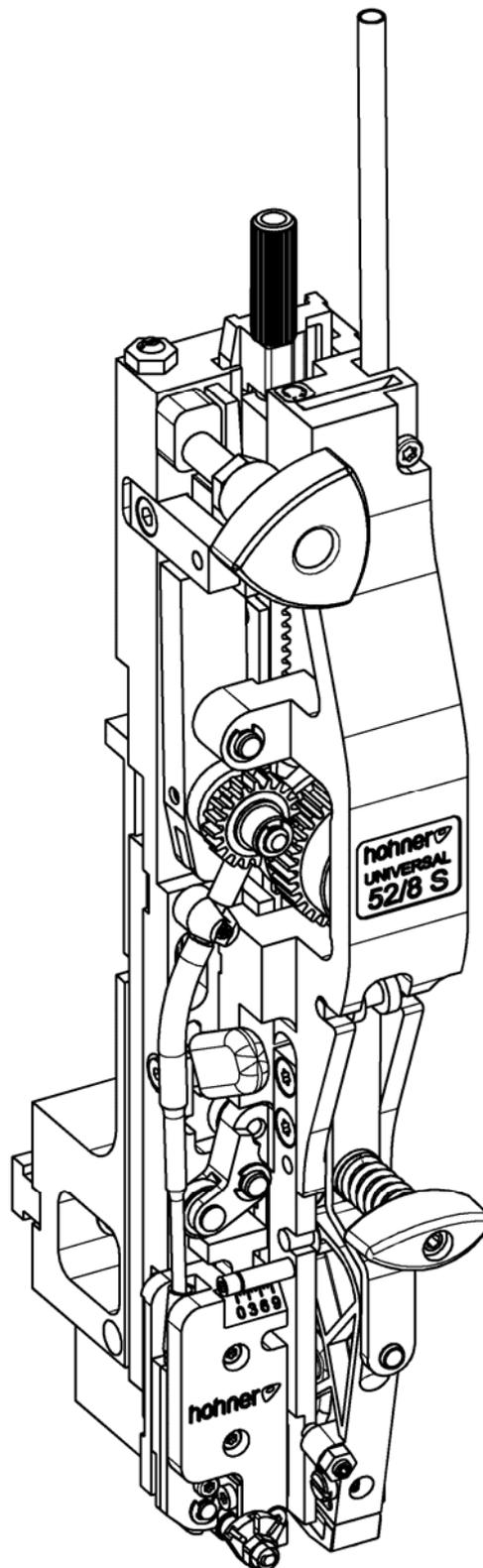


# hohner

## UNIVERSAL 52/8 S

Narrow Stitching Head

Edition 04/2010





## Customer Entries

Stitching head no: .....

Machine manufacturer: .....

Type of manufacturer: .....

## Manufacturer' s Address

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## Operating-Instructions

Document: Translation of the German  
original Operating-Instructions

Version: 04/2010

## Spare Parts / Customer Service

Service telephone no: +49 (0) 7462 / 9468-23

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### 1 Safety Information

#### 1.1 Purpose of this document

This document will inform the operator of the **Stitching Head 52/8 S** of the following:

- The safety symbols and signs
- The packing of the machine and its transportation
- The function and operation of the machine
- Commissioning the machine
- The elimination of faults which arise
- Servicing

Familiarity with this Operating Manual is thus a prerequisite for the safe and correct operation of the stitching head. It must be read carefully by the operator before the machine is commissioned. Keep the manual safely in a place where it is readily available and which is close to hand for persons working on the machine.

#### 1.2 The operator

The **Stitching Head 52/8 S** must only be operated by trained personnel.

Training will be undertaken by the manufacturer or by persons who have been authorised by the manufacturer to undertake such training.

#### 1.3 Safety symbols and the displays that have been used



***This symbol indicates immediate danger to the life or health of persons in the immediate vicinity of the machine.***

Non-observance of dangers which are so indicated can have grave consequences and can cause serious damage to health, or may even to lead to deaths.



***This symbol indicates that a potentially dangerous situation has arisen.***

Non-observance of dangers which are so indicated can lead to slight injuries to persons or damage to equipment.



TIP

***This symbol indicates that tips on how to use the machine or particularly useful information are available.***

These will help you to use all of the functions of the machine in an optimal manner.

- ***This symbol requires you to take action.***
- ***This sign serves as a symbol for listing items.***

### 1.4 Obligation and liability

The **52/8 S Stitching Head** has been built according to state-of-the art technology under observance of all the recognised safety regulations. However, dangers to life and limb of the user or third parties and damage to the system or other material assets can still occur during use. The stitching head should only be used,

- for the purpose for which it was designed
- when it is in a perfect technical condition.

Faults which could reduce levels of safety when using the machine must be eliminated immediately.

Warranties and liability on the part of the manufacturer are fundamentally covered by the regulations laid down in our "General sales and delivery conditions".

Warranty claims will only be valid if the number label is affixed (number label on stitching head housing).

### 1.5 Correct use

The **Stitching Head 52/8 S** is designed exclusively for binding brochures and leaflets or similar items.

Any use of the machine contrary to that described above is forbidden, since incorrect use of the machine can present a danger.

### 1.6 Organisational measures

The user of machine is required to provide the required personal safety equipment. All existing safety devices should be checked regularly.

### 1.7 Safety and protective devices

All safety and protective devices must be correctly attached to the machine and should be in full working order before every start-up of the machine and **Stitching Head 52/8 S**.

Safety and protective devices may only be removed:

- After the machine has come to a standstill **and**
- As security against the machine starting up again.

### 1.8 Non-formal safety measures

The Operating Manual must be kept so that it is permanently at hand at the machine with **Stitching Head 52/8 S**. There are also generally valid local regulations concerning accident prevention and environmental protection measures which should be made available and observed in addition to those described in the Operating Instructions.

All safety and danger signs on the machine should be maintained in a legible condition and should be renewed where necessary.

### 1.9 Staff training

Only trained and instructed personnel may install, operate, set and maintain the stitching head.

## Safety Information

### 1.10 Parts of the equipment which are particularly dangerous

There is a **risk of injury** in the area of moving parts of the stitching head.



### 1.11 Maintenance and repair work, elimination of faults

Undertake the required setting, servicing and inspection work on schedule.

The machine may only be operated in cycle mode during all servicing, inspection and repair work on the **Stitching Head 52/8 S**.

Always make absolutely sure **that the machine is only being operated by one person in order to avoid any influence to the machine by any other persons.**



### 1.12 Structural modifications to the stitching head

Changes to the stitching head, additions or modifications may only be undertaken with the manufacturer's permission.

### 1.13 Cleaning the machine and the disposal of waste products

The functionality of the stitching head and perfect processing of the product can only be guaranteed over a prolonged period of time if the stitching head is regularly cleaned and maintained in accordance with the standard methods of mechanical engineering.

**In this regard, particular attention should be paid to the regular removal of trimmed paper residue and paper dust, as these can result in jamming of the stitching head or increased wear.**



Substances and materials used (e.g. solvents and lubricants) must be handled correctly and disposed of in an environmentally friendly manner.



Description of the Stitching Head

2 Description of the Stitching Head

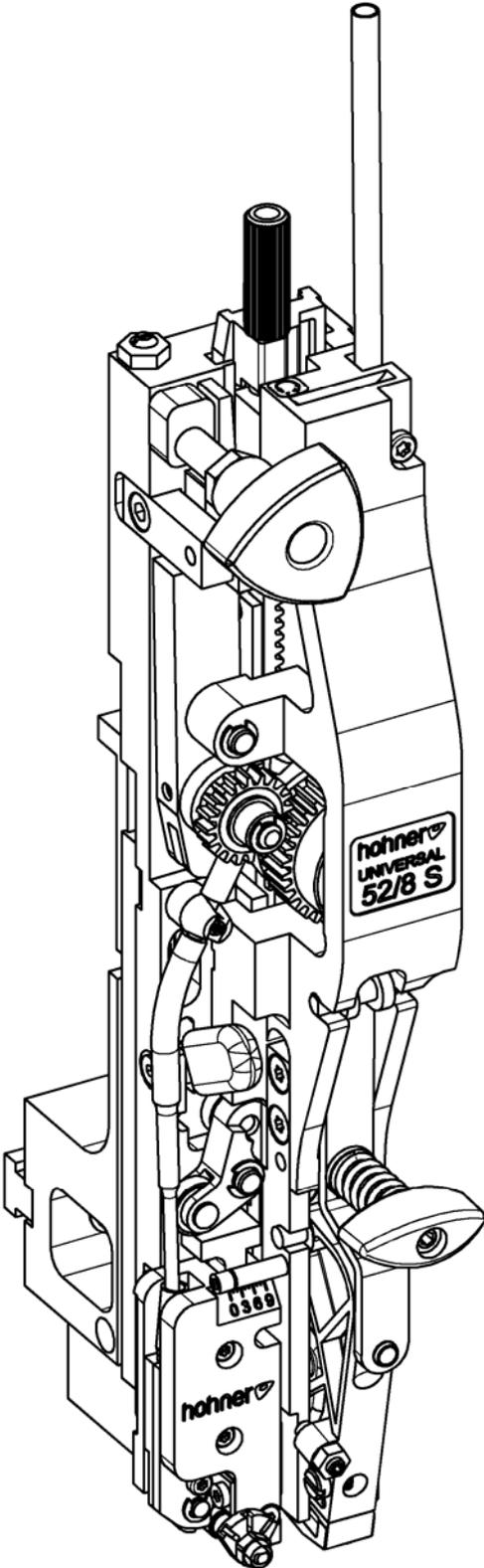


Fig. 1

## 2.1 General overview

- Fig. 1 -

## 2.2 Conformity

Please observe the document attached:



**"EC Declaration of Incorporation according to the EC Machinery Directive 2006 / 42 / EC"**

## 2.3 Marking and type plate

The type plate is located at the front of the stitching head.

The serial number of the stitching head is indicated on an adhesive label at the right-hand side of the housing.

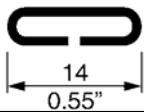
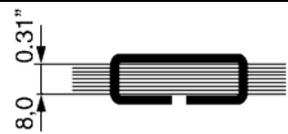
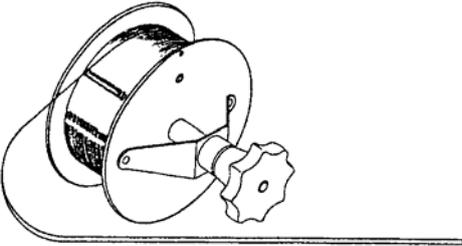
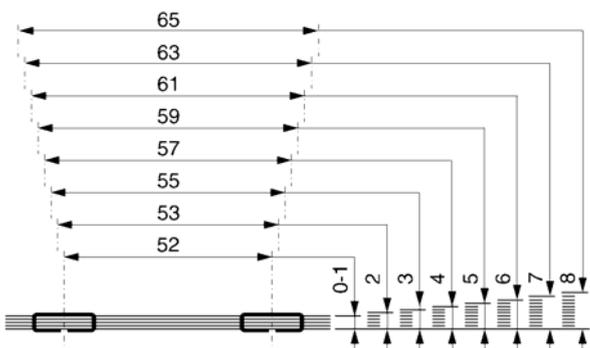
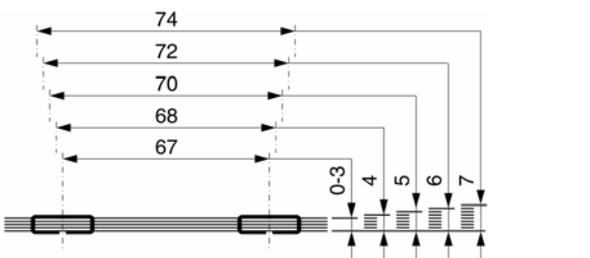
## 2.4 Technical data



Net weight of the stitching head	2,6 kg / 5.73 lbs
Quality of the stitching wire	Only use perfect quality classes, in normal or steel strength as required. Pay attention to abrasion resistance, as heavy abrasion will clog the wire-guidance parts.

## Description of the Stitching Head

### 2.4.1 Normal stitch

Wire stitch dimensions	
Max. stitch thickness	
<p>Stitching wire coil No. 24 - 28 Ø 0.60 - 0.40 mm (Ø 0.024 - 0.016 in.)</p> <p>or:</p> <p>Stitching wire coil No. 26 - 30 Ø 0.50 - 0.35 mm (Ø 0.020 - 0.014 in.)</p> <p>or:</p> <p>Stitching wire coil No. 21 - 23 Ø 0,80 - 0,70 mm (Ø 0.031 - 0.027 in.)</p> <p>or:</p> <p>Stitching wire, flat Nr. I – III 0,70 x 0,35 mm (0.028 x 0.014 in.) to 0,75 x 0,55 mm (0.030 x 0.022 in.)</p>	
Possible distances between wire stitches and stitch thicknesses in mm	
With holding down device	

2.4.2 Loop stitch

	Standard - L6 -	- L8 -
Wire stitch dimensions	<p>Ø6 / Ø 0.21" 14 0.55"</p>	<p>Ø8 / Ø 0.31" 16 0.63"</p>
Max. stitch thickness	<p>4.0 0.16"</p>	<p>3.0 0.118"</p>
Stitching wire coil: No. 24 - 26 Ø 0.60 - 0.50 mm Ø 0.024 - 0.020 in.		
Possible distances between wire stitches and stitch thicknesses in mm	<p>64 62 60 58 0-1 2 3 4</p>	<p>66 64 62 0-1 2 3</p>
With holding down device	<p>71 70 69 68 0-1 2 3 4</p>	<p>72 71 70 0-1 2 3</p>

# Description of the Stitching Head

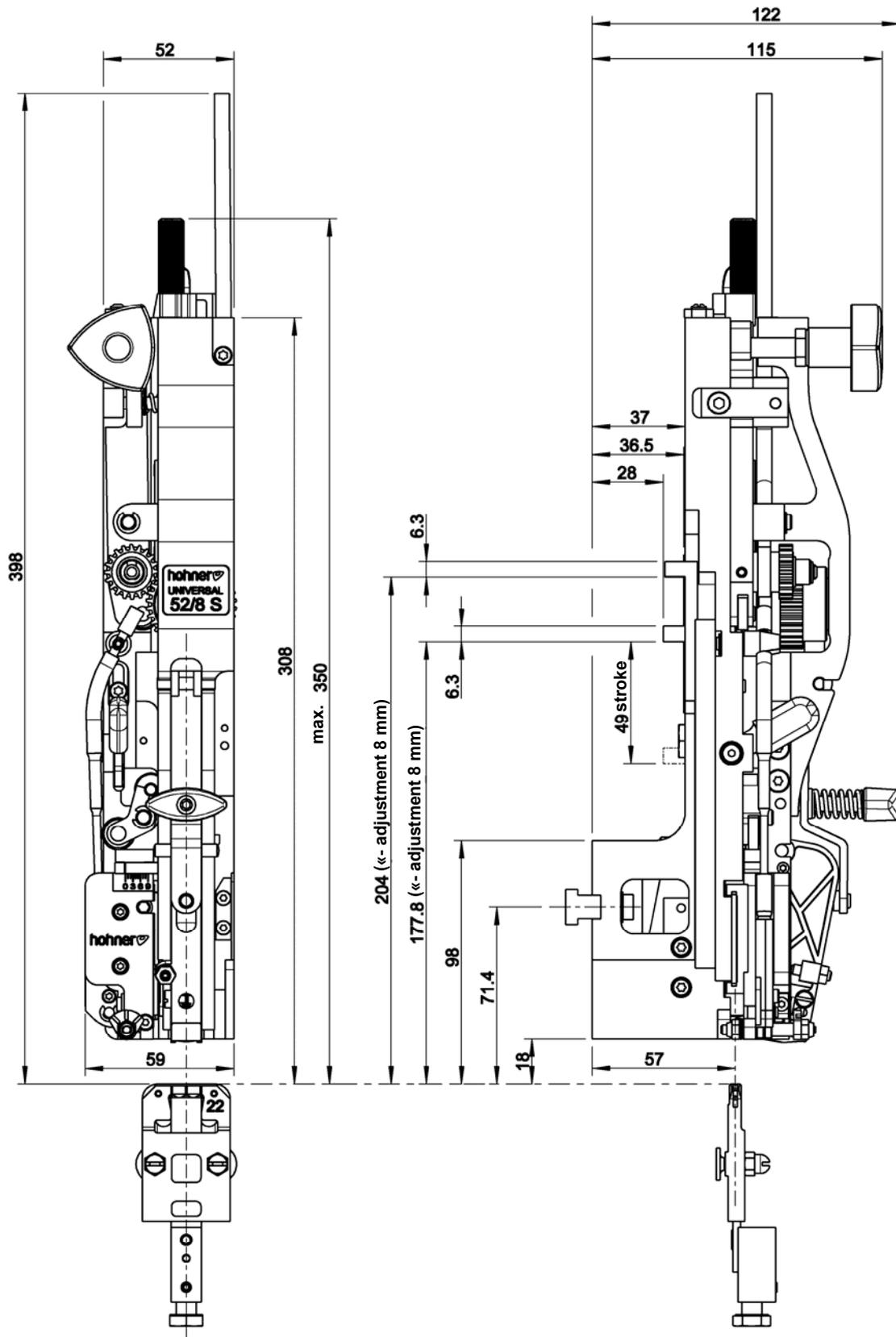


Fig. 2

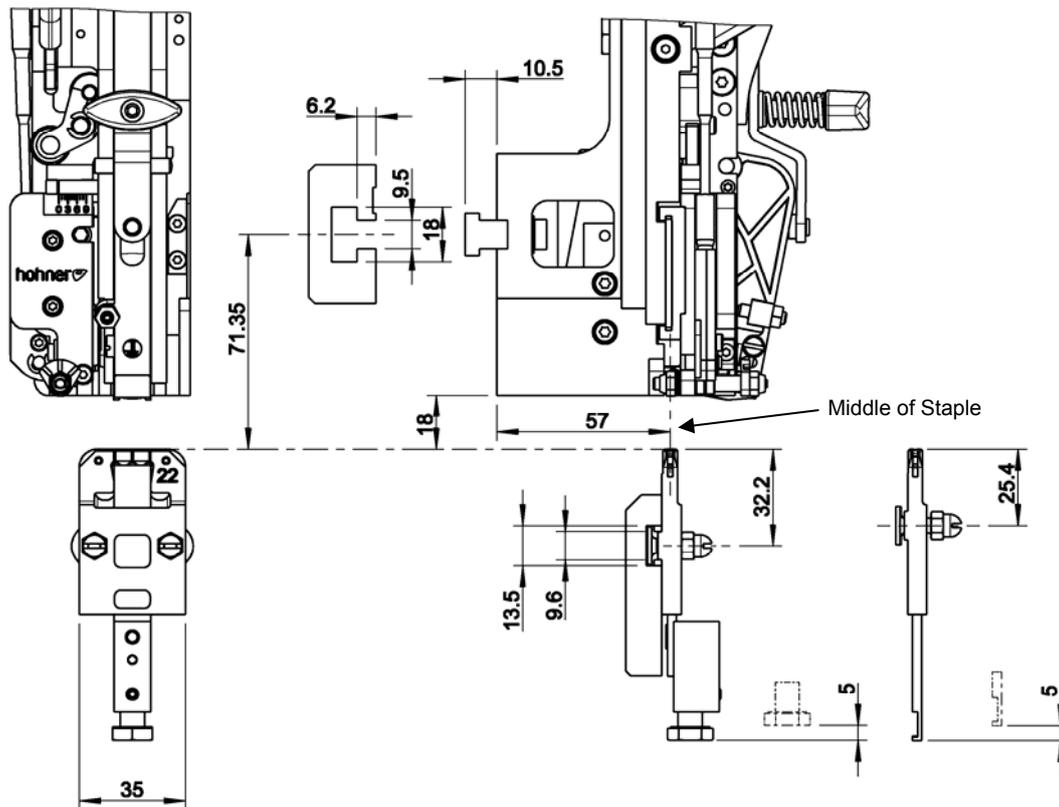


Fig. 3

## 2.5 Dimensional sheet

- Fig. 2 , Fig. 3-

## 2.6 Outfitting of the stitching head

### 2.6.1 Basic features

The stitching head is delivered with the following accessories:

<b>DESIGNATION</b>	<b>ORDER NUMBER</b>
Allen key with T-handle SW4-150	46 00 033
Torx screwdriver T20	46 00 039
Torx screwdriver T10	46 00 044
Adjusting handle	94 61 230
Wire guide, complete	according to machine manufacturer
Clincher box, complete	according to machine manufacturer

# Operation

## 3 Operation

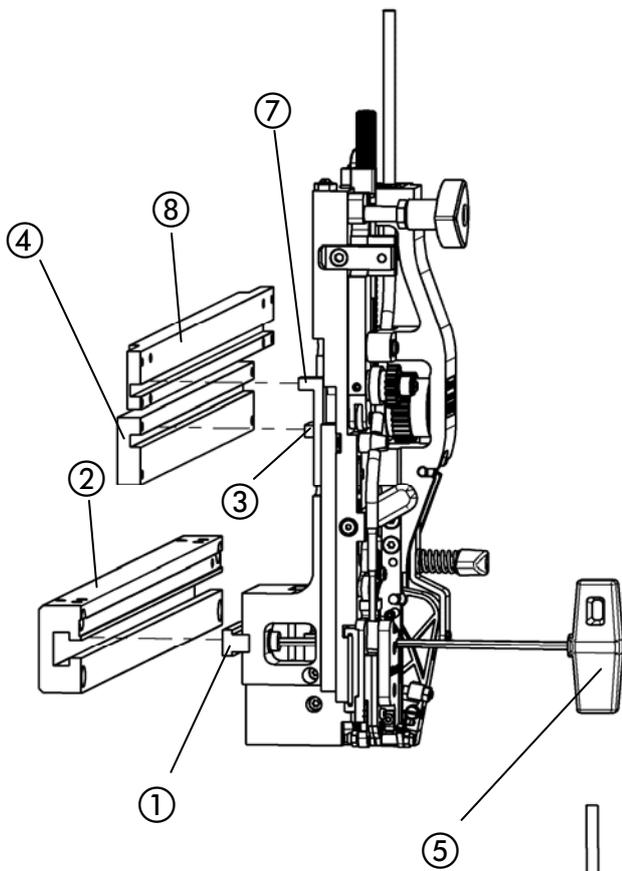


Fig. 4

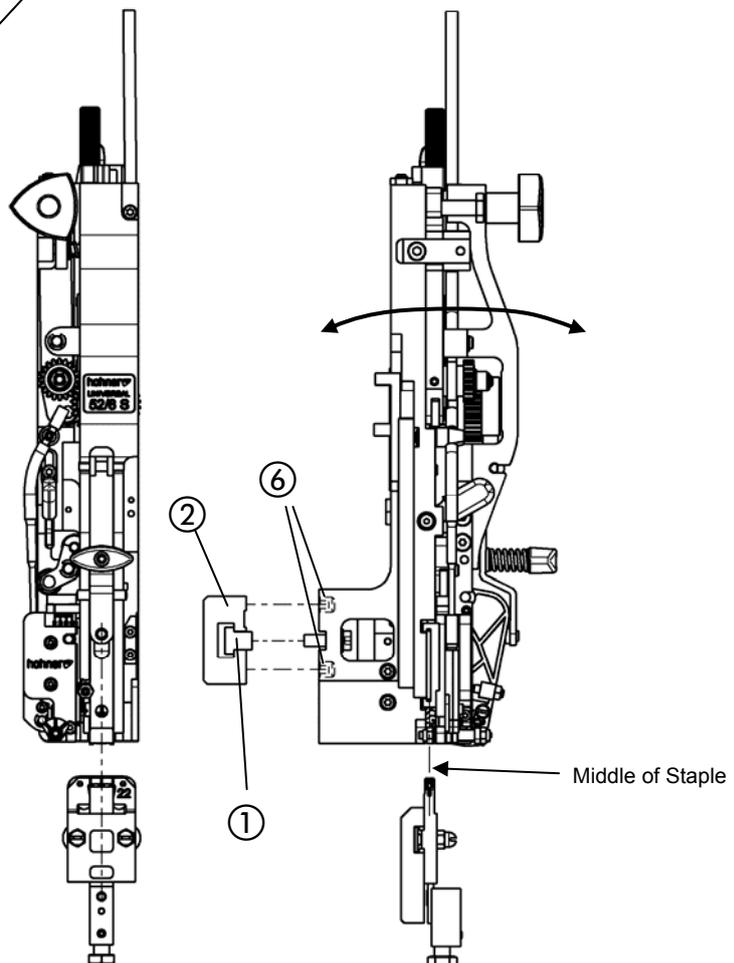


Fig. 5

### 3.1 Installation of the stitching head

#### 3.1.1 Clamping the stitching head

- Fig. 4 -

The stitching head is held by a tenon block which is inserted into the stitching head mounting on the machine.

- Unscrew tenon block from the stitching head with Allen key SW4 ⑤.
- Introduce tenon block laterally into the stitching head mounting ②.
- Insert stitching head in the stitching head holder so that the driver lug ③ can be inserted in the lifting bar ④ and the lug of the adjustment rods ⑦ in the adjustment bar ⑧ (⑦ and ⑧ only for machines with central adjustment) and that the tenon block fits into the stitching head.
- Fix the stitching head by tightening the tenon block in the stitching head mounting using the Allen key ⑤.

##### 3.1.1.1 Lateral adjustment of the stitching head

- Fig. 4, Fig. 5 -



The center of the wire formed parts within the stitching head must be set to the desired stitching position for the wire stitch by lateral adjustment.

- Loosen the tenon block ① with the Allen key ⑤.
- Move the stitching head sideways, until the desired position is reached.
- Fix the tenon block in the stitching head mounting ② with the Allen key.

##### 3.1.1.2 Front adjustment of the stitching head

- Fig. 5 -



The lifting movement of the wire formed parts must drive the stitch accurately into the clincher box forming gap. (Cf. Chap. 3.1.4). If the center of the wire stitch is located too far in front of or behind the clincher box, or if the lifting movement is not precisely aligned with the clincher box, this can be corrected by adjusting the set screws ⑥ on the stitching head. Unscrew the upper or lower grub screw to adjust the angle of inclination.

- Remove stitching head.
- Adjust set screws ⑥.
- Fit stitching head.
- Correct if necessary.

Operation

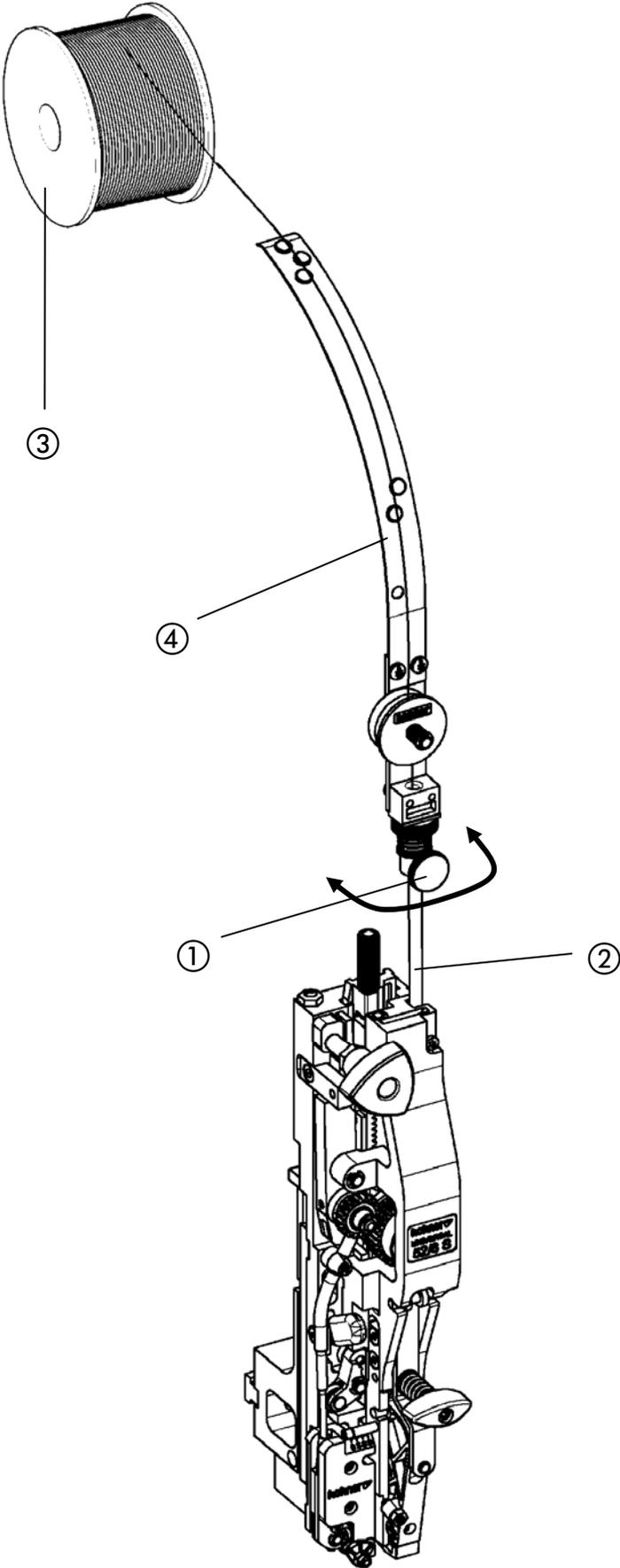


Fig. 6

### 3.1.2 Fitting the wire guide

- Fig. 6 -

- Loosen the knurled screw ① and place the wire guide ④ on the wire guide tube ②.
- Align wire guide ④ to wire roller ③ , in order to ensure perfect wire guidance.
- Tighten knurled screw ① in order to fix the wire guide ④.

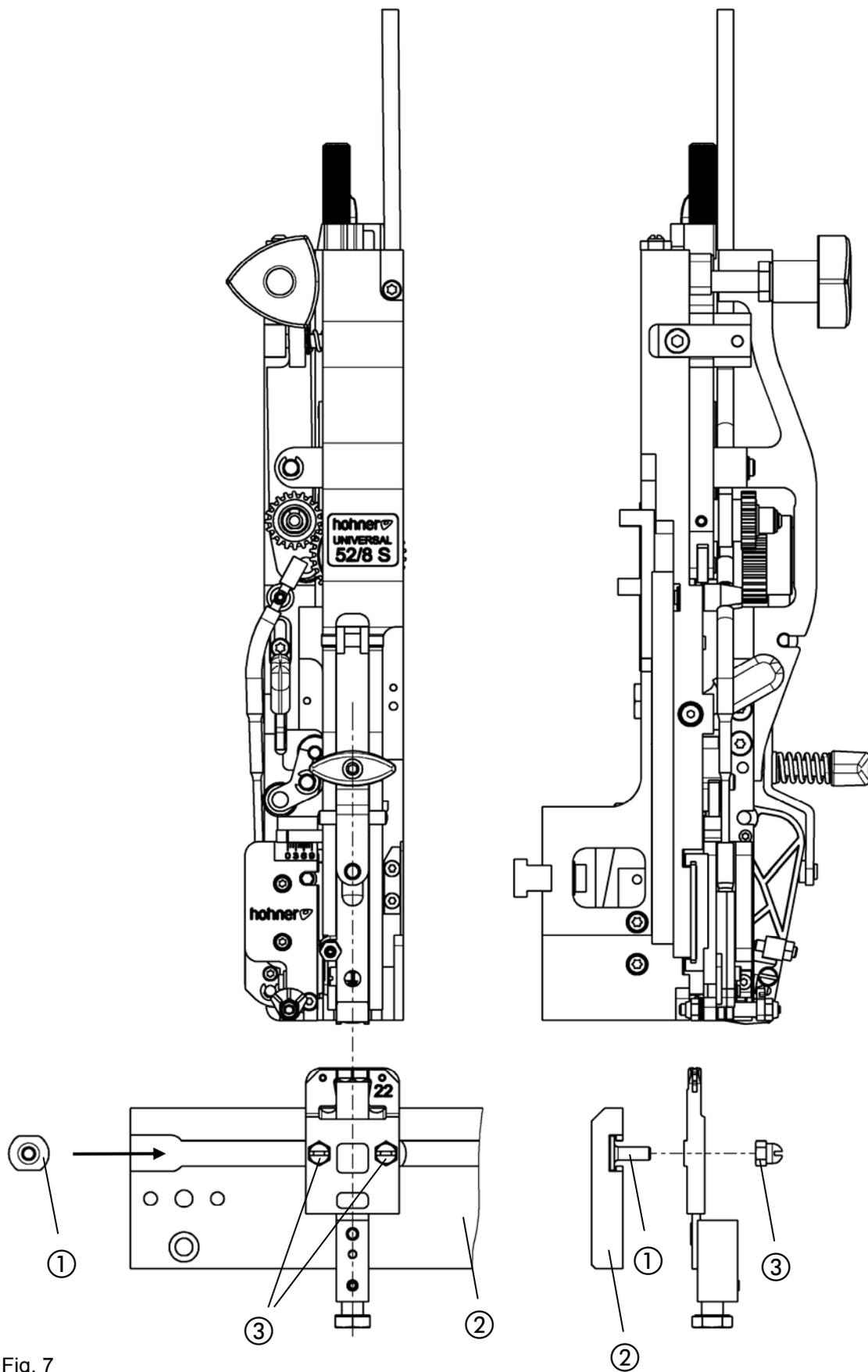


Fig. 7

### 3.1.3 Fitting the clincher box

- Fig. 7 -

- Install slotted screws ① (and tenon block) laterally into the clincher box mounting rail ②. Slightly screw down clincher box using slotted screws ① and clamping nuts ③.
- Slide clincher box beneath the center of the stitching head.
- Fix clincher box by tightening the locking nuts (and locking screws).

Operation

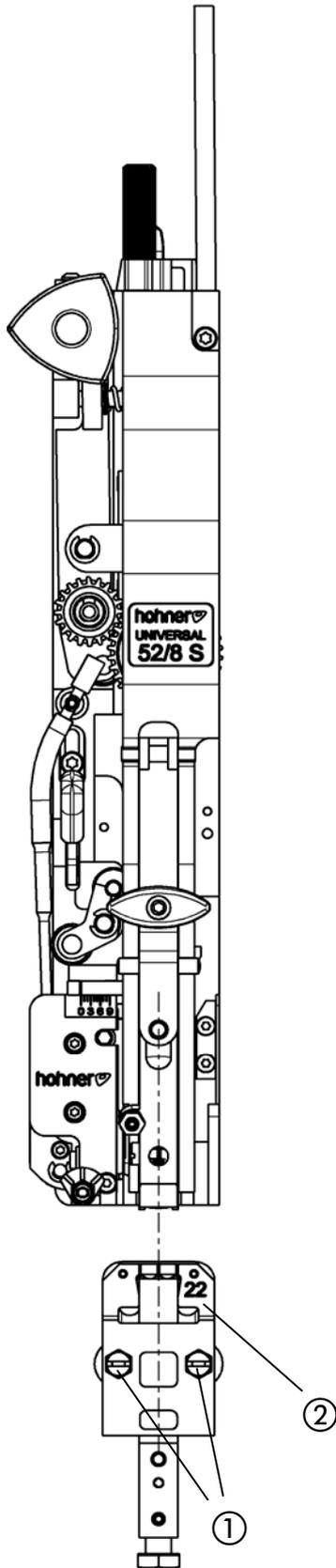


Fig. 8

### 3.1.4 Adjusting the clincher box

- Fig. 8 -

The center of the bender inside the stitching head must be precisely aligned to the center of the clincher box.

- Loosen locking nuts (or clamping screws) ① (and locking screws).
- Move clincher ② box until it is precisely aligned with the center of the bender.
- Fix clincher box by tightening the locking nuts (or clamping screws) (and locking screws).

Operation

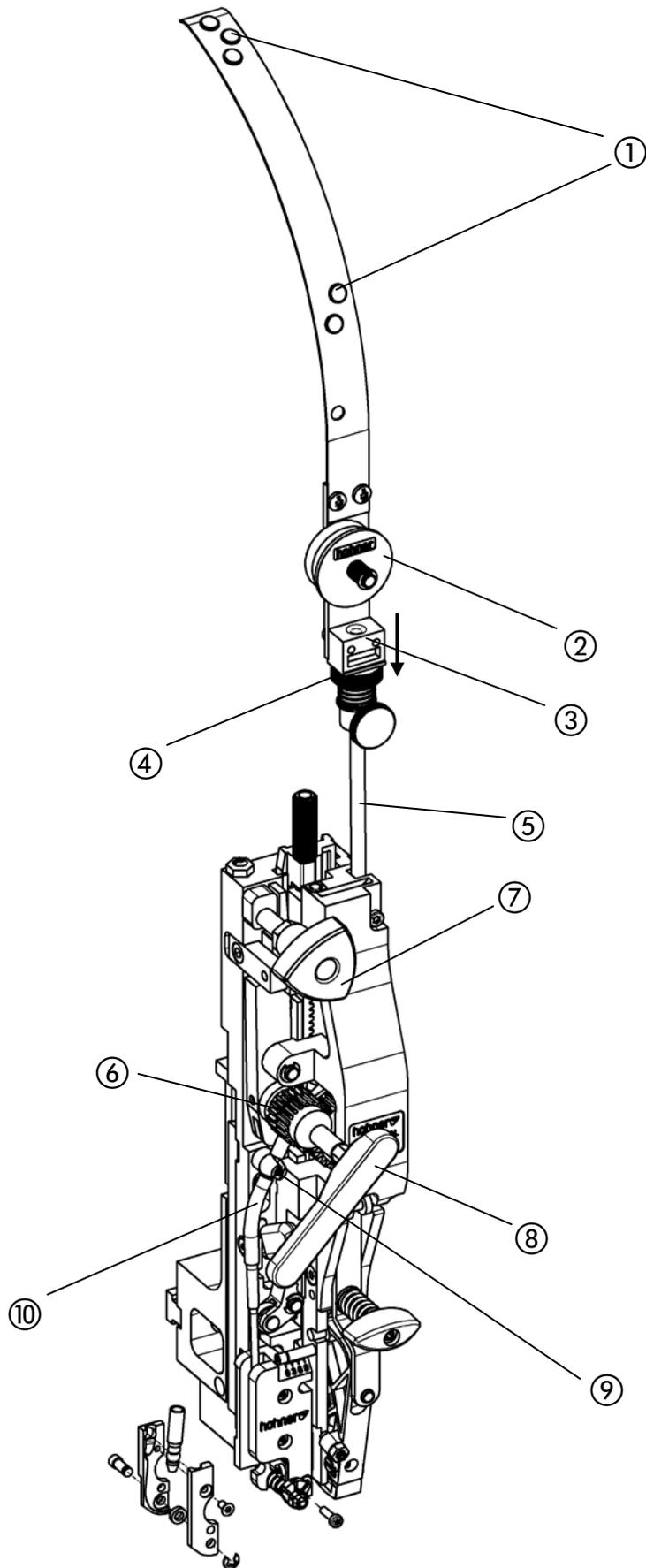


Fig. 9

### 3.2 Feeding the stitching wire

- Fig. 9 -

- Shut off the wire transport (move triangular handle ⑦ in the "centre position").
- Push the stitching wire through from above, as follows:  
through the eyes ① of the wire guide - between the two felt disks ② through into the wire return lock ③ - through the wire guidance tube ⑤ and between the two feed wheels ⑥.
- Restart the wire transport (turn triangular handle ⑦ to the left or to the right).
- Mount adjusting handle ⑧.
- Convey the wire to the knife by turning the adjusting handle ⑧ to the left (clockwise).

### 3.3 Removing the stitching wire

- Shut off the wire transport (move triangular handle ⑦ in the "centre position").
- Press adjusting disk ④ on wire return lock downwards, in order to eliminate its clamping effect, and pull the wire out.

### 3.4 Removing the wire guide tubes in the event of a wire jam

If a wire jam has occurred in the area of the wire guide tubes, this can be eliminated more easily by removing the wire guide tube.

- Shut off the wire transport (move triangular handle ⑦ in the "centre position").
- Loosen the clamping screw ⑨ (Torx screw) and remove wire guide tube ⑩
- Disentangle wire and remove from wire guide tubes.
- Press adjusting disk ④ on wire return lock downwards in order to eliminate its clamping effect and pull wire out.

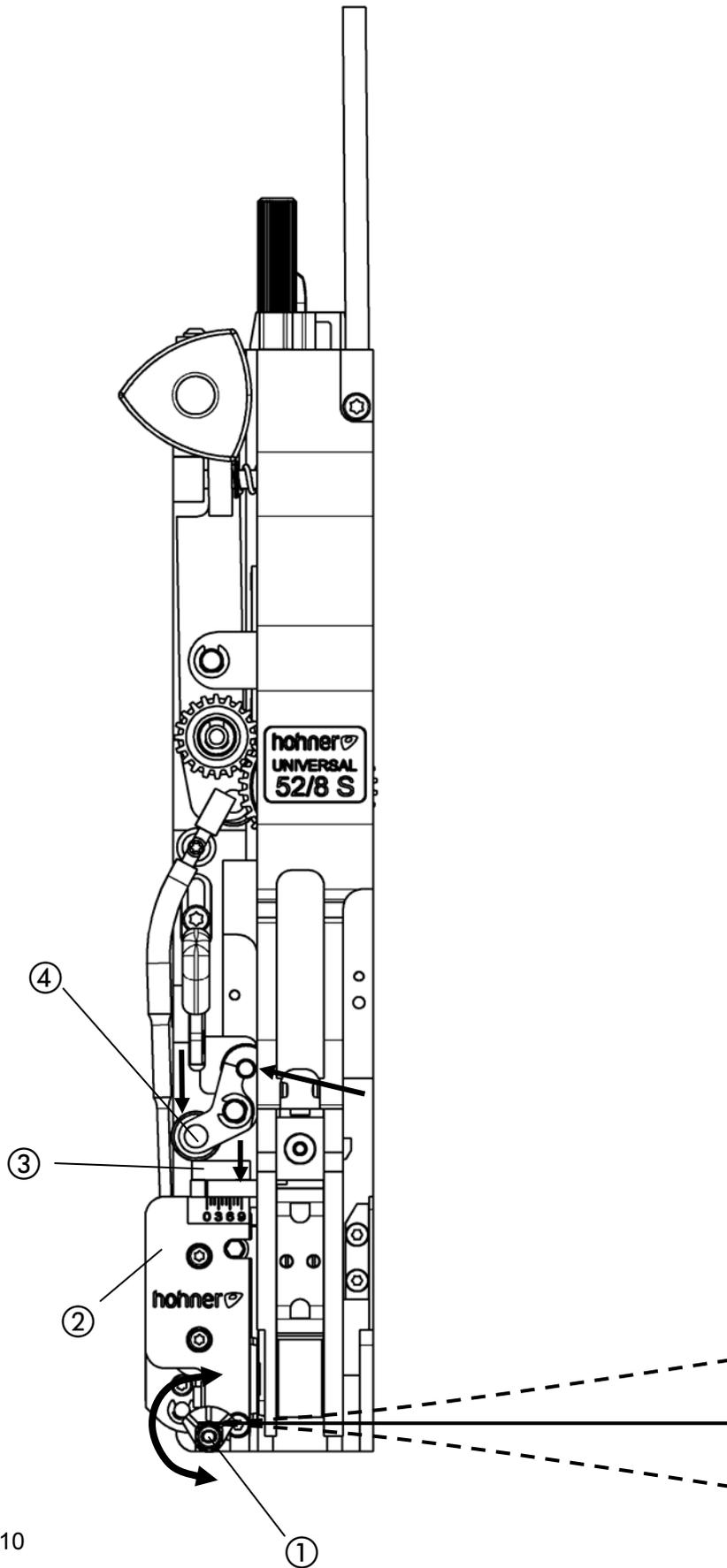


Fig. 10

### 3.5 Straighten the stitching wire

- Fig. 10

The stitching wire must run absolutely straight out of the circular knife. The wire feed can be set to run absolutely straight by turning the wire alignment roller ① which is arranged on eccentric bearings.

Wire straightening procedure:

- First remove former. (cf. 4.2.1)

a) Activate the machine's jog switch if possible.

b) Manual wire feed (cf. 3.2 Feeding the stitching wire)

Wire can be fed by turning the provided adjusting handle in the clockwise direction. When doing this, it is a good idea to cut off any overlong pieces of wire, by pressing down the knife slider ③ (possible by "levering" the rocker ④).

- Turn eccentric fixing of the wire alignment roller ① with the screwdriver until the stitching wire runs absolutely straight out of the circular knife.

Operation

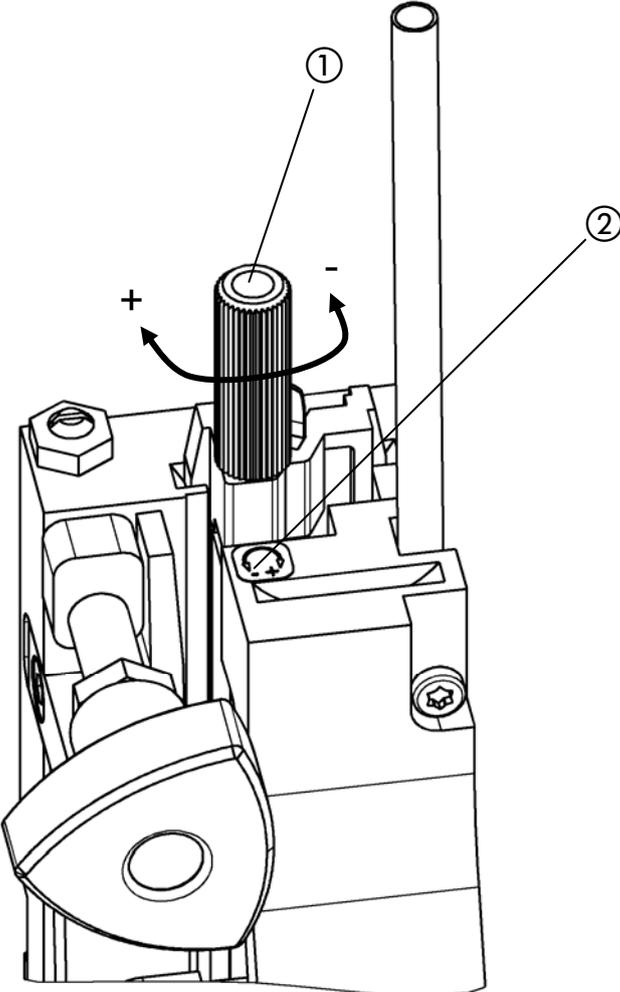


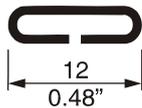
Fig. 11

### 3.6 Setting the stitch length

#### 3.6.1 Basic setting of the stitch length

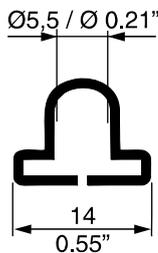
The setting is dependent on the stroke length of your machine.  
Basic setting is done ex works (referred to a stroke of 49 mm).

Normal stitching:



The recommended wire length for 2-sheet stitching is approx. 26 mm, the stitching unit must then be set to 2-sheet stitching.

Loop stitching standard stitch -L6-:



The recommended wire length for 2-sheet loop stitching is approx. 32 mm, the stitching unit must then be set to 2-sheet stitching.

Loop stitching special stitch - L8 -:



The recommended wire length for 2-sheet loop stitching is approx. 40 mm, the stitching unit must then be set to 2-sheet stitching.

When changing from normal stitching to loop stitching (standard -L6-) or vice-versa the stitch length required must be adapted.

Turn the knob ① clockwise (+) for feeding more wire, anticlockwise (-) for feeding less wire.



#### 3.6.2 Fine adjustment of the stitch length

- Fig. 11 -

Fine adjustment of the wire length is performed by means of test stitches. If the stitch is not the required length, more wire can be fed by **turning** knob ① (+), or less wire can be fed by **turning** the knob (-) (cf. scale ②).

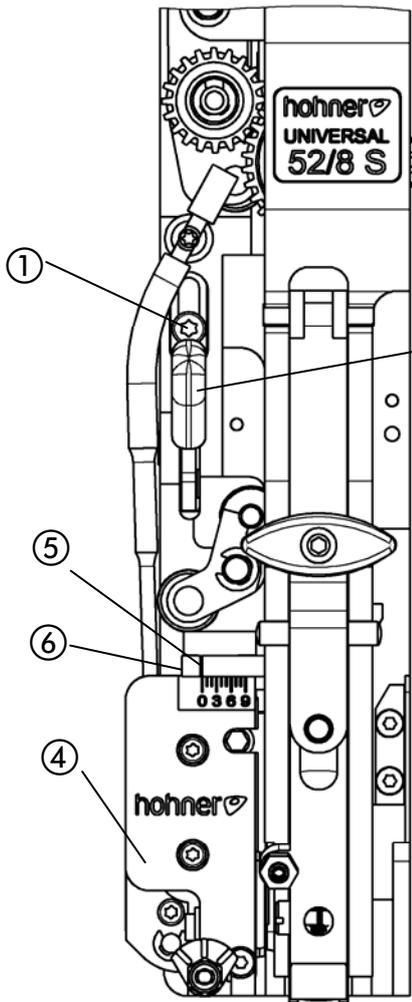


Fig. 12a

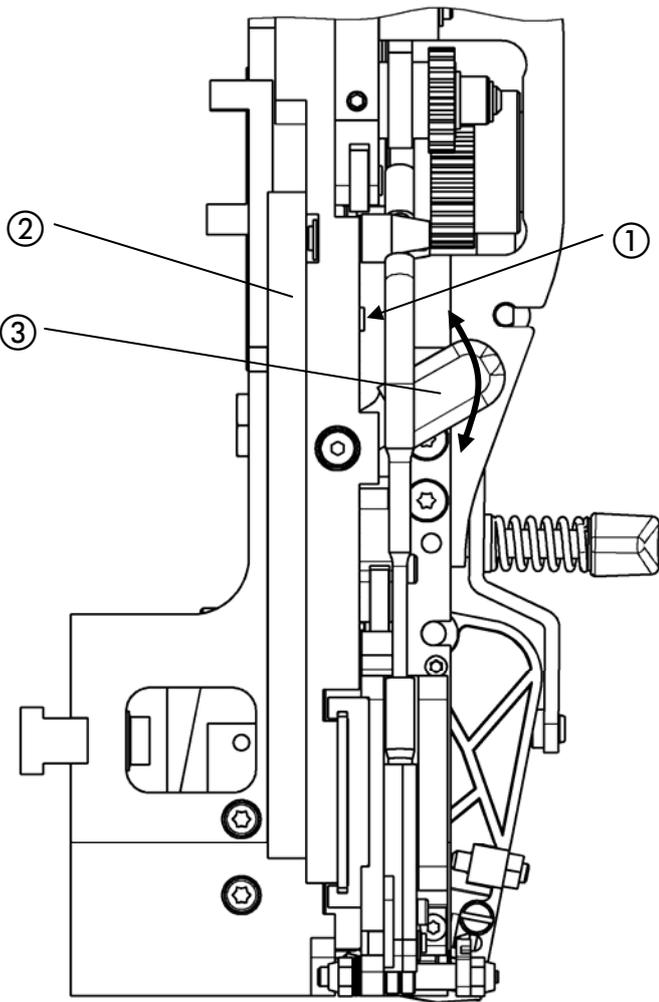


Fig. 12b

### 3.6.3 Setting the leg length of the stitch

- Fig. 12a, Fig. 12b -

After having set the wire length the leg length of the staple must be adjusted. Set the stitching unit to 2-sheet stitching.

- Undo the Torx screw ①.
- Shift the adjustment rods ② by adjusting the adjustment lever ③. Both the staple legs must be of equal length.
- Tighten the Torx screw ①.

Test the leg length by a test stitch. Repeat procedure if a correction is necessary.

#### Normal stitch



set higher value



set lower value

#### Loop stitch



set higher value



set lower value

### 3.6.4 Manual adjustment of the leg length (without central adjustment)

- Fig. 12a, Fig. 12b -

After having set the wire length the leg length of the staple must be adjusted. Both the staple legs must be of equal length. The leg length of the staple depends on the stitch thickness of the material to be stitched. Adjust the knives box ④ by adjusting the adjustment lever ③ in order to adapt the leg length to the material to be stitched. The notch at the scale pin ⑤ marks the set value of the stitch thickness in mm for normal staples.

The end of the scale pin ⑥ marks the set value of the stitch thickness in mm for loop-stitching clamps (-L6-).

Operation

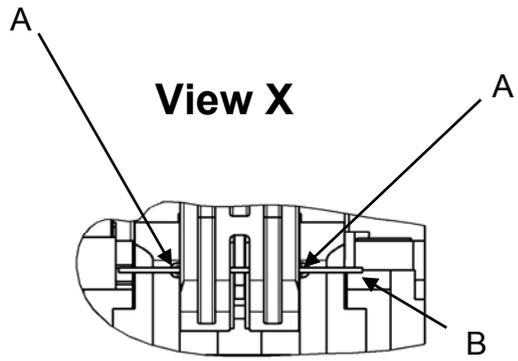
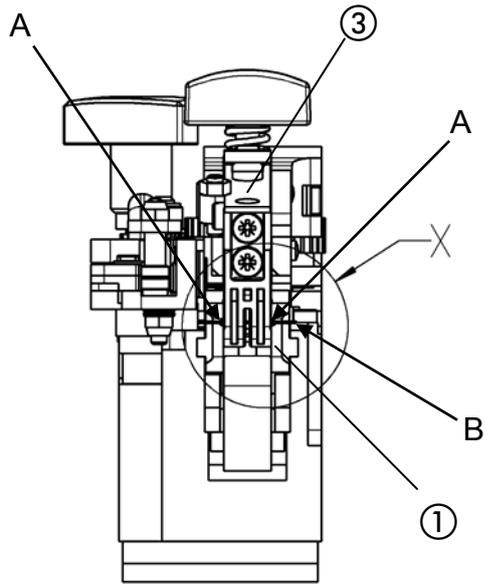


Fig. 13

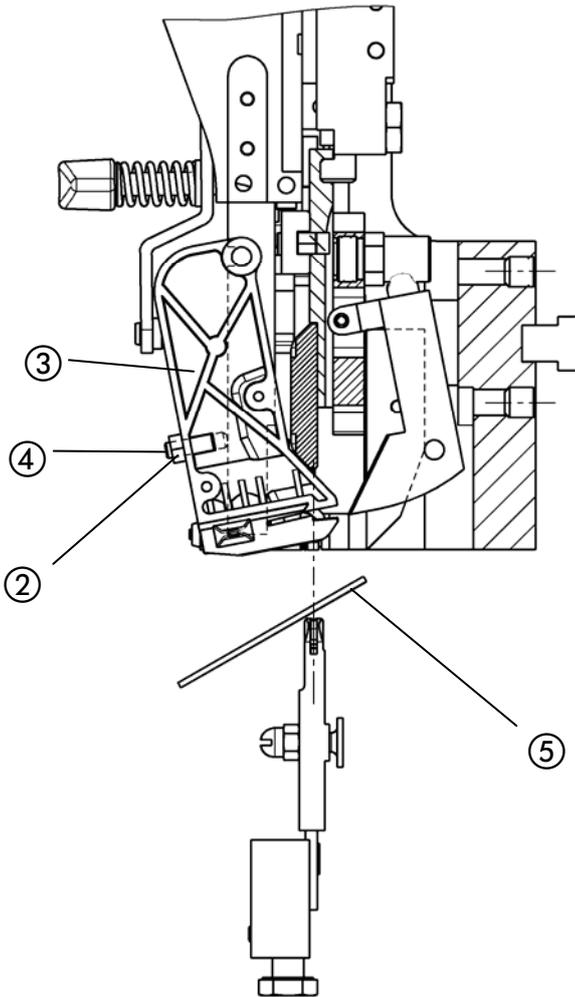


Fig. 14

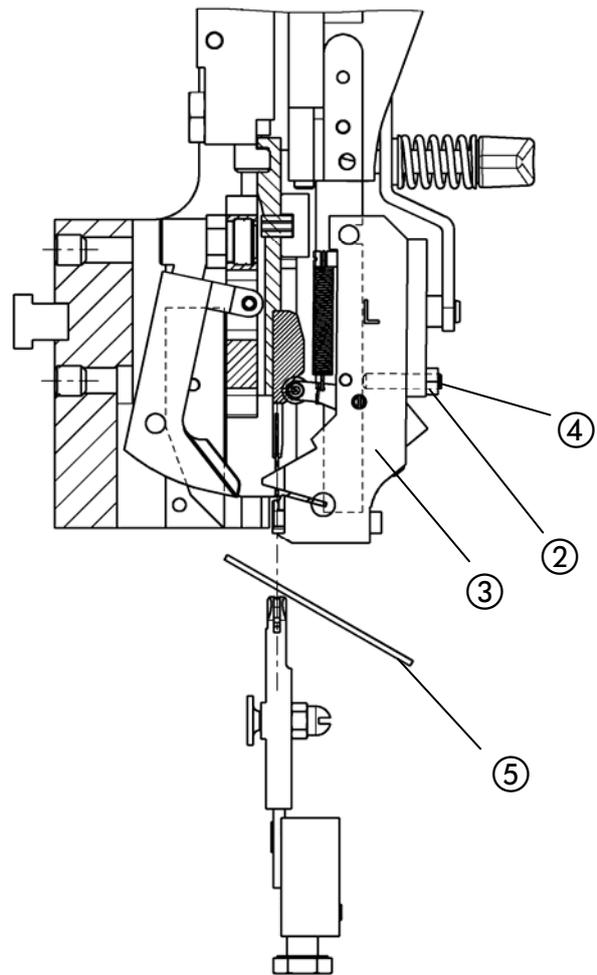


Fig. 15

### 3.7 Setting the former

- Fig. 13, Fig. 14, Fig. 15 -

To guarantee perfect stitching, the former ③ must swivel in far enough for the stitching wire (**arrow B**) to be positioned exactly beneath the center of the groove (**arrow A**) of the bender ①.

A mirror ⑤ placed on the clincher box can be used to check the setting on the fitted stitching head. The former ③ must keep the wire (arrow B) exactly aligned with the groove (**arrow A**) of the bender ①.

To adjust:

- Loosen locknut ②
- Turn grub screw ④ until it is perfectly aligned.
- Tighten locknut ②.



When changing the stitching wire thickness, the former setting should be checked and corrected if necessary.

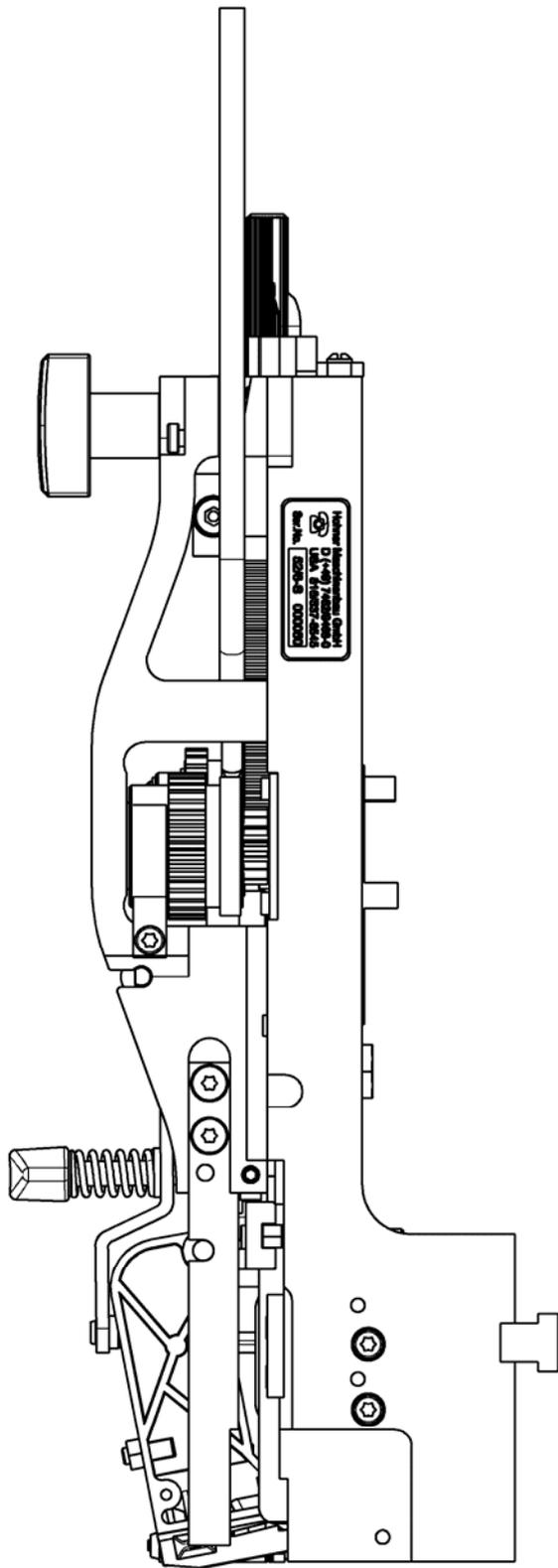


Fig. 16

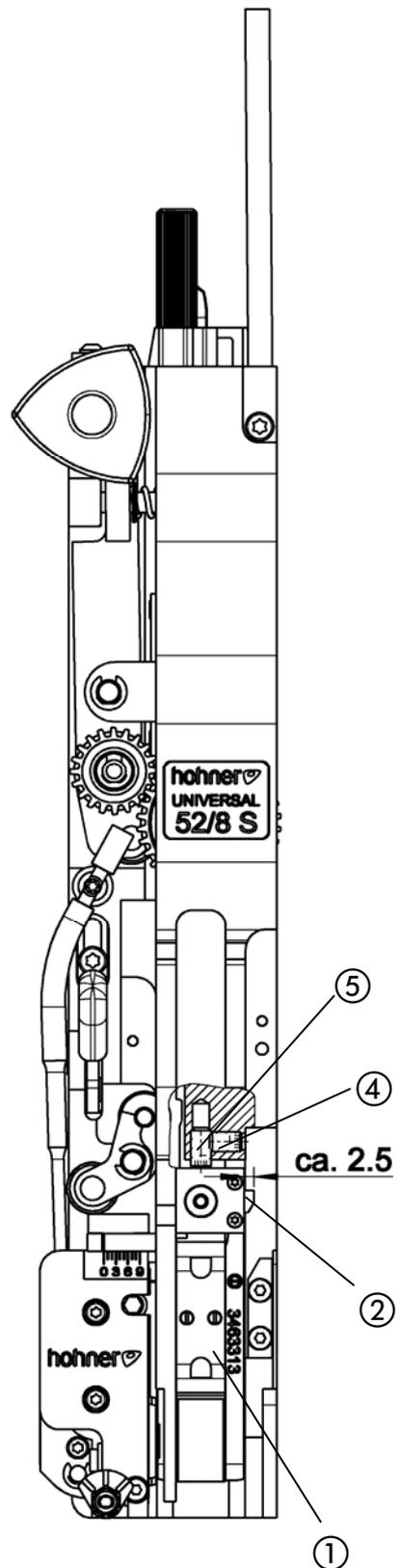


Fig. 17

### 3.8 Adjustment of the bender

- Fig. 16, Fig. 17 -

In order to achieve perfect stitching the stitching head must be set to the stroke height of the stitching unit (basic settings factory-set). This setting only needs to be corrected if the latch ② in the bender ① does not unlatch in the topmost position, i.e. if the latch does not protrude from the sides of the bender ① by approx. 2.5 mm.

To readjust:

- Move the stitching unit in the lowest position and remove former (see 4.2.1).
- Undo locknut ④ and unscrew check screw ⑤.
- Tighten locknut after adjustment.
- Run unit and check whether the latch ② is unlatched.

Repeat procedure – if necessary – until perfect functioning is ensured.

- Refit former (see 4.2.1).

**Operation**

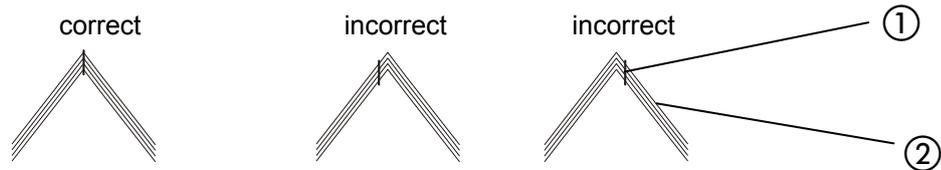


Fig. 18

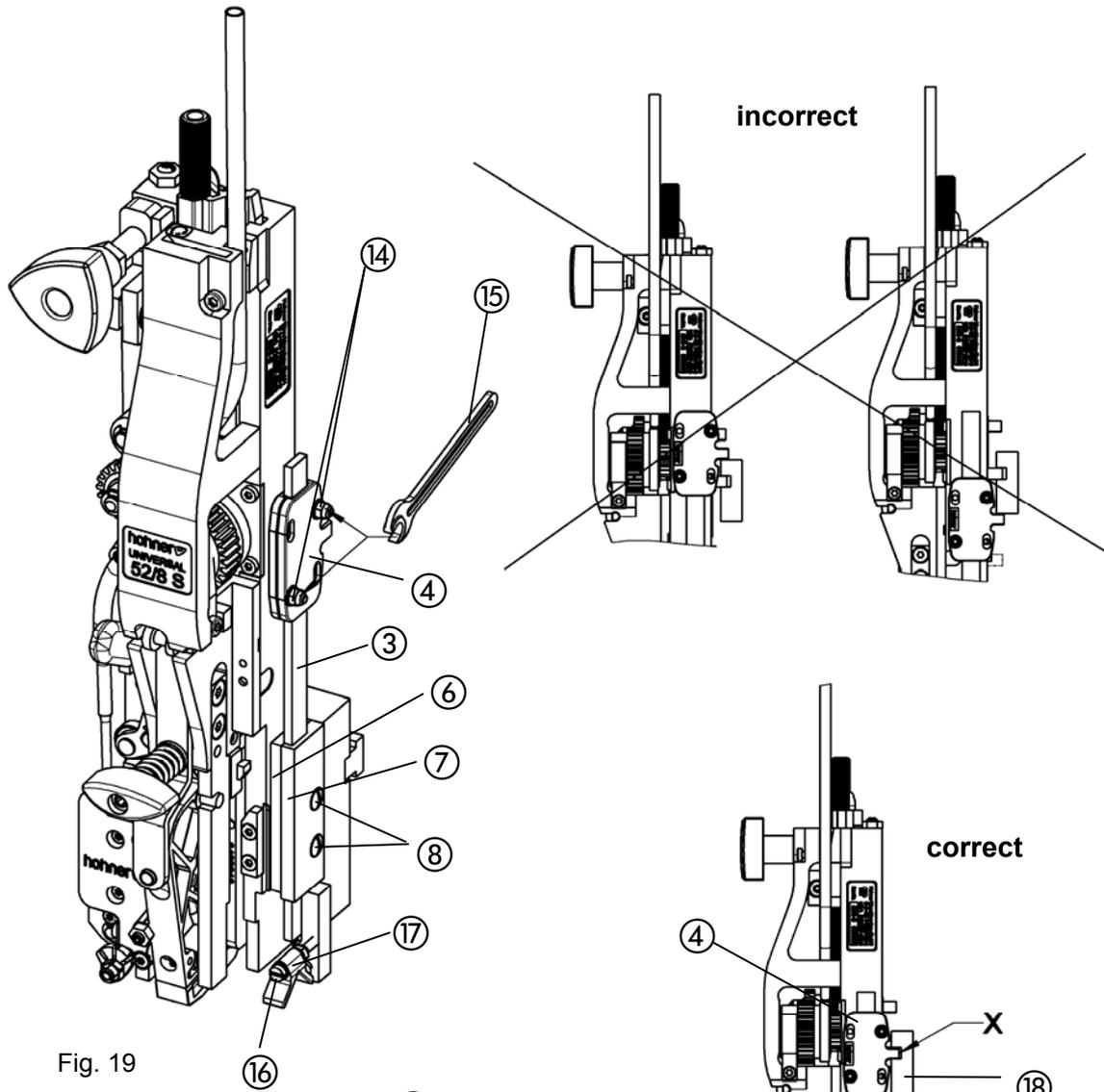


Fig. 19

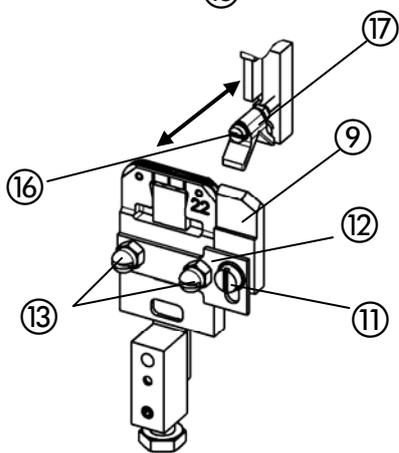


Fig. 19a

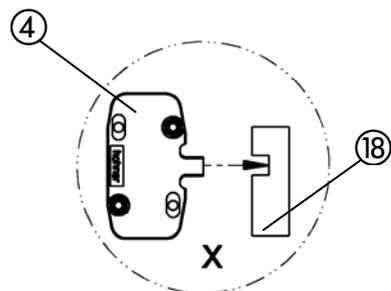


Fig. 19b

### 3.9 Spine centering parts

The spine centering parts are only used for saddle stitching. They help to precisely position the stitch ① in the center of the sheet fold ② (cf. Fig. 17)

#### 3.9.1 Fitting the holding down device

- Fig. 19 -

- Put centering device rods ③ with carrier ④ between distance plate ⑥ and guide plate ⑦ (plates and rods should be slightly lubricated).
- Screw in screws ⑧ through the plate holes in the thread on the housing and tighten screw; the rods ③ should be parallel with the housing edge.

Proper setting of the carrier ④ is required to ensure correct functioning of the centering device. The two adjusting nuts ⑭ can be turned uniformly (same gap widths between both plates) with the open-end wrench ⑮.



TIP

The adjusting nuts ⑭ are tightened clockwise so that the centering device rods ③ can just be pushed upward and downward with two fingers (pushing force 15-20N).

Rods and guide plates should be slightly lubricated and the adjusting nuts be retightened ⑭ (if necessary) from time to time.



ATTENTION

- A too strong setting causes higher wear of the functional components and markings on the stitching material.
- If the setting is too light the centering device might drop and block the stitching material.



ATTENTION

When installing the stitching head with centering device (- Fig. 19b -) make sure that the carrier ④ is correctly placed in the groove of the drive beam ⑱ (view "X").

#### 3.9.2 Fitting the slide

- Fig. 19a -

- Attach slide ⑨ with holding plate ⑫ by means of nuts or screws ⑬ to the clincher box.
- Loosen clamping screw ⑪.
- Move slide ⑨ in the oblong hole and set the height of the slide prism ⑨ to approx. 0.5 mm above the clincher box.
- Tighten clamping screw ⑪.

#### 3.9.3 Setting the centering prism

- Fig. 19a -

The centering prism ⑰ can be shifted to the front or rear by turning the check screw ⑯.

- Shift the centering prism ⑰ until it is aligned with the slide prism ⑨.
- Correct if necessary after having carried out test stitches.

## Operation

### 3.10 Exchangeable parts – Changeover (stitch type)

Converting the stitching head (**standard stitch / loop stitch**)

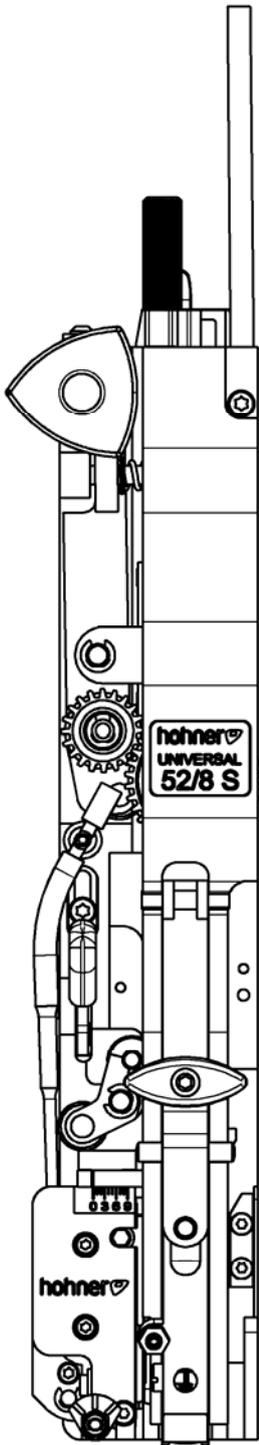


Fig. 20

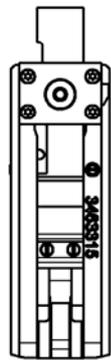


Fig. 20a

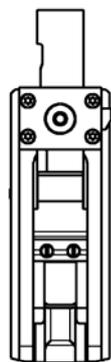
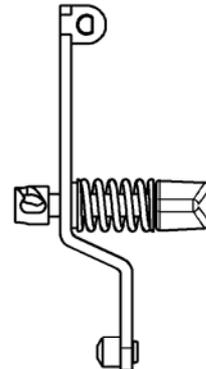
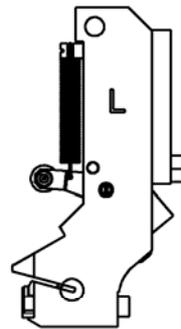
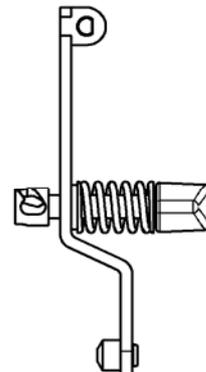
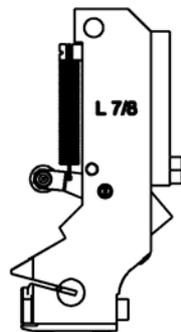


Fig. 20b



### 3.10.1 Exchangeable parts

- Fig. 20 , Fig. 20a , Fig. 20b -

To change over from standard stitching to loop stitching, a set of exchangeable parts, art. no. 0522 940 is required, consisting of:

Bender -L6-, cpl.	Art. no. 9963 408
Former -L6-, cpl.	Art. no. 9963 410
Former lever -L-	Art. no. 9963 840

Or a set of exchangeable parts loop stitch L7, Art.-no. 0522 944, consisting of:

Bender -L7-, cpl.	Art.-no. 9963 458
Former -L7-, cpl.	Art. no. 9963 455
Former lever -L-	Art. no. 9963 840

Or a set of exchangeable parts loop stitch L8, Art.-no. 0522 942, consisting of:

Bender -L8-, cpl.	Art.-no. 9963 458
Former -L8-, cpl.	Art. no. 9963 455
Former lever -L-	Art. no. 9963 840

Operation

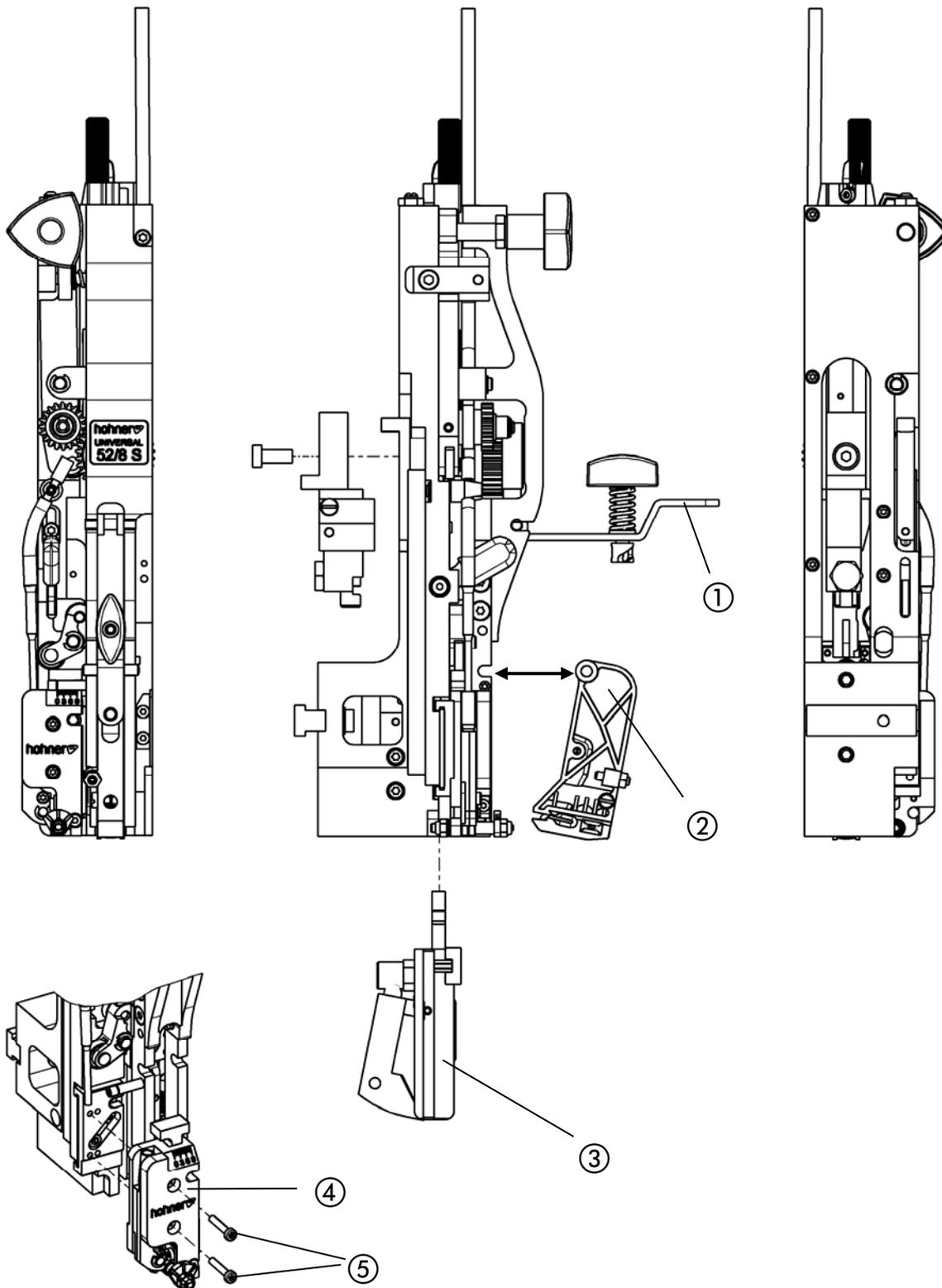


Fig. 21

### 3.11 Procedure - Converting from standard to loop stitching

- Fig. 21 -

- Remove stitching head (see Chap. 3.1).
- Replace former lever ① Art. No. 9963 590 with former lever –L- Art. No. 9963 840.
- Remove former (cf. 4.2.1 Replacing the former).
- Remove bender (cf. 4.2.2 Replacing the bender).
- Remount bender and former for loop stitching in the inverse order.
- Remove knives box ④ by undoing the screws ⑤ at the right fastening point of the guide. Move knives box by 4 mm to the left. Place knives box at the left fastening point of the guide and tighten screws ⑤.
- Install and set stitching head (see Chap. 3.1).

### 3.12 Adapting the stitch and leg length settings

As the loop stitch requires a longer wire piece, a new setting is required for the stitch and leg length (cf. 3.6 Setting the stitch length).

Servicing

4 Servicing

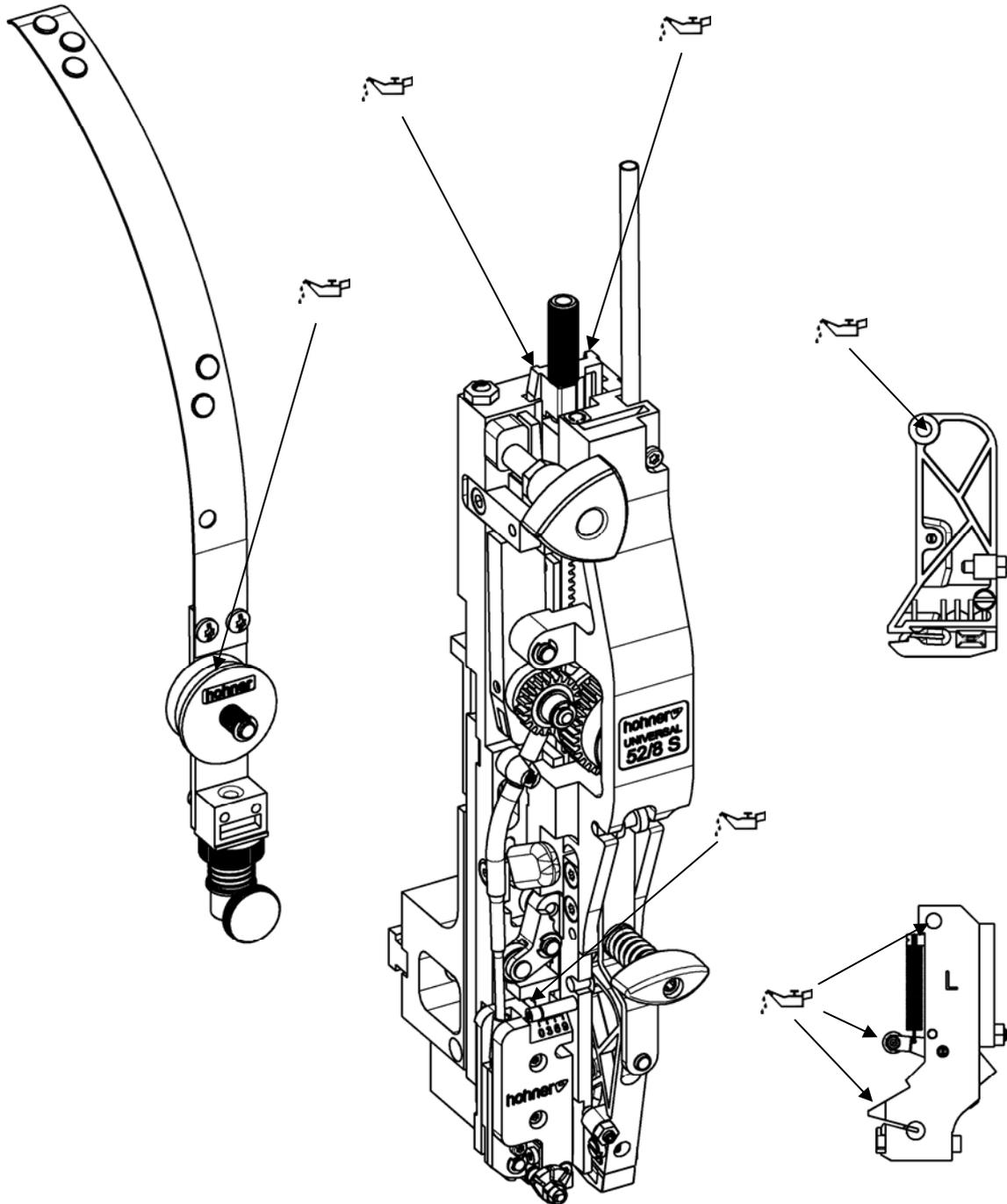


Fig. 22



4.2 Installation and replacement of parts

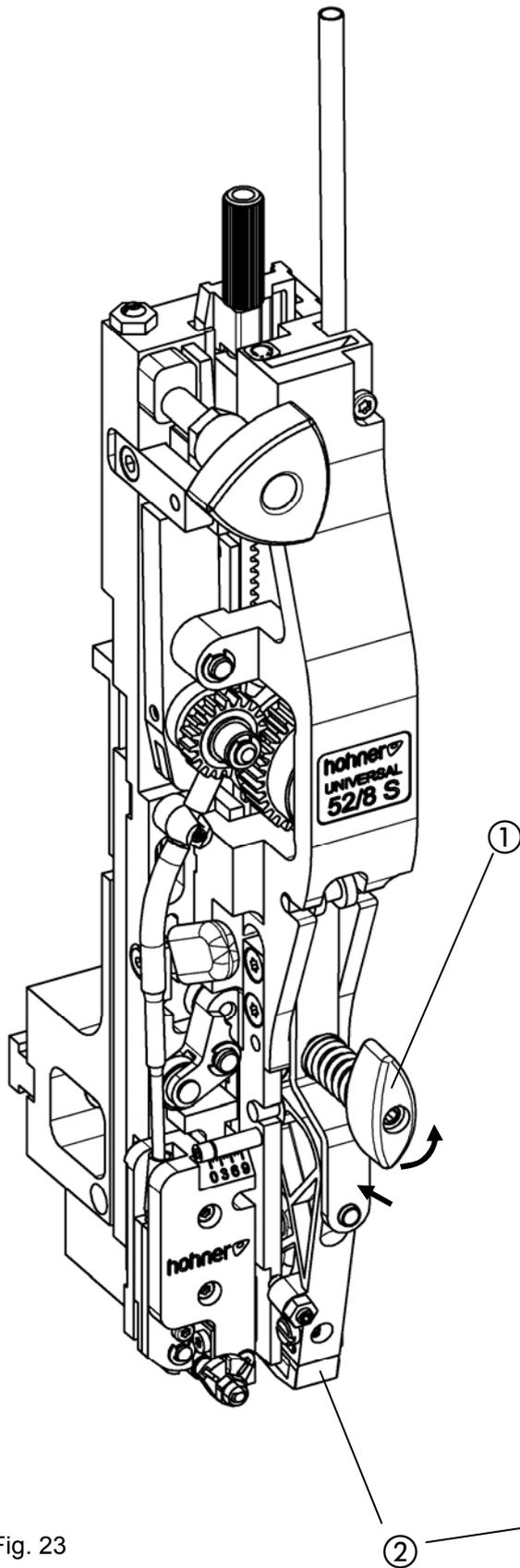


Fig. 23

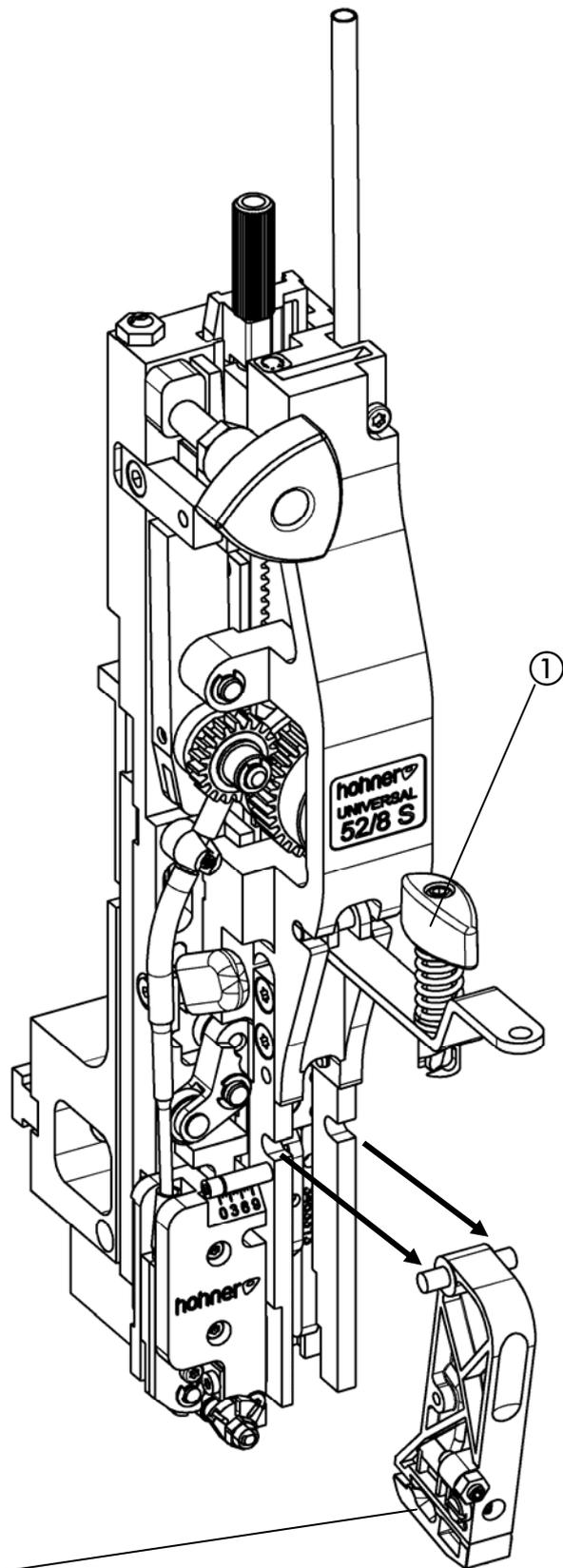


Fig. 24

#### 4.2.1 Replacing the former

- Fig. 23, Fig. 24 -

- Slightly press in gripping yoke ① turn through 90° to the left (anticlockwise) and tilt upwards.
- Remove former ② to the front.



Installation is performed in the reverse.

The gripping yoke ① is locked in horizontal position and unlocked in vertical position.

- Adjust former according to Chap. 3.7.

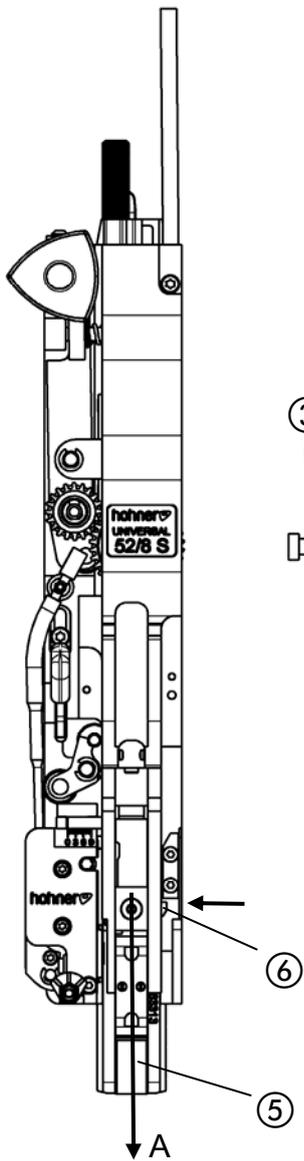


Fig. 25

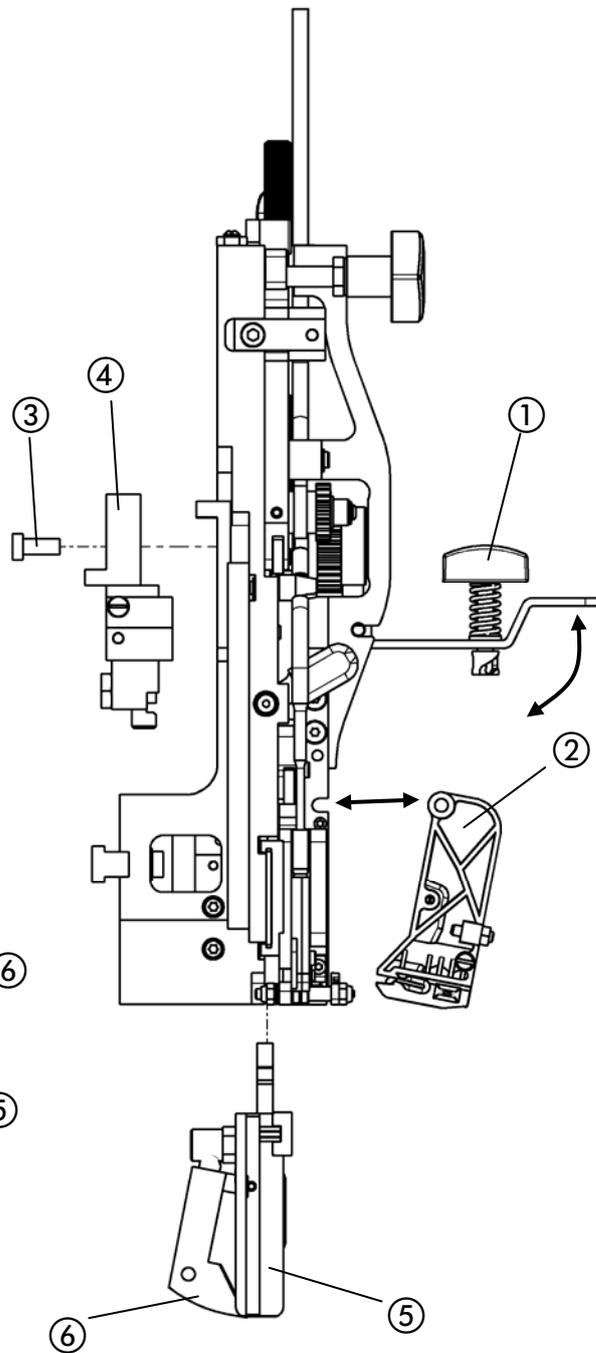


Fig. 26

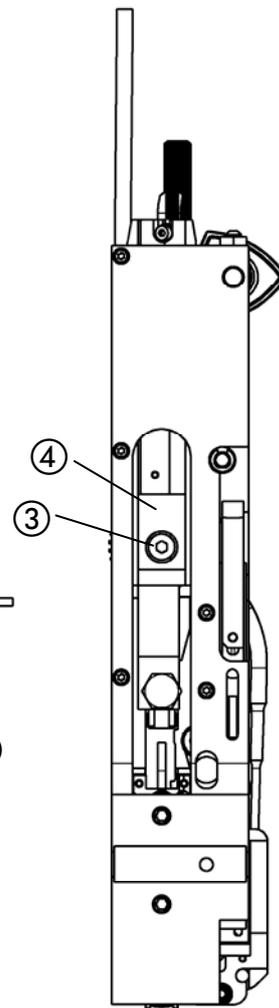


Fig. 27

#### 4.2.2 Replacing the bender

- Fig. 25, Fig. 26, Fig. 27 -

For replacing the bender ⑤ slightly press in gripping yoke ① turn through 90° to the left (anticlockwise) and tilt upwards.

- Remove former ② to the front.
- Undo Allen screw ③ and remove carrier ④.
- Pull out bender ⑤ downward (**arrow A**)

Installation is performed in the inverse order.



TIP

Press the latch ⑥ slightly into the bender while the bender ⑤ is being pushed into the stitching head.

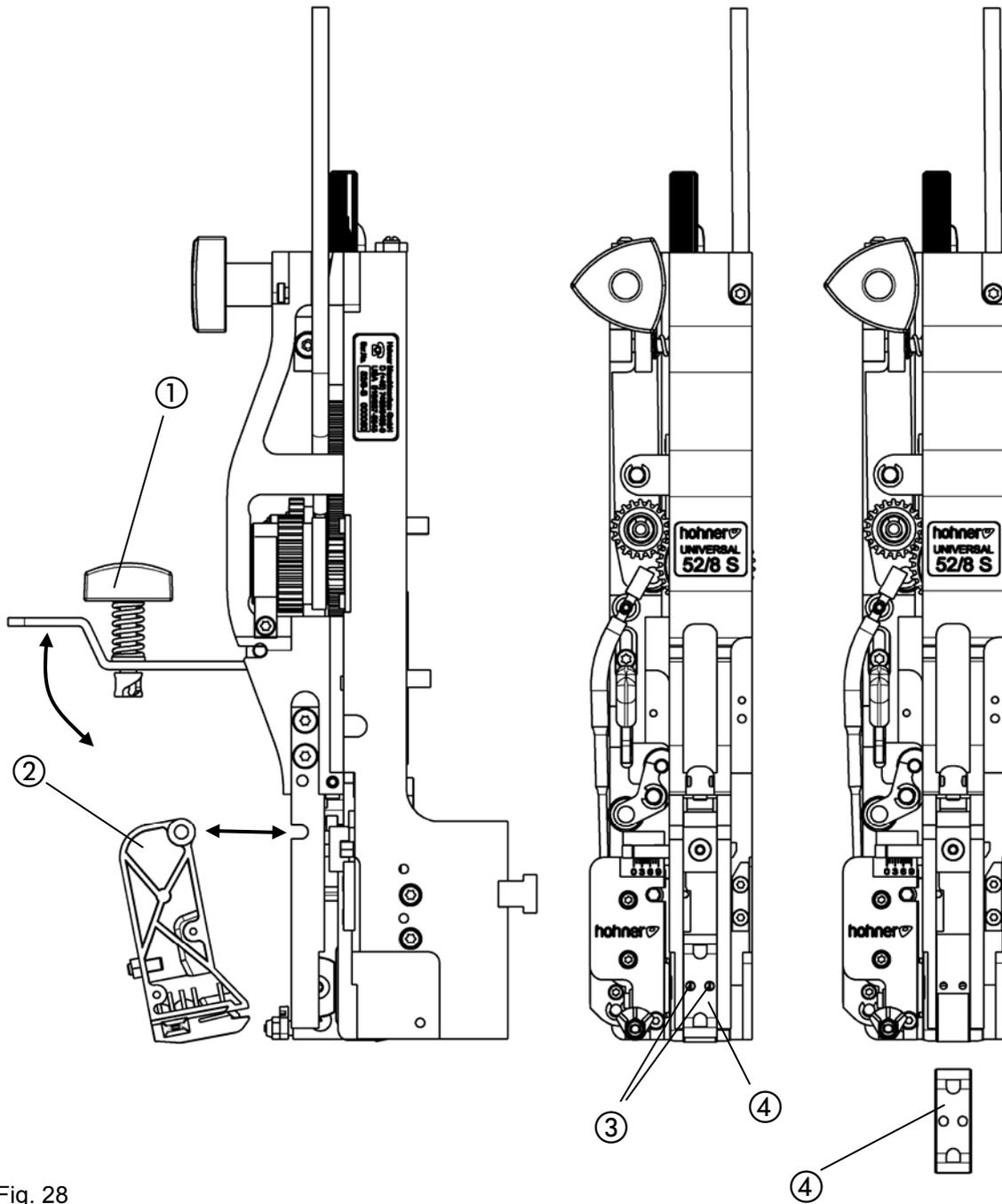


Fig. 28

### 4.2.3 Exchanging the driver

- Fig. 28 -

The driver can be used twice (only with normal stitching). If one side is damaged or deflected, the driver can be turned round.

- Slightly press in gripping yoke ① turn through 90° to the left (anticlockwise) and tilt upwards.
- Remove former ② to the front.
- Unscrew the two threaded bolts ③ in the driver ④ and pull out driver downwards.

Installation is performed in the inverse order.

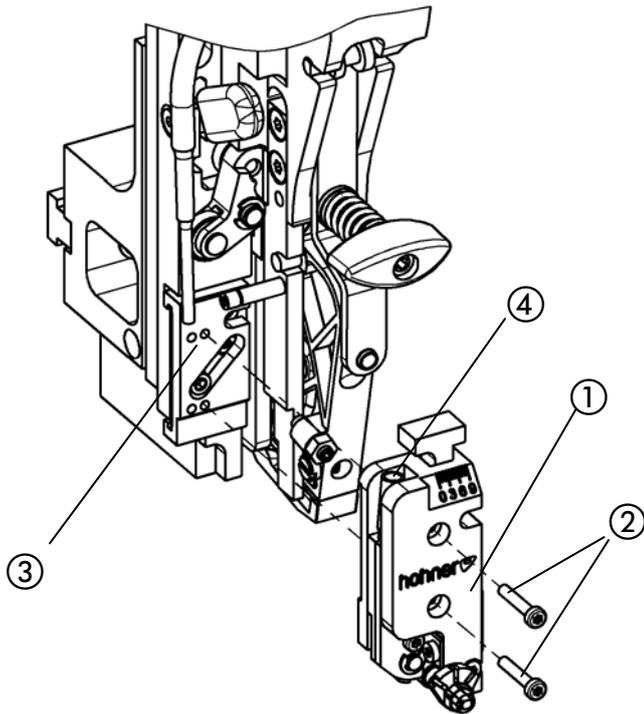


Fig. 29

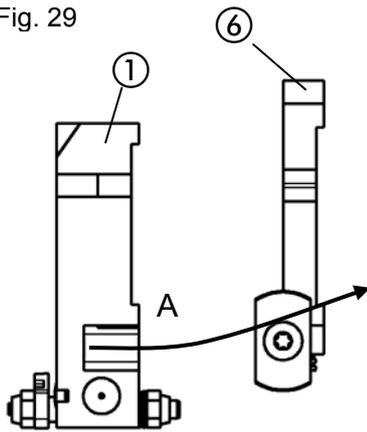


Fig. 30

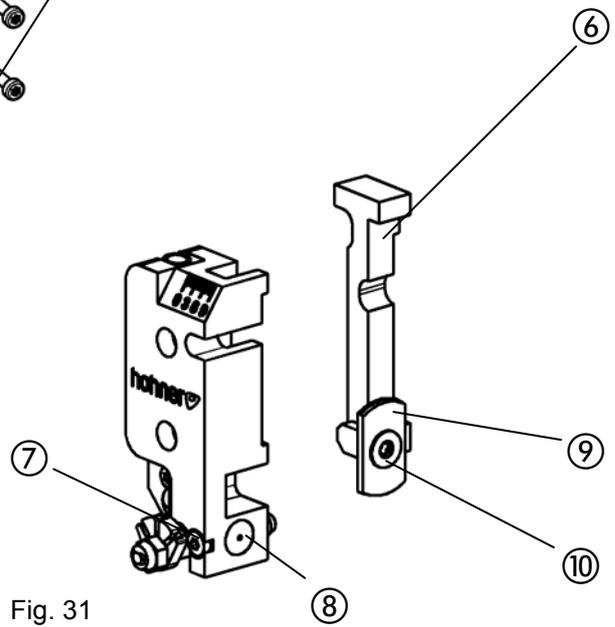


Fig. 31

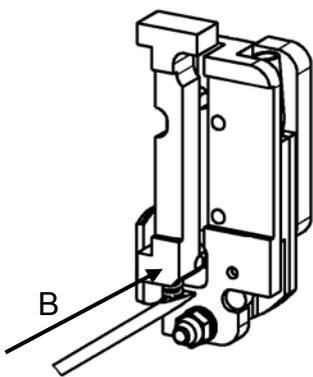


Fig. 32

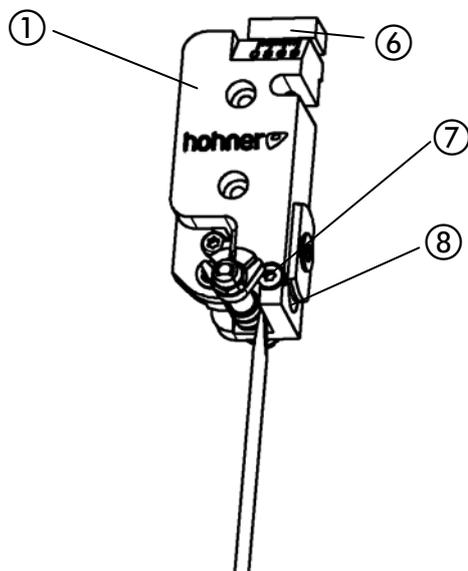


Fig. 33

#### 4.2.4 Replacing the knife

- Fig. 29 -

- For replacing the knives remove knives box ① by undoing the screws ② at the guide ③.

- Fig. 30 -

- Push the knife slider ⑥ out of the knife box ① (arrow A)

**Make sure** that the pressure spring doesn't strip.

- Change the knife (see following chapter)

- Fig. 32 -

- Replace knife slider ⑥ in the knife box ① (arrow B), compressing the pressure spring of the knife slider with a screwdriver, and pushing it into the knife box. **Make sure** that the pressure spring is not bent.

- Fig. 29 -

- Attach wire guide tube ⑤ to drill hole ④ in knives box.

- Place knives box ① on the guide ③ (please note - right fastening thread for normal staples and left fastening thread for loop-stitching clamps).

- Tighten screws ②.

##### 4.2.4.1 Rotating/Changing the flat knife

- Fig. 31 -

The flat knife has 2 cutting edges. If the first cutting edge is blunt, the knife can be rotated.

- Unscrew fastening screw ⑩ (approx. triple per side, slightly turned, usable).

- Rotate or replace flat knife ⑨ and tighten fastening screw ⑩.

##### 4.2.4.2 Replacing the circular knife

- Fig. 31 -

Round knife can be used several times if turned.

- Loosen the clamping screw ⑦ and remove the circular knife ⑧.

- Press new circular knife completely into the seat in the knife box.

- Adjust circular knife (cf. Adjusting the circular knife).

##### 4.2.4.3 Adjusting the circular knife

- Fig. 33 -

The circular knife is adjusted so as to ensure clean cutting of the wire.

When the knives are mounted, set the clearance between the flat and circular knives by carefully "levering" with a screwdriver.

- Loosen clamping screw ⑦ and position circular knife ⑧ exactly against the flat knife by "carefully levering" with a screwdriver.

- Tighten clamping screw ⑦.

If the distance between the knives is set too close the knife slider ⑥ may block and cause a wire jam.



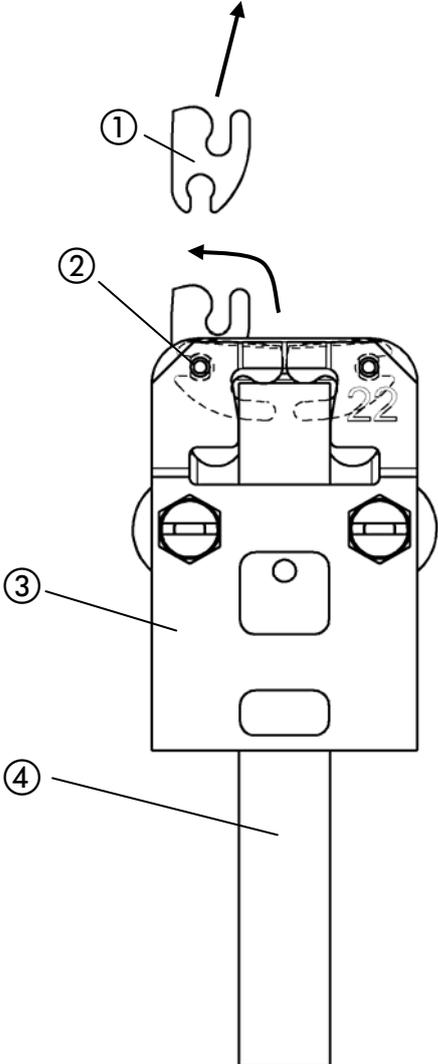


Fig. 34

#### 4.2.5 Replacing the clincher

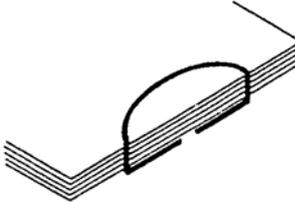
- Fig. 34 -

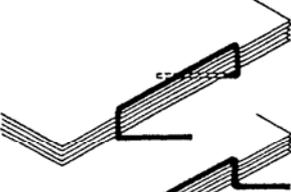
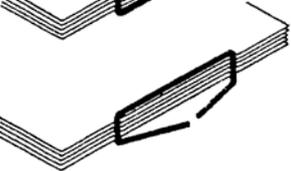
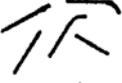
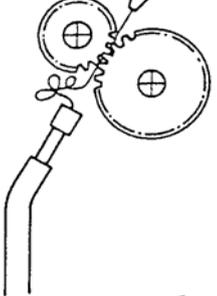
Remove clincher pusher ④ downwards. Turn clincher ① upwards in the clincher box ③ and remove from retention pin ②. Push new clincher onto retention pin and turn to the center of the clincher box. Replace clincher pusher.

## 5 Faults

### 5.1 Causes and elimination of faults

Below you will find some examples of faults, with information on the potential cause. If various causes come into consideration, sometimes several suggestions may be made for the remedy: You should not follow all of these before testing the result, but proceed step by step, with intermediate testing. Worn parts should always be replaced.

Stitch	Fault	Potential cause and elimination of the fault
	Back of stitch is bent in a banana shape:	<ul style="list-style-type: none"> <li>- Weak or soft wire.</li> <li>- Wire not aligned, cf. 3.5.</li> <li>- Circular or flat knife worn, cf. 4.2.4.</li> <li>- Shoe tongue pressure too weak: remove obstructing wire pieces or replace pressure spring in shoe tongue.</li> <li>- Wire groove in driver soiled, worn or damaged: remove driver, cf. 4.2.3. Clean driver groove or replace driver.</li> </ul>
	Back of stitch not securely positioned:	<ul style="list-style-type: none"> <li>- Stitching not pressed sufficiently: set stitching unit to stitch thickness.</li> </ul>
	Stitch legs are not sufficiently clinched:	<ul style="list-style-type: none"> <li>- Stitching not pressed sufficiently: set stitching unit to stitch thickness.</li> <li>- Clincher is not coming up far enough: adjust clincher lift pressure on stitching unit.</li> <li>- Time from clincher activation to lift movement is incorrect: stitching unit must be reset by the manufacturer.</li> </ul>
	Back of stitch is not securely positioned and is sagging in a saddle shape:	<ul style="list-style-type: none"> <li>- Stitching not sufficiently pressed: set stitching unit to stitch thickness.</li> <li>- Weak or soft wire.</li> <li>- Shoe tongue pressure too weak: remove obstructing wire pieces or replace pressure spring in shoe tongue.</li> </ul>
	Stitch legs are buckled and are not properly clinched:	<ul style="list-style-type: none"> <li>- Weak or soft wire.</li> <li>- Wire not aligned, cf. 3.5.</li> <li>- Align clincher box, cf. 3.1.4.</li> <li>- Different leg lengths, cf. 3.6.3.</li> <li>- Overall wire piece too short, cf. 3.6.2.</li> <li>- Circular or flat knife worn, cf. 4.2.4.</li> </ul>
	Wire not penetrating, resulting in loop formation:	<ul style="list-style-type: none"> <li>- Weak or soft wire.</li> <li>- Bender groove blocked by wire pieces.</li> <li>- Circular or flat knife worn, cf. 4.2.4.</li> <li>- Wire groove in driver soiled, worn or damaged: remove driver: clean driver groove or replace driver, cf. 4.2.3.</li> <li>- Shoe tongue pressure too weak: remove obstructing pieces of wire or replace pressure spring in shoe tongue.</li> <li>- Align clincher box, cf. 3.1.4.</li> </ul>

	<p>Stitch legs break off:</p>	<ul style="list-style-type: none"> <li>- Wire too brittle: use a different wire quality.</li> <li>- Former blocked by pieces of wire: remove wire pieces, remove former if necessary.</li> <li>- Gripper spring or gripper in former defective.</li> <li>- Wire thickness not suitable for the wire guiding parts (bender and driver).</li> <li>- Adjust former to bender groove.</li> </ul>
	<p>Hump at a stitch corner:</p>	<ul style="list-style-type: none"> <li>- Weak or soft wire.</li> <li>- Driver damaged, cf. 4.2.3.</li> <li>- Circular or flat knife worn, cf. 4.2.4.</li> <li>- Wire not aligned, cf. 3.5.</li> </ul>
	<p>Stitch legs contract or diverge:</p>	<ul style="list-style-type: none"> <li>- Circular or flat knife worn, cf. 4.2.4.</li> <li>- Wire not aligned, cf. 3.5.</li> <li>- Align clincher box, cf. 3.1.4.</li> </ul>
	<p>Leg ends clinched the wrong way round:</p>	<ul style="list-style-type: none"> <li>- Weak or soft wire.</li> <li>- Wire not aligned, cf. 3.5.</li> <li>- Circular or flat knife worn, cf. 4.2.4.</li> </ul>
	<p>One or both legs are clinched obliquely:</p>	<ul style="list-style-type: none"> <li>- Clincher damaged, cf. 3.1.3.</li> <li>- Adjustment of clincher box mounting to stitching head mounting, cf. 3.1.4.</li> <li>- Wire not aligned, cf. 3.5.</li> </ul>
	<p>Stitch legs are clinched obliquely to the same side:</p>	<ul style="list-style-type: none"> <li>- Adjustment of clincher box mounting to stitching head mounting, cf. 3.1.4.</li> <li>- Wire not aligned, cf. 3.5.</li> <li>- Bender worn, cf. 4.2.2.</li> </ul>
	<p>Lightly bent wire pieces fall out:</p>	<ul style="list-style-type: none"> <li>- Wire not aligned, cf. 3.5.</li> <li>- Cutting slider jammed: circular knife set too tightly to flat knife, cf. 4.2.4.3.</li> <li>- Cutting rocker locked, pressure spring in cutting block defective.</li> </ul>
	<p>Wire loop between conveyor wheels and wire guidance tube:</p>	<ul style="list-style-type: none"> <li>- Former incorrectly set, cf. 4.2.1.</li> <li>- Cutting pusher gets caught:                             <ul style="list-style-type: none"> <li>- compression spring faulty</li> <li>- knife set too strong</li> <li>- bottom wire guides clogged</li> </ul> </li> </ul>
	<p>Straight wire pieces fall out:</p>	<ul style="list-style-type: none"> <li>- Weak spring pressure on former.</li> <li>- Wire not aligned, cf. 3.5.</li> <li>- Former set incorrectly, cf. 4.2.1.</li> </ul>
	<p>Remedy for faults: loop stitching</p>	<p>You will find most faults and their causes in the preceding section.</p>