

Wadkin 01162 769 111
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OPERATING AND MAINTENANCE

INSTRUCTIONS

36" X 72" → NOTE OUR MACHINE

PANEL PLANNER AND THICKNESSER

TYPE RX

BOOK RECEIVED MAY '96 OUR MACHINE No. RX 107

Test No. 50149

30"

WADKIN36" PANEL PLANING AND THICKNESSING MACHINE, TYPE R.X.FITTED WITH WEDGE BED.PRINCIPAL DIMENSIONS AND CAPACITIES.

	<u>ENGLISH</u>	<u>METRIC</u>
Planing and thicknessing capacity	36" x 7".	914 mm x 178 mm.
Speed of cutterblock	4000 r.p.m.	4000 r.p.m.
Diameter of cutterblock	6".	152 mm.
Diameter of sectional infeed roll	6".	152 mm.
Diameter of top outfeed roll and bed rolls	5½".	140 mm.
Width of sectional feed roll sections	2".	51 mm.
Width of sectional chipbreaker shoes	2".	51 mm.
Length of thicknessing table	4'6".	1372 mm.
Standard rates of feed - For 50 cycle supply -	20, 32, 48, 52,	6.1, 9.8, 14.6, 15.8,
	80, 120 ft.p.m.	24.4, 36.6 Metres p.m.
For 60 cycle supply -	28, 43, 60, 66,	8.5, 13.1, 18.3, 20.1,
	100, 148 ft.p.m.	30.5, 45.1 Metres p.m.
Horse power of driving motor	25 H.P.	25 H.P.
Horse power of raising and lowering motor	1 H.P.	1 H.P.

Six Speed
Gear Box
for Feed
Range.

Handwheel for
Adjustment of
Rear Pressure
Bar.

Cutterblock
and Feed
Driving
Motor.

Table Raising and
Lowering Motor.

Contactor Gear
Cover.

FIG.1. GENERAL REAR VIEW OF MACHINE.

Exhaust Hopper.

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Handwheels for Adjustment of Spring Pressure on Infeed and Outfeed Top Rollers.

Swing Away Combined Grinder and Jointer Device.

Control Station

Mains Inlet.

High & Low Gear Selector Lever.

Handwheel for Raising and Lowering Table Manually.

Handwheel for Raising and Lowering Table Rolls.

Lubrication Points 'D'.
(See Page 4)

Three Speed Gear Selector Lever.

FIG.2. GENERAL FRONT VIEW OF MACHINE.

INSTALLATION

Machines are despatched from the works with all bright surfaces greased to prevent rusting. This can be removed by applying a cloth dampened in Paraffin or Turpentine to all greased parts.

FOUNDATIONS

Foundation bolts, 5/8" (16 mm) diameter, should be used to bolt machine down to the floor. If the Mill floor consists of solid concrete no special foundation is necessary. Rag type foundation bolts may be used in the positions shown on the Foundation Plan, Fig.3. Cut 4" to 6" square holes in the concrete for the bolts and finally after the machine has been carefully levelled these should be grouted in with liquid cement.

IMPORTANT: Extreme accuracy is required when a knife grinder is fitted, so it is essential that the machine be carefully levelled in both directions before finally bolting down. Packings should be inserted under the machine feet and the machine levelled using a spirit level across the thickening table and motor base plate in both directions. Check that the thickening table is free in its slides and that the cutterblock rotates freely in its bearings.

WIRING: For complete cabling instructions see wiring diagram at the end of the book.

LUBRICATION DATA.

Points 'A' - Give 4-6 depressions of grease gun every 3 months using Wadkin Grease Grade L.6.

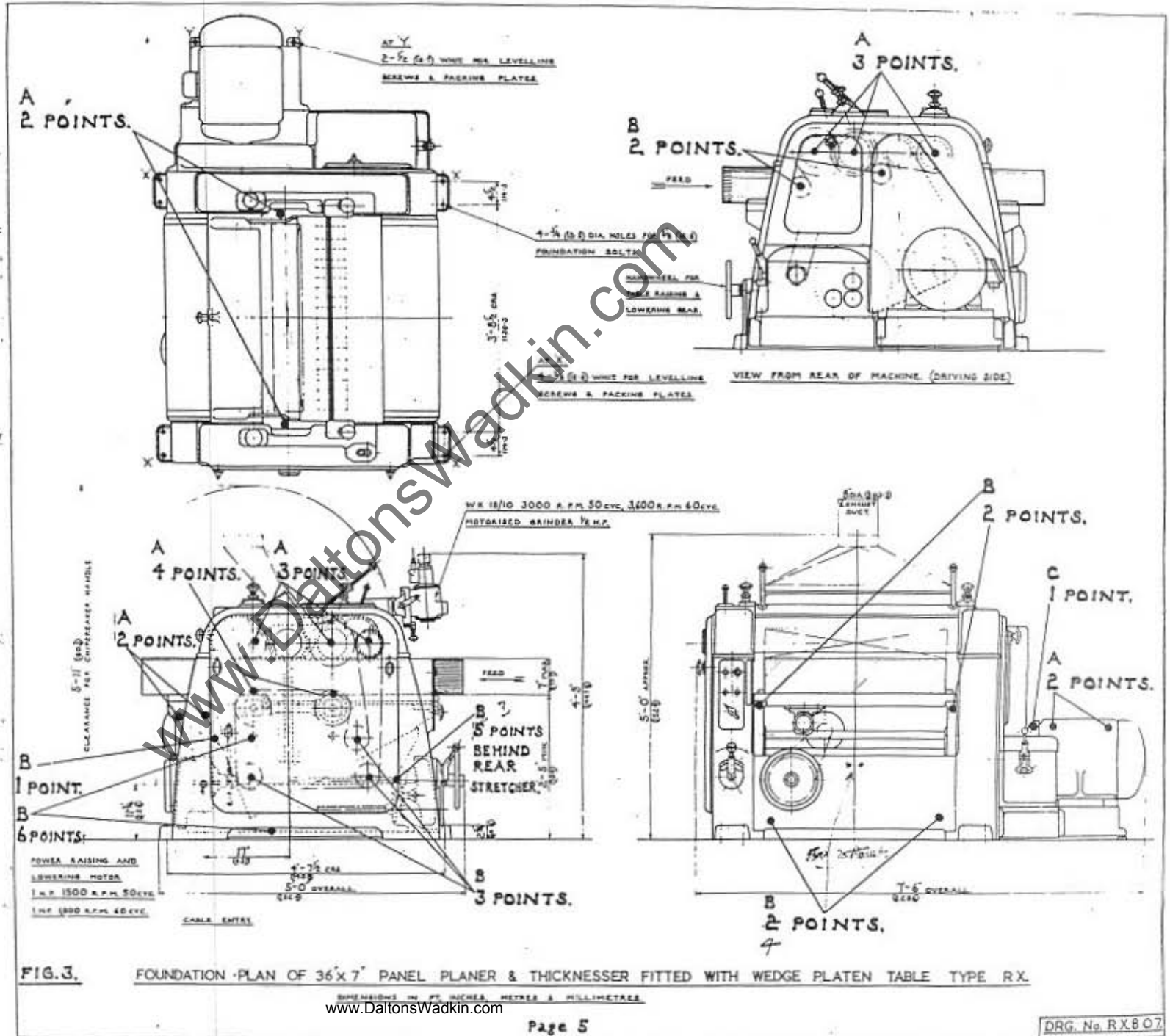
Points 'B' - Oil once weekly using Wadkin Oil Grade L.4.

Points 'C' - Inspect and top up to level of filling plug every 3 months, drain and refill using Wadkin Heavy Gear Oil Grade L.2.

Points 'D' - Remove covers shown on page 3 and every three months smear grease on gears enclosed in front stretcher.

Machine must be cleaned down weekly.

For list of equivalent oil and grease lubricants, see Page 6.



BALL BEARING LIST

<u>Position on Machine.</u>	<u>Makers No.</u>	<u>Quantity.</u>	<u>Bore Dia.</u>	<u>Outside Dia.</u>	<u>Width.</u>
Cutterblock.	SKF.2311	2	55 mm	120 mm	43 mm
Gearbox.	SKF.6208	2	40 mm	80 mm	18 mm
Gearbox.	SKF.6305	6	25 mm	62 mm	17 mm
Feed Rolls & Layshaft.	Torrington HR.2724X.	10	1.6875"	2.17/32"	1½"
Bottom Roll Drive Idler Sprocket.	Torrington BR.1820.	2	1.125"	1.5/8"	1¼"
Table Raising Screw.	SKF.O.10.	2	1¼"	2.3/32"	23/32"
Table Raising Shaft.	SKF.O.10.	2	1¼"	2.3/32"	23/32"
Handwheel Shaft.	SKF.O.10.	2	1¼"	2.3/32"	23/32"
<u>CHAIN SPARES.</u>					
Main Drive.	Renold Chain	No.110088	1" pitch 71 pitches including connecting link.		
Bottom Roll Drive.	Renold Chain	No.110088	1" pitch 140 pitches including connecting link.		
Power Raising and Lowering Drive.	Renold Chain	No.110038	3/8" pitch 119 pitches including connecting link.		
Top Roll Drive.	Renold Chain	No.110088	1" pitch 55 pitches including connecting link.		
Cutterblock Drive.	50 cycles - B.81 vee ropes. 60 cycles - B.75 vee ropes.				
Feed Drive.	½" x 28° Brammer Belt.				
<u>EQUIVALENT OIL AND GREASE.</u>					
	<u>Mobil Oil Co.Ltd.</u>	<u>Shell Mex & B.P. Ltd.</u>	<u>Caltex Lubricants.</u>		
Wadkin Gear Oil Grade L.2.	Mobil Oil DTE/BB.	Vitrea Oil 69	Meropa Lubricating Oil No.2.		
Wadkin Machine Oil Grade L.4.	Mobil Vactra Oil (Heavy Medium)	Vitrea Oil 33	Caltex Aleph Oil.		
Wadkin Ball Bearing Grease Grade L.6.	Mobilux Grease No.2.	Nerita Grease No.3.	Regal Starfax No.2 Grease.		

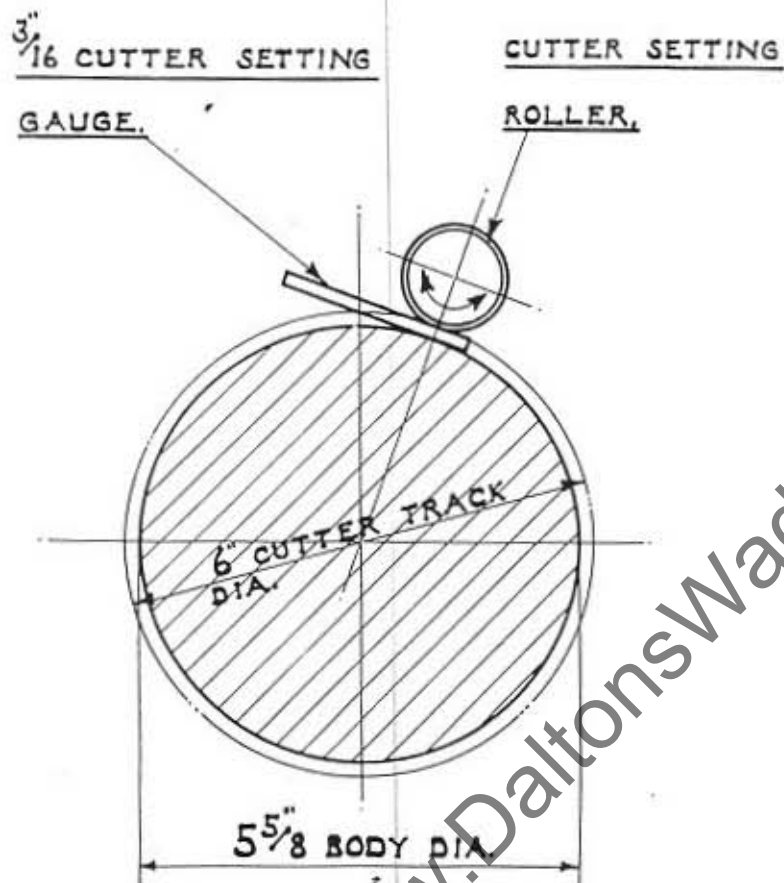
CUTTERBLOCK AND CUTTERS.

FIG.4.

provided. (See FIG. 4. above). Adjust the cutters by means of the special key so that all just rotate the setting roller when the cutterblock is rotated slowly by hand using the crank handle. Repeat this operation on all four cutters at both ends and in mid position. Lock cutters securely when set. Although this procedure enables cutters to be set accurately for most work, it may be desired to joint the cutters in position for fine finish at high feed speeds.

The cutterblock is of the 4 knife circular wedge type and is mounted on heavy type self-aligning ball bearings carried in dustproof housings, each mounted on main side frames. Cutters are supplied with machine, Wadkin Reference VP.14 (36.3/8" x 1 3/4" x 1/4") and should be kept in balanced sets of four. With sectional chipbreaker assembly and chip deflector swung away clear, insert cutters using special spanner and key supplied. Next swing into position the combined grinder and jointing device and set the setting roller provided to the correct distance, i.e. 3/16" from the body of the cutterblock using setting gauge

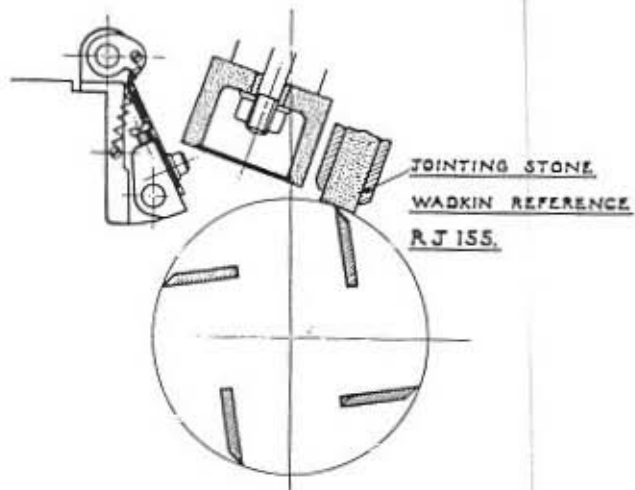


FIG.5.

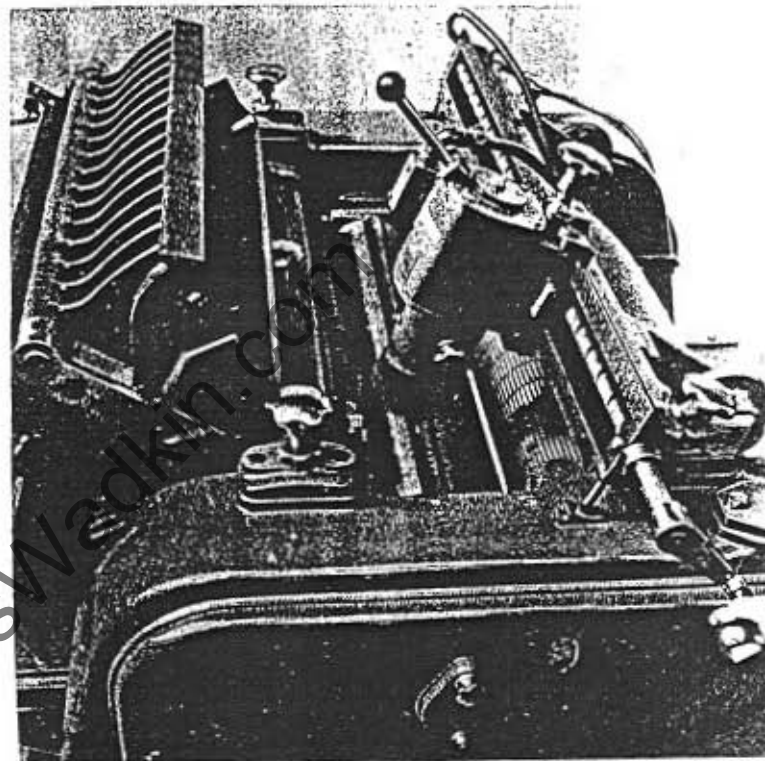


FIG.6.

JOINTING.

With jointing attachment in position (See Figs. 5 and 6) and cutters set as above, start up the cutterblock and allow to attain full speed, lower the jointer stone to just touch the cutting edges of the rotating knives and traverse the jointing stone three or four times across the entire length of the cutterblock. This operation will produce a slight flat or heel on the knives, thus ensuring that all four knives are cutting equally. The heel should never exceed $1/32''$ (1 Millimeter). Any increase on this figure causes a pounding effect on the timber and then regrinding becomes necessary.

bevel angles as shown.

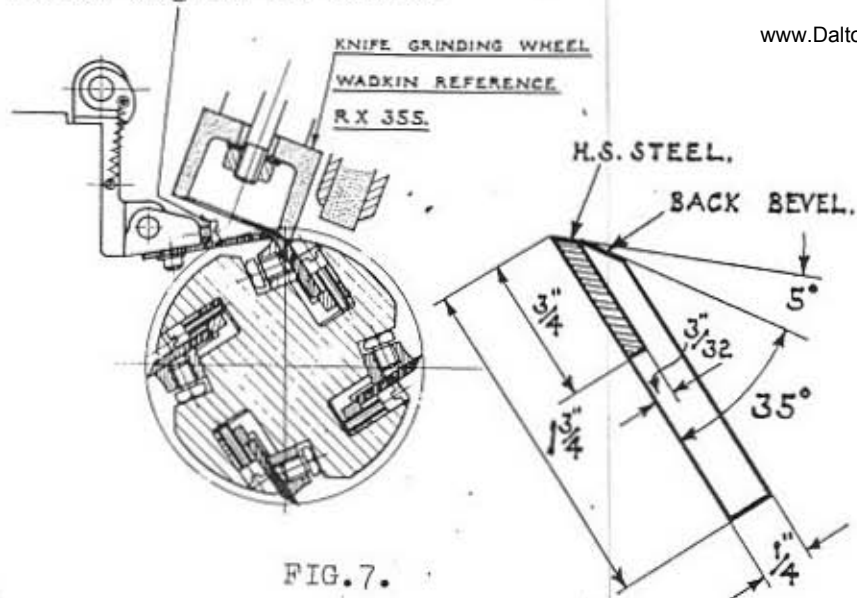
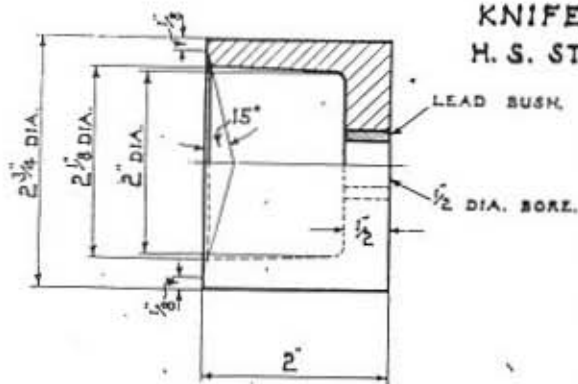


FIG.7.



KNIFE V.P.14.
H.S. STEEL ON IRON.

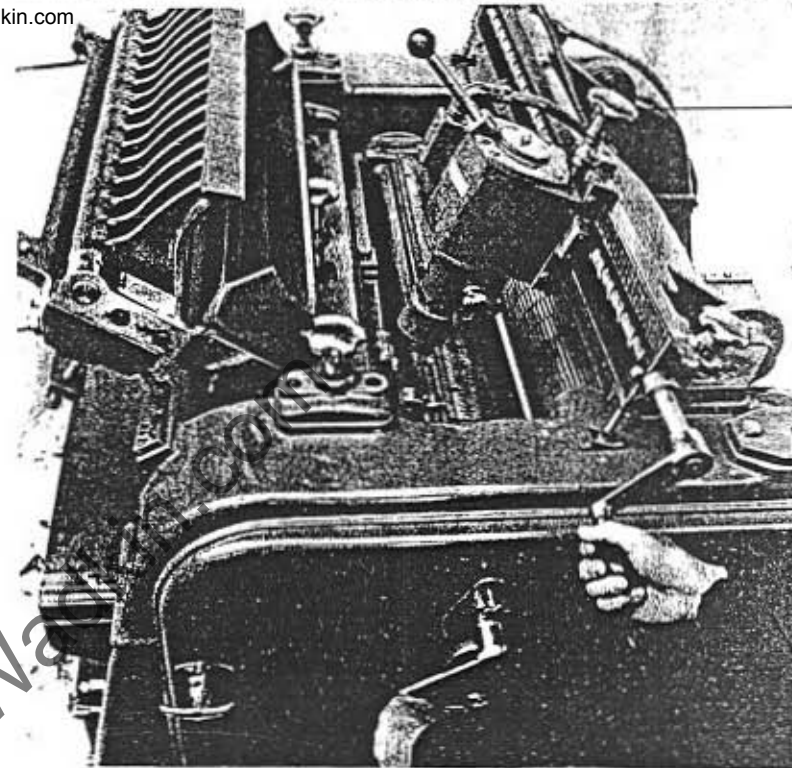
BAUXILITE VITRIFIED CUP WHEEL WADKIN REFERENCE
R.X 355.

FIG.8.

wheel in contact with the back bevel of the knife. Traverse the grinding wheel two or three times across the full length of the block. NOTE: The crank handle must be held firmly in the left hand during this operation as shown in Fig.9. This holds the indexing finger against the front of the knife. Repeat this operation until all four knives are ground at one setting and if necessary lower grinding wheel and take further cuts on each knife in turn until all bevels are evenly ground. Important: The indexing finger must be securely latched under the spring loaded pawl after use.

handwheel 'A' immediately wheel touches knife.

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GRINDING.

FIG.9.

The knives can be reground in the block using the motorised grinder supplied. Arrange machine as for jointing and release indexing finger as shown in Fig.7. Rotate cutterblock clockwise by hand using crank handle on the square extension which is accessible by swinging away the small coverplate attached to main panel cover as shown on Fig.9. The indexing finger will now rest in front of the knife. Start the grinder spindle and adjust the vertical slide screw to bring the grinding

FEED ROLLERS

TOP INFEED SECTIONAL ROLLER - Set $1/64$ " (.5 mm) below the cutter track (see Fig.10) and apply the necessary pressure by adjusting the star handwheels on the top of the infeed end of front and rear side frame covers. The maximum yield of each section is $5/16$ " (8 mm), but a total of $3/4$ " (19 mm) lift can be obtained on the complete roller.

TOP OUTFEED ROLLER - Set $1/32$ " (1 mm) below the cutter track (see Fig.10) and apply pressure by the star handwheels situated on the rear end of side frame covers.

TABLE ROLLERS - Set $1/64$ " (.5 mm) above centre table platen for hard and parallel boards but for badly twisted or soft wood, this figure should be increased to suit. Adjustment of these rollers is obtained by rotating the star handwheel situated at the infeed end of table as shown on Fig. 2.

SECTIONAL CHIPBREAKER ASSEMBLY

See Fig.10. All chipbreaker shoes are set in line before leaving Works and should not be interfered with. The stop screw 'A' controlling the lift of each screw is set to give a maximum lift of $1/4$ " (6.5 mm). The studs 'B' each fitted with large and small locknuts, are set to give a maximum drop from the cutter periphery of $1/64$ " (.5 mm). The stop screw 'C' is set to allow the whole chipbreaker unit to lift if the sectional infeed roller lift is increased beyond $1/4$ " (6.5 mm).

REAR PRESSURE BAR.

The rear pressure bar is set $1/32$ " (1 mm) below the maximum cutter track diameter, i.e. 6" (152 mm). (See Fig.10). As grinding operations are performed however, the star handwheel 'D' must be adjusted to suit any reduction in the diameter of the cutter track. This adjustment raises or lowers the nose of the pressure bar, compensating for the reduction in cutter track diameter, resulting from repeated jointing or grinding operations.

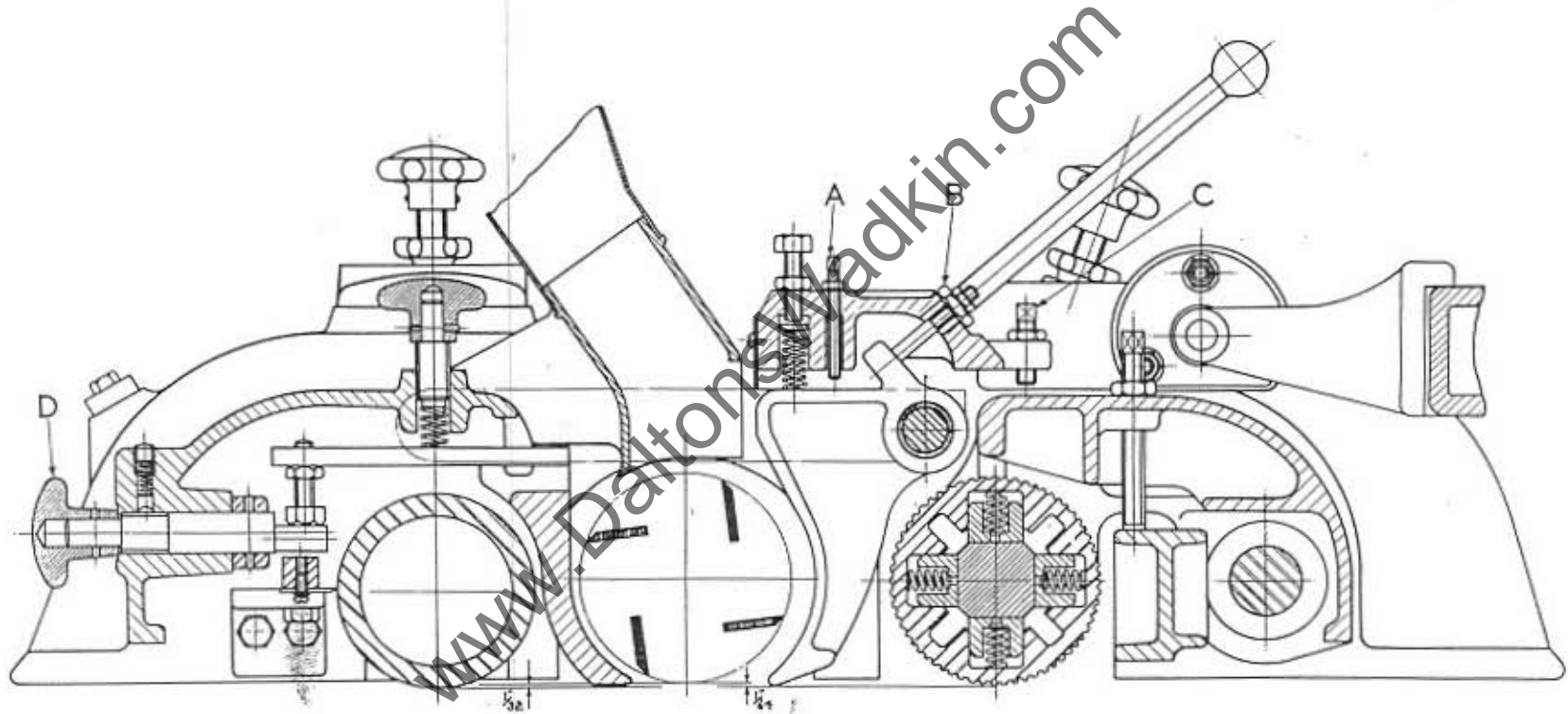


FIG. 10.

ELECTRICAL INSTALLATION AND OPERATING INSTRUCTIONS.

Fit isolating switch near machine, unless supplied by Wadkin Ltd., to special order, so that the electrical gear may readily be isolated for inspection purposes. Bring supply cables to isolating switch and to L1, L2, L3 at contactor through conduit which should be screwed into the machine and secured by means of locknuts. Ensure that the direction of rotation is correct before putting the machine into service, to reverse rotation interchange L1 and L3 at contactor.

FAILURE TO START.

1. Electric supply is not available at the machine.
2. Fuses have 'blown' or have not been fitted.
3. Isolating switch has not been closed.
4. Stop button has not been released from the lock off position.

OPERATING INSTRUCTIONS.

Close isolating switch.

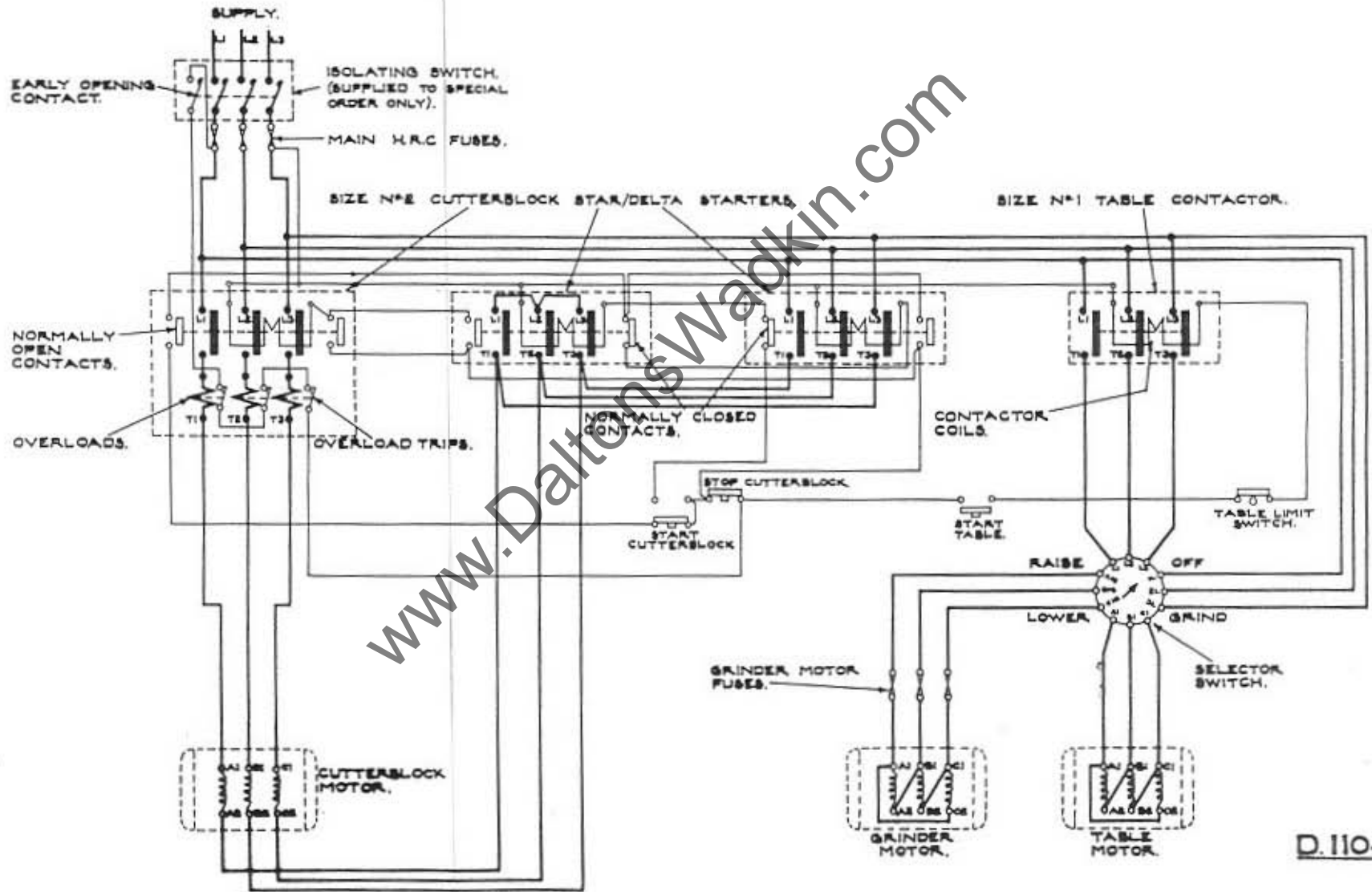
To start cutterblock:- Hold 'start cutterblock' button depressed until motor has reached full speed then release. To stop cutterblock:- Press 'stop cutterblock' button. To lock off cutterblock:- Press and turn 'stop cutterblock' button, this must be released before a start can be made. To raise or lower table, turn selector switch to the position required and hold 'start table' button depressed. To operate the grinder motor, turn selector switch to the 'grind' position.

OVERLOAD.

Should the machine stop due to overload wait for a short time to allow the coils to cool then start in the usual manner. The overloads are set at these works at 'Auto' for automatic reset after tripping, if set at 'Hand' the plunger on the overload assembly should be depressed to reset.

GENERAL.

Check the earth connection from time to time. Users are recommended to display in an appropriate position in the maintenance department a Wadkin Electrical Maintenance Instruction Card, No.356, which is issued gratis on application.



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