

WOOD TURNING LATHE TYPE 5" BXL

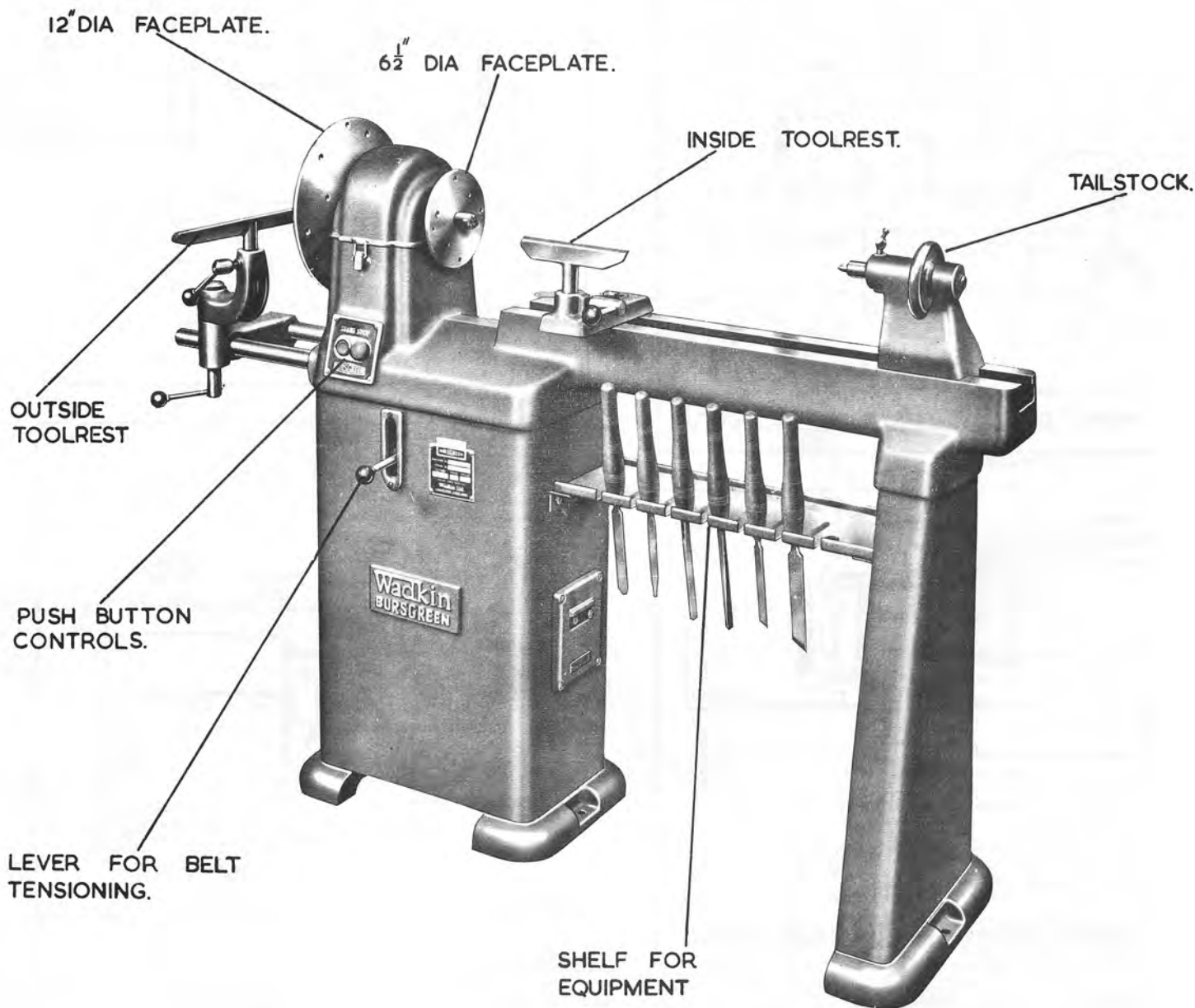


FIG. 1.

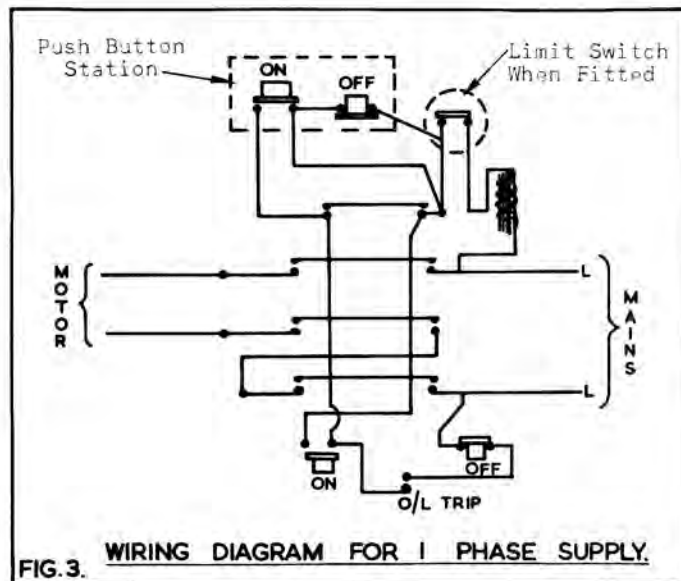
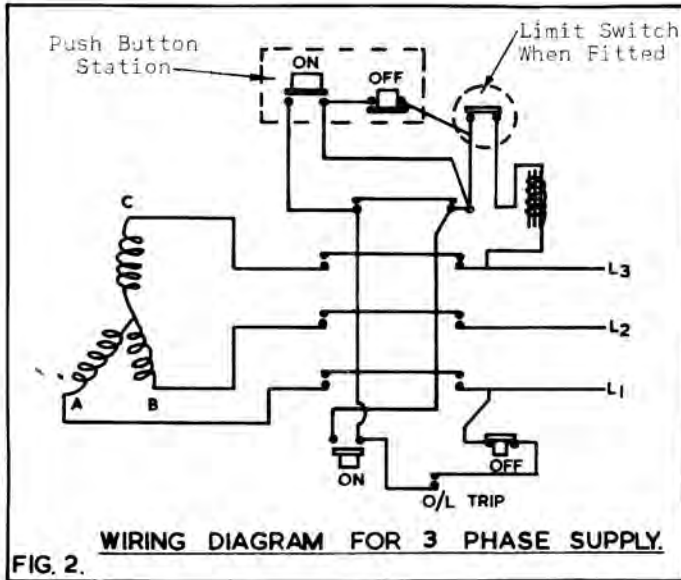
SPECIFICATION

Height of centres...	5"	125 mm
Maximum will swing between centres over bed..	10"	250 mm
Will take between centres ...	30"	760 mm
Height from floor to centres..	40"	1016 mm
Diameter turned with gap bed..	13"	330 mm
Width turned with gap bed ...	5"	125 mm
Diameter turned over hand rest ...	7"	177 mm
Diameter of inside faceplate..	6 1/2"	165 mm
Diameter of outside faceplate. ...	12"	304 mm
Maximum size turned on outside faceplate ...	18" x 5"	460 x 130 mm
Speed of spindle ...	425, 800, 1400, 2300 r.p.m.	
Horse power of motor: 3 phase	1	
1 phase	3/4	
Main spindle bored..	No. 1 morse taper	
Floor space ...	61" x 18"	1550 x 460 mm
Net weight ...	324 lb	147 kg
Gross weight...	440 lb	200 kg
Shipping dimensions. ...	39 c.ft.	1.1 cu. m.

INSTALLATION

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

When the machine is cased for export the outside turning assembly is removed and packed individually. 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.

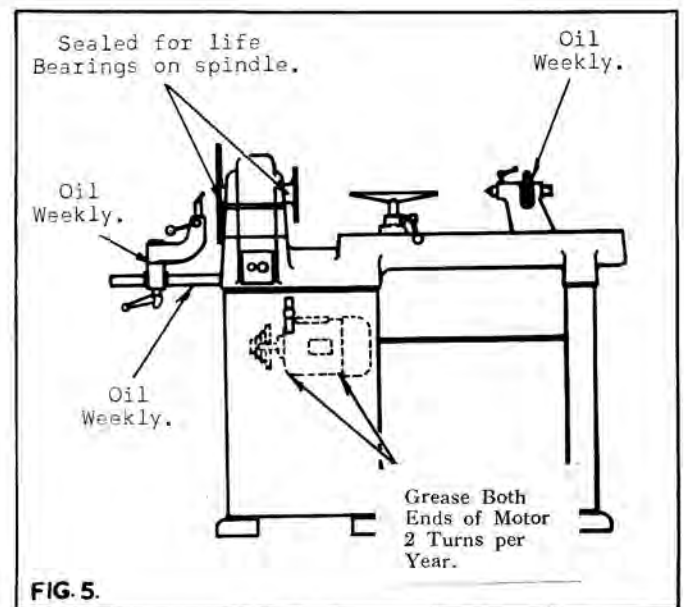
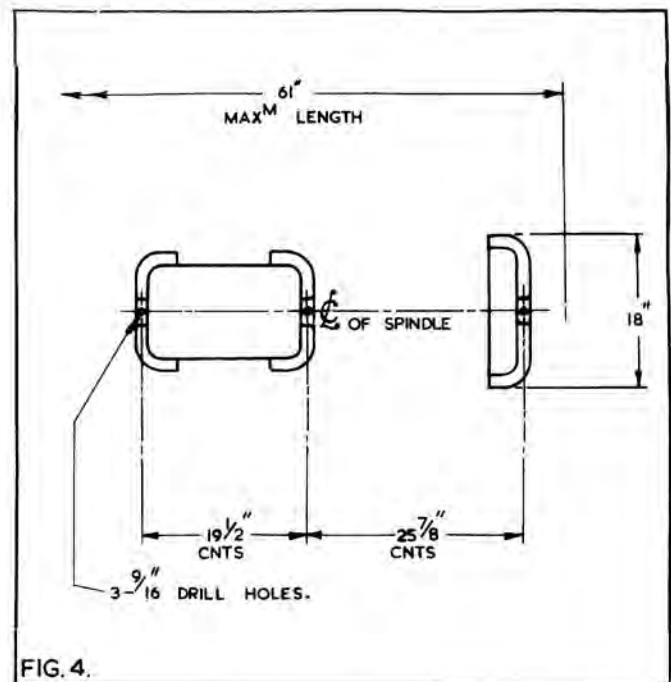
Points to note when connecting to power supply:

1. Check 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.
4. Connect the line leads to the appropriate terminals. See Fig. 2 for three phase supply. See Fig. 3 for single phase supply.
5. Check all connections are sound.
6. Check the rotation of the motor for the correct direction. If this is incorrect on three phase supply reverse any two of the line lead connections.

VOLTAGE	PHASE	S.W.G. TINNED COPPER WIRE	AMPS
550, 340/420	3	30	8.5
220	3	25	15
200/250	1	23	20

FOUNDATION

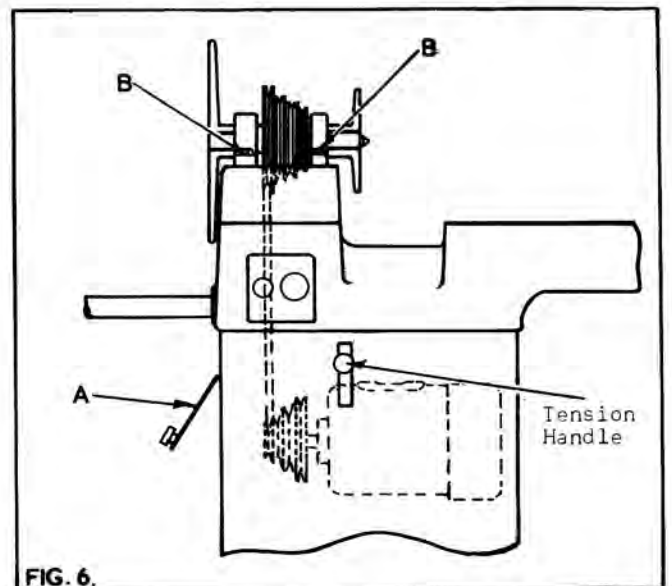
See Fig. 4 for bolt positions and clearance required. When installing the machine level the bed by packing under the feet. Foundation bolts are not supplied with the machine except by special order.



LUBRICATION

It is advisable to keep all bright parts covered with a thin film of oil to prevent rusting. The bed should also be kept clear of chippings to aid the operation of the toolrest and tailstock.

TYPE OF OIL RECOMMENDED: POWER EM 125
 TYPE OF GREASE RECOMMENDED: SHELL ALVANIA 3.



BELT TENSION

The drive is by means of a vee belt from a 1 HP motor mounted on a hinged bracket. A hand lever removes the tension on the belt for speed changing. To change the speed the undermentioned procedure should be followed:

1. Swing the lid clear of the pulley at the top of the machine.
2. Release the tension on the belt by moving the tension handle in Fig. 6 up the ratchet.
3. Select the required speed on the stepped spindle pulley.
4. Select the required speed on the stepped motor pulley through the aperture covered by the flap "A".
5. Re-tension the belt by moving the tension handle down the ratchet until the required tension is obtained.

To replace a worn or broken belt the undermentioned procedure should be followed:

1. Swing the lid clear of the pulley at the top of the machine.
2. Release the tension on the belt by moving the tension handle in Fig. 6 up the ratchet.
3. Remove the four hexagon head bolts "B" and the four dowels which secure the spindle bearing housings to the bed.
4. Lift flap "A" and remove the belt from the motor pulley.
5. The spindle assembly can now be lifted clear of the bed and the belt changed.
6. The above procedure should be reversed when re-assembling. Before replacing the spindle assembly check that all faces are free from burrs and dirt. If this point is not checked the centre of the main spindle may not line up with that of the tailstock.

HEADSTOCK SPINDLE UNIT.

The spindle is threaded at both ends to receive faceplates and chucks. The inside spindle end is threaded 1" whit. right hand and the outside end is threaded 1" whit. left hand.

Any centres with a No. 1 morse taper will fit into the taper bore up the inside spindle end. Before inserting the centres make sure they are free from any burrs, rust or dirt and put a thin film of oil on the shank. The centres can be ejected from the spindle by means of the knock out rod provided, being placed down the centre of the spindle and given a sharp tap.

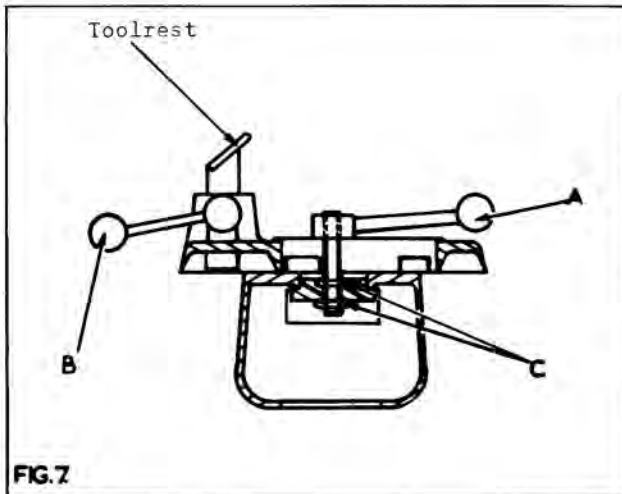


FIG. 7

OPERATION OF THE TOOLREST

The complete toolrest assembly can be locked in any position on the bed by means of the ball handle "A" in Fig. 7.

The toolrest can be locked individually in any required position by means of ball handle "B" (left hand thread).

The approximate correct locking position for the ball handle "A" is with the handle pointing away from the operator. If the handle does not lock correctly, adjust the 2 - 1/2" whit. locknuts "C" until the required position is obtained.

OPERATION OF THE TAILSTOCK

The movement of the tailstock spindle is controlled by the handwheel "A" in Fig. 8. Turning the handwheel in the direction of the arrow moves the spindle towards the workpiece. The tailstock spindle is locked in position by means of the two ball lever screw "B", at the front end of the tailstock. The spindle must be unlocked at all times before attempting to move it by means of the handwheel.

The tailstock assembly is locked to the bed by means of the lever "C" at the rear of the tailstock. If the tailstock assembly does not lock sufficiently lift the lever "C" and move it round a sufficient number of notches to make it lock correctly.

Any centres with a No. 1 morse taper will fit into the taper bore in the tailstock spindle. Before inserting a centre make sure it is free from burrs, rust or dirt and put a thin film of oil on its shank. The centres can be ejected from the tailstock spindle by means of the knock out rod provided, being placed down the centre of the spindle and given a sharp tap.

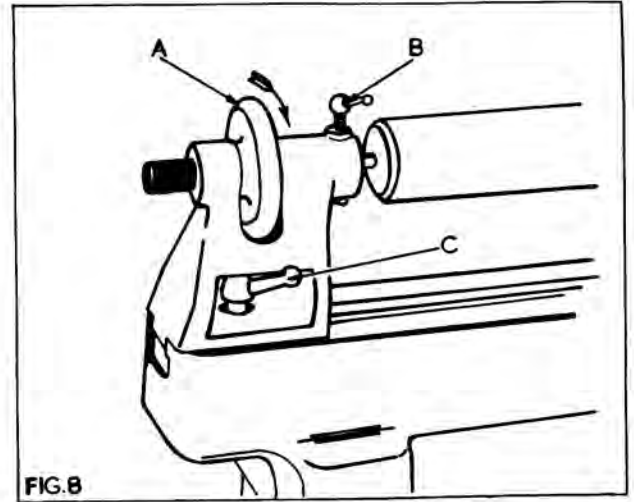


FIG. 8

CARE OF THE BED

The bed of the lathe has been precision ground to provide a smooth and true surface for the tailstock and the toolrest assembled to slide on. Care should be taken not to damage this surface through careless handling of tools etc. as this will effect the accuracy of the machine, also the smooth movement of the toolrest and tailstock.

Keep the bed clear of chippings and wipe frequently with an oily rag.

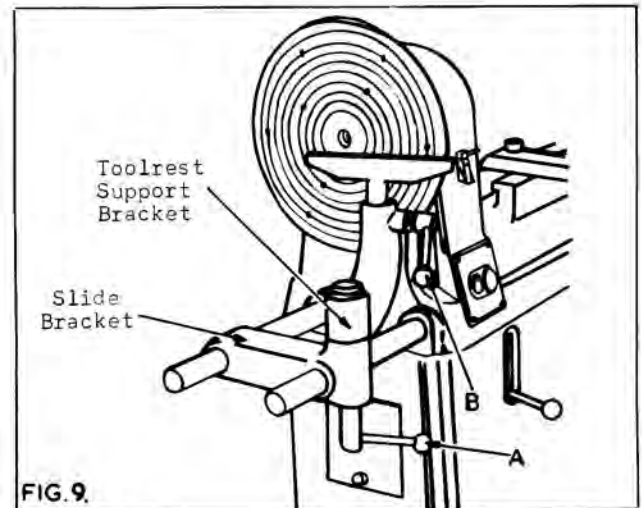


FIG. 9

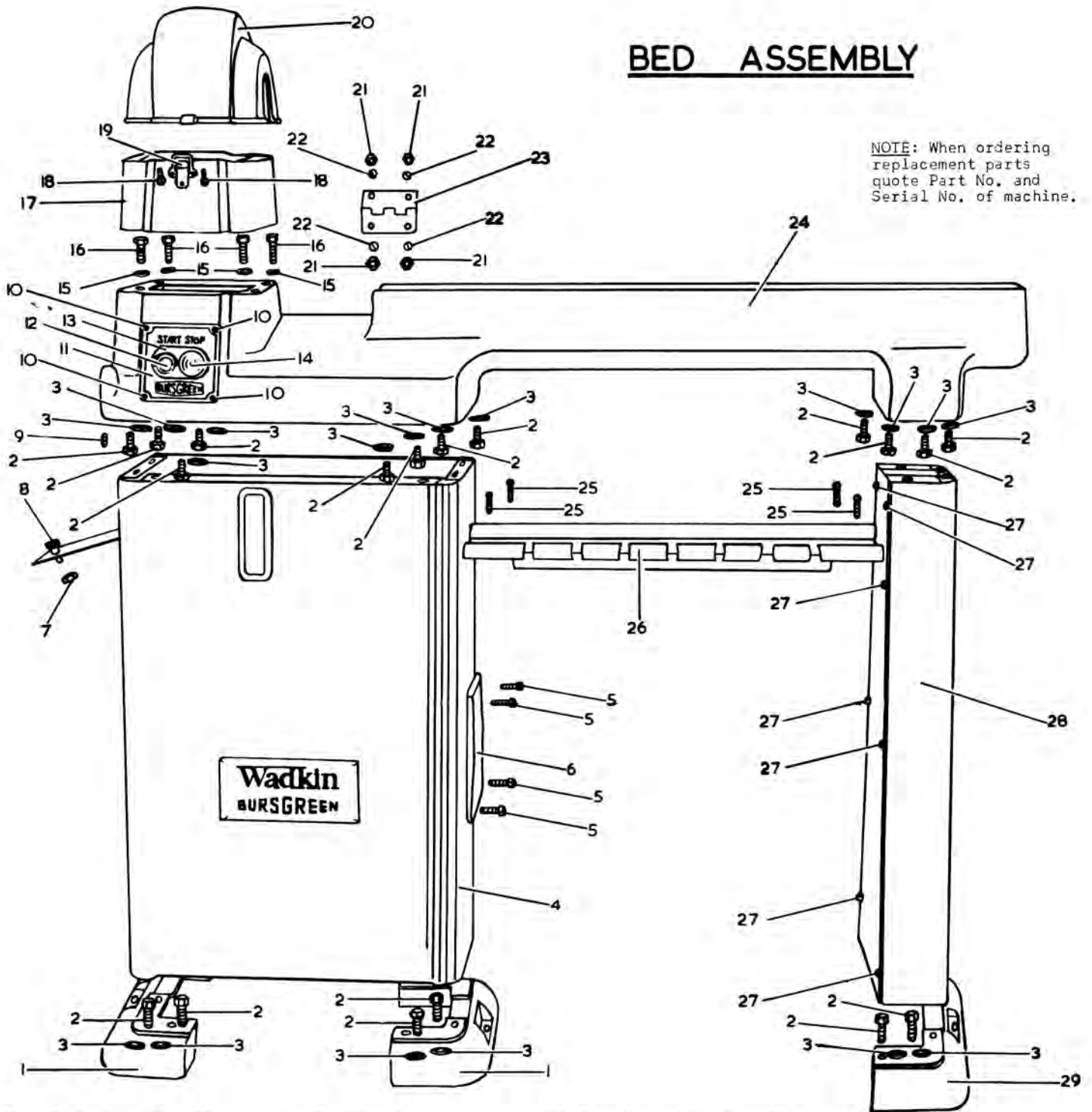
OPERATION OF THE OUTSIDE TURNING REST

The complete outside turning rest assembly slides on two ground bars and can be quickly locked in any position by means of the ball handle "A" in Fig. 9. This handle simultaneously locks the slide bracket to the slide bars and the toolrest support bracket to the slide bracket.

The toolrest only, can be locked individually in any required position by means of the ball handle "B".

BED ASSEMBLY

NOTE: When ordering replacement parts quote Part No. and Serial No. of machine.

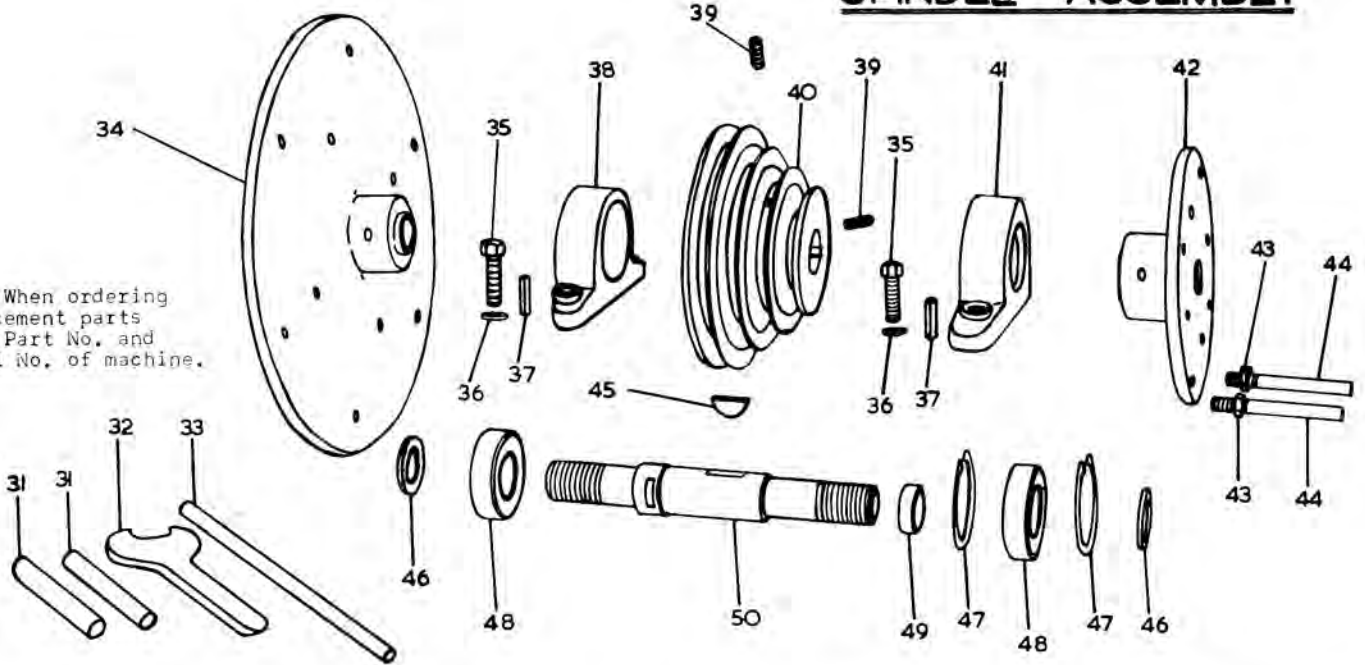


Ref. No.	Part No.	No. off	Description
1.	C-1029/11	2	Foot for base.
2.		24	$\frac{3}{8}$ " whit x $\frac{3}{4}$ " long cadmium hexagon head bolt.
3.		24	$\frac{3}{8}$ " cadmium washer.
4.	D-1035/11	1	Base.
5.		4	$\frac{1}{4}$ " whit x 1" long cadmium cheese head screw.
6.	44 ADS/FO	1	MEM Starter (3phase 50cycles).
	82 ADS/FO	1	MEM Starter (1phase 50cycles).
	AT3.	1	Brook Starter (3phase 60cycles).
	AT3.	1	Brook Starter (1phase 60cycles).
7.		1	$\frac{1}{4}$ " whit. nut.
8.	D-1797/62	1	Knurled knob for base ($\frac{3}{4}$ " long).
9.		2	$\frac{3}{8}$ " whit. x 1" long socket head grub screw.
10.		4	$\frac{3}{16}$ " whit. x $\frac{1}{2}$ " long round head screw.
11.	A-S-128	1	Plate for push button station.
12.		1	Brook start push button complete with rubber cover.

Ref. No.	Part No.	No. off	Description
13.	B-S-49	1	Casting for push button station.
14.		1	Brook stop push button complete with rubber cover.
15.		4	$\frac{3}{8}$ " washer.
16.		4	$\frac{3}{8}$ " whit x 1" long hexagon head bolt.
17.	C-1035/3	1	Headstock bracket.
18.		2	$\frac{1}{2}$ " whit x $\frac{1}{2}$ " long round head screw.
19.	No. 25	1	Zest toggle fastener.
20.	C-1035/7	1	Lid for headstock.
21.		4	$\frac{1}{4}$ " whit. nut.
22.		4	$\frac{1}{4}$ " whit. x 1" long countersunk head screw.
23.		1	3" wide steel hinge.
24.	E-1035/1	1	Bed.
25.		4	$\frac{1}{4}$ " whit x $\frac{3}{4}$ " long round head screw.
26.	C-1035/29	1	Shelf.
27.		8	2BA x $\frac{1}{2}$ " long round head screw.
28.	D-1035/12	1	Leg.
29.	C-1035/13	1	Foot for leg.

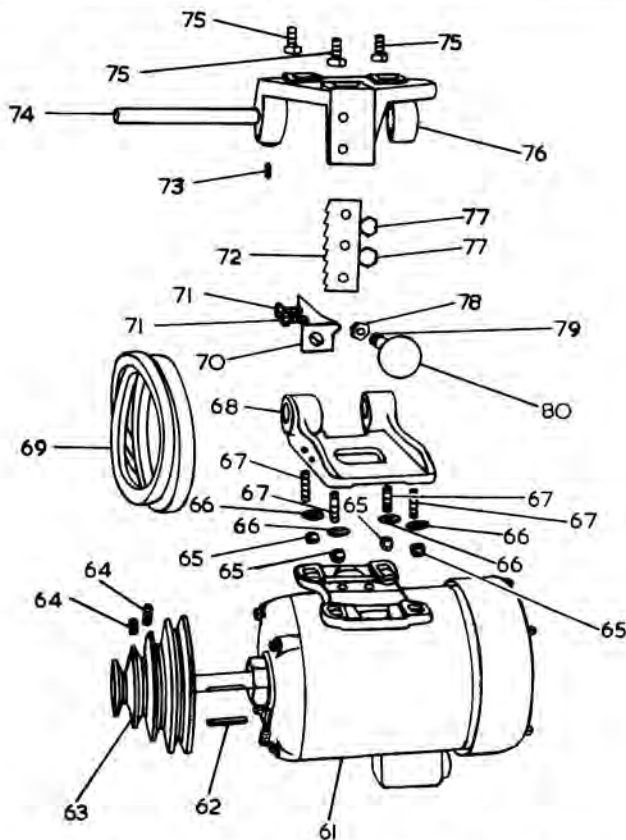
SPINDLE ASSEMBLY

NOTE: When ordering replacement parts quote Part No. and Serial No. of machine.



Ref. No.	Part No.	No. off	Description
31.	A-1026/57	2	Toggle bar.
32.		1	9/16" whit. open end spanner.
33.	A-1023/57	1	Knock out rod for centres.
34.	B-1023/17	1	Faceplate for outside turning.
35.		4	5/16" whit x 1" long hexagon head bolt.
36.		4	3/8" washer.
37.		4	1/2" dia. x 1" long groverlok spring dowel.
38.	B-1035/6	1	Bearing housing (without grooves).
39.		2	5/16" whit x 3/8" long socket head grub screw.

Ref. No.	Part No.	No. off	Description
40.	B-1023/10	1	Spindle pulley.
41.	B-1035/6	1	Bearing housing (with grooves).
42.	B-1035/8	1	Faceplate for standard turning.
43.		2	3/8" whit. locknut.
44.	A-1023/42	2	Driving peg for faceplate.
45.		1	5/16" wide x 1" long Woodruff key.
46.	A-1035/48	2	Faceplate distance piece.
47.		2	2 1/4" dia. Internal Seeger Circlip.
48.	DN 2100	2	Fafnir sealed for life bearing.
49.	A-1035/27	1	Spindle distance piece.
50.	B-1035/10	1	Spindle.

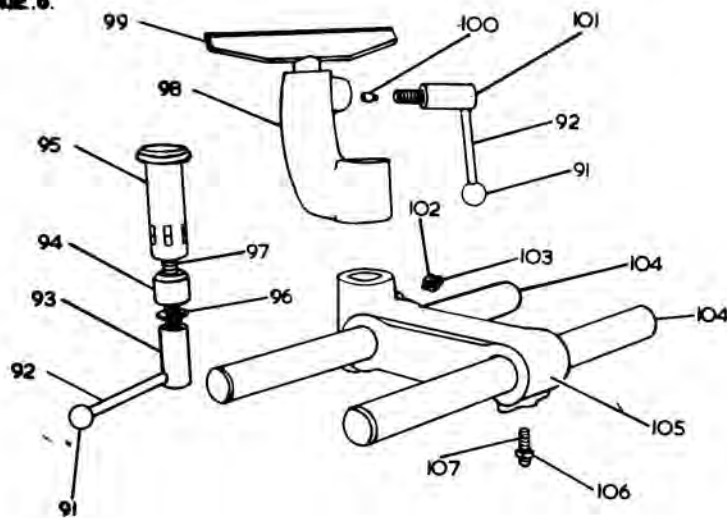


Ref. No.	Part No.	No. off	Description
61.		1	Brook Motor T.14 TEFC 1HP 1440rpm (3phase 50cycles).
		1	Brook Motor C.12 TEFC 3/4HP 1440rpm (1phase 50cycles).
		1	Brook Motor T.14 TEFC 1HP 1720rpm (3phase 60cycles).
		1	Brook Motor C.12 TEFC 3/4HP 1720rpm (1phase 60cycles).
62.		1	3/16" wide x 1 1/4" long feather key.
63.	B-1023/11	1	Motor pulley.
64.		2	5/16" whit x 1/2" long socket head grub screw.
65.		4	5/16" whit Aerotight nut.
66.		4	5/16" washer.
67.		4	5/16" whit. x 1 1/8" long stud.
68.	B-1035/4	1	Motor platform.
69.	A-47	1	Vee belt.
70.	A-1035/19	1	Lever for belt tension.
71.		2	5/16" whit x 3/4" long hexagon head bolt.
72.	A-1023/33	1	Motor adjusting ratchet plate.
73.		1	1/2" whit x 1/2" long socket head grub screw.
74.	A-1035/18	1	Motor pivot pin.
75.		3	3/8" whit x 3/4" long cadmium hexagon head bolt.
76.	C-1035/5	1	Motor pivot bracket.
77.		2	3/8" whit x 3/4" long hexagon head bolt.
78.		1	3/8" whit lock nut.
79.	A-1035/20	1	Handle for belt tension.
80.		1	1 1/2" dia. plastic ball, 1/2" whit.

NOTE:

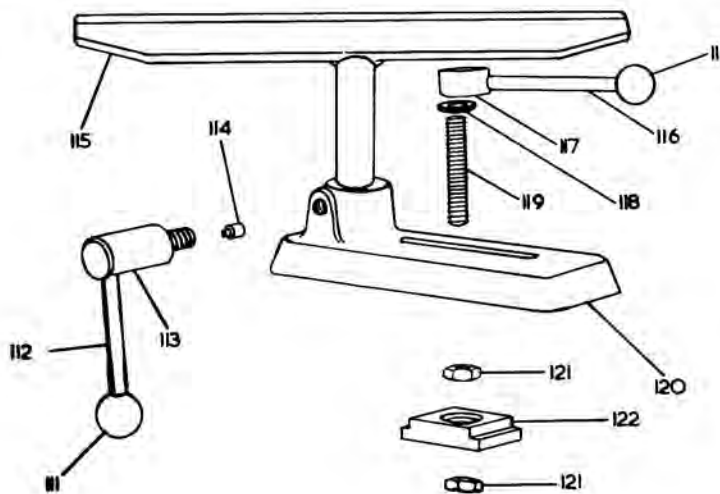
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MOTOR MOUNTING



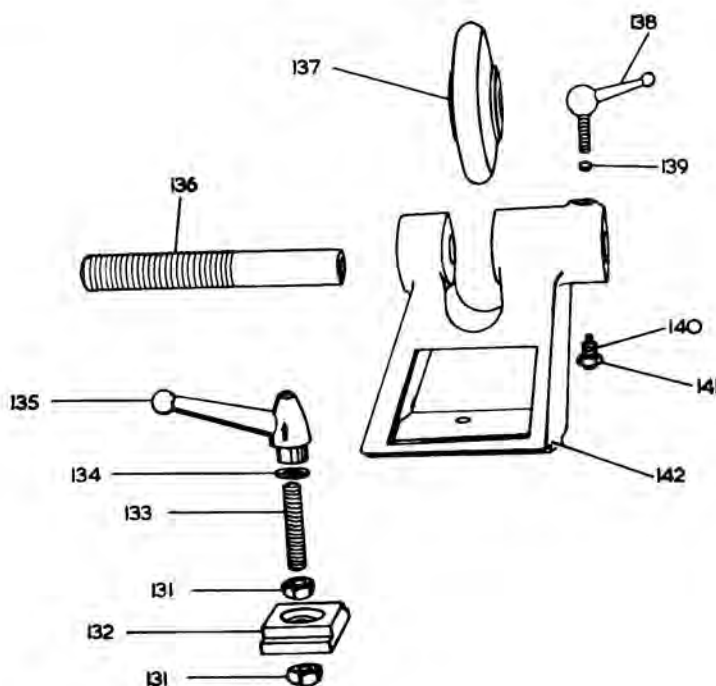
OUTSIDE TURNING ASSEMBLY

Ref. No.	Part No.	No. off	Description
91.		2	1" dia. plastic ball, $\frac{3}{8}$ " whit.
92.	A-1002/90A	2	Handle for lock.
93.	A-1035/39	1	Outside turning locking handle.
94.	A-1035/25	1	Locking distance piece for outside turning.
95.	A-1035/24	1	Locking pin for outside turning.
96.		1	$\frac{1}{2}$ " washer.
97.	A-1035/45	1	Stud for outside turning lock (3" long).
98.	A-1035/22	1	Toolrest bracket for outside turning.
99.	C-1023/16	1	Toolrest for outside turning.
100.	A-1023/45	1	Brass bot for toolrest.
101.	A-1023/35	1	Locking handle for outside turning toolrest ($\frac{1}{2}$ " whit. left hand).
102.		1	$\frac{3}{8}$ " whit. locknut.
103.	A-1035/28	1	Pip screw for outside turning.
104.	A-1035/23	2	Slide bars for outside turning.
105.	C-1035/21	1	Slide bracket for outside turning.
106.		1	$\frac{3}{8}$ " whit. locknut.
107.		1	$\frac{3}{8}$ " whit. x 1" long brass grubscrew.



TOOLREST ASSEMBLY

Ref. No.	Part No.	No. off	Description.
111.		2	1" dia. plastic ball, $\frac{3}{8}$ " whit.
112.	A-1002/90A	1	Handle for toolrest lock.
113.	A-1023/35	1	Locking handle for inside toolrest. ($\frac{1}{2}$ " whit. left hand).
114.	A-1023/45	1	Brass bot for toolrest.
115.	C-1023/15	1	Toolrest for standard turning.
116.	A-1035/46	1	Locking nut handle.
117.	A-1035/44	1	Toolrest bracket locking nut.
118.		1	$\frac{1}{2}$ " washer.
119.	A-1035/45	1	Stud for toolrest lock (3" long).
120.	C-1035/17.	1	Bracket for standard turning.
121.		2	$\frac{1}{2}$ " whit. locknut.
122.	A-1035/47	1	Clamp plate.



TAILSTOCK ASSEMBLY

Ref. No.	Part No.	No. off	Description.
131.		2	$\frac{1}{2}$ " whit. locknut.
132.	A-1035/47	1	Clamp plate.
133.	A-1035/45	1	Stud for tailstock lock (2 $\frac{1}{2}$ " long).
134.		1	$\frac{1}{2}$ " washer.
135.	No. 3 TYPE "A" 15°	1	$\frac{1}{2}$ " whit. Kipp handle.
136.	B-1035/16	1	Tailstock screw.
137.	B-1035/15.	1	Tailstock handwheel.
138.	B-S-1-B	1	$\frac{3}{8}$ " whit. ball lever screw.
139.	A-1035/59	1	Brass bot for tailstock.
140.	A-1035/28	1	Pip screw for tailstock screw.
141.		1	$\frac{3}{8}$ " whit. lock nut.
142.	C-1035/14.	1	Tailstock.

NOTE:

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Accessories for use on Wood Turning Lathe B.X.L.

ALL CENTRES ARE NO. 1 MORSE TAPER.



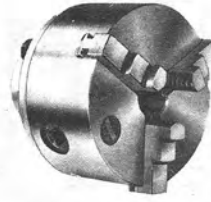
Conical Centre.



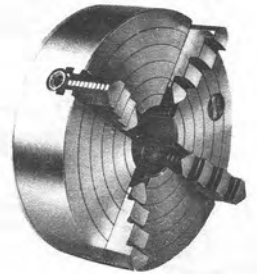
Two spur driving centre.



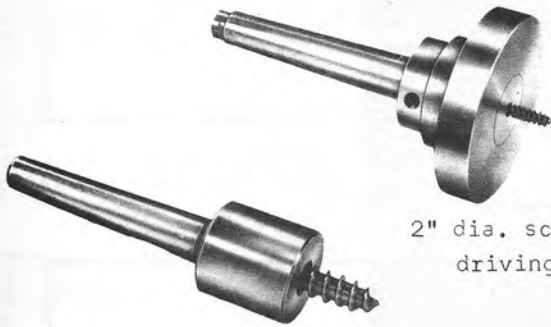
$\frac{1}{2}$ " and $\frac{3}{4}$ " diameter cup centre.



4" dia. 3 jaw chuck.



6" dia. 4 jaw chuck.

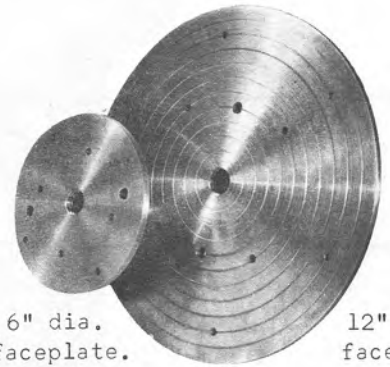


1" dia. screw driving centre.

2" dia. screw point driving plate.



3" and 4" dia. faceplate.



6" dia. faceplate.

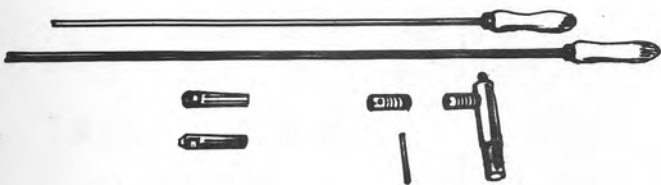
12" dia. faceplate.



3" dia. screw flange chuck.



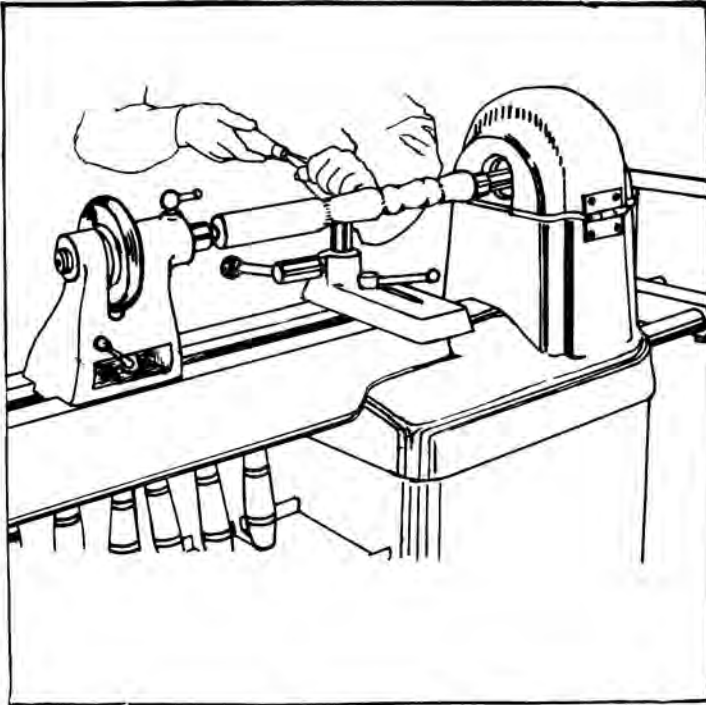
Bowl turning rest.



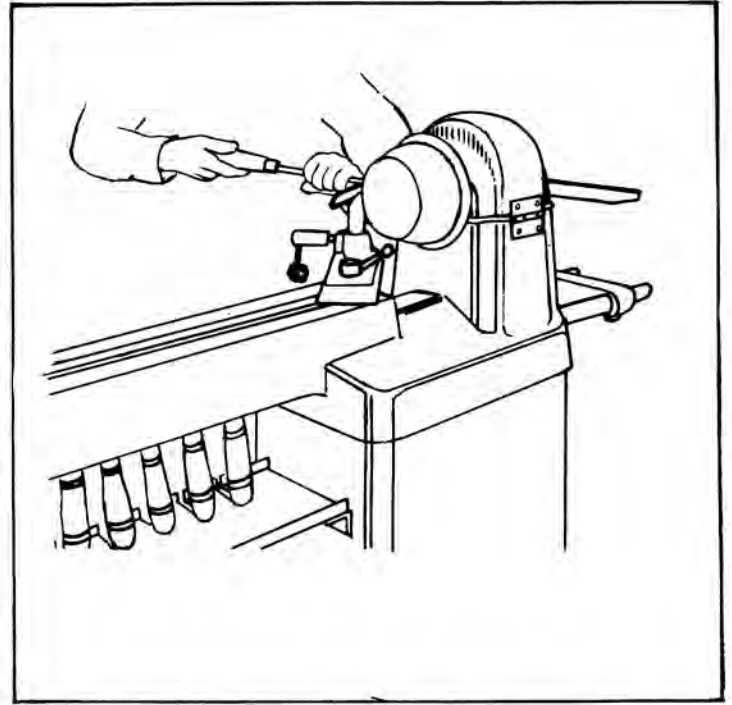
Deep hole boring equipment.



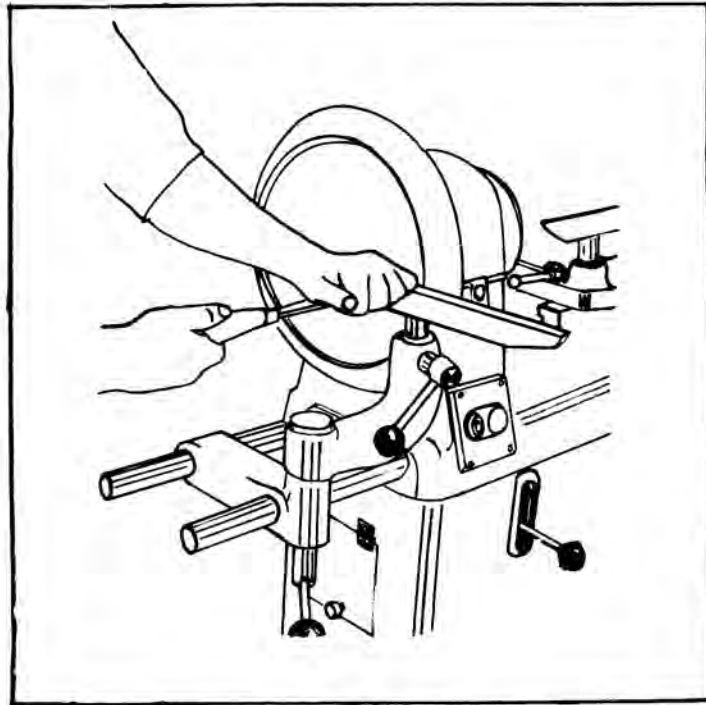
Set of hand turning tools.



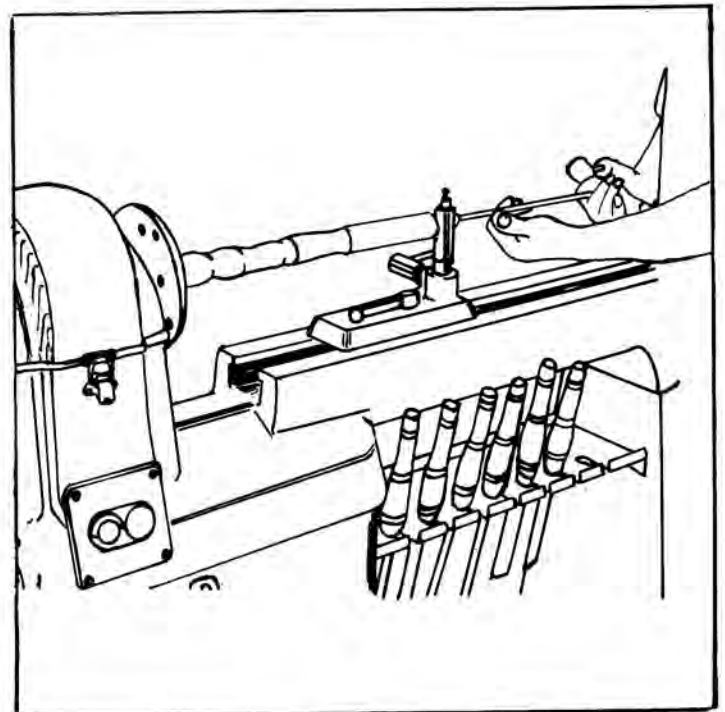
Turning between centres up to a maximum of 30".



Turning on the inside faceplate up to a maximum of 13" dia. x 5" deep over gap in bed.



Turning on the outside faceplate up to a maximum of 18" dia. x 5" wide.



Deep hole boring can be done either through the Tailstock or off a special post in the Toolrest Bracket.