

**OPERATING INSTRUCTIONS
MAINTENANCE AND PARTS LIST
BOOK**

12" SLIDING TABLE DIMENSION SAW

TYPE 12" BGS

INSTRUCTION BOOK B418

12" SLIDING TABLE DIMENSION SAW. TYPE 12" BGS

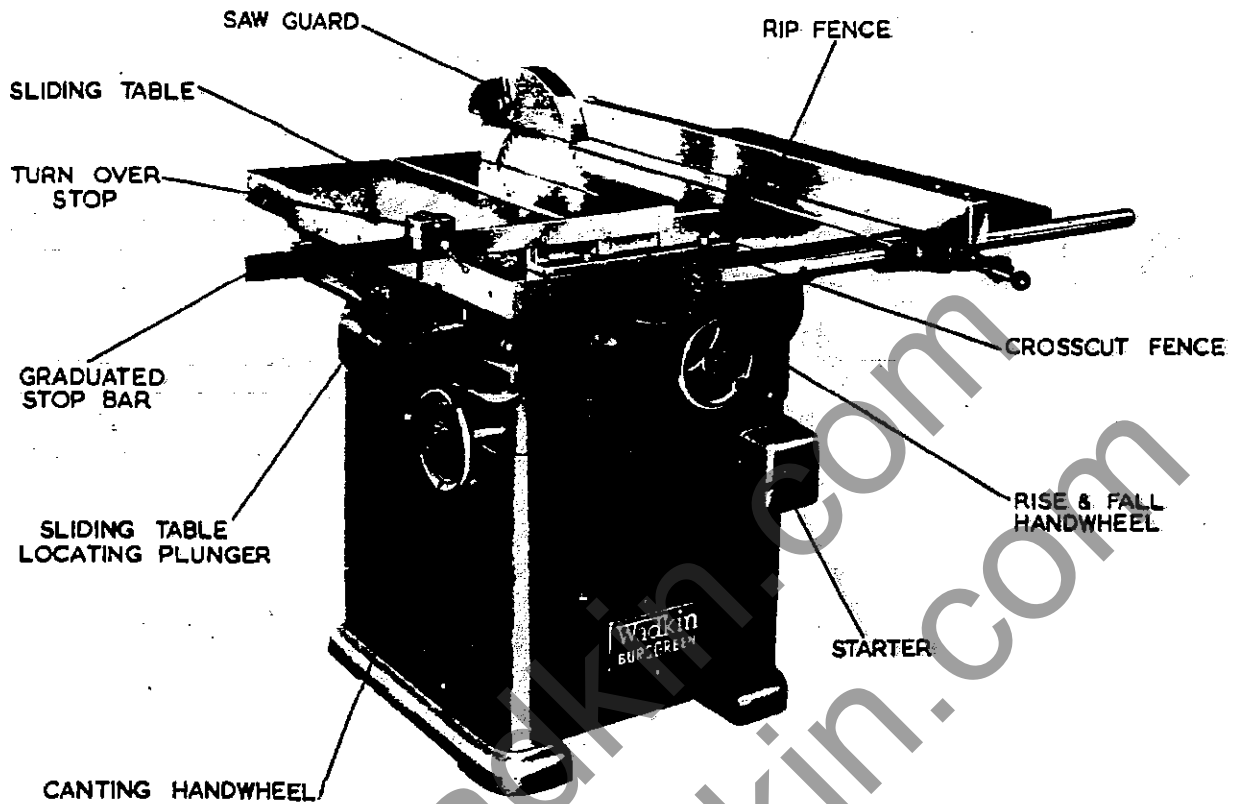


FIG. 1.

SPECIFICATION

Maximum diameter of saw.....	12"	300	mm
Diameter saw arbor.....	1"	25	mm
Maximum saw projection above table.....	3 $\frac{3}{4}$ "	95	mm
Maximum sections of cut(standard machine).....	.24" x 1"	610 x 25	mm
	.19" x 3 $\frac{3}{4}$ "	480 x 95	mm
Maximum depth of cut, with saw at 45°.....	2.5/8"	65	mm
Maximum size of Dado or grooving set.....	.8" x 1"	200 x 25	mm
Maximum size of circular cutterblock for moulding.....	.4. 7/8" dia x 15/16	120 x 24	mm
Speed of saw spindle r. p. m.3, 200		
Horsepower of motor (3 phase).....3 (standard)		
5 (Extra)		
	(1 phase).....3	
Size of table:-			
To right of saw (fixed).....	.24" x 34" deep	610 x 880	mm
To left of saw (sliding).....	.16" x 34" deep	405 x 880	mm
Front of table to saw:-			
with maximum depth of cut.....	17 $\frac{1}{2}$ "	445	mm
with 1" depth of cut.....	19 "	480	mm
Maximum travel of sliding table.....	25 $\frac{1}{2}$ "	650	mm
Sliding table draws back.....	2 $\frac{1}{2}$ "	63	mm
Maximum distance saw to rip fence.....	26 "	660	mm
Fixed extension to right of saw (Extra):-.....			
Maximum distance, saw to rip fence.....	50"	1270	mm
Sliding extension table to left of saw(Extra):-.....			
Maximum distance, saw to stop.....	96"	2438	mm
Floor space, standard machine(excluding stop bar).....	48" x 60"	1220 x 1525	mm
Approx. nett weight (standard machine).....	900 lb	400 kg	
Approx. gross weight (standard machine).....	1000 lb	450 kg	
Approx. Shipping Dimensions.....	60 cu. ft	1.70 cu. m.	

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 rip fence, fence bars and motor are removed and packed separately inside the case. Remove and re-assemble as shown in fig 1.

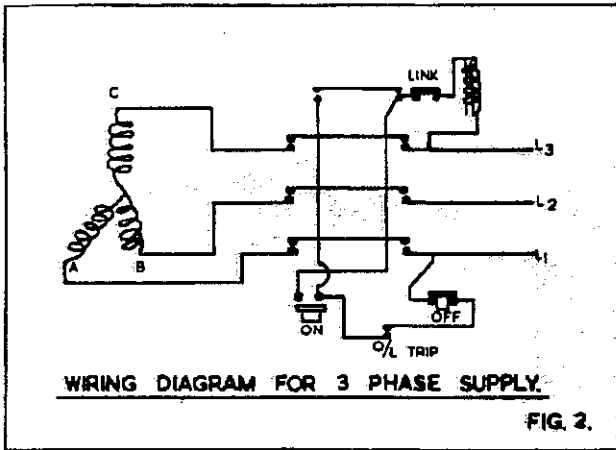


FIG. 2.

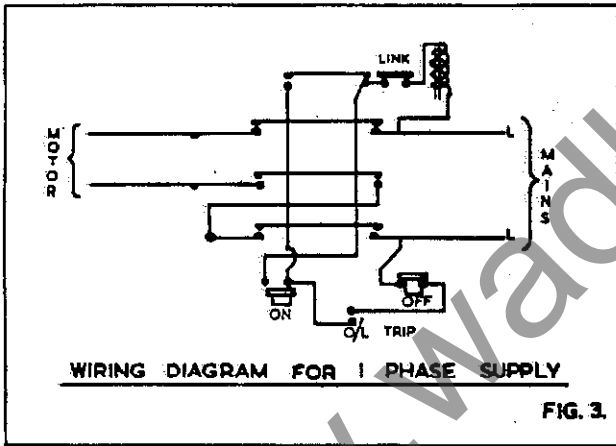


FIG. 3.

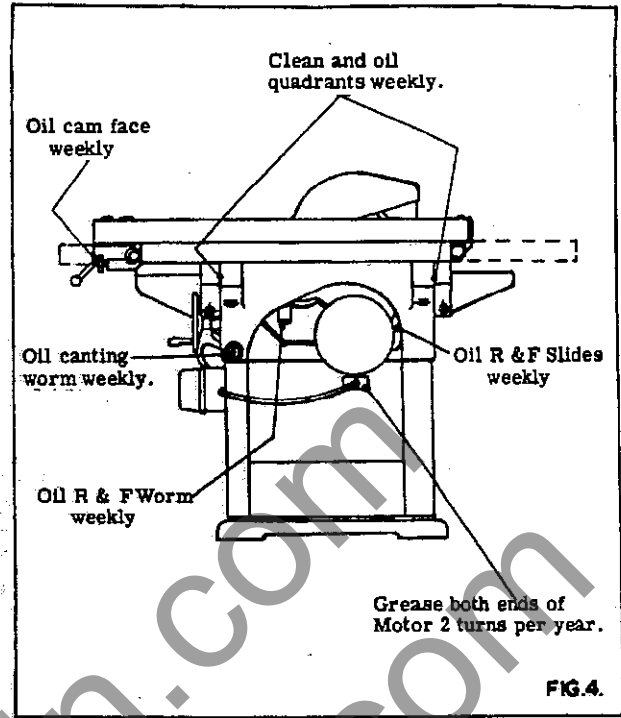
WIRING DETAILS.

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 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. When an isolator is fitted the fuses are of the correct capacity as received.
4. Connect the line leads to the appropriate terminals. See fig. 2 for 3 phase supply. See fig 3 for 1 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 for 3 phase supply.

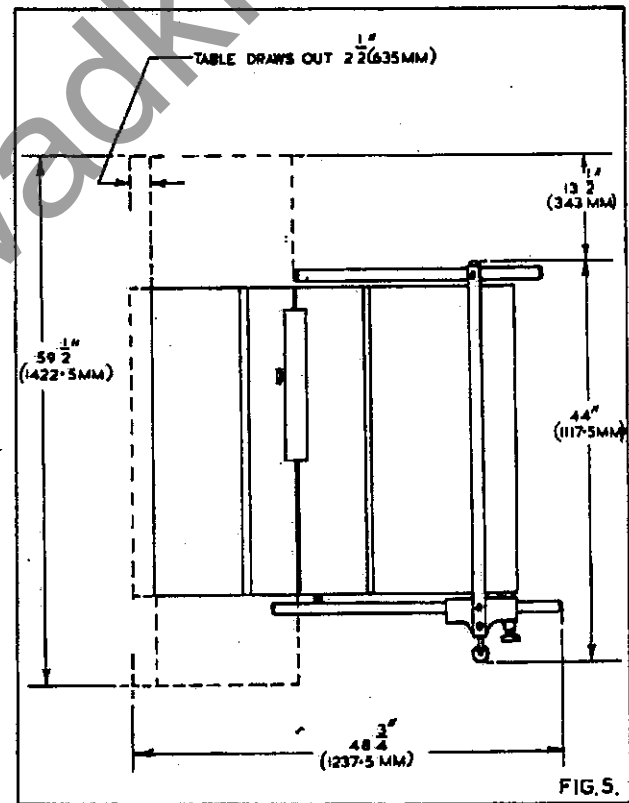
VOLTAGE.	PHASE	H. P.	S. W. G. Tinned COPPER WIRE	AMPS
220	3	3	21	29
380/420	3	3	24	17
550	3	3 & 5	24	17
220	3	5	19	38
380/420	3	5	22	24
200/220	1	3	17	65
230/250	1	3	18	45



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 ALVANIA 3.



FOUNDATION

See fig. 5 for clearances required for this machine. When installing the machine, the tables should be levelled by packing under the feet of the base.

MOUNTING SAW BLADES.

To mount a sawblade the undermentioned procedure should be followed:-

1. Check the machine is isolated electrically before starting to fit sawblade.
2. Swing the sawguard to the top position.
3. Raise saw arbor to its highest position, draw out sliding table to the left of the saw, as described in the following section to give access to the saw arbor.
4. Remove the arbor nut (left hand thread) and front saw flange. To assist in the removal of the arbor nut the back saw flange can be held in position by means of a toggle bar inserted through the hole in the main table.
5. Select the blade which is required depending on the type of work which is to be done. Check the blade is free from all dirt - gum or sawdust especially where it will be gripped by the flanges. Mount the blade on the arbor. Check the front saw flange is clean and then fit onto saw arbor. The saw teeth should point towards the front of the machine.

NOTE:- If the flanges and the saw are not clean the saw will run out of true, hence causing vibration.

6. Lock the saw securely in position with the arbor nut (left hand thread). To tighten arbor nut, hold spindle in position with the toggle bar in the back saw flange.
7. Position the sawguard depending on the thickness of timber to be worked. Clearance between saw guard and timber should be as small as practicable and at no time should it be possible for the fingers to pass between guard and timber.

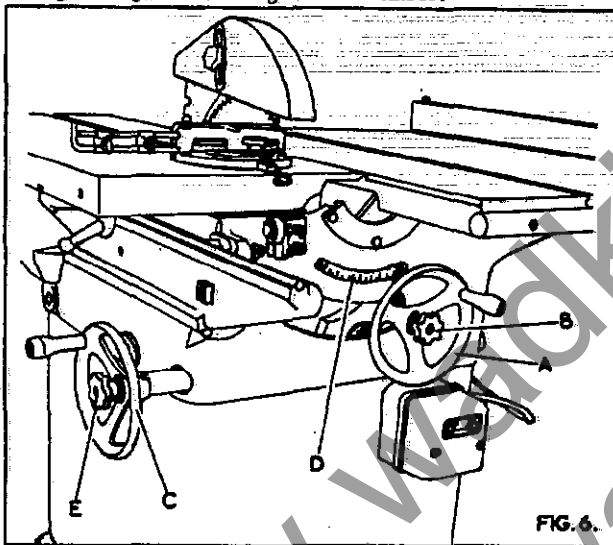


FIG. 6.

RISE AND FALL CONTROLS

The saw arbor rises and falls by wormwheel and quadrant and has a total travel of $3\frac{1}{4}$ " (95 mm). The travel of the saw is pre-set before despatch from the works. The rise and fall is controlled by the conveniently placed handwheel "A" in fig. 6.

To lock the saw in any position, lock plastic handwheel "B".

CANTING CONTROLS.

The saw cants 45° to the right, with positive stops at 90° and 45° which are accurately set before despatch from the works. The motion is again through a wormwheel and racked quadrant and is controlled by the conveniently placed handwheel "C", in fig. 6. The angle of cant is shown on the graduated scale "D".

To lock the saw at any angle, lock plastic handwheel "E".

RIP FENCE CONTROLS.

The rip fence slides on two round bars at the front and rear of the fixed table. The fence is provided with rapid and micro adjustment, also an effective lock.

For rapid adjustment the undermentioned procedure should be followed:-

1. Lift handle "A", in fig 7, and disengage the pinion from the front racked fence bar by pulling handwheel "B" out of the fence front bracket.
2. Position fence where required and depress lever "A" to lock fence in position.

For micro adjustment the pinion should be engaged in the front racked bar i.e. handwheel "B" pushed into the fence front bracket.

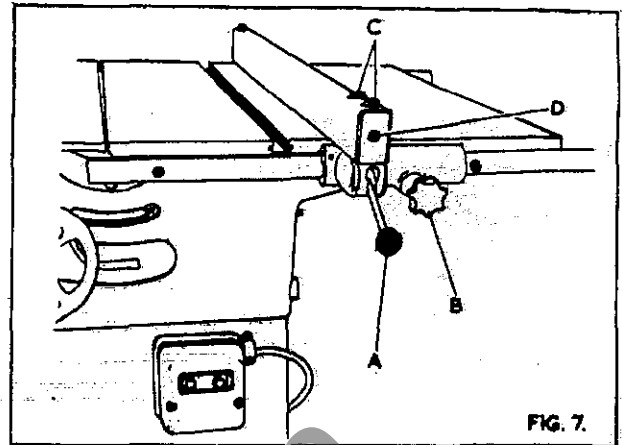


FIG. 7.

FENCE ALIGNMENT.

To check the fence alignment the undermentioned procedure should be followed:-

1. Position rip fence near to the edge of the mitre fence slot that is furthest away from the saw and lock in position.
2. In this position the distance from the fence to the mitre fence slot should be approximately $1/32$ " (.8 mm) more at the rear of the table, than at the front of the table i.e. $1/32$ " (.8 mm) lead off.
3. If the fence is incorrectly aligned loosen the two hexagon head bolts "C", in fig 7 and re-align as above. When set tighten all bolts.

It should be noted that the locking action of the fence is in three stages. The first stage, which is made possible by a spring loaded plunger, and ensures that the fence is always lined up to the saw as set, before the final locking.

The second stage, locks the fence back bracket in position and the final stage locks the front bracket securely in position.

Should the locking action of the fence be incorrect the fence connecting rod nut "D" should be adjusted. Turning nut "D" in a clockwise direction increases the locking power of the rear lock and anti-clockwise reduces the locking power. The correct locking procedure for the fence is as described above.

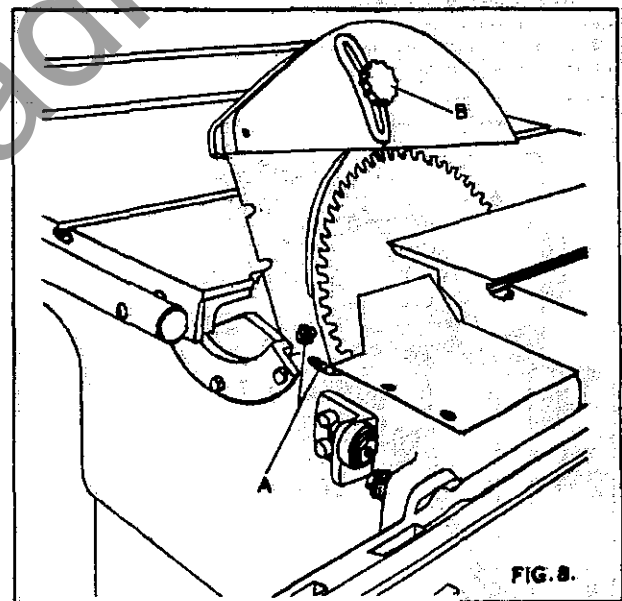


FIG. 8.

HOW TO ADJUST GUARD AND RIVING KNIFE.

The riving knife complete with the guard rises and falls with the saw. The riving knife should be brought to within $\frac{1}{4}$ " (6 mm) of the saw at the closest point. To adjust the riving knife to this position, loosen the two hexagon nuts "A", in fig 8, position riving knife where required then re-lock in position.

The guard should then be adjusted to protect as much of the saw as possible by loosening the handwheel "B" and positioning the guard where required. When set re-lock handwheel "B".

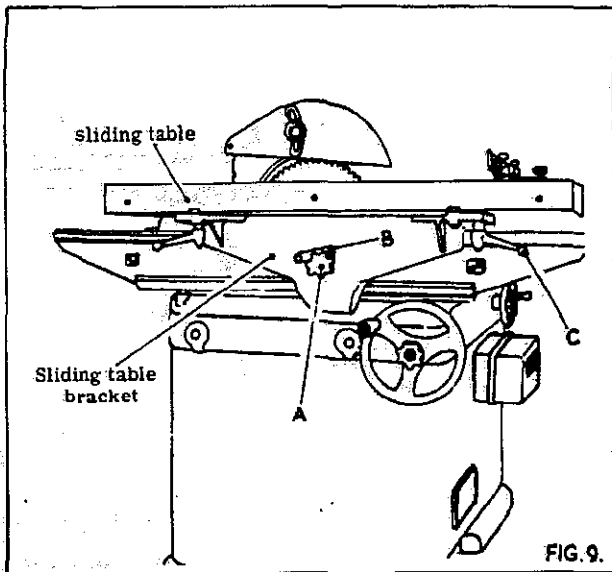


FIG. 9.

HOW TO FIX SLIDING TABLE.

The sliding table can be fixed in line with the fixed table to convert the machine into a standard sawbench.

The sliding table should be approximately positioned then the handwheel "A", in fig 9, should be pulled from the sliding table bracket and lever "B" swung clear of handwheel "A". Handwheel "A" should then be allowed to spring into casting engaging in the slide beam. Hence fixing sliding table in line with fixed table.

To disengage table pull handwheel "A" from casting and swing lever "B" between sliding table bracket and handwheel this ensures table is always free to move until required to be fixed again.

HOW TO DRAW OUT SLIDING TABLE.

The sliding table draws out to the left, a maximum distance of 2½" (63 mm) to facilitate the use of dado heads, cutterblocks etc.

To draw out table loosen the two levers "C" in fig. 9. When table is correctly set re-lock levers "C". It should be noted that the distance between the two tables should be kept to a minimum at all times.

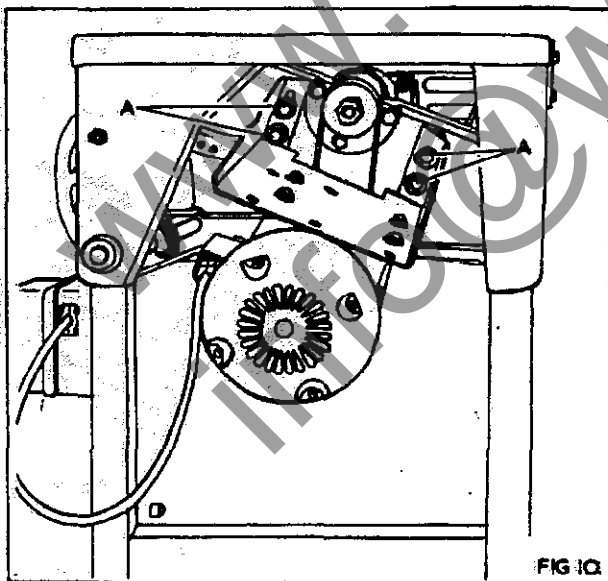


FIG. 10.

BELT TENSION.

The drive is by two Vee belts from a 3 HP motor. To tension the belts loosen the hexagon bolts "A", in fig 10. Move motor platform until the required tension is reached then re-lock hexagon bolts "A".

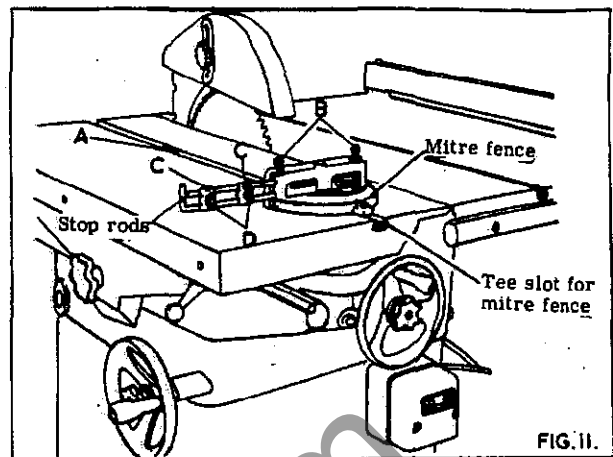


FIG. 11.

MITRE FENCE.

The mitre fence can be used on either side of the saw and slides in a tee slot, which should be kept clean. When the sliding table is fixed the mitre fence capacity which can be crosscut is 28" (710 mm). The mitre fence can be locked into the tee slot in sliding table by means of the grub screw "A" in fig 11.

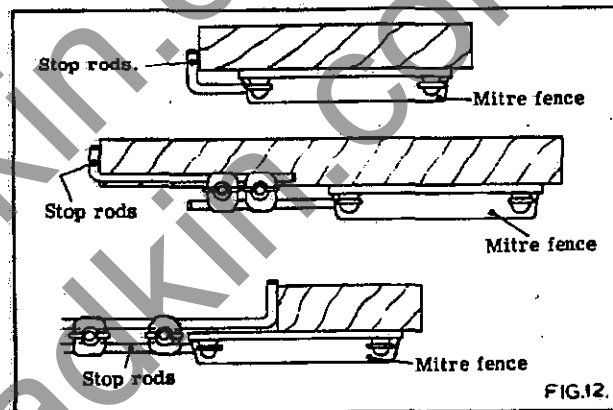


FIG. 12.

USE OF MITRE FENCE STOP RODS.

Accurate repetitive cutting can be made using the stop rods see fig. 11.

The rods are held in the fence by the thumbscrew "B", in fig 11, and the stop rods held together by the two clamps "C" to adjust the rods by the clamps, loosen the wingnuts "D".

See fig 12 for several positions in which the stop rods can be used.

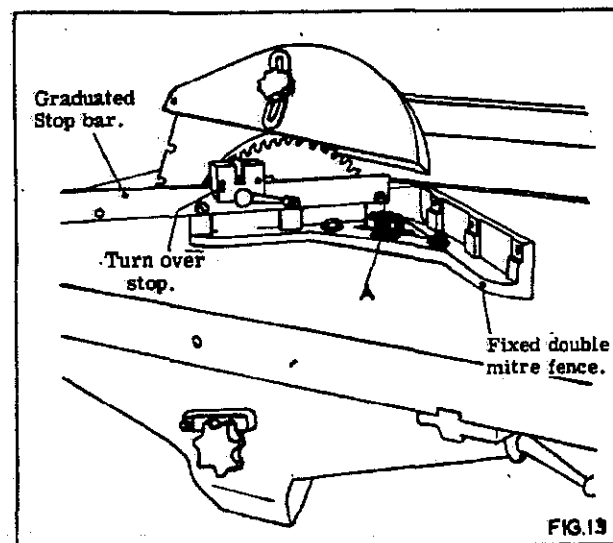


FIG. 13.

FIXED DOUBLE MITRE FENCE.

A fixed double mitre fence is supplied with this machine. This can be locked in the tee slot, in the sliding table by means of the handwheel "A", in fig 13. The fence is fitted with a graduated stop bar and turnover stops. The graduated stop bar is interchangeable with that supplied with the straight cross cut fence, hence mitres can be cut on both ends of timber; with stop bars on both sides of the fixed double mitre fence.

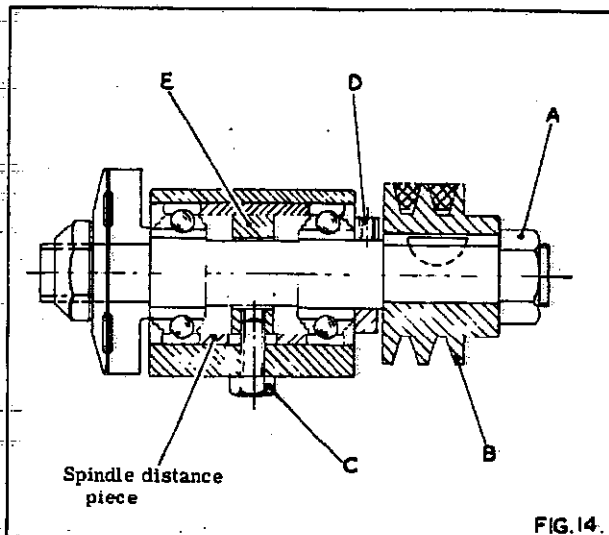


FIG. 14.

HOW TO REPLACE SPINDLE BEARINGS

To replace spindle bearings the undermentioned procedure should be followed:-

1. Remove saw and sawguard complete with riving knife.
2. Release the tension on the belts, as previously described and remove belts. The saw spindle should be cant to approx 45° and the gap between the tables made as large as possible.

Now working from pulley end of the spindle.

3. Remove the 1" fine thread nut (Right hand thread) "A", in fig 14, remove spindle pulley "B", which is keyed to the spindle.
4. Remove the hexagon head bolt "C" securing the remaining spindle assembly in the housing, tap out assembly from the pulley end. Care should be taken not to damage the threads on the spindle end.
5. To remove the bearings, remove the woodruff key, then loosen the two 1/4" whit socket head grubscrews "D", remove the spindle locking collar.
6. The bearings and spindle distance piece can now be driven from the spindle.

The bearings should now be replaced as the arrangement in fig 14. Care should be taken not to pre-load the bearings i.e. the spindle distance piece should be just free between the two bearings.

When the locking collar has been replaced and the assembly is ready to be replaced in the spindle housing a socket head grubscrew should be inserted in the spindle trapping collar "E". This will assist in lining up the 3/8" whit x 1 1/4" long hexagon head bolt "C" on assembly.

TO RE ASSEMBLE THE SPINDLE ASSEMBLY INTO THE SPINDLE HOUSING

1. Line up socket head grubscrew with the hole in the spindle housing and tap in spindle assembly.
2. Remove socket head grubscrew and replace hexagon head bolt "C"
3. Replace riving knife and set saw central to riving knife as described in the following section.
4. Replace the pulley and belts then re-tension belts.

When set tighten all bolts.

It may be found to be an advantage to remove the fixed table for access to the spindle assembly. However, if table is removed care should be taken to ensure the table is set level and parallel to sliding table. It should be noted that the sliding table is set .003" to .005" (.08 mm to .13 mm) above the fixed table.

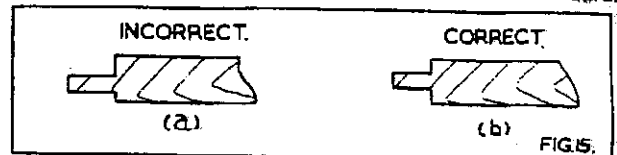


FIG. 15.

SETTING SAW TO RIVING KNIFE

It is most important that the saw and the riving knife are in line. To reset after the spindle has been disturbed the undermentioned procedure should be followed:-

1. Loosen the hexagon head adjuster bolt "C" in fig 14, and tap spindle as required taking care not to damage the threads on the spindle end. Place a steel rule along both sides of riving knife to check whether the saw is central.
2. When set re-tighten the hexagon head bolt "C".
3. To check this setting feed a short piece of timber from the rear along both sides of the riving knife. If the riving knife is correctly set the blade will cut equal shoulders as shown in fig. 15 (a) and when incorrectly set unequal shoulders as shown in fig. 15 (b).

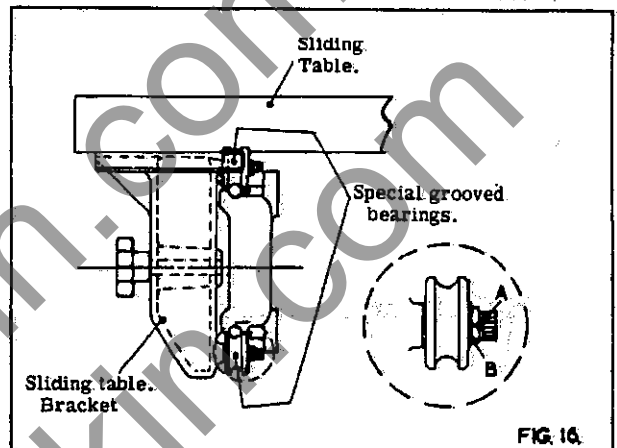


FIG. 16.

HOW TO ADJUST SLIDING TABLE ROLLERS

The sliding table is fitted on three special grooved rollers which are eccentrically mounted. Should wear occur the bottom roller only should be adjusted as the top two rollers have been accurately set before despatch from the works to ensure the table top is parallel to the beam.

To adjust roller, loosen socket head capscrew "A", in fig 16 and eccentric bush "B" adjusted until the wear has been taken up. When set tighten all screws.

ARRANGEMENT OF SHEET METAL EXTENSION TABLE (OPTIONAL EXTRA)

A sheet metal extension table can be supplied to fit to the right of the saw as shown in fig 17. This table increases the capacity to the right of the saw to 50" (1270 mm) between the saw and rip fence.

To assemble table the undermentioned procedure should be followed:-

1. Remove parts from parcel and remove protective coating by applying a cloth soaked in paraffin, turpentine or other solvent and assemble as shown in fig 17.
2. Remove existing fence bars and replace with long bars supplied with the table, ensuring replacement bars are correctly positioned i.e. zero mark on graduated bar is to the lip of fixed table.
3. Centralise the table with the main table of the machine. Loosen socket head grubscrew "A" in fig 17, and keeping filloes "B" against the inside of the extension table. The whole assembly can slide along the tie bars. When central with main table re-tighten socket head grubscrews "A".
4. Loosen the four socket head capscrews "C", securing the fence slide bars to the main table and the square head bolts "D" securing the feet to the support legs. Raise or lower the support legs until the fence slide bars are parallel with the main table. There is to be 1/32" (.8mm) to 1/16" (1.6mm) clearance between the table and the bottom of the rip fence throughout the entire length. When set re-tighten all screws.

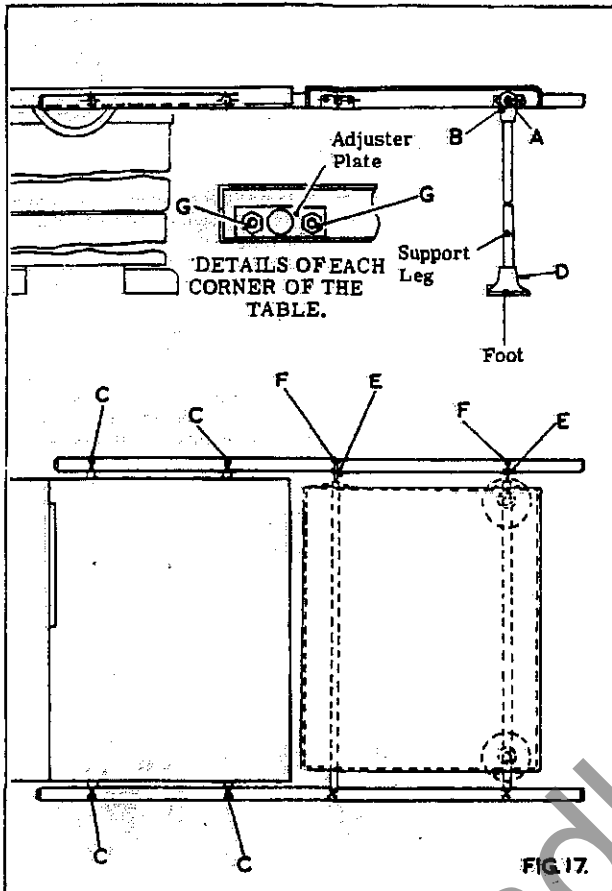


FIG. 17.

5. Loosen the nuts "E" and adjust socket head cap screws "F" until the rear fence slide bar is parallel to the front slide bar. When set re-lock nuts "E".
6. Loosen the hexagon head bolts and nuts "G" securing the adjuster plate to the extension table. Raise or lower the extension table until it is level with the machine table. Check by means of a straight edge. When correctly set re-tighten the hexagon head bolts and nuts "G".

The table is now ready for use.

HOW TO ASSEMBLE SLIDING EXTENSION TABLE TO LEFT OF MACHINE (OPTIONAL EXTRA)

An extension table can be supplied to fit to the left of the saw as shown in fig 18. This table increases the capacity to the left of the saw to 98" (2,440 mm) between the saw and stop.

To assemble the table the undermentioned procedure should be followed:-

1. Remove parts from the parcel and remove protective coating by applying a cloth soaked in paraffin, turpentine or other solvent and assemble as shown in fig. 18.
2. When assembling table set outer floor support 22"(559 mm) away from the sheet steel base as shown.
3. With outer support correctly positioned, secure extension table top by means of the tie bar brackets as shown.
4. Check the table tops are level and parallel to the main table by means of a straight edge. If adjustment is necessary adjust the slide bar by removing panel "A" and adjusting the screws "B".
5. Secure fence to machine table in hole "C", then set square to saw. With fence securely locked in this position drill and tap a 3/8" whit hole in extension table top. When fence has been locked in position by both screws, drill the 2 - 1/4" dia. holes "D" in the machine table and fence for location pegs. This will ensure the fence is always positioned as set.
6. Move fence forward to hole "E", in the machine table and repeat the procedure set out in item 5.
7. The extension table is now ready for use.

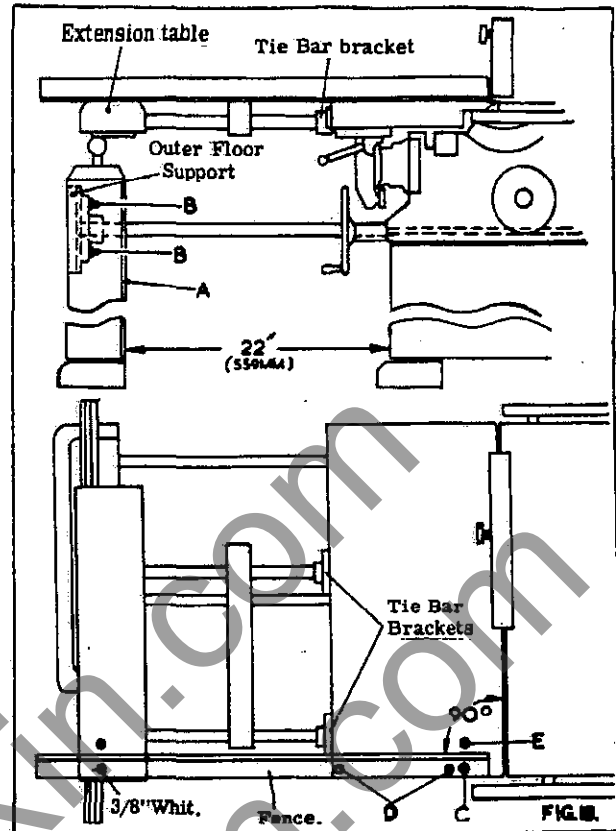


FIG. 18.

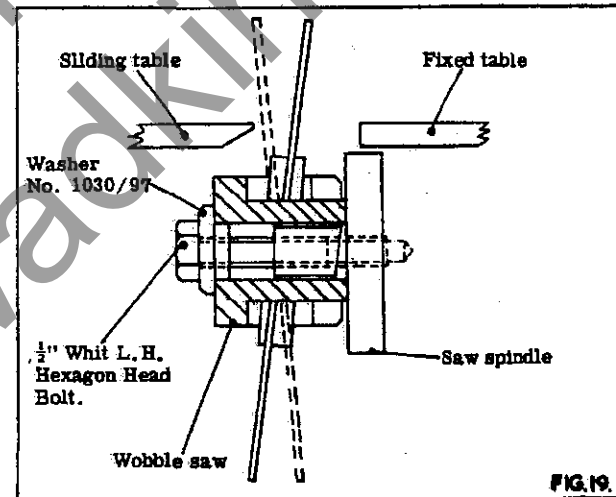


FIG. 19.

HOW TO FIT WOBBLE SAW.

To fit wobble saw the undermentioned procedure should be followed:-

1. Draw out sliding table, as previously described and remove riving knife complete with guard and front saw flange, keep these in a dry safe place.
2. Remove 1/2" whit(left hand thread) socket head grub screw from the end of the saw spindle.
3. Fit the wobble saw to saw spindle as shown in fig. 19 and secure to saw spindle by means of 1/2" whit left hand thread hexagon head bolt supplied.
4. Set the saw to wobble to give the size of slot which is required to be cut.

To adjust saw loosen nut "A" and move saw complete with large collars to required position. When set re-lock nut "A"

5. Close the gap between tables to a minimum still allowing clearance on the wobble saw.
- Maximum diameter of saw which can be used is 8"(203mm) After the job has been completed with the wobble saw, replace the 1/2" whit left hand thread socket head grub screw into the spindle end.

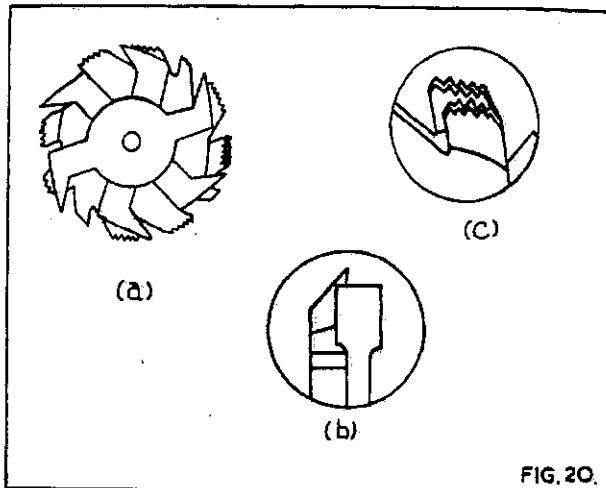


FIG. 20.

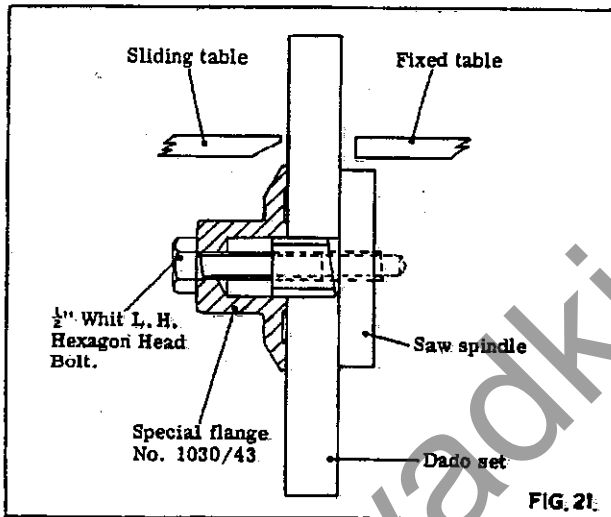


FIG. 21.

HOW TO FIT DADO HEAD

A dado head is made of two outside saws and five inner cutters. Various combinations of saws and cutters can be used to cut grooves from 1/8" to 7/8" (3mm to 22mm) wide. Inner cutters are heavily swaged and must be arranged so that the heavy portion falls in the gullets of the outside saws, as shown in fig 20(a)

Fig 20 (b) shows how the saws and cutters overlap, "A" being the saw and "B" being inside cutter.

A 1/4" (6 mm) groove is cut by using the two outside saws fitting the ground teeth directly opposite as shown in fig 20 (c) in order to allow clearance for the slight set of the saw teeth.

The dado head is secured to the saw spindle by means of a special flange as shown in fig 21.

To fit dado head draw out sliding table as previously described remove riving knife complete with sawguard front saw flange and the 1/2" whit left hand thread socket head grub-screw from the end of the spindle.

Fit the outer saws and required inner cutters on the spindle and lock in position with the special front flange and 1/2" whit left hand thread hexagon head bolt supplied.

When the dado head has been secured to the saw spindle reduce the distance between the tables to a minimum with clearance on the dado head.

When the job is completed with the dado head, replace the 1/2" whit left hand thread socket head grub-screw in the spindle end.

HOW TO FIT MOULDING CUTTERBLOCK.

The cutterblock is 4. 7/8" dia x 15/16" wide (124mm x 24mm) and takes 5/32" (4 mm) and 1/4" (6mm) thick cutters. The cutterblock is secured to the spindle by means of a special flange, as shown in fig 22. The procedure when fitting the cutterblock is identical to that when fitting the wobble saw and dado set.

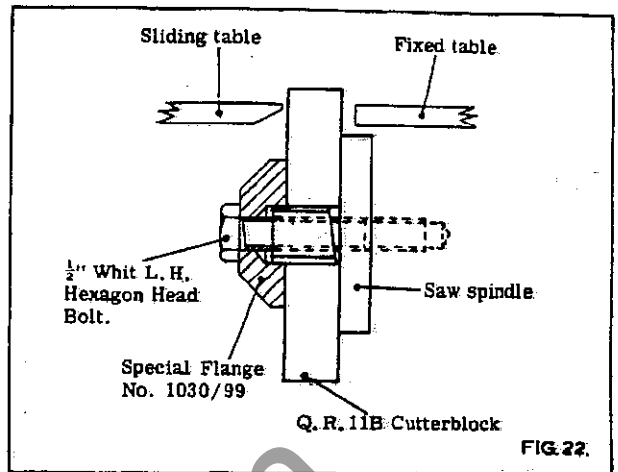


FIG. 22.

When using a cutterblock it is necessary to fit a wood facing to the fence so that only the required amount of cutter is exposed for the moulding or rebate being cut.

This facing is secured to the fence with wood screws through the holes provided. The sketch, fig 22, gives suggested sizes for this wood facing.

Before securing the knives in the cutterblock, always ensure that the slots and knives are free from sawdust and dirt.

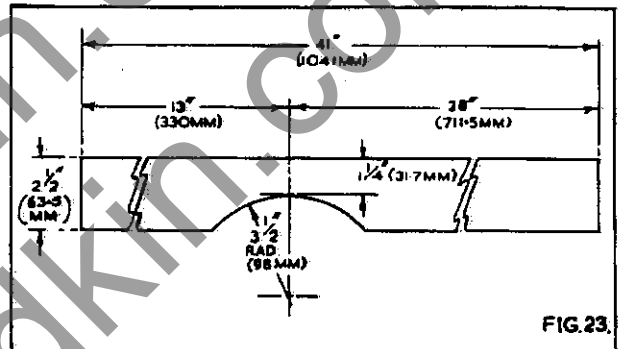


FIG. 23.

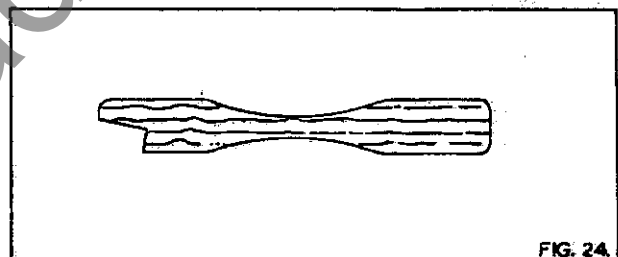


FIG. 24.

SAFETY PRECAUTIONS.

Always adjust the guard to protect as much of the saw as possible and fit the riving knife 1/4" (6 mm) behind the saw at the rear. These adjustments are previously described.

Use a push stick as fig 24, as much as practicable when feeding timber to avoid accident.

When changing equipment always isolate the machine electrically.

SAW MAINTENANCE.

Efficient operation of a circular saw depends on the true running of the saw spindle and the collars being perfectly square on the faces with the axis of the spindle, it must run at the correct peripheral speed to ensure straight cutting.

All Bursgreen circular saw benches embody these requirements and provided the sawblade is maintained in a sharp condition with the teeth correctly sharpened and set, efficient service will be given.

Before putting a new saw to use, it is essential that it is "ranged down" on the teeth, to ensure each tooth is cutting and to maintain true running.

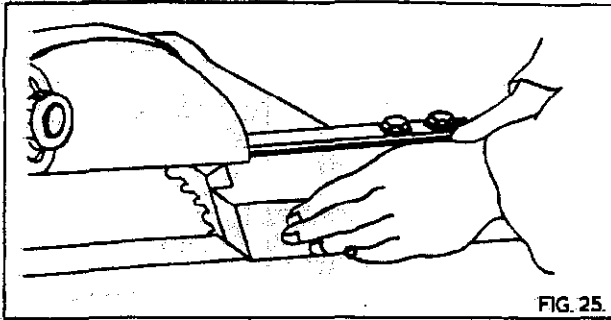


FIG. 25.

RANGING

Ranging down should be done on a new saw or any saw after the fourth or fifth re-sharpening. To range down a saw, feed a square edged abrasive block in wooden holder as shown in fig. 25, lightly against the saw teeth whilst running. The saw should then be removed and the tops of the teeth filed to remove the ranging marks on the points.

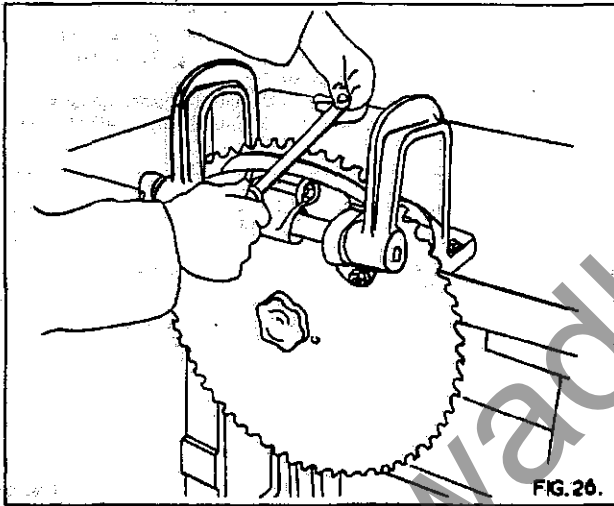


FIG. 26.

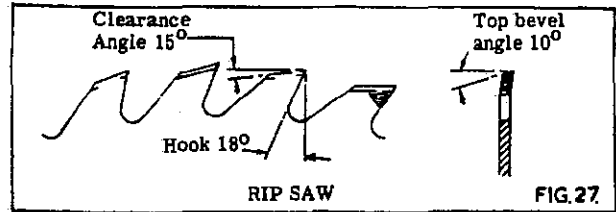
SAW SHARPENING

Do not run a saw when blunt, remove and re-sharpen. To sharpen by hand, hold the saw rigid in a vice, as shown in fig 25, then proceed to sharpen the saw. With rip saw teeth chisel edges and square faces are required see fig 27. Sharpen by giving each tooth an equal number of strokes with a flat faced saw file with rounded edges. At the same time file the gullet, taking care to keep the gullet well rounded. With a crosscut saw, points are needed with back and front bevels as fig 28. In the case of repeated filing the teeth loose the original shape and the gullets shallow. To restore the shape of each tooth, essential for satisfactory performance, it is necessary to grind the saw on a saw sharpening machine. These machines are usually of the automatic type and feed each tooth giving equal spacing or pitch.

SETTING

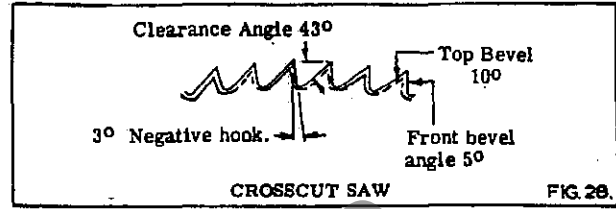
The amount of set to the teeth should be sufficient to give clearance to the body of the saw, so that there is freedom from friction between saw and timber. It is generally accepted that the teeth are "spring set" i. e. the tips of alternate teeth are bent to the left and right as shown in fig. 29. For good sawing the amount of set on each side of the saw must be identical, otherwise the saw will run to one side. To check the set, cut into a piece of wood a few inches when a small even triangle should be cut as in fig. 30.

The exact amount of set each side varies with the timber being cut, usually .010" to .015" (.3 mm to .4 mm). For clean cutting, just sufficient set should be allowed to prevent bending and heating. More set is required for wet woolly timber than for dry close grained timber and the amount of set is greater for crosscutting than for ripping.



RIP SAW

FIG. 27.



CROSSCUT SAW

FIG. 28.

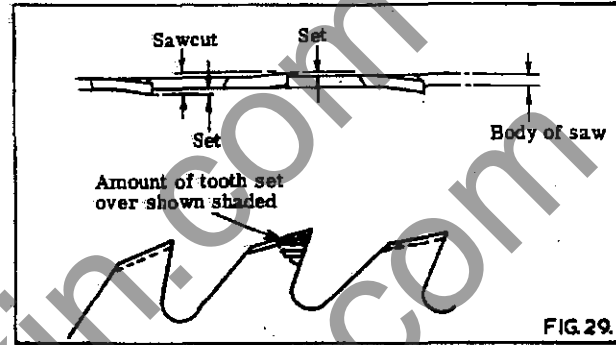


FIG. 29.

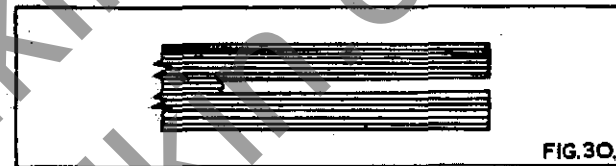


FIG. 30.

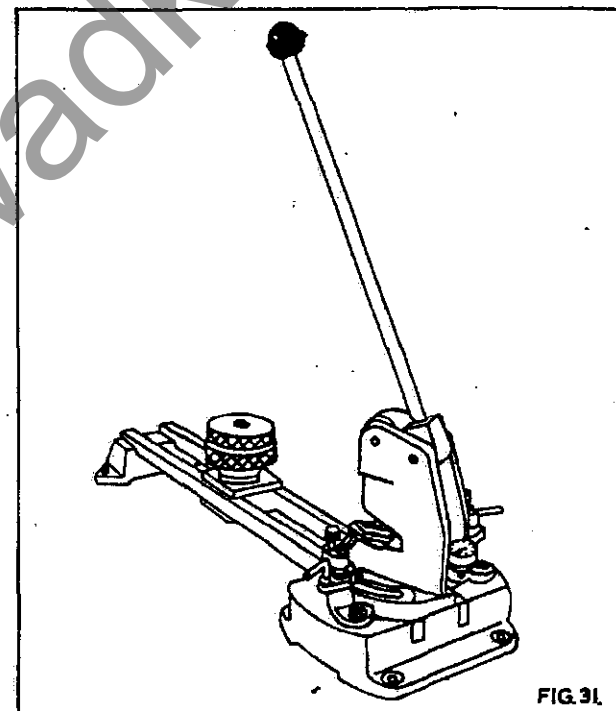


FIG. 31.

MACHINE SETTING

We can supply a small machine for efficiently setting the teeth, as illustrated in fig 31, and will deal with saws 8" to 36" (202 mm to 910 mm) diameter. The micrometer dial indicates accurate reading of the amount of set in thousandths of an inch.

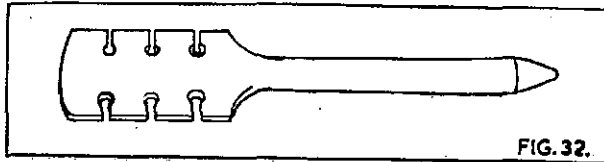


FIG. 32.

HAND SETTING.

Where the number of saws does not warrant a machine being installed the saws can be set by hand using a tool as shown in fig 32. This tool is provided with notches to take saws 8 to 14 gauge thick, while the amount of "set over" is derived by using the gauge shown in fig. 33.

For this process of setting the saw should be securely clamped in a vice.

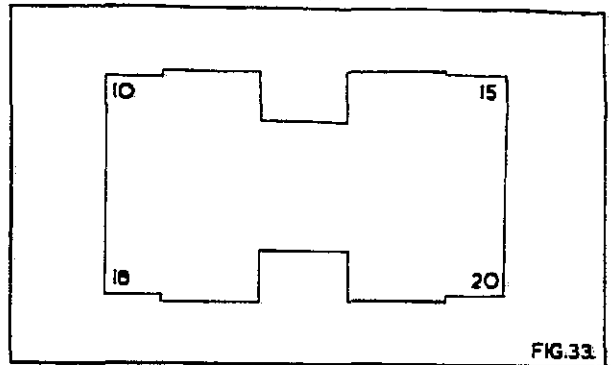


FIG. 33.

EXTRA EQUIPMENT



BS 121
A general purpose rip saw for hard or soft woods.



BS 124
For crosscutting or ripping with an exceptionally smooth finish.

B. S. 125
As above but hollow ground.



B.S. 122
A general purpose crosscut saw.

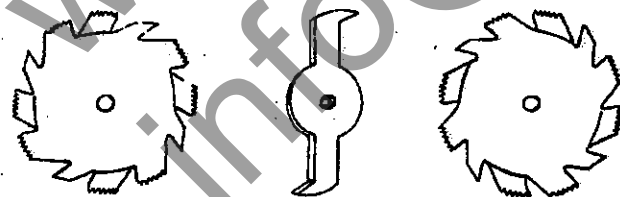


BS 123.
A general purpose hollow ground crosscut saw.



BS 129
For plastic materials.

This is our standard range of saws, normally available from stock. Hollow ground saws require no setting, give minimum saw kerf or wastage and ensure exceptionally clean finish.



EXPANDING GROOVING SAW OR DADO HEAD

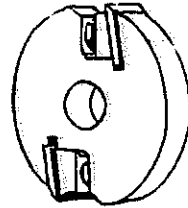
This tool is recommended for giving a smooth finish both with and across the grain in hard or soft woods. It comprises of two 8" (203 mm) diameter outer saws 1 - 1/4" (6mm), 2- 1/8"(3mm) and 2 - 1/16" (1.5mm) inner cutters for grooves up to 7/8" (22 mm) wide. A special front saw flange no. 1030/43 is necessary for securing this head on to the saw spindle and should be ordered with the head.



WOBBLING OR GROOVING SAW.

This saw can be set to cut any width of groove between 1/8" and 1" (3 mm and 25 mm) and can be removed from the spindle without disturbing the setting, once set the saw and collars remain tightly locked on a screwed sleeve. Maximum depth of cut is 2" (50 mm).

A special washer no. 1030/97 is necessary for securing this head on to the saw spindle.



TWO KNIFE WEDGE TYPE CUTTERBLOCK, TYPE QR11B

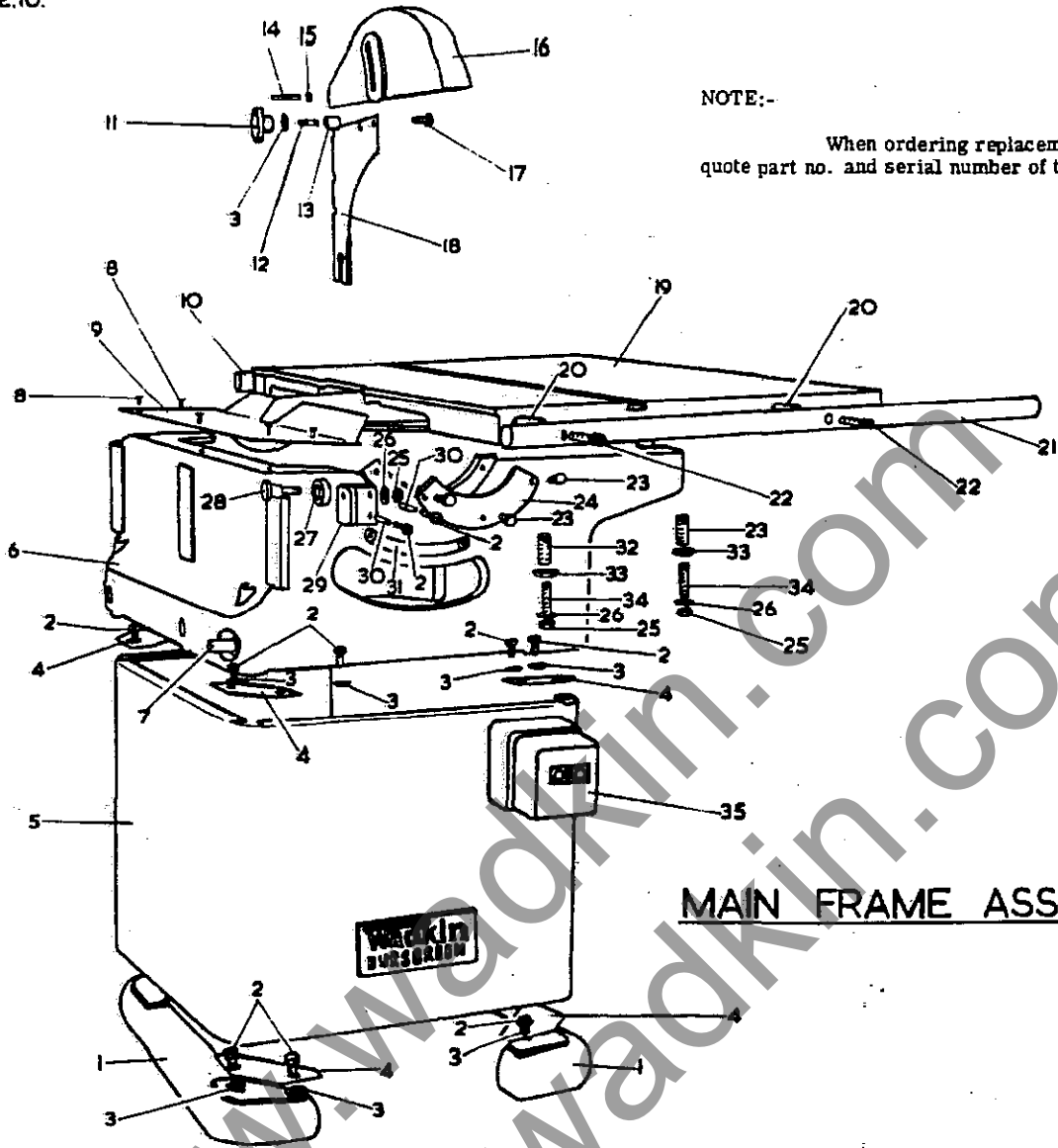
This cutterblock is of a simple design and made from nickel chrome steel for strength. Wedge type clamping of the cutters ensures maximum safety. The wedges and screws are easily removed for cleaning or replacing when worn. The block is 4. 7/8" (124 mm) diameter x 15/16" (24 mm) wide and carries two 5/32" (4 mm) or 1/4" (6 mm) thick cutters.

A special flange no. 1030/99 is necessary for securing this head onto the saw spindle.

SQUARE EDGE CUTTERS FOR CUTTERBLOCK, TYPE VZ

5/32" thick x 1 1/4" long. (4mm): (38mm):	Solid High Speed Steel		
	3/4"	1"	1 1/4"
Width on cut	19mm	25mm	32mm
Part No.	VZ	VZ1	VZ3
1/4" thick x 1 1/4" long. (8mm): (38mm):	H. S. S. welded to mild steel		
	3/4"	1"	1 1/4"
Width on cut	19mm	25mm	32mm
Part No.	VZ2	VZ21	VZ22

Solid H. S. S. in widths of up to 3" (76 mm) and H. S. S welded to mild steel in widths up to 2" (50 mm) available in the bar.

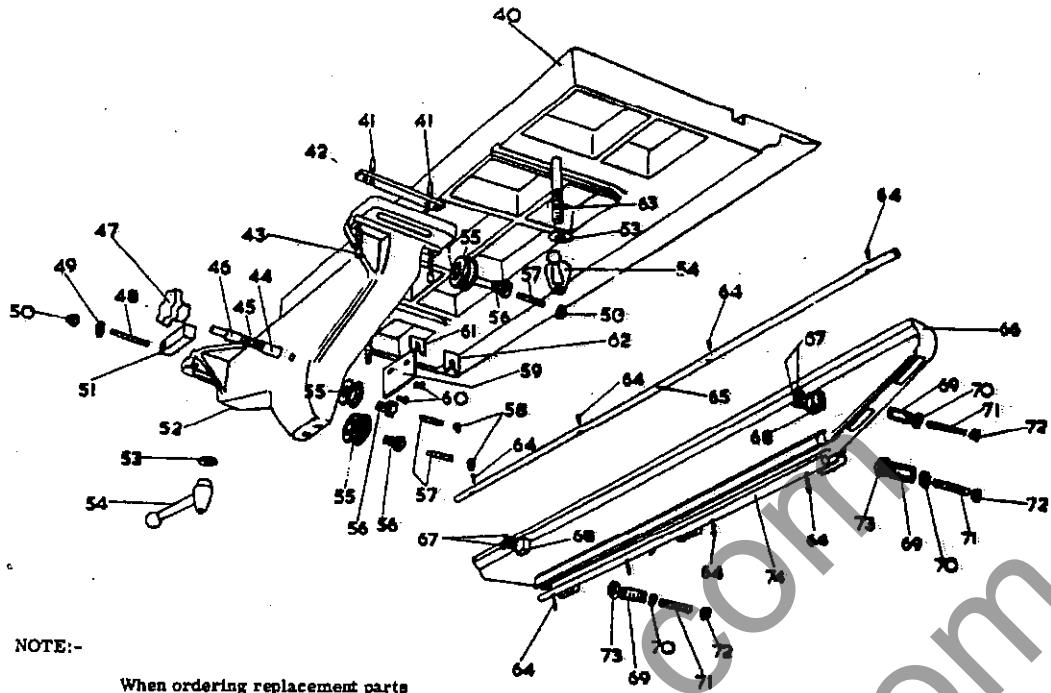


NOTE:-

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

MAIN FRAME ASSEMBLY.

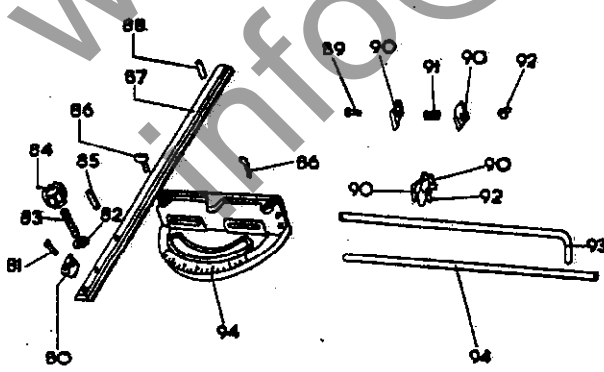
Ref.No.	Part No.	No.off.	DESCRIPTION.	Ref.No.	Part No.	No.off.	DESCRIPTION.
1	C - 1030/6	2	Foot for base.	20	A - 1028/51	4	Fence slide bar distance piece.
2		19	3/8" whit x 1/2" long cadmium hexagon head bolt.	21	B - 1028/52	1	Front fence bar (Standard)
3		18	3/8" cadmium washer.	B - 1028/54	1	Front fence bar (50" capacity)	
4		8	Corner fillets for base.	B - 1028/56	1	Front fence bar (37" capacity)	
5	E - 1030/7	1	Base.	22		4	3/8" whit x 1 3/4" long socket head cap screw.
6	E - 1041/15	1	Mainframe.	23		6	5/16" whit x 3/4" long cadmium hexagon head bolt.
7		2	3/4" bore x 7/8" o/d x 1/4" long oilite bush.	24	C - 1026/7	2	Trunnion trapping plate.
8		5	1/4" whit x 3/8" long countersunk head screw.	25		6	3/8" whit nut
9	B - 1040/21	1	Under table finger guard.	26		6	3/8" Washer.
10	B - 1028/53	1	Back fence bar (Standard)	27	6202 FF	2	Fischer sealed bearing
	B - 1028/55	1	Back fence bar (50" Capacity)	28	A - 1040/7	2	Outer roller pin.
	B - 1028/57	1	Back fence bar (37" capacity)	29	B - 1040/3	2	Outer table roller bracket.
11	Patt No. 32	1	1 1/2" dia plastic handwheel, 3/8" whit.	30		4	1/4" dia x 3/4" long fluted dowel.
12		1	3/8" whit x 1" long stud.	31	B - 1026/17	1	Angle indicator rule.
13	A - 1026/60	1	Riving knife distance piece.	32	A - 1040/9	4	1/2" simplex adjuster for main table.
14		1	5/16" dia x 1 1/4" long groverlok spring dowel.	33	A - 1028/24	4	3/4" simplex locknut.
15	A - 1030/31	1	Sawguard pivot.	34		4	3/8" whit x 2 1/2" long stud.
16	C - 1030/10	1	Sawguard.	35	84 ADS	1	MEM starter (3 phase, 3 hp, 50 cycles.)
17		1	3/8" whit x 1/2" long hexagon head bolt.		AT 3	1	Brook starter (3 phase, 3 hp, 60 cycles.)
18	B - 1030/80	1	Riving knife.		ZT 3	1	Brook starter (3 phase, 5 hp, 50 & 60 cycles.)
19	D - 1041/1	1	Main table.		ZVC	1	Brook starter (1 phase, 3 hp, 50 cycle.)



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

SLIDING TABLE ASSEMBLY

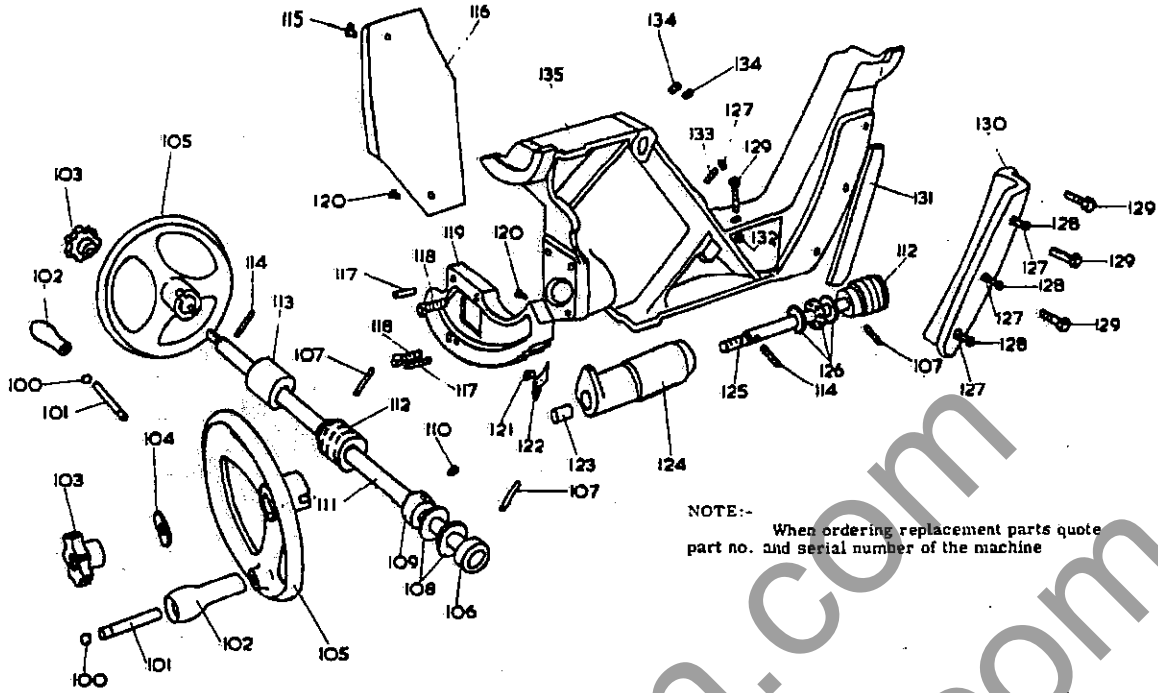
Ref. No.	Part No.	No. off	DESCRIPTION	Ref. No.	Part No.	No. off	DESCRIPTION
40	D - 1040/34	1	Sliding table.	57		3	5/16" whit x 2" long stud.
41		4	1/4" dia x 3/4" long fluted dowel.	58		3	5/16" whit nut.
42	A - 1040/8	2	Sliding table key	59	B - 1040/20	2	Roller wiper bracket.
43		4	5/16" whit x 1" long socket head capscrew.	60		4	3/16" whit x 3/8" long round head screw
44	A - 1040/5	1	Table location plunger	61	A - 1028/13	4	Felt wiper
45	A - 1040/12	1	Table location plunger spring.	62	A - 1028/16	4	Felt wiper trapping plate.
46		1	5/16" bore x 1/2" o/d x 1/2" long oilite bush.	63		2	1/2" whit x 2" long stud.
47	Part No. 14.	1	2" dia plastic handwheel, 5/16" bore	64	CK 78	8	2BA x 3/4" long cheese head screw.
48		1	1/2" whit x 1 1/2" long stud.	65	B - 1040/4	1	Slide bar (43" long)
49		1	1/2" washer	66	D - 1040/1	1	Beam
50		1	1/2" whit aerotight.	67		4	1/2" whit x 3/4" long countersunk head screw
51	A - 1040/8	1	Table plunger release arm	68	A - 1028/10	2	Fibre table stop
52	E - 1040/3	1	Table roller bracket.	69	A - 1040/39	4	1/2" simplex adjuster for beam
53		2	1/2" washer	70		4	3/8" washer
54	Type 3, 160	2	1/2" whit, "Kipp" handle, female thread.	71		4	3/8" whit x 2 1/2" long stud.
55	FG 3400	3	FBC Roller bearing	72		4	3/8" whit nut.
56	A - 1028/9	3	Eccentric roller bush	73	A - 1028/24	4	1/2" simplex locknut.
				74	B - 1040/4	1	Slide bar (27 3/8" long)



Ref. No.	Part No.	No. off	DESCRIPTION
80	A - 1028/172	1	Mitre fence pointer
81		1	1/2" whit x 1/2" long cheese head screw
82	A - 1028/174	1	Washer for mitre fence.
83		1	5/16" whit x 1 1/2" long stud.
84	Part No. 32	1	1 1/2" dia plastic handwheel 5/16" whit
85		1	3/8" dia x 1/2" long fluted dowel.
86		2	1/2" whit thumbcrew
87	B - 1030/33	1	Mitre fence tongue.
88		1	5/16" whit x 1/2" long nicked grubscrew.
89		2	1/2" whit x 3/4" long coach bolt.
90	A - 1028/68	4	Mitre fence stop plate
91	A - 1028/73	2	Mitre fence stop plate spring.
92		2	1/2" whit wingnut
93	A - 1028/89	1	Mitre fence stop rod (Cranked)
94	B - 1028/89	1	Mitre fence stop rod (Straight)
95	C - 1028/188	1	Mitre fence body.

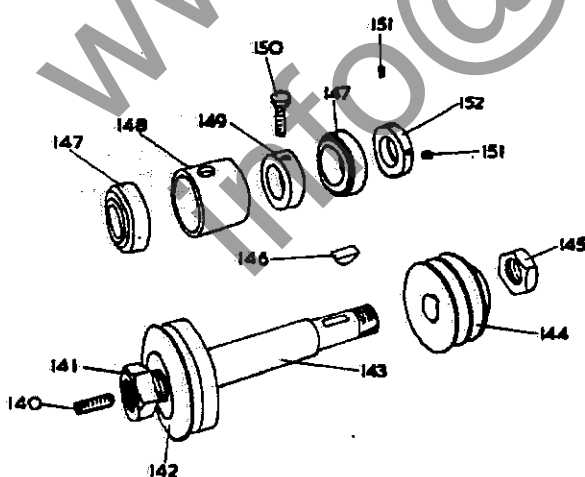
NOTE:-
When ordering replacement parts
quote part no. and serial no. of the machine.

MITRE FENCE ASSEMBLY



TRUNNION ASSEMBLY.

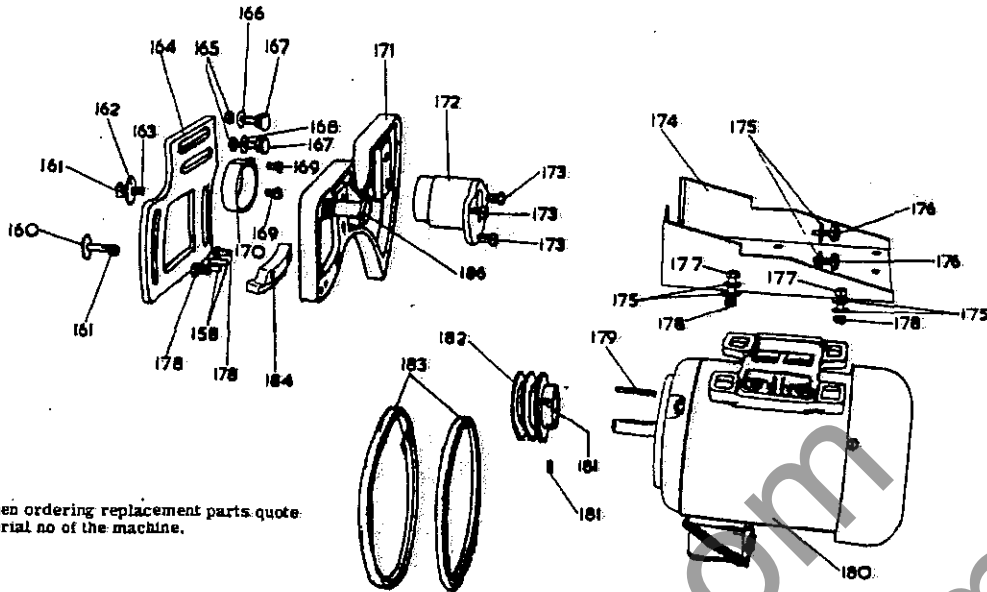
Ref. No.	Part No.	No. off.	DESCRIPTION.	Ref. No.	Part No.	No. off.	DESCRIPTION.
100	5555 - 37	2	"Truearc" grip ring circlip.	119	D - 1030/11	1	Racked quadrant for canting.
101	A - S - 101	2	Spindle for 3" plastic handle.	120	A - 1026/33	1	1/4" gas pipscrew.
102	Part No. 4	2	3" plastic handle.	121		1	1/4" whit x 3/8" long round head screw.
103	Part No. 14	2	2" dia plastic handwheel, 1/2" whit T. R. T.	122	A - 1030/38	1	Angle indicator pointer.
104	A - 1026/22	2	Washer for handwheel.	123		2	3/4" bore x 7/8" o/d x 1/2" long oilite bush.
105	C - 1030/14	2	7 1/2" dia dished handwheel.	124	B - 1026/6	1	R & F screw bearing
106	A - 1026/29	1	Canting shaft collar (without 3/8" whit hole)	125	B - 1026/20	1	R & F shaft.
107		3	3/16" dia x 1 1/2" long groverlock spring dowel	126	EW 1/2	1	Hoffmann thrust race.
108	A - 1026/65	2	Fibre washer for canting shaft.	127		4	1/4" whit locknut.
109	A - 1026/29	1	Canting shaft collar (with 3/8" whit hole)	128		4	1/4" whit x 1 1/2" long square head bolt.
110		1	3/8" whit x 1 1/2" long socket head grubscrow	129		3	3/8" whit x 1 1/2" long cadmium hexagon head bolt.
111	B - 1040/17	1	Canting shaft.	130	C - 1030/8	1	Motor bracket trapping piece.
112	A - 1026/32	2	Worm.	131	A - 1030/28	1	Retaining strip for spindle housing.
113	A - 1040/18	1	Canting shaft distance piece.	132		1	1/4" whit nut.
114		2	3/16" dia x 1 1/2" long groverlock spring dowel	133		1	1/4" whit x 1 1/2" long nicked grubscrow.
115		2	1/4" whit x 1 1/2" long cadmium hexagon head bolt.	134		2	1/8" gas x 1 1/2" long socket head grubscrow.
116	B - 1030/26	1	Chip guard.	135	E - 1030/3	1	Trunnion bracket.
117		2	5/16" dia x 1 1/2" long groverlock spring dowel				
118		2	3/8" whit x 1 1/2" long cadmium hexagon head bolt.				



SAW SPINDLE ASSEMBLY.

Ref. No.	Part No.	No. off.	DESCRIPTION
140		1	1/2" L. H. whit x 1 1/2" long socket head grubscrow
141	A - 1040/10	1	Saw spindle nut (1" acme)
142	A - 1030/18	1	Front saw flange.
143	A - 1040/11	1	Saw spindle.
144	B - 1030/51	1	Spindle pulley (3 HP, 50 & 60 cycle.)
	B - 1030/68	1	Spindl a pulley (3 HP, 60 cycle.)
	B - 1030/73	1	Spindle pulley (3 HP, 50 cycle)
145	A - 1030/20	1	Saw spindle locknut (1" fine thread)
146		1	5/16" woodruff key.
147	5G88506	2	SKF sealed for life bearing
148	A - 1030/21	1	Saw spindle distance piece.
149	A - 1030/22	1	Spindle trapping collar.
150		1	3/8" whit x 1 1/2" long hexagon head bolt.
151		2	1/4" whit x 3/8" long socket head grubscrow
152	A - 1030/23	1	Spindle locking collar.

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

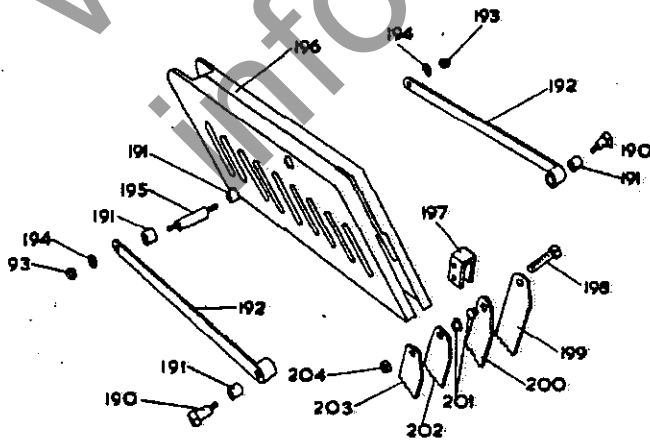


NOTE:-
When ordering replacement parts quote part no. and serial no of the machine.

MOTOR MOUNTING ASSEMBLY

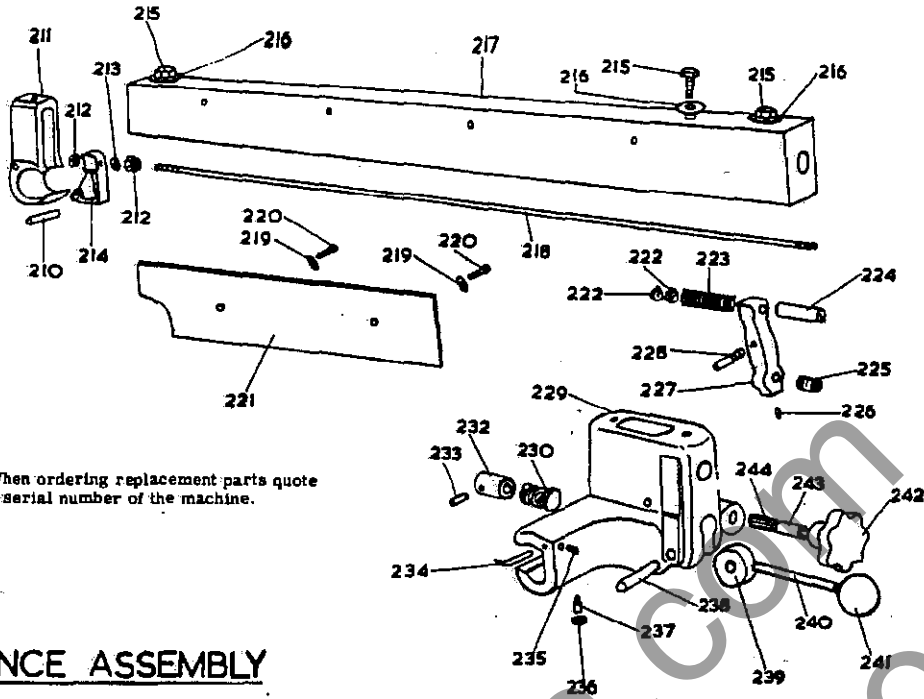
Ref.No.	Part No.	No.off	Description	Ref.No.	Part No.	No.off	Description
160	A - 1030/81	1	Riving knife bracket trapping bolt.	180		1	Brook 68B motor, 3 HP, 3,000 r. p. m. foot mounted (3 HP, 50 cycles)
161		2	3/8" whit aerotight nut.			1	Brook 68B motor, 3 HP, 3,600 r. p. m. foot mounted (3 HP, 60 cycles)
162	A - 1024/58	1	Retaining washer			1	Brook D-100L motor, 5HP, 3,000 r. p. m. foot mounted, (5HP, 50 cycles)
163		1	3/8" whit x 1 1/4" long stud.			1	Brook D-100L motor, 5HP, 3,600 r. p. m. foot mounted, (5HP, 60 cycles)
164	C - 1030/78	1	Riving knife bracket.			1	Brook D100L motor, 3HP, 3000 r. p. m. foot mounted, (1 phase, 50 cycles)
165		2	3/8" whit nut.			1	Brook D100L motor, 3HP, 3000 r. p. m. foot mounted, (1 phase, 50 cycles)
166	A - 1032/22	1	Riving knife washer			1	Brook D100L motor, 3HP, 3000 r. p. m. foot mounted, (1 phase, 50 cycles)
167	A - 1026/98	2	Bolts for riving knife			1	Brook D100L motor, 3HP, 3000 r. p. m. foot mounted, (1 phase, 50 cycles)
169		1	3/8" washer.			1	Brook D100L motor, 3HP, 3000 r. p. m. foot mounted, (1 phase, 50 cycles)
170	B - 1030/79	1	Riving knife pivot bracket			1	Brook D100L motor, 3HP, 3000 r. p. m. foot mounted, (1 phase, 50 cycles)
171	C - 1030/105	1	Slide bracket.	181		2	5/16" whit x 3/4" long socket head grub screw.
172	C - 1030/106	1	Spindle housing	182	B - 1030/52	1	Motor pulley (3 HP, 60 cycles)
173		3	3/8" whit x 1" long cadmium hexagon head bolt.		B - 1030/54	1	Motor pulley (3 HP, 60 cycles)
174	C - 1030/107	1	Motor platform.		B - 1030/72	1	Motor pulley (5HP, 60 cycles)
175		12	3/8" cadmium washer		B - 1030/69	1	Motor pulley (5HP, 60 cycles)
176		4	3/8" whit x 3/4" long cadmium hexagon head bolt.	183	B - 1030/52	1	Motor pulley (5HP, 60 cycles)
177		4	3/8" whit cadmium nut.		A 24	2	Fenner Vee belt(3HP, 50 & 60 cycles)
178		6	3/8" whit x 1 1/4" long cadmium hexagon head bolt.	ALPHA. 250	3	Fenner space saver Vee belt(5HP, 50 & 60 cycles)	
179		1	3/16" wide x 1 1/4" long key.	184	D - 1030/12	1	Racked quadrant for rise and fall.
				185		2	5/16" dia x 1" long groverlock spring dowel.
				188	A - 1030/27	1	Pivot pin for slide bracket.

AMERICAN SAW GUARD ASSEMBLY (SPECIAL)



Ref.No.	Part No.	No.off	Description
190	A - 1026/107	2	Back pivot screw.
191		4	3/8" bore x 1/2" o/d x 1/2" long nylon bush
192	A - 1030/63	2	American saw guard pivot arm.
193		2	1/2" whit aerotight nut.
194		2	1/2" washer
195	A - 1026/108	1	Front pivot pin.
196	D - 1030/62	1	American saw guard
197	A - 1026/104	1	Pivot block for arm.
198		1	1/2" whit x 1" long hexagon head bolt.
199	A - 1030/32	1	Kick back finger (5 1/4" long)
200	A - 1030/32	1	Kick back finger (4, 3/8" long)
201	A - 1026/109	2	Riving knife pivot bush
202	A - 1030/32	1	Kick back finger (3, 5/8" long)
203	A - 1030/32	1	Kick back finger (2, 7/8" long)
204		1	1/2" whit nut.

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

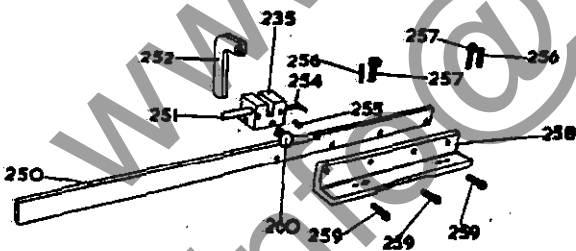


NOTE:- When ordering replacement parts quote part no. and serial number of the machine.

RIP FENCE ASSEMBLY

Ref. No.	Part No.	No. off	Description	Ref. No.	Part No.	No. off	Description
210		1	3/8" dia x 1 1/4" long groverlok spring dowel	227	A - 1028/38	1	Rip fence front locking lever
211	B - 1026/38	1	Rip fence back bracket	228	A - 1026/55	1	Rip fence front locking lever pivot
212		2	1/4" whit aerotight nut.	229	D - 1040/35	1	Rip fence front bracket.
213		1	1/4" double coil spring washer	230	A - 1026/47	1	Rip fence locking plunger
214	B - 1026/37	1	Rip fence back lock	231	A - 1028/49	1	Rip fence locking plunger spring.
215		3	3/8" whit x 1/2" long bright cadmium hexagon head bolt.	232	A - 1028/48	1	Rip fence locking plunger bush.
218		3	3/8" bright cadmium washer	233		1	1/4" dia x 1/2" long groverlok spring dowel
217	C - 1030/30	1	Rip fence body	234	A - 1028/54	1	Rip fence pointer
218	A - 1030/37	1	Rip fence connecting rod.	235		1	1/4" whit x 3/8" long socket head grubscrow,
219		2	1/4" washer	236		1	3/8" whit locknut
220		2	1/4" whit x 2 1/4" long round head screw	237	A - 1028/50	1	Rip fence locking plunger pipscrow
221	B - 1030/51	1	Rip fence plate (Special to order only)	238	A - 1028/58	1	Rip fence cam pivot pin.
222		2	1/4" whit locknut	239	A - 1028/43	1	Rip fence locking cam.
223	A - 1044/89	1	Spring for fence locking bar.	240	A - 1028/59	1	Rip fence locking handle.
224	A - 1026/46	1	Rip fence connecting rod nut	241	Part No. 28	1	1 1/4" dia plastic ball, 3/8" whit
225	A - 1028/44	1	Rip fence locking lever adjusting screw	242	Part No. 14	1	2" plastic handwheel, 5/16" bore
226		1	1/4" whit x 3/8" long socket head grubscrow	243		1	5/16" bore x 1/4" o/d x 1/2" long oilite bush
227		1	Rip fence front locking lever	244	A - 1028/42	1	Rip fence pinion.
228		1	Rip fence front locking lever pivot				
229		1	Rip fence front bracket.				
230		1	Rip fence locking plunger				
231		1	Rip fence locking plunger spring.				
232		1	Rip fence locking plunger bush.				
233		1	1/4" dia x 1/2" long groverlok spring dowel				
234		1	Rip fence pointer				
235		1	1/4" whit x 3/8" long socket head grubscrow,				
236		1	3/8" whit locknut				
237		1	Rip fence locking plunger pipscrow				
238		1	Rip fence cam pivot pin.				
239		1	Rip fence locking cam.				
240		1	Rip fence locking handle.				
241		1	1 1/4" dia plastic ball, 3/8" whit				
242		1	2" plastic handwheel, 5/16" bore				
243		1	5/16" bore x 1/4" o/d x 1/2" long oilite bush				
244		1	Rip fence pinion.				

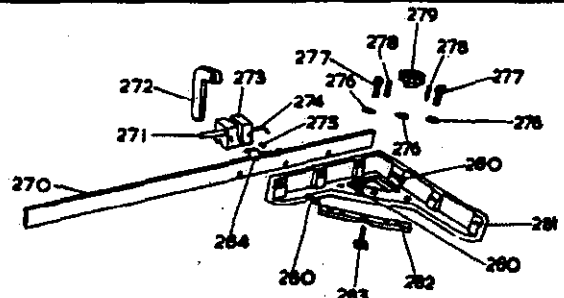
STRAIGHT CROSS CUT FENCE ASSEMBLY



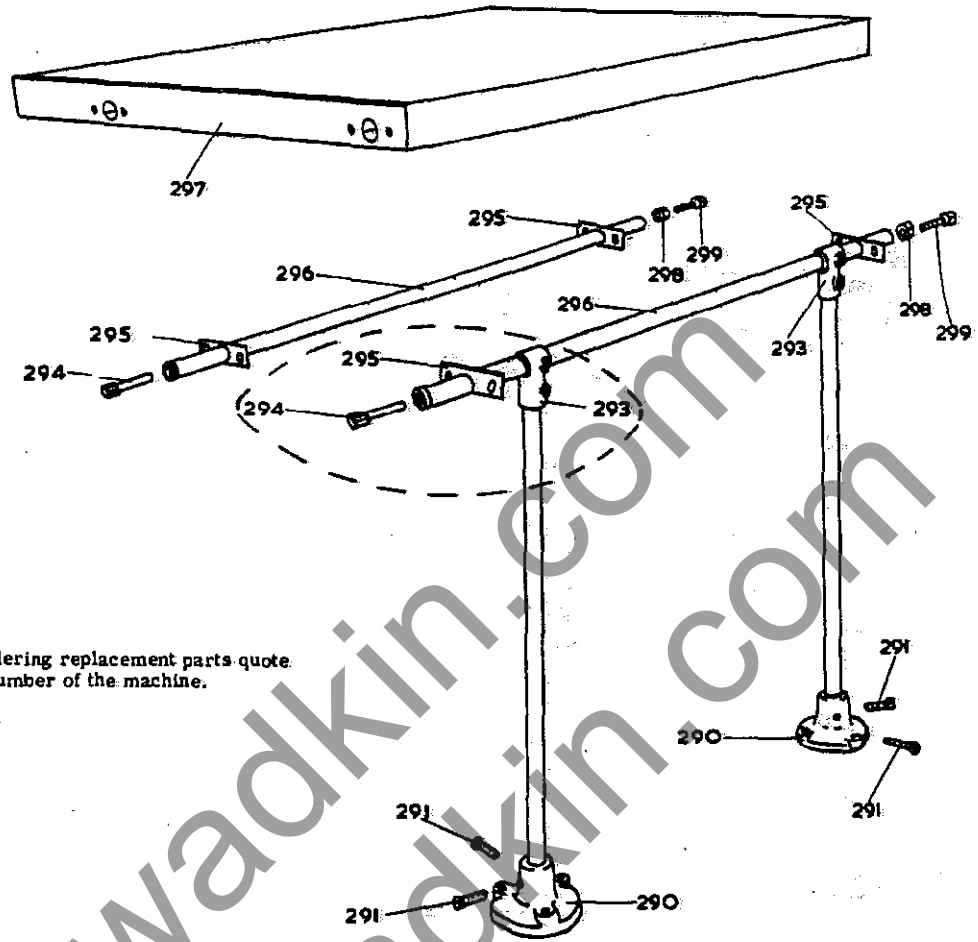
Ref. No.	Part No.	No. off	Description
250	A - 1040/38	1	Stop bar (Standard)
	A - 1040/40	1	Stop bar (Metric.)
251		1	5/16" dia x 2" long hardened and ground dowel.
252	A - 1028/26	1	Turn over stop.
253	A - 1027/83	1	Turn over stop holder.
254	A - 1027/202	1	Pointer for turn over stop.
255		1	1/4" whit x 3/8" long socket head grubscrow
256		2	1/4" dia. x 1/2" long fluted dowel.
257		2	3/8" whit x 1/2" long hexagon head bolt.
258	B - 1028/8	1	Short cross cut fence.
259		3	5/16" whit x 1/2" long cheese head screw.
280	B-S-1-B	1	3/8" whit ball lever screw.

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

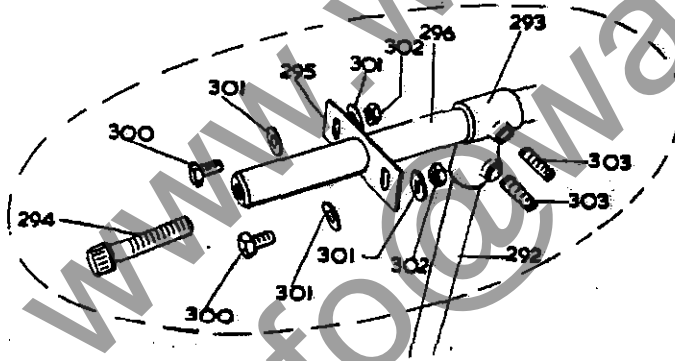
DOUBLE MITRE FENCE ASSEMBLY



Ref. No.	Part No.	No. off	Description
270	A - 1040/38	1	Stop bar (Standard)
	A - 1040/40	1	Stop bar (Metric)
271		1	5/16" dia. x 2" long hardened and ground dowel.
272	A - 1028/26	1	Turn over stop.
273	A - 1027/83	1	Turn over stop holder
274	A - 1027/202	1	Pointer for turn over stop.
275		1	1/4" whit x 3/8" long socket head grubscrow
276		3	3/8" cadmium washer.
277		2	3/8" whit x 1/2" long cadmium hexagon head bolt.
278		2	1/4" dia. x 1/2" long fluted dowel.
279	Part. No. 32	1	1 1/4" dia plastic handwheel, 3/8" whit TRT
280		3	5/16" whit x 1/2" long cheese head screw.
281	C - 1028/7	1	45° mitre fence.
282	A - 1028/22	1	45° mitre fence tongue
283	A - 1028/23	1	45° mitre fence lock bolt.
284	B-S-1-B	1	3/8" whit ball lever screw.

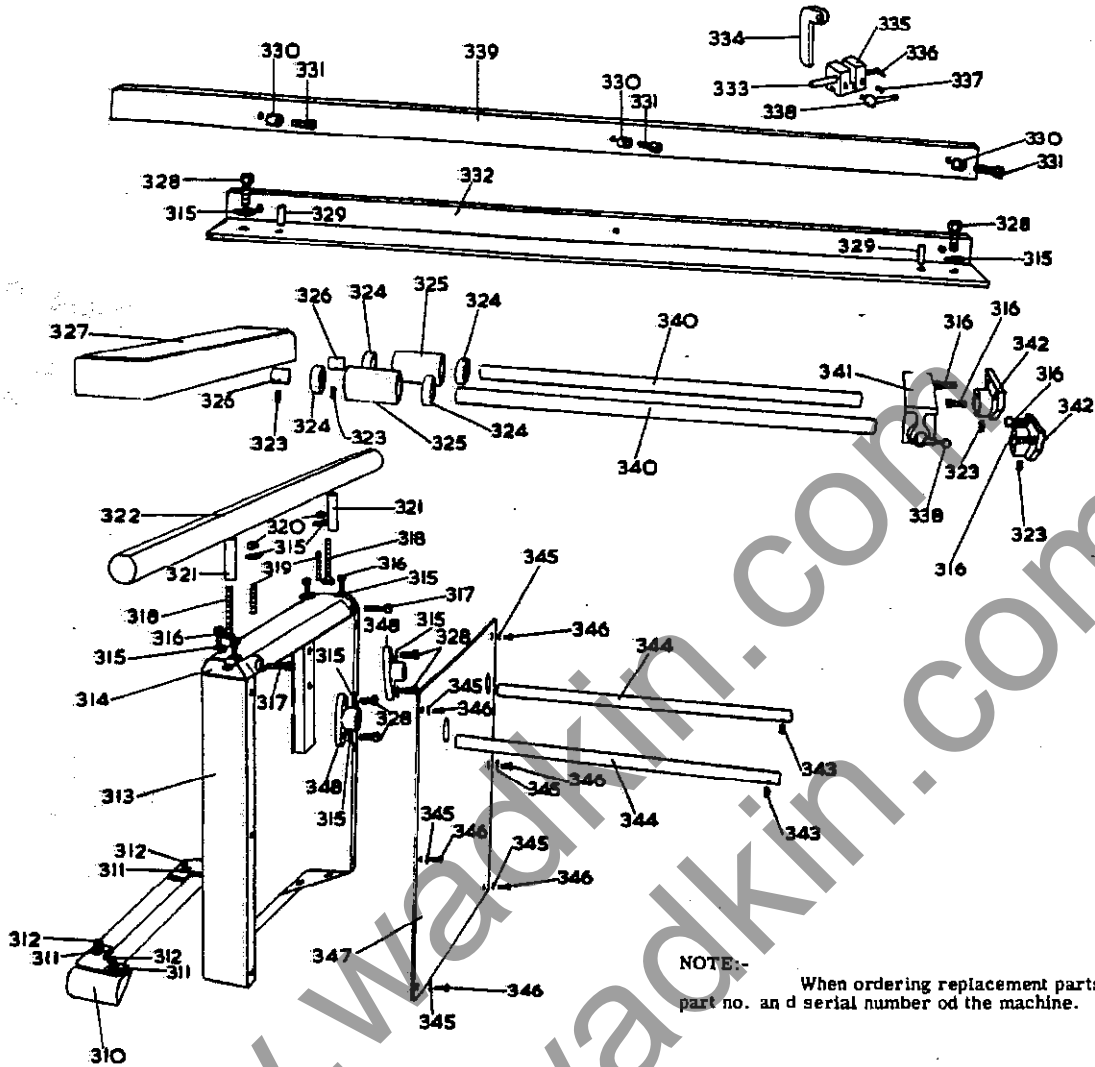


NOTE:- When ordering replacement parts quote part no. and serial number of the machine.



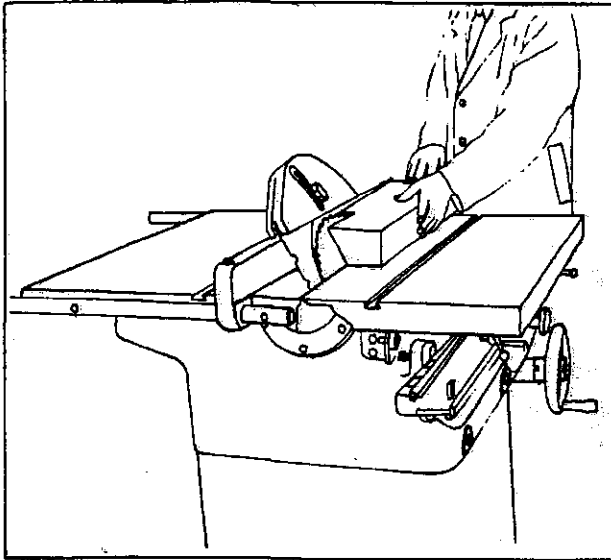
SHEET METAL EXTENSION TABLE ASSEMBLY (EXTRA)

Ref. No.	Part. No.	No. off	Description.	Ref. No.	Part. No.	No. off	Description
290	A - 1026/85	2	Support feet for sheet steel extension table.	296	A - 1030/42	2	Tie bar for sheet steel extension table.
291		4	3/8" whit x 3/4" long square head bolt.	297	D - 1030/39	1	Sheet steel extension table.
292	A - 1026/84	2	Support leg for sheet steel extension table.	298		2	3/8" whit nut.
293	B - 1026/99	2	Tee filboe for sheet steel extension table.	299		2	3/8" whit x 1 1/4" long socket head cap screw.
294		2	3/8" whit x 1 1/4" long socket head cap screw.	300		8	1/2" whit x 1/2" long hexagon head bolt.
295	A - 1026/80	4	Adjuster plate for sheet steel extension table.	301		16	1/4" washer
				302		8	1/4" whit nut
				303		4	3/8" BSF x 3/8" long socket head grub screw.

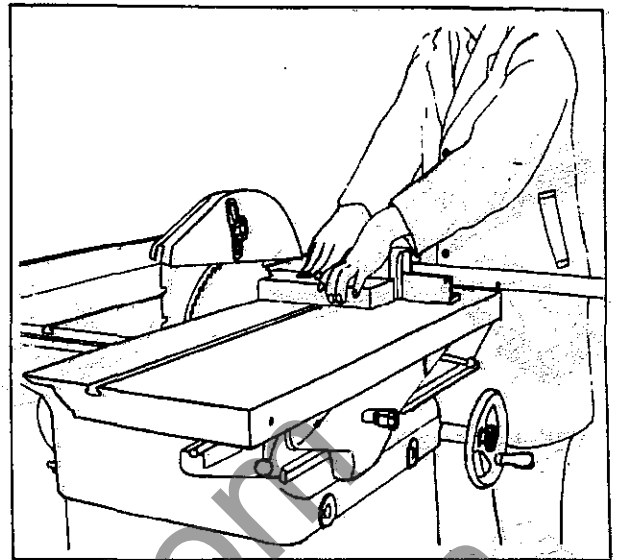


SLIDING EXTENSION TABLE ASSEMBLY

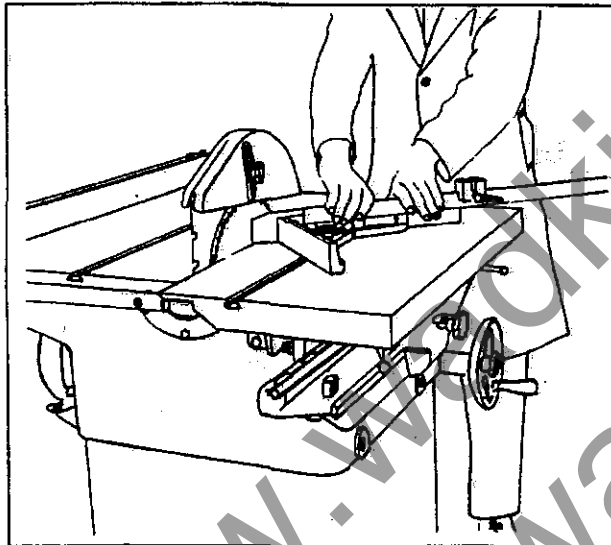
Ref. No.	Part No.	No. off	Description	Ref. No.	Part No.	No. off	Description
310	C - 1030/6	1	Foot for outer support	330	A - 1041/32	3	Distance piece for fence.
311		4	3/8" cadmium washer	331		3	5/16" whit x 1/2" long cheese head screw
312		4	3/8" whit x 1" long cadmium hexagon head bolt.	332	C - 1041/36	1	Crosscut fence.
313	D - 1040/28	1	Sliding extension table outer support	333		1	5/16" dia. x 2" hardened and ground dowel.
314	C - 1040/25	1	Sliding extension table outer support top.	334	A - 1028/28	1	Turn over stop.
315		12	3/8" washer	335	A - 1027/83	1	Turn over stop holder.
316		8	3/8" whit x 1" long hexagon head bolt	336	A - 1027/202	1	Pointer for turn over stop.
317		2	3/8" whit x 2" long square head bolt.	337		1	1/2" whit x 3/8" long socket head grub screw.
318		2	1/2" whit x 3 1/2" long hexagon head bolt.	338	B.S. 1-B	2	3/8" whit ball lever screw.
319		2	3/8" whit x 2" long stud.	339	B - 1041/24	1	Long stopbar.
320		2	3/8" whit nut.	340	A - 1040/31	2	Sliding extension table top tie bar.
321	A - 1041/8	2	Pillar for outer rail.	341	C - 1040/27	1	Sliding extension table adjustable table.
322	B - 1040/30	1	Sliding extension table rail.	342	B - 1028/34	2	Tie bar bracket
323		4	3/8" whit x 1/2" long socket head grub screw.	343		2	3/8" whit x 1" long socket head grub screw.
324	SN. 2075	4	Fischer single seal bearing	344	A - 1040/32	2	Sliding extension table bottom tie bar.
325	B - 1040/29	2	Sliding extension table roller.	345			1/2" whit x 1/2" long hexagon head bolt.
326	A - 1040/33	2	Sliding extension table roller distance piece.	346			1/2" light weight washer
327				347		1	Panel for outer support.
328	C - 1040/24	1	Sliding extension table top.	348	B - 1040/26	2	Lower tie bar bracket.
329		6	3/8" whit x 1 1/2" long hexagon head bolt.				
		2	1/2" dia x 1 1/2" long fluted dowel.				



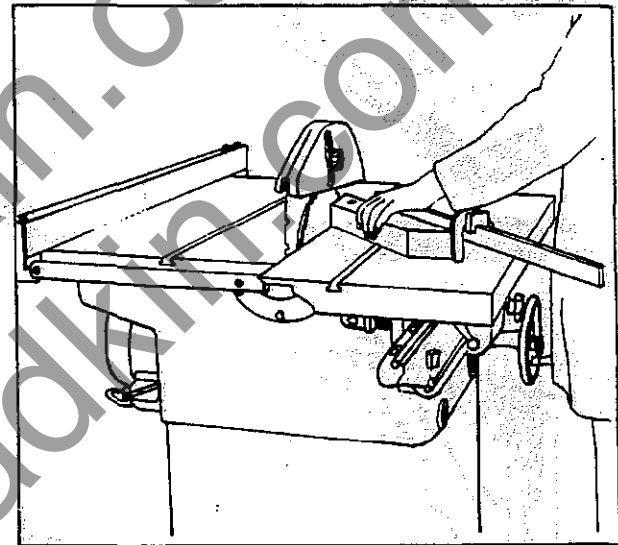
STRAIGHT OR BEVEL RIPPING.



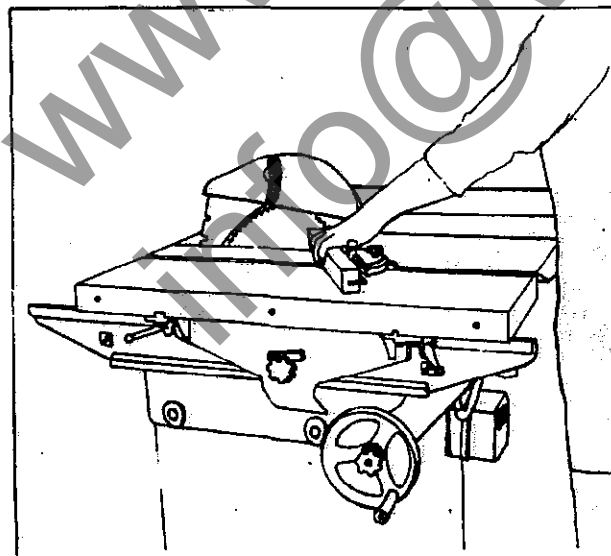
STRAIGHT CROSS CUTTING USING FENCE ON SLIDING TABLE.



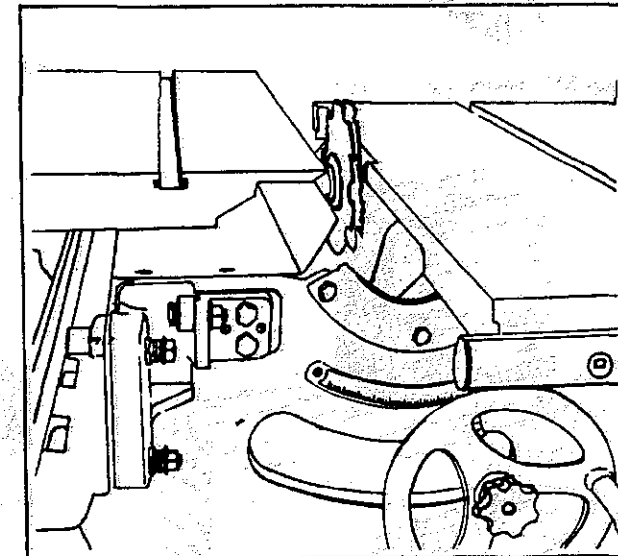
MITRE CUTTING USING BACK OF DOUBLE MITRE FENCE AND SLIDING TABLE.



FRONT OF DOUBLE MITRE FENCE IS USED FOR CUTTING OPPOSITE ANGLE TO THAT ON LEFT.

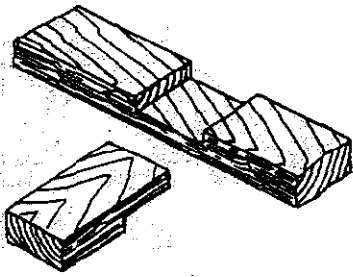


COMPOUND MITRE USING SWIVELLING MITRE FENCE IN TABLE GROOVE.

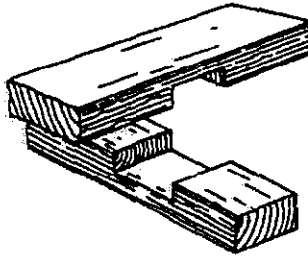


SLIDING TABLE DRAWN BACK TO SHOW FITTING OF DADO SET.

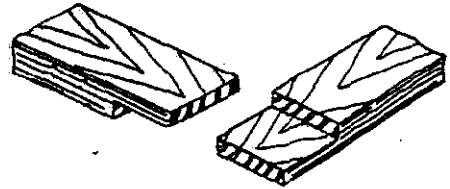
THE ILLUSTRATED JOINTS CAN BE READILY DONE ON THIS MACHINE, SOME MAY REQUIRE SIMPLE JIGS.



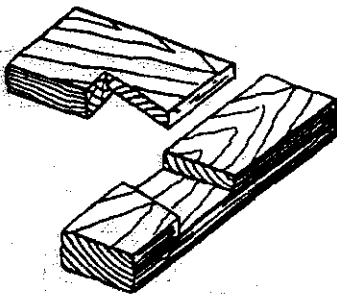
TEE HALF LAP



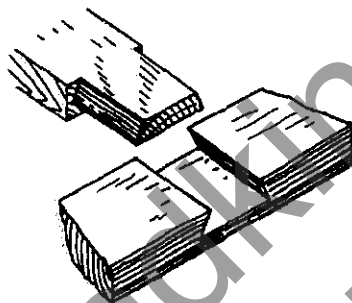
MIDDLE HALF LAP



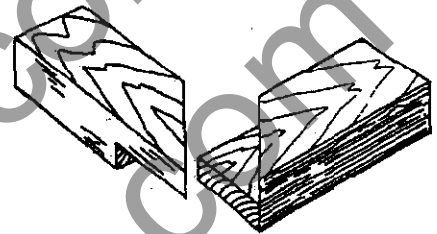
END HALF LAP



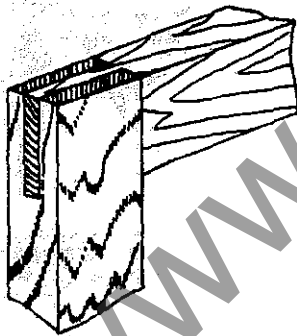
DOVETAIL HALF LAP
(ONE SIDE ONLY)



DOVETAIL HALF LAP



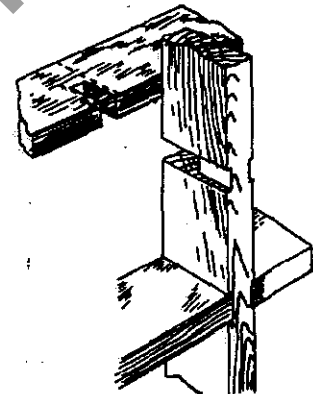
MITRED FACE WITH HALF LAP



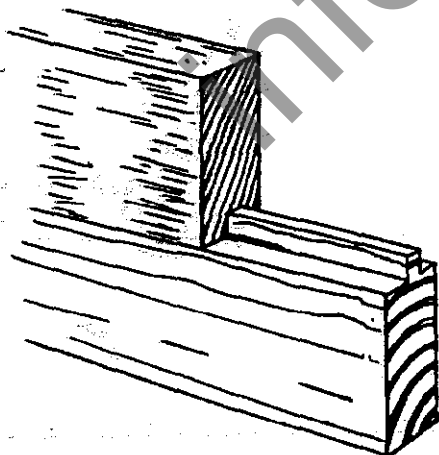
OPEN MORTISE & TENON



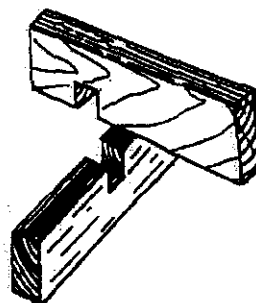
TENONS



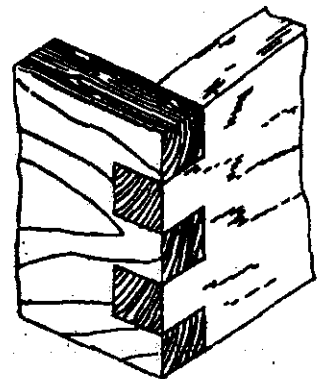
LAPPED JOINT WITH GROOVE
(USEFUL FOR SHELVING)



TONGUE & GROOVE



MIDDLE HALF LAP



BOX JOINT