

# OPERATING AND MAINTENANCE INSTRUCTIONS

7" x 4"

MOULDING MACHINE

TYPE FB

# 7" × 4" MOULDING MACHINE TYPE PB

# PRINCIPAL DIMENSIONS AND CAPACITIES

# (SEE BOOKLET No. 1000 FOR CUTTER EQUIPMENT)

0/5	FIRST BOTTOM HEAD	FIRST TOP HEAD	FENCE SIDE HEAD	NEAR SIDE HEAD	SECOND TOP HEAD	SECOND BOTTOM HEAD	
MAXIMUM CUTTING	73"	91*	83"	81"	911	10"	
CIRCLE	190 mm	228 mm	215 mm	215 mm	228 mm	254 mm	
MINIMUM CUTTING	611	6"	6"	6"	6"	6"	
CIRCLE	1,52 mm	152 mm	152 mm	152 mm	152 mm	152 mm	
R.P.M.	4200 and 6000	4200 and 6000	4200 and 6000	4200 and 6000	4200 and 6000	4200 and 6000	
н.Р.	7½ or 10	7½ or 10	5	5 or 71/2	7½ or 10	7½ or 10	
SIZE OF EXHAUST	53" x 53"	4" x 94"	5" dia.	5" dia.	4"x 9\frac{1}{4}"	5½" x 9¼"	
OUTLET	146 x 140mm 100 x 235mm		127mm	127 тт	1	140 x 235mm	

H.P. OF FEED MOTORS	7½/6 or	5/4 r.p.m.				
FEED SPEEDS	20	35	40	50	70	100
FT/MIN	6.1	10.7	12.2	15. 2	21.3	30.4

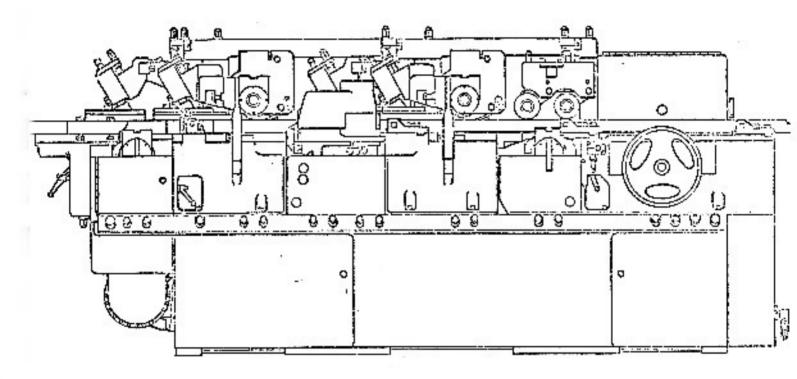


FIG. 1

FRONT VIEW OF MACHINE

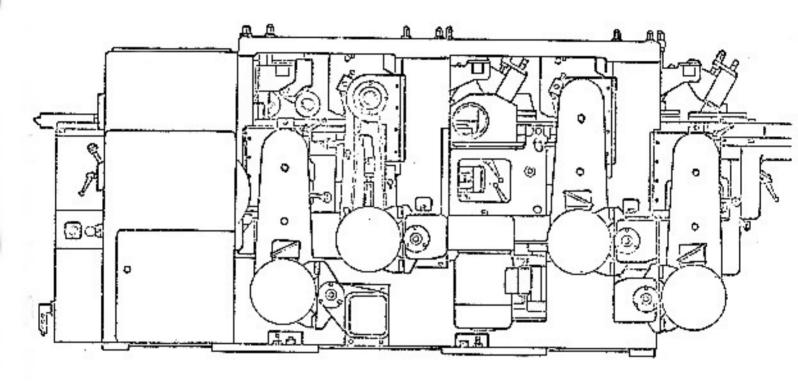
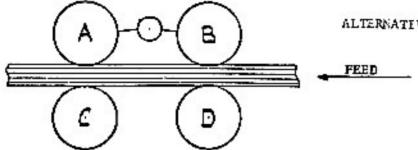


FIG. 2

REAR VIEW OF MACHINE



NOTE: Toothed rolls must not be fitted at 'A'.

# I General Purpose Work (Standard Arrangement)

- A Plain
- B Saw tooth
- C Plain
- D Saw tooth

## II Wet Timber

- A Plain
- B Diamond tooth
- C Plain
- D Saw tooth

# Hardwood

- A Plain
- B Diamond tooth
- C Plain
- D Diamond tooth

#### IV Waxed Timber

As for II or III

# Y Pre-Machined Stock

- A Polyurethane coated
- B Polyurethane coated
- C Plain
- D Saw tooth

# VI Bevelled Stock

- A Narrow heavithane
- B Narrow heavithane
- C Plain
- D Saw tooth

# YII Veneered or Faced Stock

- A Polyurethane coated
- B Polyurethane coated
- C Polyurethane coated. .
- D Polyurethane coated.

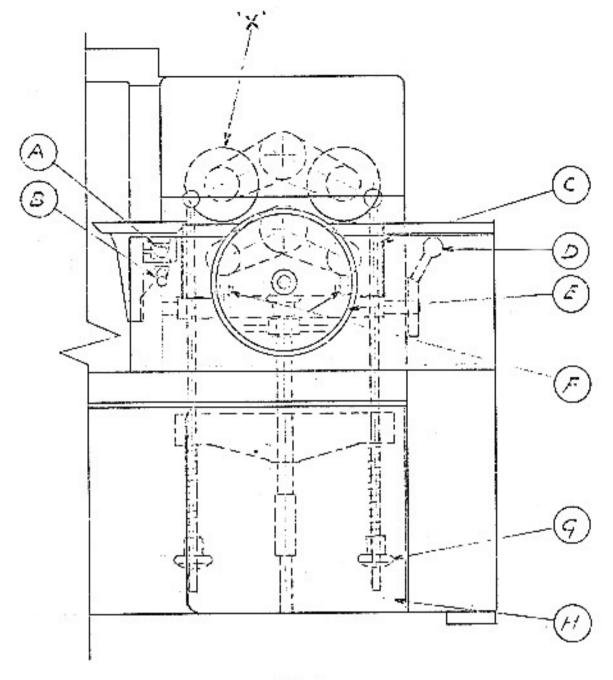


FIG. 3

# FRONT VIEW OF PEEDWORKS

THE FEEDWORKS

#### THE TOP FEED ROLLS

ADJUSTED VERTICALLY BY MEANS OF HANDWHEEL 'E'.

SPRING TENSION TO THE TOP ROLLS IS ADJUSTED BY MEANS OF HANDWHEELS 'G' ACCESSIBLE THRO' DOOR 'H'

THE TABLE BEFORE FIRST BOTTOM BLOCK IS ADJUSTED BY APPLYING A CRANK HANDLE TO THE SQUARE 'A' HANDLE 'B' IS THE LOCK FOR THIS ADJUSTMENT THE BOTTOM FEED ROLLS ARE ADJUSTED BY ROTATING ECCENTRIC 'D', INDEPENDENT ADJUSTMENT IS BY MEANS OF JACKSCHEWS 'F'

ACCESS TO THESE JACKSCREWS IS BY REMOVING HANDWHEEL "E" AND CENTRE PORTION OF TABLE "C".

THE BOTTOM FEED ROLLS ARE REMOVABLE AND ACCESS FOR THIS PURPOSE IS ALSO WITH HANDWHEEL 'E' AND TABLE 'C' REMOVED.

NOTE:- FLUTED FEED ROLL MUST NOT HE FITTED ON THE SECOND TOP FEED ROLL SHAFT POSITION 'X'

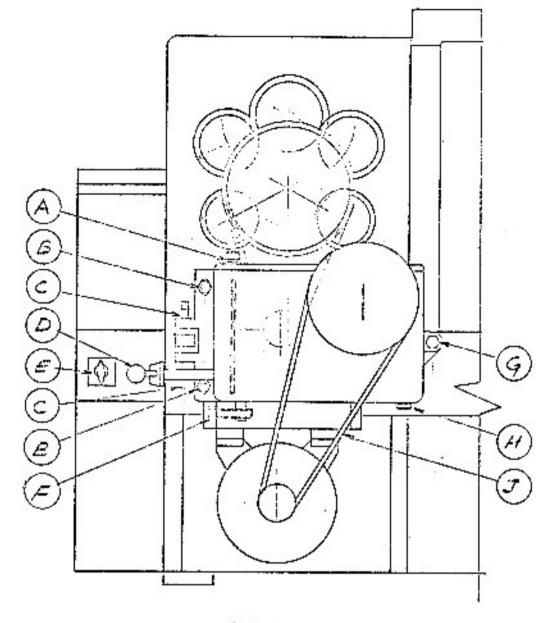


FIG. 4
REAR VIEW OF FEEDWORKS WITH COVERS REMOVED

PT/MIN	ਿੰਦ	M/MIN
20	Ø ~	61
<del>3</del> 5	00	10.7
40	0 0-	/2:2
50	000	/€:2
70	00	213
100	0	₫5 4¢

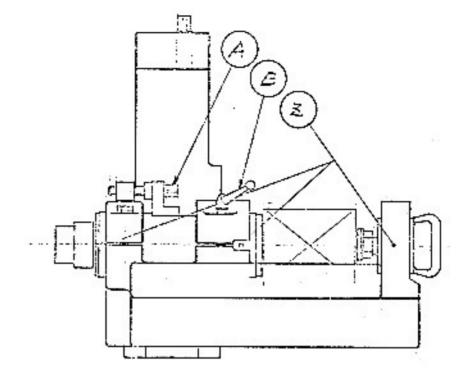
FIG. 5

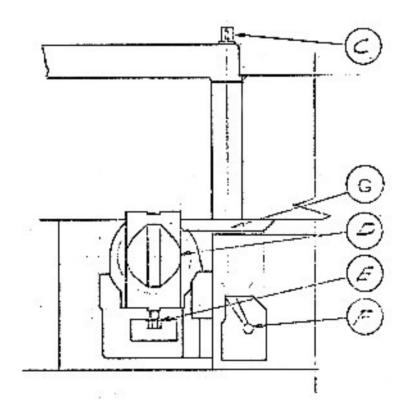
THE FEED SPEED PLATE AS FIG. 5 IS LOCATED ABOVE THE GEAR CHANGE LEVER 'D'. SPEEDS ARE CHANGED BY ADJUSTING THE LEVER AND/OR ADJUSTING THE TWO SPEED MOTOR SWITCH 'E'.

FEED MUST BE STOPPED TO CHANGE SPEED.

TO REPLACE VEE BELTS 'J' TENSION IS REMOVED BY ADJUSTING SCREW 'F'
THE CHAIN DRIVE FROM GEARBOX IS TENSIONED BY SLACKING OFF SCREW 'G'
AND NUTS 'B' AND ADJUSTING JACK SCREWS 'C'.

THE GEAR BOX IS PROVIDED WITH AN OIL FILLER PLUG/DIPSTICK 'A' AND DRAIN PLUG 'H' (SEE LUBRICATION INSTRUCTIONS)





FIGS. 6
THE FIRST BOTTOM HEAD

VERTICAL ADJUSTMENT OF THE FIRST BOTTOM HEAD IS MADE BY APPLYING A CRANK HANDLE TO THE SQUARE 'C'. HANDLE 'F' IS A LOCK TO THE MOVEMENT. HORIZONTAL ADJUSTMENT IS MADE BY APPLYING A CRANK HANDLE TO SQUARE 'A'. HANDLE 'B' IS A LOCK TO THIS MOVEMENT THE OUTBOARD BEARING 'D' CAN BE REMOVED FROM SPINDLE END (TO CHANGE C/BLOCK) BY SLACKING OFF NUT 'E'.

A LONGER TABLE  ${}^{\bullet}G^{\bullet}$  IS AVAILABLE TO SUIT THE CONDITIONS FOR DIFFERENT CUTTER DIAMETERS.

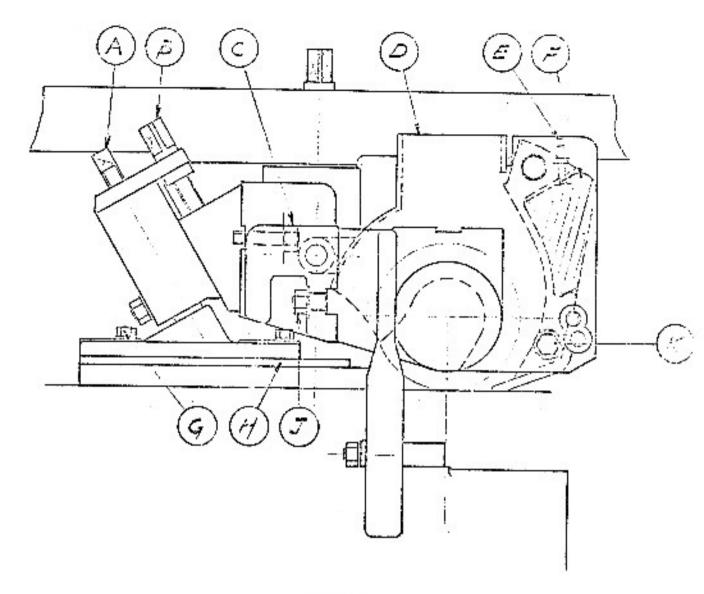
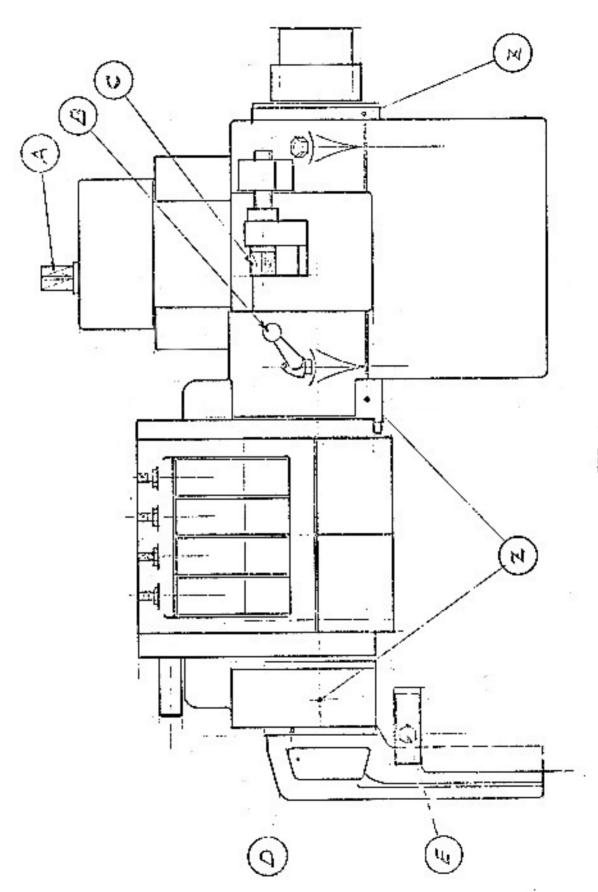


FIG. 7

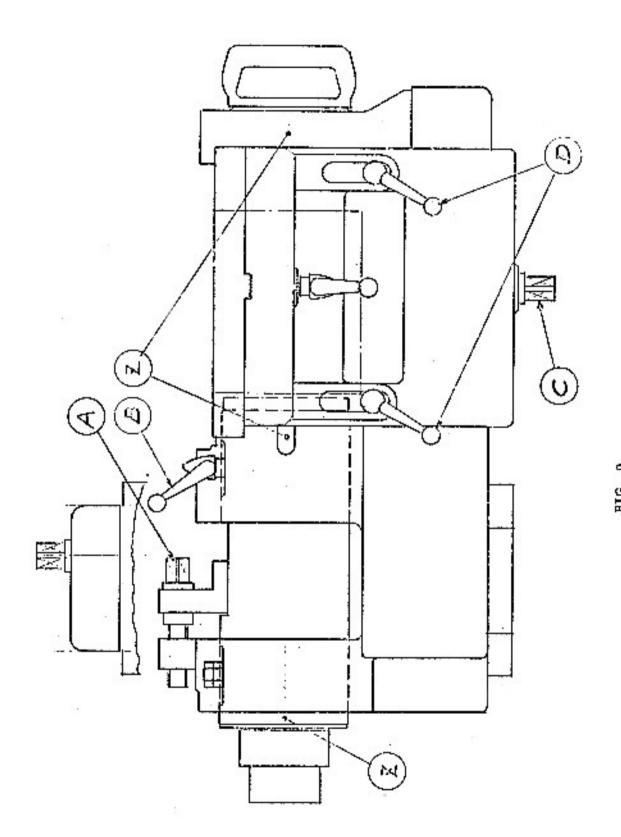
THE TOP HEAD CHIPBREAKER AND RIGID PRESSURE

THE CHIPBREAKER MAY BE SET IN ONE OF THREE POSITIONS (RELATIVE TO HOOD) FOR DIFFERENT BLOCK DIAS. HEX SCREW 'K' LOCKS CHIPBREAKER IN POSITION. THE LOAD AT THE CHIPBREAKER MAY BE ALTERED BY REMOVING OR ADDING WEIGHTS 'F' SCREWS 'E' LOCK WEIGHTS IN POSITION.

THE RIGID PRESSURE IS ADJUSTED VERTICALLY BY APPLYING A CRANK HANDLE TO SQUARE 'B' AND HORIZONTALLY (ACROSS BED) BY RELEASING NUT 'C' AND SLIDING BY HAND LOADING ON THE PRESSURE IS ALTERED BY ADJUSTING SQUARE HEAD 'A'. LOOSE PLATE 'H' CARRYING WOOD PRESSURE SHOE HAS ADJUSTMENT RELATIVE TO C/BLOCK, NUTS 'G' LOCK PLATE IN POSITION.



VERTICAL ADJUSTMENT OF THE TOP HEAD IS MADE BY APPLYING A CRANK HANDLE
TO THE SQUARE 'A'. HEX. NUT 'E' IS THE LOCK TO THIS MOVEMENT.
HORIZONTAL ADJUSTMENT IS MADE BY APPLYING A CRANK HANDLE TO SQUARE
'C'. HANDLE 'B' IS A LOCK TO THIS MOVEMENT.
THE OUTBOARD BEARING 'D' CAN BE REMOVED FROM SPINDLE END (TO CHANGE
C/BLOCK) BY SLACKING OFF NUT 'J' FIG. 7 AND NUT 'B'



## THE SECOND BOTTOM HEAD

HORIZONTAL ADJUSTMENT OF THE SECOND BOTTOM HEAD IS MADE BY APPLYING A CRANK HANDLE TO THE SQUARE A HANDLE B IS A LOCK TO THIS MOVEMENT.

VERTICAL MOVEMENT OF THE TABLE AFTER THE SECOND BOTTOM HEAD IS MADE BY APPLYING A CRANK HANDLE TO THE SQUARE C. HANDLES D LOCK THE TABLE SLIDE IN POSITION.

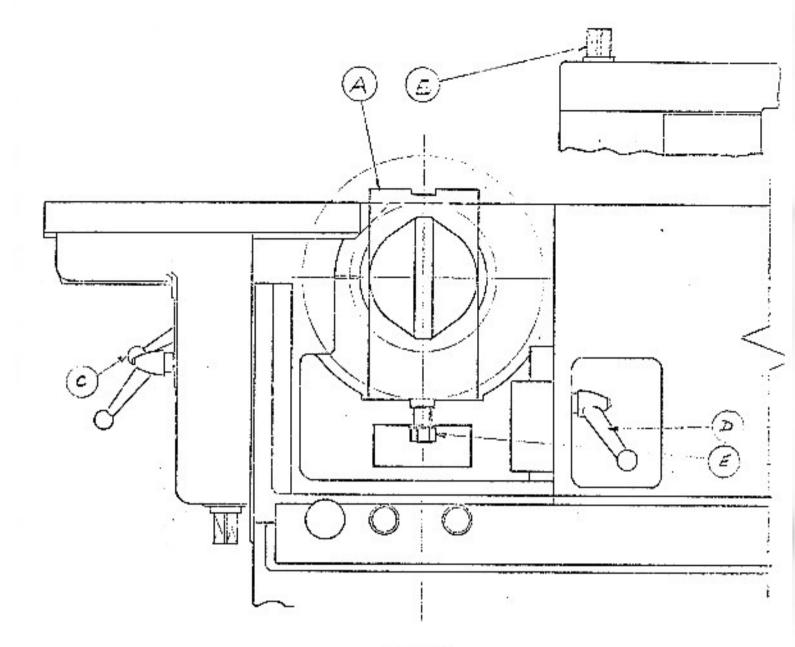


FIG. 10
THE SECOND BOTTOM HEAD

THE TABLE AFTER THE SECOND BOTTOM HEAD MAY BE MOVED OUT TO ACCOMMODATE LARGE CUTTING CIRCLES BY RELEASING LOCKING HANDLE 'C' AND SLIDING TABLE BY HAND.

VERTICAL ADJUSTMENT OF SECOND BOTTOM HEAD IS MADE BY APPLYING A CRANK HANDLE TO SQUARE 'B'. HANDLE 'D' IS A LOCK TO THIS MOVEMENT.

THE OUTBOARD ERG. 'A' CAN BE REMOVED FROM SPINDLE END (TO CHANGE C/BLOCK) BY SLACKING OFF NUT 'E'.

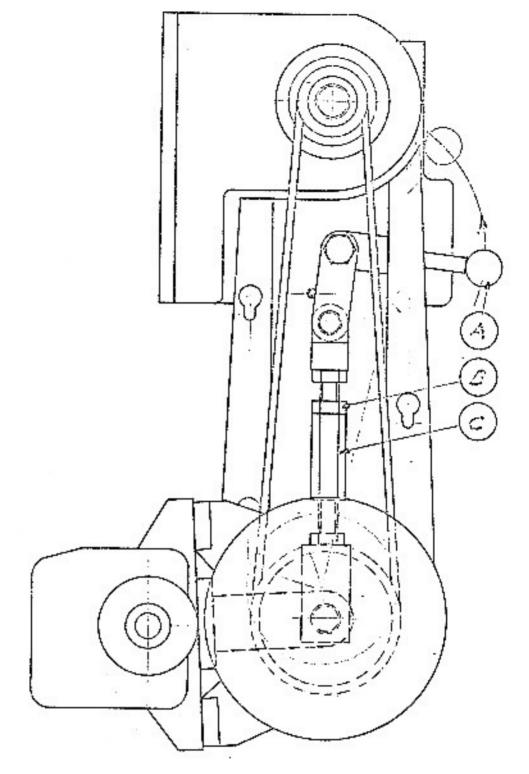


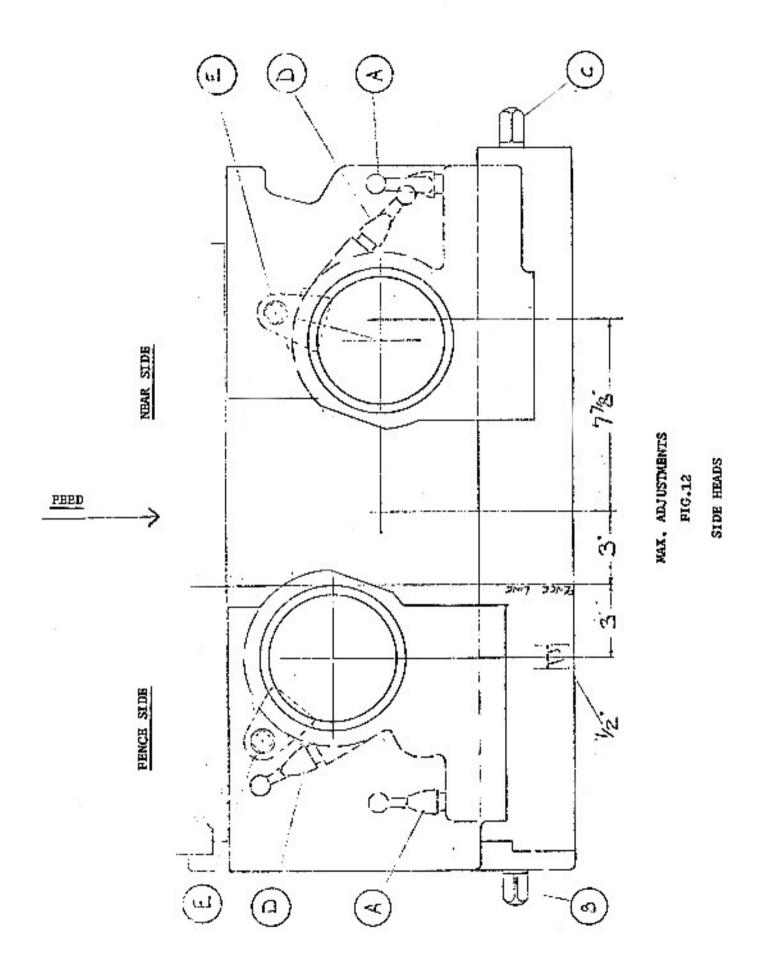
FIG. 11

THE TOP AND BOTTOM HEAD DRIVES (SHOWN WITH COVER REMOVED)

TO TENSION BELTS ROTATE TURNBUCKLE 'C'. THIS IS LOCKED WITH LOCKNUT 'B'.

TO CHANGE SPEED LIFT HANDLE 'A'. THIS RAISES MOTOR AND ALLOWS BELTS TO BE CHANGED. LOWER H'NDLE BACK TO ORIGINAL POSITION AFTER CHANGING SPEED.

AFTER THE DRIVE HAS BEEN RUNNING FOR A FEW DAYS, THE BELTS WILL HAVE SEATED IN THE GROOVES AND THE DRIVE TENSION SHOULD BE RE-CHECKED.



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#### SIDE HEADS

TO ADJUST IN HORIZONTAL PLANE RELEASE APPROPRIATE LOCK AT "A" AND APPLY CRANK HANDLE PROVIDED TO SQUARES AT "B" AND "C". IN THE CASE OF MEAR SIDE HEAD USE LOWEST OF 2 SQUARES AT "C" AND FENCE SIDE HEAD USE THE UPPERMOST SQUARE AT "C". FENCE SIDE HEADS MAY ALSO BE ADJUSTED BY MEANS OF SQUARE AT "B" - REAR OF MACHINE.

NOTE:- RELOCK AT "A" BEFORE COMMENCING CUTTING. TO ADJUST IN VERTICAL PLANE RELEASE APPROPRIATE LOCK "D" AND APPLY RATCHET SPANNER PROVIDED TO SQUARES AT "E" LOCATED UNDERNEATH THE SIDE HEAD CARRIAGES. A NORMAL VERTICAL ADJUSTMENT OF 9/16" IS PROVIDED.

#### NOTE:-

RELOCK AT 'D' BEFORE COMMENCING CUTTING

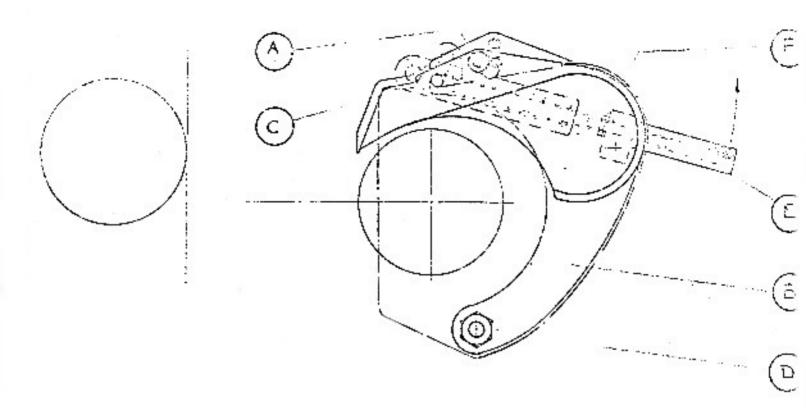


FIG. 13
NEAR SIDE HEAD CHIPBREAKER (DUST HOOD - CHAIN DOTTED)

SCREW 'A' CAN BE POSITIONED IN ONE OF THREE HOLES IN CARRIER PLATE
'B', THIS CATERS FOR VARIOUS CUTTING CIRCLE DIAS. THE DUST HOOD IS
EASILY REMOVED FROM ITS LOCATING PINS AT 'C' AND 'D'.
BY UNSCREWING HANDLE AT 'E' SUFFICIENTLY TO DISENGAGE SPIGOT IT CAN BE

SWUNG SIDEWAYS IN DIRECTION OF ARROW, THIS ALLOWS CHIPBREAKER MECHANISM TO BE SWUNG CLEAR OF 'BLOCK', TO ENABLE THE JOINTERS TO BE MOUNTED ON CARRIAGE.

NO ADJUSTMENT ON SPRING PRESSURE IS NECESSARY, THE LOCKNUTS AT "F" ENABLE AN ADJUSTMENT TO THE CHIPBREAKER POSITION TO BE MADE.

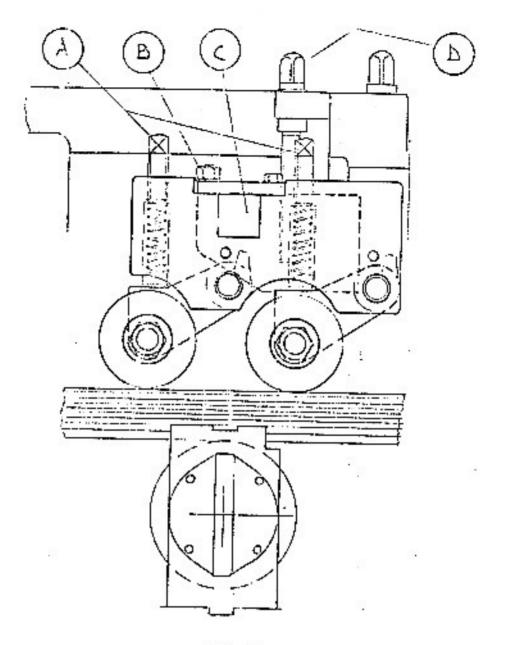


FIG. 14
ROLLER PRESSURE OVER FIRST BOTTOM HEAD

ROLLER PRESSURE IS APPLIED BY MEANS OF SPRINGS AND IS ADJUSTED BY SCREWS AT "A".

IN ORDER TO POSITION ROLLERS ACCORDING TO TIMBER WIDTH, THE NUT AT \*B\* IS SLACKENED AND MECHANISM MOVED ALONG BAR \*C\*. RETIGHTEN NUT \*B\*.

VERTICAL MOVEMENT IS OBTAINED BY APPLYING A CRANK HANDLE TO SQUARE AT \*D\*

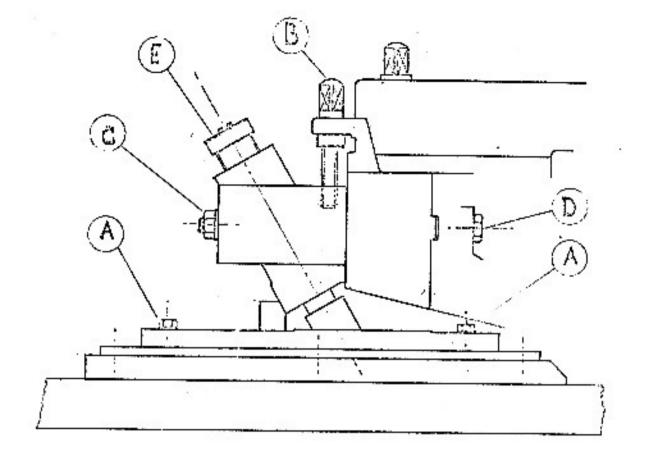


FIG. 15

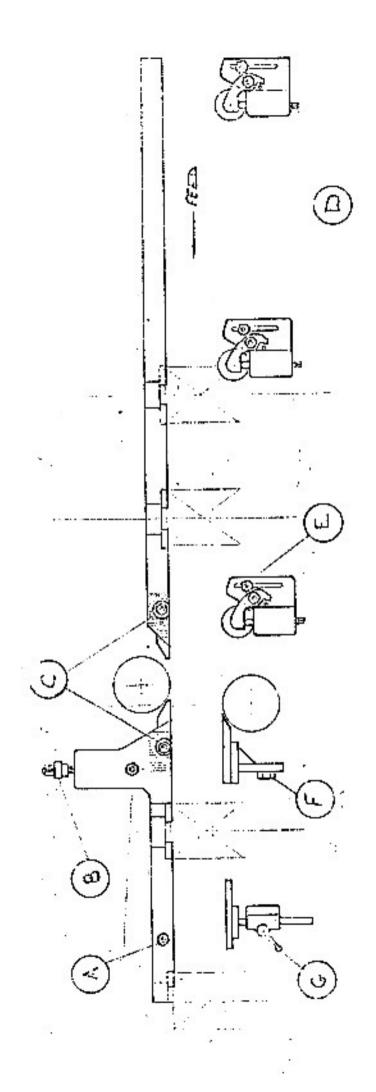
# RIGID PAD PRESSURE

THE ABOVE PRESSURE HAS A WOODEN PAD WHICH IS ADJUSTABLE IN THE DIRECTION OF FEED BY MEANS OF NUTS AT 'A'.

THE PRESSURE RISES AND FALLS WITH THE TOP HEAD CARRIAGE, BUT ALSO HAS A FINE ADJUSTMENT BY MEANS OF SQUARE SCREW (B). THE NUT (C) IS THE LOCK FOR THIS MOVEMENT.

HORIZONTAL ADJUSTMENT IS PROVIDED BY SLACKENING NUT (D) AND SLIDING THE PRESSURE ALONG THE HEAD CARRIAGE.

THE AMOUNT OF SPRING TENSION APPLIED TO THE PRESSURE IS CONTROLLED BY SCREW (E).



SIDE PRESSURES AND FENCES

### SIDE PRESSURBS & FENCES

FENCE IS FIXED AT INFEED SIDE AND AFTER FENCE SIDE HEAD IS ADJUSTABLE BY UNLOCKING NUTS AT 'A' AND TURNING SCREW 'B'.

BOTH PENCES CARRY NOSE PLECES ADJUSTABLE ON SLIDES ON FENCES AND LOCKED IN POSITION BY HEX NUTS AND SERRATED WASHERS AT \*C\*.

THERE ARE THREE ROLLER PRESSURES WITH ADJUSTABLE SPRING PRESSURE (TURN SCREW "D") ADJUSTABLE FOR VARIOUS TIMBER WIDTHS BY SLACKENING NUT "B".

A GUIDE IS SITUATED DIRECTLY AFTER NEAR SIDE HEAD AND IS ADJUSTED BY MOVING ON A SLIDE ON NEAR SIDE HEAD CARRIAGE AFTER SLACKENING NUT \*F\*.

A FURTHER GUIDE IS POSITIONED RETWEEN SECOND TOP AND SECOND BOTTOM HEADS AND ADJUSTED AFTER LOOSENING HANDLE 'G'.

#### JOINTING

JOINTERS ARE NOT PROVIDED FOR STAPENING ALONE, ALTHOUGH THIS RESULT IS ACHIEVED, BUT ARE DESIGNED TO IMPROVE QUALITY OF FINISH BY ENSURING THAT ALL KNIVES ON A BLOCK ARE CUTTING EQUALLY.

NORMALLY ABOUT 5 JOINTING OPERATIONS CAN BE OBTAINED BEFORE A MAXIMUM HEEL OF .045" APPROXIMATELY IS REACHED AND THE BLOCK IS REMOVED FOR REGRINDING.

THE JOINTERS CAN BE DIVIDED INTO 4 TYPES

- 1, STRAIGHT BUILT IN JOINTER FOR first BOTTOM HEAD ONLY
- 2. STRAIGHT JOINTER FOR HORIZONTAL HEADS
- 3. PROFILE JOINTER FOR HURIZONTAL HEADS
- 4. COMBINATION (STRAIGHT AND PROFILE) JOINTER FOR USE ON SIDE HEADS THESE ARE DESCRIBED IN MORE DETAIL ON THE FOLLOWING PAGES.

ALL JOINTERS ARE SUPPLIED AS OPTIONAL EXTRAS ON THIS MACHINE

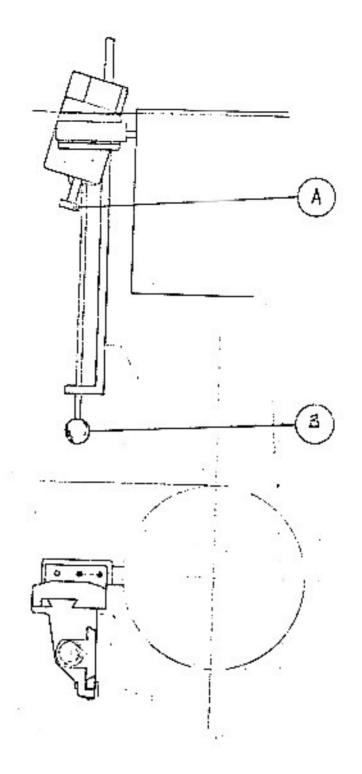


FIG. 17 PIRST BOTTOM HEAD

# BUILT IN JOINTER (TO SPECIAL ORDER)

CONFINED TO FIRST BOTTOM HEAD BUT ENABLES JOINTING TO BE UNDERTAKEN WITHOUT INTERRUPTING PRODUCTION.

THE STONE IS CLAMPED INTO ITS HOLDER WITH STONE PROTEUDING, THE HOLDER IS THEN CLAMPED, OPEN SIDE DOWN, INTO THE SLIDE WHICH HAS BEEN WOUND TOWARDS THE FRONT OF THE MACHINE.

THE ANGULAR SLIDE GIVES A FINE FRED TOWARDS THE BLOCK AND IS OPERATED BY TURNING KNOB \*A\*.

THE STONE IS PASSED ACROSS THE BLOCK IN A PUSH PULL ACTION BY KNOB AT \*B\*. \*

WHEN JOINTER IS NOT IN USE IT CAN BE PUSHED TO ITS INNERMOST POSITION AT THE REAR OF THE BLOCK. IT WILL BE PREVENTED FROM MOVEMENT ACCIDENTALLY OR BY RUNNING VIBRATIONS BY THE FRONT DOOR WHICH CLOSES OVER THE KNOB \*B\*

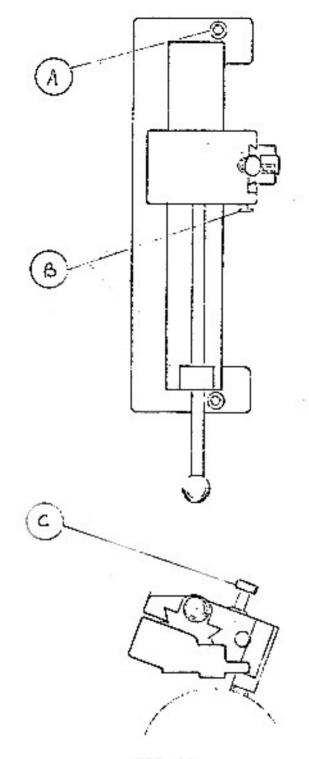


FIG. 18

#### STRAIGHT JOINTER FOR HORIZONTAL HEADS

THIS HAS SAME ACTION AS BUILT-IN JOINTER AND IS CAPABLE OF BEING USED ON ALL HORIZONTAL HEADS BUT NECESSARILY INTERRUPTS PRODUCTION.

THE SLIDE IS MOUNTED ON TONGUE-SLOTS IN CARRIAGE AND OUTBOARD ERG.

AND HELD BY TWO CAPTIVE SCREWS 'A'.

SINCE THE SLIDE ON WHICH THE STONE IS FED INTO THE BLOCK IS NORMAL TO THE BLOCK (UNLIKE THE BUILT-IN JOINTER) A LOCKING SCREW \*B\* IS PROVIDED. THIS MUST BE TIGHTENED PRIOR TO EACH JOINTING CUT. THE STONE IS FED INTO THE BLOCK BY TURNING KNOB \*C\*

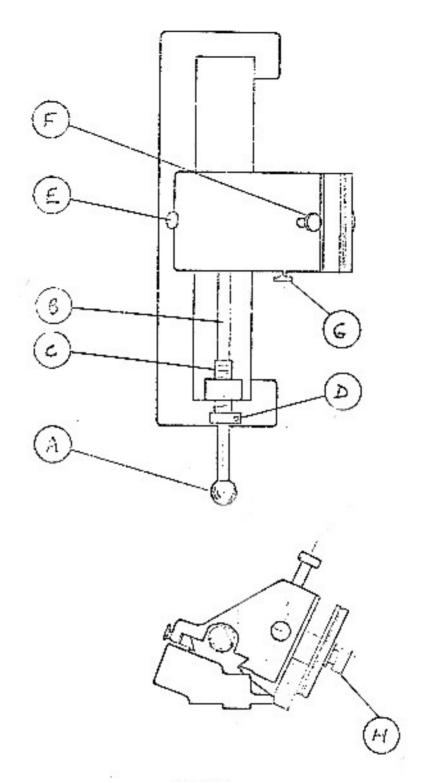


FIG.19
PROFILE JOINTER FOR HORIZONTAL HEADS

SPECIALLY SHAPED STONES ARE APPLIED TO THE CUTTING EDGE OF THE BLOCK BITHER SINGLY OR IN STAGES BY MEANS OF A TURRET HOLDER. IN COMBINING 4 STONES COMPLICATED FORMS CAN BE CATERED FOR.

THE TURRET CAN BE MOVED TO ITS APPROXIMATE POSITION BY PUSH PULL ACTION WITH KNOB "A". SHAFT "B" IS THEN LOCKED TO SCREW "C" BY TIGHTENING SCREW "D" THE TURRET CAN NOW BE FINELY ADJUSTED OVER THE LENGTH OF SCREW "C" AND CAN BE LOCKED ON ITS SLIDE BY SCREW "E".

THE STONE CAN NOW BE FED INTO THE BLOCK BY TURNING SCREW 'F' AND A LOCK IS PROVIDED AT SCREW 'G'. TO ROTATE THE TURRET, KNOB 'H' IS UNTIGHTENED SUFFICIENTLY TO RELEASE A PLUNGER, AFTER ROTATION KNOB 'H' CAN BE

RETIGHTENED ALLOWING THE SPRING PLUNGER TO LOCATE IT EXACTLY.

THE SLIDE IS MOUNTED IN THE SAME WAY AS THE STRAIGHT JOINTER ON HORIZONTAL HEADS

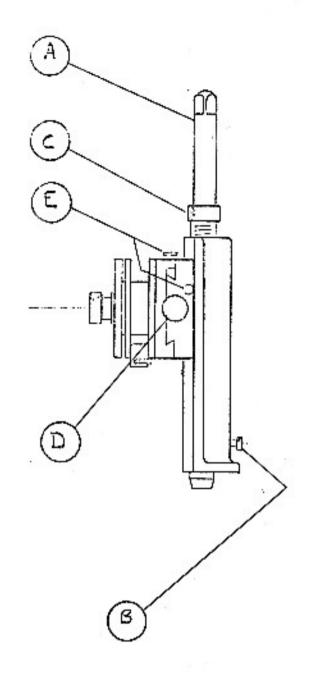


FIG. 20

# COMBINATION JOINTER FOR SIDE HEADS

A TURRET PROVIDES THE MEANS FOR BATH PROFILE AND STRAIGHT JOINTING OPERATION OF TURRET IS THE SAME AS ON HORIZONTAL HEADS.

TO FACILITATE STRAIGHT JOINTING A HOLDER IS PROVIDED FOR THE FLAT STONE MOUNTED IN TURRET AS SHOWN.

THE TURRET IS WOUND UP AND DOWN THE SLIDE BY ROTATING SHAFT 'A'

AFTER LOCKING SCREW 'B', FINE ADJUSTMENT IS OBTAINED BY ROTATING SCREW 'C'.

JOINTING STONES ARE FED TOWARDS THE BLOCK BY ROTATING SCREW 'D'.

LOCKING SCREWS 'E' ARE PROVIDED ON BOTH SLIDES.

ON NEAR SIDE HEAD PRIOR TO JOINTING THE EXTRACTION EQUIPMENT MUST BE REMOVED AND CHIPBREAKER MECHANISM SWUNG CLEAR.

IN CASE OF FENCE SIDE, EXTRACTION HOOD ONLY NEED BE REMOVED, SHAFT "A"
MUST BE ENTERED THROUGH THE HOLE IN THE BEAM AND IN BOTH CASES THE SLIDE
IS LOCATED ON A SPIGOT AND LOCK DOWN BY MEANS OF TWO CAPTIVE SCREWS IN BASE.

SPARES LIST							
POSITION ON MACHINE	MA	KERS* NO.		QUANTITY	BORB	0,0	THICKNESS
RAISING SCREW TO	TORRINGTON THRUST BRG.	RUST BRG.	NTA 2031	cu	40 H		
TOP FRED ROLLS	:	RACE		4	141		
RAISING SCREWS		" BRG.	NTA 1625	'n	н		
70		" RACE		4	-		
HORIZONTAL HEADS		*		ψ	1		
RAISING SCREWS ON	F	# BRG.		N	rot-d		
SIDE HEADS		" RACE		4	- MCd		
FEED ROLL SHAFT	FBC SEALED BRGS	82	DN 207	æ	35 ma	72	1 7mm
FEEDWORKS	HOPFMANN ROLLER BRG.	R BRG.	RLS 14	м	13	179 179	13/16
GEARS	=		LS 14	н	***	7 F26	13/16
GEARBOX	=		LS 12	H	7 -19 1-4	T (%)	11/16
GEARBOX	r		LS 10	m	' - <del>-</del>	- <del>- (</del>	0/2
HORIZONDAL AND SIDE			N 3349	4	ļ	ī	2
HEADSPINDLES	F		1701 N	13			
GBARBOX	NADELLA SRBLL TYPE DLF	TYPE DLF	4020/35	73	35000	8	20
GEARBOX	RENOLD DUPLEX CHAIN	CHAIN	114 046	1			
SIDE HEAD DRIVES	FENNER BELTS ALPHA 530	LPHA 530		4			
FEED DRIVE	FENNER BELTS ALPHA 560	LPHA 560		οı			
HORIZONTAL HEAD DRIVES	=	. 560		12			
GEAR BOX	GACO OIL SHAL G225 150	6225 150		H			
GEAR BOX	:	G189 125		Ŧ			

#### LUBRI CATION

#### HORIZONTAL HEADS

- 3 POINTS (Z FIGS. 6, 8, 9) 2 ON CARRIAGE, 1 OUTBOARD BEARING I SHOT/DAY WADKIN GRADE L1 SPINDLE OIL. RAISING SCREWS AND SLIDES OILED WEEKLY. WADKIN VERTICAL HEADS
- 2 POINTS AT EXTREME ENDS OF SPINDLE BARRELS 1 SHOT/DAY WITH WADKIN GRADE L1 SPINDLE OIL.

RAISING SCREWS AND SLIDES OILED WEEKLY - WADKIN GRADE L4 OIL

#### GEARBOX

CHECK LEVEL AT 3 MONTHLY INTERVALS (DIPSTICK "A" FIG. 4)
TOP UP WITH WADKIN GRADE L2 GEAR OIL

#### PEEDWORKS

DRIVING GEARS AND FEEDROLL SWINGS TO HAVE DAILY SHOT OF WADKIN GRADE L4 OIL (6 FOINTS - SITUATED ON OUTSIDE OF COVERS)

AT THREE MONTHLY INTERVALS REMOVE REAR COVERS FROM FEEDWORKS AND APPLY WADKIN GRADE L6 GREASE TO TWO GREASE POINTS ON DRIVING GEAR AND SPROCKET.

WADKIN TYPE AND GRADE		BQUIVALENTS								
HIGH SPEED SPINDLE OI	L L1	CASTR	OL HYSPIN	70	MOBIL	DTE	LIGHT	:	TELLUS OIL 27	
HEAVY GEAR OIL	L2		ALPHA 41	L7 :		117	66	:	SHELL VITREA 69	9
GOOD QUALITY M/C OIL	L4		PERFECTO N	4 ;		11	VACTRA	:	SHELL VITREA 3	3