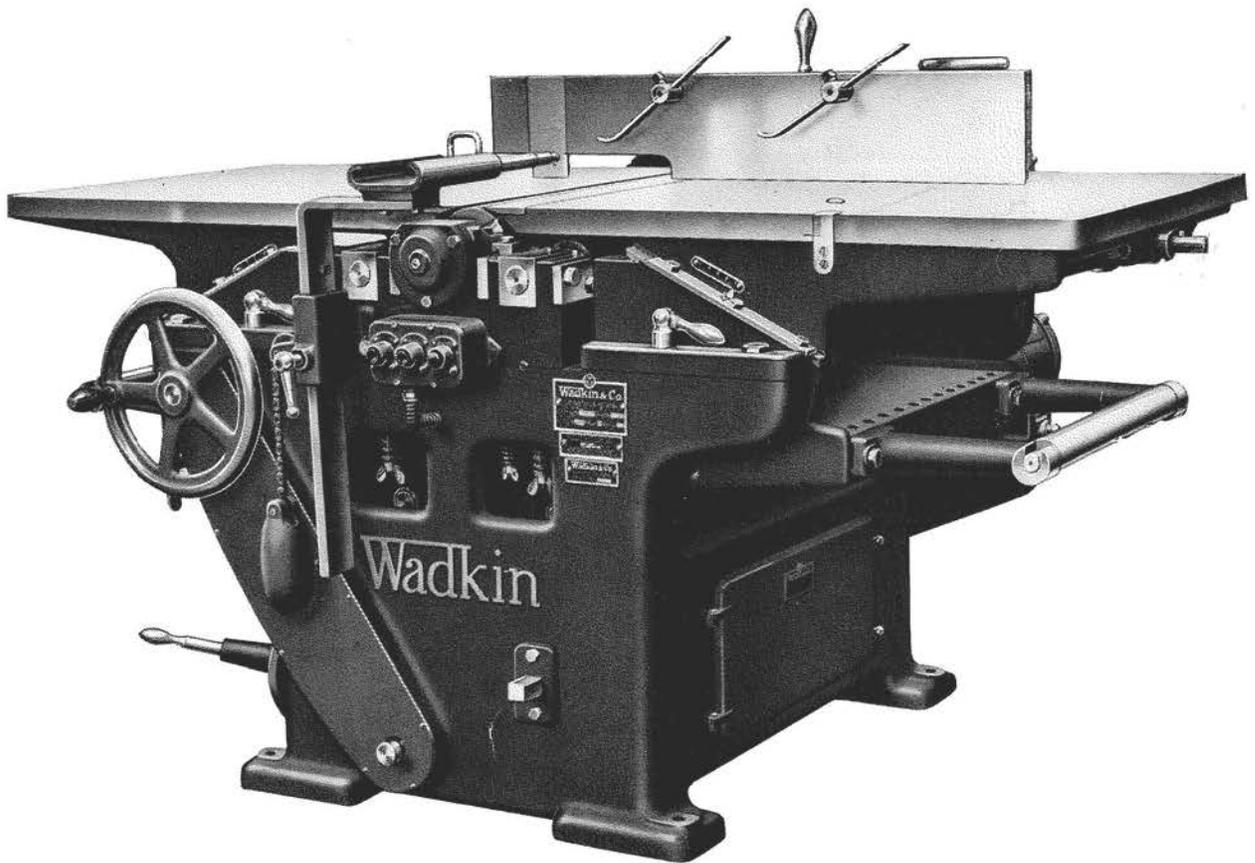


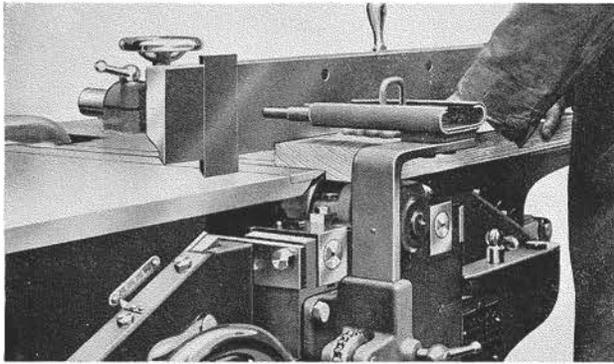
Wadkin

Combined Surfacer and Thicknesser, R.M. 16" and 24" sizes

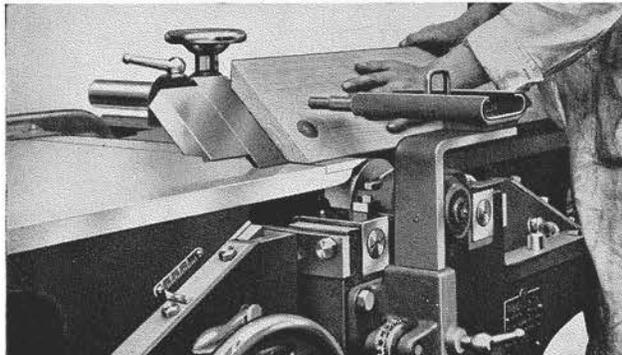


Wadkin

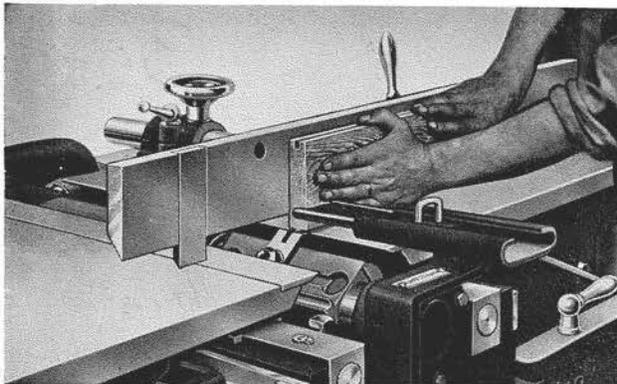
Combined Surfacer and Thicknesser, R.M.



REBATING can be done $\frac{1}{2}$ " deep in any width of timber, or 1" deep when the timber overhanging the table does not exceed $1\frac{1}{2}$ ".



BEVELLING. Fence can be locked at any angle up to 45°.



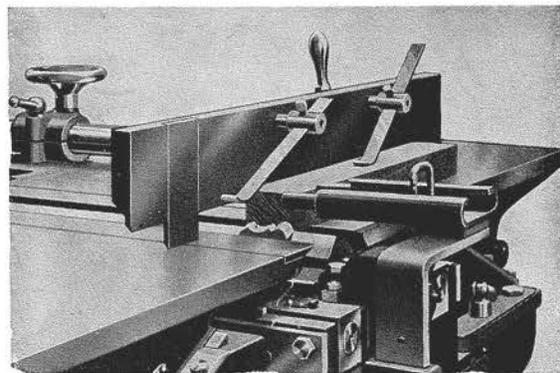
TONGUEING AND GROOVING. This can be efficiently performed as shown. Back and front tables are set dead level and the fence adjusted to give the exact location of the tongue. After the tongues have been cut, the cutters are changed for the grooving operation.

The machines described in the following pages are in the fullest sense high-grade machines.

They are built for the best class of work and are essentially machines for the man who knows the added value and efficiency of precision engineering allied with modern design.

This combination is nowhere more desirable than in such an important machine as a Combined Surfacer and Thicknesser, particularly to the purchaser who intends to utilise to the full, the capabilities of the machine for work such as that illustrated on this and the opposite page.

To ensure good results, indefinitely, on each of these differing classes of work, in addition to straightforward planing and thicknessing, a good machine is essential. This is exactly what a Wadkin claims to be—a claim which we suggest is amply justified by the features listed opposite, and the specification which follows.

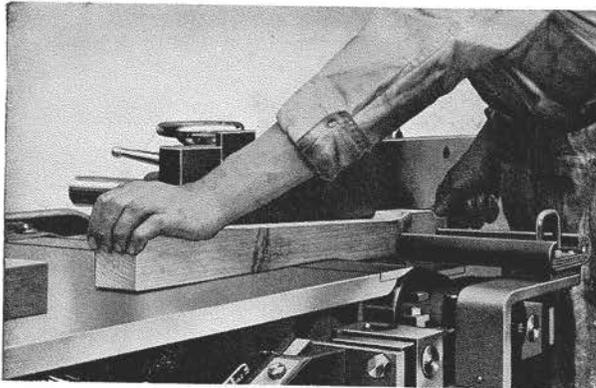


MOULDING. Mouldings may be cut up to $\frac{5}{8}$ " deep without removing pressure bars. Cutters can be attached to the block without upsetting the planing knives.

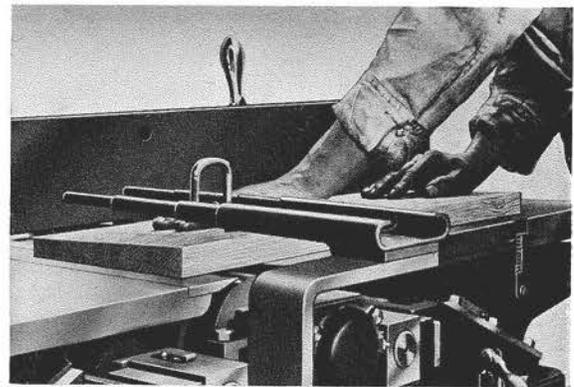


Features

1. The table surfaces are ground, ensuring both perfect accuracy and smoother feeding of the work past the cutterblock.
2. The fence is carried on a heavy circular bar ensuring perfect rigidity, and is adjustable across the table by handwheel and quick-acting rack and pinion.
3. The cutterblock is of unique design and incorporates special screw knife setting device.
4. Cutterblock guard is of a quickly adjustable telescopic type which does not inconvenience the operator.
5. Three rates of feed are provided by totally enclosed oil bath gearbox with gears machine cut from solid steel blanks. Feed speeds can be varied whilst the machine is running.
6. Feed rollers are driven by noiseless bushed roller chain, ensuring an even and powerful feed when taking the heaviest cuts.
7. Table anti-friction rollers have quick vertical adjustment, and both adjust simultaneously by one handwheel at the feed-in end.
8. All mechanism for raising and lowering thickening table is well protected against dust and chips to ensure easy operation at all times.
9. Pressure bars are quickly removable for working deep mouldings.
10. Electric driven machines have separate motors for both cutterblock and feed, mounted on the side of the machine out of the way of dust and chips.
11. Front surfacing table on all machines can be arranged to cant for taper planing, for pattern shop work, by simple screw motion.



TAPERING. The surfacing table will drop $\frac{3}{4}$ " and any taper up to this amount obtained. This illustration shows the operation of tapering a newel on all four sides.



TAPER PLANING. When specially ordered the front table can be arranged to cant as shown above. This is particularly valuable for the pattern maker as the required draught on the pattern can be obtained straight from the machine.



Specification

The Main Frame

The Main Frame is exceptionally heavy with large base area to eliminate vibration and shaped to afford good foot room for the operator.

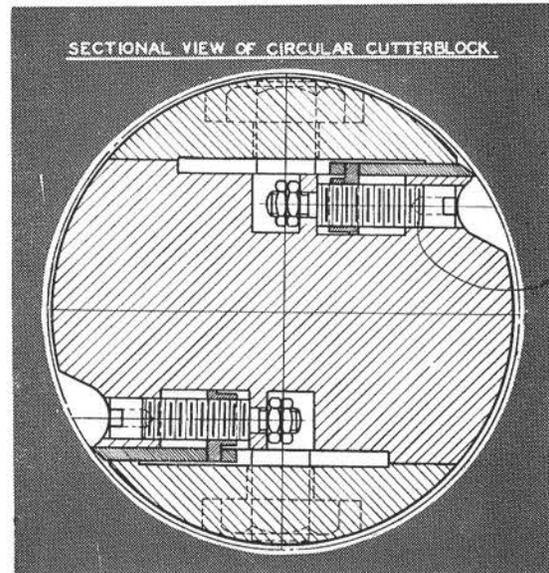
The Surfacing Tables

The Surfacing Tables are long and dead true. The new method of grinding ensures a standard of accuracy never before achieved by other methods of manufacture. Not only does this improve the quality of the planing, and enable the machine to make perfectly true glue joints, but the highly polished surface greatly assists the smooth feeding of the wood past the cutterblock. The tables have horizontal draw-out motion for convenience in changing and sharpening cutters. Each table has also a rising and falling motion, and the table edges adjacent to the cutters are fitted with steel lip plates. Index scales are provided on both tables to indicate the exact amount of the vertical movement in relation to the cutterblock. When required the front table can be arranged to cant for taper planing as shown below. This screw method of canting not only allows the table to be adjusted to the correct height with a minimum of trouble, but the raising screw also serves to lock the table down on to machined faces, thus maintaining proper alignment with the rear table.

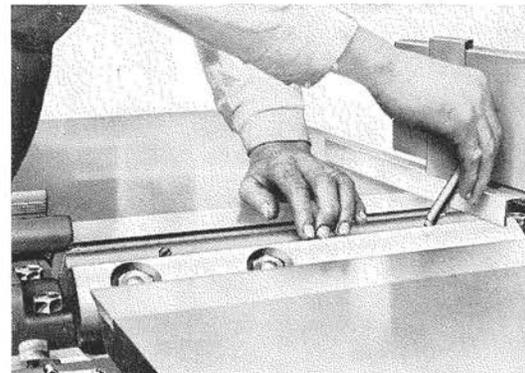
The Cutterblock

The Cutterblock is of the circular safety type arranged to give a shearing cut. It is of the two-knife pattern and is so designed that the knives are rigidly supported close up to the edge, thus preventing knife chatter, and making it impossible for chips to wedge in front of the knives. It is made from a steel forging and revolves in special heavy type ball bearings.

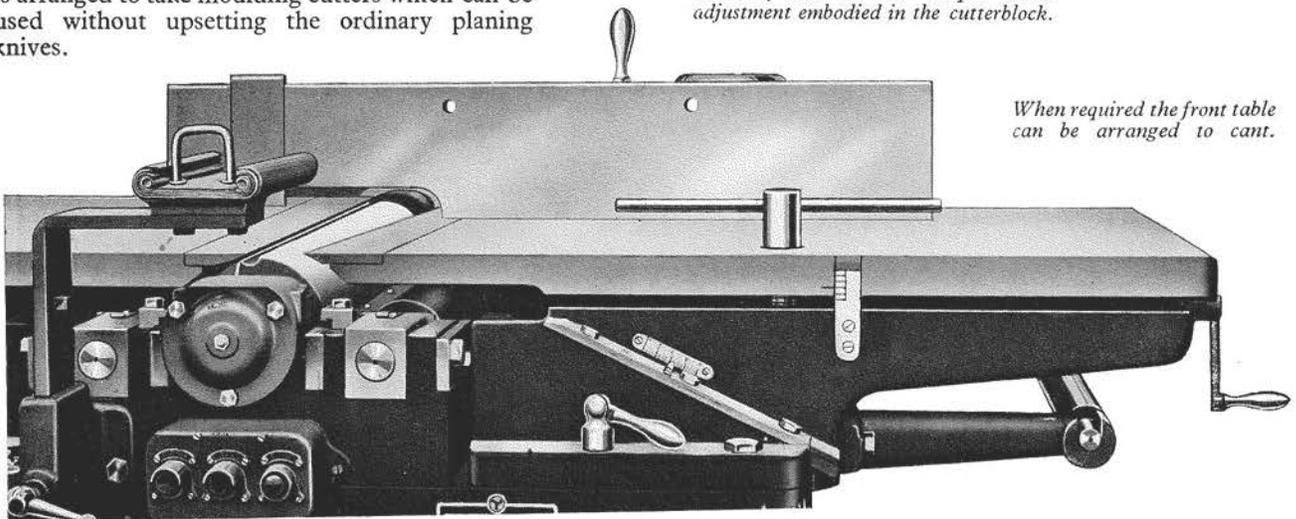
The cutterblock has a 5" diameter cutting circle and is arranged to take moulding cutters which can be used without upsetting the ordinary planing knives.



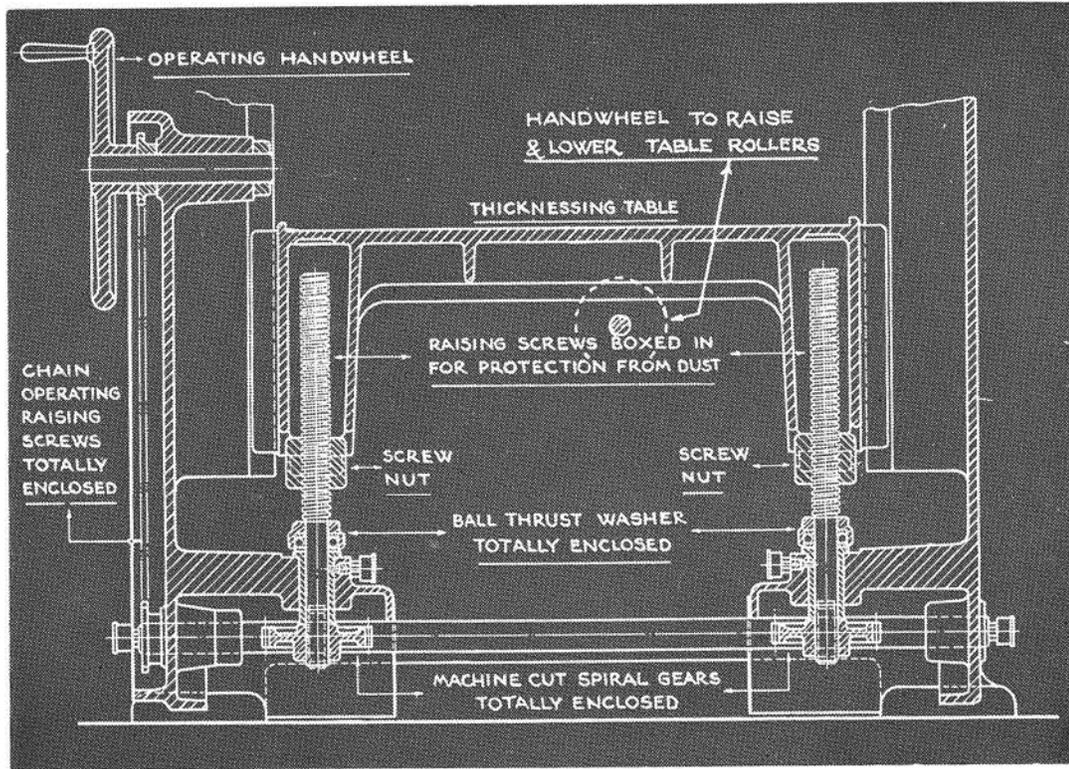
Green
Book



Cutter setting is an extremely simple operation on a Wadkin, due to the unique screw adjustment embodied in the cutterblock.



When required the front table can be arranged to cant.



The Thickening Table

The Thickening Table is mounted on broad slides on each side of the main frame, and is raised and lowered 9" by handwheel. An index scale registers the exact thickness of timber being planed.

The sectional drawing above clearly shows how the raising and lowering motion is obtained, and it will be noted that all the vital mechanism is completely protected against dust and chips.

Long working life and ease of operation is ensured at all times as a result of this dust-proof design, whilst the use of machine-cut steel and gunmetal spiral gears and ball thrust washers to take the weight of the table, all assist in obtaining a particularly smooth and easy rise and fall motion to the thickening table.

Carrier rolls are provided at both ends of the table for supporting long work. In addition, the table is provided with two anti-friction rollers, both being arranged with a small vertical adjustment.

The adjustment is obtained simultaneously on both rollers by means of one handwheel at the feeding-in end of the machine.

The Fence

The Fence cants up to 45 degrees and is designed to give absolute rigidity in all positions. It is quickly adjustable across the table by handwheel, and the method of holding and guiding the fence

avoids the need for a vee slot in the table. Lever handles lock the fence in any desired position on the table.

An extension on the front table enables the fence to be set back to allow the full width of the cutters to be used. Two adjustable holding-down springs are provided.

The Safety Guard

The Safety Guard provided on all machines has telescopic steel cover and is easily and quickly extended across the cutterblock. The guard draws back well clear of the cutters.

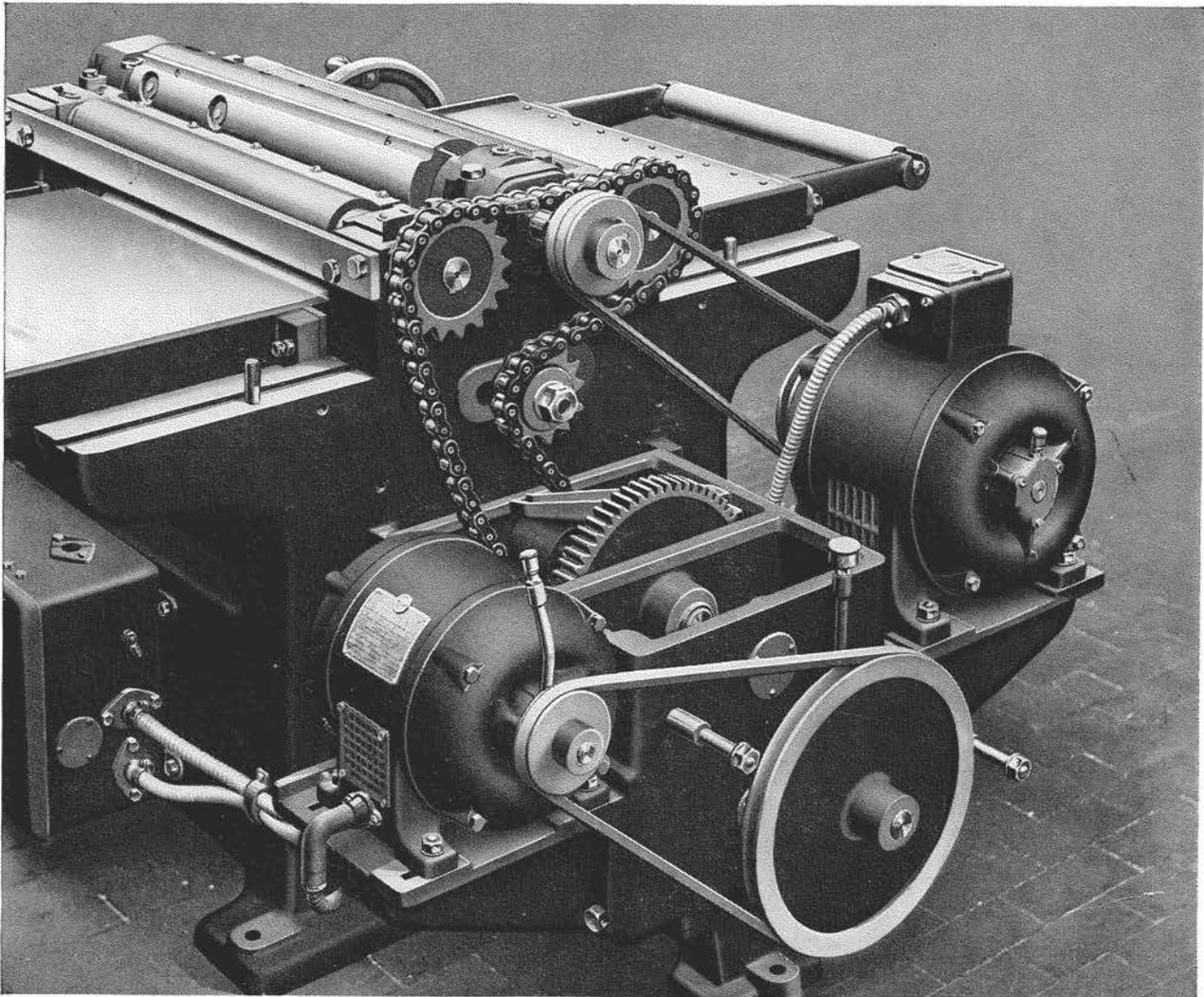
The Power Feed

A powerful and steady feed is obtained on a Wadkin by the chain drive to the rollers as shown overleaf.

The gearbox provides for three speeds of 20, 30 and 46 feet a minute, and the speeds can be varied whilst the feed is in operation.

All the gears are steel, machine-cut and run continuously in oil.

The gearbox oil bath also automatically lubricates the chain, and the gear spindle bearings. The feed roller bearings are each provided with an oil chamber, making them self-oiling. Both rollers are of steel, the feeding-in roller being grooved, and the feeding-out roller smooth. A scraper is provided to the feeding-out roller to avoid any possibility of chips being carried round and impressed into the finished surface.



Shows the arrangement of the drive to the cutterblock and feed. Both tables and all covers have been removed for illustration purposes.

Electric Drive

Wadkin Planing and Thicknessing machines are driven by two separate motors mounted on the side of the machine, not under the thicknessing table, and consequently are not continually working in an accumulation of dust and chips falling from the machine. The serious risk of motor breakdown and fire is thus entirely eliminated.

Motors are available for alternating or direct current.

The Control Gear

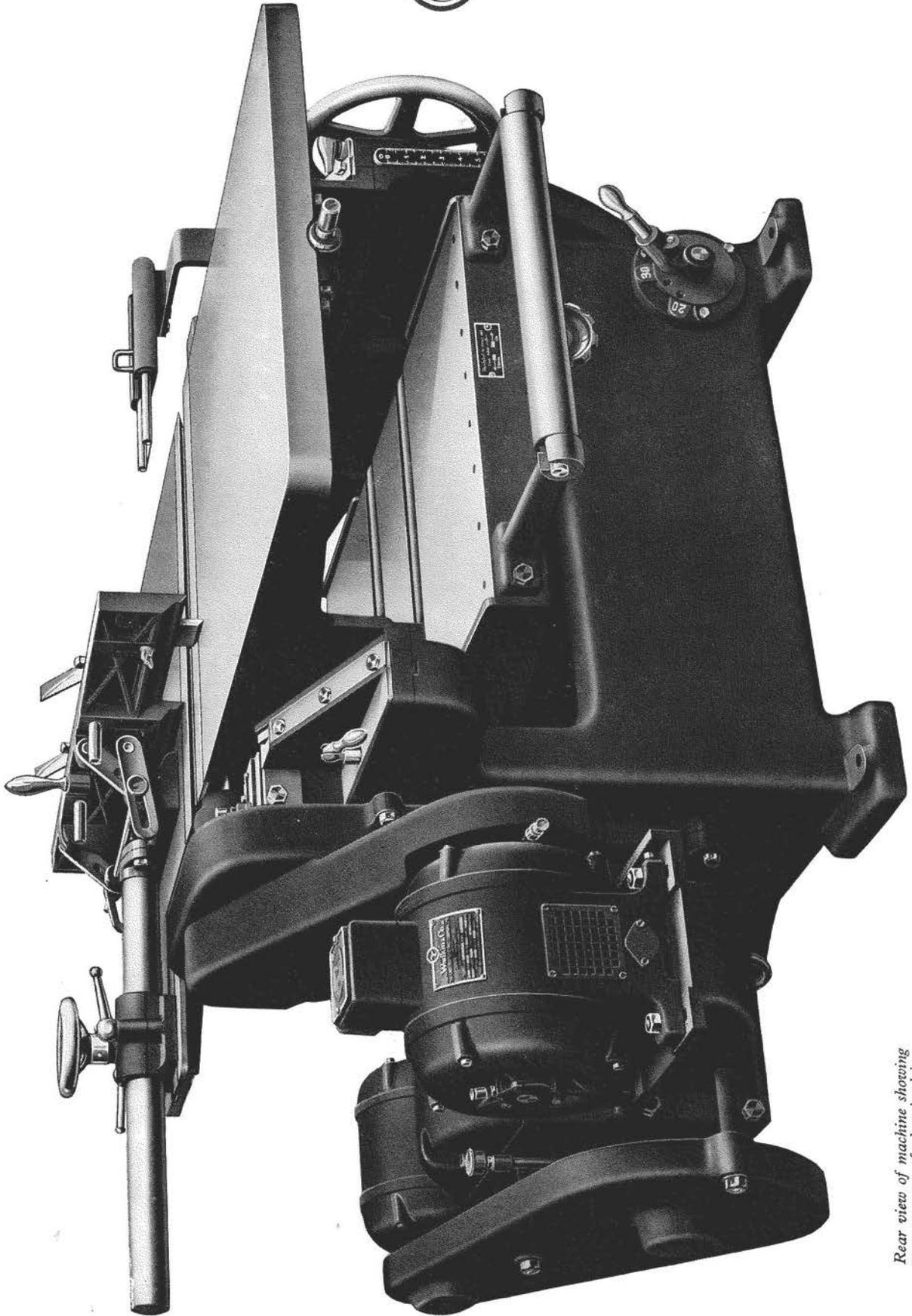
The control gear for alternating current is of the automatic contactor type, controlled by two start buttons and one master stop button. The latter is of an improved type incorporating a new lock-out safety feature.

Overload safety feature is included in both

cutterblock and feed contactors, both of which inherently give no-volt protection. The control gear is interlocked so that the feed motor contactor automatically falls out if the cutterblock motor is stopped. The contactor gear is built into a dust-tight recess in the main frame, the gear itself being carried on the hinged door of the recess for convenient wiring and inspection. For direct current, dust-proof, hand operated starters are supplied as standard, but push button control can be supplied to order.

Belt Drive

A countershaft is provided when the machine is required to be driven by a lineshaft above or below the floor. The shaft runs in ball bearings carried by strong standards. It is fitted with fast and loose pulleys and striking gear. The loose pulley is also mounted on ball bearings.



Rear view of machine showing arrangement of electric drive.



Principal Dimensions and Capacities

	16" size	24" size
Thickening capacity	16" × 9"	24" × 9"
Surfacing capacity without removing fence	18"	26"
Maximum depth of cut on surfacing tables	$\frac{3}{4}$ "	$\frac{3}{4}$ "
Maximum depth of rebate in any width of timber	$\frac{1}{2}$ "	$\frac{1}{2}$ "
Maximum depth of rebate when timber overhanging tables does not exceed 1 $\frac{1}{2}$ "	1"	1"
Maximum depth of moulding without removing pressure bars	$\frac{5}{8}$ "	$\frac{5}{8}$ "
Maximum depth of moulding removing pressure bars	1 $\frac{1}{4}$ "	1 $\frac{1}{4}$ "
Length of surfacing tables overall	6' 1"	6' 1"
Length of thickening table	3' 9 $\frac{1}{2}$ "	3' 9 $\frac{1}{2}$ "
Length of thickening table over carrier rollers	5' 5 $\frac{1}{2}$ "	5' 5 $\frac{1}{2}$ "
Height of surfacing table from floor level	2' 10"	2' 10"
Fence on surfacing table cants	45°	45°
Approximate speed of cutterblock in r.p.m.	4,200	4,200
Diameter of cutting circle	5"	5"
Standard rates of power feed in feet per minute	20, 30 and 46	20, 30 and 46
Belt Drive :		
Speed of countershaft in r.p.m.	850	850
Size of fast and loose pulleys	8" × 3 $\frac{3}{4}$ "	10" × 4 $\frac{1}{4}$ "
Horse power required	5	7 $\frac{1}{2}$
Approximate net weight in cwts.	25 $\frac{1}{2}$	28
Approximate gross weight in cwts.	29 $\frac{1}{2}$	31 $\frac{1}{4}$
Approximate shipping dimensions in cubic feet... ..	83	98
Code Words—Standard machine	Rutem	Recom
With taper planing	Rudum	Ripam
Electric Drive :		
Horse power of cutterblock motor	5	5
Horse power of feed motor	1	1
Floor space	6' 1" × 4' 8"	6' 1" × 5' 4"
Approximate net weight in cwts.	26 (2912 lbs.)	29 (3248 lbs.)
Approximate gross weight in cwts.	28 (3136 lbs.)	31 $\frac{1}{2}$ (3538 lbs.)
Shipping dimensions in cubic feet	83	98
Code Words :		
Standard machine for alternating current	Rifem	Racum
Standard machine for direct current	Rirem	Ridum
Machine with taper planing for alternating current	Rufim	Rotom
Machine for taper planing for direct current	Rigam	Ratam

Details included with each machine :

Motors, control gear and insulated wiring for electric machines.

Ball bearing countershaft and striking gear for belt-driven machines.

One canting fence complete with holding-down springs.

One pair of solid high-speed steel cutters for safety circular cutterblock.

One balanced telescopic cutter guard.

One lubricating pump.

One set of spanners.