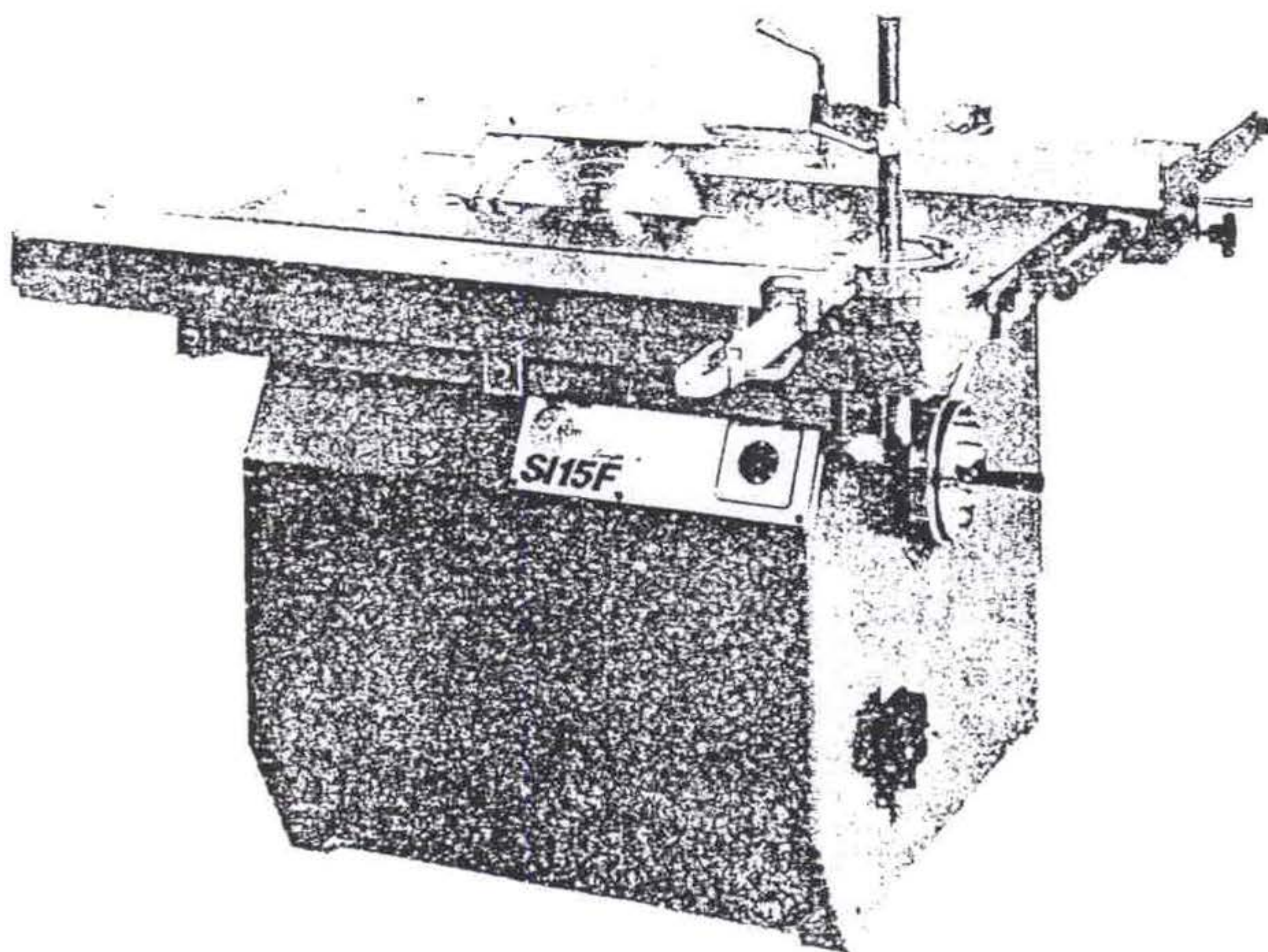


*Service* Instructions for use  
**SI15F**  
**SI15WF**





# I N D E X

## Chptr. 1 - INTRODUCTION

I	- Identification of the machine . . . . .	Page	1
II	- Technical features . . . . .	▪	1

## Chptr. 2 - UNLOADING - INSTALLATION SETTING UP - ADJUSTMENT

I	- Unloading and installation . . . . .	▪	2
II	- Electrical connection . . . . .	▪	2
III	- Connection to the suction plant . . . . .	▪	5
IV	- Mounting of the saw disk and guard . . . . .	▪	6
V	- Saw disk lifting . . . . .	▪	6
VI	- Saw disk tilting . . . . .	▪	7
VII	- Change of speed and adjustment of belts tension . . . . .	▪	7
VIII	- Rip fence . . . . .	▪	8
IX	- Adjustment of the sliding table . . . . .	▪	9
X	- Use of the normal sliding table . . . . .	▪	10
XI	- Mounting of the 2,7/3,2 mts. sliding table . . . . .	▪	10
XII	- Use of the extension table and crosscut fence . . . . .	▪	11
XIII	- Use of the 2,7/3,2 mts. sliding table . . . . .	▪	13

## Chptr. 3 - SCORING UNIT

I	- Mounting of the scoring unit . . . . .	▪	18
II	- Mounting of the scoring blades . . . . .	▪	19
III	- Adjustment of the scoring unit . . . . .	▪	19
IV	- Adjustment of the belts tension . . . . .	▪	19
V	- Use of the scoring unit . . . . .	▪	20

## Chptr. 4 - MAINTENANCE AND LUBRICATION

I	- Maintenance . . . . .	▪	21
II	- Lubrication . . . . .	▪	21

## Chptr. 5 - SPARE PARTS REPLACEMENT

I	- Substitution of the spindle ball bearings . . . . .	▪	22
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# 1 INTRODUCTION

## I IDENTIFICATION OF THE MACHINE

Every machine is identified by the initials marked on the control panel  
The serial number is punched on the table (toothed-bar side)

## II TECHNICAL FEATURES

	SI15F	SI15FS	SI15WF
Standard saw diameter	13 3/4" - 350 mm		
Max. saw diameter	15 3/4" - 400 mm		
Max. depth of cut with Ø 350 mm blade	4 9/16" - 115 mm		
Max. depth of cut with Ø 400 mm blade	5 1/2" - 140 mm		
Max. depth of cut at 45° (with Ø 350 mm blade)	3 1/8" - 80 mm		
(with Ø 400 mm blade)	3 3/4" - 96 mm		
Standard spindle diameter	1 1/4" - 31.75 mm		
Standard motor	5.5 HP		
optional	7.5 HP or 10 HP		
Speed of saw shaft	3200-4500-6000 rpm		
Speed of saw shaft with two-speeded motor 4.8/6 HP			
(on request)	1600-2250-3000-3200-4500-6000 rpm		
Max. width of cut with rip fence	33 1/2" - 850 mm		
on request	50" - 1270 mm		
on request	60" - 1520 mm		
Size of fixed table	45 1/4" x 31 1/2" - 1150 x 800 mm		
(SI 15 WF)	45 1/4" x 24 3/4" - 1150 x 630 mm		
Size of sliding table	53 1/8" x 9 1/2" - 1350 x 240 mm		
(SI 15 WF)	100 1/2" x 13 3/4" - 2550 x 350 mm		
with sliding table stroke	51 1/4" - 1300		
(SI 15 WF)	106 1/4" - 2700 mm		
Size of sliding table (optional)			
(SI 15 WF)	120 1/8" x 13 3/4" - 3050 x 350 mm		
with optional stroke	126" - 3200 mm		
Overall dimensions			
(SI 15 F)	52" x 53 1/2" x 39 3/8" - 1320 x 1360 x 1000 mm		
(SI 15 FS)	92 1/2" x 53 1/2" x 39 3/8" - 2350 x 1360 x 1000 mm		
(SI 15 WF)	98 1/2" x 106 1/4" x 39 3/8" - 2500 x 2700 x 1000 mm		
Scoring unit (optional)			
Scoring unit blade	4 1/8" ÷ 4 3/4" - 105 ÷ 120 mm		
(SI15WF)	4 1/8" ÷ 4 15/16" - 105 ÷ 125 mm		
Scoring unit int. diam.	20 mm		
Scoring unit speed	8300 rpm		
Scoring unit motor	0.75 HP		
(optional)	1 HP		

## UPON REQUEST

- For scoring unit blade for scoring unit, double ended wrench, pivot for scoring control
- Blade flange Ø134 mm
- Overload switch protection
- For SI15WF automatic workpiece clamp



## 2 UNLOADING - INSTALLATION - SETTING UP - ADJUSTMENT

### I UNLOADING AND INSTALLATION

- Before unloading, free the table from anything that may hamper this operation. Make sure that the sliding table is well locked both by the latch and by the center bolt.
- The machine is to be slung with ropes as shown in fig. 1. Protect varnished parts with rags. Lift slowly to check machine horizontality and lower down very carefully.
- If the crane is not available, a skid can be made by using two heavy beams or boards (see fig. 2) well fixed to the ground and supported in the middle by stands.

Brake the lorry firmly and control descent of the machine by strong ropes kept constantly under tension.

Once on the ground, it can be moved to the working place by making it slide on rolls. Setting is done by placing machine in proper location well levelled. Fit eventually rubber blocks to insulate it from ground.

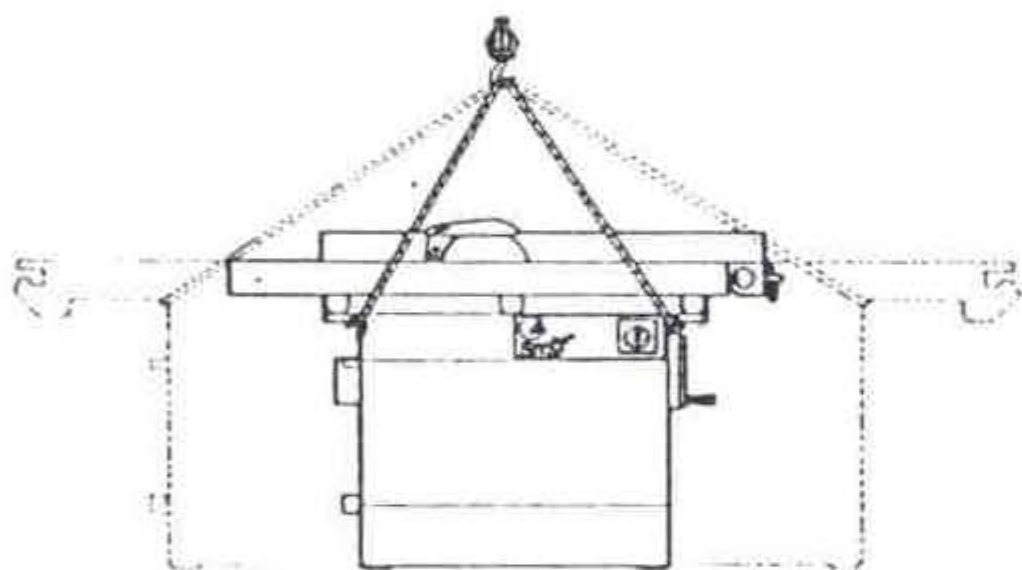


Fig. 1

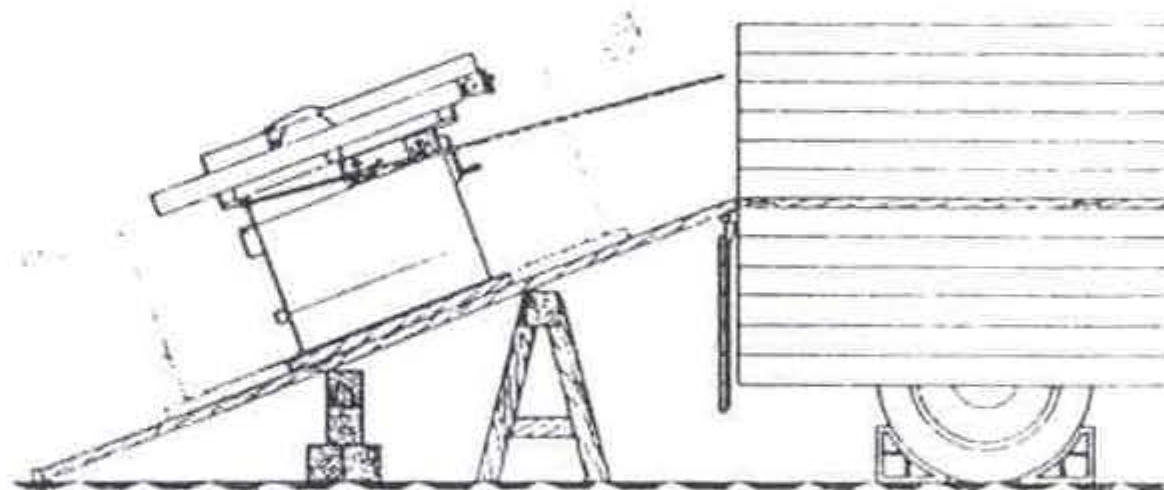
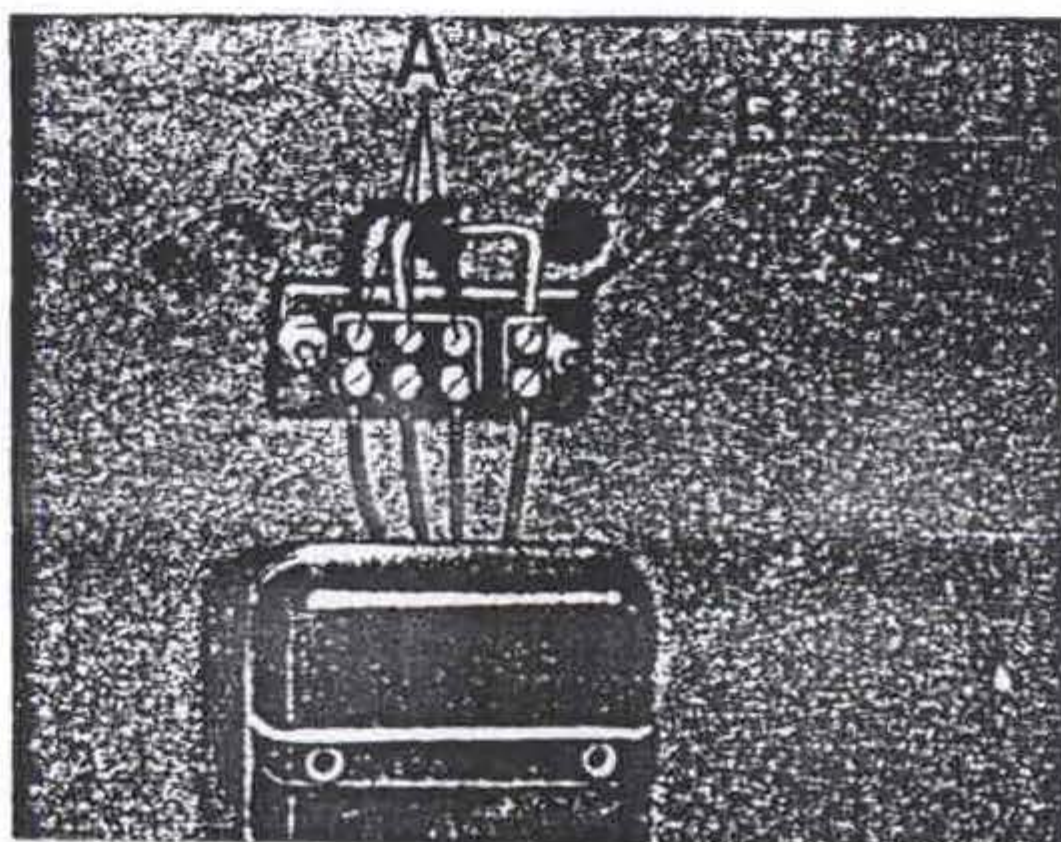


Fig. 2

### II ELECTRICAL CONNECTION (fig. 3)

- Is carried out very simply by connecting to the mains the three terminals (A) of the junction box located at the side of the machine whilst the terminal (B) is to be connected to the earth of the installation. Check immediately the direction of rotation. If rotation is incorrect reverse two wires, without moving the earth connection.





The machine is equipped with « star delta » starting (see electr. diagram) do not shift over to the « delta » position until the motor has reached its maximum speed.

The motor of the eventual scoring unit has the direct start.

- For machines equipped with overload switch protection (electr. diagram) before turning on the « star-delta » starter, press the « start » button of the overload switch protection.

In case of overload or one phase drop down, the overload switch protection trips the circuit. Connection is restored by pressing the button (RESET) which must never be used before having located the damage or cause of the overload. When uncertain of the causes, have

an electrician check for reason. Always set to zero the motor switch before using the button « RESET ».

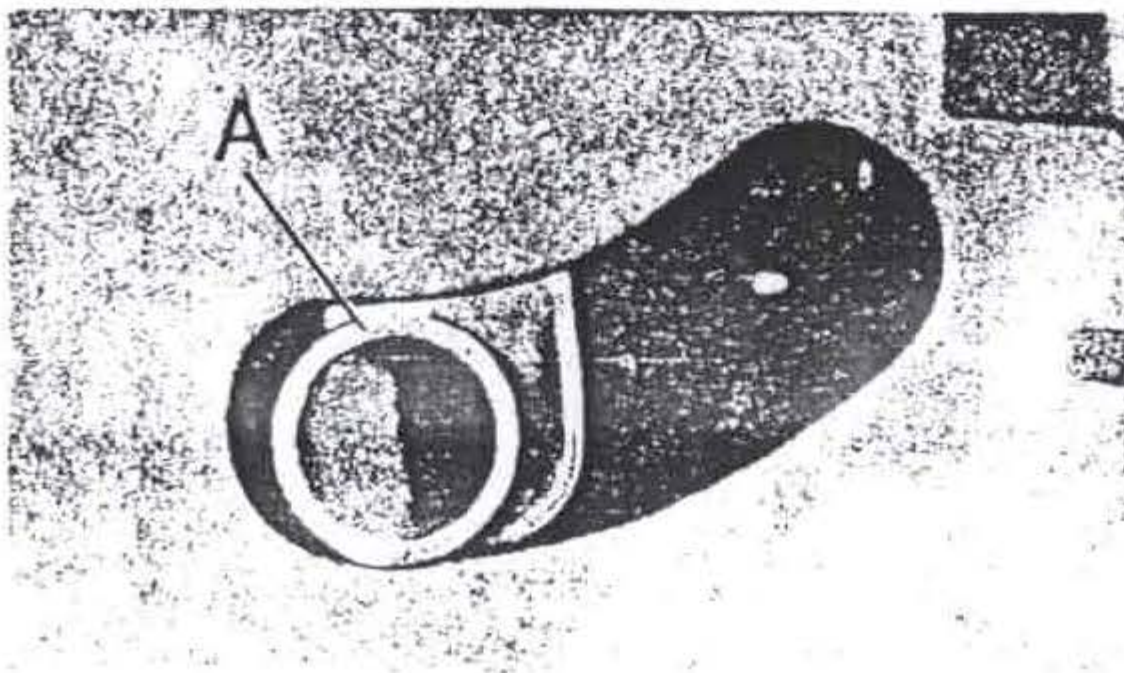
- For machines equipped with direct start and overload switch protection (electr. diagram fig. 5) the « starting » and « stopping » are effected by appropriate push-buttons.

As regards the action of the overload switch protection in case of breakdown or overload, proceed as above.

### III CONNECTION TO THE SUCTION PLANT (fig. 7)

The pipe union of the chips discharge (A) is a circular shape with 120 mm external diameter. The connection to the suction plant is an extremely simple operation.

The speed in the air duct must be approx. 25 m/sec. and consequently  
The capacity must never be less than 1000 m<sup>3</sup> per hour.





#### IV MOUNTING OF THE SAW DISK (fig. 8) AND GUARD (fig. 9)

- Lift the saw shaft as much as possible.
- Press the red push-button (A) that emerges from the table gap and simultaneously rotate the shaft manually until it locks.
- The disk tightening screw (B) has a left hand threading.
- Releasing pressure from the push-button, the shaft unlocks automatically.
- For an eventual utilization of the entire length of the saw shaft remove the rear flange (C).
- After having mounted the disk, fix the riving knife as in (fig. 9) and mount on top the aluminium guard.

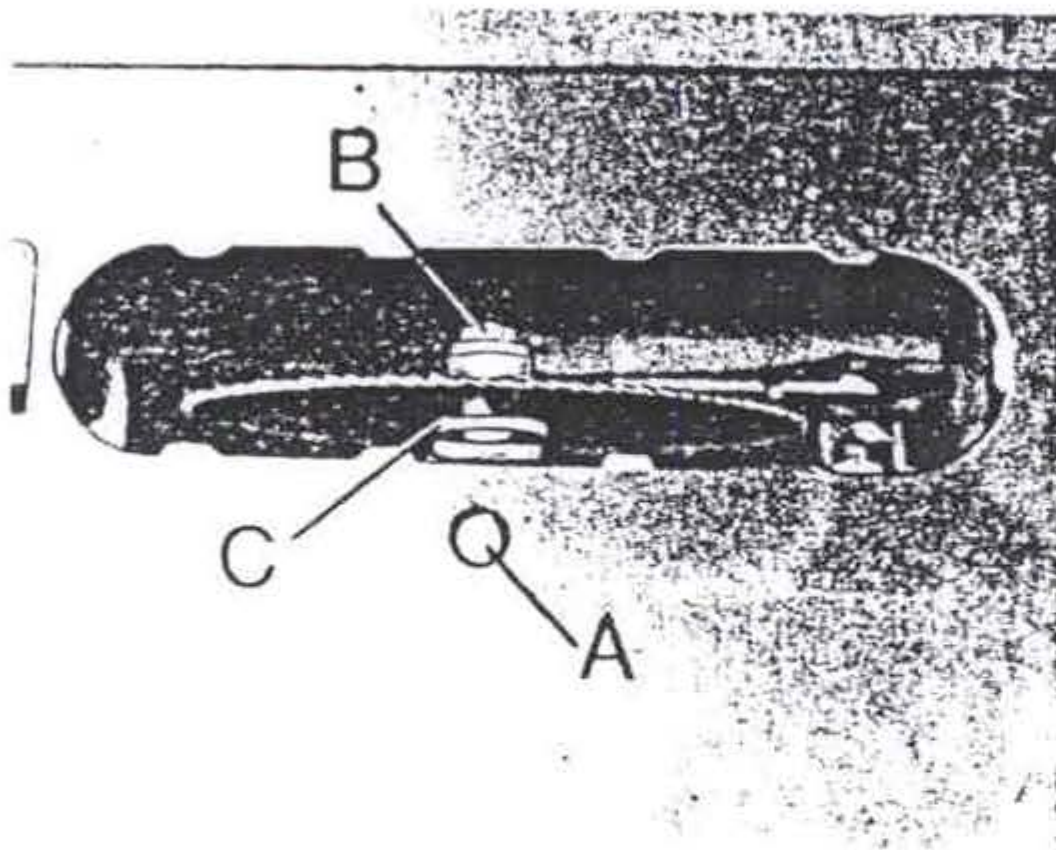


Fig. 8

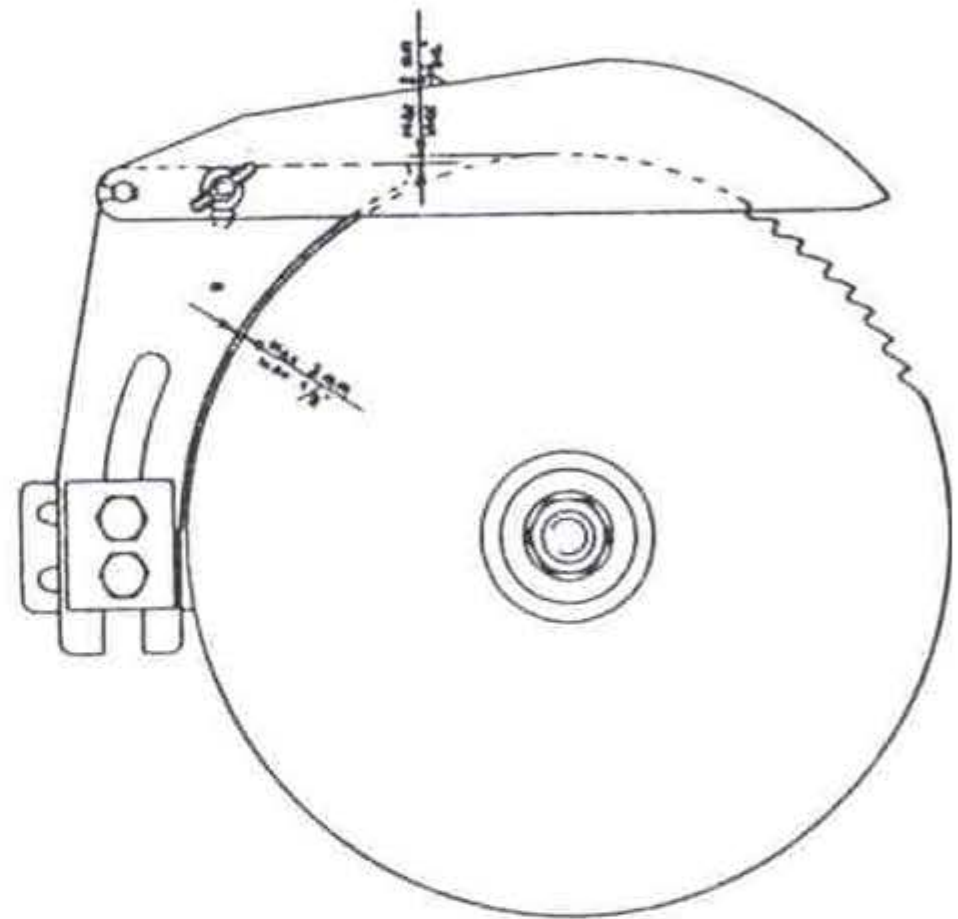


Fig. 9

#### V SAW DISK LIFTING (fig. 10)

The lifting movement of the blade is given by sector gear and endless screw mechanism

- Operate the handwheel (A)
- Locking is available by the knob (B)

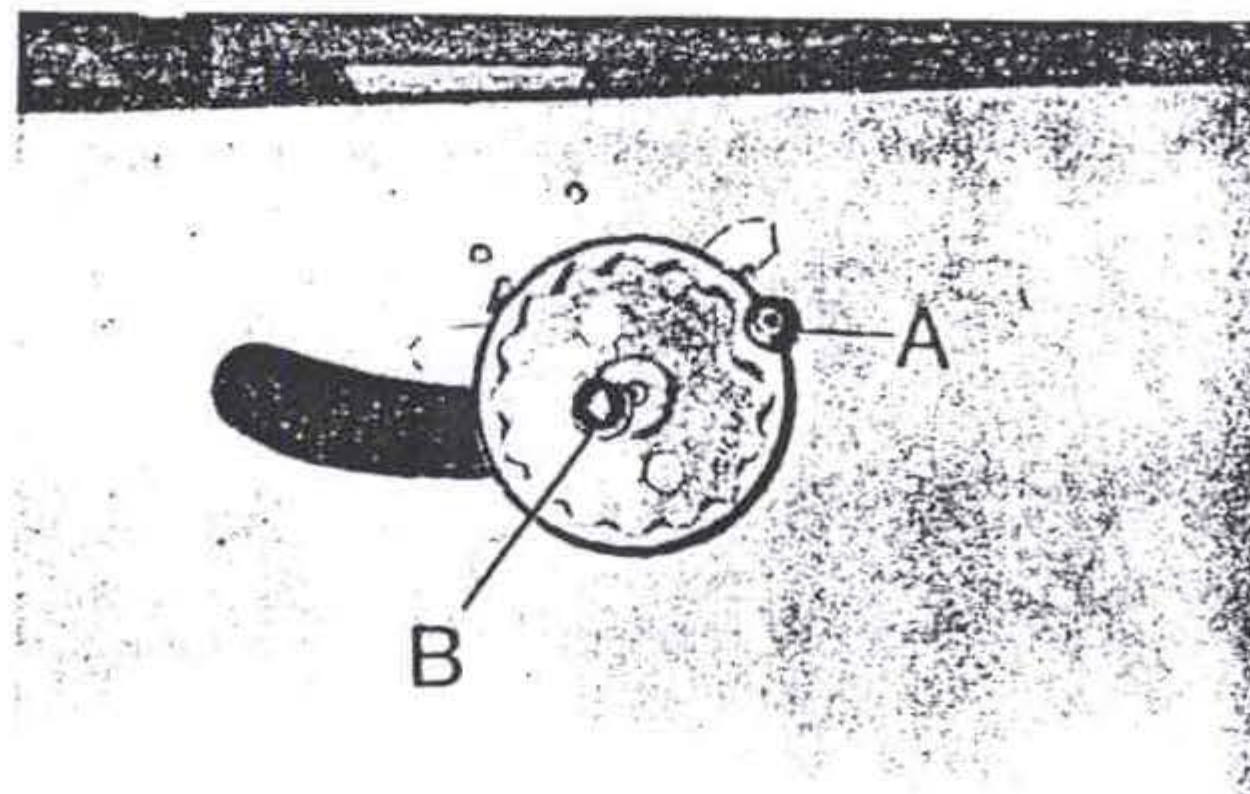


Fig. 10



## VI SAW DISK TILTING (fig. 11)

Also this movement is obtained by sector gear and endless screw mechanism

- Introduce the crank in the tang (A)
- Every turn of the crank corresponds to 2°
- Lock in position by means of the knob (B).

## VII CHANGE OF SPEED AND ADJUSTMENT OF BELTS TENSION (fig 11)

Changing of speed is done by varying the position of belts on the steps of the pulleys following the instructions of the diagram in the rear inspection door, where also are marked all various speeds.

For this operation proceed as follows:

- Lift the saw disk
- Lift the stanchion (C) by means of lever (D)
- Lower the saw disk just enough to untighten the belts so as to be able to take them off the pulleys steps
- Set the belts in the required steps and lift again the saw disk
- The stanchion (C) falls in the original position and belts are automatically tightened by a spring.

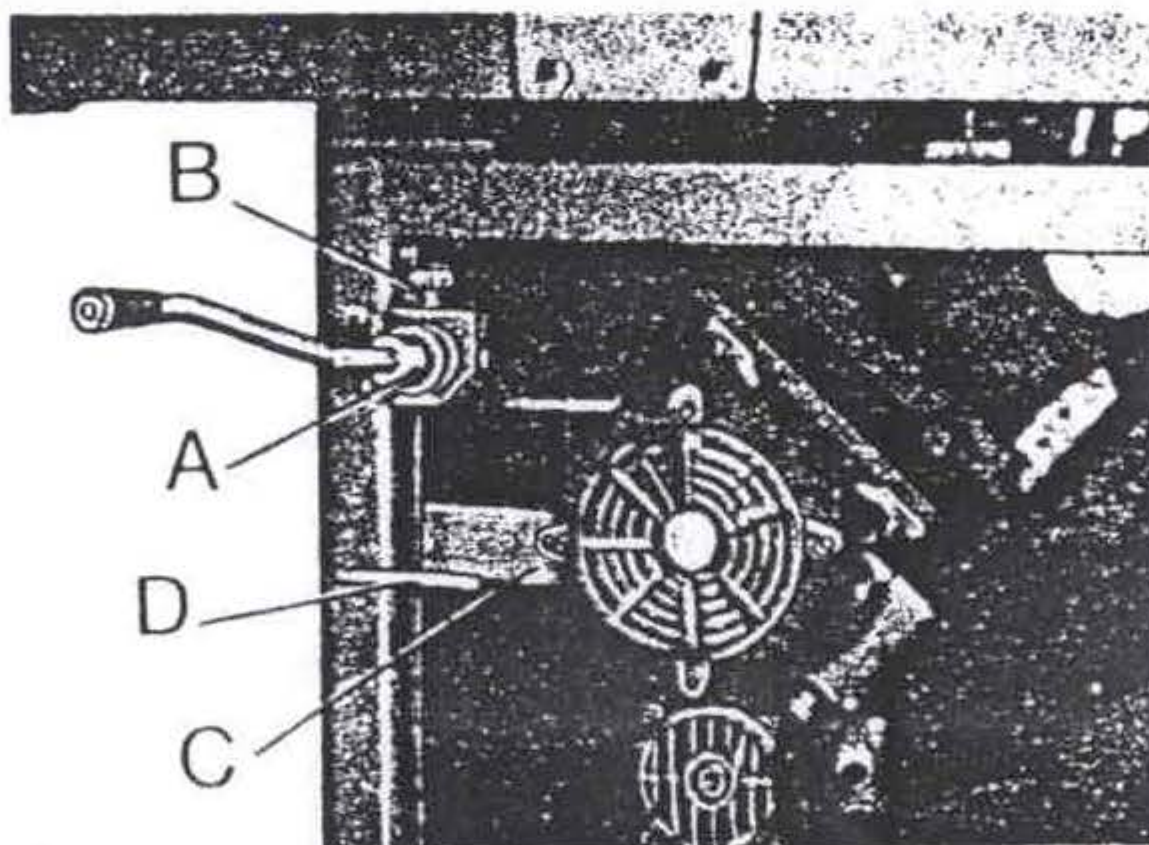


Fig. 11



# VIII RIP FENCE (fig. 12)

For transport purposes the toothed front support of the fence is removed. To mount it, it has to be fixed to the table by means of the nuts (A) setting appropriate tipped washers in between.

During this operation ensure that the fence supporting triangle stays slightly lifted over the table and that the parallelism between fence and saw disk is respected.

This latest condition is automatically realized in the factory: the nuts (G) are fixed to the screws (H) with pivots.

The lever (B) locks the fence if pushed downwards; a pinion is attached to the knob (C) and its teeth engaging in the rack of the front support allow fine adjustments to set the distance of the fence and saw, whilst for large displacements the knob has to be pulled back.

The measure of the cut is read through a magnifying glass, directly on the graduated scale fixed to the toothed support.

The measure's reading is correct when the upper and lower notches are in perfect superposition.

The indicator is adjustable (it can be displaced by releasing it from the knob (D)) in order to adapt it to the different setting between one blade and the other, or to have immediately the cut's direct reading, both when using the aluminium fence (E) in vertical or horizontal positions. (It is set tightly to the supporting triangle by means of the handgrips (F).

The horizontal position of the aluminium fence allows enough space for the operator's fingers to push very narrow workpieces.

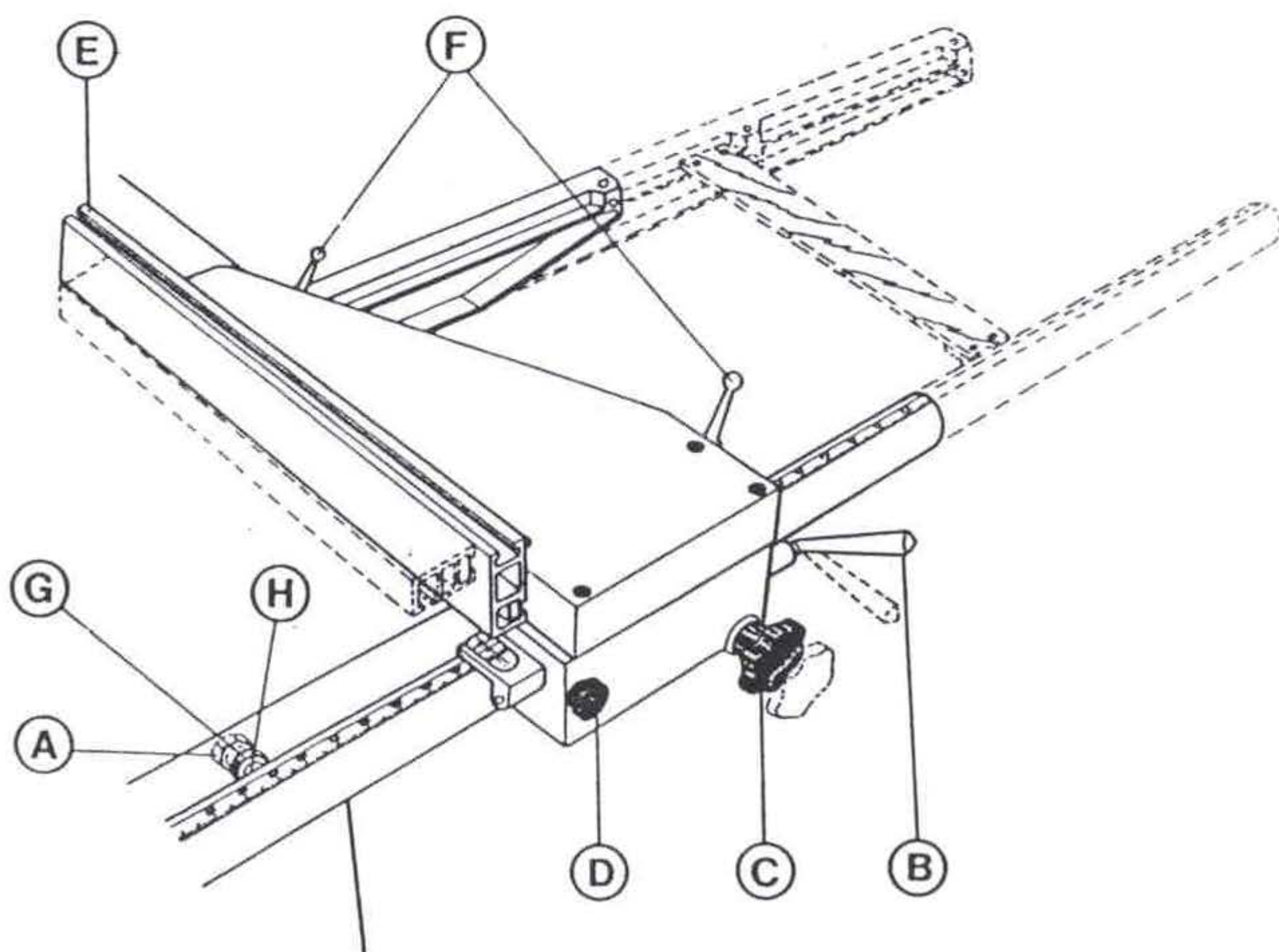


Fig. 12



## IX ADJUSTMENT OF THE SLIDING TABLE (fig. 13) SI15F - SI15FS

The adjustment is to be carried out as follows:

- Remove plastic taps by means of a nail and with an Allen key 5 mm, loosen the screws (A) fig 13 fixing the V-shaped ball bearings and release them.
- Move the sliding table 0,5 mm away from the fixed one using for instance two cardboard shims.
- Rotate the eccentrics of the end V-shaped ball bearings (B) until the sliding table is 0,3 mm over the fixed table's head.
- Now adjust the three external ball bearings (C) until both tables are parallel. This can be checked by using a rule (D).
- After this operation tighten the bronze screws (E) and adjust the central ball bearing until it settles in its groove completely.
- Finally, untighten the screws (E) so much as to allow a good sliding facilitated by a few drops of oil on the ways.

This adjustment has to be carried out with the maximum attention.

This however would not be necessary if all sliding surfaces would be kept clean and above all if the sliding table would not be forced even when obstacles or fouling hamper its smooth movement.

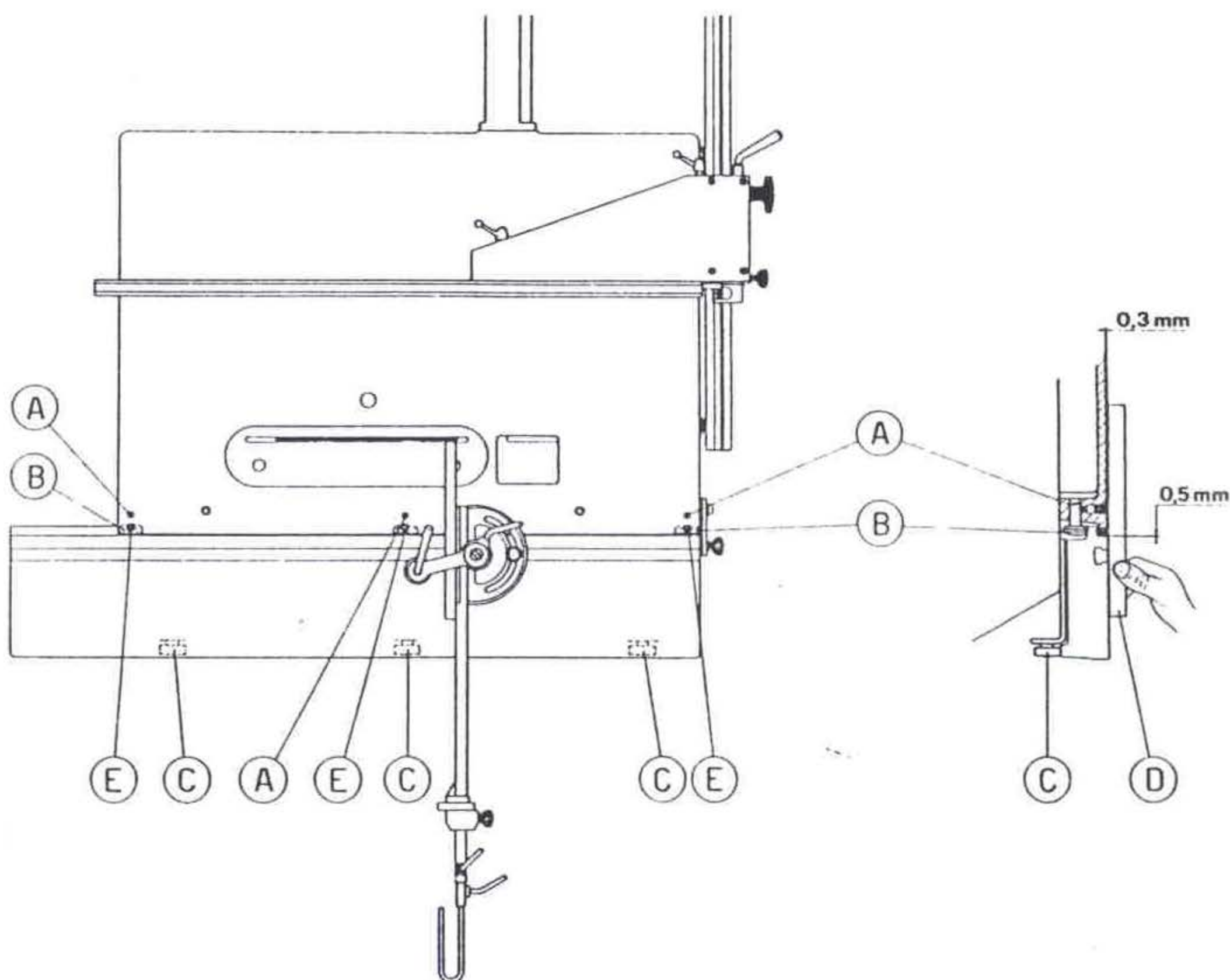


Fig. 13



## X USE OF THE NORMAL SLIDING TABLE (fig. 14) SI15F - SI15FS

The normal sliding table is suitable for transversal cuts on not too wide workpieces. It is provided with a groove in which the mitre gauge (A) moves, or on which it can be solidly locked in any position by screwing the pivot (B). The mitre gauge is equipped with a telescopic extension for measures up to over 2 metres, with an end stop for short workpieces that is used as a fence and with a wooden chips deflector that has to be cut to appropriate length. Finally the mitre gauge tilts from  $90^\circ \pm 45^\circ$  by loosening the screw (C) and verifying the tilting on the appropriate notch.

The sliding table can be locked to the fixed one using the lock (D) with knob (E) and it can thus become an extension of the same.

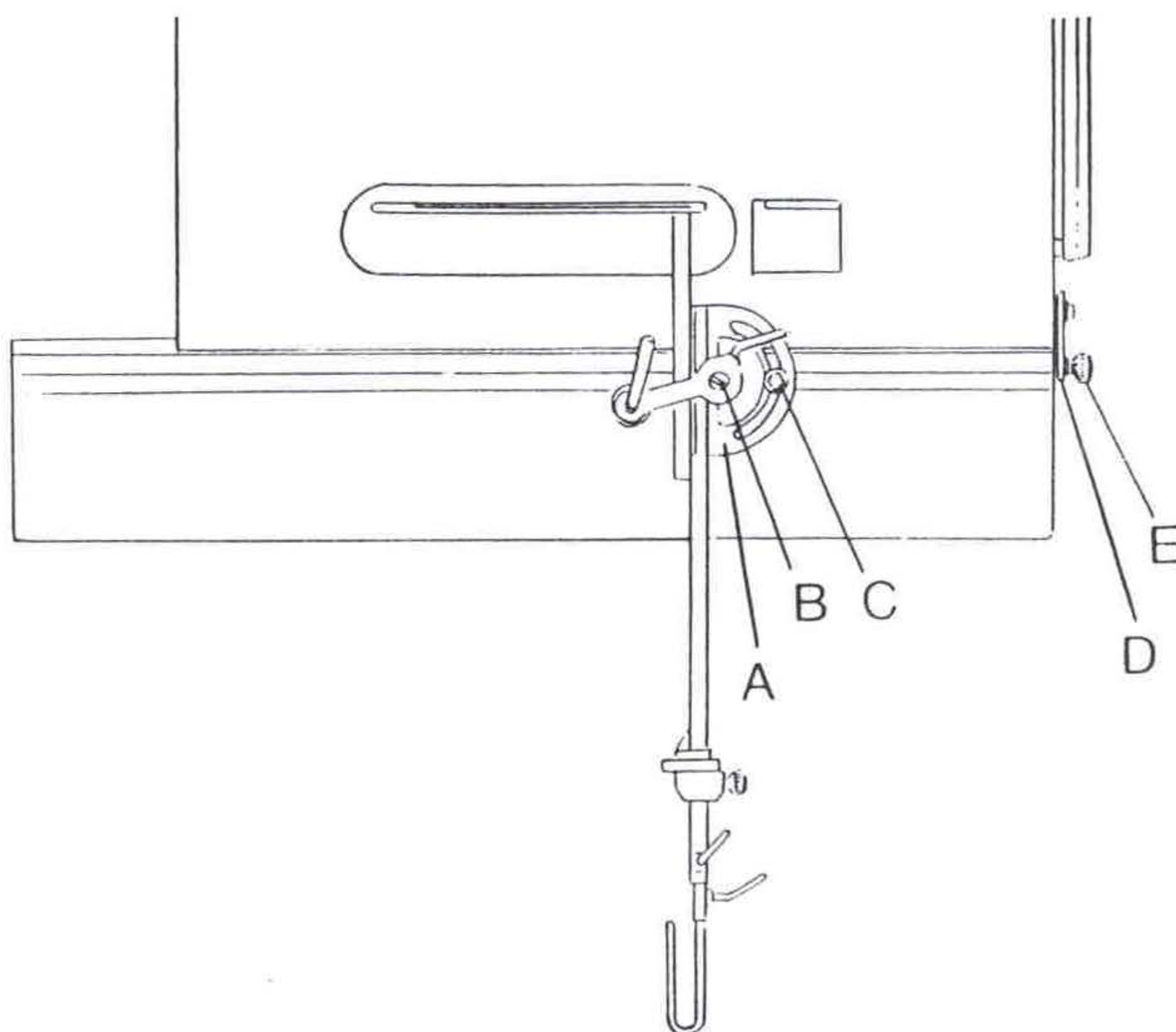


Fig. 14

## XI MOUNTING OF THE 2.7/3.2 MTS. SLIDING TABLE fig. 15 (SI15WF)

Generally for transport facility, the sliding table is delivered separate from the machine. For its mounting, use the position pins, the counter-sunk headed screws (A) as in fig. 15 and lock them very tightly. This machine can be either fixed to the floor by means of four bolts or simply posed. Free the sliding table by lowering the locking pin at one end of



the same (a slight rotation facilitates this operation) and make it slide forward and backward until the end stops are heard. Always remember that the ball bearings that avoid the sliding table from upsetting when it is fully extended are mounted on eccentric pivots and therefore they are all adjustable.

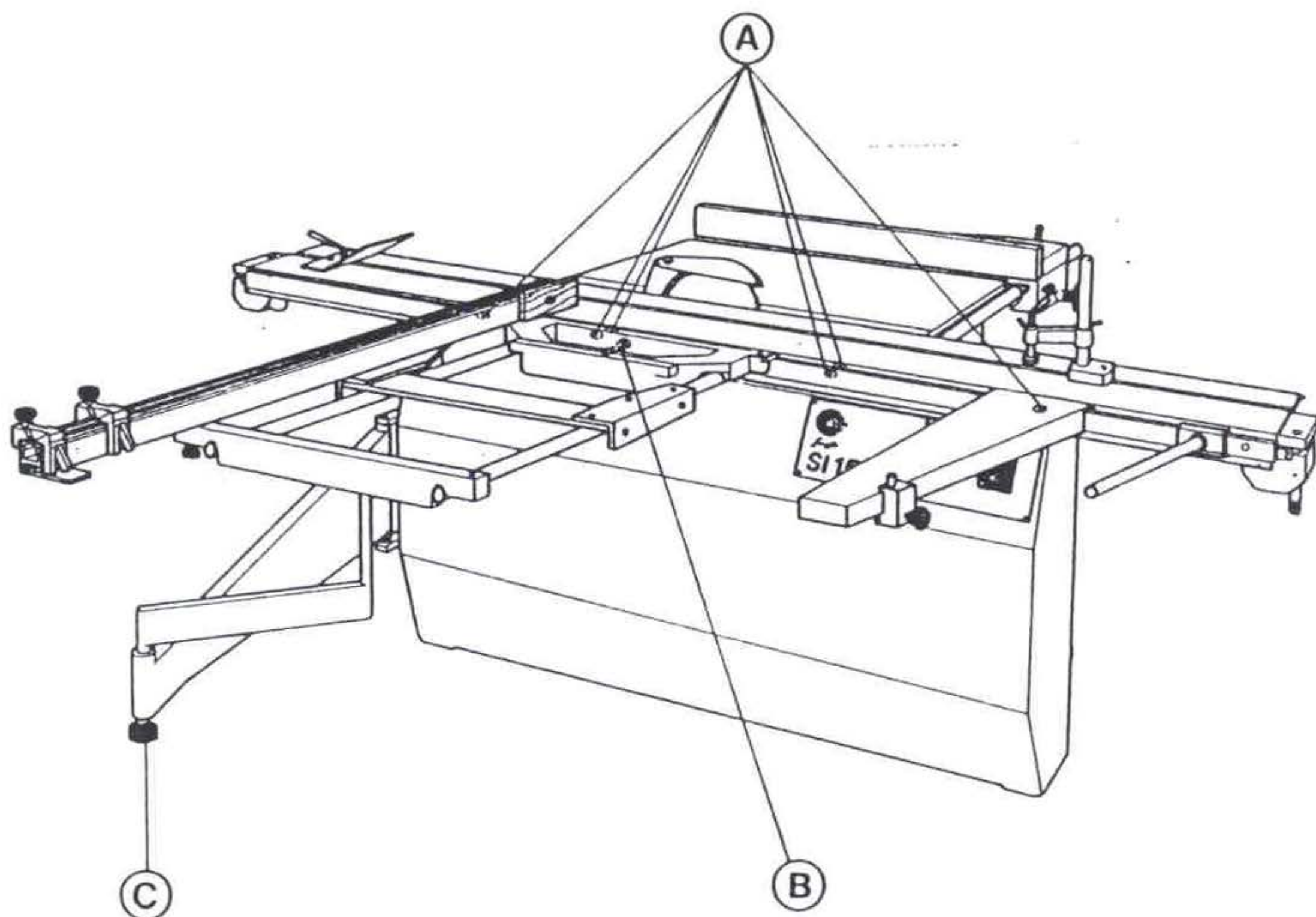


Fig. 15

## XII USE OF THE EXTENSION TABLE AND CROSSCUT FENCE

The extension table is mounted by forcing its front part on the rule situated on the sliding table and locking it by rotating the lower cam (B) fig. 15. The gooseneck has to be introduced in one of the holes of the extension table's rear (the most appropriate one) the level of which can be adjusted by the knob (C).

The crosscut fence is fixed to the extension table with the two knobs fig. 17, choosing either one or the other of the two couple of holes A/B and C/D.

If the crosscut fence has to be set and removed frequently, use the quick acting clamps (fig. 18) which are to be locked solidly to the same by tightening their screw. Now, to set the fence it is sufficient to lay it on



the extension table introducing the two clamps in the above mentioned holes.

In case the fence cannot perform a precision square anymore, it is always possible to adjust the holes B and D, fig. 16, as follows:

- Untighten the socket screw (E)
- With a screw driver rotate as required the bush (F) with eccentric hole
- Tighten the socket screw (E) again, but not excessively. For cuts slanting in two directions set the crosscut fence on the central hole (G) by means of the short clamp and lock it inside the arch of the extension table using the bracket (H) with its knob. The fence's edge on the graduated scale (I) indicate the value in degrees of tilt.

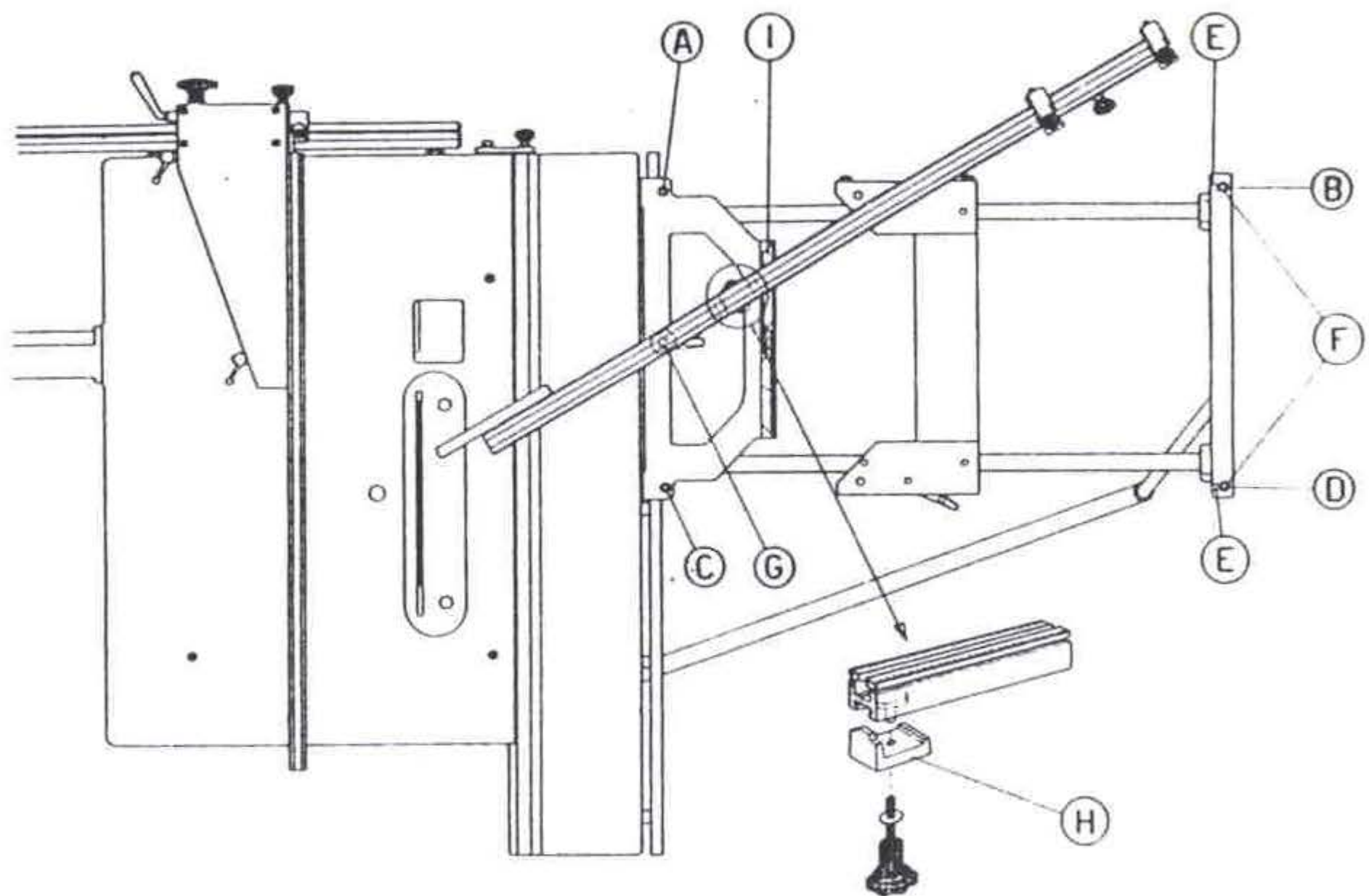


Fig. 16

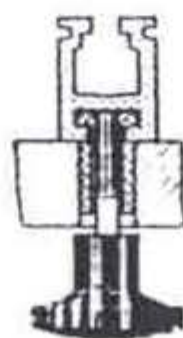


Fig. 17

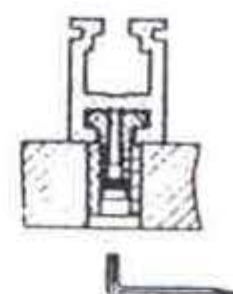


Fig. 18



### XIII USE OF THE 2,7/3,2 MTS SLIDING TABLE (SI15WF)

The most important work that can be executed with the sliding table is the squaring of great dimensions panels.

Here is an example of squaring with the use of the crosscut fence without moving it at all; the piece is squared up without being piled at all between one cut and the other:

- A first longitudinal cut in the workpiece is taken by leaning it against the fence and by pressing it by hands or with the aid of the clamp (fig. 19)

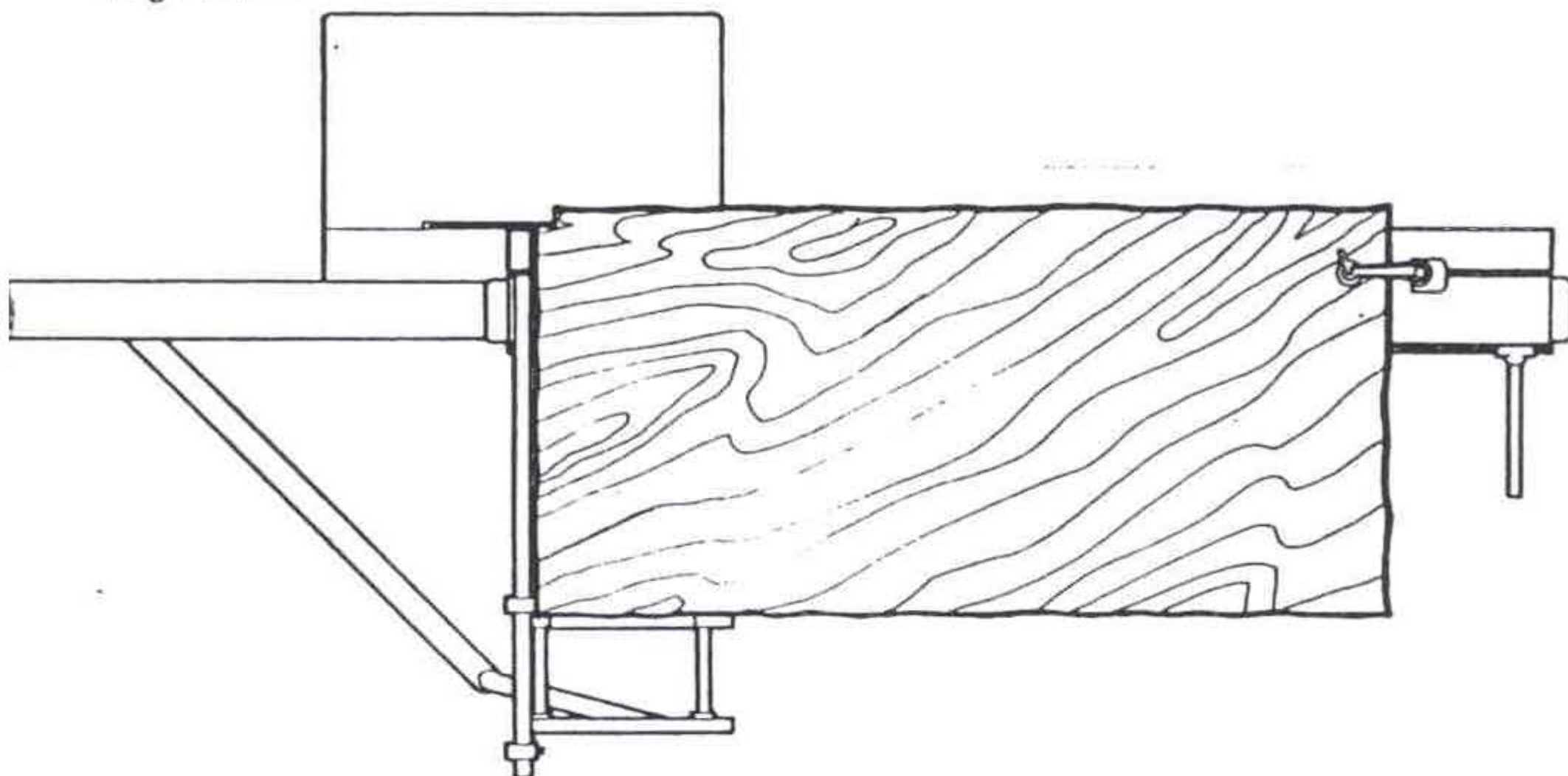


Fig. 19

- The finished sawn side of the panel is now adjusted against the rip fence to make a sized and parallel cut, against the first stop of the aluminium crosscut fence and the sliding stop on the support (A) (fig. 20)

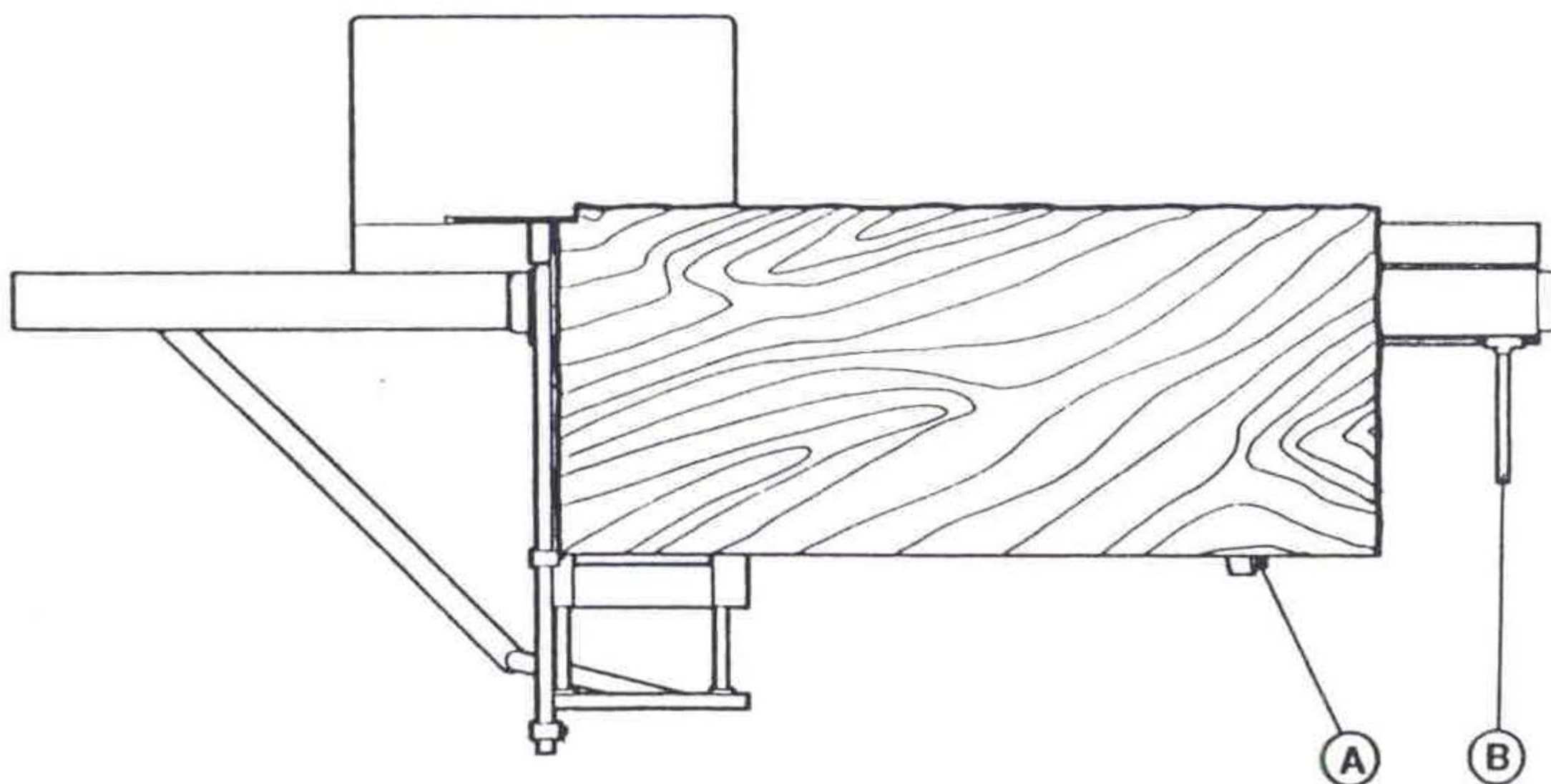


Fig. 20



- Now, trimming is done on the first side against the aluminium fence (fig. 21)

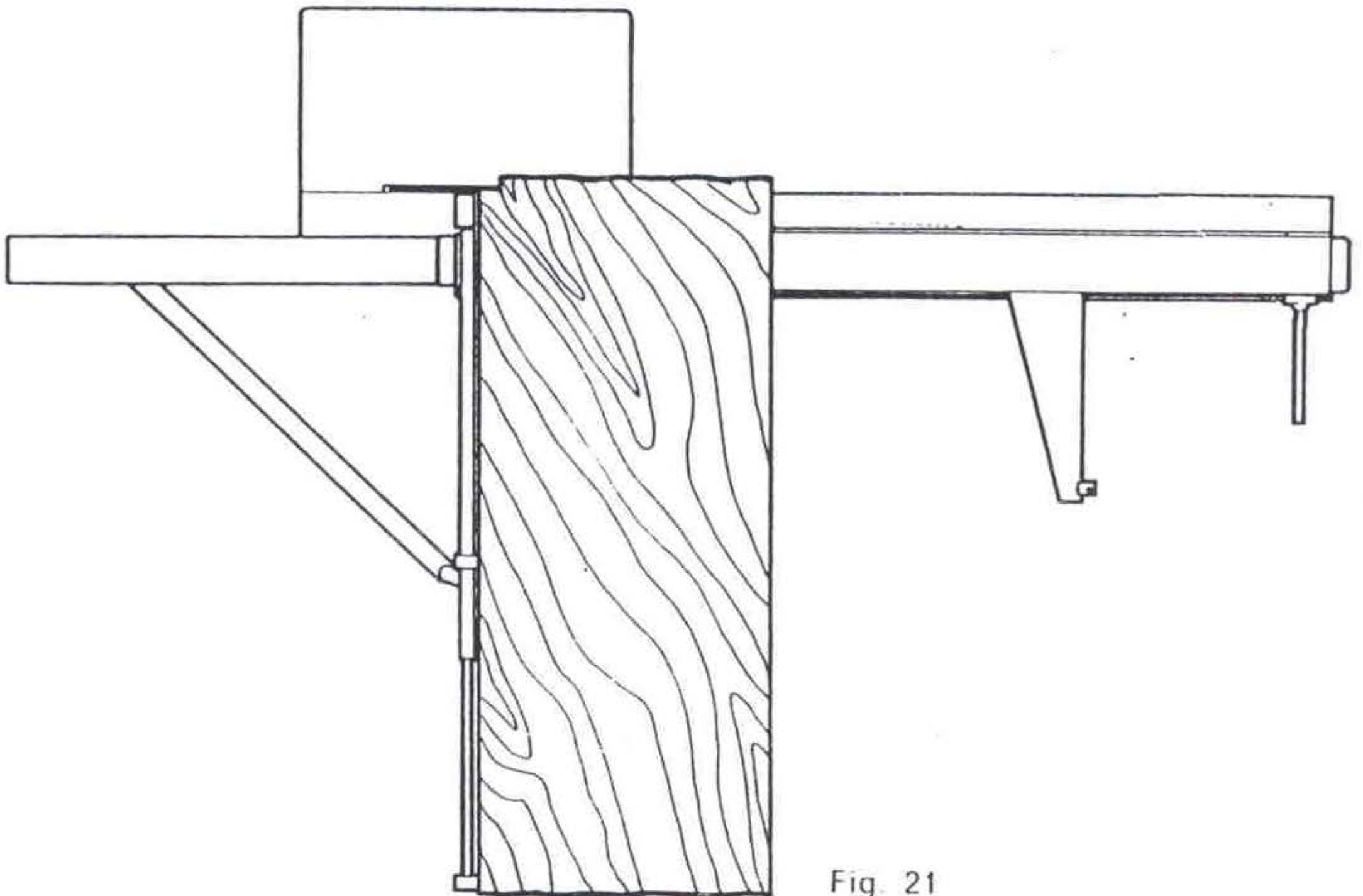


Fig. 21

- Finally a second trimming is taken, always using the aluminium crosscut fence and the second stop as measure (fig. 22).

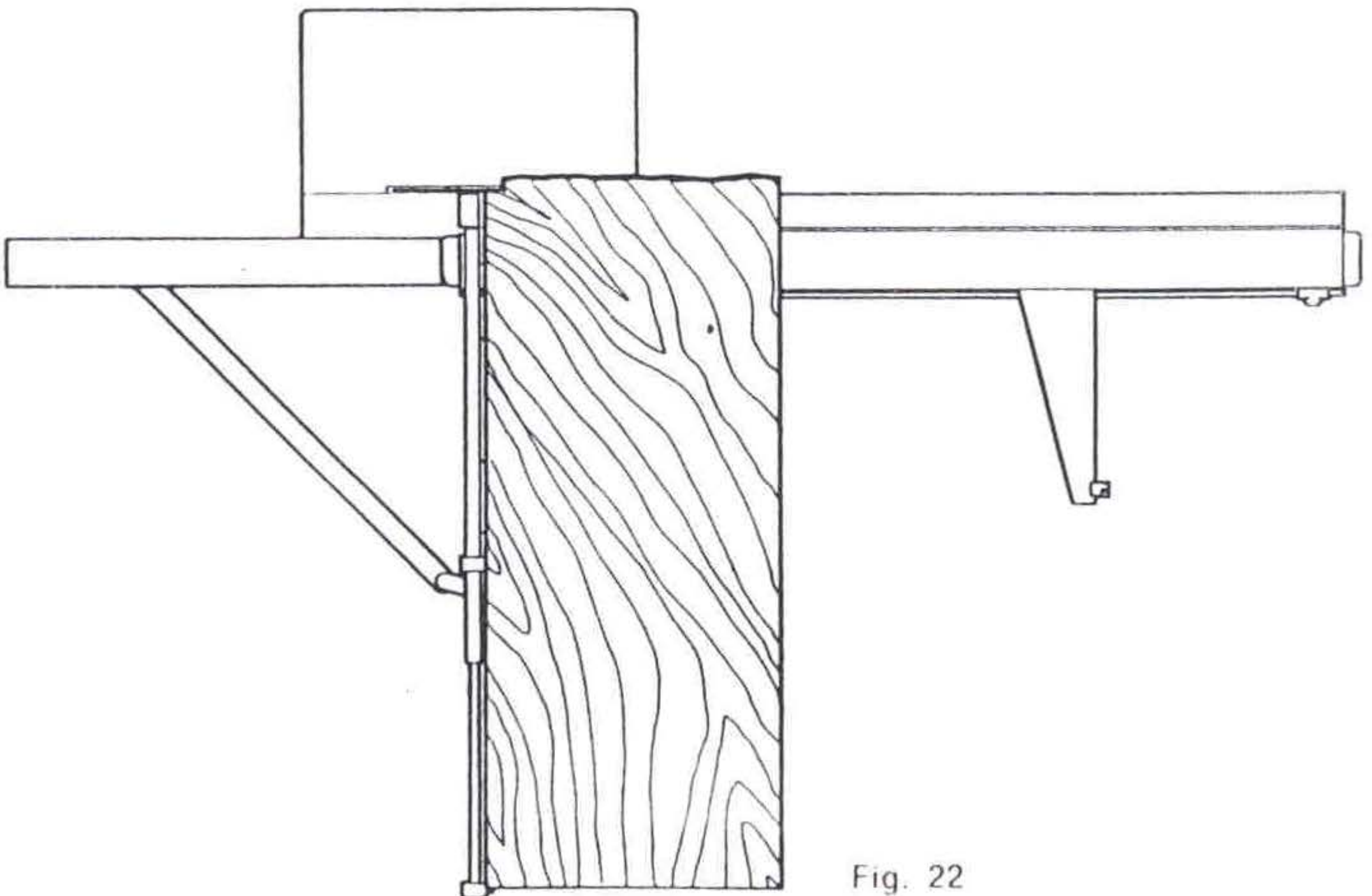


Fig. 22



Another system is to take the second parallel cut with the aid of rule mounted on the cross-member of the extension table; this is the system in use when large series are to be worked and one prefers to pile workpieces between one cut and the other. The operations sequency is the following:

- A first longitudinal cut of the workpiece by pressing it against the tile-shaped stop and keeping the piece fixed by hands or with the clamp (fig. 23).

This cut has to be taken on the entire amount of panels that are piled up, awaiting the second cut.

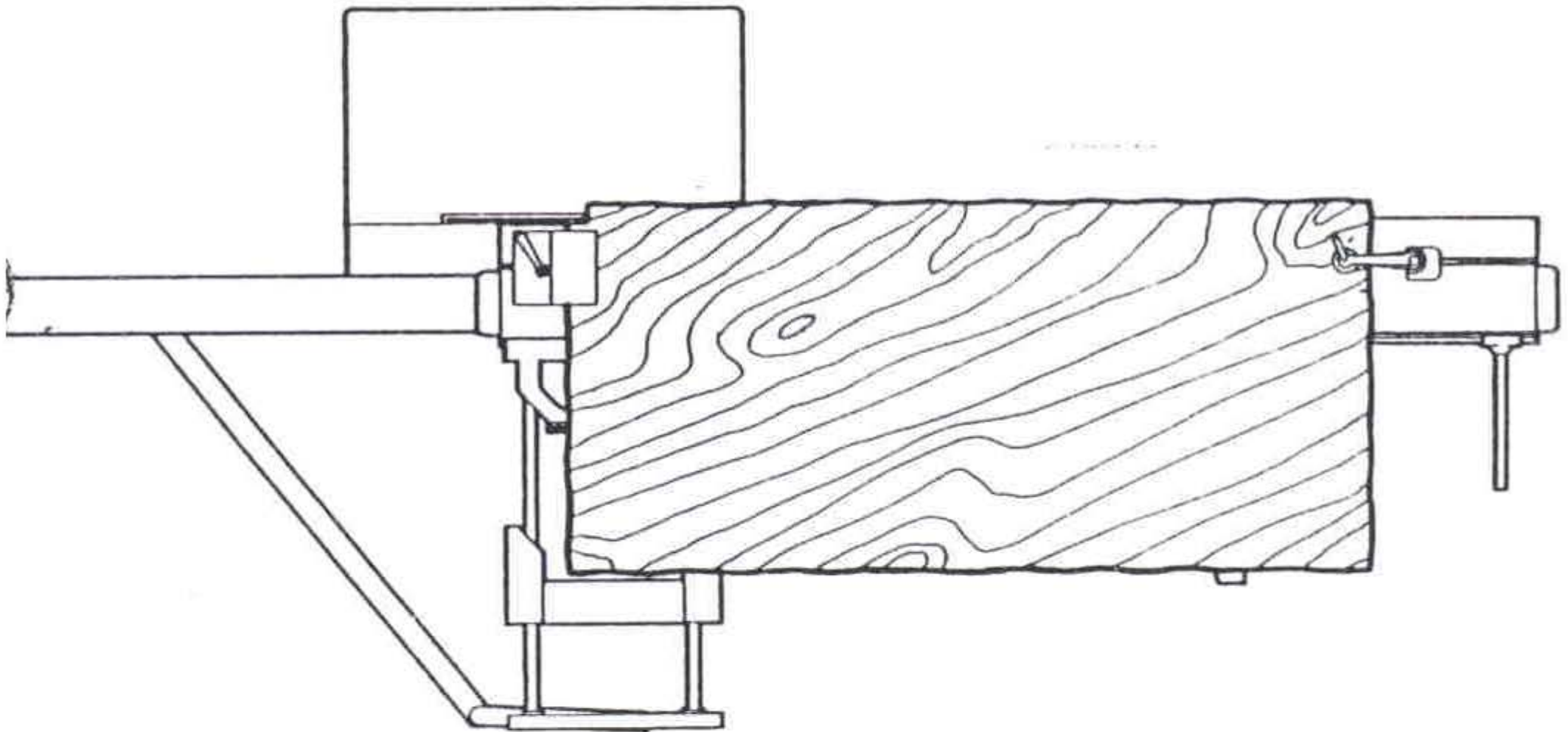


Fig. 23

- After having obtained this finished cut, the panel is set against the rip fence to make a sized and parallel cut (fig. 24). Also this cut has to be done on all the panels that have been piled awaiting to be crosscutted.

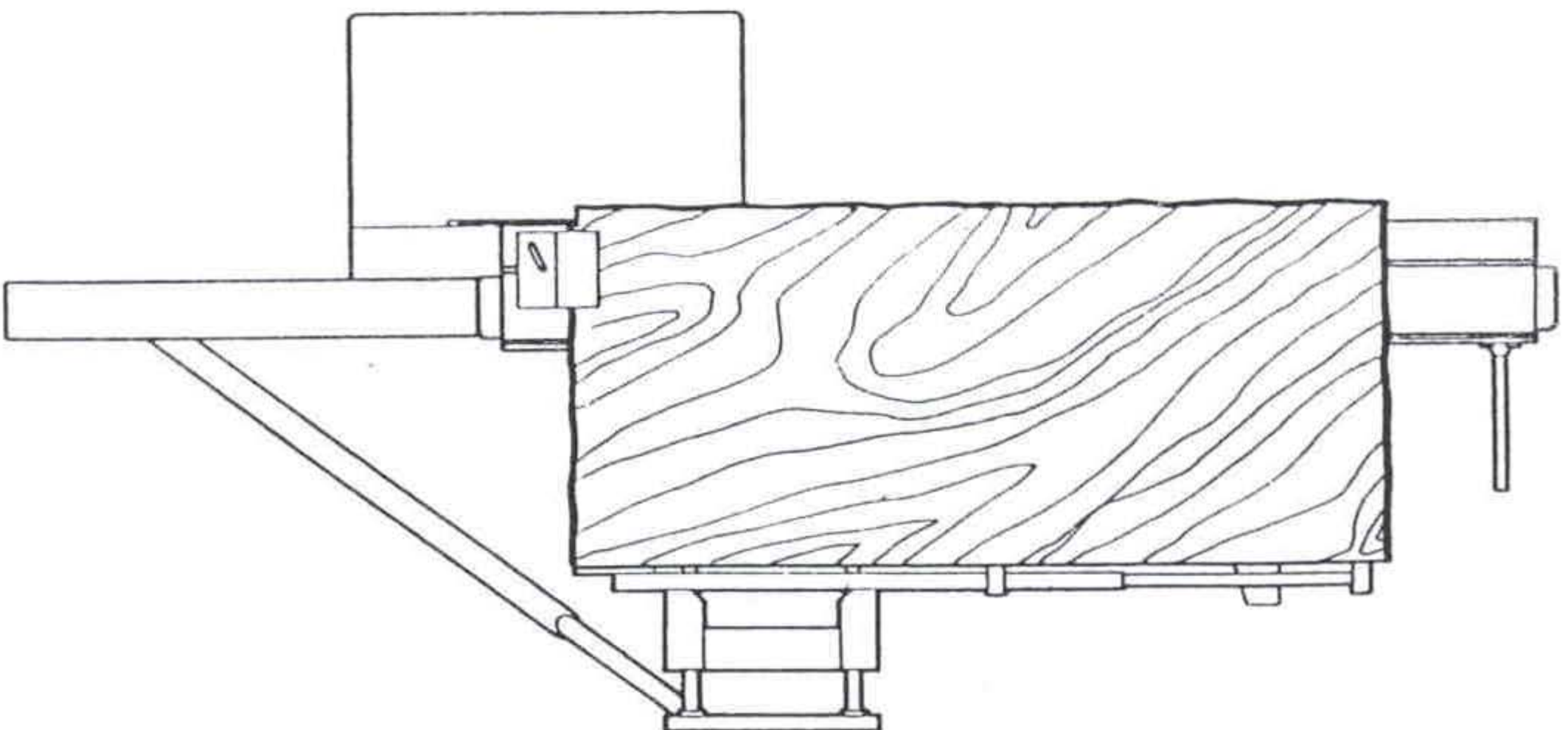


Fig. 24



- Now, by leaning the workpiece against the aluminium fence, execute a first trimming, making the stop pawl withdraw (fig. 25)

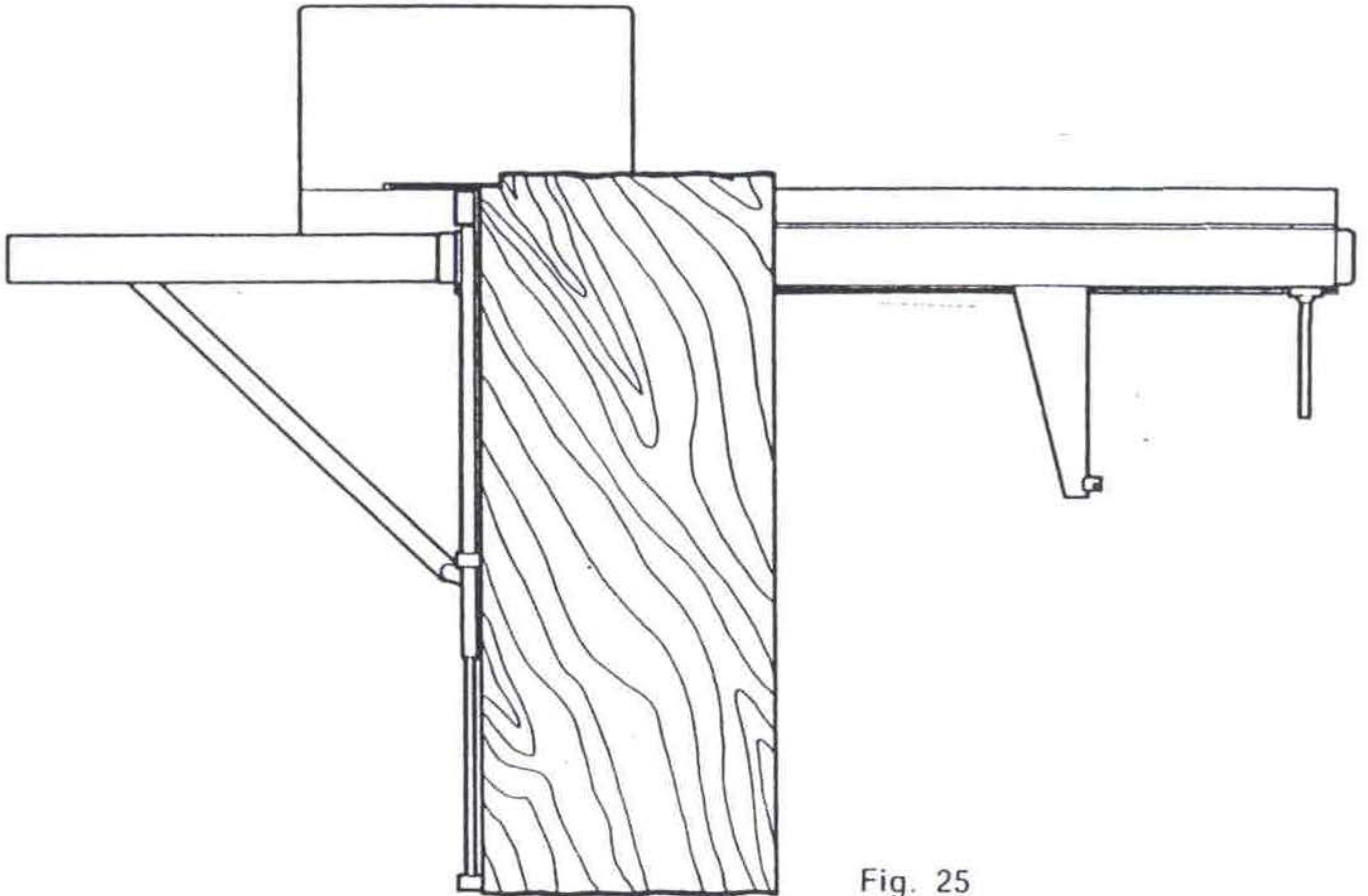


Fig. 25

- Finally the panel is turned up and given the second trimming by leaning it against the aluminium fence and using the stop pawl for the measure (fig. 26)

The call-back arm (A) is kept behind the operator's body so that the sliding table may be pulled back without using hands. To make the

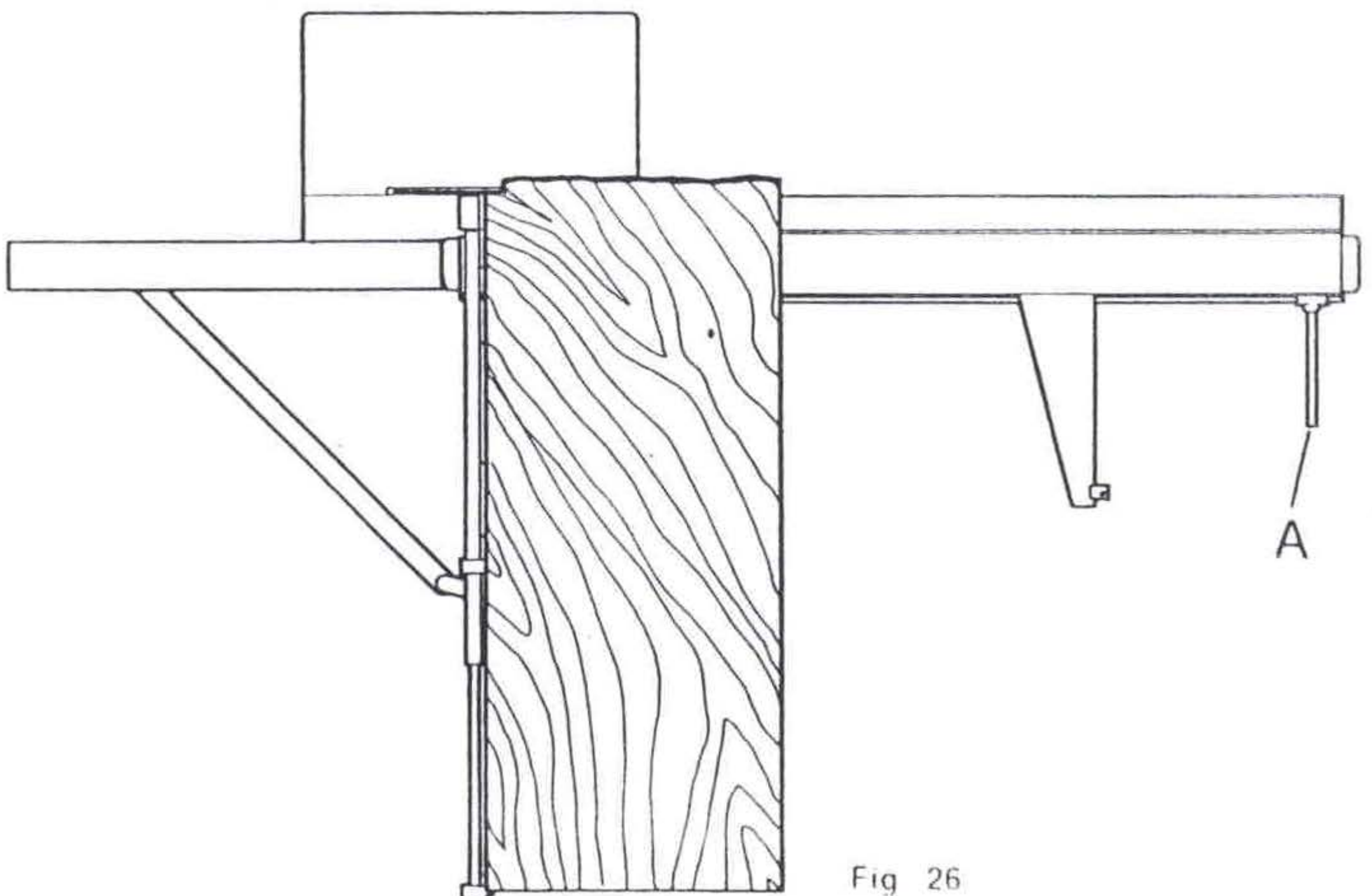


Fig. 26



sliding table perform its entire movement, it must be first pushed till the end stop. Successively, unlock the extension table and make it slide along as much as allowed by the articulation of the gooseneck and swinging support; lock the extension table in this position and make the sliding table fulfil the complete stroke.

- Finally, it is also possible to work with the rule that follows the workpiece (fig. 27) but in this case the crosscutting stroke is sensibly reduced.

This system is advised only when it is necessary to work small pieces with very heavy workings.

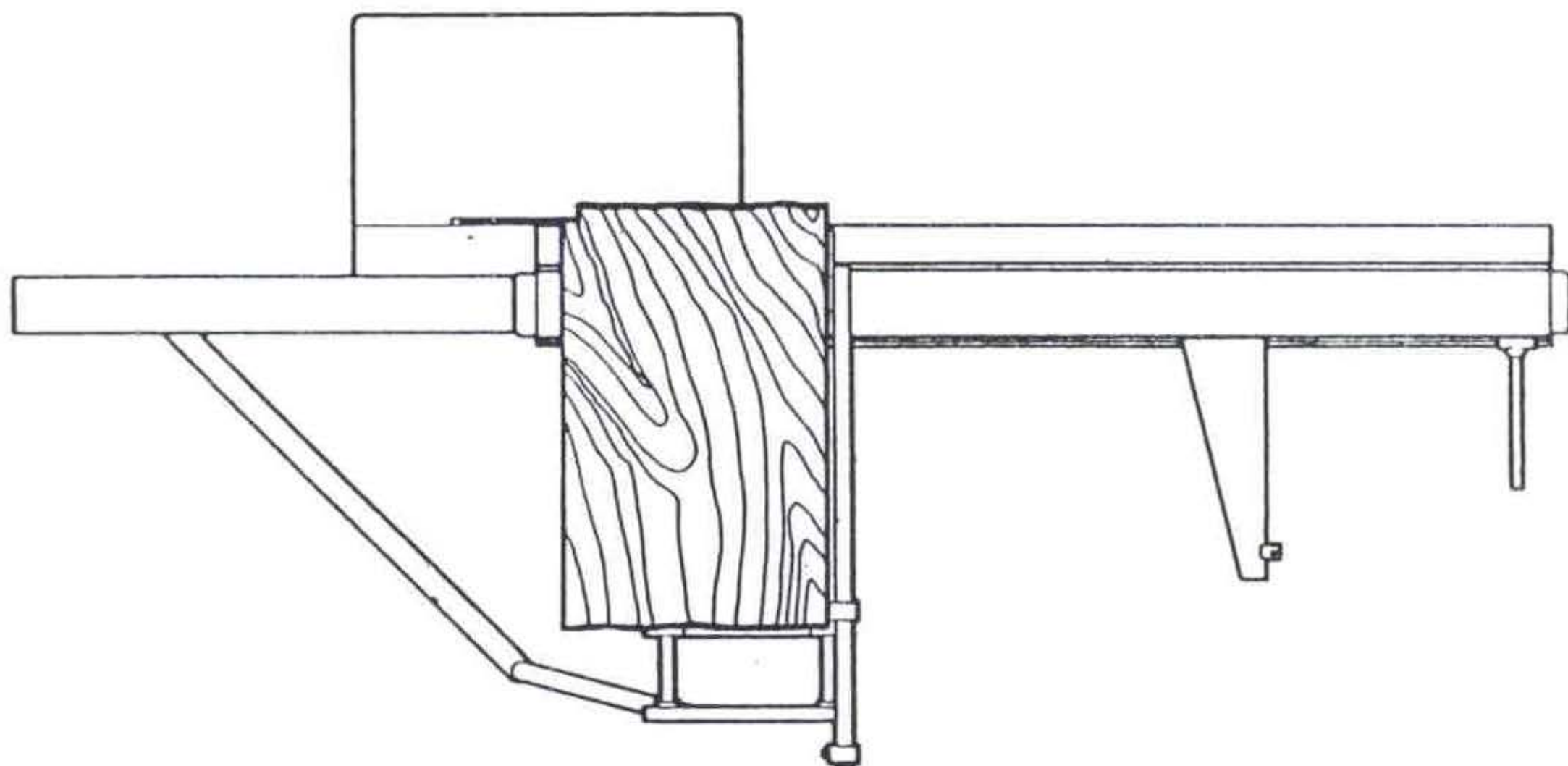


Fig. 27



### 3 SCORING UNIT

#### I MOUNTING OF THE SCORING UNIT

The machine is set for the equipment of the scoring unit that can be mounted also after the delivery, following the under mentioned instructions (fig. 28):

- Fit the guide key (A) by means of screws (B).....
- Join the scoring unit to the tilting block of the machine by keying it and by tightening the pivot (C) containing the spring (D) with the screw (E)
- Mount the upper carriage spring packet (F) by tightening its screw (G)
- Connect all electricals as per diagrams
- Check the rotation direction.

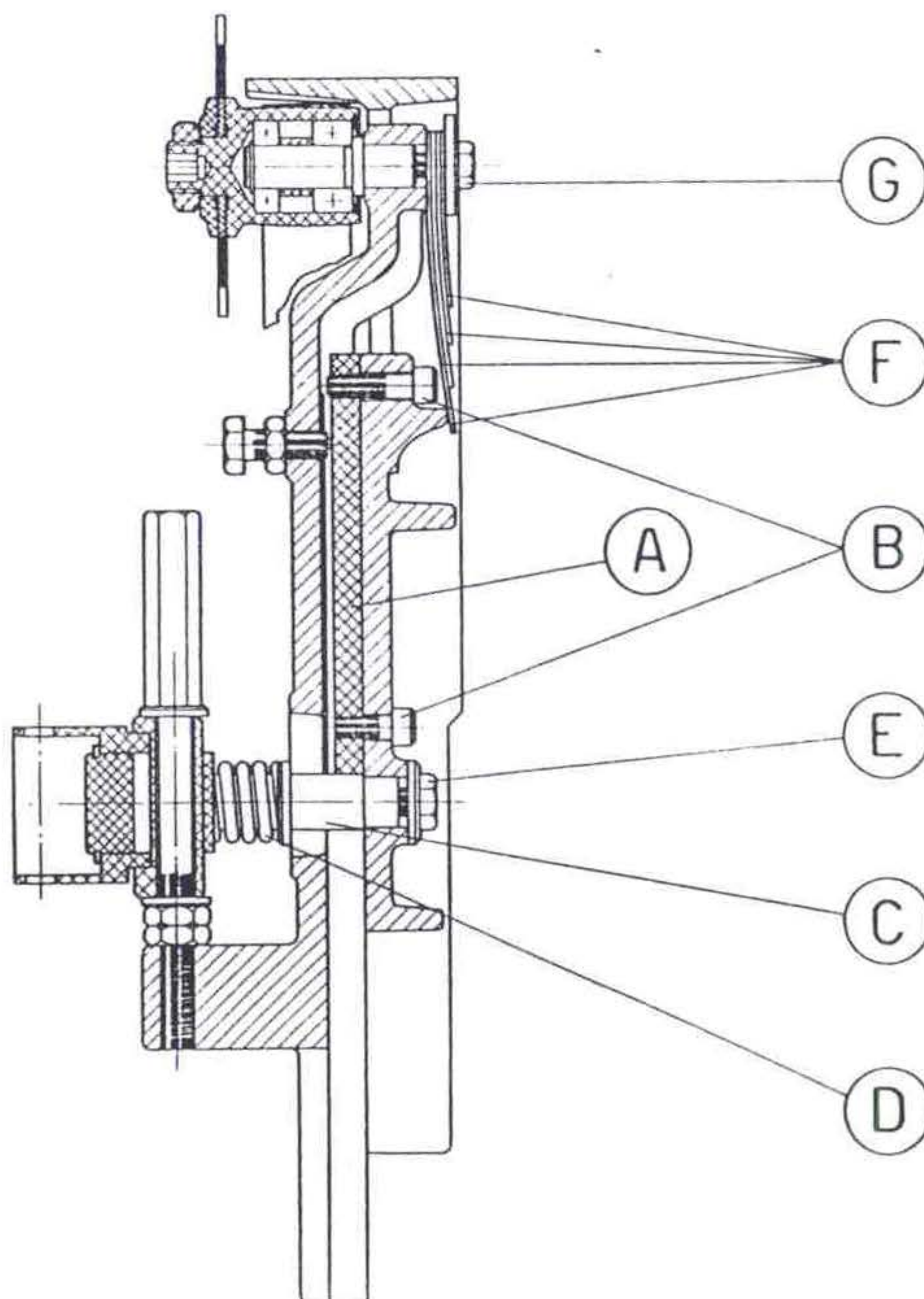


Fig. 28



## II MOUNTING OF SCORING BLADES (fig. 29)

Scoring blades are mounted or removed keeping the shaft still by means of the 8 mm key introduced in the hexagonal slot (A) and tightening or loosening the nut (B).

## III ADJUSTMENT OF THE SCORING UNIT (fig. 29)

By introducing the equipment pivot in the cam (C) and rotating it toward left, the scoring blade is rapidly plunged under the table when it has not be used. The projection of the scoring blade can be adjusted by acting with the 17 mm. key on the hexagonal pivot (D).

Obviously this operation has to be carried out with the cam (C) turned to the right.

The alignment of the scoring blade with the main saw disk is obtained by acting on the screw (E).

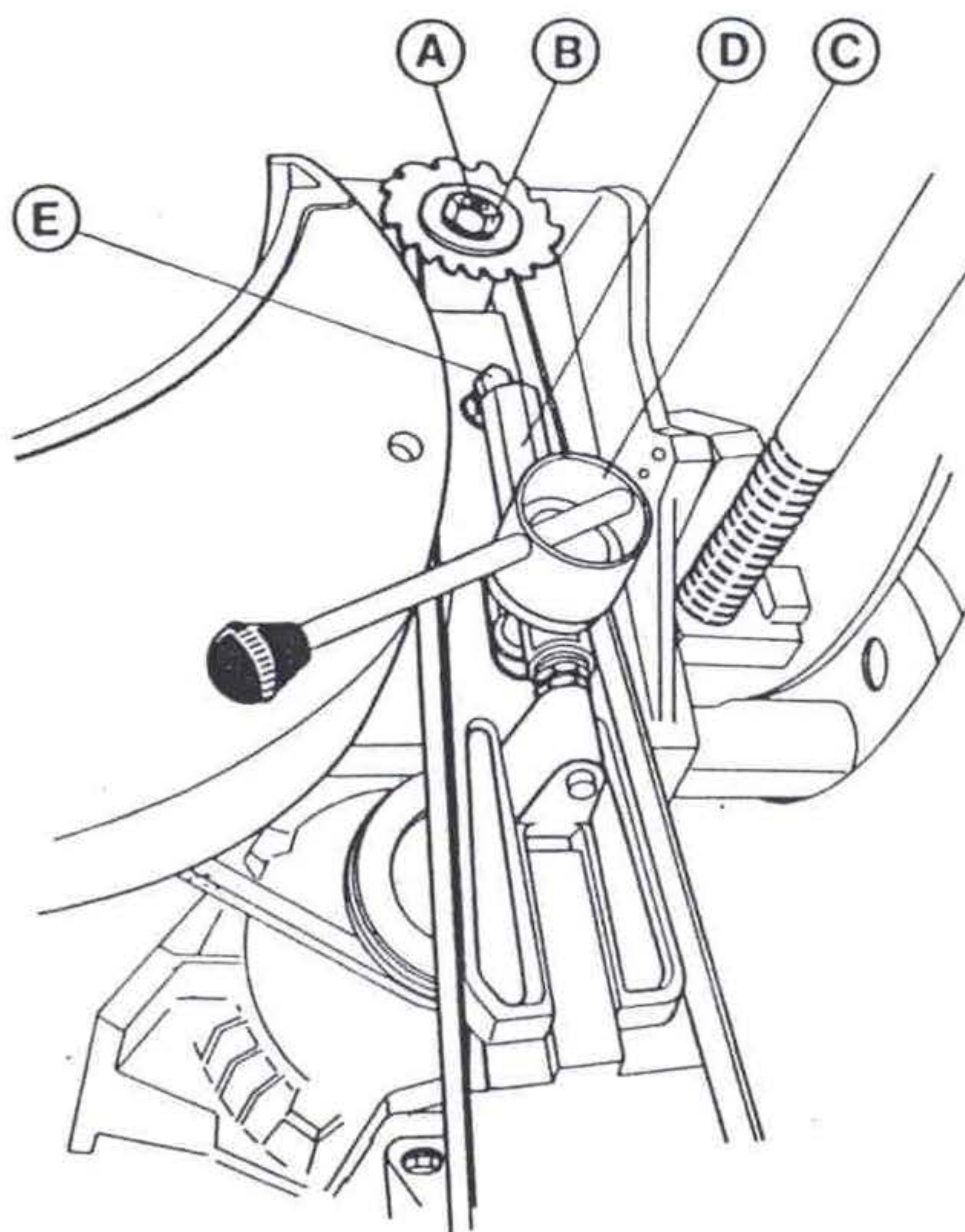


Fig. 29

## IV ADJUSTMENT OF THE BELT TENSION

The belt has to be tight enough to avoid slippings. To give it the right tension, loosen the screw fixing the motor joint plate, push the motor down and retighten.



## V USE OF THE SCORING UNIT

The scoring unit can be used in various ways:

- With a scoring blade of same thickness or thicker than the main saw disk (fig. 30).
- By using a double scoring blade: setting between the two elements appropriate shims, it is possible to obtain the right thickness or one that is slightly larger than the thickness of the main saw disk (fig. 31).
- Using a profiled scoring blade as in (fig. 32) it is possible to obtain on the edges of a panel, two more or less large chamfers, that are particularly useful in certain cases.

However, if panels are very long and not perfectly straight the chamfers obtained may not result perfectly regular.

- Finally if there is only one edge of the workpiece that must not be chipped, the scoring blade can be of any shape or dimension as there is to take care only of the alignment of one edge operating the screw (E) (fig. 29).

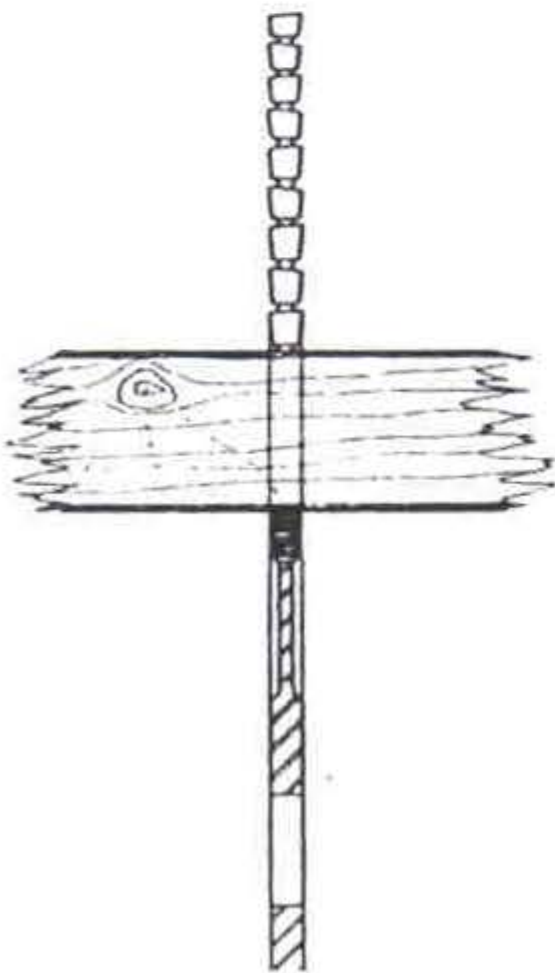


Fig. 30

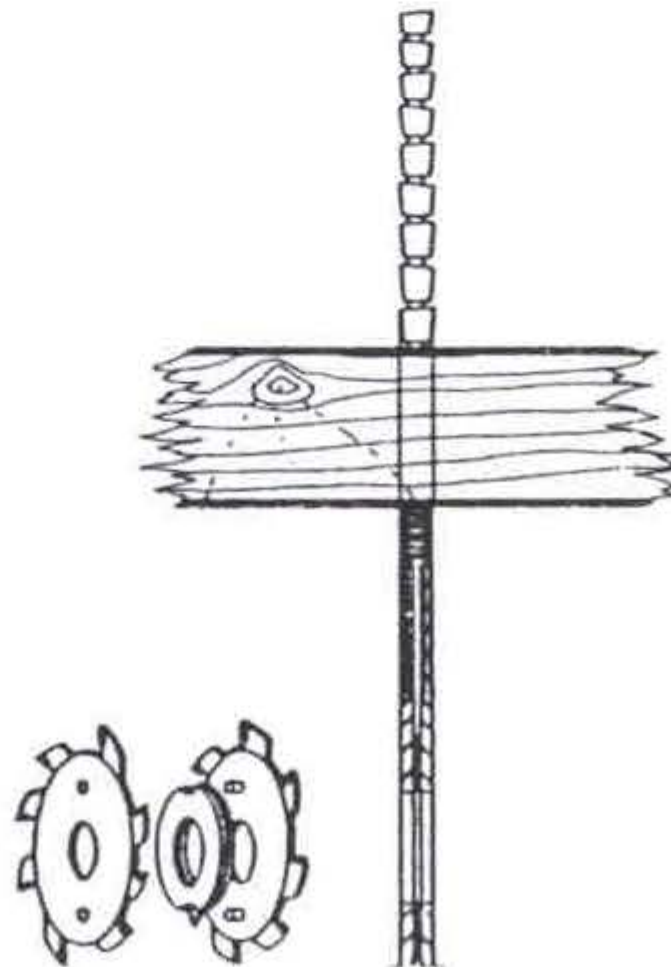


Fig. 31

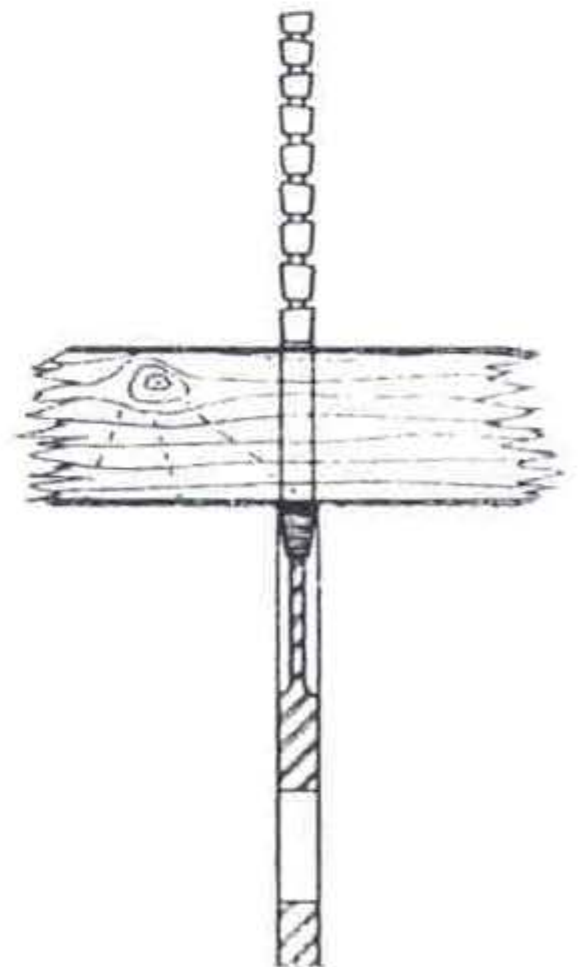


Fig. 32



## 4 MAINTENANCE AND LUBRICATION

### I MAINTENANCE

Every week (40 hours)

- Clean all movements (especially those which are subject to resin and dust) using turpentine or other efficient solvent; take particularly care of: the ways on which the sliding table moves, the grooves and the steel rule of the mitre gauge and the rip fence support slides
- Check efficiency of belts
- Clean inside of machine

### II LUBRICATION (fig. 33)

All the ball bearings of the machine are sealed for life requiring no lubrication

Oil every week:

- The sector ways (A) for the saw tilting
- The friction surfaces and the saw lifting support pivot (B)
- The riving knife joints
- The supports (C) of lifting and tilting screws
- The fence retractile gear
- The fence pilot bar

Grease every week:

- The lifting and tilting screws and sector gears (D).

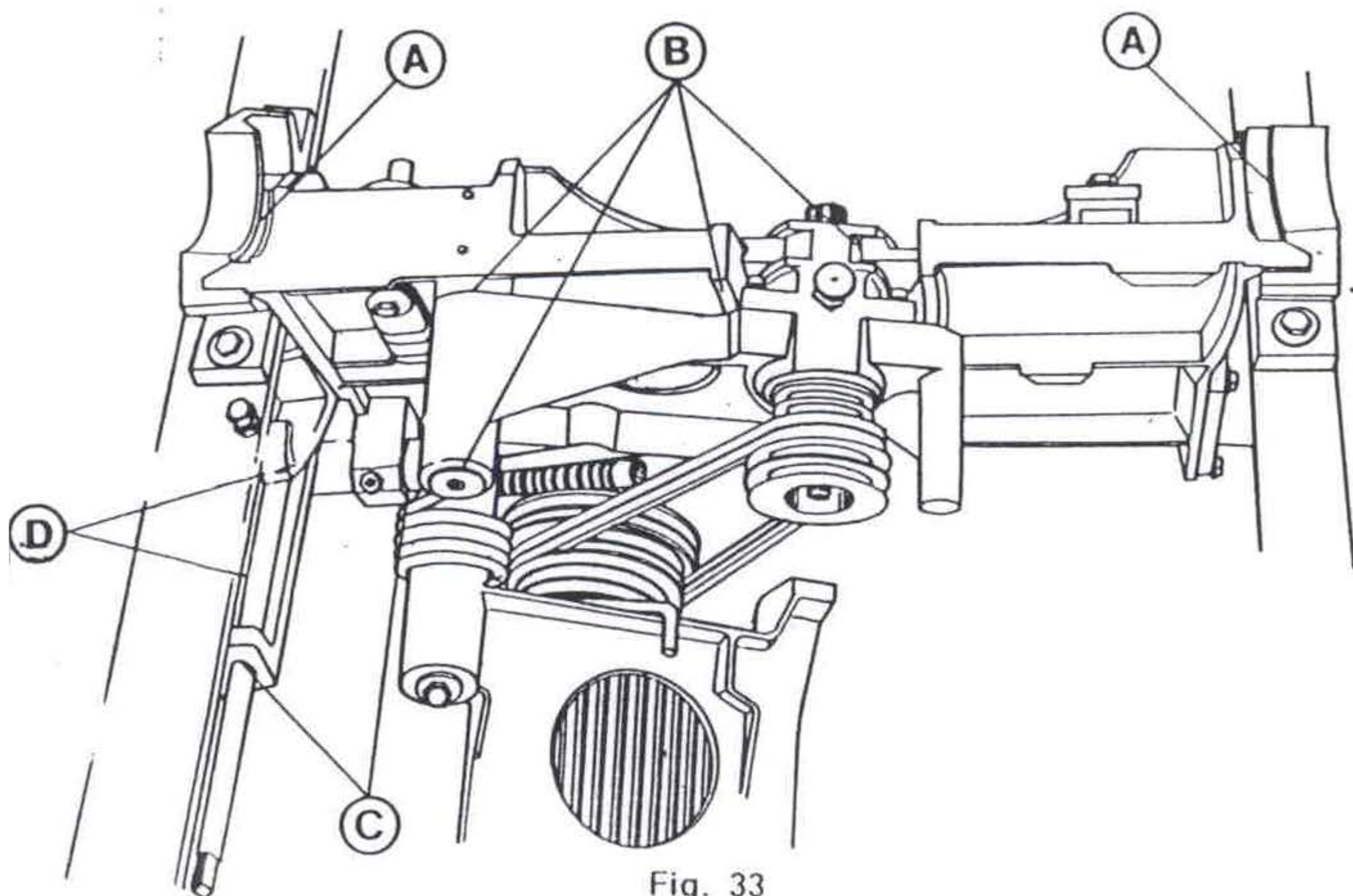


Fig. 33



## 5 SPARE PARTS REPLACEMENT

### I SUBSTITUTION OF THE SPINDLE BALL BEARINGS (fig. 34)

To execute this operation proceed as follows:

- Loosen the screw (A)
- Remove the spindle locking knob, untightening the screw (B) by means of the key 22.
- After having taken off the spindle flange and the belts, slip off the spindle from the rear.
- The front ball bearing can be removed by means of an appropriate puller on the sleeve (C) paying attention not to deform mechanical parts.
- The rear ball bearing is taken off by using a puller on the inner race of the same after having removed the pulley.

To mount the unit again proceed as follows:

- Mount the rear ball bearing and the pulley.
- Introduce the sleeve (C) in the tube (D) taking care that the slacks take-up spring is well centered in its housing.
- Introduce the set of sleeves (C) and (D) on the spindle.
- Mount the front ball bearing
- Introduce spindle with ball bearings in the spindle-holder paying attention that the locking holes (F) are well aligned.
- Re-insert the locking pivot (B) without tightening it.
- Tighten the screw (A) moderately
- Tighten the locking pivot (B).

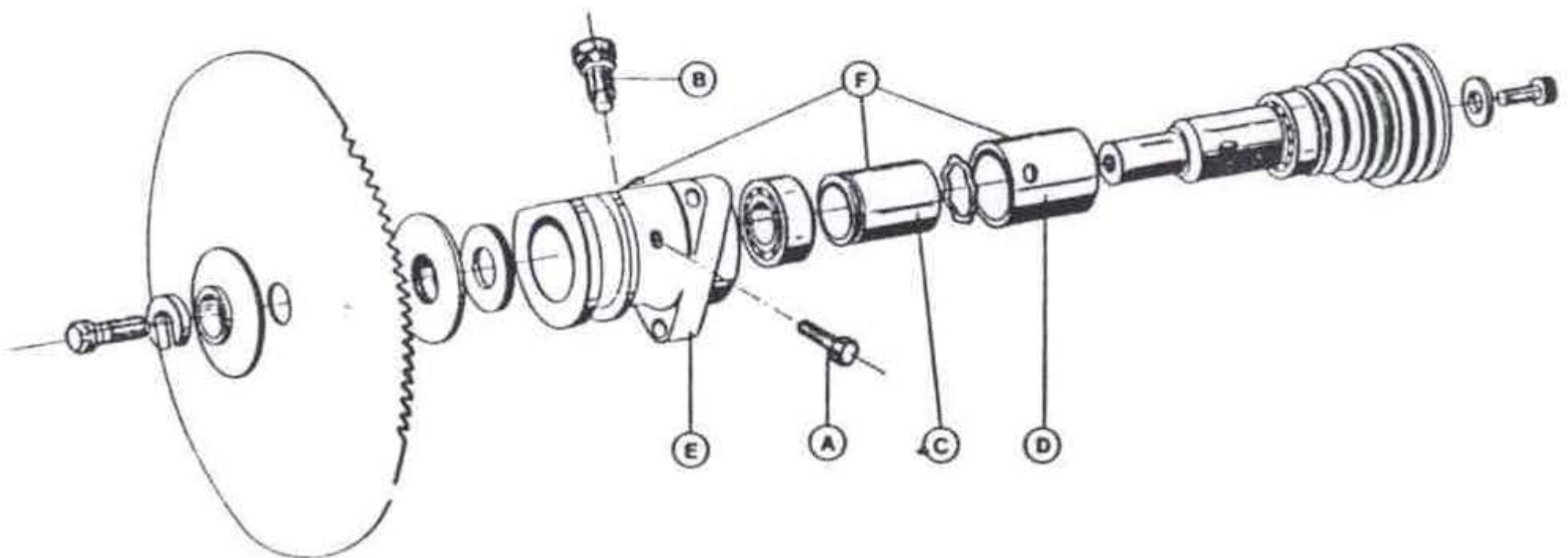


Fig. 34