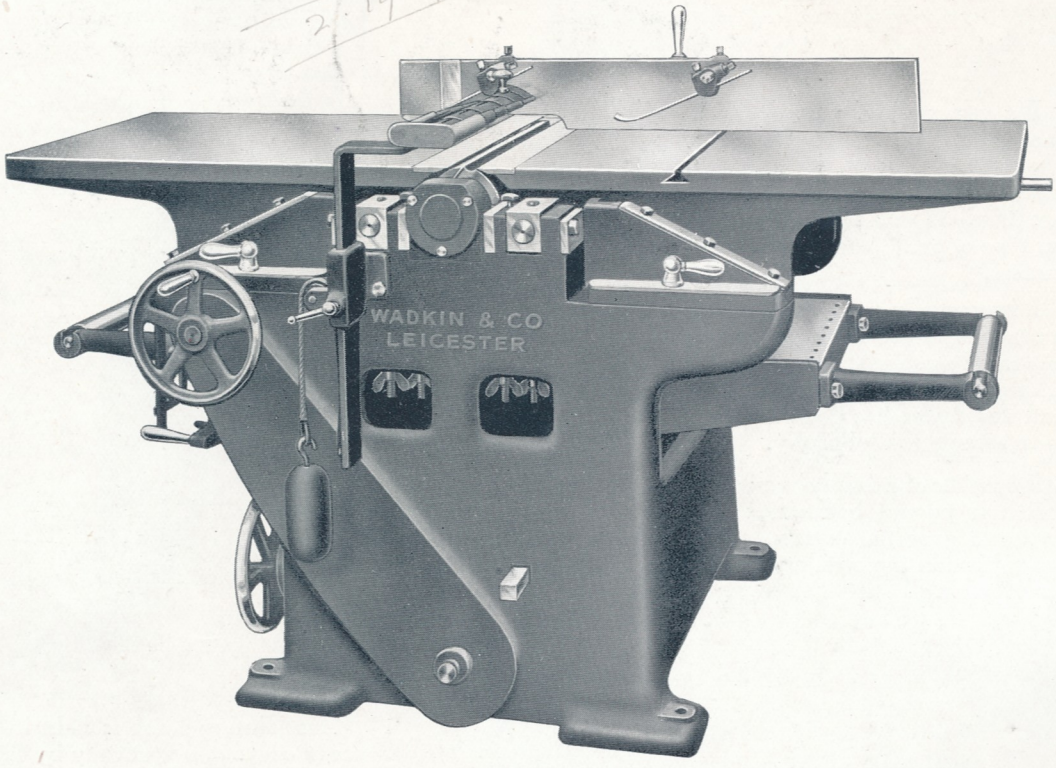
Combined Surface Planers and Thicknessers



Front view of 20″ and 24″ Machines.

Our Combined Surface Planing and Thicknessing Machine is a heavy duty machine capable of taking the heaviest cuts at the highest rate of feed. It is particularly suitable for Joiners and Builders, Cabinet Makers, Ship Builders, Motor Body Builders, Pattern Makers, etc.

Capacity

Made in three sizes to plane 15″, 20″ and 24″ wide by 9″ thick in each case.

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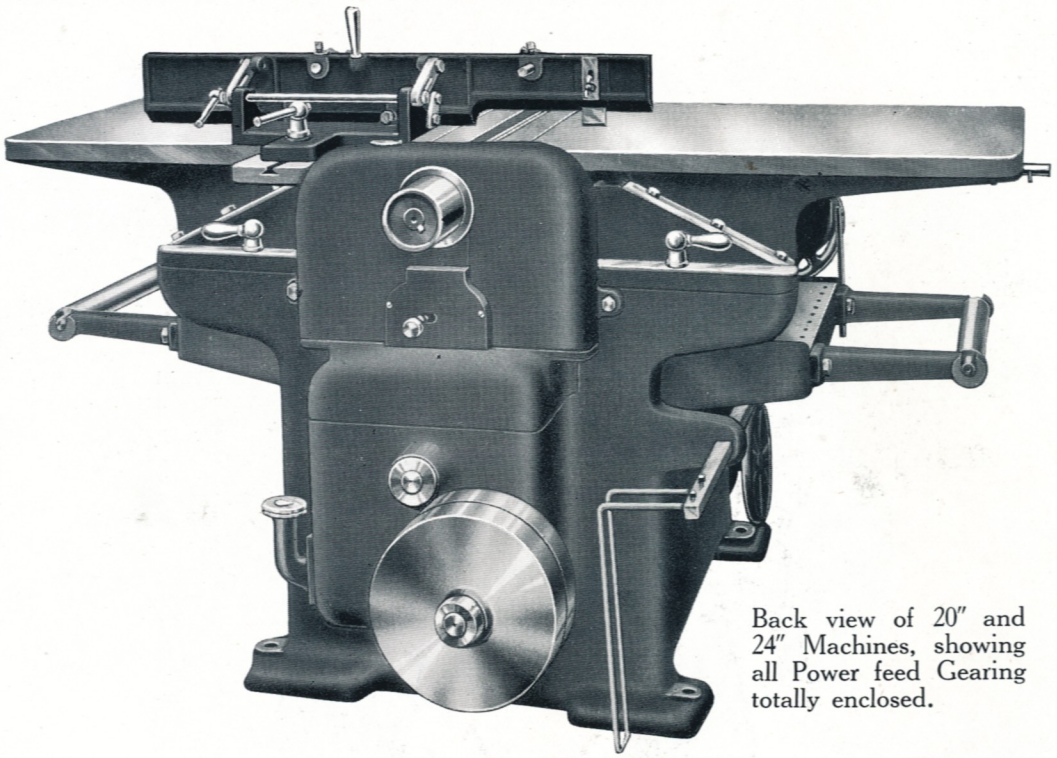
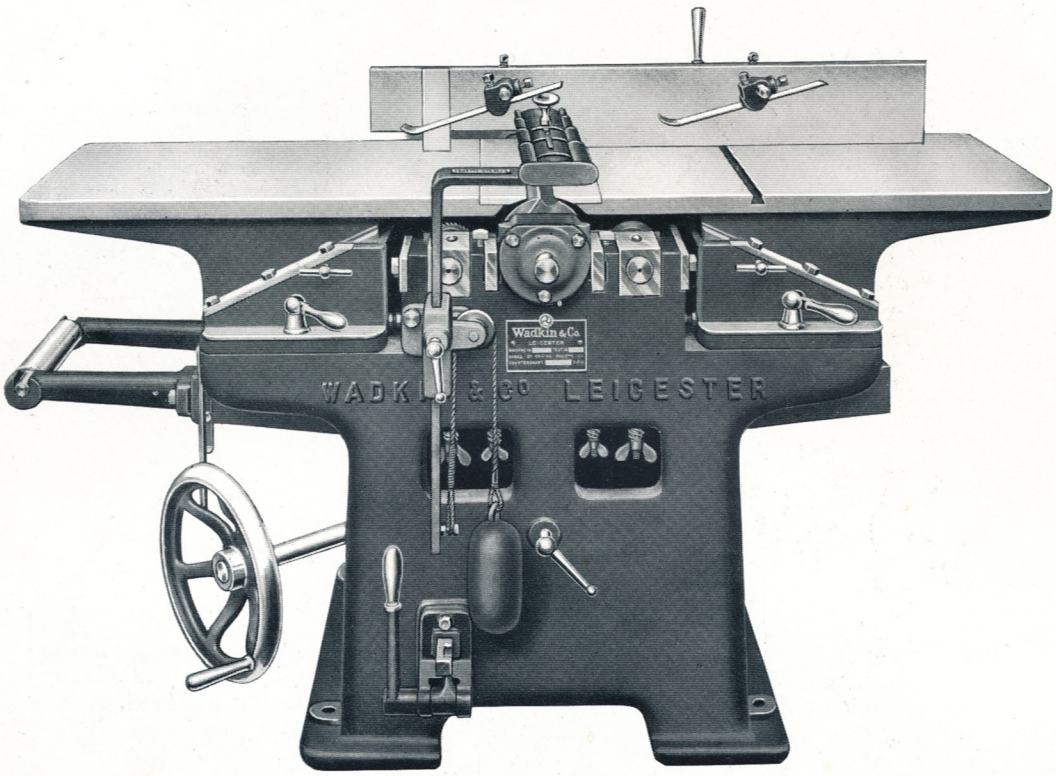


Back view of 20″ and 24″ Machines, showing all Power feed Gearing totally enclosed.

Special Features

1. Cutting circle 5″ diameter, giving high peripheral cutting speed.
2. Safety circular cutterblock of our special skew type.
3. Quick and reliable device for setting cutters from back surfacing table.
4. Heavy type ball bearings to cutterblock spindle.
5. Totally enclosed gear box.
6. All sliding gears are machine cut from solid steel blanks.
7. Gears run in an oil bath, and this also automatically lubricates gear shaft bearings and the driving chain to feed rollers.
8. Feed rollers are driven by a noiseless bushed roller chain of exceptional strength, ensuring an even and powerful feed when taking the heaviest cuts.
9. In the case of the 20″ and 24″ models, three rates of feed which can be changed instantly by hand lever while the machine is running. (Short centre belt feed drives are abolished.)
10. Quick and easy raising and lowering motion to thicknessing table by totally enclosed gearing.
11. Raising and lowering screws protected from dust and chips.
12. Spiral gears operating raising and lowering screws protected from dust and chips.
13. Pressure bars quickly removed if required for working deep mouldings.
14. In the case of the 20″ and 24″ models the tables are 6′ 1″ long overall. In the case of the 15″ model the tables are 5′ 0″ long overall.
15. All models will surface 2″ extra on surfacing tables without removing fence.
16. Absolutely rigid canting fence working in dovetail groove.
17. Telescopic steel planer guard, avoiding any inconvenience to operator.
18. The drives for all models can be from any direction without using belt deflectors.
19. Front surfacing table arranged to cant for taper planing when required for Pattern Makers.
20. Ball bearings to countershaft.
21. Ball bearings to loose pulley on countershaft.

Combined Surface Planers and Thicknessers



Front view of the 15″ Machine.

Construction

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 are long and scraped dead true to enable the machine to make perfect glue joints. They 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.

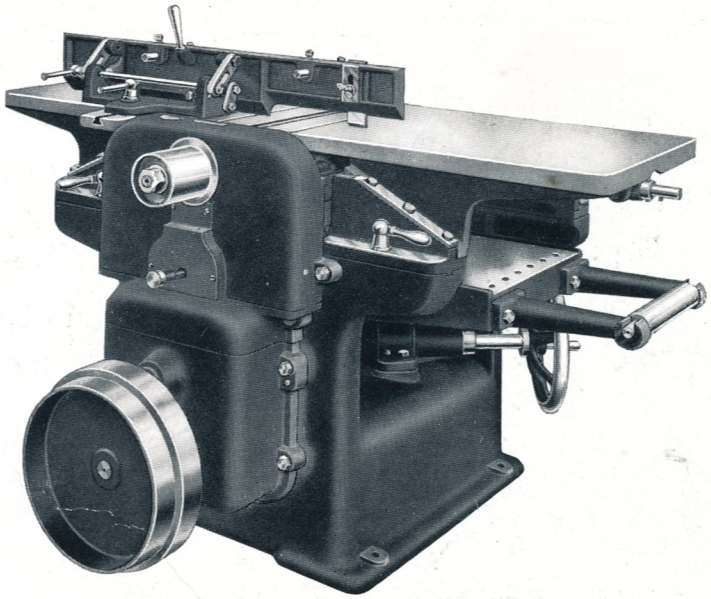
Rebating on Surfacing Tables. The machine is specially designed to enable rebating to be done ½″ deep and of any desired width. It will also rebate 1″ deep up to 1½″ wide.

The Fence is designed to give absolute rigidity in all positions. It will cant to 45° and it is provided with two adjustable holding down springs. An extension on the front table enables the fence to be set back to allow the full width of the cutters to be used without removing the fence from the table.

A close-up view of the fence is illustrated on page 81.

The Thicknessing Table is long and provided with adjustable anti-friction rollers let into the table and carrier rollers are also provided for supporting long work. The table is raised and lowered by handwheel at the front of the machine and all mechanism controlling this motion is totally enclosed from dust. An index scale marked in English or Metric sizes indicates the exact thickness of timber being planed.

Combined Surface Planers and Thicknessers



Back view of 15″ Machine.

Construction—*continued*

The Cutterblock is of the two knife circular safety type and runs in heavy type ball bearings. The cutters are arranged on the skew to give a shearing cut.

When desired it will take moulding cutters and can be used without upsetting the ordinary planing cutters. A very efficient setting gauge is provided for accurately setting the planing cutters.

Detailed illustrations and specification of the cutterblock and the method of fixing moulding cutters are shown on pages 78 and 83.

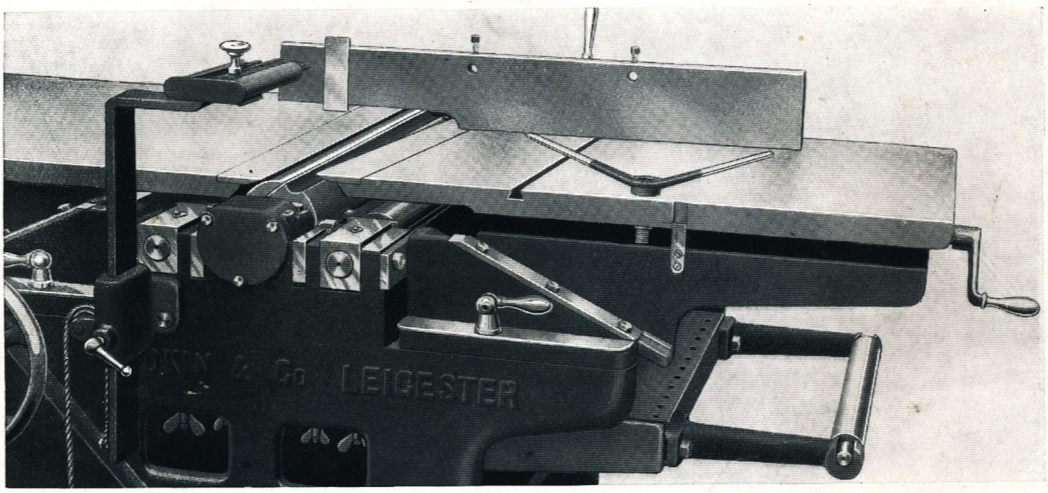
The Feed Rollers are of large diameter and driven by heavy chain totally enclosed and running in an oil bath. The design is a great improvement over the old spur gear drive and gives the strong steady drive which is so essential if a good finish is to be obtained. Three rates of feed are provided in the case of the 20″ and 24″ machines, any of which are instantly obtainable by the hand lever at the front of the machine. In the case of the 15″ size, two rates of feed are provided. All feed gearing is of steel, machine cut and runs in oil in totally enclosed gear box. The gear spindle bearings are automatically lubricated by the oil in the gear box, and require no attention whatever. The feed rollers and pressure bars are controlled by adjustable springs and are provided with stops to prevent them being lifted into the cutters. An illustration showing the interior of the gear box is to be found on page 86.

The Safety Guard, which is included in the price of the machine, is telescopic and made of steel.

Belt Drive. A countershaft is provided if the machine is to be driven by belt from a line shaft. Both the shaft and the loose pulley are mounted on ball bearings.

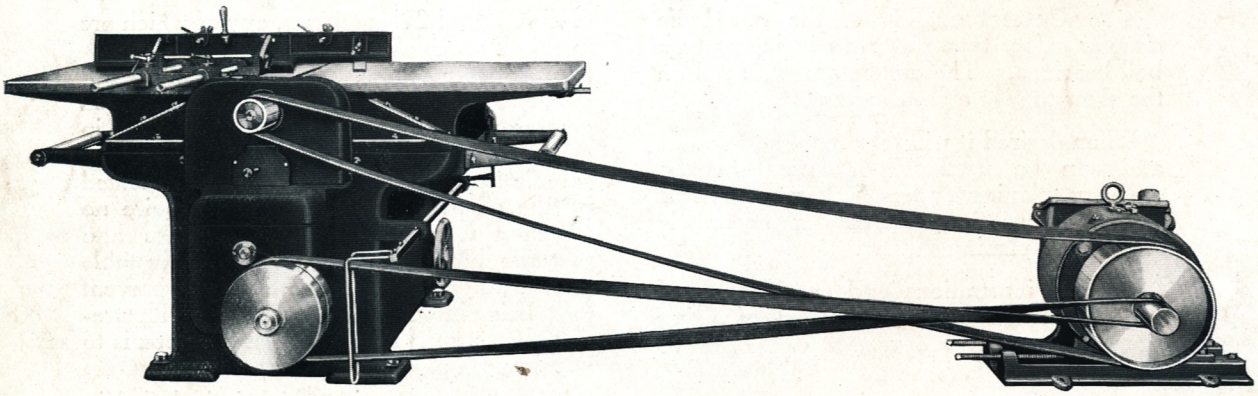
Combined Surface Planers and Thicknessers

Taper Planing for Pattern Makers



When specially ordered we can supply these machines with the front surfacing table arranged to tilt for taper planing. We regard this as indispensable when the machine is being installed in a Pattern Shop, as it enables the necessary " draft " on the timber to be obtained direct from the machine. A scale indicates the amount of taper required.

Motor Drive



This illustration shows one method of driving by an individual motor, which can be supplied for practically any electric supply. A cone pulley is fitted to the motor for driving the cutterblock and the feed motion. Alternatively, we manufacture an electric-driven machine with separate motors driving cutterblock and feed motion, as described on pages Nos. 102 and 103.

Combined Surface Planers and Thicknessers

Principal Dimensions and Capacities

	15″ M.J.	20″ M.K.	24″ M.L.
Thicknessing capacity	15″×9″	20″×9″	24″×9″
Surfacing capacity without removing fence	17″	22″	26″
Maximum depth of cut on surfacing tables	¾″	¾″	¾″
Maximum depth of rebate and of any desired width	½″	½″	½″
Maximum depth of rebate up to 1½″ wide	1″	1″	1″
Maximum depth of moulding without removing pressure bars	½″	½″	½″
Maximum depth of moulding removing pressure bars	1¼″	1¼″	1¼″
Maximum of certain types of moulding	1¾″	1¾″	1¾″
Length of surfacing tables overall	5′ 0″	6′ 1″	6′ 1″
Length of thicknessing table	3′ 6″	3′ 9½″	3′ 9½″
Length of carrier rollers to thicknessing table	4′ 3″	5′ 5½″	5′ 5½″
Time occupied in raising thicknessing table 9″	12 seconds	30 seconds	30 seconds
Height of surfacing table from floor level	2′ 9″	2′ 10″	2′ 10″
Fence on surfacing table cants	45°	45°	45°
Speed of cutterblock in r.p.m.	4000	4000	4000
Diameter of cutting circle	5″	5″	5″
Standard rates of power feed per minute	18 & 29	14, 21 & 29	14, 21 & 29
Diameter of power feed rollers	3⅛″	3⅛″	3⅛″
Speed of power feed driving pulleys in r.p.m.	200 & 310	210	210
Size of power feed driving pulleys	13½″×2″ and 15″×2″	11½″×2¼″	11½″×2¼″
Floor space without countershaft	5′ 4″×3′ 9″	6′ 6″×4′ 6″	6′ 6″×4′ 10″
Net weight in cwts.	20¼	25	26
Gross weight in cwts.	23¾	28½	31
Shipping dimensions in cubic feet	79	92	105
Belt Drive			
Speed of countershaft in r.p.m.	800	800	800
Sizes of fast and loose driving pulleys	8″×3¾″	10″×4¼″	10″×4¼″
Horse power required	5	6	7½
Motor Drive			
If driven by belt, any speed of motor from 750 to 1500 r.p.m.			
Horse power required	5	6	7½

For self-contained electric driven machines see following pages.

Details included with the machine :—

- One canting fence complete with holding down springs.
- One pair of cutters for safety circular cutterblock.
- One setting gauge for cutters.
- One balanced telescopic cutter guard.
- Ball bearing countershaft complete with striking gear.
- One lubricating pump and tin of our special ball bearing lubricant.
- One set of spanners.

Code Words

	15″ M.J.	20″ M.K.	24″ M.L.
Machine with countershaft	Maraj	Matok	Marel
Machine with countershaft and taper planing arrangement	Mapej	Mopok	Mepel
Machine without countershaft	Mosej	Moxek	Menol
Machine without countershaft, but with taper planing arrangement	Mekoj	Mimik	Manal

Add full particulars of available electric supply.