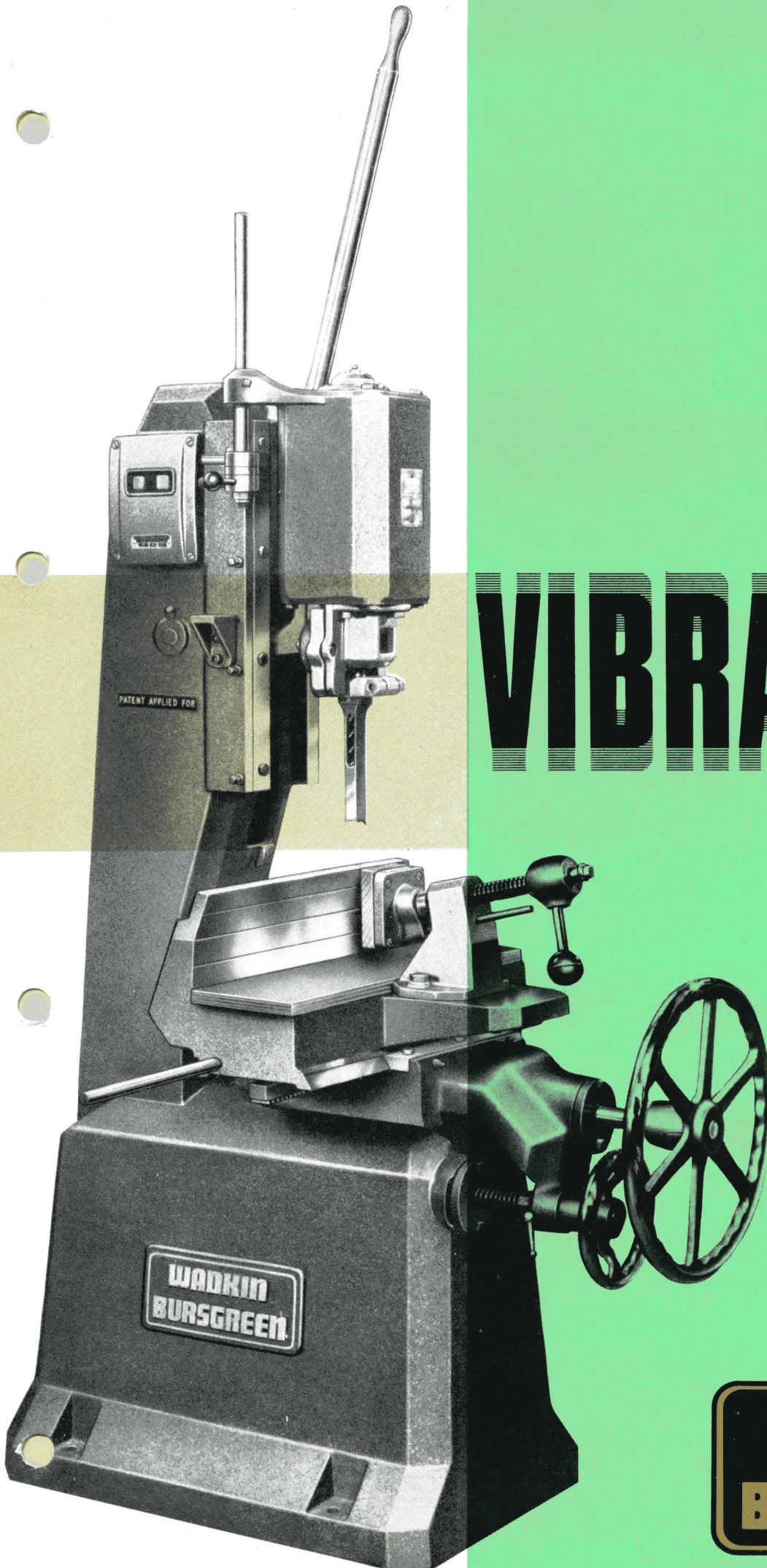


DM/V  
HOLLOW  
CHISEL  
MORTISER  
with  
**VIBRATORY**  
HEAD

BRITISH STANDARD  
CLASSIFICATION  
NO. 12.532



**WADKIN  
BURSGREEN**

# MAKES LIGHT OF HEAVY WORK



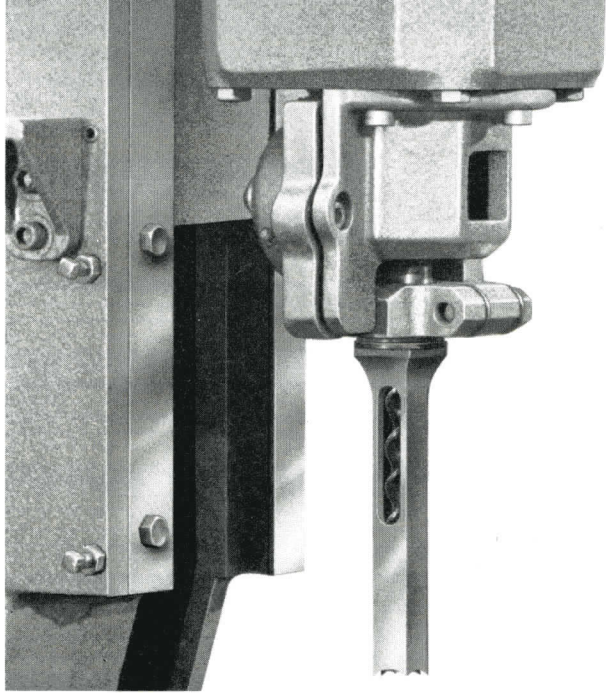
The Wadkin-Bursgreen DM/V Hollow Chisel Mortiser is an extremely valuable production tool in any woodworking plant. The mortising head is of entirely new design, incorporating a patent method of vibrating the mortise chisel. This exclusive development dramatically minimises operator fatigue. The reduction in the effort required to produce a mortise is more than 66% compared with a conventional machine.

The DM/V Hollow Chisel Mortiser is a large capacity machine, producing clean, accurate work with speed and at economical running costs. It is built to high engineering standards to give long continuous service that quickly repays a comparatively small outlay.

**WADKIN  
BURSGREEN**

Fig. 2

# DM/V HOLLOW CHISEL MORTISER with



# VIBRATORY HEAD

## CUTS EFFORT BY OVER

# 66%

Fact! The vibrating motion reduces the effort required to produce a mortise to one-third of that normally required on a conventional Hollow Chisel mortiser. Obviously, too, by such a dramatic reduction in effort, production time is proportionately reduced and output is vastly increased.

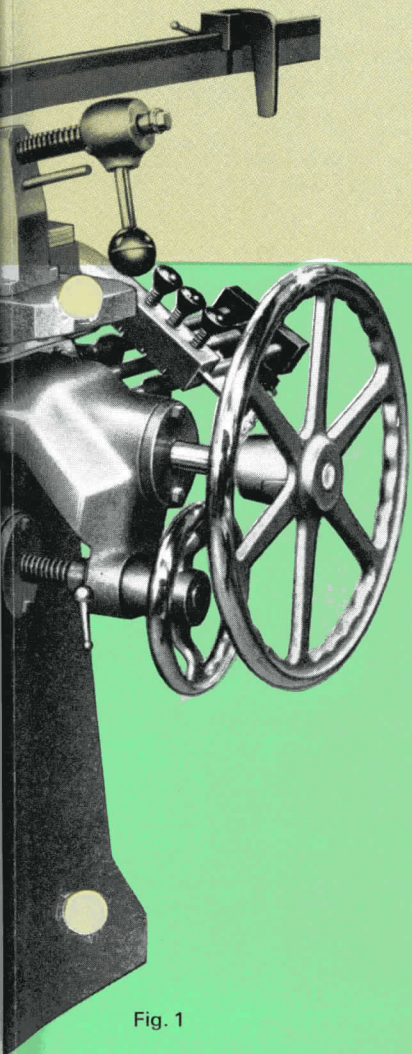
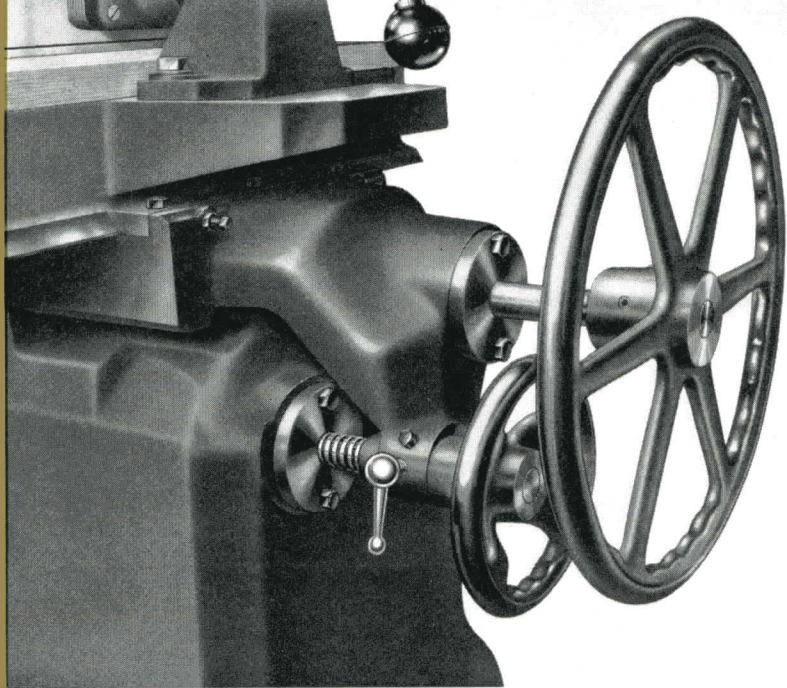


Fig. 1

## WORK TABLE CONTROLS

Machined slides ensure accurate, smooth and easy movement, and allow compound movements of the table. Longitudinal motion is by rack and pinion gearing and lateral motion is by screw. Both movements are controlled by conveniently placed handwheels at the front of the machine, placed so that the operator may work either the handwheels or the head lever without moving from his normal operating position. The lateral motion may be locked.

Fig. 3

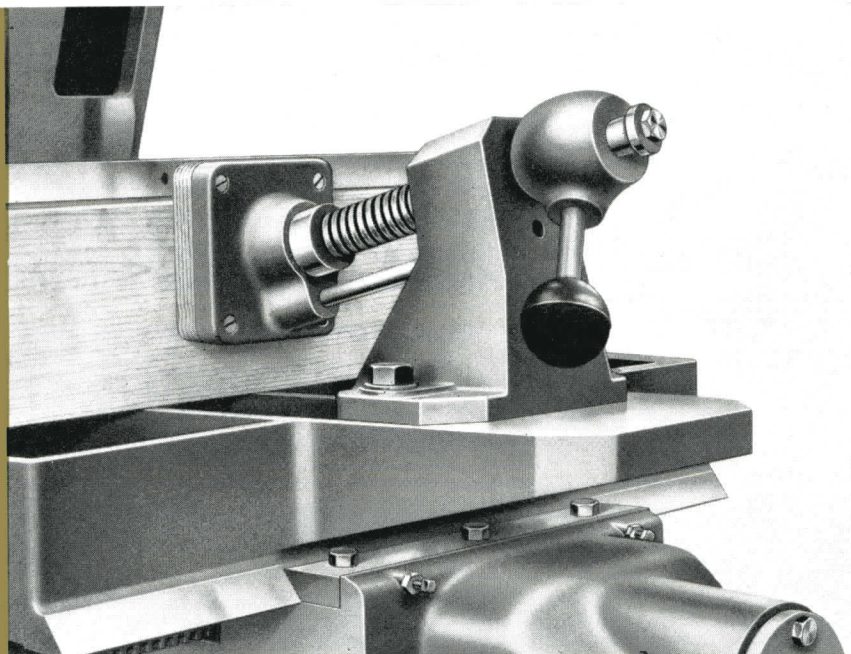


## WORK TABLE AND CLAMP

The cast and accurately machined work table has a rear face for locating timber square to the chisel. A stop bar for regulating the length of mortises is incorporated and used in conjunction with the depth stop on the mortising head assists in the repetition of precisely spaced mortises and thereby eliminating the need to mark out each mortise.

A specially designed clamp holds the work securely whilst mortising. A quick-acting screw forces the timber in a downwards action against the rear table face, so preventing any movement.

Fig. 4



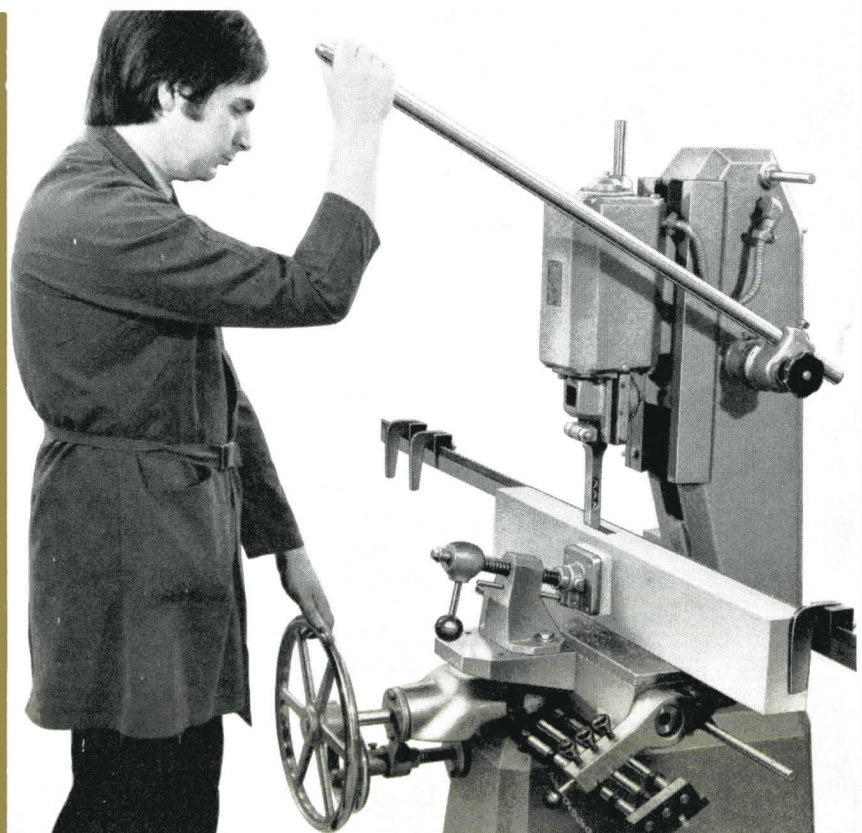
## MORTISING HEAD AND CONTROL

A built-in 1.5 kW (2 hp) motor, controlled by start and stop push buttons with no-volt and overload releases gives direct drive to the chisel unit. The head unit, mounted in precision machined vee slideways is raised and lowered by handlever through rack and pinion gearing.

The head spindle is fitted with a face cam at its lower end. The movable chisel holder carries a cam follower. When load is applied to the chisel the cam follower engages with the face cam and imparts vertical vibration to the hollow chisel.

This mortiser has the facility for accurate working to marked out lines inherent with a chisel together with the ease of cutting normally associated with a chain.

Fig. 5



# DM/V HOLLOW CHISEL MORTISER with

# VIBRATORY HEAD

## OPTIONAL EXTRAS

### Turret Stop Arrangement

This arrangement controls 9 different prefixed lengths of mortises. It consists of spring loaded stops and adjustable collars on three short circular stop bars attached to the table slide.

### Setting Out Attachment

This attachment positions the mortises in relation to the end of the timber. It consists of a long bar attached to the back of the table which carries turn over stops to locate the mortises. Thus the combination of the turret stop arrangement and the setting out attachment permits a wide choice of accurate mortises to be cut without the need for marking out, with appreciable saving in time, and the elimination of the risk of errors inherent in the marking out process.

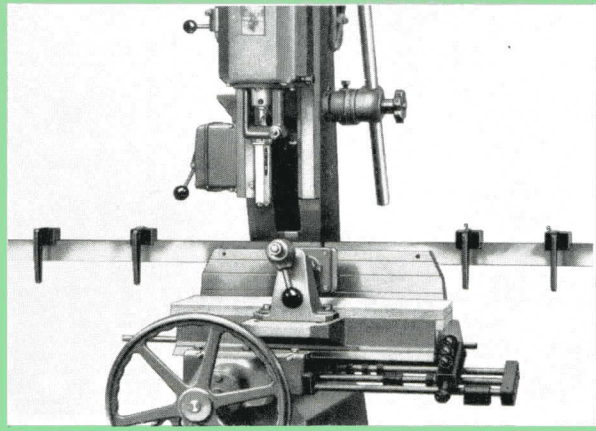


Fig. 6

## MORTISING HEAD (Patent applied for)

The mortising head consists of a built-in 1.5 kW (2 hp) motor which gives direct drive to the chisel unit. The motor is controlled by start and stop push buttons with no-volt and overload releases. The head unit is mounted in precision vee slideways and is raised and lowered by means of a handlever through rack and pinion gearing in conjunction with a spring loaded cam which gives constant balance throughout the stroke. The handlever is adjustable for both angle and length to suit the application and operator.

The head spindle, fitted with taper roller bearings which run in dust-proof housings, is also fitted with a face cam at the lower end of the spindle. The chisel holder bracket consists of a precision vee slide secured to the lower end plate. A movable chisel holder is fitted which carries a cam follower. When load is applied to the chisel the cam follower engages with the face cam and imparts a vertical vibration of approximately 100 cycles per second to the hollow chisel. The cam follower automatically disengages when the load is withdrawn from the handlever. The head unit will accept chisels up to 25 mm sq. (1 in sq.) which can be securely held in position by a split locking device. An adjustable stop bar is fitted to regulate the depth of mortise and to enable haunching operations to be performed.

## WORK TABLE AND CLAMP

The work table is an accurately machined casting mounted on the main frame. It is provided with a rear face against which the timber is located perfectly square with the chisel. A stop bar for regulating the length of mortises is incorporated in the table, and when used in conjunction with the depth stop on the mortising head, assists in the repetition of precisely spaced mortises thereby eliminating the need to mark out each mortise.

A specially designed clamp is attached to the table for holding the work during mortising operations. A hand operated quick acting screw forces the timber in a downwards action against the rear table face, thereby preventing any movement of the work at all times. The front clamp pad is drilled to receive a timber pad to prevent possible marking of work.

## WORK TABLE CONTROLS

The table moves on machined slides to ensure accurate, smooth and easy movement, and provides for compound movements. Longitudinal motion is by rack and pinion gearing, and lateral motion by screw. Both movements are controlled by conveniently placed handwheels at the front of the machine, placed in such a position that the operator may work either the handwheels or the head lever without moving from his normal operating position. The lateral motion may be locked if required.

The machine is also readily convertible for boring up to 50 mm (2 in) diameter holes.

## OPTIONAL EXTRAS

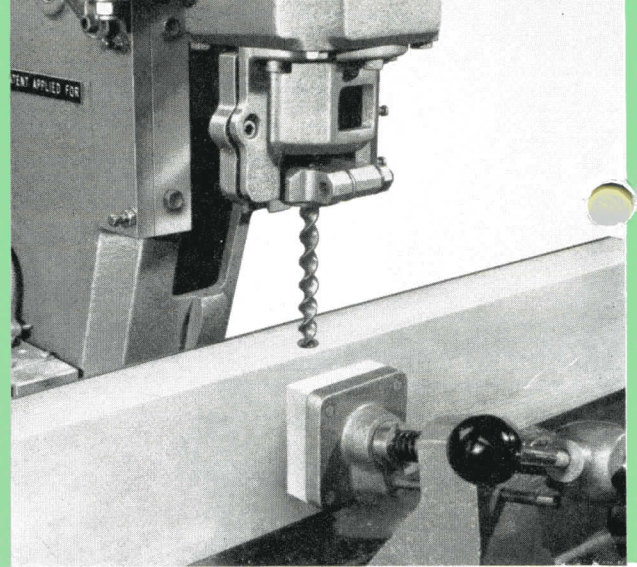
Spot light equipment  
Setting out attachment & Turret stop

Air operated clamp  
Selection of chisels and bits

Fig. 7

## BORING

The machine is readily convertible for boring and takes boring tools up to 50 mm (2 in) diameter.



# DM/V HOLLOW CHISEL MORTISER

## SPECIFICATION

Largest chisel which can be used for softwood	25 mm sq.	1 in sq.
Largest chisel which can be used for hardwood	20 mm sq.	$\frac{3}{4}$ in sq.
Timber capacity with 100 mm (4 in) chisel	250 mm deep $\times$ 200 mm wide	10 $\times$ 8 in
Timber capacity with 165 mm (6½ in) chisel	190 mm deep $\times$ 200 mm wide	7½ $\times$ 8 in
Size of table	560 $\times$ 150 mm	22 $\times$ 6 in
Longitudinal movement of table	480 mm	19 in
Lateral movement of table	100 mm	4 in
Speed of mortising head spindle – 50 hertz	3,000 rev/min	3,000 rev/min
– 60 hertz	3,600 rev/min	3,600 rev/min
Power of motor, 3 phase	1.5 kW	2 hp
Approximate floor area, maximum movement	860 $\times$ 1570 mm	34 $\times$ 62 in
Approximate net weight	330 kg	728 lb
Approximate gross weight	380 kg	840 lb
Shipping dimensions	1.25 m <sup>3</sup>	44 ft <sup>3</sup>

*As our policy is constantly to improve the design of Bursgreen woodworking machinery the details given in this leaflet are not to be regarded as binding.*



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