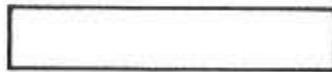


Modifications are made to these books from time to time and it is important therefore that only the book sent with the machine should be used as a working manual



PLEASE INSERT SERIAL NUMBER OF MACHINE

INSTRUCTION MANUAL FOR

DM

Hollow Chisel Mortiser

Specification

Largest chisel which can be used in softwood.	1"square	25.4mm
Largest chisel which can be used in hardwood.	¾"square	19mm
Timber capacity of machine with 4"(101.6mm) chisel.	10"deep	8"wide. 254mm x 203mm
Timber capacity of machine with 6½"(165mm) chisel.	7½"deep x 8"wide.	190.5mm x 203mm
Size of table.	22" x 6"	558.8mm x 152.5mm
Longitudinal movement of table.	19"	482mm
Lateral movement of table.	4"	101.6mm
Speed of spindle.	3,000rpm (50 cycles)	
	3,600rpm (60 cycles)	
Horsepower of motor.	3 phase.	2
	1 phase.	1
Approx. floor area.	2'-10" x 5'2"	863.6mm x 1574.8mm
Height of work table.	27¾"	705mm
Approx. net weight.	672 lb.	303 kg.
Approx. gross weight.	840 lb.	380 kg.
Shipping dimensions.	44 cu.ft.	1.25cu.m.

For Replacement Parts, Tools & Accessories,

Contact:-

BURSGREEN (DURHAM),

FENCE HOUSES, HOUGHTON-LE-SPRING,

TYNE & WEAR, ENGLAND DH4 5RQ

Telephone: Durham (0385) 852385

Telex: 53441 (BURDRM G)

SAFETY

- 1. Read Instruction Book.**
- 2. Securely Lock Cutters.**
- 3. Set Guards Correctly.**
- 4. Select Correct Speed.**
- 5. Use Feeding Devices Where Possible.**
- 6. Refer To HSW Booklet No.41. (in UK) For Safety In The Use Of Woodworking Machinery.**



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 COMPLY WITH THE ABOVE RULES IN HIS OWN INTEREST. WE WOULD BE PLEASED TO ADVISE ON THE SAFE USE OF OUR PRODUCTS.

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 handwheels are removed and packed individually. Remove and re-assemble as shown in fig. 1.

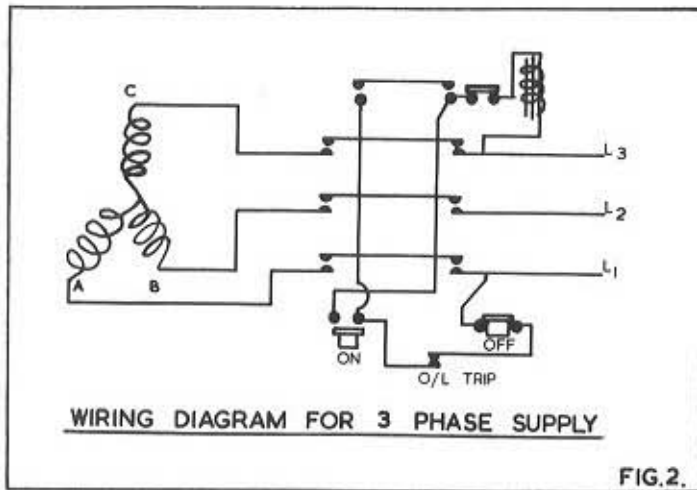


FIG.2.

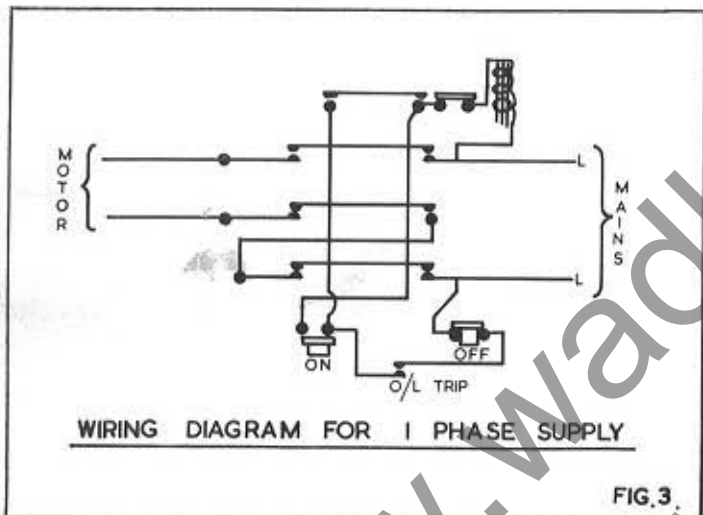


FIG.3.

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 the 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 size of cable is used to give the correct voltage at the starter. Too light a cable will give a voltage drop at the starter and may damage the motor.
3. Check the main line fuses are of the correct capacity. See list below.
4. Connect the line leads to the appropriate terminals. See fig. 2 for 3 phase supply and fig. 3 for 1 phase supply.
5. Check all connections are sound.
6. Check the rotation of the motor for the correct direction. If this is incorrect, reverse any two of the line lead connections for 3 phase supply.

VOLTAGE.	PHASE	HP	SWG TINNED COPPER WIRE	AMPS
220	3	2	22	24
380/420	3	2	25	15
550	3	2	25	15
200/250	1	1	19	38

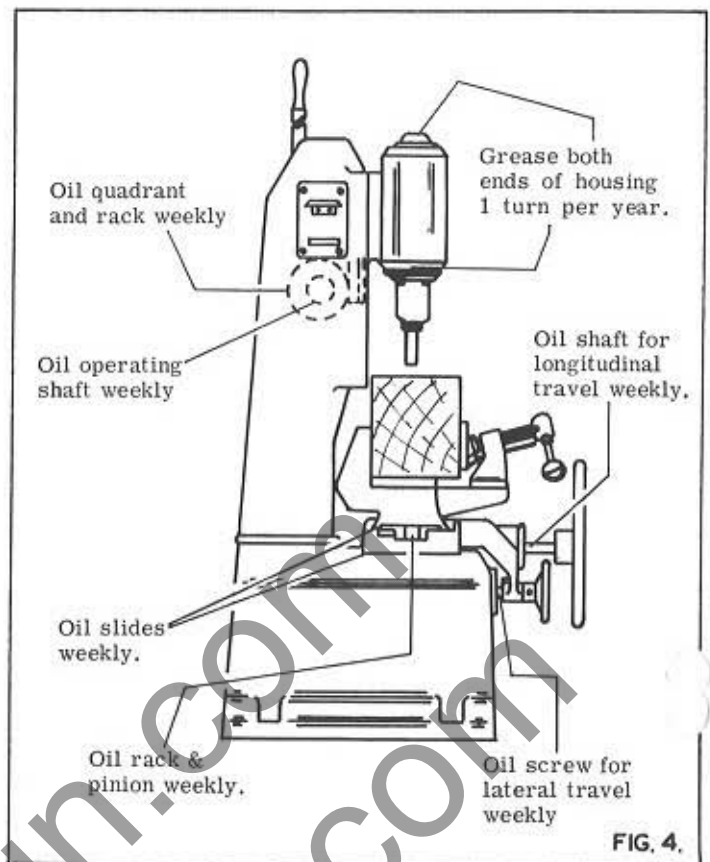


FIG.4.

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
TYPE OF GREASE RECOMMENDED SHELL AL VANIA 3.

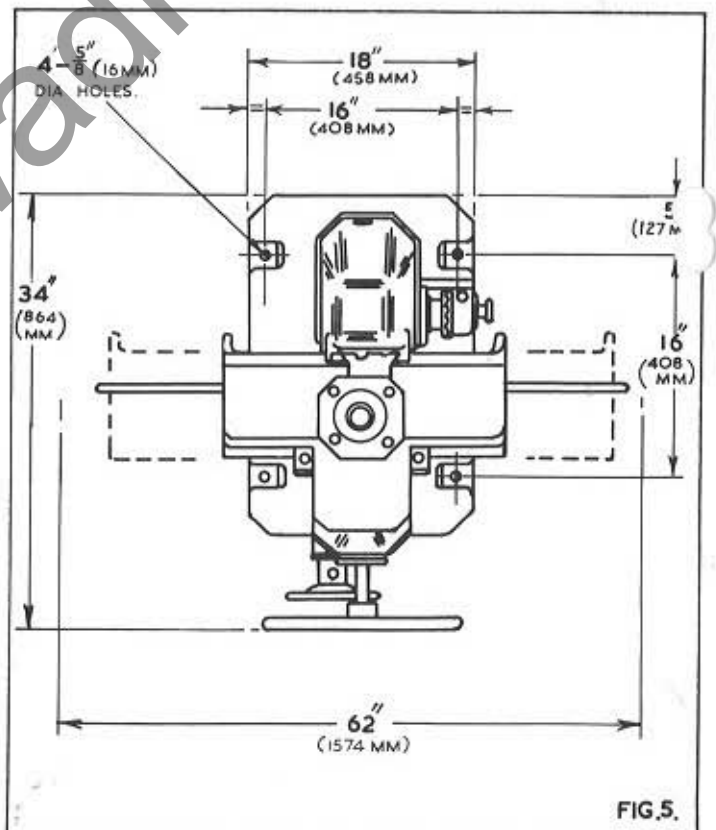


FIG.5.

FOUNDATION

See fig. 5 for bolt positions and clearances required. When installing the machine level the table by packing under the base

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

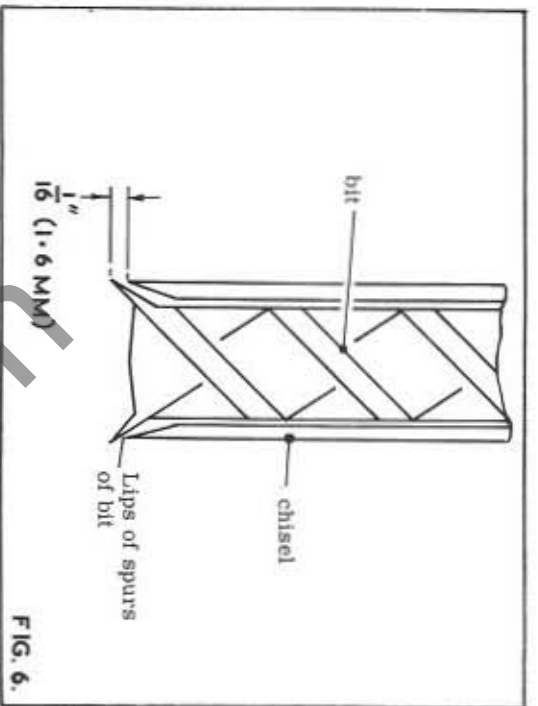


FIG. 6.

MORTISING, HOW TO SET CHISEL

The lips or spurs of the bit should not be allowed to touch the cutting edge of the chisel but should be set $1/16''$ (1.6 mm) below the chisel points, as shown in fig. 6, so that the bit cuts before the chisel.

The bit is held in the machine spindle by means of the low set screw "A", in fig 7. The bore of the spindle is $1\frac{1}{2}''$ (12.7 mm) and the machine is supplied with bushes so that all sizes of bits can be fit up to the maximum size required for $1''$ (25.4. mm) square chisel.

The chisel is held in a special bracket below the machine spindle and is locked in position by means of the hexagon nut "B", in fig 7. The bore of the bracket is $1\frac{3}{8}''$ (35 mm) and a set of bushes is supplied so that all sizes of chisel can be used up to a maximum size of $1''$ (25.4 mm) square.

To set the chisel correctly, select the bush required and fit bush to chisel, push the chisel complete with bush into the chisel holder bracket until the shoulder comes into contact with the chisel bracket. The chisel should also be positioned square to the rear of the table. When correctly positioned lock securely in position by means of the hexagon nut "B". Position the bit so that the lips protrude $1/16''$ (1.6 mm) below the chisel points and lock the bit tightly in position. Care should be taken to ensure that the bit is securely locked so that it cannot be forced against the cutting edge of the chisel resulting in a fractured tool.

Do not jerk the tool into the work but give steady pressure withdraw the tool occasionally from the work to allow the

to clear itself of chips.
The maximum chisel which can be used in soft wood is $1\frac{1}{2}''$ (38 mm) square (25.4. mm) and $\frac{3}{4}''$ (19 mm) square in hardwood.

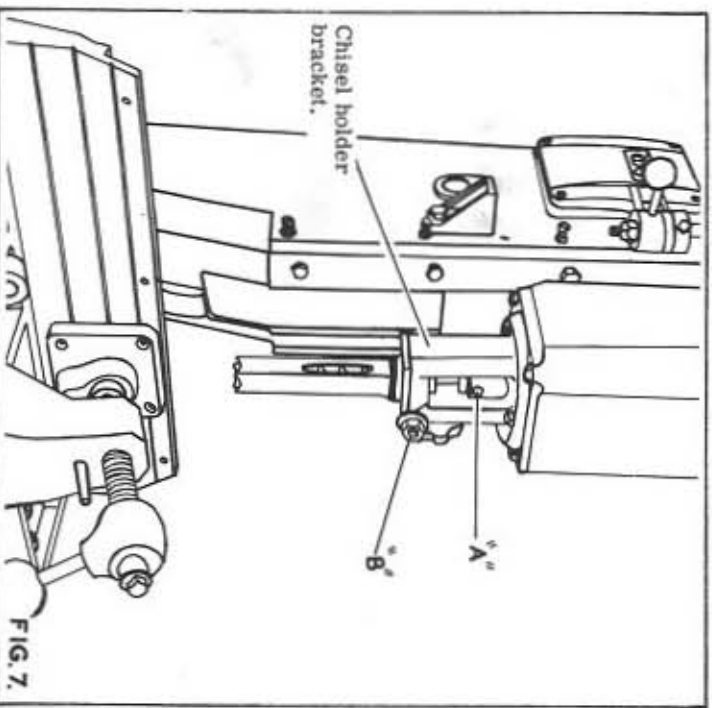


FIG. 7.

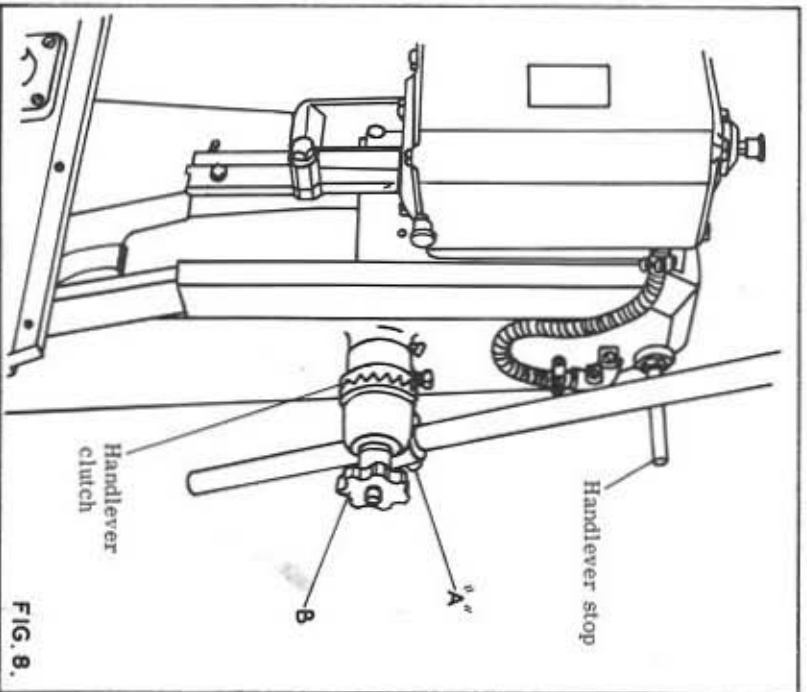


FIG. 8.

HANDLEVER

The handlever to the right of the machine is used to control the movement of the head. The handlever is provided with dual adjustment. Firstly to obtain the correct leverage the square head bolt "A" in fig 8, should be loosened and the lever adjusted through the boss until the correct leverage is obtained. When set relcock bolt "A".

Secondly unnecessary movement of the head after the chisel has started the work can be eliminated by releasing the plastic handlewheel "B" and adjusting the clutch to the required position. Finally secure the clutch by tightening handlewheel "B".

A stop is provided to the handlever which allows the handlever to return to one position only. This in turn restricts the movement of the head depending on the positioning of the clutch.

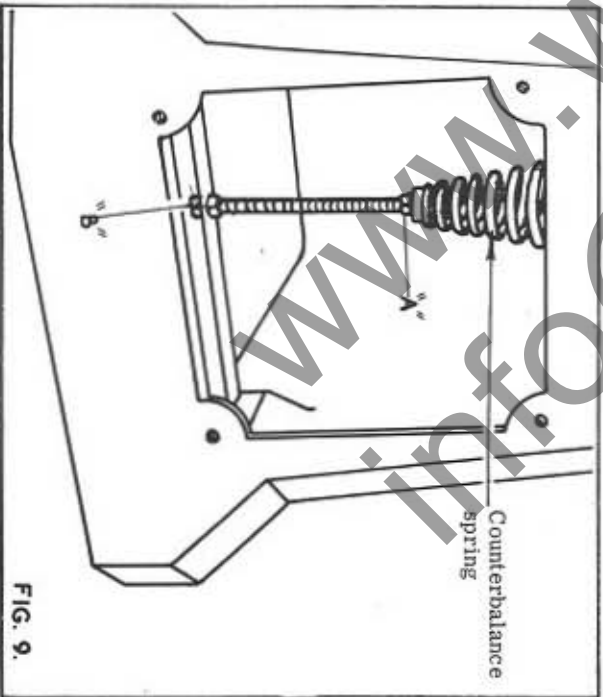
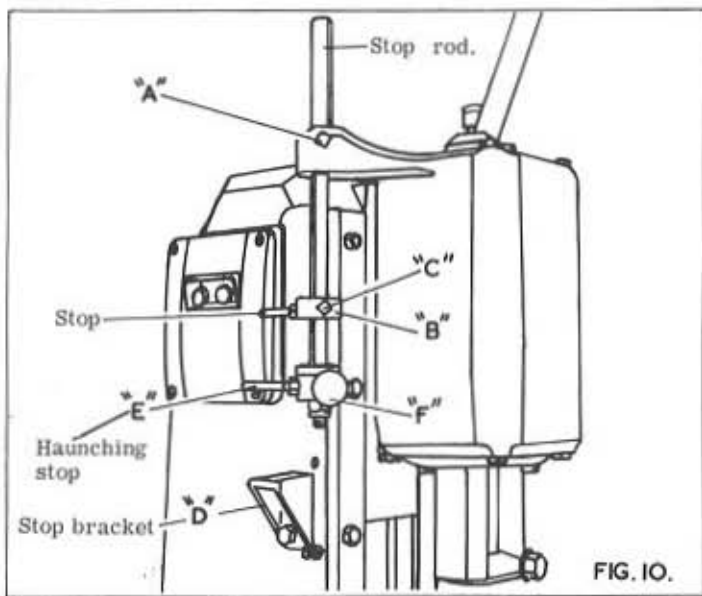


FIG. 9.

COUNTERBALANCE.

The mortising head is counterbalanced by means of a spring connected by a chain to a cam on the handlever shaft. The tension of this spring is set for normal counterbalancing at the works but may be reduced or increased by adjusting nut "B" shown in fig. 9. The lock nut "A" should be secured when desired tension has been given.

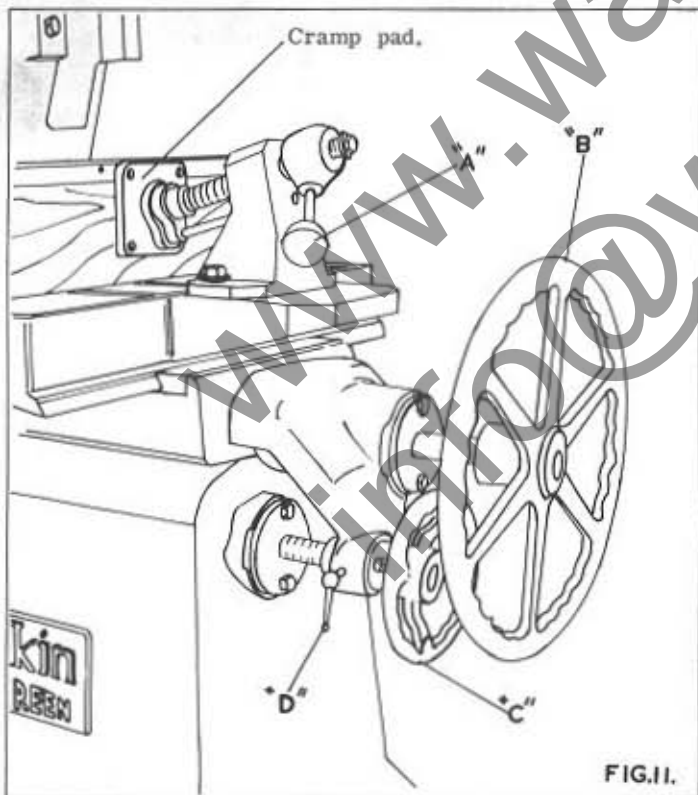


DEPTH STOP.

A stop to control the travel of the head is fitted to the left hand side of the head stock. Also incorporated on the stopbar is a haunching stop. The stop bar is locked in the headstock by means of the square head bolt "A" in fig 10. The sliding collar "B" is locked on the stop bar by the square head bolt "C". The stop on the collar hits against the stop bracket "D". This stop controls the depth of the mortise.

The swivelling stop "E" has two positions one where it strikes on the stop bracket "D" and one where it clears the stop bracket and allows the stop on the sliding collar to strike the stop bracket. The swivelling stop is adjusted by the handle "F". Thus the swivelling stop also controls the stroke of the head allowing haunched mortisers to be cut.

Stop rods are provided on the table to control the length of the mortise.



WORK CRAMP.

The work cramp has 3 positions on the machine table allowing a maximum width of timber of 8" (203 mm) between the cramp face and the rear of the table.

The cramp is controlled by the lever "A" in fig. 11.

The cramp face is drilled to receive a wooden pad to prevent possible marking of the workpiece.

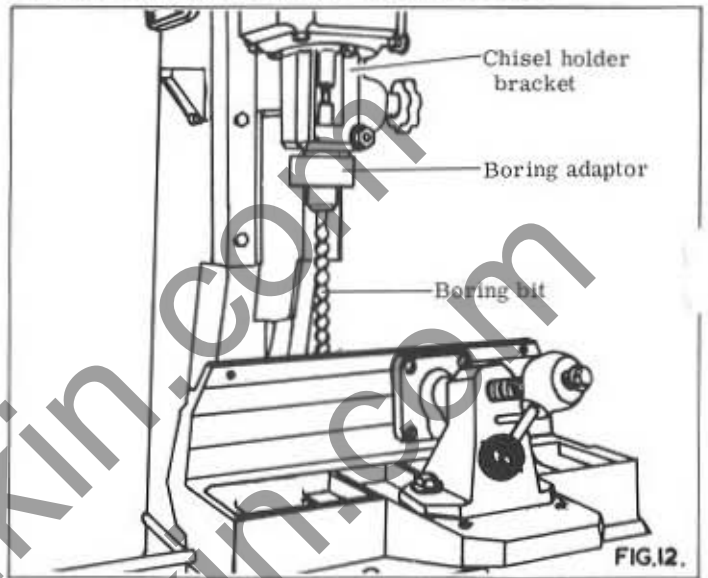
TABLE CONTROLS.

The table has both longitudinal and lateral movements. The longitudinal movement is controlled by means of handwheel "B" in fig. 11, and has a maximum movement of 19" (482 mm). The table has positive stops in the side which can be set to control the length of mortise to be cut.

The lateral movement is controlled by means of the handwheel "C" and has a maximum movement of 4" (101.6 mm). The table can be locked in position laterally by means of the ball lever screw "D".

BORING

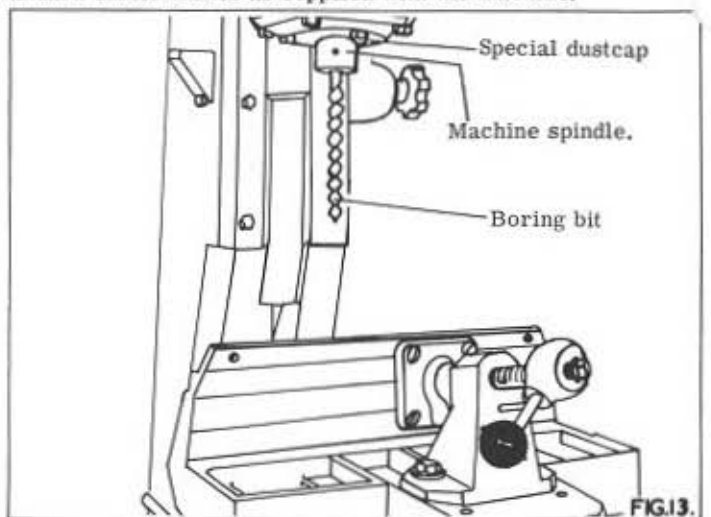
There are two methods by which this machine can be used for boring. The maximum diameter of boring bit is 2" (50.8 mm) dia and the maximum diameter of all shanks is $\frac{1}{2}$ ".



Method 1.

This method is used for quick conversion. The adaptor consists of an inner spindle whose shank fits into the machine spindle. This spindle runs through a bearing in a housing and is secured in the chisel holder bracket. The adaptor is fitted to the machine in an identical manner to that of a chisel and is shown in position in fig 12. Care should be taken to ensure that the adaptor is securely in position, both in the chisel holder bracket and machine spindle before use.

The spindle of the adaptor is bored $\frac{1}{2}$ " dia and accepts standard chisel bushes as supplied with the machine.



Method 2.

This method requires the removal of the chisel holder bracket and this is to be replaced by a special dustcap which is supplied to special order. Care should be taken when fitting special dustcap that dirt does not get into the bearing.

The boring bits now fit direct into the machine spindle. A three jaw drill chuck of $\frac{1}{2}$ " (12.7 mm) capacity with $\frac{1}{2}$ " dia shank can be supplied to special order. This also can be used for boring.

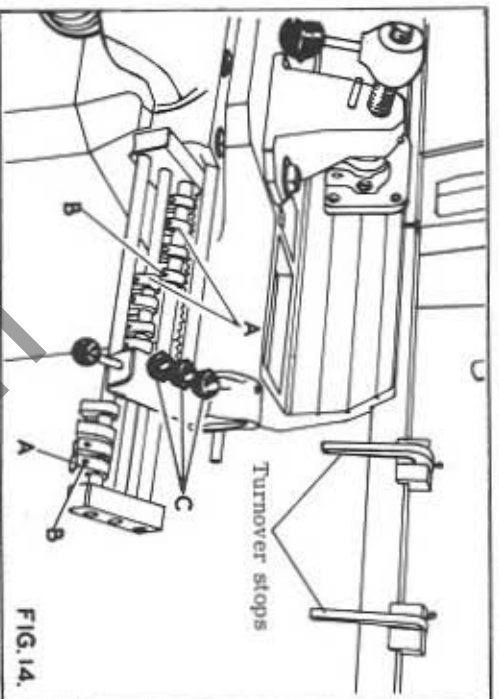


FIG. 14.

SETTING OUT ATTACHMENT & TURNET STOP (EXTRA)

The machine can be supplied with a setting out attachment and turret stop for rapid and accurate mortising or boring on short or long runs, as shown in Fig. 14.

The setting out attachment consists of steel angle stop bars fitted to the rear of the mortiser table on either or both sides of the table. A number of adjustable turnover stops are fitted to these stop bars and are adjustable throughout the full length by means of a ball lever screw.

The turret stop consists of short circular stop bars extended out to the right and are attached to the intermediate cross slide. Each of the three stop bars are fitted with four adjustable collars "A" which can be locked in any position, by means of the hexagon head bolt "B". The necessary spinner is provided. Three spring loaded stop collars "C" attached to the end of the table locate against the adjustable collars "A".

The turnover stops on either or both sides of the table are set to position the mortise in relation to the end of the timber whilst the spring loaded stop "C" and adjustable collars "A" control the length of the mortise to be cut.

Thus the combination of these two sets of stop bars allows a wide choice of accurately dimensioned and located mortises to be cut and hunched without need for slow and laborious marking out.

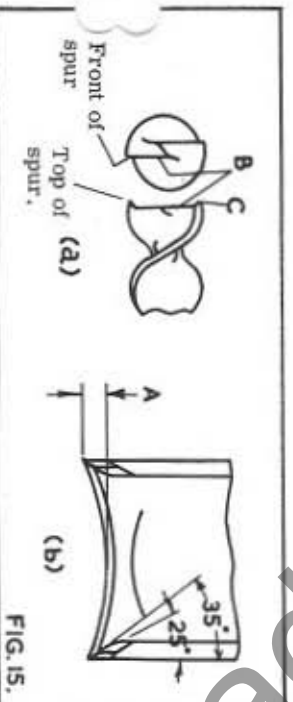


FIG. 15.

SHARPENING SQUARE CHISELS AND BITS

This chisel must be sharpened on the inside only and the cutting edges should be shaped to give a curve, as shown in fig. 15 (b) and maintained in shape as new. The bevels of the cutting edges must meet exactly at the corners. The depth "A" i. e. the distance from the corner point to the curve at the centre should be about one-eighth the diameter of the size of the chisel. The cutting edges must be as short as possible and fitted to an angle of about 35°, as shown in fig. 15 (b). The angle behind the cutting edge must then taper off at an angle of 25°. It is recommended that the special tool which can be supplied should be used to ensure the correct angle on all four cutting edges of the chisel.

It is most important that the outside of the chisel is never filed as this will reduce the size of the mortise and tend to bind in the timber.

The bit is sharpened by filing above the cutting edges "B", keeping the file at an angle of 15°. They must be kept in a straight line with the inside points extending past the centre as shown. Sharpen the spurs "C" on the top and front only never on the outside. Keep them in line with the cutting edges "B".

When a bit has been worn away by frequent resharping replace it by a new one. Using a short bit may lead to the chisel being split at the cutting edges. Use a file of very fine grade for sharpening both chisels and bits.

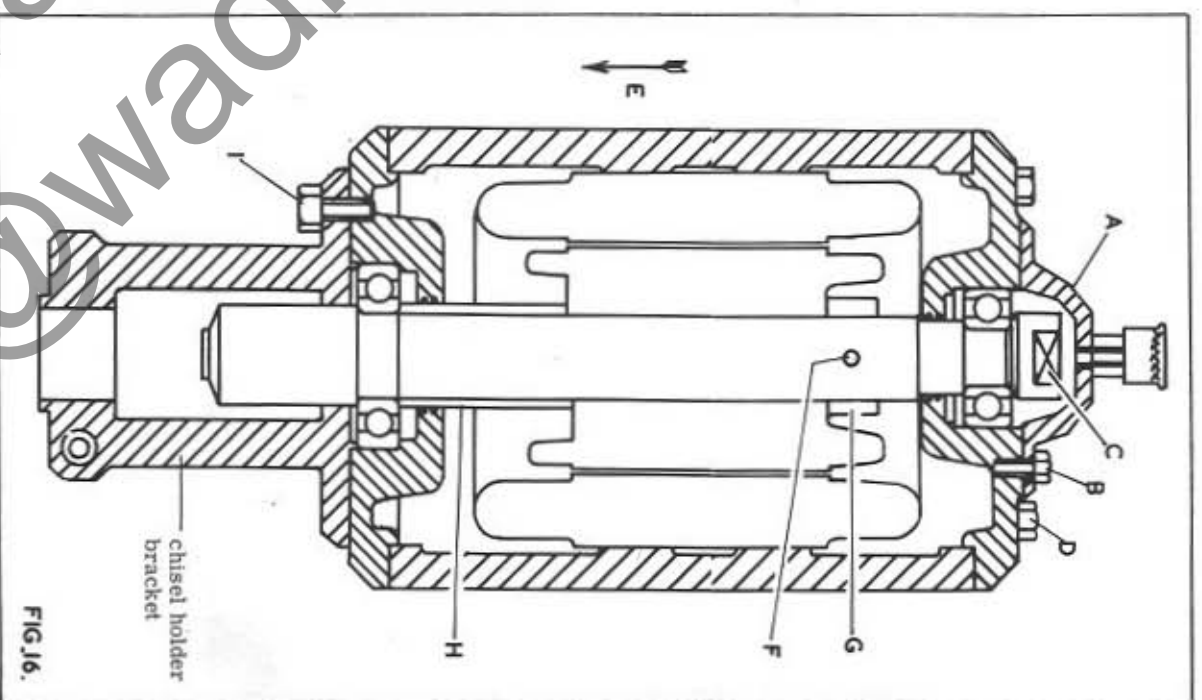


FIG. 16.

HOW TO CHANGE BEARINGS

To remove the spindle from the machine, so that the bearings can be renewed the undermentioned procedure should be followed:-

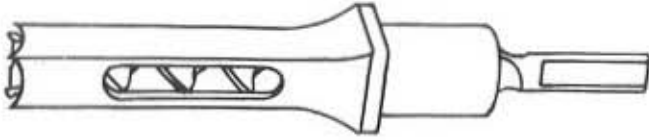
1. Isolate the machine electrically.
2. Remove the top dust cap "A" in fig. 16 by removing the two hexagon head bolts "B".
3. Remove locknut "C" (right hand thread) from the top of the machine spindle.
4. Remove the 4 hexagon head bolts "D" securing the top bearing housing to the motor carcass.
5. Remove the 4 hexagon head bolts, securing the bottom bearing housing to the motor carcass. Care should be taken to support the machine spindle when removing bolts. The complete spindle assembly can now be removed in the direction of arrow "E". Care should also be taken not to damage the threads on the spindle end.

6. The top bearing housing can now be removed from the motor carcass and the bearing removed and replaced by the new bearing.

7. The spindle assembly which has been removed can now be dismantled on a bench.

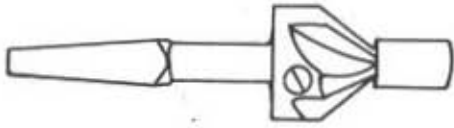
8. Remove the taper pin "F" securing the collar "G" to the spindle.
9. Remove the rotor from the spindle and the rotor key. Slide off the distance piece "H".
10. Remove the 3 hexagon head bolts "I" securing the chisel holder bracket to the bottom bearing housing.
11. Drive spindle from the bottom bearing housing in the direction of arrow "E". The bearing may come out with the spindle or remain in the bearing housing, but in either case can be readily removed.

To re-assemble the head unit reverse the above procedure taking care to ensure that no dirt or grit enters the bearings. Before running the machine after the bearings have been renewed always ensure they have been greased.

EXTRA EQUIPMENTBORING EQUIPMENTHOLLOW MORTISE CHISELS AND BITS

The standard sizes of tools which can be supplied to order are as listed below:-

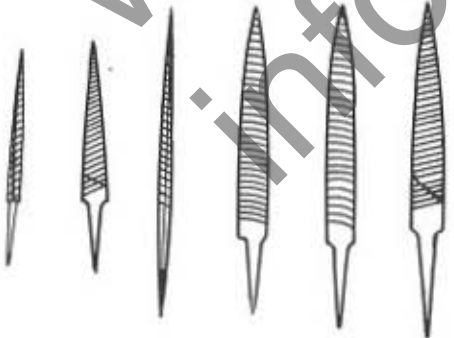
To cut square	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
Length of chisel blade.	4"	4"	4"	6 1/2"	6 1/2"	6 1/2"	6 1/2"
Dia of bit shank							
Dia of chisel shank							

SHARPENERS FOR HOLLOW MORTISE CHISELS

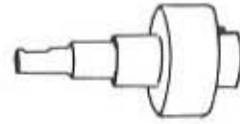
The tool illustrated above, has been produced to enable mortise chisels to be kept correctly sharpened. It is for use in an ordinary Joiners brace and is mounted centrally with the axis of the chisel by means of a pilot which fits the bore of the chisel. This ensures that all four cutting edges are sharpened to the correct angle. The corners only require finishing off sharp with a file. The sharpeners are available in three sizes with interchangeable loose pilots for each size to suit different chisels.

No. 1 Set.	1/4" to 3/8" chisel with 3 pilots
No. 2. Set	3/8" to 11/16" chisel with 5 pilots.
No. 3. Set	3/4" to 1" chisel with 3 pilots.

Also available are sharpeners as shown above but with fixed pilots, the range of these are 1/4" to 1" rising in increments of 1/16".

FILES FOR MORTISE CHISELS AND BITS

This set of special files are recommended for sharpening the square chisel and bits. They are of very fine grade and shaped to efficiently sharpen the corners of chisels after use of the sharpeners, illustrated above.



The adaptor illustrated above is to convert the machine quickly to accept boring bits up to 2" (50 mm) dia, with 1/2" dia shanks. This is desirable but not essential equipment for boring operations.

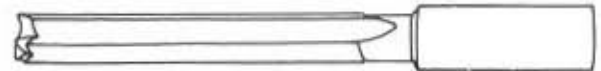


The special dustcap illustrated above can be supplied to convert the machine to accept boring bits up to 2" (50.8 mm) dia with 1/2" dia shanks. This dustcap replaces the chisel holder bracket. This is essential for boring operations when the special boring adaptor is not used.



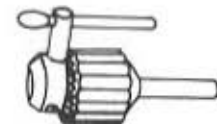
Jennings bits:- These are available in the sizes shown below they all have 1/2" dia shank, 2" (50 mm) long

1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1", 1.1/8", 1 1/4", 1.3/8", 1 1/2", 1.5/8", 1 3/4", 1.7/8", 2"



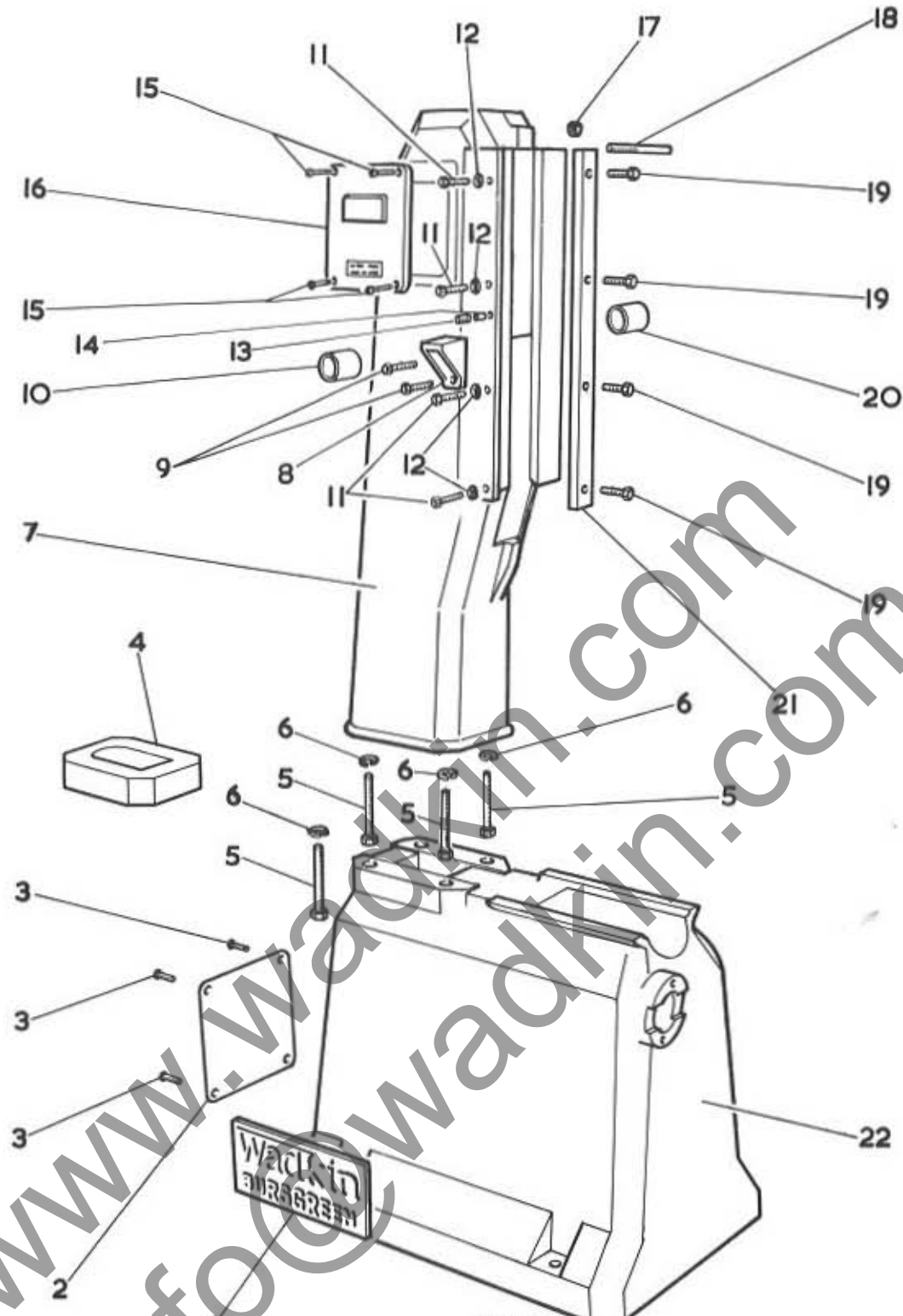
Three wing boring and slotting bits:- all bits have 1/2" dia shanks.

1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1".



A three jaw drill chuck of 1/2" (12.7 mm) capacity as illustrated above, can be supplied for use with this machine.

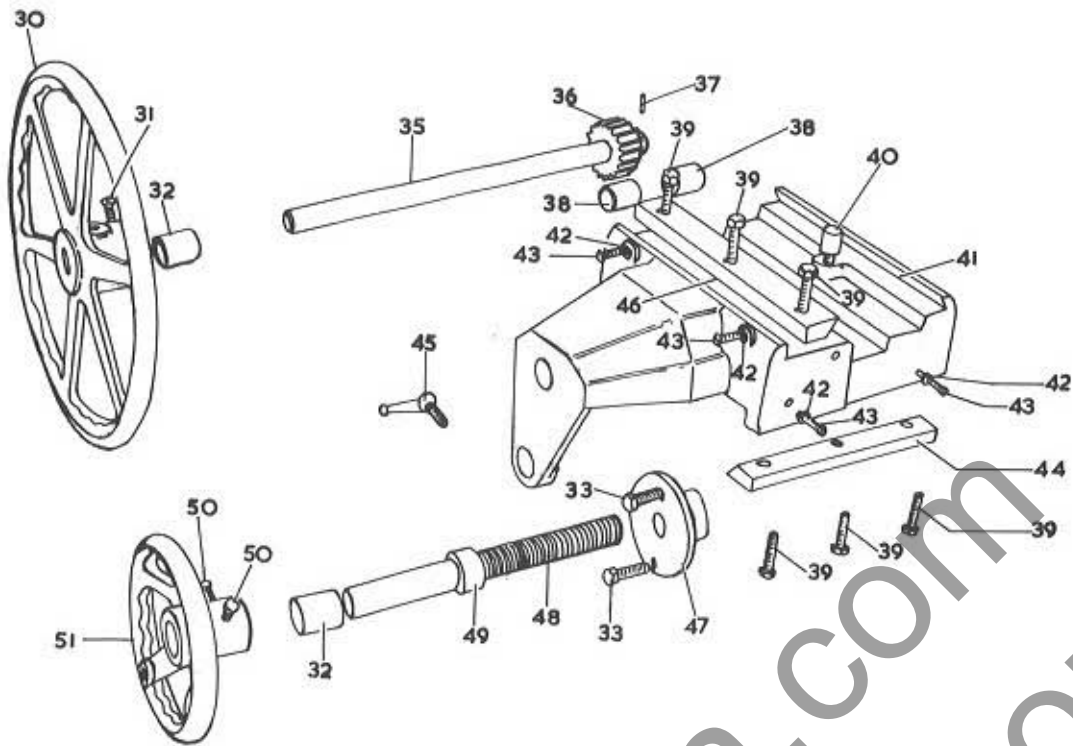
A special dustcap for boring has to be used in conjunction with the chuck unless the special boring adaptor is fitted.



TRUNK ASSEMBLY

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

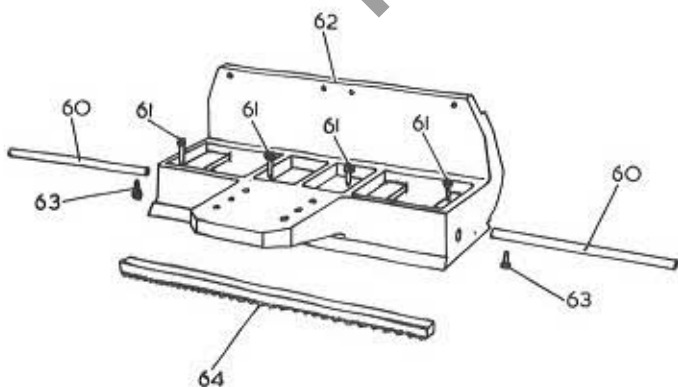
Ref. No.	Part No.	No. Off	Description	Ref. No.	Part No.	No. Off	Description
1	B-SK-1096	1	Nameplate	11		4	M10 x 30 long hex head bolt
2	B-1014/87	1	Backplate for base	12		4	M10 Nut
3		4	M8 x 10 long round head screw	13		1	M10 x 12 long socket set screw
4	B-1014/86	1	Trunk packing piece (Special)	14	A-1014/82	1	Brass bot for head
5		4	M16 x 50 long hexagon head bolt	15		4	M6 x 20 long cheese head screw
		4	M16 x 100 long hexagon head bolt (Special when packing piece is fitted)	16	44ADS/FO A.T.3	1	M.E.M. Starter (3 phase, 50 cycles)
6		4	16 spring washer			1	Brook Starter (3 phase, and 1 phase, 60 cycles)
7	D-1014M/2	1	Trunk		82ADS/FO	1	MEM starter (1 phase, 50 cycles)
8	A-1014/101	1	Stop bracket	17		1	M16 nut
9		2	M10 x 25 long hexagon head bolt	18	A-1014M/28	1	Handlever stop
10		1	1" i/d x 1 1/4" o/d x 1 1/2" long oilite bush	19		4	M10 x 40 long hexagon head bolt
				20		1	1 1/2" i/d x 1 3/4" o/d x 2" long oilite
				21	B-1014/31	1	Adjusting strip for trunk
				22	E-1014/1	1	Base



INTERMEDIATE SLIDE ASSEMBLY

Ref. No.	Part No.	No. Off	Description	Ref. No.	Part No.	No. Off	Description
30	B-1014M/18	1	15" dia handwheel	41	C-1014M/200	1	Intermediate slide for table
31		2	M10 x 20 long dog point screw	42		4	M6 locknut
32		2	1" i/d x 1 1/4" o/d x 1 1/2" long oilite bush	43		4	M6 x 30 long hex head bolt
33		2	M10 x 25 long hexagon head bolt	44	A-1014/37A	1	Vee strip for lateral slide
35	A-1014/24	1	Shaft for longitudinal travel	45	B-S-1-B	1	3/8" whit ball lever screw
36	A-1014/41	1	Pinion for longitudinal travel	46	A-1014/37B	1	Vee strip for longitudinal slide
37		1	No. 3 taper pin	47	A-1014/13	1	Nut for cross travel
38		2	1" i/d x 1 1/4" o/d x 3/4" long oilite bush	48	A-1014/25	1	Shaft for lateral travel
39		6	M10 x 30 long hexagon head bolt	49	A-1014/40	1	Collar for lateral shaft
40	A-1014M/39	1	Table stop peg	50		2	M10 x 20 long dog point screw
				51	B-1014M/17	1	7" dia dished handwheel

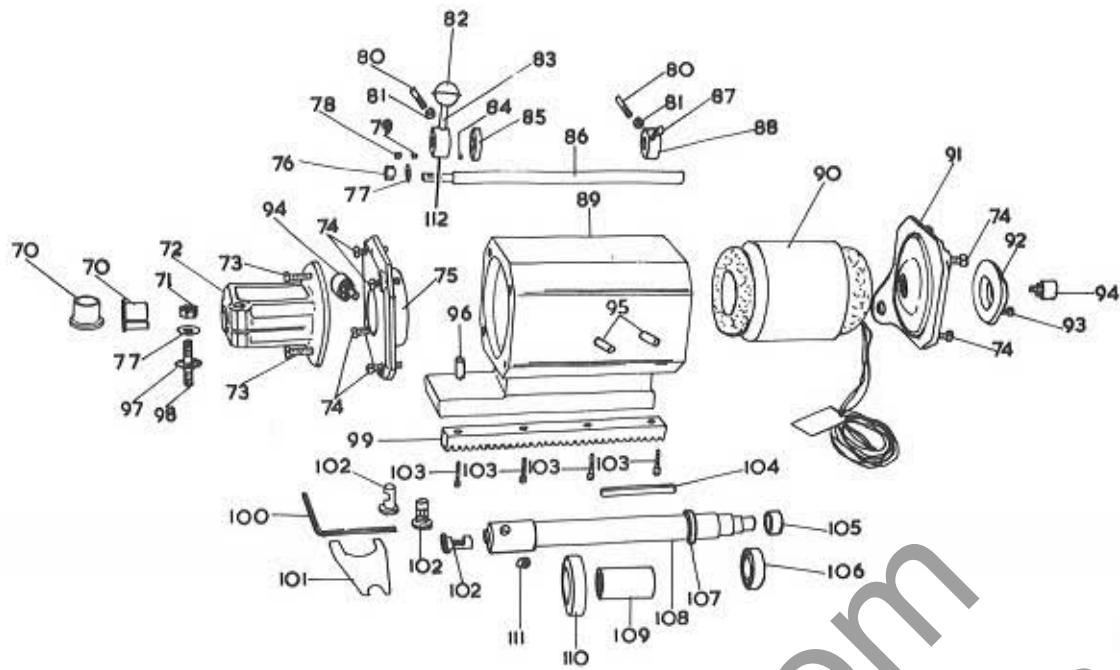
TABLE ASSEMBLY



Ref. No.	Part No.	No. Off	Description
60	A-1014/38	2	Longitudinal stop rod
61		4	M10 x 50 long hexagon head bolt
62	D-1014M/4	1	Sliding Table
63		2	M10 x 20 long hexagon head bolt
64	B-1014M/33	1	Rack for table

NOTE:-

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

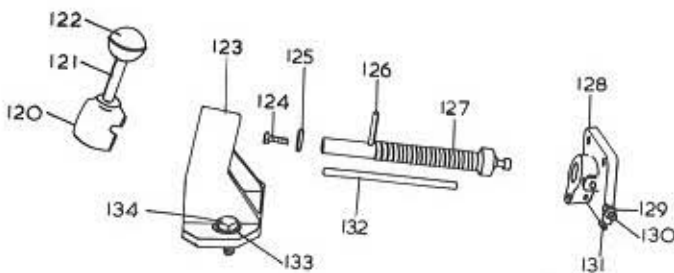


HEAD ASSEMBLY

Ref. No.	Part No.	No. Off	Description	Ref. No.	Part No.	No. Off	Description
70	A-1014/42	2	Bush for chisel holder (1-13/16" bore 1 - 1.13/16" bore) (Special for Canadian machines 1-5/8" bore, 1 - 3/4" bore, 1 - 1.1/8" bore)	91	C-1014M/95	1	Top endplate and stop carrier
				92	A-1014/9	1	Dust cap
				93		2	M6 x 20 long hexagon head bolt
				94		2	1/8" gas kingfisher grease stauffer
71		1	M12 nut	95	A-1014/83	2	Stator retaining pip screw
72	C-1014M/6	1	Chisel Holder	96		1	8 x 30 long fluted dowel
73		3	M10 x 25 long hexagon head bolt	97		1	1/2" B. S. F. Washer
74		8	M10 x 30 long hexagon head bolt	98		1	M12 x 60 long stud
75	B-1014M/7	1	Bottom endplate	99	B-1014/32	1	Rack for motor
76		1	M12 aerotight nut	100		1	1/4" A/F equal arm hexagon wrench
77		2	12 washer	101	A-1014/57	1	Key for Bushes
78		1	M10 x 10 long hollow set screw	102	A-1014M/181	3	Adaptor bushes for augers (1-3/16" bore, 1 - 1/4" bore, 1-3/8"bore) Special for Canadian machines 1-3/16"bore, 1 - 1/4" bore, 1-19/64"bore)
79	A-1014/97	1	Haunch stop location spring	103		4	M6 x 30 long socket cap screw
80	A-1014M/170	2	Stop pin	104		1	5/16" wide x 4 3/8" long key
81		2	M10 locknut	105	A-1014/62	1	Nut for spindle
82		1	1" dia plastic ball M10	106	L. S. 9	1	Hoffmann bearing
83	A-1014M/103	1	Handle for haunch stop collar	107	A-1014/30	1	Rotor locking collar
84		1	S. K. F. 5/16" dia steel ball	108	B-1014/23	1	Spindle
85	A-1014M/98	1	Haunch stop location collar	109	A-1014/64	1	Distance piece for spindle
86	A-1014M/102	1	Column for stops	110	L. S. 12	1	Hoffman bearing
87		2	M10 x 20 long hex head bolt	111		1	1/4" gas x 1/2" long hollow set screw
	A-1014M/99	1	Adjustable stop collar	112	A-1014M/104	1	Haunch stop collar
	C-1014M/5	1	Motor carcase				
		1	Brook rotor and stator unit, frame 22/18, 2H. P., 3,000 r. p. m. (3 phase, 50 cycles)				
		1	Brook rotor and stator unit, frame 22/18 2H. P. 3,000 r. p. m. (3 phase, 60 cycles)				
		1	Brook rotor and stator unit, frame 22/18 1 H. P. 3000 r. p. m. (1 phase 50 cycles)				
		1	Brook rotor and stator unit, frame 22/18, 1 H. P. 3,600 r. p. m. (1 phase 60 cycles)				

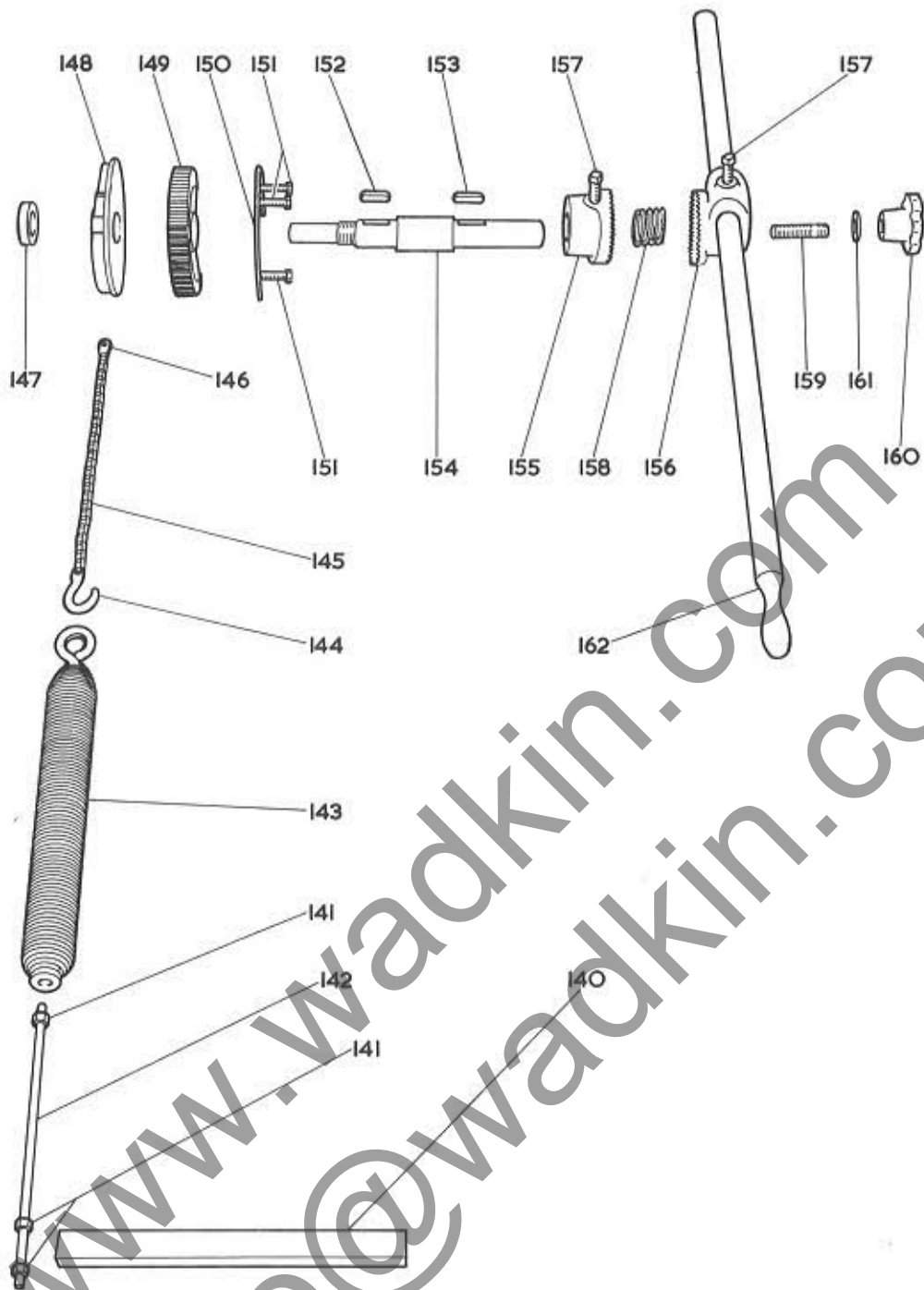
NOTE:-
When ordering replacement parts quote part no. and serial number of the machine.

CLAMP ASSEMBLY



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

Ref. No.	Part No.	No. Off	Description
120	A-1014M/19	1	Boss for clamp screw lever
121	A-1014M/36	1	Lever for clamp
122	Patt No. 28	1	1 1/2" dia plastic ball M12
123	B-1014/10	1	Clamping screw bracket
124		1	M10 x 20 long hexagon head bolt
125	A-1014/72	1	Limit washer for clamp screw
126		1	5/16" dia x 2" long fluted dowel (Flutes central)
127	A-1014M/34	1	Clamp screw
128	B-1014M/11	1	Clamp plate
129		1	M10 nut
130	A-1014M/65	1	Dogpoint screw for clamp
131		1	M10 x 20 long hollow set screw
132	A-1014/35	1	Clamp guide rod
133		2	12 washer
134		2	M12 x 30 long hexagon head bolt



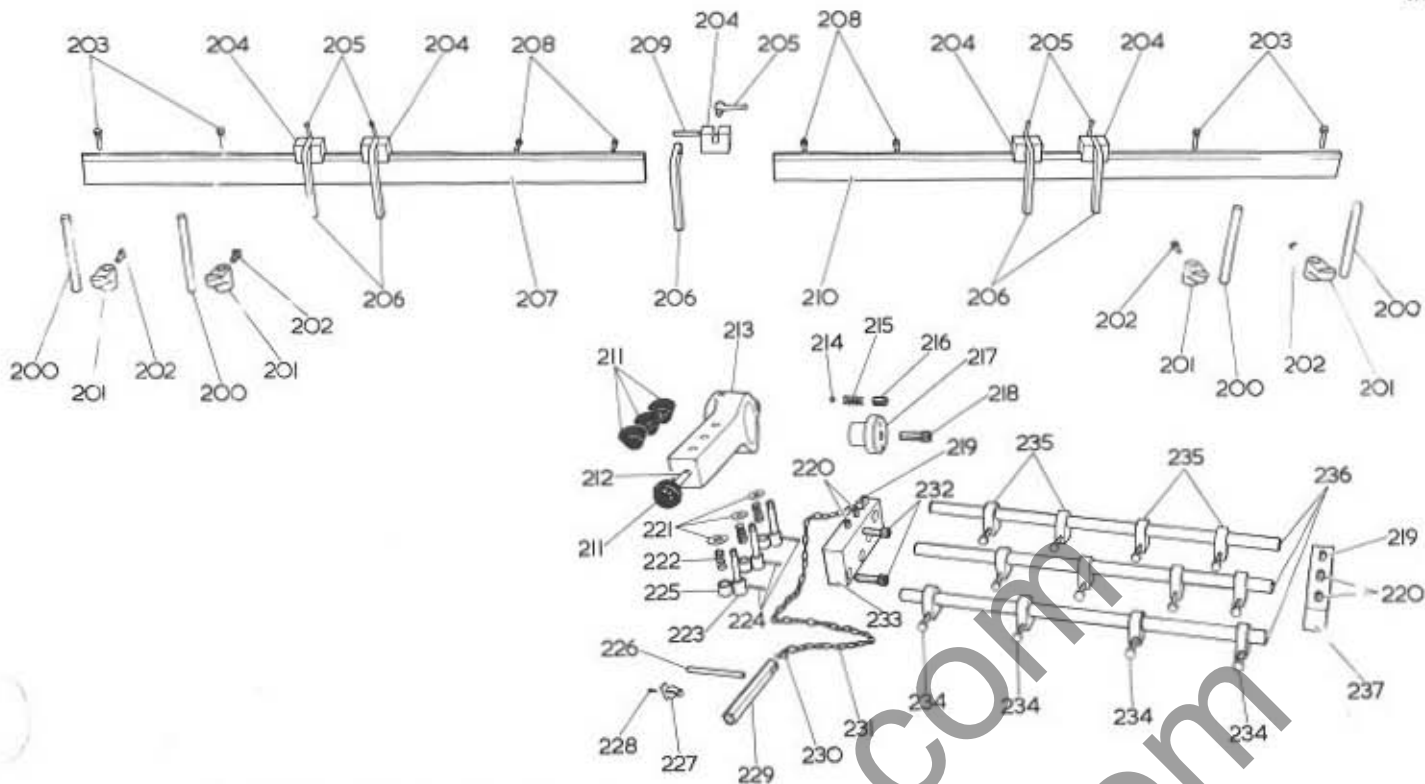
HANDLEVER SHAFT ASSEMBLY

NOTE:-

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

Ref. No.	Part No.	No. off	Description
140	B-1014/58	1	Suspension bar
141		3	M10 whit nut
142	A-1014M/92	1	Suspension adjustment rod
143	B-1014M/46	1	Balance Spring
144	A-1014/45	1	Hook for chain
145		26	110044 chain rivets
146	A-1014M/44	1	Link screw for chain
147	A-1024/44	1	Spindle locknut
148	C-1014M/15	1	Cam for counterbalance chain
149	B-1014M/14	1	Quadrant for head
150	B-1014/16	1	Quadrant plate
151		3	M8 x 12 long hexagon head bolts

Ref No.	Part No.	No. Off	Description
152		1	3/8" wide x 1 1/2" long key
153		1	3/8" wide x 1 3/4" long key
154	B-1014M/26	1	Handlever shaft
155	B-1014M/21	1	Inside clutch
156	B-1014M/22	1	Outside clutch
157		2	M12 x 30 long hexagon head bolt
158	A-1014/47	1	Spring for clutch
159		1	M16 x 90 long stud
160	Patt. no. 14	1	3" dia. plastic handwheel, M16T, R, T.
161		1	16 washer
162	B-1061/66	1	Handlever



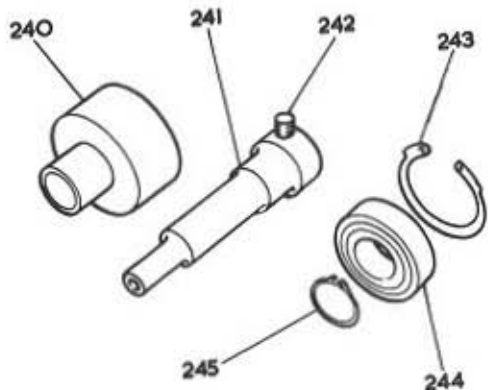
SETTING OUT ATTACHMENT & TURRET STOP EXTRA

NOTE:-

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

REF. NO.	Part No.	No. Off	Description	Ref. No.	Part No.	No. Off	Description
200	A-1014M/117	4	Support Bar bracket	218		1	M16 whit x 35 long socket cap screw
201	B-1014M/20	4	Support brackets	219		1	M8 x 12 long hollow set screw
202		4	M10 x 20 long square headbolt	220		4	M8 x 20 long hollow set screw
203		4	M10 x 20 long socket cap screw	221		3	10 washer
204	A-1027/83	6	Turn over stop holder	222	A-1014/118	3	Spring for table stop plunger
205	B-S-1B	6	3/8" whit ball lever screw	223	A-1014M/108	3	Plungers for stop
206	B-1014M/106	6	Turn over stop	224		3	3 dia. x 20 long groverlok spring dowel
207	B-1014/107	1	Left hand stop bar for setting out attachment	225		3	10 I/D x 16 O/D x 20 long oilite bush
208		4	M8 x 25 long socket cap screw	226	A-1014/114	1	Handle for box spanner
209		6	8 dia. x 50 long hardened ground dowel	227		1	Terry's clip size No. 80/0
210	B-1014/107	1	Right hand stop bar for setting out attachment	228		1	1/8" fluted dowel
211		4	1" dia. x M10 spherical plastic knob	229	A-1014/115	1	Box spanner for stops
212	A-1014M/103	1	Handle for stop bracket	230	A-1014/116	1	Pin for box spanner chain
213	B-1014M/96	1	Plunger stop bracket	231		2	M10 x 30 long socket cap screw
214		1	SKF 3/8" dia. steel ball	232		1	18" long Oval link chain
215	A-1810/74	1	Location spring for plunger stop bracket	233	B-1014M/105	1	Stop bar and plate
216		1	M12 x 12 long hollow set screw	234		12	M6 x 25 long hexagon head bolt
217	A-1014M/109	1	Pivot pin for stop bracket	235	A-1014M/111	12	Stopblock
				236	A-1014/110	3	Stop bar
				237	A-1014M/112	1	Stop bar tie plate

QUICK CHANGE BORING ADAPTOR (EXTRA)



Ref No.	Part No.	No. Off	Description
240	A-1014/89	1	Boring attachment steel bearing housing
241	A-1014/88	1	Boring attachment extension spindle
242		1	1/2" gas x 1/2" long hollow set screw
243		1	62mm internal circlip
244	88506	1	SKF "Sealed for life" bearing
245		1	30mm external circlip

NOTE:-

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

SPECIFICATION

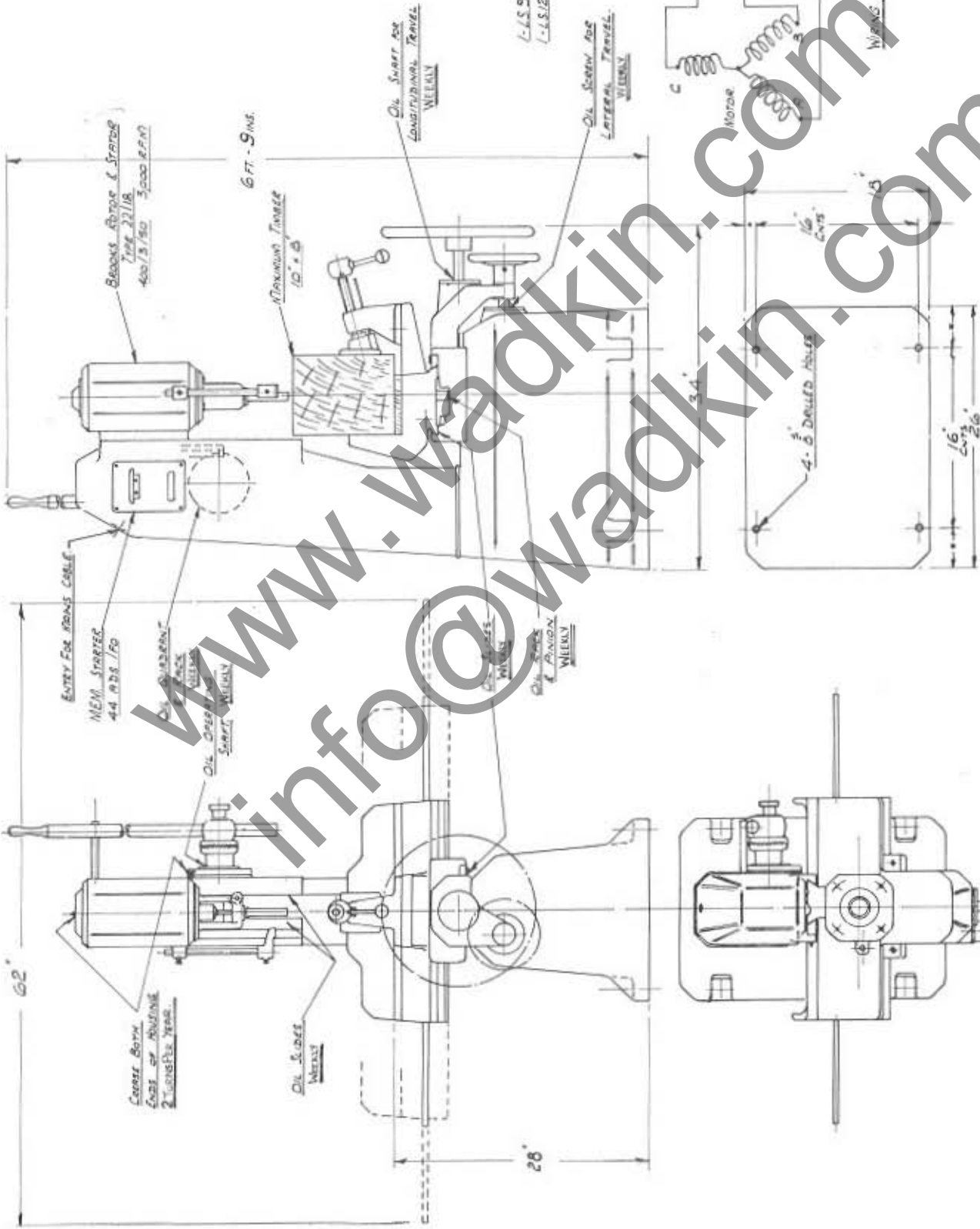
LARGEST CURVE USED IN SOFT MOLD. . . 1/32 INCH
 LARGEST CHISEL USED IN HARDWARES. . . 3/4 INCH
 SIZE OF TABLE. . . 22" x 6"
 CAPACITY OF TABLE. . . 10 DEEP x 8 WIDE
 HEIGHT OF TABLE. . . 28"
 LATERAL MOVEMENT OF TABLE. . . 4"
 LONGITUDINAL. . . 1 1/2"
 SPEED OF CRUEL SANDS. . . 3000 RPM
 HORSE POWER OF MOTOR. . . 2 HP
 GROSS WEIGHT. . . 640 LBS
 NETT. . . 672 LBS
 CASE SIZE. . . 5'-3 1/2" x 6' x 5 1/2"
 CUBE CAPACITY. . . 43 CU FT

NOTE

OIL ALL MOVING PARTS WEEKLY
 TYPE OF OIL. AMBEREN 125
 * GREASE. SHELL RUBINA 3
 WHEN INSTALLING LEVEL TABLES BY
 PACKING UNDER BASE

BRANDS

(-L.S.D. (HORIZONTAL) - RLS 7 (S.K.P.) } OF EQUIPMENT
 (-L.S.I.R. (.) - RLS 10 (.) }



TITLE	HOLLOW CASEL MORTISING M/C	DESIGNED (Durham) 4/24
TYPE	MOTOR NOTES	DATE
OUTLINE Dwg	DW	10-11-52
DRAWN BY	J.H.R.	DRG. NO.
CHECKED BY	J.H.R.	C-1014 / FD.

Sharpening Square Chisels.

Chisels to be sharpened should be secured in vice and sharpened as follows:-

A sharpening tool FIG - A - has been produced to enable mortise chisels to be kept correctly sharpened. It is for use in an ordinary joiners brace and is maintained central with the axis of the chisel by means of a pilot which fits the bore of the chisel. This ensures that all four cutting edges are sharpened to the correct angle.

After using sharpening tool the shaded sections of the chisel as shown in FIG - B - may be filed back to ensure better penetration of the wood. NOTE:- It is most important that the outside of the chisel is never filed as this will reduce the mortise size and tend to bind in the timber.

Sharpeners are available in three sizes with interchangeable loose pilots for each size, to suit different chisels as follows:-

No. 1 SET	$\frac{1}{4}$ " to $\frac{3}{8}$ " chisel with 3 pilots.
No. 2 SET	$\frac{3}{8}$ " to $\frac{11}{16}$ " chisel with 5 pilots.
No. 3 SET	$\frac{3}{4}$ " to 1" chisel with 3 pilots.

Also available are sharpeners as shown above but with fixed pilots, the range of these are $\frac{1}{4}$ " to 1" rising in increments of $\frac{1}{16}$ ".

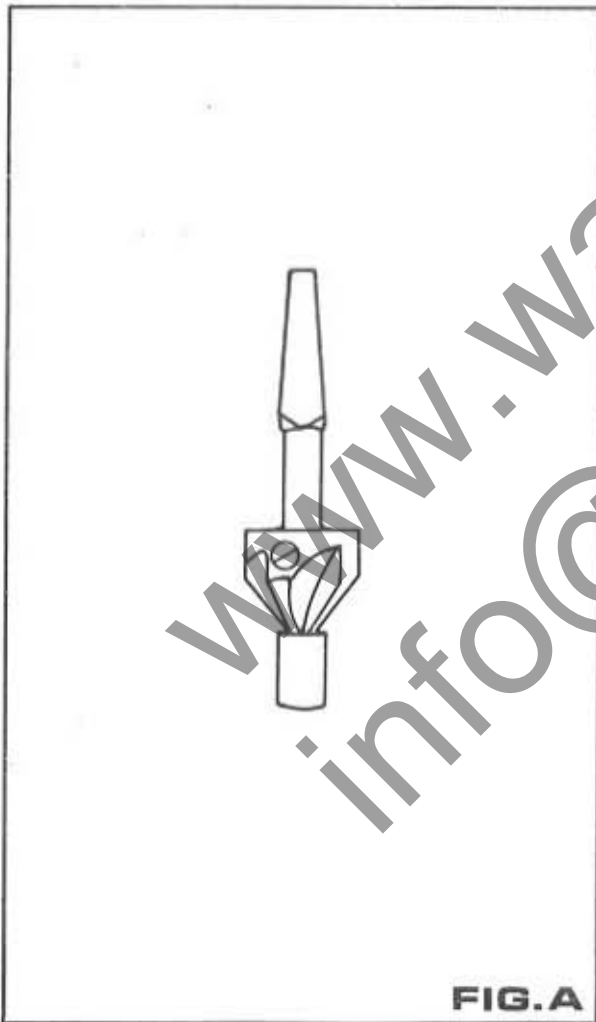


FIG. A

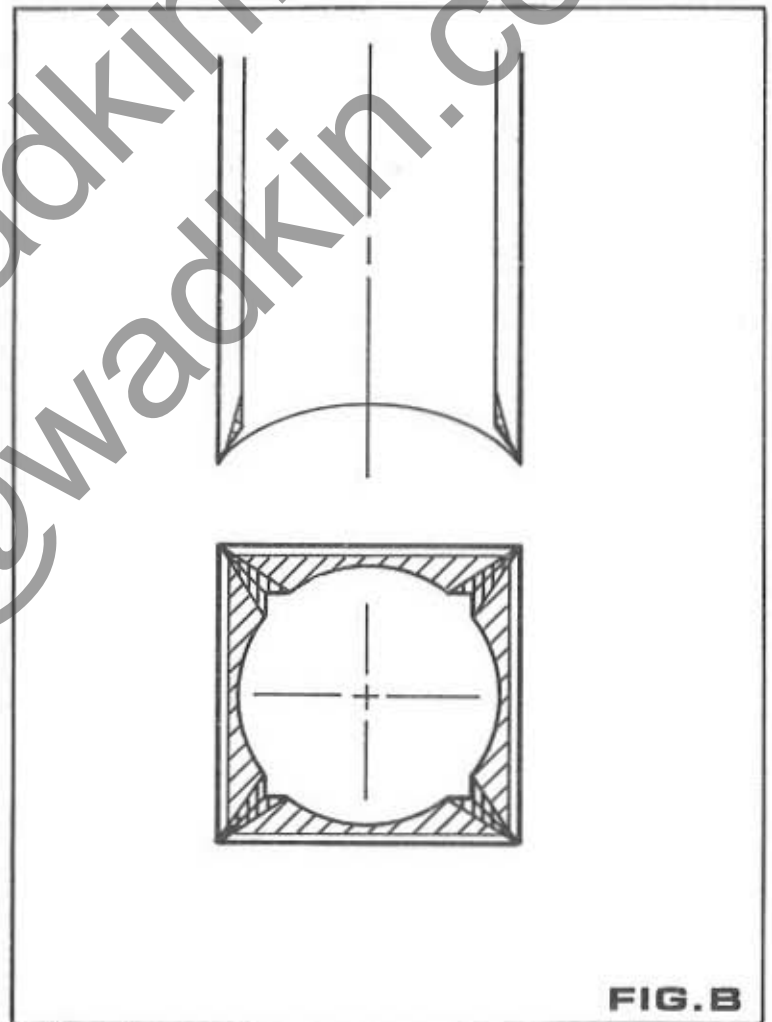


FIG. B

Application	APPROVED LUBRICANTS					
	Castrol	B.P.	Shell	Esso	Texaco/Caltex	Wadkin
Worm Boxes	ZN220	Energol CS320	Vitrea 320	Spartan EP220	Regal Oil 320	L2
General Lubrication	Magna 68	Energol HP68	Vitrea 68	Nuray	Ursa Oil P68	L4
Pneumatic Lubricators	Hyspin AWS32	Energol HL32	Tellus 37	Nuto H32	Rando Oil HD32	
Grease	Spheerol AP3	Energol L53	Alvania R3	Beacon 3	Regal Starfak Premium 3	L6
Brake Cables	Brake Cable grease	Energol L21M	Alvania R3	Esso Multi-purpose grease		

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