

OPERATING INSTRUCTIONS MAINTENANCE AND PART LIST

FOR

COMBINED PLANER &
THICKNESSER

TYPE

UO/S

COMBINED PLANER & THICKNESSER

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TYPE UO/S

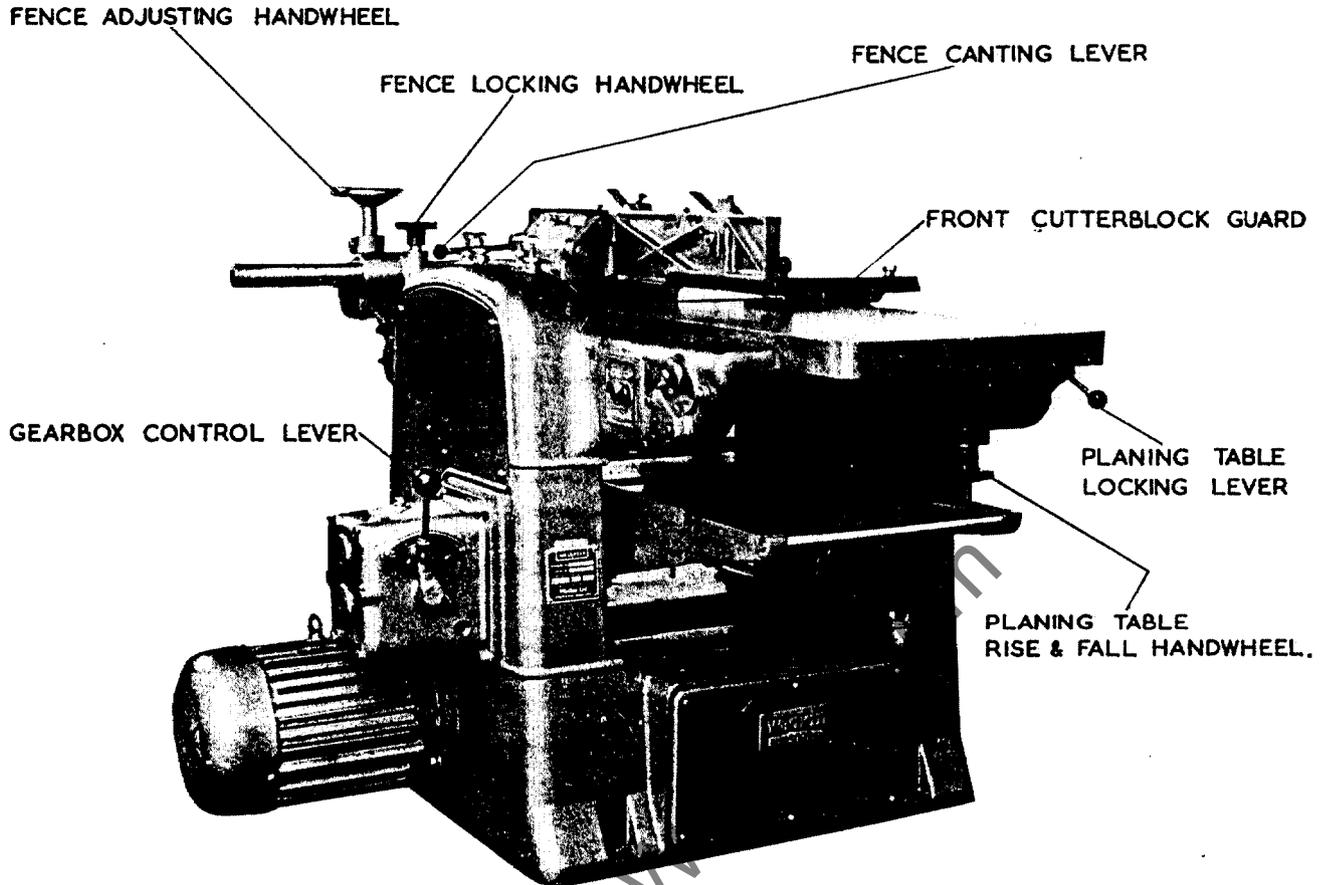


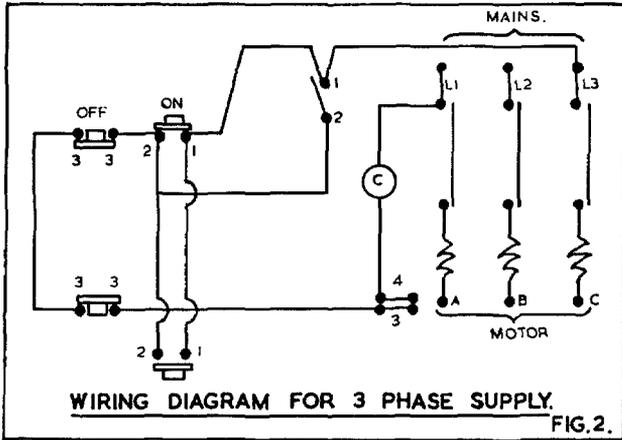
FIG. I.

SPECIFICATION

Planing and thicknessing capacity...	18" wide x 9" deep	460 mm. x 230 mm.
Standard rates of power feed : 2 speed gear box	20 and 40ft. per min	6 and 12 m. per min.
3 speed gear box	20, 30 and 45ft. per min	6, 9 and 14 m. per min
Maximum depth of rebate	$\frac{1}{2}$ "	13 mm.
Rise and fall of surfacing tables	$\frac{1}{2}$ "	13 mm.
Length of surfacing table	66"	1675 mm.
Cutting circle diameter of cutterblock...	$4\frac{1}{2}$ "	114 mm.
Speed of cutterblock...	5,000 r.p.m.	
Diameter of feed rollers	$2\frac{7}{8}$ "	75 mm.
Length of thicknessing table	36"	915 mm.
Horse power of driving motor	5	
Syn. speed of motor...	1,500 r.p.m.	
Fence will cant up to...	45°	
Height of surfacing table from floor (top position) ..	$34\frac{1}{2}$ "	875 mm.
Approximate floor space	$66" \times 59\frac{1}{2}"$	1675 mm. x 1510 mm.
Approximate gross weight	2800 lb.	1270 kg.
Approximate net weight	2136 lb	968 kg.
Shipping dimensions...	92 cu. ft.	2.6 m^3

INSTALLATION

Remove protective coating from all bright parts by applying a cloth soaked in paraffin, turpentine or other solvent. When the machine is cased for export, the fence, motor and front cutterblock guard are removed and packed inside the case. Remove and re-assemble as shown in fig. 1.



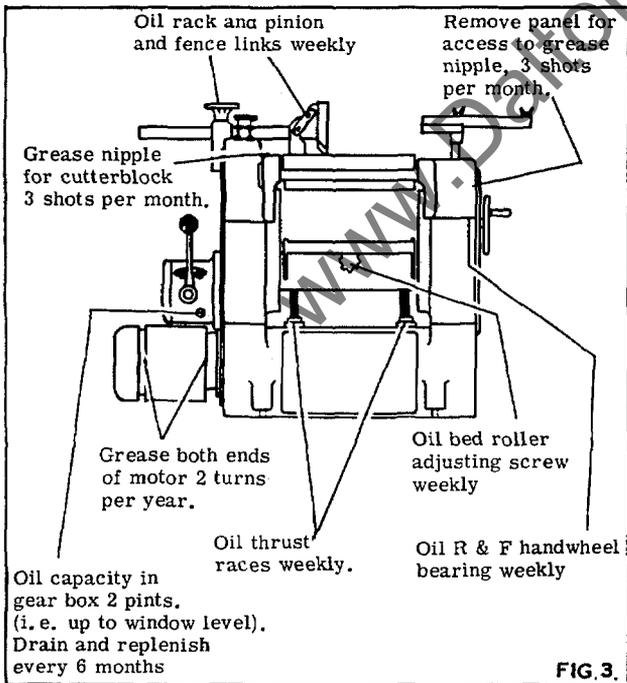
WIRING DETAILS

The motor and control gear have been wired in before despatch. All that is required is to connect the power supply to the starter or isolator when fitted.

Points to note when connecting to power supply:-

1. Check that the voltage, phase and frequency correspond to those on the motor plate, 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 motor.
3. Check the main line fuses are of the correct capacity. See list below. When an isolator is fitted these are correct as received.
4. Connect the line leads to the appropriate terminals. See fig. 2 for 3 phase supply.
5. Check all connections are sound
6. Check the rotation of the motor for correct direction. If this is incorrect, reverse any two of the line lead connections.

Voltage	Phase	H. P.	S. W. G. Tinned Copper Wire	AMPS
220	3	5	18	45
380/420	3	5	21	29
550	3	5	22	24



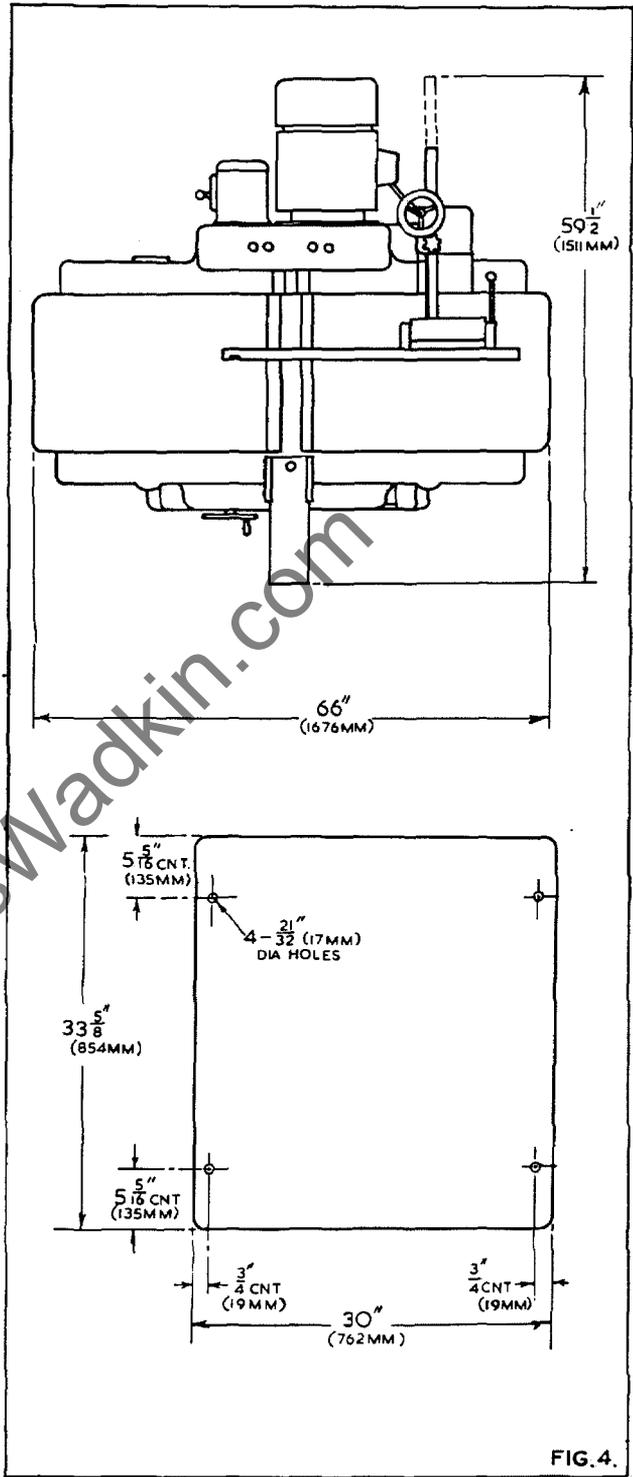
LUBRICATION

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

Type of oil recommended POWER EM 125 (For general lubrication)

Type of oil recommended. CASTROL PERFECTO RR (for gearbox)

Type of grease recommended. SHELL ALVANIA 3.



FOUNDATION

See fig. 4 for bolt positions and clearances required and level tables by packing under base.

Foundation bolts are not supplied with the machine except by special order.

All adjustments and alignments listed below have been carefully set and checked and the whole machine thoroughly tested before despatch from the works. During the first few weeks of operation and at regular intervals afterwards, certain items such as belt tension and chain tension should be checked carefully. When adjustments are necessary proceed in accordance with the relative instructions given.

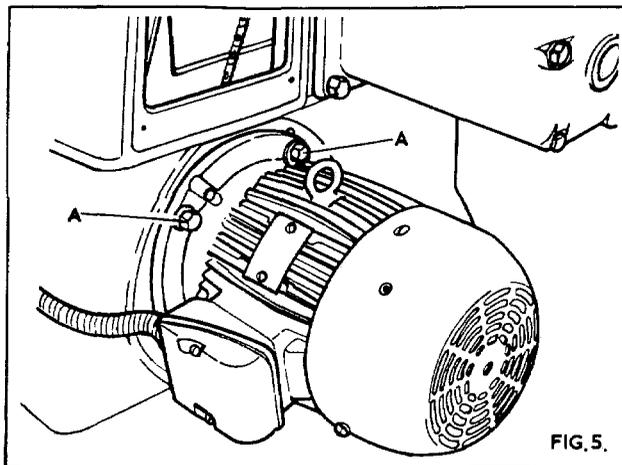


FIG. 5.

BELT TENSION

The cutterblock drive is by two vee belts from a 5 H. P. motor. To tension the belts, remove drive side panel and loosen the 4 hexagon nuts "A" in fig. 5, securing the motor flange to the mainframe. Move the motor down the slots in the mainframe until the correct tension is reached. When set relock the hexagon nuts "A". When checking the cutterblock drive tension also check the tension of the belt to the gearbox as this drive is from the same motor pulley. The gearbox drive is by means of linkbelting to shorten length remove the required number of links and store in a safe place.

Replace side panel before operating the machine.

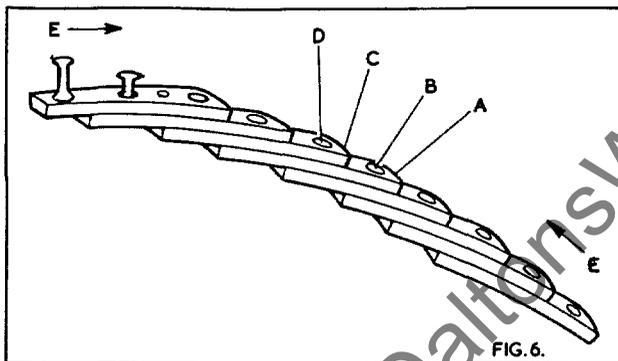


FIG. 6.

To shorten link belting drive between motor pulley and gearbox pulley the undermentioned procedure should be followed :-
 1. Prise link "A", in fig. 6, over stud "B". Then prise link "A" and "C" over stud "D". The belt can now be easily removed from the pulleys.
 2. To remove the required number of links, repeat the procedure set out in item 1. To assist in the removal of these links the belt should be curved in the direction of the arrows "E", this releases the tension on the studs.

To re-assemble belt reverse the above procedure.

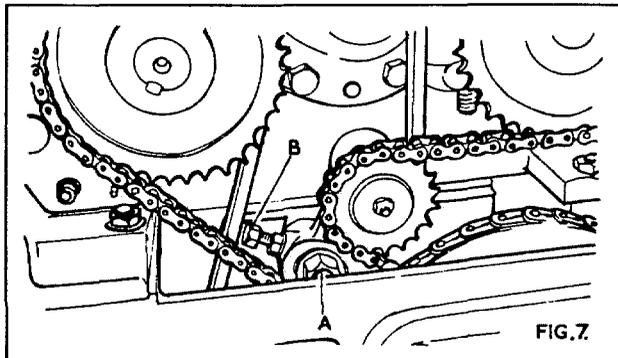


FIG. 7.

Drive to the feed rollers is by roller chain from a 2 speed or gear (optional extra) gearbox, which is driven from the cutterblock motor. The feed speeds obtained from a 2 speed gearbox, 20 & 40 ft. per min. (6 and 12 m. min) and from the 3 speed gearbox, 20 30 and 45 ft. per min. (6, 9 and 14 m. min).

The feed chain must be run with sufficient slack to allow the front or serrated feed roller to freely lift 1/4" (6 mm) from the rest position. To adjust, remove drive side panel and loosen the 5/8" whit hexagon nut "A" in fig. 7, securing the idler sprocket arm to the side frame. Adjust the 3/8" whit hexagon head bolt "B" until the required tension is reached. Check the feed roller lift as above. Tighten all nuts.

Replace side panel before operating the machine.

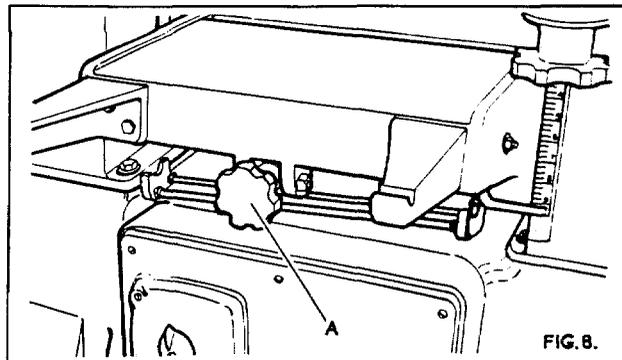


FIG. 8.

THICKENING TABLE ROLLERS

The anti- friction table rollers or bed roller revolve on sealed for life ball bearings and require no lubrication. These are adjustable simultaneously by means of the handwheel "A" in fig. 8 at the infeed end of the thickening table. Turning handwheel "A" in a clockwise direction increases the height of the rollers above the table surface.

In all cases the lowest position consistent with good and regular feeding should be used as this will give the best possible results. Should the table rollers be removed for any reason care must be taken to replace them exactly as before otherwise the settings will be disturbed.

It must be emphasised that a really good surface finish from a thickening machine is only possible when the face of the timber resting on the machine table is flat and has a reasonable finish. Wherever practicable this face must be pre-machined on an overhand jointer or surfacer to remove twist and other irregularities

Also to assist feeding the under table rollers should be cleaned at regular intervals or resin etc. which tends to build up and thus create an eccentric rolling action to the rollers which in turn give inaccurate and jerky feeding to the timber.

ADJUSTING BED ROLLERS

It is most important that the bed rollers are parallel to the thickening table at all times to ensure good feeding. Should the bed rollers be disturbed for any reason and are incorrectly aligned to the thickening table the undermentioned procedure should be followed.

1. Clear thickening table of all chippings etc and place a straight edge over both rollers to one side of the table.
2. Check the straight edge is parallel throughout the length of the table, also check the bed rollers are parallel across the width of the table.
3. To adjust the height of the bed rollers raise thickening table to approximately the top position and adjust the 4-3/8" whit hexagon head bolts and nuts on the under side of the thickening table directly below each end of the bed rollers.

When bed rollers are correctly set ensure all bolts are securely locked in position.

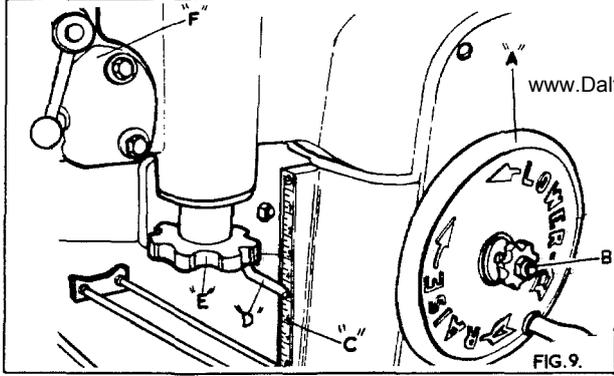
THICKENING TABLE RISE AND FALL CONTROLS

The thickening table rises and falls on wide slides and screws which are controlled through bevel gears and chain drive from the conveniently placed handwheel "A" in fig. 9 The table can be locked in any position by the plastic handwheel "B".

The finished thickness of the timber is clearly shown on the rule "C" by the pointer "D".

Should the pointer "D" be disturbed, feed a piece of timber through the machine and measure the thickness accurately. Check the reading given by the pointer corresponds to the thickness of the timber machined. Should adjustment be necessary slacken the hollow set screw securing the pointer in the block and set the pointer to read the correct thickness.

CUTTER SETTING



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FIG. 9.

PLANING TABLE RISE AND FALL CONTROLS

The planing tables rise and fall $\frac{1}{2}$ " (13mm) and are controlled by the handwheel "E", in fig. 9. The depth of cut on the surfacing tables is clearly shown on a rule at either end of the rebate side top frame. The planing tables can be locked in any position throughout their travel by means of the locking lever "F". The locking lever "F" should be loosened at all times before attempting to raise or lower the planing tables.

FEED ROLLER AND PRESSURE BAR SETTINGS

These are pre-set at the works in accordance with the details given in fig. 10 and provided the cutters are correctly set with the special gauge supplied with the machine, they should not be disturbed.

Should replacement feed rollers or pressure bars be fitted at any time the settings should be very carefully checked with those given in fig. 10. The correct setting for the pressure bar and feed rollers is $\frac{1}{32}$ " (.7mm) below the cutting circle of the block or $\frac{3}{32}$ " (2.1mm) below the outside diameter of the cutterblock body.

To set feed rollers and pressure bars the undermentioned procedure should be followed:-

1. Thickness twopieces of wood approximately 2" (50 mm) square section x 24" (600 mm) long to exactly the same thickness.
2. Without disturbing the thicknesser table settings re-feed these pieces one at each side of the thicknesser table until they are approximately centrally positioned about the cutterblock, when the feed gearbox lever should be quickly put in the neutral position.
3. Stop the machine and isolate electrically.
4. Turn the thicknesser table down exactly $\frac{1}{32}$ " (.7 mm).
5. Set the 8 screw stops "A", (4 each side of the machine) to approximately 0.003" (0.10mm) clearance on the feed roller pivots and pressure bar arms.

Some slight advantage in finish or feed on occasions can be obtained by increasing or decreasing the tension of the pressure bar or feed roller springs.

The springs should never be compressed to a point where the feed rollers and pressure bar cannot lift sufficient to allow the maximum cut to be taken.

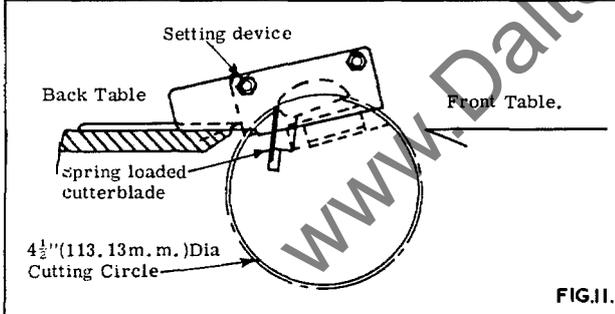


FIG.11.

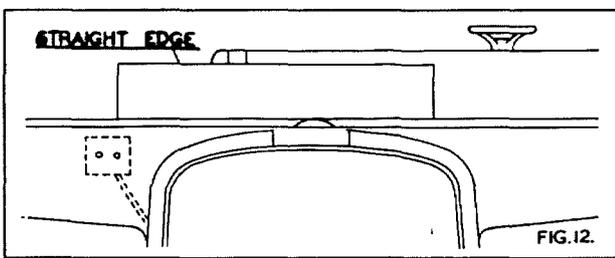


FIG.12.

The cutters are held in the cutterblock by a steel clamping bar secured with 7 - $\frac{1}{2}$ " whit heat treated hollow set screws. When the locking screws are released the cutter is ejected slightly by a small leaf spring. This is to facilitate easy setting with the special gauge supplied. As the amount of cutter projection is vital to the correct operation of the machine it is most important that the actual setting gauge supplied with the machine should be used. Should other methods of cutter setting be employed the amount of cutter projection must be exactly the same as with that given by the setting gauge supplied and failure to observe this instruction will result in bad feeding and poor finish. To remove the cutters and re-set with " Bursgreen" cutter setting gauge proceed as follows:-

1. Move the fence to the rear of the table and lower both planing tables to their lowest positions.
2. Turn the cutterblock to approximately the position shown in fig. 11 and slacken the securing screws until the knife is just free of the cutterblock. Care should be taken when loosening the last screw as the knives are spring loaded.

The knife can now be removed for grinding or replacing. When grinding it is most important that knives are ground dead straight and balanced in pairs or sets.

An efficient regrinding service is available, charges are moderate and service prompt. To avail yourself of this service return cutters to:-

Bursgreen (Durham) Limited.
Fence Houses.
Houghton-le-Spring
Co Durham.

3. To re-set the knives the cutterblock should be in approx. the position shown in fig. 11 Place the knife in the slot making sure all faces are clean and the clamping bar free from burrs. Press the knife into the cutterblock with the setting device until the four predominant pads rest on the outer surface of the cutterblock and the end stop plate is pressed against the rebate side of the back planing table. Position the knife so that its end butts against the stop plate so as to line up the tip of the knife with the edge of the rear table.

4. Holding the setting device securely in this position, tighten the securing screws. Always ensure maximum key engagement when tightening screws. Before fully tightening screws, check that the knife has not moved in the setting process. The cutting edge should now be dead parallel to the planing tables and the edge in line with the rear planing table edge.

Check that all securing screws have been tightened before setting the next knife.

5. Rotate the cutterblock until the next knife is in position and repeat the above procedure until all the knives have been set.

6. To check the setting of the knives raise the back planing table to its top position i. e. the zero mark on the rule or $\frac{1}{16}$ " (1.5 mm) above the outer surface of the cutterblock. Place a straight edge on the table as shown in fig. 12 and rotate the cutterblock by hand until the knife just touches the straight edge. Repeat this check in various positions over the width of the table to ensure the knife is parallel. Repeat this procedure for all knives.

7. When changing cutters it is advisable to check that all the locking screws are adequately lubricated and quite free. Periodically examine for damage or cracks particularly in the hexagon hole. Any doubtful screws should be replaced and all screws well lubricated with " Molyslip" or similar oil, before replacing.

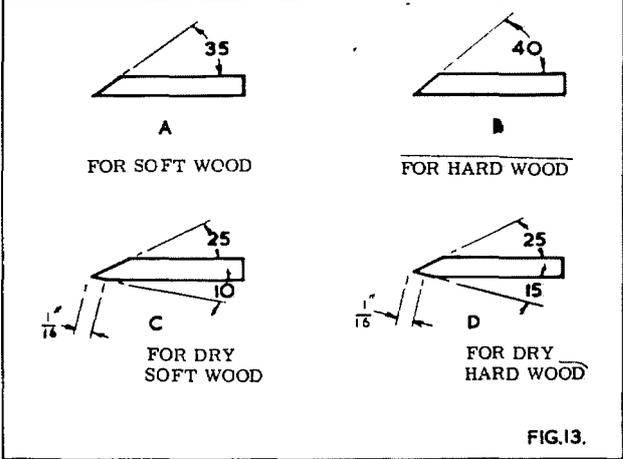
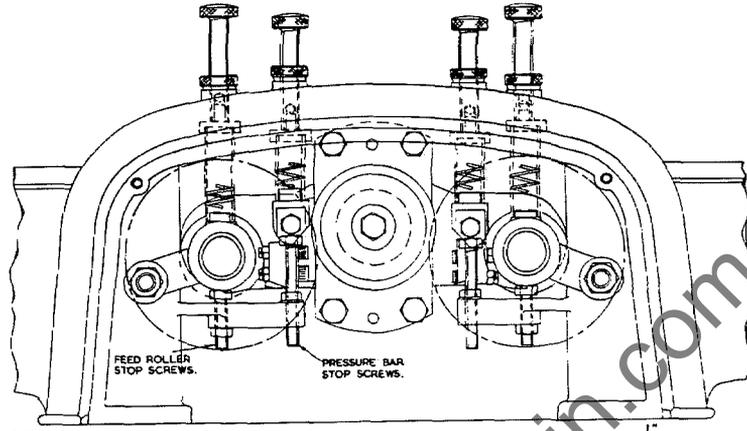


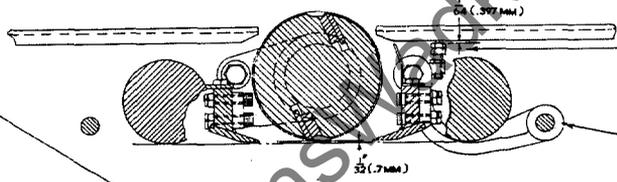
FIG.13.

**SUB-ASSY SHOWING PRESSURE BAR & FEED ROLLER SETTINGS
ON
COMBINED PLANING & THICKNESSING MACHINE UO/S**



THICKNESSING TABLE TO BE PARALLEL TO CUTTERBLOCK KNIVES.

NOTE - CORRECT SETTING OF FEED ROLLERS AND PRESSURE BARS IN RELATION TO CUTTERBLOCK IS $\frac{1}{32}$ (.7MM) BELOW CUTTERBLOCK KNIVES AS SHOWN BELOW.



FRONT PRESSURE BAR TO LIFT $\frac{1}{4}$ (.375MM) NUT SET WITH $\frac{1}{32}$ (.375MM) CLEARANCE AS SHOWN.

NOTE - BEFORE SETTING FEED ROLLERS AND PRESSURE BARS MAKE SURE UNDERTABLE ROLLERS ARE BELOW THE LEVEL

THE SHOE OF THE PRESSURE BAR TO BE SET CENTRALLY TO THE TABLE STRIPS BY THESE SLIDING COLLARS ON THE TIE BAR.

THIS SIDE IS SET AT THE SAME TIME AS THE DRIVE SIDE WITH THE FEED ROLLERS AND PRESSURE BARS IN THE SAME POSITION AS ABOVE. THE PRESSURE SPRING STUDS ARE THEN LOCKED IN POSITION AS SHOWN. THERE IS TO BE APPROX 0.003" CLEARANCE BETWEEN THE WASHER AND THE TWO LOCKED NUTS

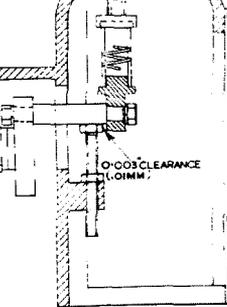
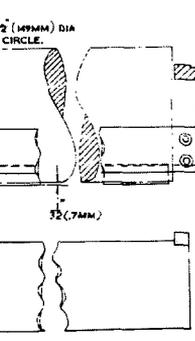
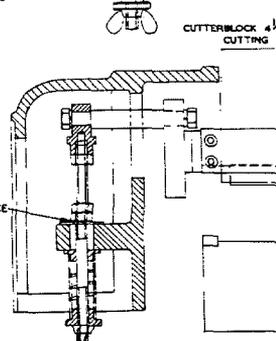
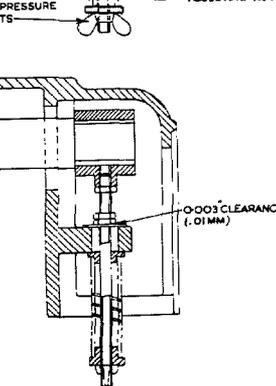
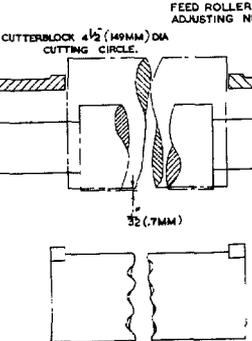
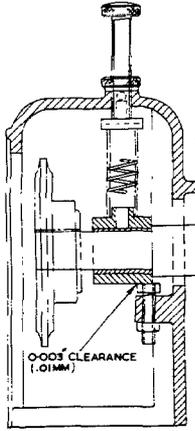
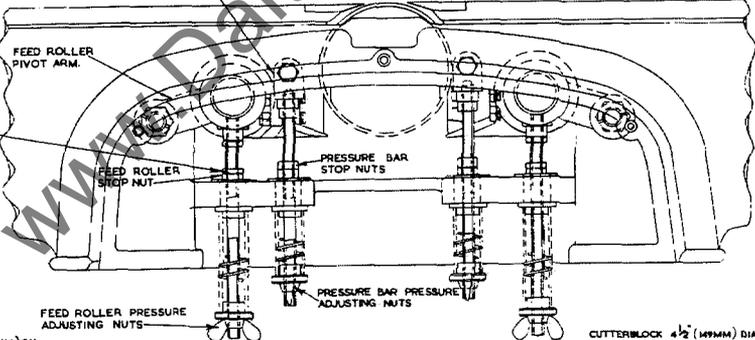


FIG. 10.

CUTTER CARE

The cutters as supplied new are 18 $\frac{1}{4}$ " (4635 mm) long x 1 $\frac{1}{2}$ " (38 mm) x 1/8" (3 mm) thick in balanced sets. They should be kept in balanced sets by ensuring that the cutters have equal dimensions after grinding and that the cutter edge is straight and parallel to the back edge.

For general work knife angles for soft and hard woods are recommended as in fig. 13 (a) and (b).

When a very fine finish is required in dry soft and hard woods a slight front bevel is given as in fig. 13 (c) and (d). For wet or green timber the cutting bevel may be decreased five degrees, but the front bevel should not be given.

Keep the cutter sharp when in position by using a fine grade oil stone dipped in paraffin. Allow the stone to rest lightly and flat on the bevel and pass over the cutter with a rotating action a few times. Give about two strokes on the full length of each knife on the face side to remove all burrs from the cutting edge.

Do not allow a heel greater than 1/32" (.7mm) wide on the bevel before removing and regrinding. When the heel becomes too wide the knives may heat up or have a hammering effect on the wood and more than normal power will be required to run the cutterblock.

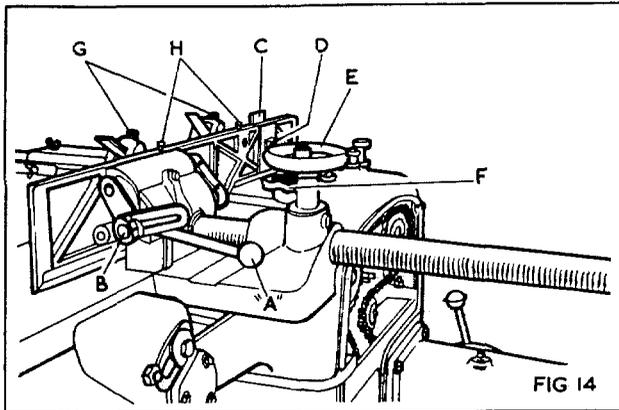


FIG. 14

FENCE ADJUSTMENT

The fence cants by means of a lever "A" in fig. 14.

To cant the fence loosen handwheel "B" and lift handle "A" until the required angle is reached, then relock handwheel "B".

The fence plate is fitted with an insert "C" that is adjustable depending on the depth of cut being taken. To adjust loosen wingnut "D" and move the insert until it touches the rear table then re-lock wingnut "D". The insert should be loosened at all times before lowering the table.

The fence is adjustable across the table by the handwheel "E". To move fence across the table loosen handwheel "F" and turn handwheel "E" until required position is reached then re-lock handwheel "F".

The fence should be locked in both positions at all times when the machine is in operation.

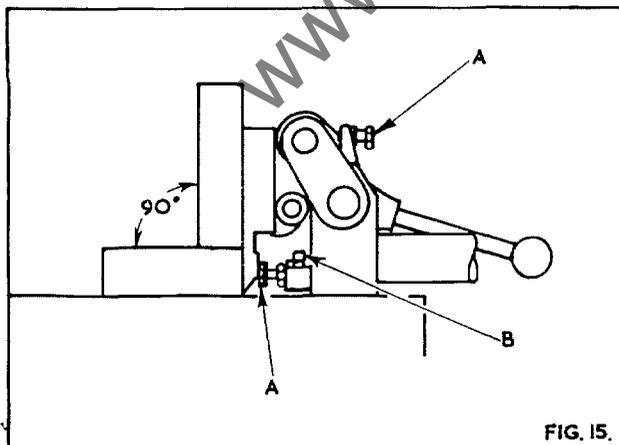


FIG. 15

Adjustable spring pressures are fitted to the fence plate and are locked in desired position by the square head set screw marked "G". These pressure springs are readily removable to give a clear fence by loosening the set screw "H".

The fence has positive stops at 90° and 45°. These are accurately set before despatch.

To check these settings, the undermentioned procedure should be followed:-

1. Move the fence towards the rear of the table, as shown in fig. 15.
2. Check the 90° positive stops by means of a steel square as in fig. 15. If adjustment is necessary adjust the hexagon head bolts "A" until fence is at right angles to the table when hard up against the stops and handwheel "B", in fig. 14 locked.
3. Check the 45° positive stops by means of an adjustable square or mitre gauge. Should adjustment be necessary move the hollow set screw "B", in fig. 15 until the fence is at 45° to the table when hard up against the stop and handwheel "B" in fig. 14 locked.

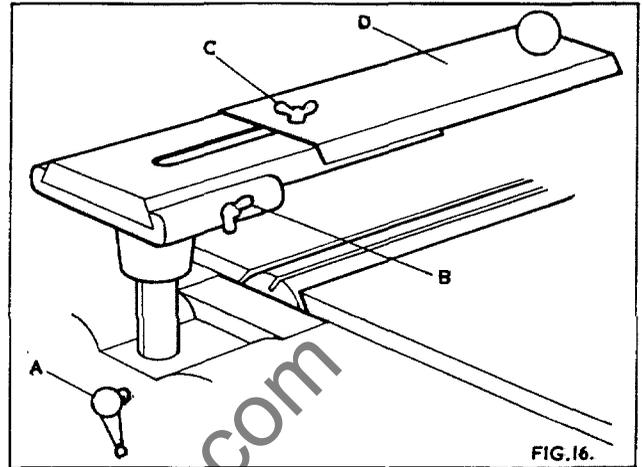


FIG. 16.

FRONT CUTTERBLOCK GUARD

The machine is fitted with a telescopic front cutterblock guard as shown in fig. 16. To adjust the guard for height depending on the thickness of timber to be surfaced, loosen two ball lever screws "A" and lift guard to required position then re-lock two ball lever screws "A".

To slide complete guard within the slide bracket loosen wingnut "B" and slide guard to required position and lock wingnut "B".

To adjust the guard for length loosen wingnut "C" and slide section "D" to required position then re-lock wingnut "C".

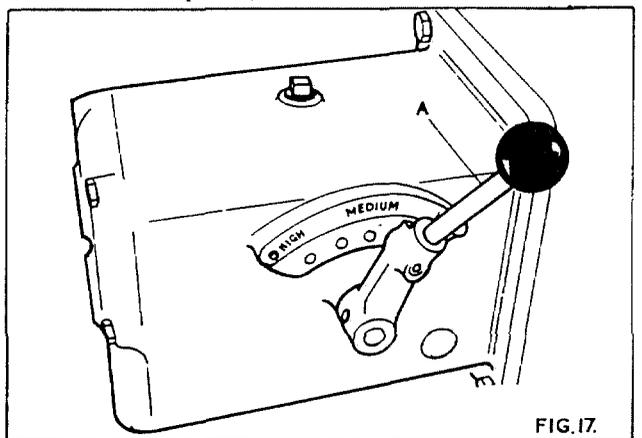


FIG. 17.

GEARBOX CONTROL

The machine is fitted as standard with a 2 speed constant mesh gearbox giving feed speeds of 20 and 40 ft per min (6 and 12 m. per min.)

The speed required is selected by the lever "A", in fig 17. It should be noted that there is a neutral position on the gearbox control and the lever "A" should be in this position when the machine is used for surfacing.

Also available as an optional extra in place of the 2 speed gearbox is a 3 speed constant mesh gearbox giving speeds of 20 30 and 45 ft per min. (6, 9 and 14 m. per min.). The gearbox is controlled by a lever the same as the 2 speed gearbox, with a neutral position between the speeds.

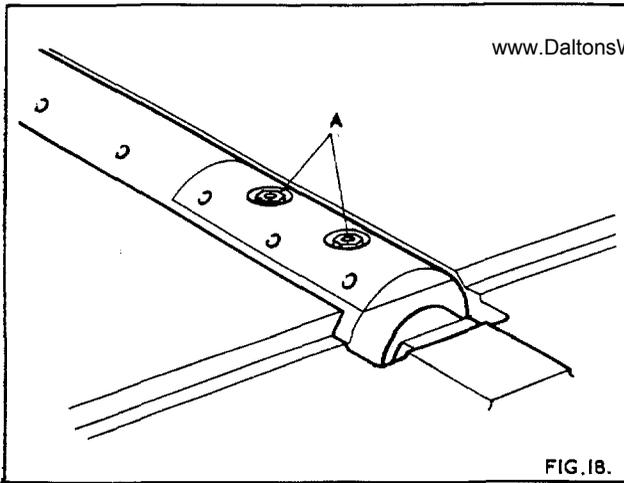


FIG.18.

MOULDING CUTTERBLOCK (Optional extra)

The machine can be arranged to do moulding up to a maximum width of 7 1/4" (184.15 mm). This consists of a special cutterblock with removable segments held on by dovetail bolts, and special planing tables which can be drawn back to allow for a maximum moulding diameter of 5 1/2" (139.7 mm).

To remove the segments of the cutterblock remove the 5/8" whit hexagon nuts "A", in fig. 18. and remove the segments completely and store in a safe place. The 5/8" whit dovetail bolts are then used to secure the moulding cutters to the cutterblock. Care should be taken when settling the moulding irons not to exceed the maximum moulding diameter.

To draw back the planing tables loosen the 2-3" (76.2 mm) diameter plastic handwheels on the underside of each planing table and move table top to required position and re-lock in position.

FOR THICKENING

When thickening long lengths of timber always support after the thickening table, otherwise a step will appear on either or both ends.

2. When a smooth finish is required use the slow feed speed. For roughing when the finish is not important use the fast feed speed.
3. For the best results always feed the timber to cut with the grain.
4. Should the timber stick when thickening probable causes are given below.
 - a) The table rollers are set too low in the table.
 - b) The spring pressure is too great on the pressure bars and too light on the feed rollers.
 - c) The timber is too roughly sawn or badly twisted and requires pre-facing.
 - d) The timber may be tapered in its length and thus wedged under the cross tie bar.

FOR SURFACE PLANING

1. To obtain the best surface finish always check the direction of the grain, which should run with the cutter as in fig. 19.
2. To obtain a perfectly flat surface especially with warped stock always put maximum pressure on the back table at "A" in fig. 20 and as little as possible on the front table "B".
3. Greater pressure will be required when surfacing bad grained timber otherwise chattering will take place resulting in a coarse finish near each knot.
4. When planing four sides of timber square, turn the timber anti-clockwise after each cut so that there will always be a machined face next to the fence as in fig. 21. The fence locates accurately at 90°.

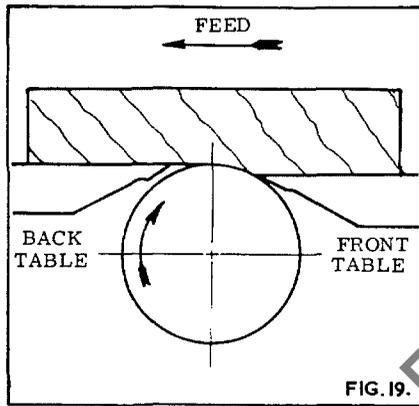


FIG.19.

CORRECT RUN OF GRAIN

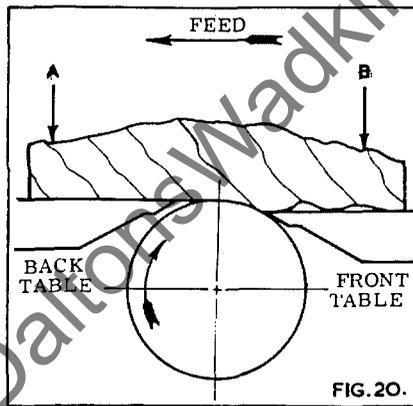


FIG.20.

FEEDING WARPED TIMBER

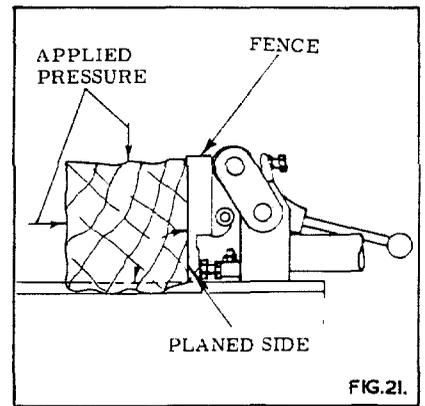
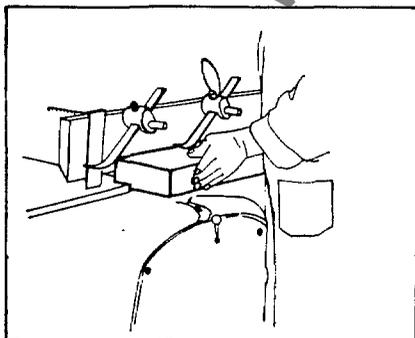


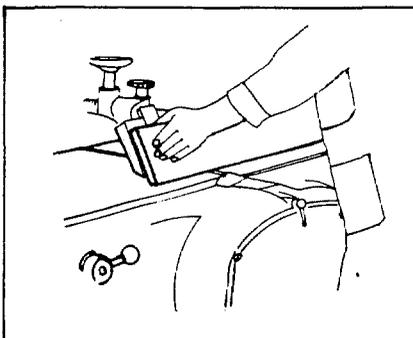
FIG.21.

WORKING WITH FENCE

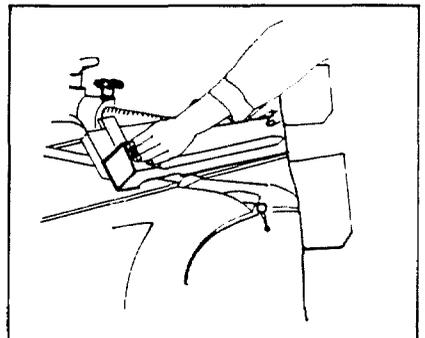
OPERATIONS



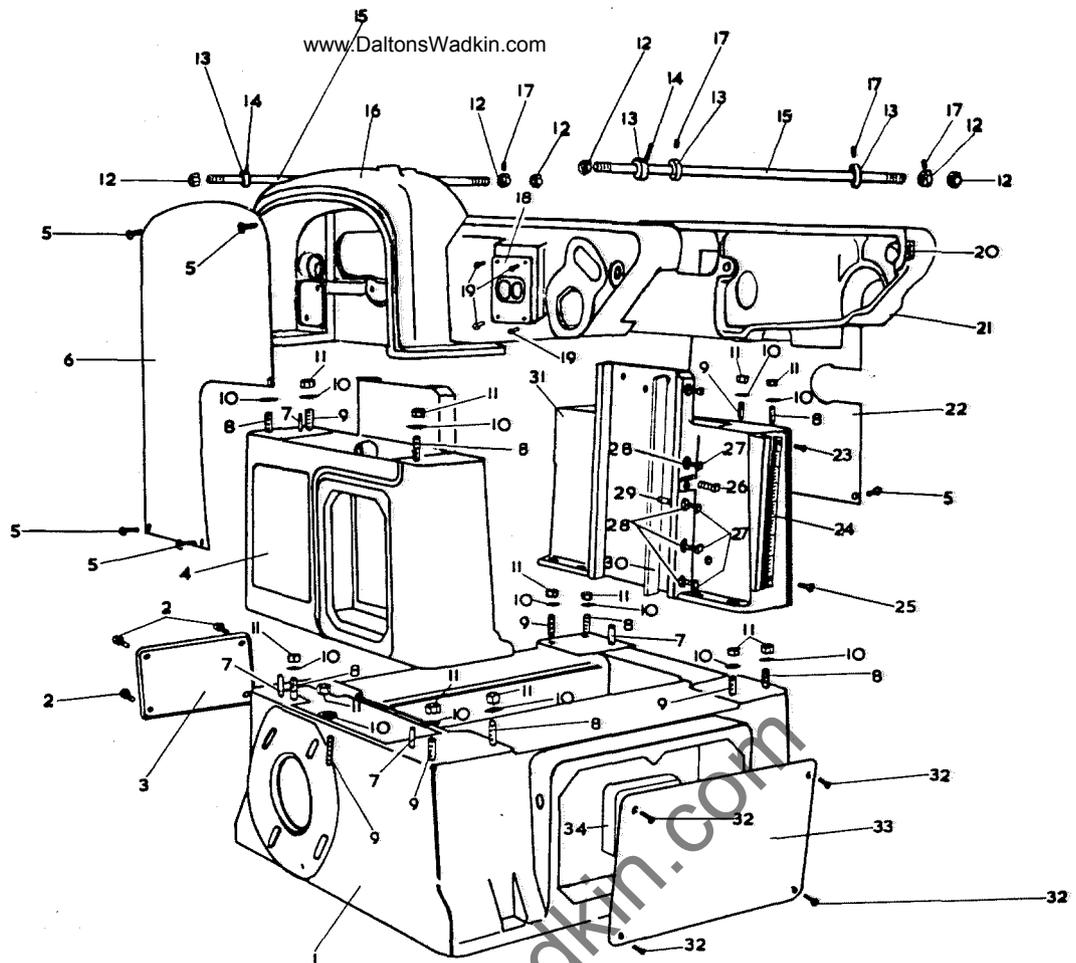
REBATING



CHAMFERING



STOP CHAMFERING

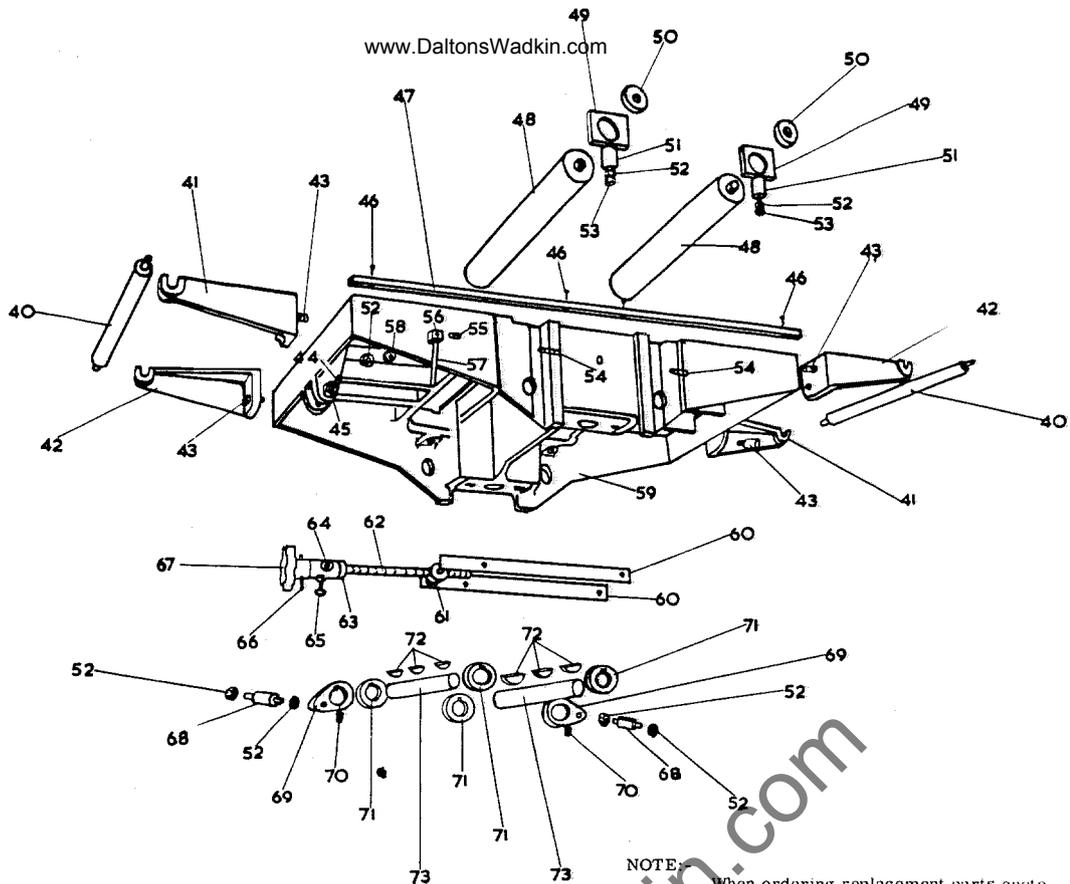


MAIN FRAME ASSEMBLY

NOTE:-

When ordering replacement parts quote part no. and serial number of the machine.

Ref.No:	Part No.	No.off	Description	Ref.No.	Part No.	No.off	Description
1	E-1002/1	1	Base	19		4	3/16" whit x 3/8" long round head screw
2		4	1/4" whit x 3/8" long round head screw	20	A-1002/61	1	Planing table rise and fall rule
3	C-1002/130	1	Inspection cover for bevel gears	21	E-1002/4	1	Right hand top frame
4	D-1002/3	1	Left hand centre frame.	22	C-1002/49	1	Right hand frame panel
5		8	5/16" whit x 3/8" long round head screw	23		1	1/8" dia fluted rivet
6	C-1002/50	1	Left hand frame panel	24	B-1002/60	1	9" rule
7		8	5/16" dia x 1 1/2" long goverlok spring dowel.	25		1	3/16" whit x 3/8" long countersunk head screw
8		8	1/2" whit x 2" long stud.	26		2	1/2" whit x 1 1/2" long square head bolt
9		8	1/2" whit x 1 1/2" long stud.	27		10	5/16" whit x 1 1/4" long square head bolt
10		16	1/2" washer	28		10	5/16" whit nut
11		16	1/2" whit nut	29		2	1/4" dia x 1/4" long fluted dowel
12		6	5/8" whit locknut	30	A-1002/58	1	Table slide strip
13	A-1810/109A	4	Tie bar collar	31	D-1002/2	1	Right hand centre frame
14		2	No. 3 taper pin	32		4	5/16" whit x 1/2" long round head screw
15	A-1002/26	2	Tie bar for frame end	33	C-1002/110	1	Cover for starter
16	E-1002/5	1	Left hand top frame		C-1002/113	1	Cover for starter (Special when isolator fitted)
17		4	1/4" whit x 1/4" long hollow set screw	34	ZT3	1	Brook starter interior(50 & 60 cycles).
18	B-S-49	1	Push button starter plate.				

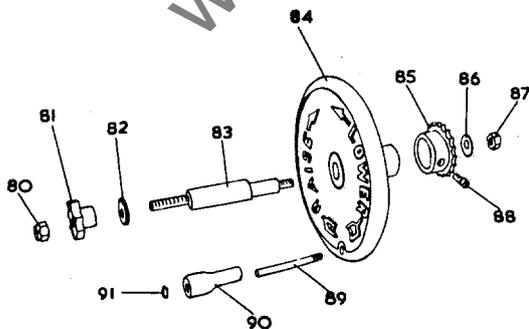


NOTE:- When ordering replacement parts quote part no. and serial number of machine.

THICKENING TABLE ASSEMBLY

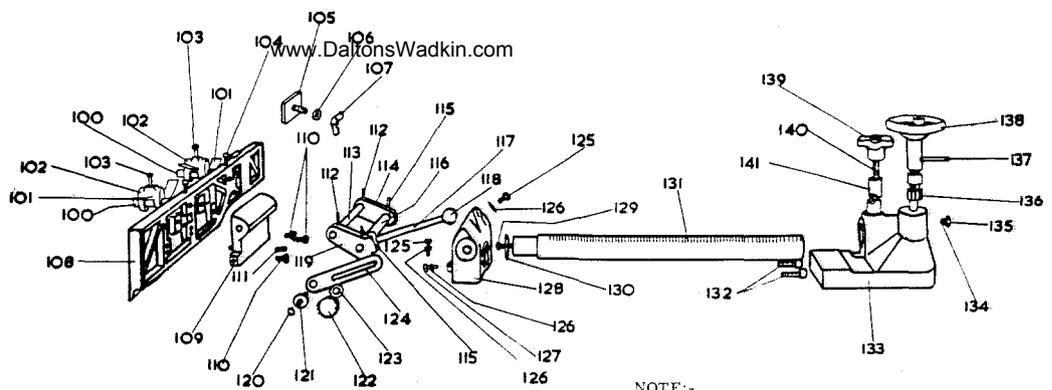
Ref. No.	Part No.	No. off	Description	Ref. No.	Part No.	No. off	Description
40	B-1002/55	2	Outer table roller	58		1	3/8" washer
41	C-1002/54	2	Outer table roller bracket(Right hand)	59	E-1002/7	1	Thickening table.
42	C-1002/54	2	Outer table roller bracket(Left hand)	60	A-1002/107	2	Under table roller link
43	A-1002/153	8	3/8" whit x 1 1/4" long hexagon head bolt	61	A-1002/93	1	Under table roller swivel nut
44	A-1002/147	2	Under table roller rise and fall trunnion screw.	62	A-1002/136	1	Under table roller rise and fall screw
45		2	1/2" whit nut	63		1	Collar for rise and fall screw
46		8	1/4" whit x 3/4" long cheese head screw	64	A-1002/86	1	Under table roller rise and fall screw bearing
47	B-1002/59	2	Strips for thickening table	65		1	1/2" whit x 1" long thumbscrew
48	B-1002/162	2	Under table roller	66		1	No. 3 taper pin
49	A-1045/47	4	Under table roller bearing block	67	Patt No. 14	1	3" dia plastic handwheel, 5/8" bore
50	6203-2RS	4	SKF sealed bearing	68	A-1002/98	2	Under table roller link pin.
51	A-1045/50	4	Under table roller pin	69	A-1002/104	2	Under table roller rocking shaft link
52		9	3/8" whit nut	70		2	1/4" whit x 3/8" long hollow set screw
53		4	3/8" whit x 1 1/4" long hexagon head bolt	71	A-1002/114	4	Under table roller eccentric
54	A-1002/137	4	Under table roller pin retaining screw	72		6	5/16" wide woodruff key
55		1	1/4" whit x 1/2" long square head bolt	73	B-1002/105	2	Under table roller rocking shaft.
56	A-1002/80	1	Pointer bracket				
57	A-1002/81	1	Pointer for thickening table				

R&F HANDWHEEL ASSEMBLY



Ref. No.	Part No.	No. off	Description
80		1	1/2" whit thin aero tight nut.
81	Patt No. 14	1	2" dia plastic handwheel, 1/2" whit T. R. T
82	A-1002/112	1	Washer for rise and fall handwheel
83	B-1002/85	1	Rise and fall handwheel shaft
84	C-1002/76	1	Table rise and fall handwheel
85	B-1002/109	1	19 tooth sprocket (1 1/4" bore)
86		1	1/2" washer
87		1	1/2" whit nut
88		1	3/8" whit x 3/4" long cheese head screw
89	A-S-101	1	Spindle for 3" plastic handle
90	Patt No. 4	1	3" plastic handle.
91	5555-37	1	"Truarc" grip ring circlip
92	110046		53links Renolds chain

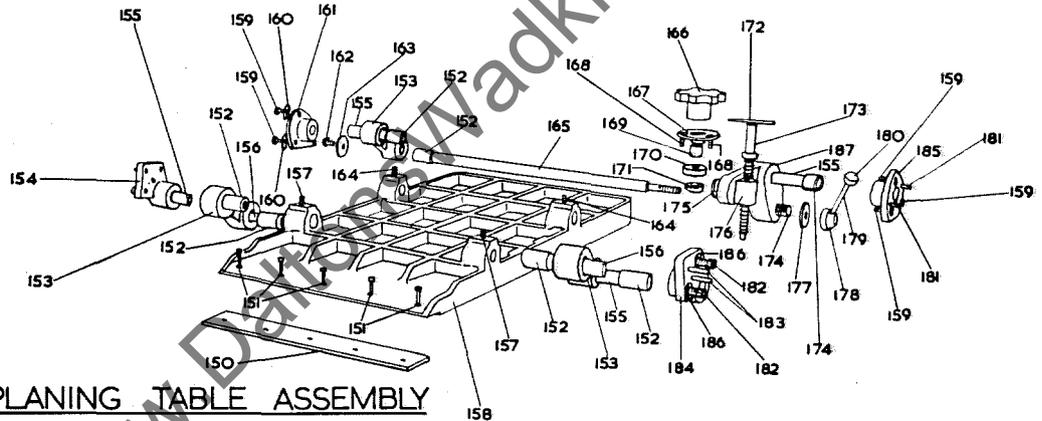
NOTE:- When ordering replacement parts quote part no. and serial number of machine.



FENCE ASSEMBLY

NOTE:- When ordering replacement parts quote part no. and serial number of the machine.

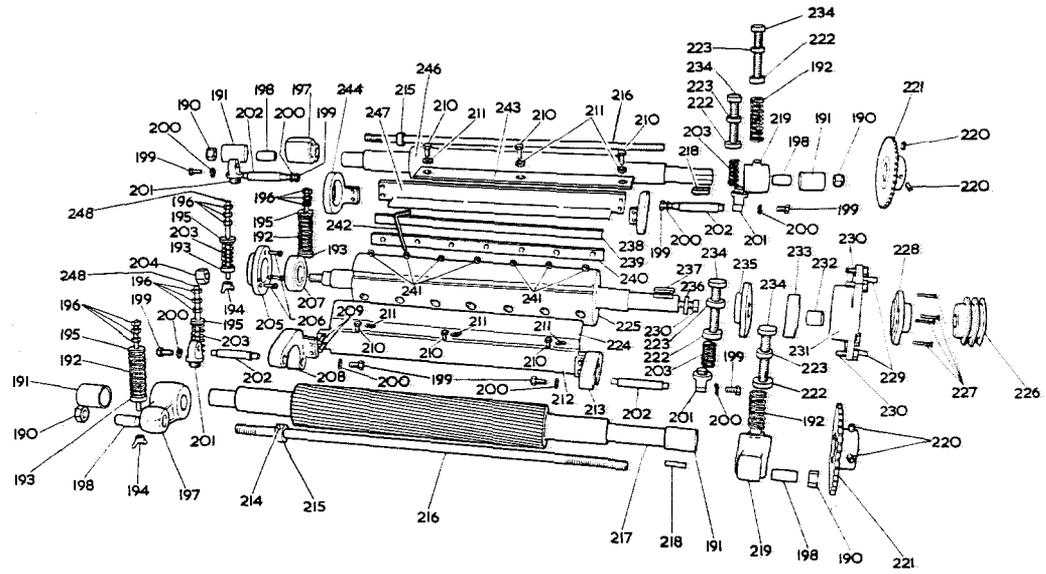
Ref. No.	Part No.	No. off	Description	Ref. No.	Part No.	No. off	Description
100	A. 1002/74	2	Fence spring pressure bar	122	Patt No. 32	1	1 1/2" dia plastic handwheel 3/8" whit T. R. T.
101	A. 1002/75	2	Fence spring	123		1	3/8" washer
102	A. 1002/73	2	Fence spring pressure block	124	B. 1002/66	1	Fence locking link
103		2	3/8" whit x 1 1/2" long square head bolt	125		2	1/2" whit x 1" long hexagon head bolt
104		2	3/8" whit x 1" long square head bolt	126		3	3/4" whit nut
105	A. 1002/133	1	Adjustable fence plate	127		1	1/2" whit x 3/4" long hexagon head bolt
106		1	1/4" washer	128	D. 1002/63	1	Fence canting bracket
107		1	1/4" whit wingnut	129		1	3/8" whit 1 1/4" long hexagon head bolt
108	D. 1002/149	1	Fence front plate	130	A. 1002/148	1	Washer for fence rack bar
109	C. 1002/150	1	Fence front plate bracket	131	B. 1002/72	1	Fence rack bar
110		3	3/8" whit x 3/4" long hexagon head bolt	132		2	1/2" whit x 1 1/4" long socket cap screw
111		2	1/4" dia. x 3/4" long fluted dowel	133	D. 1002/64	1	Fence adjusting bracket
112		2	3/16" dia. x 1 1/4" long groverlok spring dowel	134	A. 1002/135	1	Dog point screw
113	B. 1002/65	1	Fence top pivot bar	135		1	1/2" whit locknut
114	B. 1002/69	1	Fence link (Plain)	136	B-1002/79	1	Fence pinion
115		2	3/16" dia. x 1 1/4" long groverlok spring dowel	137		1	No. 3 taper pin.
116	B. 1002/65	1	Fence bottom pivot bar	138	B-1002/90	1	Fence pinion handwheel
117	A. 1002/139	1	Fence canting arm	139	Patt No. 14	1	3" dia plastic handwheel 1/2" whit T. R. T.
118	Patt. No. 28	1	1 1/2" dia plastic ball, 3/8" whit	140	A-1002/70	1	Locking screw for fence rack bar
119	B. 1002/68	1	Fence link (with boss)	141	A-1002/71	1	Locking bush for fence rack bar.
120	5100.37	2	"Truarc" external circlip				
121	A. 1002/67	1	Fence locking link pivot				



PLANING TABLE ASSEMBLY

Ref. No.	Part No.	No. off	Description	Ref. No.	Part No.	No. off	Description
150	B. 1002/34	2	Table insert	166	Patt. No. 14	2	4" dia. plastic handwheel 1/2" bore
151		10	1/2" whit x 3/4" long hexagon head bolt	167	A. 1002/14	2	End plate for rise and fall screw
152		12	1" i/d x 1 1/4" o/d x 2" long oilite bush	168		6	5/16" whit x 1/4" long countersunk head screw
153	B. 1002/9	6	Rise and fall link	169	A. 1002/32	2	Distance piece for rise and fall screw
154	B. 1002/10	2	Inside swivel pin bracket (Right hand)	170	U. L. S. 8	2	Hoffmann ball race
155	A. 1002/28	8	Swivel pin	171		2	Felt washer for rise and fall screw
156	A. 1002/29	4	Inside swivel bar	172		2	No. 3. taper pin
157		4	5/16" whit x 1/4" long hollow set screw	173	B. 1002/31	2	Planing table rise and fall screw
158	D. 1002/6	2	Planing table	174		4	1" i/d x 1 1/4" o/d x 2" long graphite impregnated bushes
159		12	5/16" whit x 1" long high tensile hexagon head bolt	175	A. 1002/38	2	Retaining washer for swivel nut
160		12	5/16" spring washer	176	A. 1002/22	2	Swivel nut
161	B. 1002/11	2	Outside swivel pin bracket (Right hand)	177	A. 1002/37	2	Locking washer
162		2	1/2" whit x 1" long hexagon head bolt	178	A. 1002/90	2	Locknut for planing table
163	A. 1002/52	2	Retaining washer for clamping bolt	179	A. 1002/90A	2	Stud for planing table locknut
164	A. 1002/161	4	Special countersunk head screw	180	Patt. No. 28	2	1 1/2" dia. plastic ball, 3/8" whit.
165	A. 1002/27	2	Bars for locking planing table	181		8	No. 4 taper pin
				182		8	3/8" whit x 1" long socket cap screw
				183		8	9/32" taper pin
				184	B-1002/10	2	Inside swivel pin bracket (left hand)
				185	B-1002/11	2	Outside swivel pin bracket (right hand)
				186		8	3/8" spring washer
				187	B-1002/8	2	Rise and fall lever for planingtable (1 each hand)

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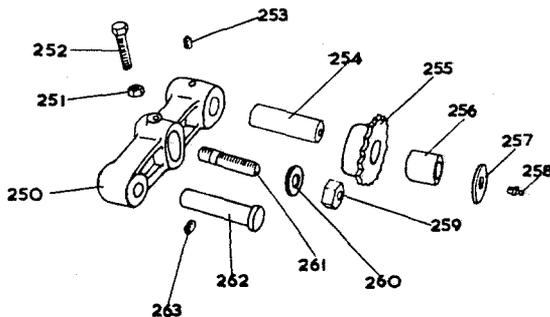


CUTTERBLOCK ASSEMBLY

Ref. No.	Part No.	No. off	Description	Ref. No.	Part No.	No. off	Description
190		4	5/8" whit aerotight nut	223	A-1810/112	4	Locking nut for pressure spring adjusting screw
191		4	1 1/4" i/d x 1 1/2" o/d x 2" long oilite bush -	224	B-1002/36	1	Baffle plate
192	A-1810/96	4	Feed roller spring	225	C-1002/51A	1	Cutterblock
193	A-1002/87	4	Adjustment nut for pressure spring	226	B-1002/99	1	Cutterblock pulley.
194		4	3/8" whit wingnut	227		4	1/4" whit x 2 3/4" long countersunk head screw
195	A-1002/40	4	Pressure spring washer	228	B-1810/21	1	Pulley side float and housing dustcap
196		12	3/8" whit nut	229		2	3/8" dia x 1 1/4" long fluted dowel
197	B-1002/13	2	Feed roller pivot arm (Rebate side)	230		5	1/2" whit x 1 1/4" long hexagon head bolt.
198	A-1810/114	4	Bush for feed roller arm.	231	B-1002/15	1	Float end housing
199		8	3/8" whit x 3/4" long hexagon head bolt.	232	A-1002/39	1	Cutterblock distance piece
200		8	3/8" spring washer	233	UMS 12	1	Hoffmann ball race
201	A-1002/16	4	Pressure bar spring holder	234	A-1810/81	4	Pressure spring adjustment screw
202	A-1002/3A	4	Pressure bar stub shaft (2 rear)	235	B-1810/22	1	Spigotted float end housing dust cap
			(2 front)	236	A-1002/155	1	Cutterblock washer
203	A-1002/82	4	Pressure bar spring	237		1	3/8" wide x 1 1/2" long key
204	A-1002/159	1	Cutterblock nut	238	B-1002/20A	1	Back pressure bar bracket (left hand)
205	B-1002/18	1	Spigotted thrust end dust cap.	239		2	Planing knives (18 1/2" long)
206		3	1/4" whit x 3/4" long countersunk head hollow set screw	240	B-1001/19	2	Strip for cutterblock
207	UMS 11	1	Hoffmann ball race	241		14	1/2" whit x 1 1/4" long full dog point, hollow set screw.
208	B-1002/88	1	Front pressure bar bracket (Left hand)	242		2	1/4" A/F long arm hexagon wrench
209		4	5/16" whit x 1 1/4" long socket capscrew	243	S, 41	1	Cutterblock spring
210		6	1/4" whit x 1/2" long hexagon head bolt.	244	B-1002/20A	1	Back pressure bar bracket (right hand)
211		6	1/4" spring washer	245	A-1002/42	1	Scraper plate
212	B-1002/30	1	Front pressure bar	246	C-1002/24	1	Feed roller (plain, rear)
213	B-1002/88	1	Front pressure bar bracket (right hand)	247	B-1002/30	1	Back pressure bar
214		2	No. 3 taper pin	248	A-1002/35	4	Pressure spring stud
215	A-1810/109A	2	Tie bar collar				
216	A-1002/25	2	Tie bar for feed roller				
217	C-1002/24	1	Feed roller (Front spirally serrated)				
218		2	3/8" wide x 1 1/4" long key				
219	B-1002/11	2	Feed roller pivot arm (Drive side)				
220		4	1/8" gas x 3/4" long hollow set screw.				
221	B-1002/108	2	38 tooth sprocket				
222	A-1810/82	4	Pressure spring seating.				

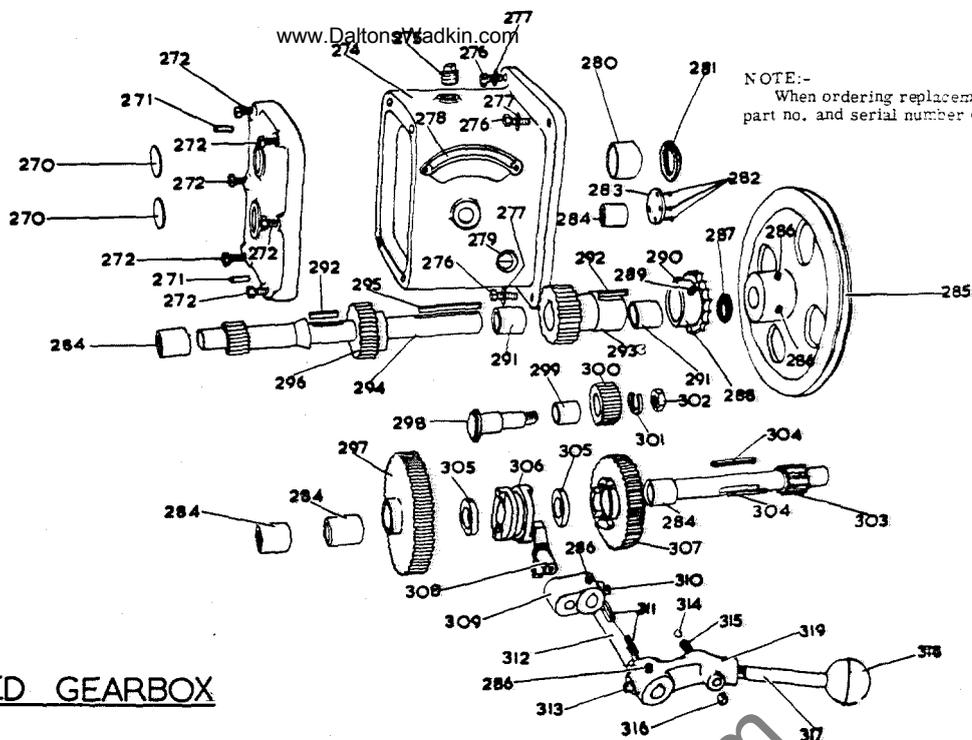
NOTE:-
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JOCKEY SPROCKET ASSEMBLY



Ref. No.	Part No.	No. off	Description
250	B-1810/33	1	Jockey sprocket arm
251		1	3/8" whit nut
252		1	3/8" whit x 2" long hexagon head bolt
253		1	1/8" gas x 3/4" long hollow set screw
254	A-1810/78	1	Chain tensioning sprocket stub shaft
255	B-1002/109	1	19 tooth sprocket (1 1/4" bore)
256		1	1" i/d x 1 1/4" o/d x 1 1/4" long oilite bush
257	A-1810/79	1	Chain tensioning sprocket stub shaft washer
258		1	1/8" gas straight grease nipple
259		1	5/8" whit nut.
260		1	5/8" washer
261		1	5/8" whit x 2 3/4" long stud.
262	A-1810/80	1	Chain tensioning device pivot pin.
263		1	3/8" whit x 3/8" long hollow set screw

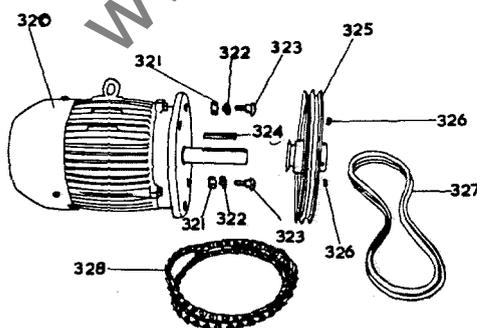
NOTE:-
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2 SPEED GEARBOX

Ref. No.	Part No.	No. off	Description	Ref. No.	Part No.	No. off	Description
270		2	1 1/2" dia domed welsh washer	296	A. 1810/63	1	Gearbox 23 tooth gear
271		2	5/16" dia x 1 1/4" long fluted dowel	297	B. 1810/85	1	Gearbox 51 tooth gear
272		6	3/8" whit x 1 1/2" long hexagon head bolt	298	A. 1810/87	1	Gearbox stub shaft
273	B-1002/116	1	Gearbox end plate	299		1	7/8" 1/d x 1.18" o/d x 1" long oilite bush
274	D-1810/28	1	Gearbox casing	300	A. 1810/62	1	Gearbox 17 tooth gear
275		2	1/2" gas plug	301		1	5/8" spring washer
276		4	1/2" whit x 1 1/2" long hexagon head bolt	302		1	5/8" whit locknut
277		4	1/2" washer	303	B. 1810/41	1	Gearbox lay shaft
278	B-1810/61	1	Gearbox selector plate	304		2	1/4" wide x 2 1/4" long key
279		1	Oil level window	305	A. 1810/71	2	Gearbox lay shaft distance piece
280		1	1 1/2" i/d x 2" o/d x 1 1/4" long oilite bush	306	B. 1810/68	1	Gearbox selector dog
281	G.S.C. 28	1	I.N.A. Oilseal	307	B. 1810/66	1	Gearbox 42 tooth gear
282		3	3/16" whit x 3/8" long round head screw	308	A. 1810/32	1	Gearbox selector
283	A-1810/36	1	Gearbox end shield	309	B. 1810/31	1	Gearbox selector arm
284		5	1" i/d x 1 1/4" o/d x 1 1/4" long oilite bush	310		1	1/8" gas 3/4" long hollow set screw
285	B-1810/15	1	Gearbox pulley	311		2	3/16" wide x 1" long key
286		4	1/8" gas x 5/8" long hollow set screw	312	A. 1810/72	1	Selector handle pivot shaft
287	G.S.C. 16	1	I.N.A. oilseal	313		1	1/8" gas x 1/2" long hollow set screw
288	B-1002/109	1	19 tooth sprocket (1 1/2" bore)	314		1	S.K.F. 3/8" dia. steel ball
289		1	1/8" gas x 1/2" long hollow set screw	315	A. 1810/74	1	Selector handle compression spring
290		1	1/8" gas x 3/8" long hollow set screw	316		1	1/2" whit x 1/2" long hollow set screw
291		2	1" i/d x 1 1/4" o/d x 1 1/2" long oilite bush	317	A. 1810/73	1	Selector handle stud
292		2	1/4" wide x 1 1/4" long key	318	Patt No. 28	1	1 1/2" dia plastic ball 1/2" whit
293	B-1810/64	1	Gearbox 26 tooth gear	319	B. 1810/30	1	Gearbox selector handle
294	B-1810/40	1	Gearbox input shaft				
295		1	1/4" wide x 3" long key				

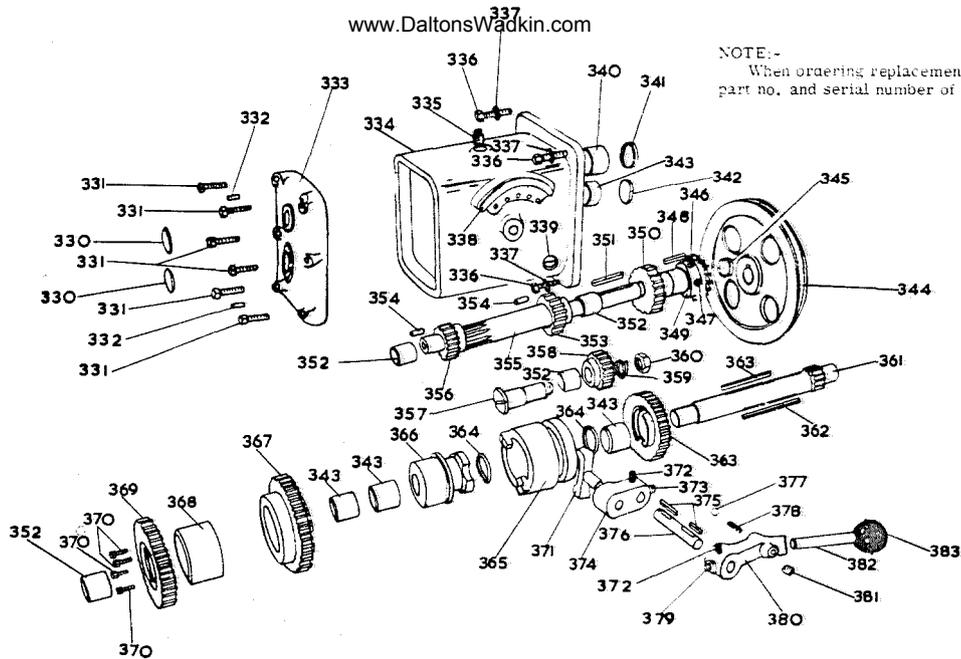
MOTOR MOUNTING ASSEMBLY



Ref. No.	Part No.	No. off	Description
320	D. 213D	1	Brook motor, 1500 r.p.m., 5 H.P., T.E.F.C. flange mounted, no spigot 5.5" shaft extension (50 cycles, 3 phase)
	NEMA. 213.D	1	Brook motor, 1,800 r.p.m., 6 H.P., T.E.F.C. flange mounted, no spigot, 5.5" shaft extension (60 cycles, 3phase)
	ED. 215D	1	Brook motor, 1,500 r.p.m. 4 H.P., T.E.F.C. flange mounted, no spigot, 5.5 shaft extension (50 cycles, 1 phase)
321		4	1/2" whit nut
322		4	1/2" spring washer
323		4	1/2" whit x 2" long coach bolt
324		1	5/16" wide x 3" long key
325	B-1810/14	1	Motor pulley (50 cycles)
	B-1810/102	1	Motor pulley (60 cycles)
326		2	1/8" gas x 1/4" long hollow set screw
327	A-74	2	Fenner vee belts (50 cycles)
	A-72	2	Fenner vee belt (60 cycles) <
328	57 links		"Rivlink", 1/2" x 400 x 3 links, 'B' pitch belt.

NOTE:-
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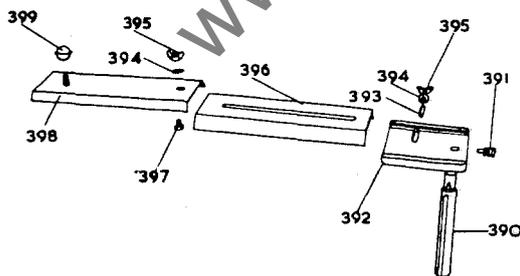
NOTE:-
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3 SPEED GEARBOX

RefNo.	Part No.	No.off	Description	Ref. No.	Part No.	No.off	Description
330		2	1 1/2" dia domed welsh washer	357	A-1002/119	1	Gearbox stub shaft
331		6	3/8" whit x 1 1/2" long hexagon head bolt	358	A-1002/125	1	Gearbox 22 tooth gear
332		2	5/16" dia x 1 1/2" long fluted dowel	359		4	1/8" spring washer
333	B-1002/116	1	Gearbox end plate	360		1	1/4" whit locknut
334	C-1002/115	1	Gearbox casing	361	B-1002/118	1	Gearbox lay shaft
335		2	1/2" gas plug	362		2	5/16" wide x 4 1/4" long key
336		4	1/2" whit x 1 1/2" long hexagon head bolt	363	B-1002/122	1	Gearbox 40 tooth gear
337		4	1/2" washer	364	A-1002/134	2	Gearbox lay shaft distance piece.
338	B-1002/132	1	Gearbox selector plate	365	B-1002/127	1	Gearbox selector dog.
339		1	Oil lever windows	366	B-1002/128	1	Gearbox selector for 46 tooth gear
340		1	1 1/4" i/d x 2" o/d x 1 1/2" long oilite bush	367	B-1002/120	1	Gearbox 51 tooth gear
341	G.S.C. 28	1	L.N.A. oilseal	368		1	2 1/2" i/d x 2, 7/8" o/d x 1 1/4" long oilite bush
342		1	1 1/2" dia domed welsh washer	369	B-1002/121	1	Gearbox 46 tooth gear
343		4	1 1/4" i/d x 1 1/2" o/d x 1 1/4" long oilite bush	370		4	1/4" whit x 1/2" long socket cap screw
344	B-1810/15	1	Gearbox pulley	371	A-1002/131	1	Gearbox selector
345	G.S.C. 16	1	L.N.A. Oilseal	372		2	1/8" gas x 5/8" long hollow set screw
346		1	1/8" gas x 1/4" long hollow set screw	373		1	1/8" gas x 1/4" long hollow set screw
347		1	1/8" gas x 3/8" long hollow set screw	374	B-1002/129	1	Gearbox selector arm.
348		1	1/4" wide x 1.3/8" long key	375		2	3/16" wide x 1" long key
349	B-1002/109	1	19 tooth sprocket (1 3/4" bore)	376	A-1810/72	1	Gearbox selector handle pivot pin.
350	B-1002/123	1	Gearbox 30 tooth gear	377		1	S.K.F. 3/8" dia steel ball.
351		1	1/4" wide x 2 1/2" long Key	378	A-1810/74	1	Selector handle compression spring
352		5	1" i/d x 1 1/2" o/d x 1 1/4" long oilite bush	379		1	1/8" gas x 1/2" long hollow set screw
353	A-1002/124	1	Gearbox 25 tooth gear	380	B-1810/30	1	Gearbox selector handle
354		2	1/4" wide x 1 1/4" key	381		1	1/4" whit x 1/2" long hollow set screw
355	B-1002/117	1	Gearbox input shaft	382	D-1810/73	1	Selector handle stud.
356	A-1002/126	1	Gearbox 19 tooth gear	383	Patt No. 28	1	1 1/2" dia plastic ball, 1/2" whit

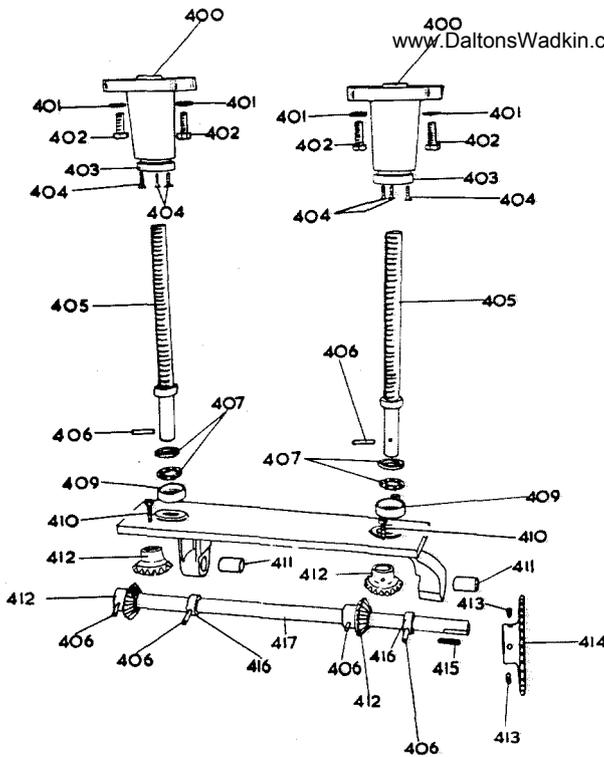
CUTTER GUARD ASSEMBLY



Ref.No.	Part No.	No.off	Description
390	A-1002/48	1	Cutter guard adjustment bar
391	A-S-186	1	Pip screw for cutter guard
392	B-1002/45	1	Cutter guard bracket
393	A-1002/47	1	Cutter guard hook bolt
394		2	3/8" washer
395		2	3/8" whit wingnut
396	B-1002/46	1	Bottom cutter guard
397		1	3/8" whit x 3/4" long hexagon head bolt
398	B-1002/46	1	Top cutter guard
399	Patt No. 28	1	1 1/4" dia plastic ball 3/8" whit

NOTE:-
When ordering replacement parts quote part no. and serial number of the machine.

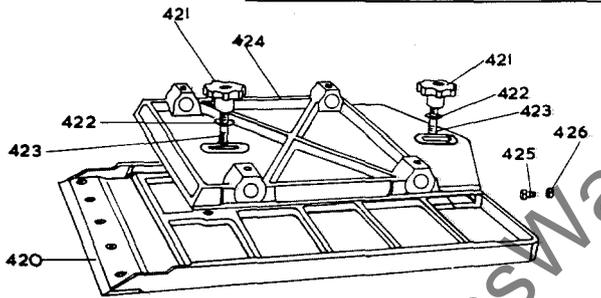
BEVEL GEAR ASSEMBLY



Ref.No.	Part No.	No. off	Description
400	B-1002/21	2	Rise and fall nut bracket
401		4	1/2" washer
402		4	1/2" whit x 1 1/4" long hexagon head bolt
403	B-1002/44	2	Rise and fall nut
404		6	1/2" whit x 1" long countersunk head screw
405	B-1002/56	2	Rise and fall screw
406		6	No. 3 taper pin
407	W. I. B.	2	Hoffmann thrust race
408	C-1001/11	1	Bevel gear bearing plate
409	A-1810/106	2	Thrust race shroud
410		4	3/8" whit x 1 1/4" long hexagon head bolt
411		2	1" i.d x 1 1/4" o.d x 1 1/2" long oilite bush
412	A-1810/56	4	Bevel gear
413		2	1/8" gas x 5/8" long hollow set screw
414	B-1002/108	1	38 Tooth sprocket
415		1	1/2" wide x 1 1/4" long key
416	A-1002/154	2	Collar for bevel gear shaft
417	A-1002/77	1	Bevel gear shaft

NOTE:-
When ordering replacement parts quote part no. and serial number of the machine.

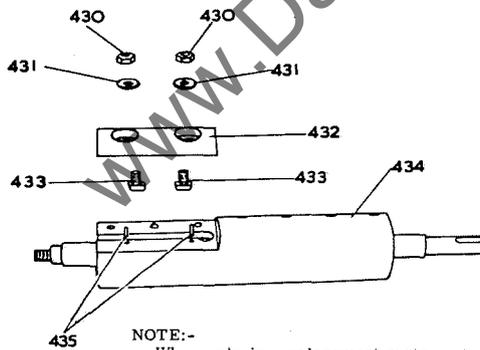
DRAWBACK TABLE ASSEMBLY (SPECIAL)



Ref No.	Part No.	No. off	Description
420	D-1002/94	2	Top drawback table
421	Patt No. 14	4	3" dia plastic handwheel 5/8" whit T. R. T.
422		4	5/8" washer
423		4	5/8" whit x 3 1/4" long stud
424	D-1002/95	2	Bottom drawback table
425		2	3/8" whit x 2" long square head bolt
426		2	3/8" whit nut.

NOTE:-
When ordering replacement parts quote part no. and serial number of the machine.

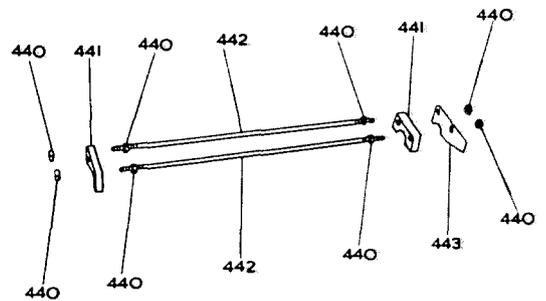
MOULDING CUTTER BLOCK (SPECIAL)



NOTE:-
When ordering replacement parts quote part number and serial number of the machine.

Ref.No.	Part No.	No. off	Description
430	A-1002/97	4	Thin domed nut
431		4	5/8" washer
432	B-1002/101	2	Segment for moulding cutterblock
433	A-1002/96	4	Standard vee bolt
434	C-1002/100	1	Special cutterblock for moulding
435		2	1/2" dia x 3/4" long fluted dowel.

KNIFE SETTING DEVICE ASSEMBLY



NOTE:-
When ordering replacement parts quote part number and serial number of the machine.

Ref.No.	Part No.	No. off	Description
440		8	3/8" whit nut
441	A-1002/78	2	Setting device end plate
442	A-1001/1	2	Setting device tie bar
443	A-1002/91	1	Setting device stop plate