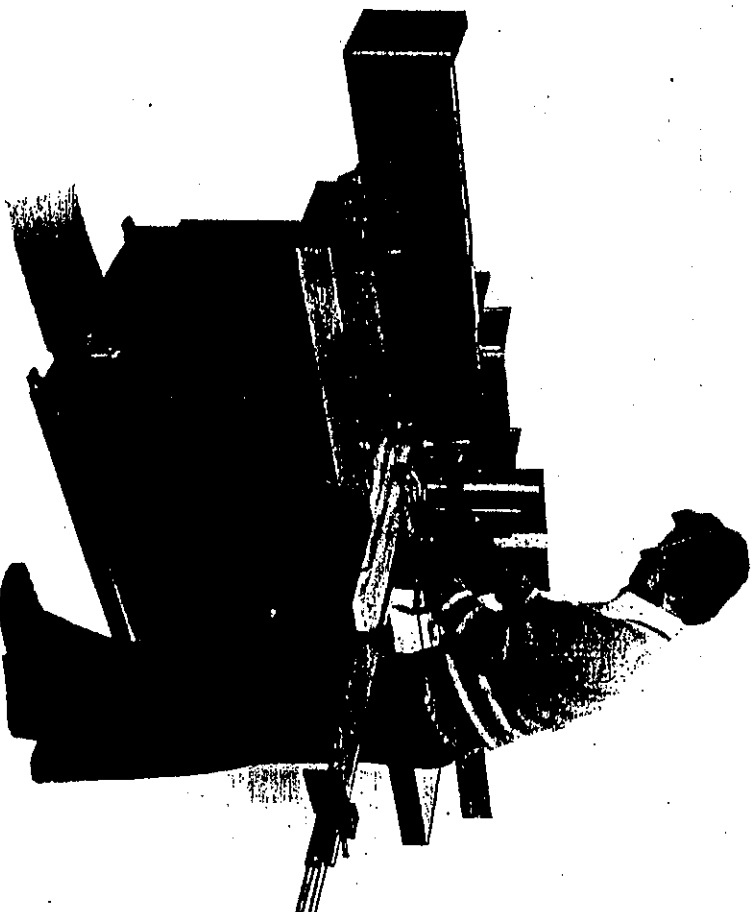


Modifications are made to these books from time to time and it is important therefore that only the book sent with the machine should be used as a working manual

INSTRUCTION MANUAL FOR

CT1300

SAW, SPINDLE MOULDER & TENONER



FOR REPLACEMENT PARTS, TOOLS & ACCESSORIES

Telephone: Fence Houses 2385 (5-lines) Telex: 53441 (Bursgreen Duram)

PLEASE INSERT SERIAL NUMBER OF MACHINE

BOOK No. B623

Bursgreen (Durham) Ltd, Fence Houses, Houghton-le-Spring,
Tyne-Wear, England. DH4 5RQ



HEALTH & SAFETY

SAFETY OF WOODWORKING MACHINES

Woodworking machines can be dangerous if improperly used. The wide range of work of which they are capable, requires adequate safeguarding arrangements against possible hazards.

Many injuries to machinists are caused by carelessness or failure to use the guards provided or to adjust them correctly.

WADKIN LTD., supply machinery designed for maximum safety which they believe, as a result of thorough testing, minimizes the risks inevitable in their use. It is the user's responsibility to see that the following rules are complied with to ensure safety at work:

1. The operation of the machine should conform to the requirements of the Woodworking Machines Regulations 1974. All guards should be used and adjusted correctly.
2. Safe methods of working only should be adopted as given in the Health and Safety Work Booklet No.41, "Safety in the Use of Woodworking Machines", (obtainable from Her Majesty's Stationery Office) and as advised by Wadkin Ltd.
3. Only personnel trained in the safe use of a machine should operate it.
4. Before making adjustments or clearing chips, etc., the machine should be stopped and all movement should have ceased.
5. All tools and cutters must be securely fixed and the speed selected must be appropriate for the tooling.

SAFETY IS OUR WATCHWORD BUT THE USER MUST COME WITH THE ABOVE RULES IN HIS OWN INTEREST. WE WOULD BE PLEASED TO ADVISE ON THE SAFE USE OF OUR PRODUCTS.

000

FRD Mr Stern

Specification

SAW UNIT

Spindle Diameter 30mm
Standard disc diameter 350mm
Maximum disc diameter 400mm
Maximum height of cut (standard disc) 110mm
Maximum height of cut (400mm discs) 135mm
Maximum width of tools (for dado cut) 50mm
Maximum horizontal stroke 175mm
Table dimensions 1360 x 700mm
Maximum width to cut with rip fence 350mm
Maximum width to cut with crosscut fence 1250mm
Standard spindle speeds 3000, 4500, and 6000 rev/min
Optional two spindle speed ranges 1600, 2250, 3000 and 3200,
4500, 6000 rev/min
Standard motor output 4kW
Optional motor output 5.5kW

SPINDLE MOULDER UNIT

Spindle diameter 35mm
Maximum working depth 170mm
Spindle vertical stroke 185mm
Maximum diameter of tools accommodated under table 340mm
Standard spindle speeds 3000/4500/7000 rev/min
Standard motor output 5.5kW
Optional motor output 7.5kW

SQUARING AND TENONING

Sliding table stroke 1300mm
Maximum squaring length for panels 50mm thick 1250mm
Maximum length tenon with 350mm moulder cutting circle 1100mm
Maximum length tenon for trimming 50mm thick 700mm
Net weight 850kg
Gross weight 1025kg
Overall machine dimensions (approximate) 1900 x 1065 x 855mm
Shipping dimensions 2.4m³

OPTIONAL EXTRAS

400mm diameter saw disc Two-speed (1000/3000 rev/min) saw motor
Cut to right of rip fence up to 1250mm Interchangeable spindle
Rotational direction reversal (max. speed 9000 rev/min)
5.5 kW saw motor Four-speed spindle
Overload protection 7.5kW spindle moulder motor.

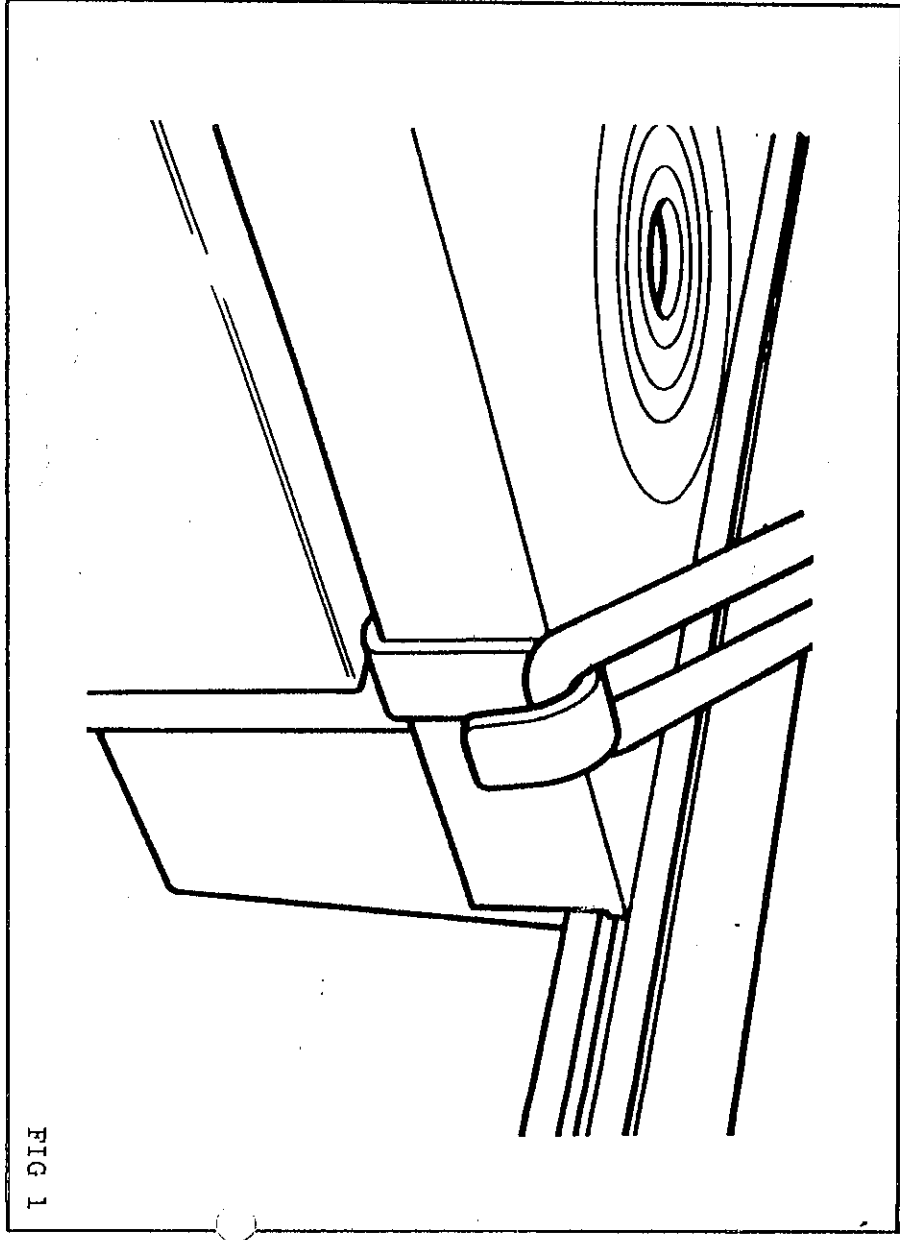


FIG 1

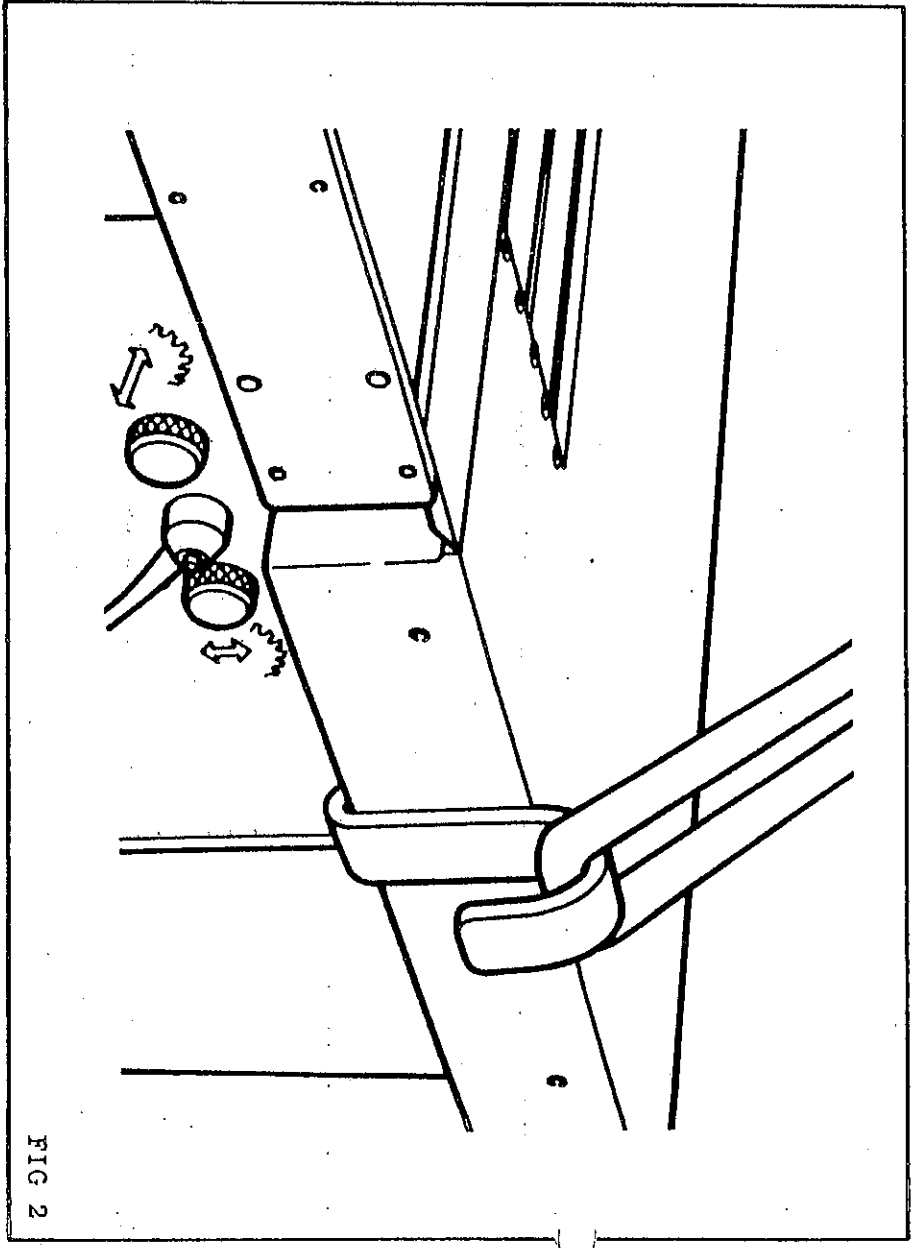


FIG 2

Safety

CAREFULLY READ INSTRUCTION MANUAL WITH PARTICULAR REFERENCE TO THE FOLLOWING INSTRUCTIONS:-

1. SLINGING, i.e. SAFE LIFTING LIMITS FOR SLINGS ETC.
2. INSTALLATION AND FOUNDATION, i.e. SAFE WORKING AREA OF MACHINE AND BOLT POSITIONS, ETC.
3. WIRING DETAILS, i.e. WIRING DIAGRAM AND INSTRUCTIONS FOR SAFE WIRING OF MACHINE.
4. MACHINE CONTROLS AND OPERATING INSTRUCTIONS.
5. SELECT CORRECT SPEED FOR CUTTER EQUIPMENT AND ENSURE CUTTERS ARE SECURELY LOCKED IN POSITION.
6. SET GUARDS CORRECTLY TO COVER CUTTER EQUIPMENT AS MUCH AS POSSIBLE.
7. NOTE START/STOP CONTROL POSITION AND ISOLATOR SWITCH POSITION (IF FITTED) BEFORE OPERATING MACHINE.
8. USE FEEDING DEVICES WHERE POSSIBLE.
9. REFER TO HEALTH AND SAFETY AT WORK BOOKLET No.41 (IN U.K.) FOR SAFETY IN THE USE OF WOODWORKING MACHINERY.
10. DO NOT RUN LARGE SAWBLADES AT HIGH SPEED.
11. DO NOT RUN LARGE CUTTERS AT HIGH SPEED.

Index

Specification.	Page 3
Slingsing.	Page 5
Cleaning.	Page 5
Marking Out.	Page 5
Wiring Details.	Page 5
Lubrication.	Page 6
Mounting Sawblades.	Page 6
Fingerplate Adjustment.	Page 6
Controls.	Page 8
Work Spindle Rise & Fall.	Page 8
Main Saw Lateral Adjustment.	Page 8
Main Saw Rise & Fall.	Page 8
Scoring Saw Lateral Adjustment.	Page 8
Scoring Saw Vertical Adjustment.	Page 8
Electrical Controls.	Page 8
Electrical Micro Switches.	Page 12
Riving Knife & Guard Adjustment.	Page 12
Work Spindle Lock.	Page 12
Rip Fence Controls.	Page 15
Fence Adjustment.	Page 16
Mitre Fence Clamp.	Page 16
Mitre Fence Stop Rods.	Page 16
Sliding Table Lock.	Page 19
Main Saw Speed Change.	Page 19
Main Saw Belt Change.	Page 19
Scoring Saw Belt Change.	Page 19
Spindle Speed Change.	Page 20
Spindle Drive Belt Change.	Page 20

SLINGING.

Attach slings to machine as shown in FIG'S 1 and 2. Ensure damage will not be caused to machine during slinging operation.

CLEANING.

Clean protective coating from all bright parts by applying a cloth soaked in paraffin, turpentine or other solvent.

MARKING OUT.

Site machine to allow working clearance for all capacities. Refer to Foundation Plan. Mark out floor to suit 4 - 12 mm Rawlbolts. These bolts are not included with the machine but can be supplied at additional charge.

NOTE: The machine has 4 Simplex adjusting feet. Move machine into position with a Simplex adjuster over each of the 4 foundation bolts. Level machine by adjusting the 4 Simplex adjusters in conjunction with a spirit level placed on the table top. When machine is level, lock Simplex adjusters then secure machine by the 4 - 12 mm foundation bolt through each of the 4 Simplex adjusters.

WIRING DETAILS.

The motors and control gear have been wired in before despatch. All that is required is to connect the power supply to the isolating switch

- Points to note when connecting to power supply:-
1. Check the voltage, phase and frequency correspond to those on the motor plates, also the correct coils and heaters are fitted to the starter.
 2. It is important that the correct cable is used to give the correct voltage to the starter as running on low voltage will damage the motors.
 3. Check the main line fuses are of the correct capacity.
 4. Connect the line leads to the appropriate terminals, see wiring diagram on enclosed foundation drawing.
 5. Check all connections are sound.
 6. Check the rotation of all motors for the correct direction. If these are incorrect, reverse any two of the line lead connections.

VOLTAGE.	PHASE.	TOTAL H.P.	S.W.G. TINNED COPPER WIRE.	FUSE RATING AMPS.
220	3	17½	17	65
380/420	3	17½	18	45
550	3	17½	19	38
220	3	15	17	65
380/420	3	15	18	45
550	3	15	19	38

LUBRICATION.

See enclosed foundation drawing for lubrication details.
See APPROVED LUBRICANTS page 11.

NOTE: It is advisable to keep all bright parts covered with a thin film of oil to prevent rusting.

MOUNTING SAWBLADES.

To mount sawblade, follow the undermentioned procedure:

1. Isolate machine electrically.
 2. Vertically adjust saw arbor to top position, (see MAIN SAW RISE & FALL, page 8.)
 3. Remove fingerplates, (see FINGERPLATE ADJUSTMENT, below)
 4. Insert toggle bar (supplied) into hole "A" in back saw flange, FIG 3 , then, holding toggle bar, remove the arbor nut (left hand thread) and front saw flange.
 5. Select the required blade and check that it is free from all dirt, gum, or sawdust, especially where it will be gripped by flanges. Mount blade onto arbor. Check the front saw flange is clean, then fit to saw arbor. The saw teeth should point towards the small control panel end of machine.
- NOTE: If the flanges and saw are not clean, the saw will not run true, causing vibration and indifferent sawing.
6. Holding toggle bar in back saw flange, securely tighten arbor nut (left hand thread) with spanner supplied.
 7. Remove toggle bar and replace fingerplates (see FINGERPLATE ADJUSTMENT, below)
 8. Position sawguard correctly depending on thickness of timber to be worked.

FINGERPLATE ADJUSTMENT.

The machine is fitted with 3 removable fingerplates which can be replaced in any order, according to the relative sawblade position.

To set the fingerplates, proceed as follows:

1. Isolate machine electrically.
2. Loosen 5 - 8 mm countersunk socket head screws "A" in FIG 4 then, by inserting finger through hole in fingerplate, each plate can be carefully removed from table.
3. Set saw in required lateral position, see page 8.
4. Replace the fingerplates in table around the saw in equally spaced positions similar to FIG
5. When fingerplates are set correctly, securely lock the 5 - 8 mm countersunk socket head screws "A" in FIG 4

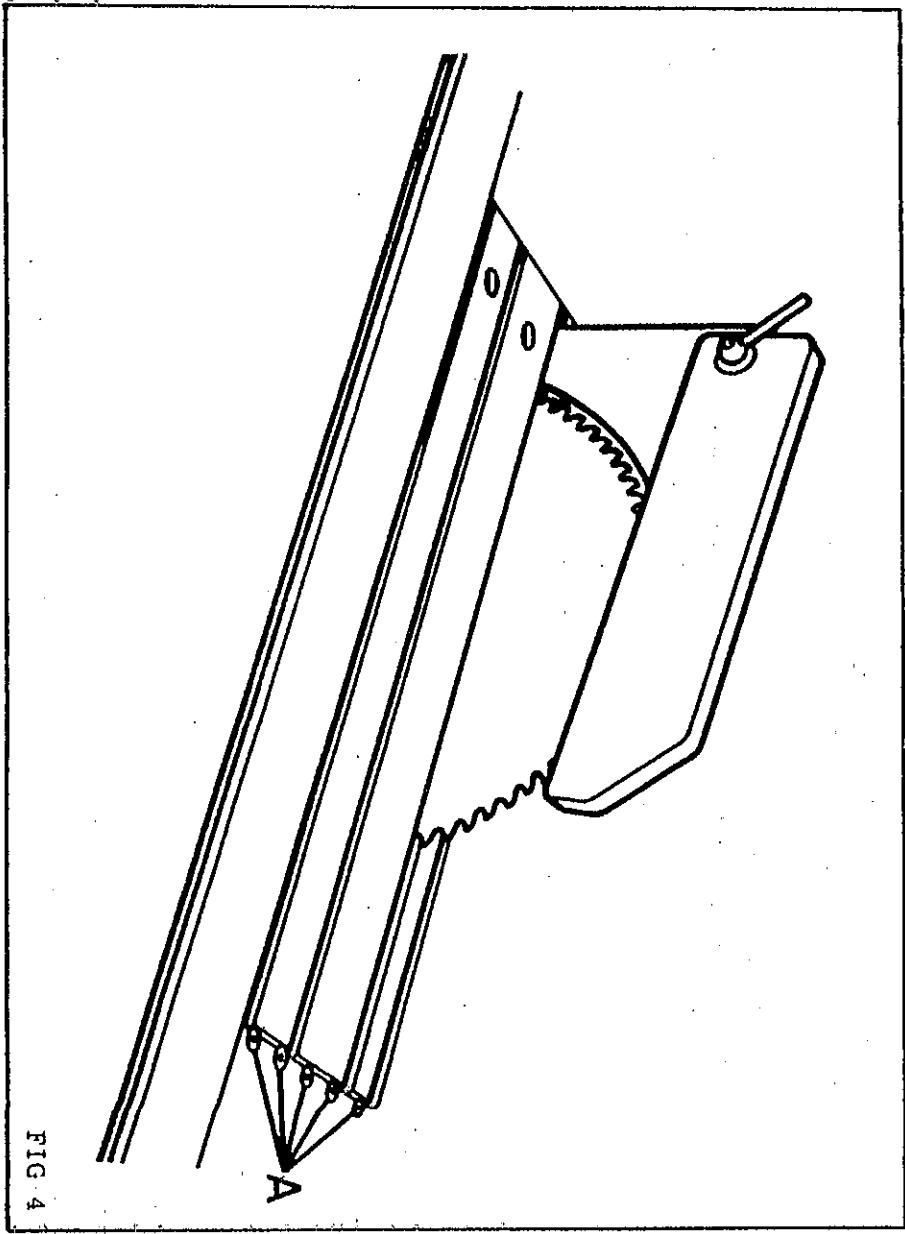


FIG 4

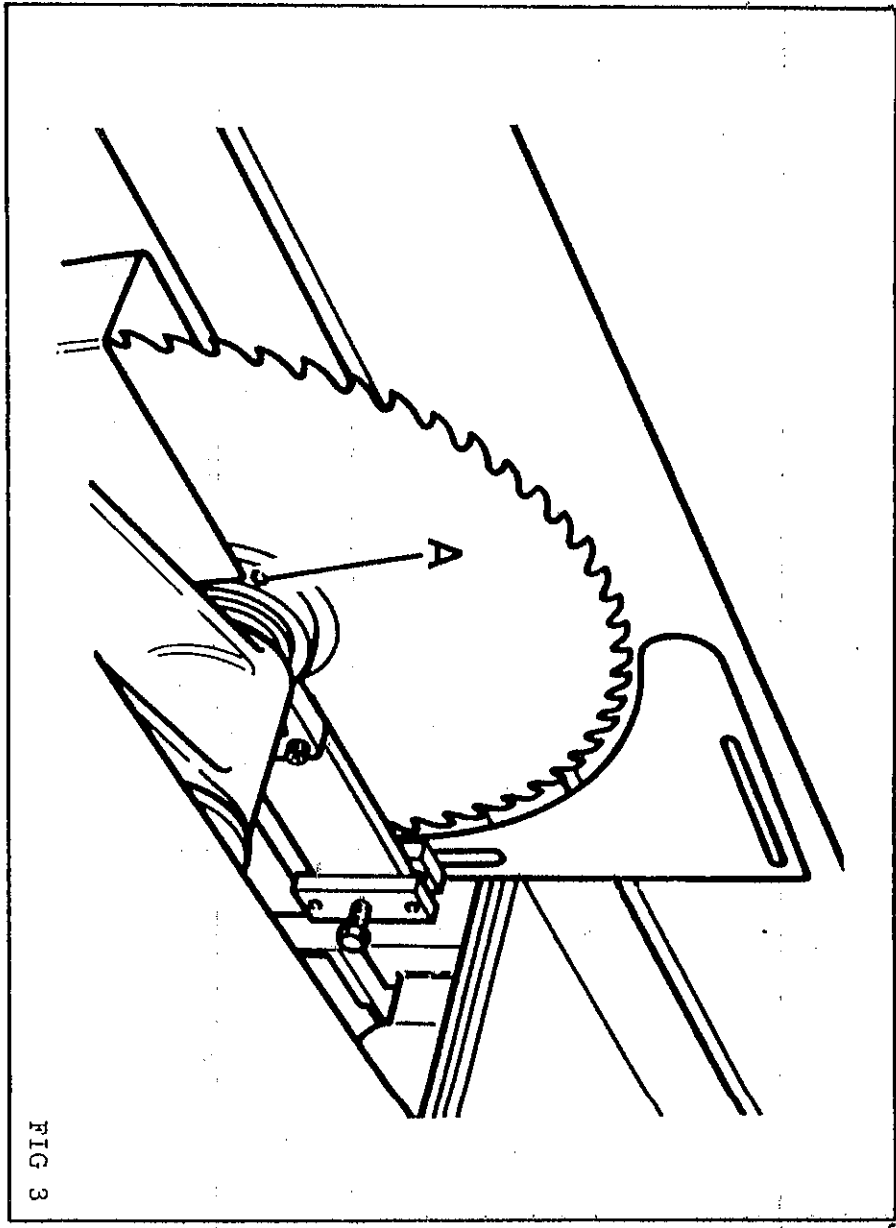


FIG 3

CONTROLS.

The machine has two control panels as shown in FIG'S 5 and 6

WORK SPINDLE RISE & FALL.

Work Spindle rise and fall is by handwheel "A" in FIG 5.

MAIN SAW LATERAL ADJUSTMENT.

To move the main saw laterally (and scoring saw, if fitted) proceed as follows:

1. Isolate machine electrically.
2. Read FINGERPLATE ADJUSTMENT, page 6.
3. Main saw lateral adjustment is by handwheel "B" in FIG 5.

ALWAYS REPLACE FINGERGUARD AND SAWGUARD BEFORE STARTING MACHINE.

MAIN SAW RISE & FALL.

Raise or lower main saw by handwheel "A" in FIG 6.

SCORING SAW LATERAL ADJUSTMENT. (if fitted)

For scoring saw lateral adjustment, release scoring saw lock by adjustable handle "B" in FIG 6 then turn knurled adjusting knob "C" until saw is in required lateral position. When set, relock adjustable handle "B".

SCORING SAW VERTICAL ADJUSTMENT. (if fitted)

To adjust scoring saw vertically, release scoring saw lock by adjustable handle "B" in FIG 6 then turn knurled adjusting knob "D" until saw is in required vertical position. When set, relock adjustable handle "B".

NOTE: FOR CORRECT POSITION OF SCORING SAW IN RELATION TO MAIN SAW, SEE FIG 7.

ELECTRICAL CONTROLS.

The electrical controls are fitted to the main control panel shown in FIG 5 and are situated in a grouped layout as follows:-

"C" - WORK SPINDLE, START.
 "D" - MAIN SAW, START.
 "E" - SCORING SAW, START (if fitted)
 "F" - MASTER STOP.

NOTE: When MASTER STOP is actuated, the button will remain in the STOP position. To release, turn button in clockwise direction.

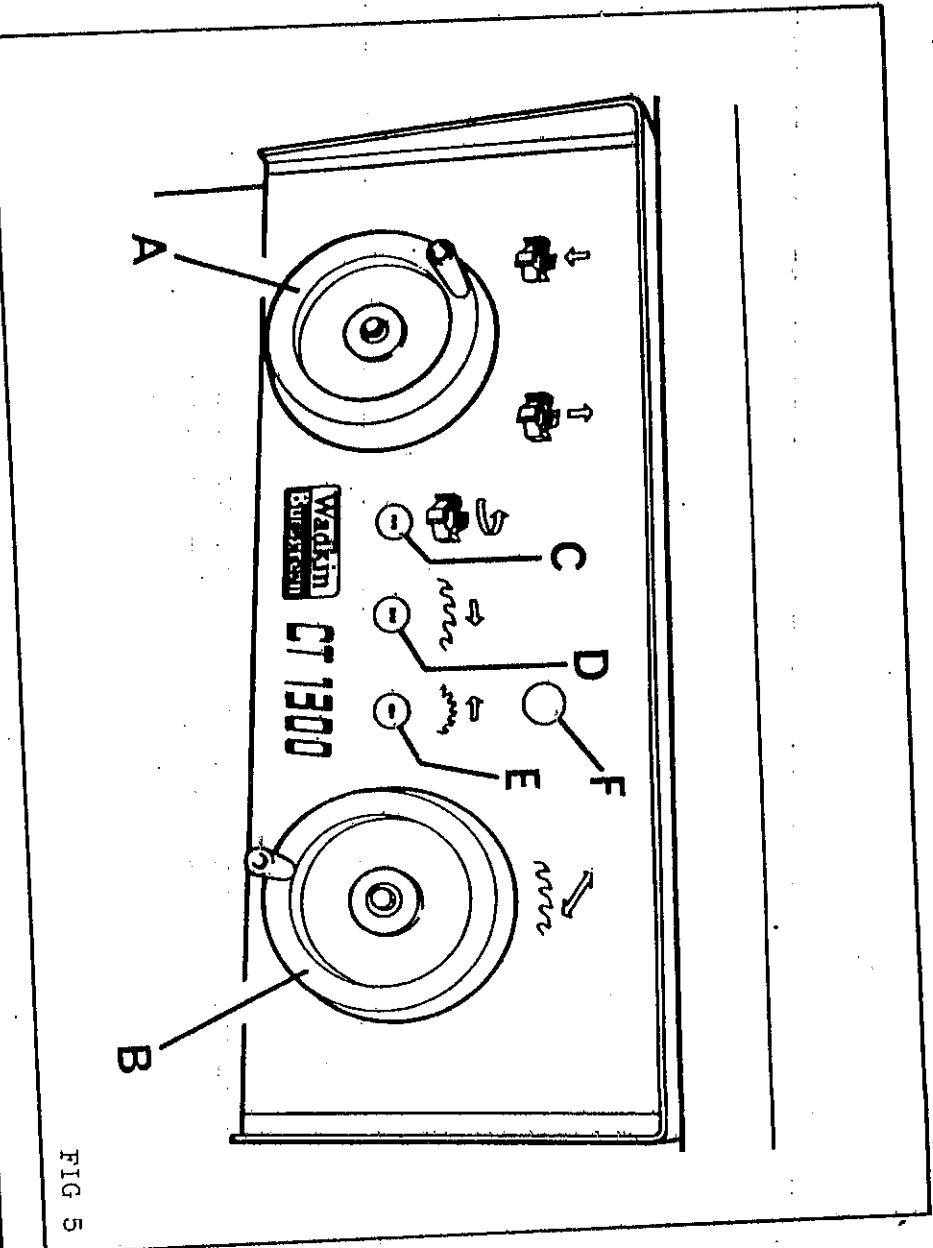


FIG 5

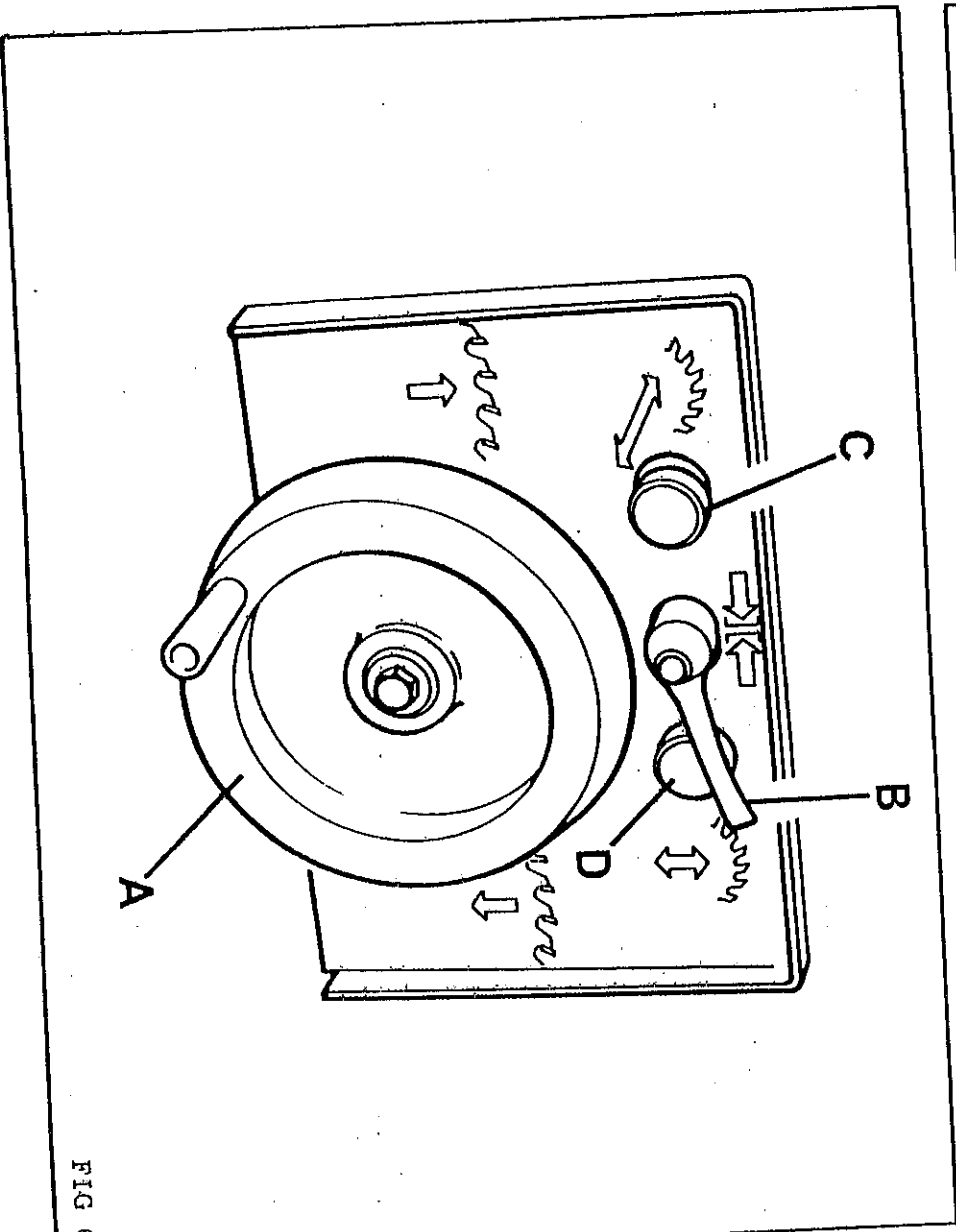


FIG 6

ALIGNMENT OF SCORING SAW WITH MAIN SAW

END VIEW OF SAWBLADES

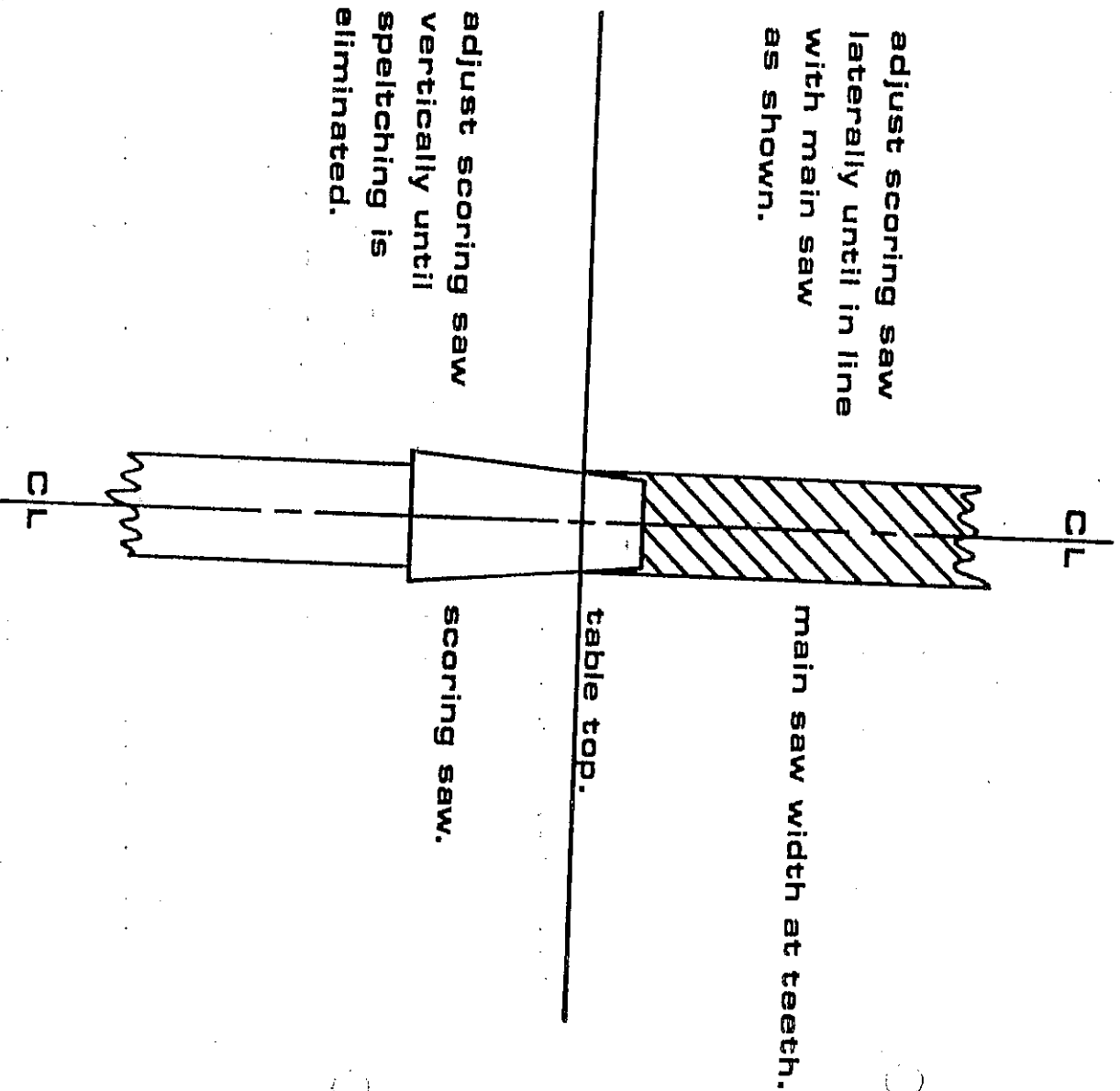


FIG 7

Approved Lubricants

Application	Approved Lubricant					Wadkin
	Castrol	B. P.	Shell	Esso	Texaco/ Caltex	
Worm Boxes	Alpha 617	Energol CS425	Vitrea 75	Pen-O-Led E. P.3	Regal Oil J	L. 2.
General Lubrication	Magna ED	Energol HP. 20	Vitrea 33	Esstic 50	Ursa Oil P. 20	L. 4.
Pneumatic Lubricators	Hyspin AWS 32	Energol HL 65	Tellus 27	Nuto H 44	Rando Oil HDA	
Grease	Spheerol AP. 3	Energrease LS. 3	Alvania 3	Beacon 3 Starfak Premium 3	Regal	L. 6.
Brake Cables	Brake cable grease	Energrease L21M	Alvania 3	Multi-purpose grease H		

ELECTRICAL MICRO SWITCHES.

FOR SAFETY, 2 electrical micro switches are fitted: 1 on each access door in base of machine.

When an access door is opened, the micro switch cuts off electrical supply to motors.

To re-start machine:- both access doors must be closed before machine can be re-started from main control panel.

RIVING KNIFE AND GUARD ADJUSTMENT.

The riving knife complete with sawguard, rises and falls with the saw. The riving knife should be set to within 12mm of the saw at table level.

To adjust riving knife, proceed as follows:-

1. Isolate machine electrically.
2. Remove fingerplates; see FINGERPLATE ADJUSTMENT, page 6.
3. Loosen hexagon head bolt "A" in FIG 8.
4. Set riving knife to within 12mm of saw at table level.
5. When set, relock hexagon head bolt "A".
6. Replace fingerplates; see FINGERPLATE ADJUSTMENT, page 6.

When riving knife is set correctly, the sawguard "B" should be adjusted to protect the operator from the sawblade.

To adjust sawguard, proceed as follows:-

1. Loosen handlever "C" and position guard "B" to cover as much of sawblade as possible, depending on thickness of timber to be worked.
2. When set, relock handlever "C".

SAFETY NOTE.

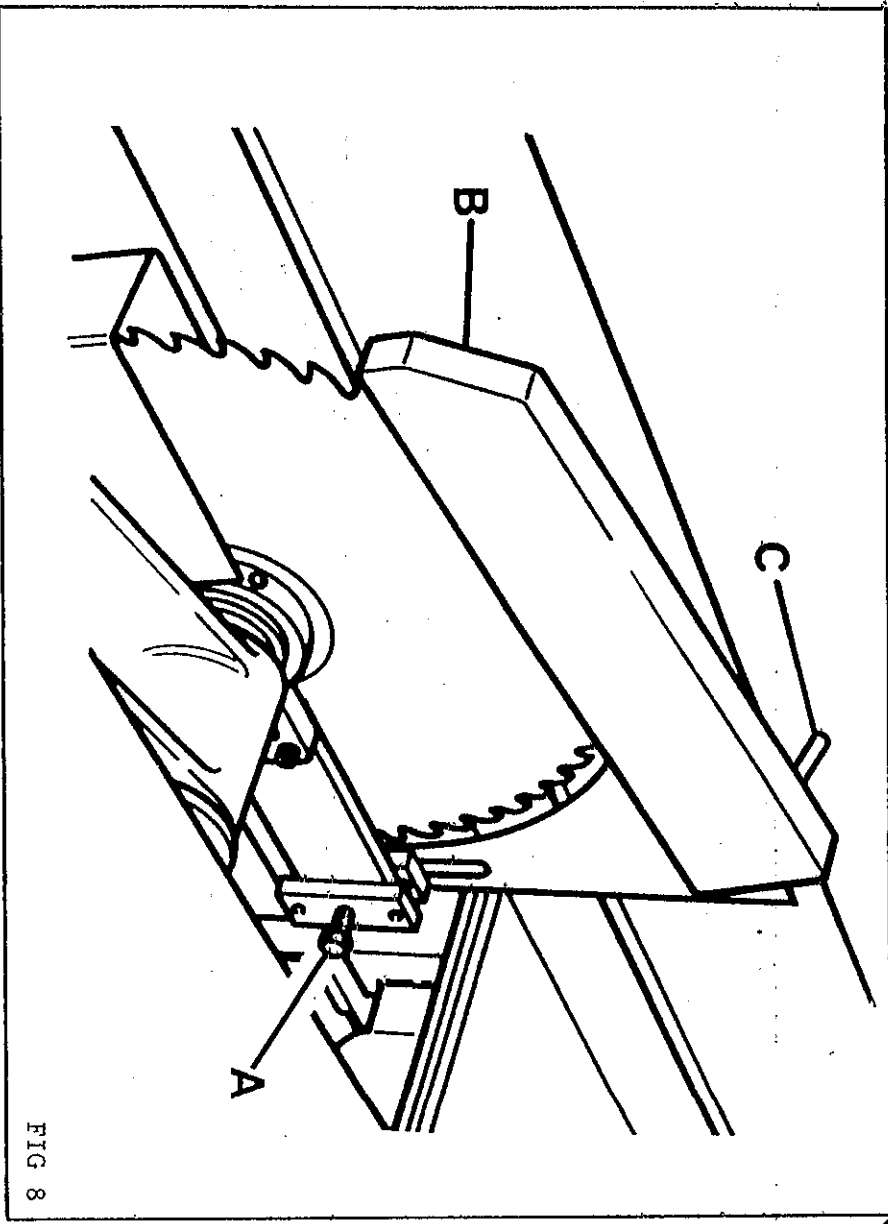
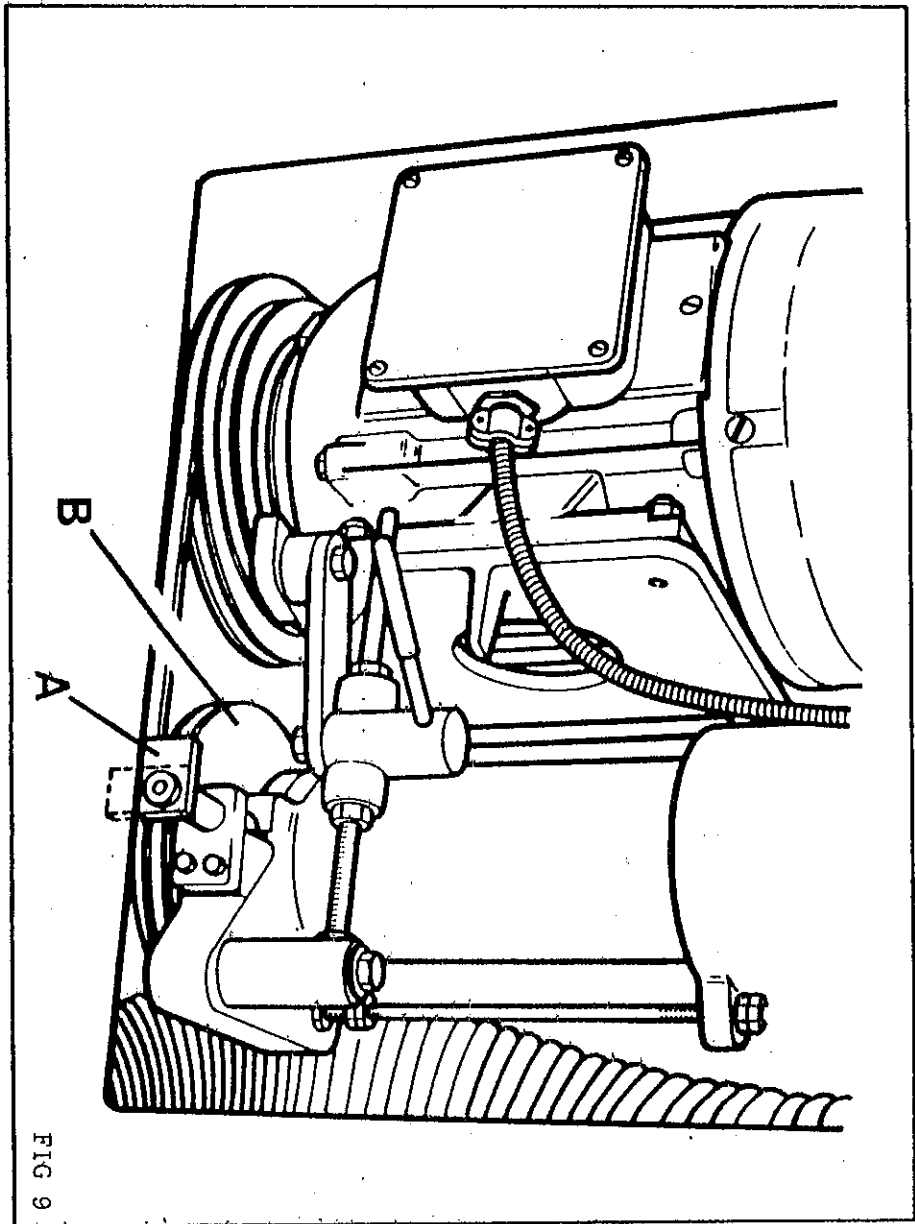
Do not adjust sawguard or riving knife with machine running.

WORK SPINDLE LOCK.

The machine is fitted with a work spindle lock which should be activated when changing cutters, etc.

To operate the work spindle lock, proceed as follows:

1. Isolate machine electrically.
2. Open door on left side of machine for access to spindle drive assembly, SEE FIG 9.
3. Push locking plunger "A" towards spindle housing and simultaneously turn spindle pulley "B" until plunger locates in spindle.
4. Secure lock by turning plunger to vertical position (as shown dotted)
5. To release lock, turn plunger to horizontal position.



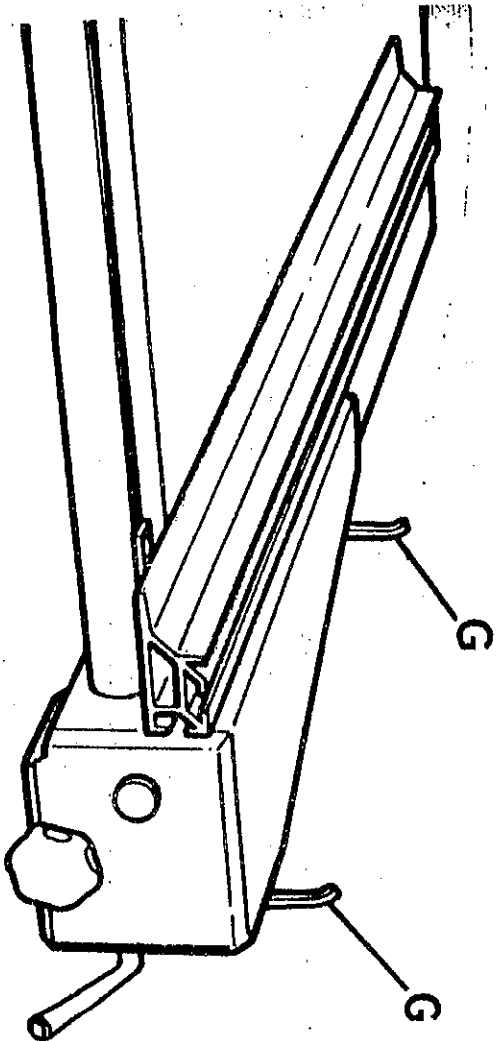


FIG 11

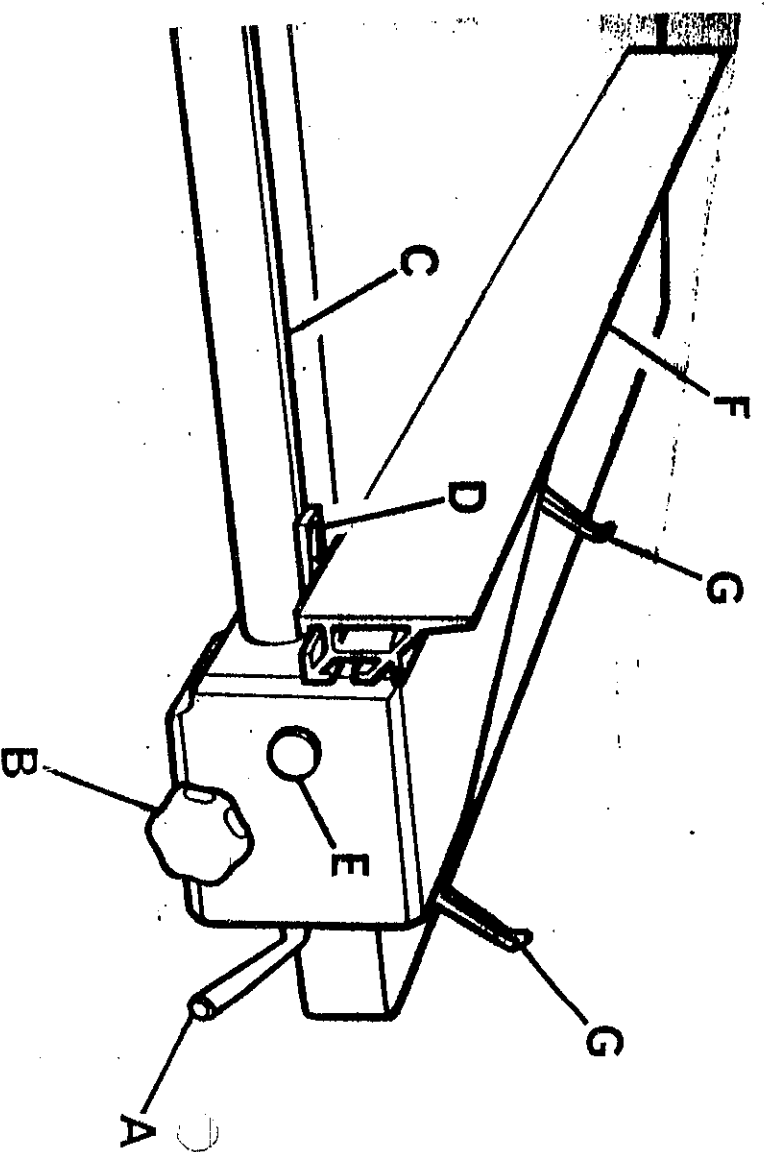


FIG 10

RIP FENCE CONTROLS.

The rip fence slides on a round bar fitted to front of table. Rapid fence adjustment and micro adjustment are provided with an effective lock.

For rapid fence adjustment follow the undermentioned procedure:-

1. Lift handle "A" in FIG 10, then disengage the pinion from the front racked fence bar by pulling handwheel "B" out of the fence front bracket.
2. Position fence where required then depress handle "A" to lock fence in position. A ripping capacity scale on fence slide bar "C" is indicated by an adjustable pointer "D" located in the fence body and secured by knurled knob "E".
3. For micro adjustment the pinion should be engaged in the racked fence slide bar, i.e. handwheel "B" pushed into the fence front bracket.

Fence Plate Positions.

The fence plate "F" in FIG 10 has 2 positions. Position shown in FIG 10 is for use with deep stock. Position shown in FIG 11, is for use with faced panels, melamine, veneer, etc.

To change the fence plate position, follow the undermentioned procedure.

1. Loosen handles "G" in FIG 10, then slide fence plate "F" from the 2 mountings on fence body.
2. With the fence plate "F" removed, revolve the 2 fence locking plates one half turn each to ensure correct location when fence plate is re-fitted to position in FIG 11.
3. Slide fence plate over the 2 locking plates then secure in the required position by locking handles "G".

NOTE: Each time the fence plate position is changed, the 2 fence locking plates must be turned to suit location.

Fence Pointer Adjustment.

When the fence plate position has been changed as previously described, the pointer "D" in FIG 10 must be re-set accordingly.

To re-set pointer, proceed as follows:-

1. Lift handle "A" in FIG 10, then move fence to a position which would allow a reasonable cut to be taken. Depress handle "A" to lock fence in position.
2. Start machine, then feed a peice of timber past the sawblade keeping timber firmly against the fence. Stop machine.
3. Accurately measure the width of timber after cut then loosen knurled screw "E" in FIG 10, and set rule pointer "D" accordingly. Re-lock knurled screw "E".

FENCE ADJUSTMENT.

Each fence plate can be independently adjusted by means of the plastic handwheels "A" in FIG 12. The fence plates can be set to the desired position and locked by the adjustable handles "B". The front fence plates can also be adjusted lengthwise. The fence plates should be locked both ways at all times when the machine is in use.

The fence is fitted with a safety guard and a "shaw" guard can also be fitted if required.

The safety guard is adjustable depending on the section of timber being worked. This guard is shown in position in FIG 12.

To adjust the guard for various sections of timber, unscrew the plastic handwheels "C", set to required position and re-lock.

To adjust the safety guard in relation to the fence plates, loosen the plastic handwheels "D", position the safety guard and re-lock.

MITRE FENCE CLAMP.

The fully adjustable mitre fence clamp is shown in FIG 13. This unit slides in a tee slot and can be used on either side of the saw. To swivel the unit to required angle proceed as follows:-

1. Release adjustable handle "A" then using suitable spanners loosen the 2 pillars "B" and "C"
 2. Swivel mitre fence to required angle using pointer on scale "D".
 3. When set, relock pillars "B" and "C", then adjustable handle "A".
- To move clamp unit vertically, proceed as follows:-

1. Loosen adjustable handle "A".
2. Slide clamp block "E" to required position.
3. When set, relock adjustable handle "A".

To move clamp unit horizontally, proceed as follows:-

1. Loosen adjustable handle "F".
2. Slide clamping bar "G" to required horizontal position.
3. When set, relock adjustable handle "F".

NOTE: Clamp will only operate efficiently when pillars and adjustable handles are securely locked.

MITRE FENCE STOP RODS.

Accurate repetitive cutting can be made using the stop rods which are attached to the mitre fence unit.

A Turnover stop and Shoulder stop are supplied with the stop rods. Each stop can be secured in required position along the length of stop rods or removed if necessary.

SAFETY NOTE:

Ensure that the stop rods are always clear of the saw or serious damage will result to sawblade and operator.

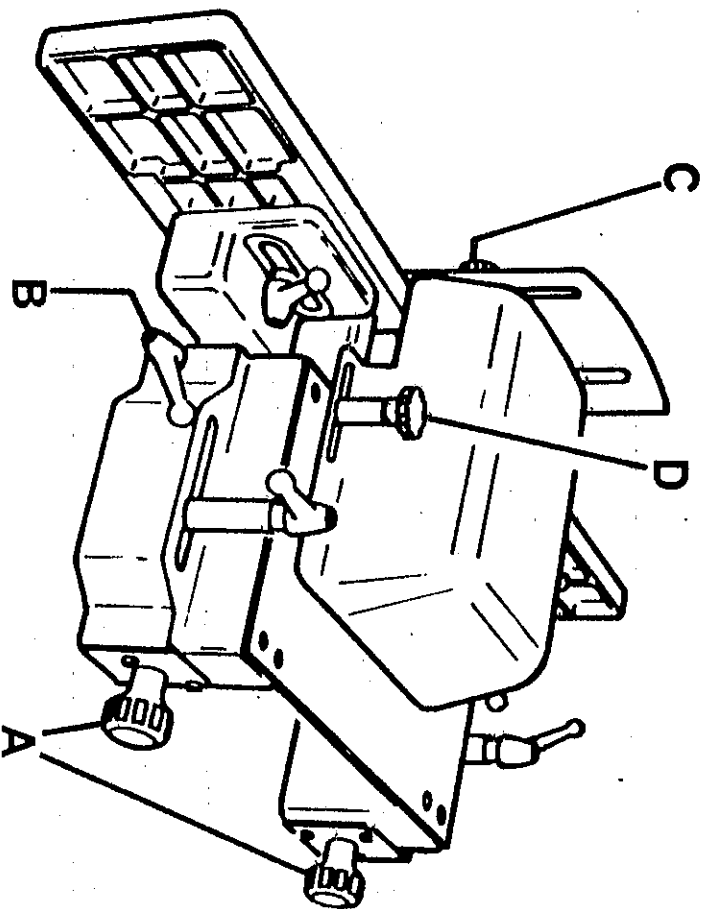


FIG 12

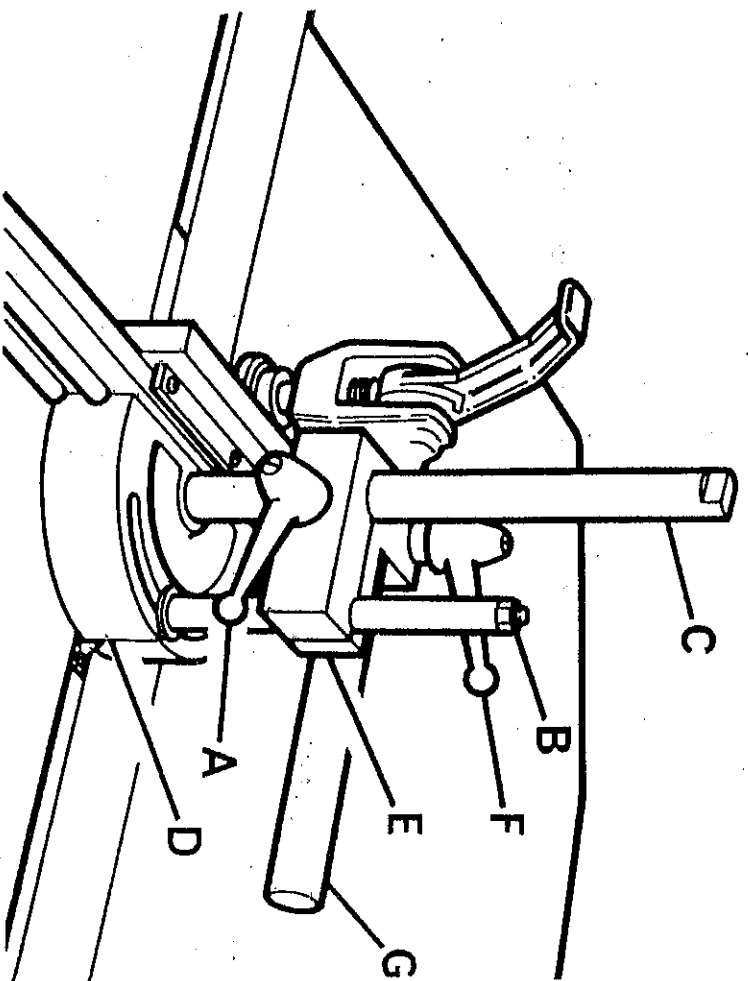
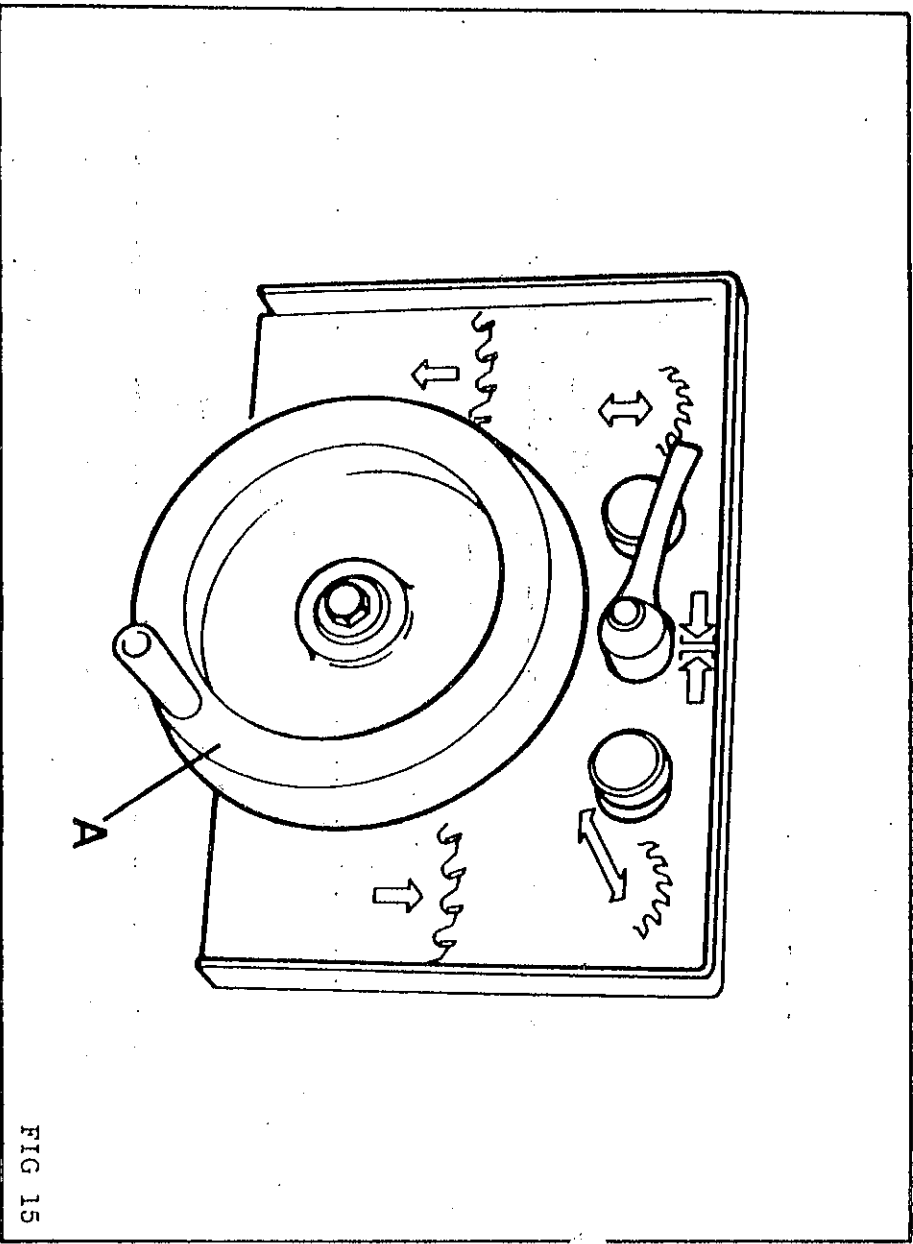
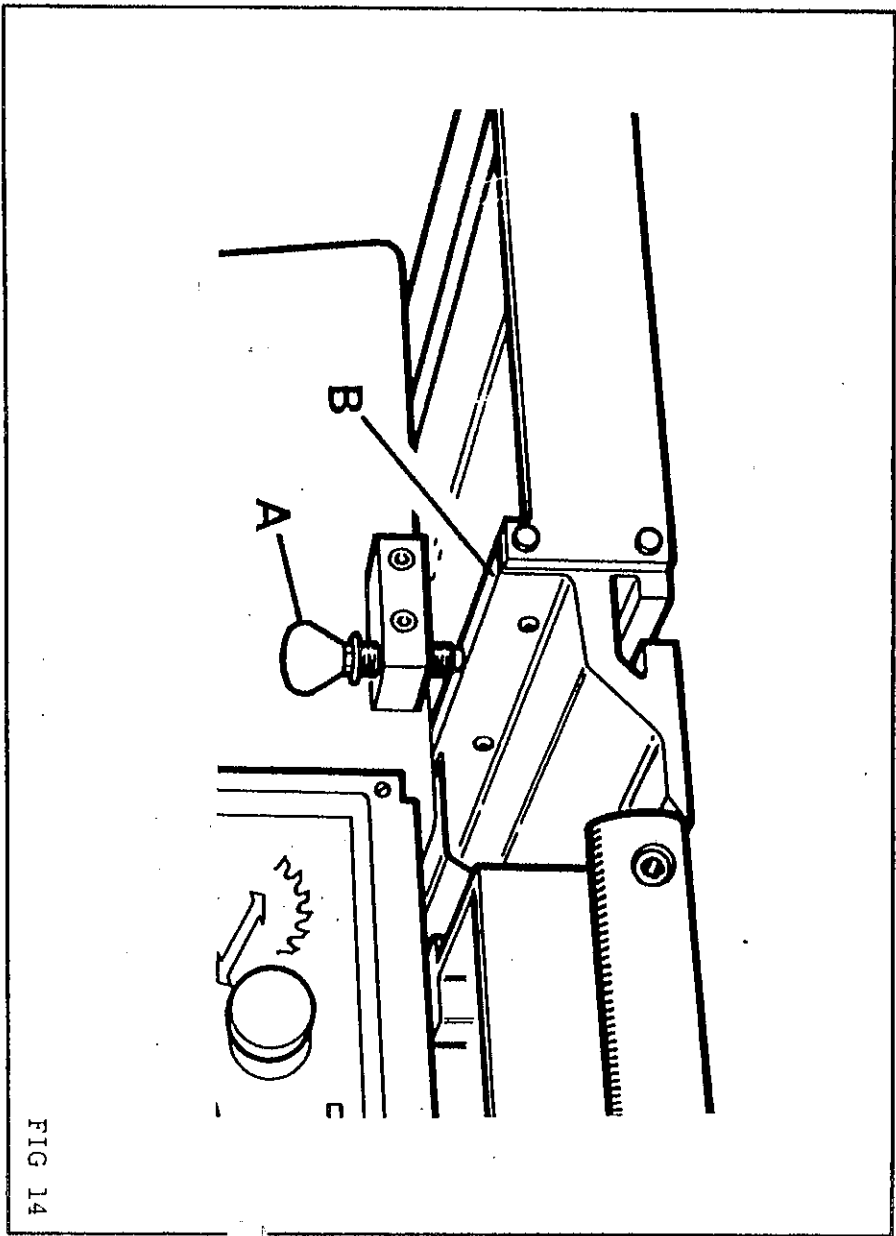


FIG 13



SLIDING TABLE LOCK.

The sliding table can be secured in line with the fixed table to convert the machine into a standard sawbench. To secure sliding table, screw locking plunger "A" into underside of sliding table "B" as shown in FIG 14. To disengage table lock, unscrew plunger "A".

MAIN SAW SPEED CHANGE.

The main saw is fitted with a 3 speed drive facility as standard. (6 speed - EXTRA).

To change the main saw speed, proceed as follows:-

1. Isolate machine electrically.
2. Turn handwheel "A" in FIG 15, raising main saw motor to uppermost position
3. Open door on rear of machine for access to main saw motor.
4. Move belt tension release handle "A" in FIG 16 to motor support position.
5. Lower main saw motor by handwheel "A" in FIG 15 until motor rests firmly on belt tension release bracket. Continue turning handwheel until motor drive belt can be easily removed.
6. Position drive belt on pulleys for required saw spindle speed, SEE FIG 17, FOR MAIN SAW PULLEY LAYOUT AND SPEEDS.
7. Raise motor by handwheel "A" in FIG 15 until belt tension supports motor.
8. Move belt tension release handle "A" in FIG 16 so belt tension release bracket does not obstruct motor when motor is lowered.
9. Close access door on rear of machine.

MAIN SAW BELT CHANGE.

To replace main saw belt, use same procedure as MAIN SAW SPEED CHANGE. Main saw drive belts: 2 - SPZ 710 Spacesaver Vee Belts

SCORING SAW BELT CHANGE.(if fitted)

To replace scoring saw belt proceed as follows:

1. Isolate machine electrically.
2. Open door on rear of machine for access to scoring saw motor
3. Lift motor by hand to release belt tension then change belt.

NOTE: Belt is tensioned by weight of motor.

4. When belt is changed, close access door.
Scoring saw (if fitted) drive belt: 1 - Fenner 2400 Vee Belt

SPINDLE SPEED CHANGE.

The spindle is fitted with a 4 speed drive facility as standard. (5 - SPEED EXTRA). To change the spindle speed, procede as follows:

1. Isolate machine electrically,
2. Open door on left side of machine for access to spindle drive assembly, SEE FIG 18.
3. Release belt tension by pulling handle "A".
4. Position drive belt "B" on pulleys for required spindle speed, SEE FIG 19, FOR SPINDLE PULLEY LAYOUT AND SPEEDS
5. Re-tension belt by pushing handle "A" towards motor.
6. Close access door.

SPINDLE DRIVE BELT CHANGE.

To replace spindle drive belt, use same procedure as SPINDLE SPEED CHANGE.

Work spindle drive belt: 1 - SPZ1010 Spacesaver Vee Belt

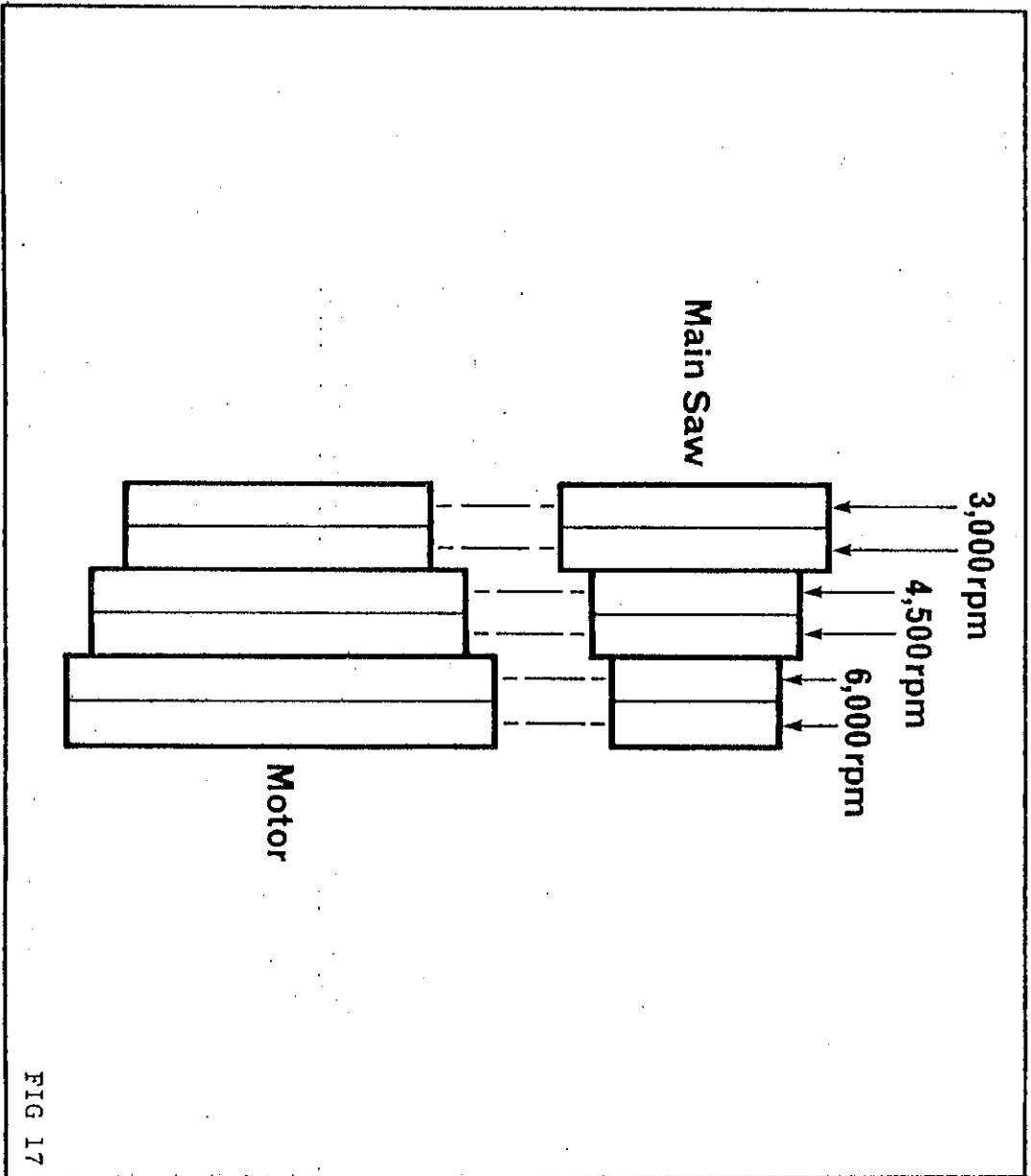


FIG 17

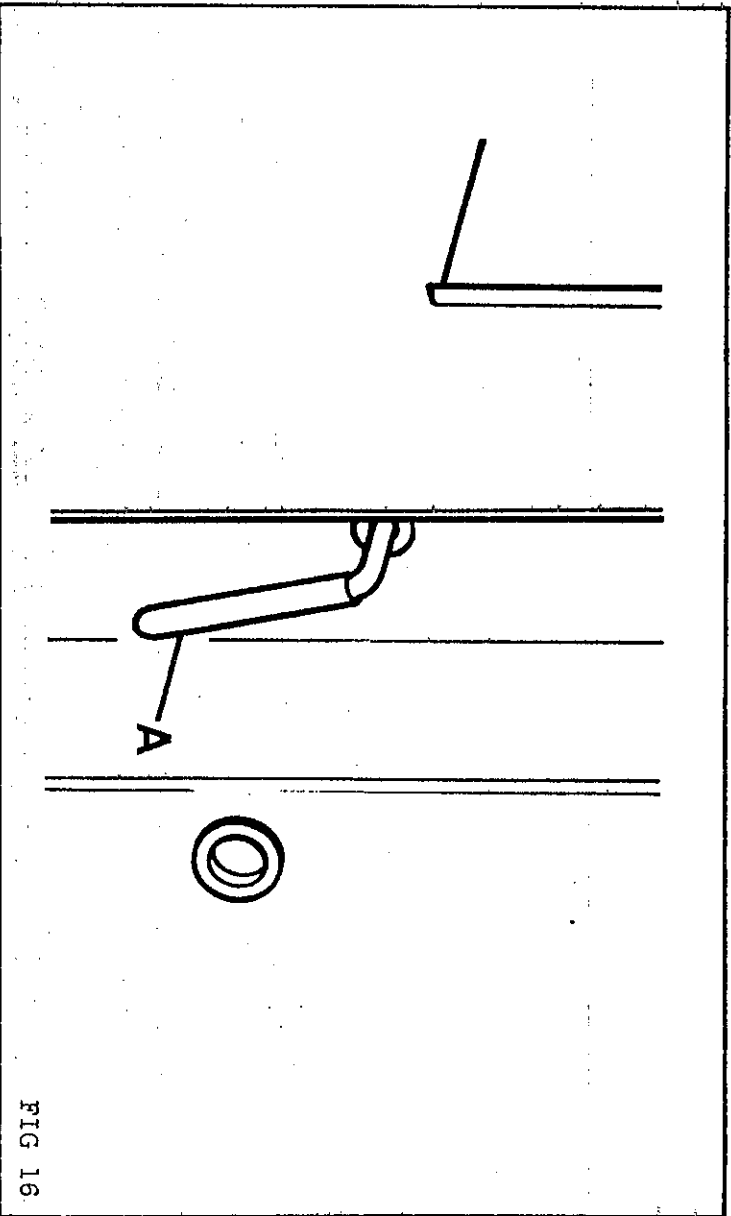


FIG 16

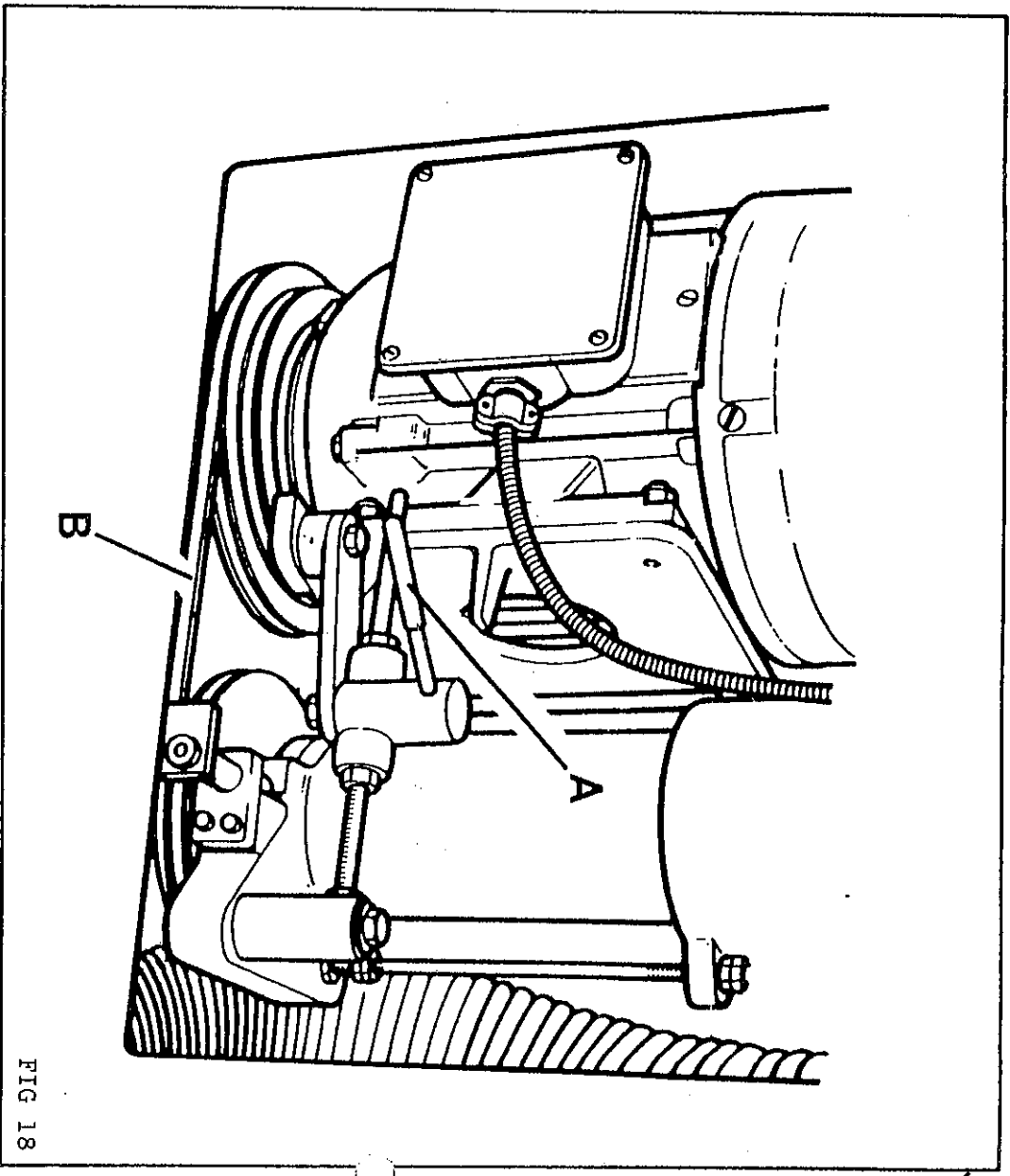


FIG 18

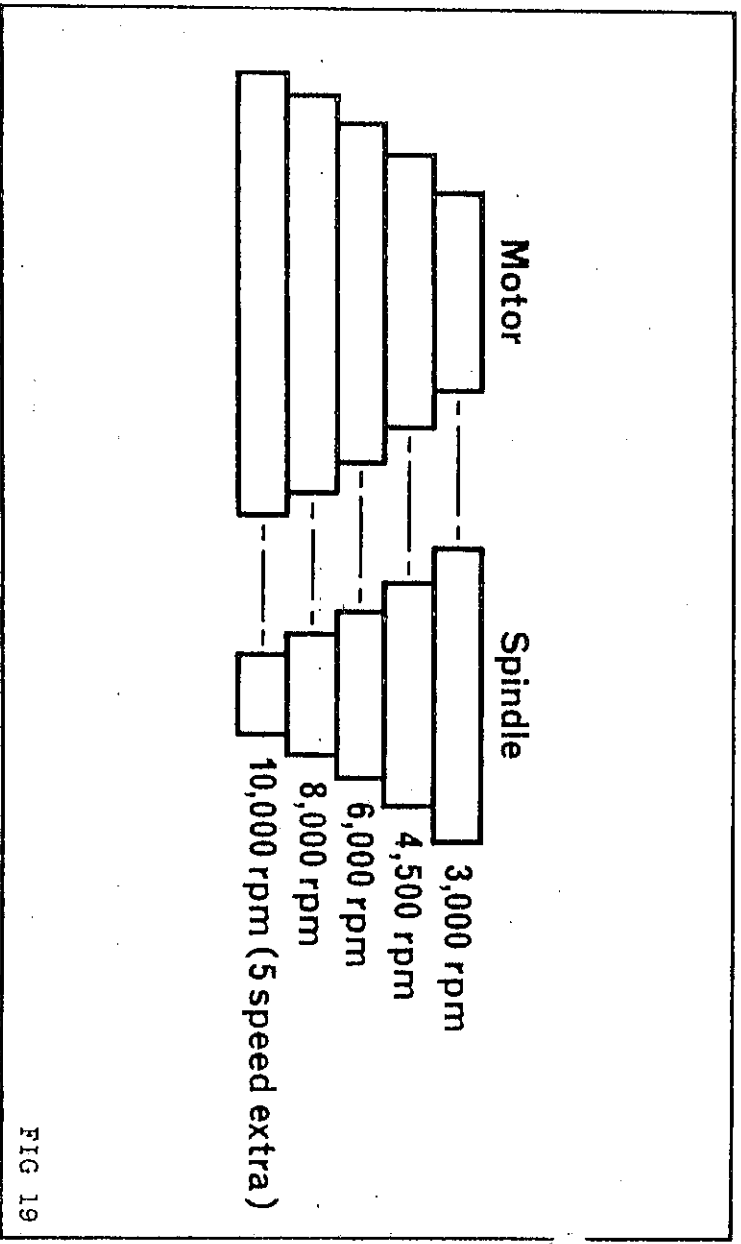


FIG 19

8.0 SPARES

8.1 Instructions When Ordering Spare/Replacement Parts

The undermentioned information should be given with all orders requesting spare/replacement parts.

- a) Machine type.
- b) Machine serial number.
- c) If no manual available, give as full a description as possible of the required part, including location within the machine.
- d) Order number and full company name and address.
- e) Company account number, with Wadkin, if known.
- f) All telephone orders must be followed by an official order, clearly marked "Confirmation Order".

NOTE: The company operate a 'Minimum Order Charge' on all spare/replacement part orders.

WADKIN DURHAM, Fence Houses, Houghton le Spring, Tyme & Wear, DH4 5RQ
Tel No: 091 385 2385 Fax No: 091 385 3311

NOISE LEVELS

This machine, under certain conditions, will emit noise levels in excess of 85dB(a).

Noise levels will be affected by the environment in which the machine operates, the timber being machined, tooling, machine setting and dust extraction.

Further information available from Wadkin (at the above address) on request".

"As a manufacturer it is Wadkin's policy to reduce the noise level as far as is practicable.

On this machine the following options are available to reduce the noise at source -
Tooling.