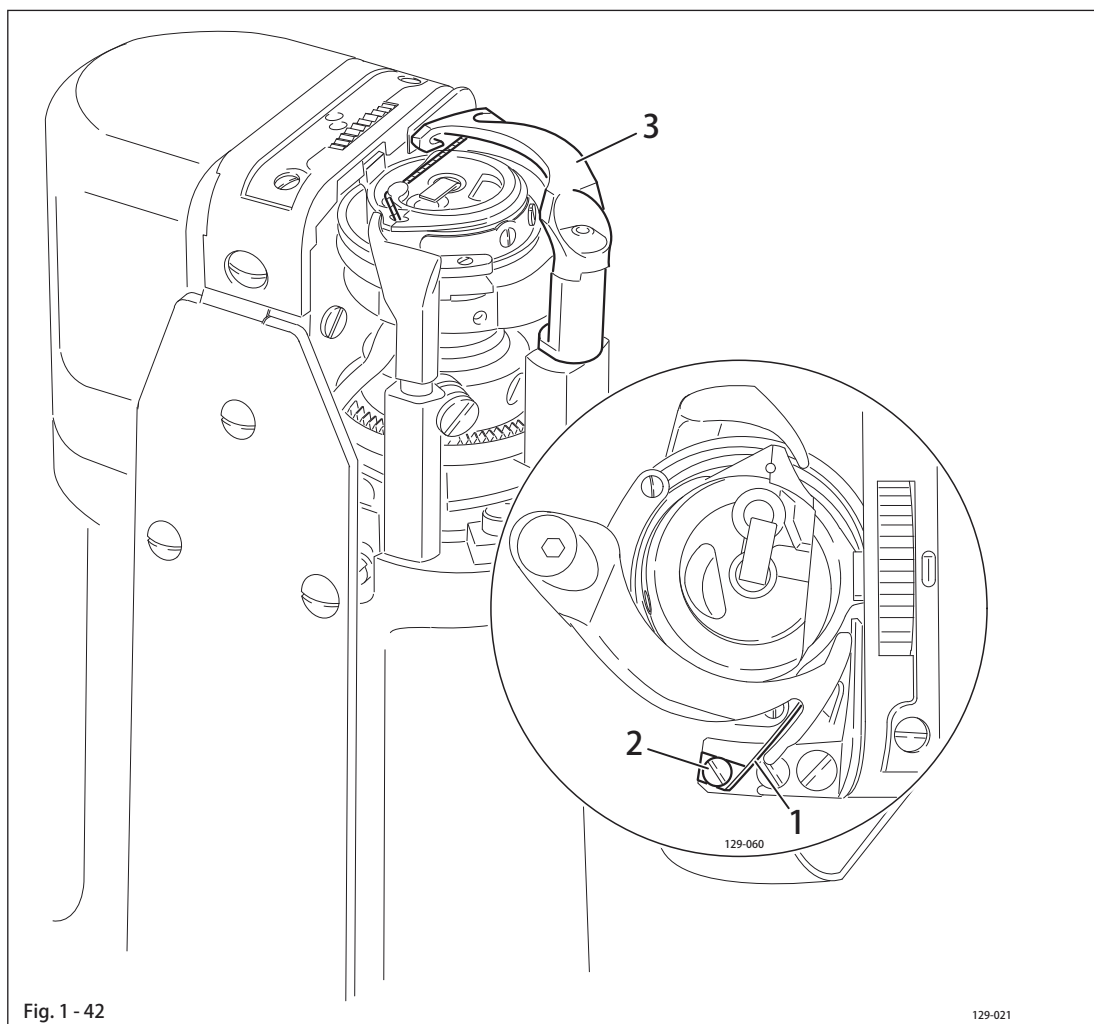


- Adjust eccentric 1 (screw 2) in accordance with the requirement.

## 1.06.05 Bobbin thread retaining spring

### Requirement

The tension of the bobbin thread clamp spring should be as low as possible, but it should reliably hold the bobbin thread after trimming.



- Adjust bobbin thread clamp spring 1 (screws 2) in accordance with requirement.

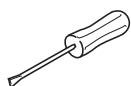
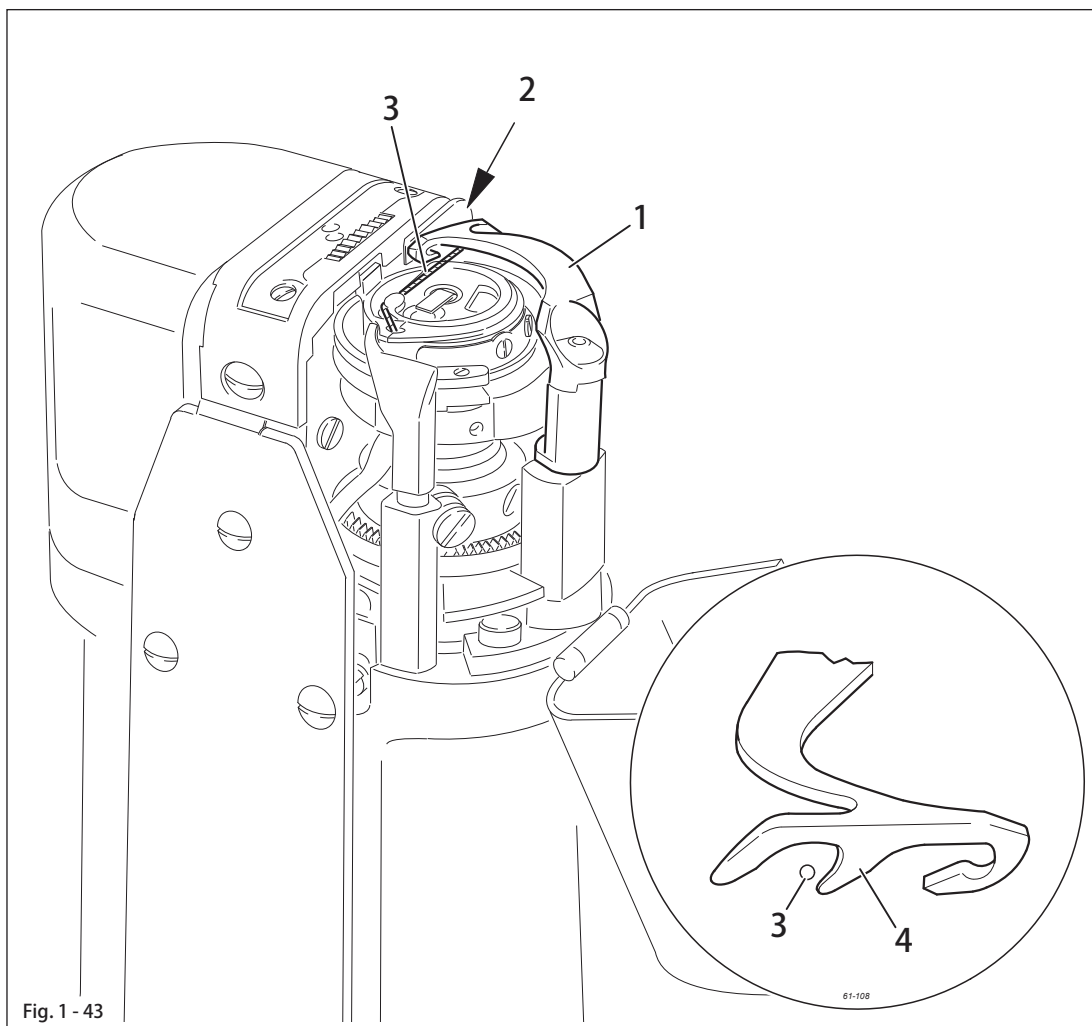
### Control

- After the thread has been cut, sew a few stitches by turning the balance wheel, checking whether the bobbin thread is drawn out of the bobbin thread clamp spring between the 1st and 3rd stitches. If necessary, correct the tension.

## 1.06.06 Manual cutting test

### Requirement

1. When thread catcher 1 is on its forward stroke, it must not carry bobbin thread 3 forward too.
2. When thread catcher 3 is in its front position, bobbin thread 3 must be held reliably by hook 4.
3. After the trimming action, both the needle thread and the bobbin thread must be perfectly cut and bobbin thread 3 retained.

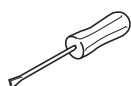
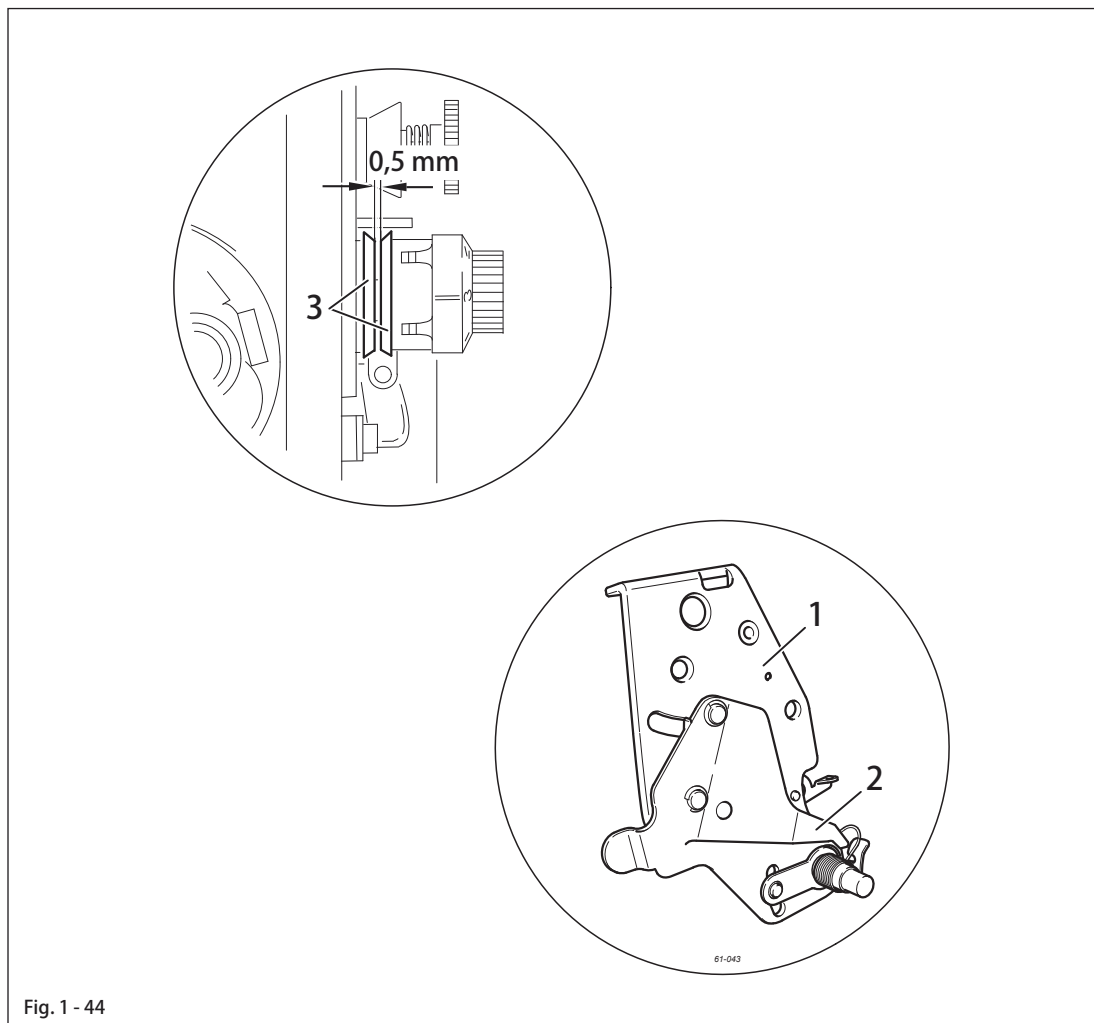


- Sew a few stitches.
- Turn off the on/off switch.
- Carry out the cutting operation manually.
- Check requirement 1 and 2, and if necessary readjust thread catcher 1 in accordance with Chapter 1.06.03 Position of the thread catcher.
- Check requirement 3, and if necessary readjust the bobbin thread retaining spring 2 in accordance with Chapter 1.06.05 Bobbin thread retaining spring.

## 1.06.07 Releasing the tension

### Requirement

When the magnet is activated, tension discs 3 must be at least 0.5 mm apart.



- Activate the magnet.
- Detach the tension bearing plate 1 and adjust pressure plate 2 in accordance with the requirement.



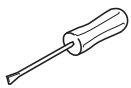
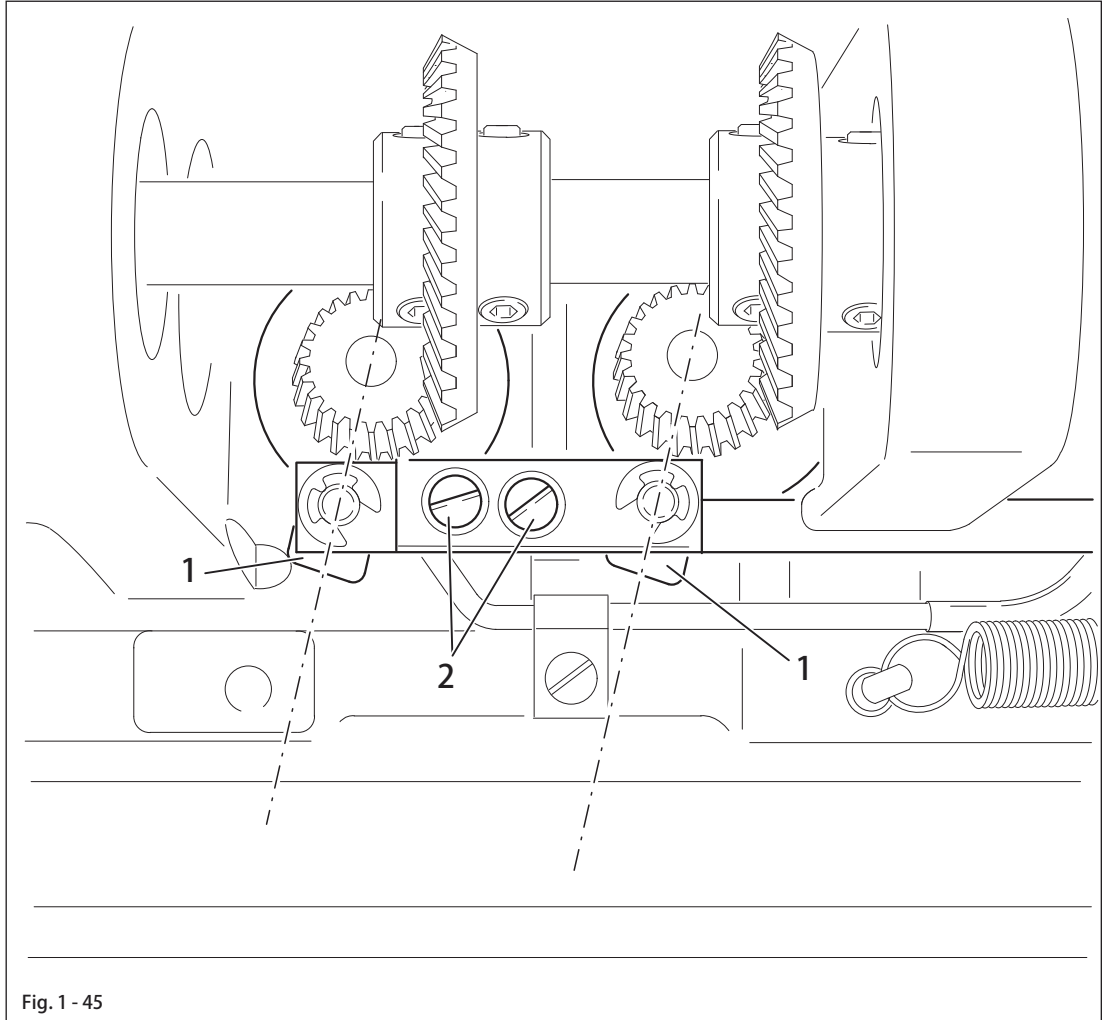
It is possible to set the time for releasing the tension with the parameter functions, see Chapter 1.08 Parameter settings.

# Adjustment

## 1.06.08 Linkage rod(only for the model 574)

### Requirement

When the thread trimmer is in its resting position, the drive levers 1 must be parallel.



- Adjust drive levers 1(screws 2) in accordance with the requirement.

## 1.07 Adjustment of backtacking mechanism -911/..

### 1.0701 Needle in needle hole(only for model 571 and 591)

#### Requirement

When the maximum stitch length is set, the needle must be the same distance from the inside edge of the needle hole, both for forward and reverse stitch.

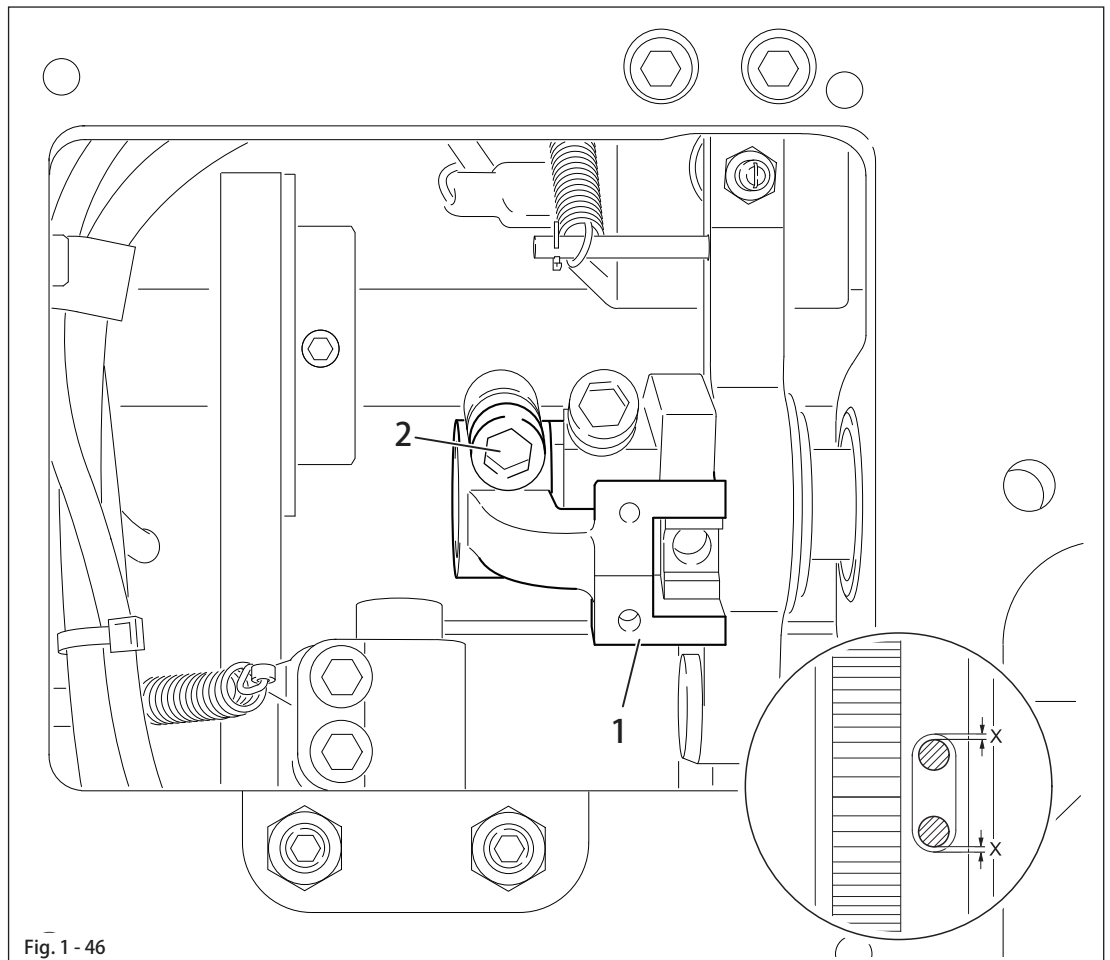
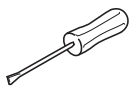


Fig. 1 - 46



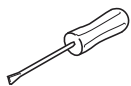
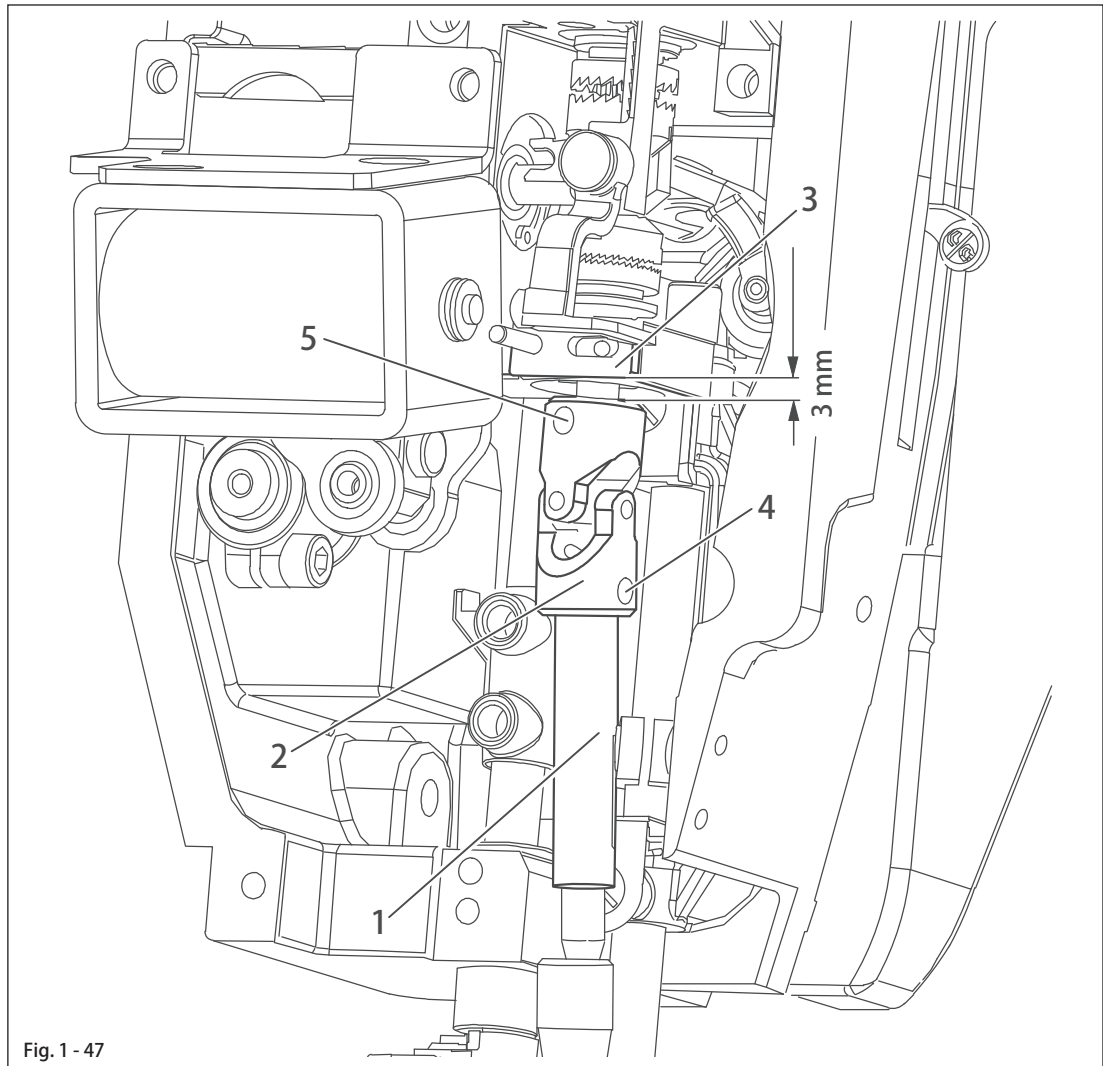
- Turn crank 1(screws 2) according to the requirement.

# Adjustment

## 1.07.02 Clute for roller presser drive

### Requirement

1. There should be no play between the cross joint 2 and the connecting rod 1.
2. There should be a clearance of 3 mm between the cross joint 2 and the mounting 3 when the roller presser is secured.



- Connect the connecting rod 1(screw 4) according to the requirement 1.
- Connect the cross joint 2(screw 5) according to the requirement 2.



## 1.07.03 Adjust roller presser drive

### Requirement

1. Adjust the bevel gears 5.2 and 3 into their position; there must be minimal play between the bevel gears 5.2 and 3.
2. The bevel gear 3 and bevel gear 4 are engaged when sewing forwards; the bevel gears 5.2.3 and 4 must move at the same time.
3. The bevel gear 1 and bevel gear 2 are engaged when sewing backwards; the bevel gears 5.1.2 and 3 must move at the same time.
4. When sewing backwards, the crank 11 must be in its correct position and the magnet lever 12 must be at its maximum lift to reach the crank 11 exactly.

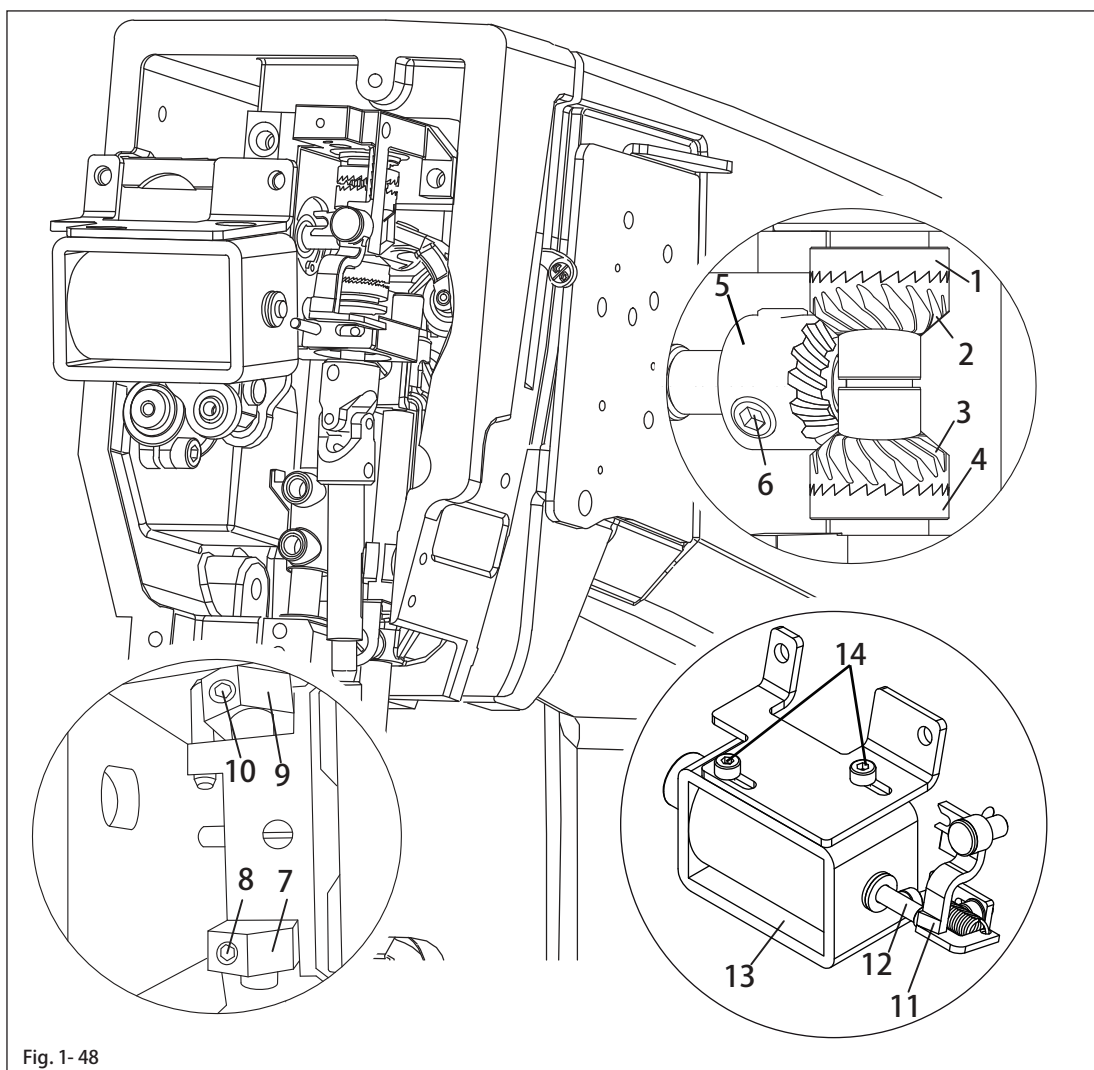
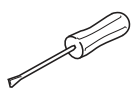


Fig. 1-48



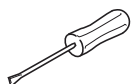
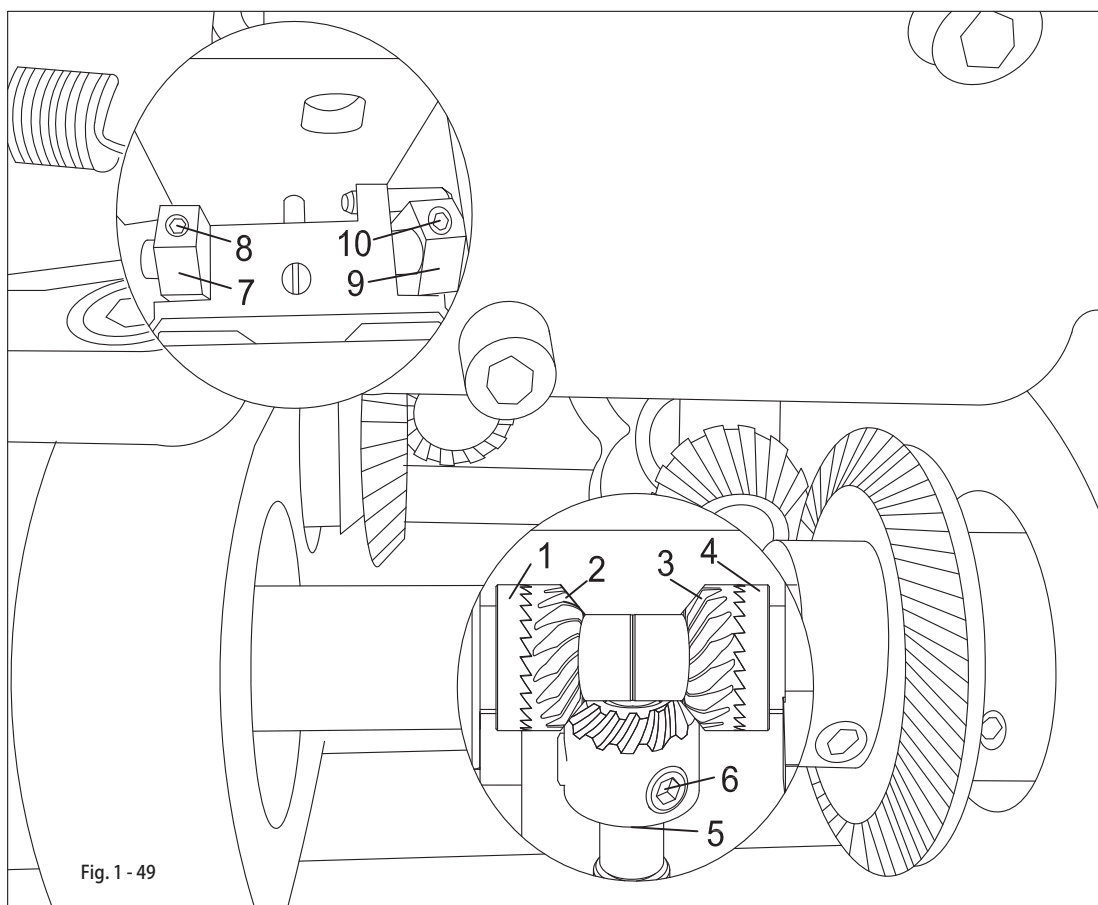
- Adjust the bevel gear 5 (screw 6) according to rule 1.
- Adjust the retainer 9 (screw 10) according to rule 2.
- Adjust the retainer 7 (screw 8) according to rule 3.
- Adjust the solenoid 13 (screw 14) according to rule 4.

# Adjustment

## 1.07.04 Bevel gears for feed wheel drive

### Requirement

1. Bevel gear 5 must fit well on gear 2 and gear 3. There must be a slight play between bevel gear 5 and gear 2, gear 3.
2. When sewing forwards, gear 3 and gear 4 are engaged, bevel gear 5 must drive gear 2, gear 3 and gear 4.
3. When sewing backwards, gear 1 and gear 2 are engaged, bevel gear 5 must drive gear 1, gear 2 and gear 3.

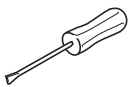
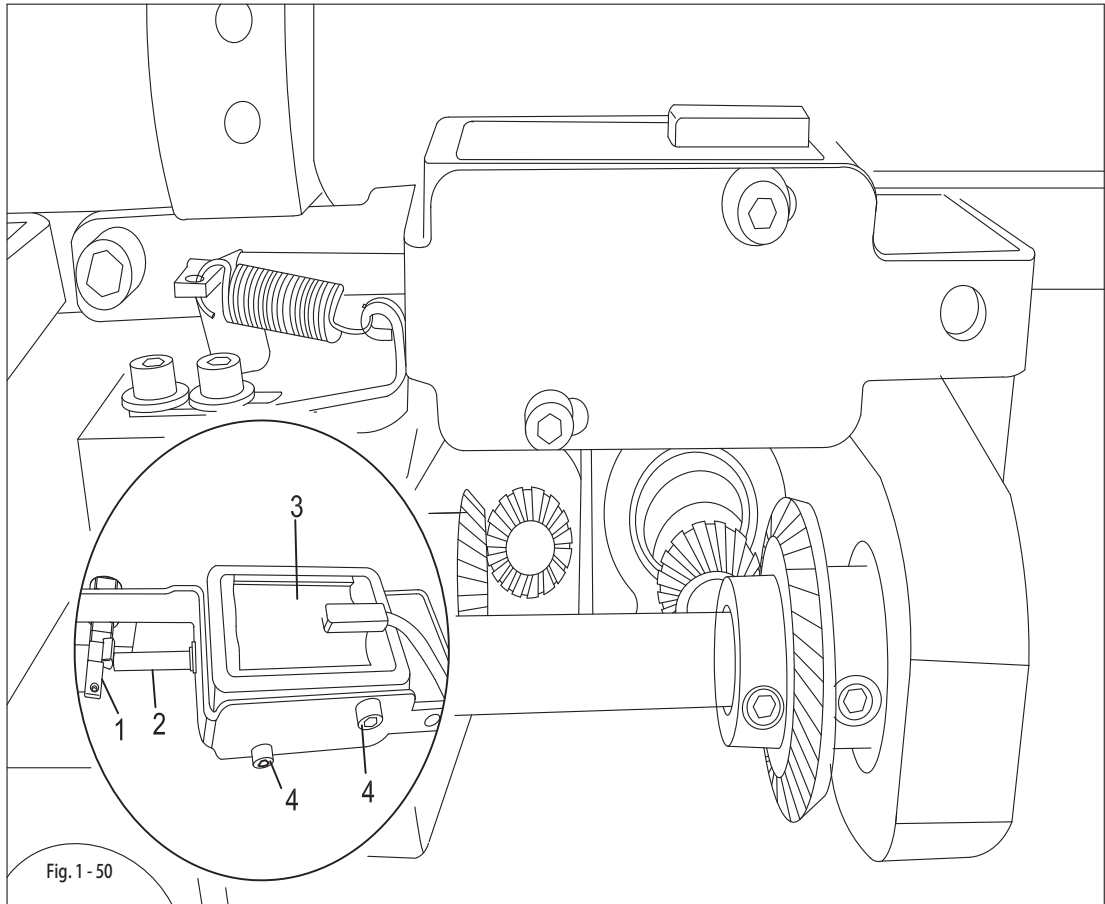


- Adjust bevel gear 5 (screws 6) according to requirement.
- Adjust dog 7 (screws 8) according to requirement 2.
- Adjust dog 9 (screws 10) according to requirement 3.

## 1.07.05 Adjusting the magnet for feed wheel drive

### Requirement

When sewing backwards, crank 1 is in its left limit position, magnet lever 2 must reach its largest stroke and touch crank 1 exactly.



- Adjust magnet 3 (screws 4) according to requirement .

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## Adjustment

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1.08      **Parameter settings**

Related parameter settings please see “Roller AC Servo System (User Manual)” .