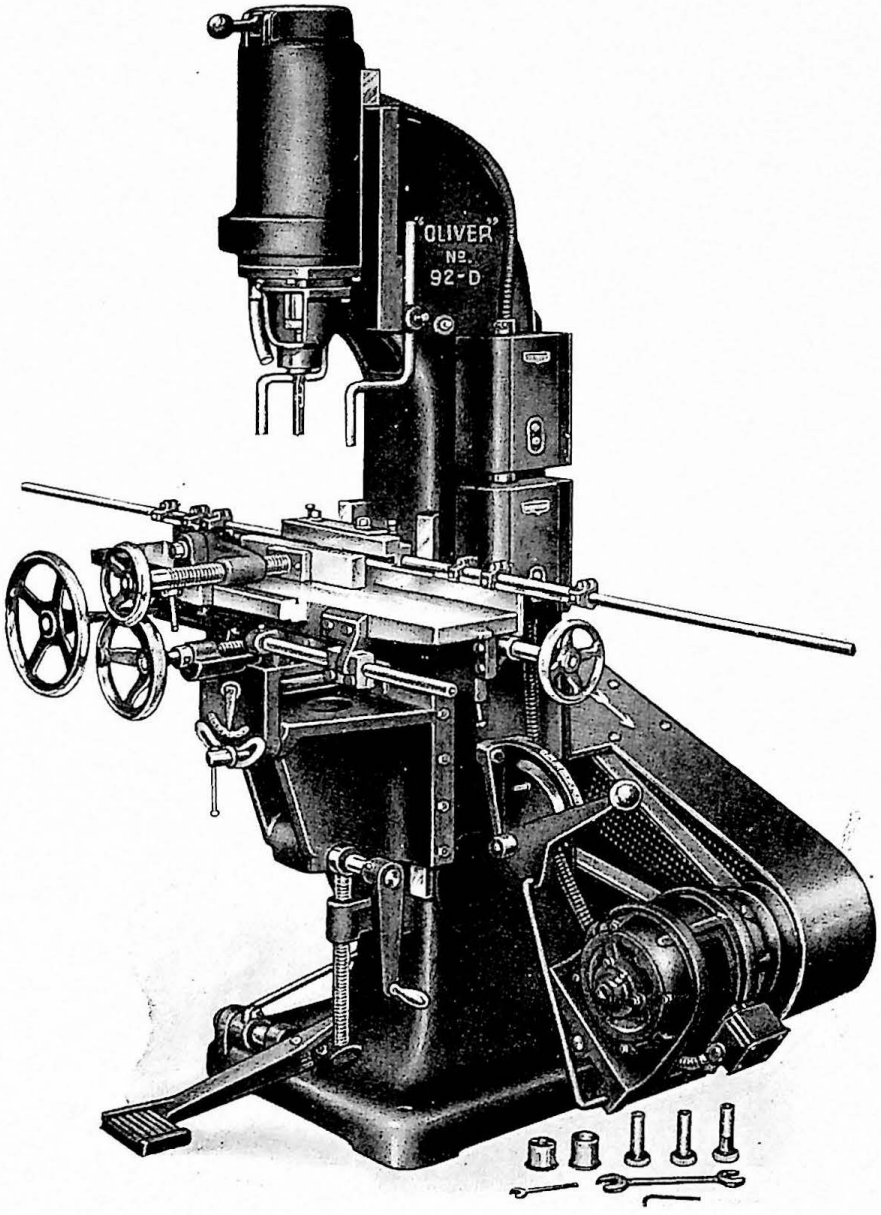
"Every User Is a Booster"

"Oliver" No. 92

Power Feed Vertical

Hollow Chisel Mortiser



Right Side view of the "Oliver" No. 92-D Motor-in-Head Power Feed Mortiser with the 5 h.p. Head Motor for heavy duty work.

- **Features . . .**

1. New head construction has fan, integral with ball bearing motor and hand brake.
2. Hand lever adjustment for depth of mortise in stock.
3. Individual push button control of each motor with overload and under-voltage protection.
4. Adjustable swing type stock clamp.
5. Automatic stops for mortise length.
6. Universal compound table with vertical, horizontal and angular adjustments.
7. Hand shift lever for any rate of speed from 16 to 40 strokes per minute.
8. Head and table operate in adjustable gibbed ways.
9. Silent V type feed drive.
10. Head and feed motors equipped with ball bearings easily lubricated.
11. Foot lever control of vertical movement of mortising head.
12. Mortising head motor will handle chisels up to 1¼ inches square.

QUANTITY PRODUCTION,
ACCURACY AND
ETREME SAFETY

Manufactured by

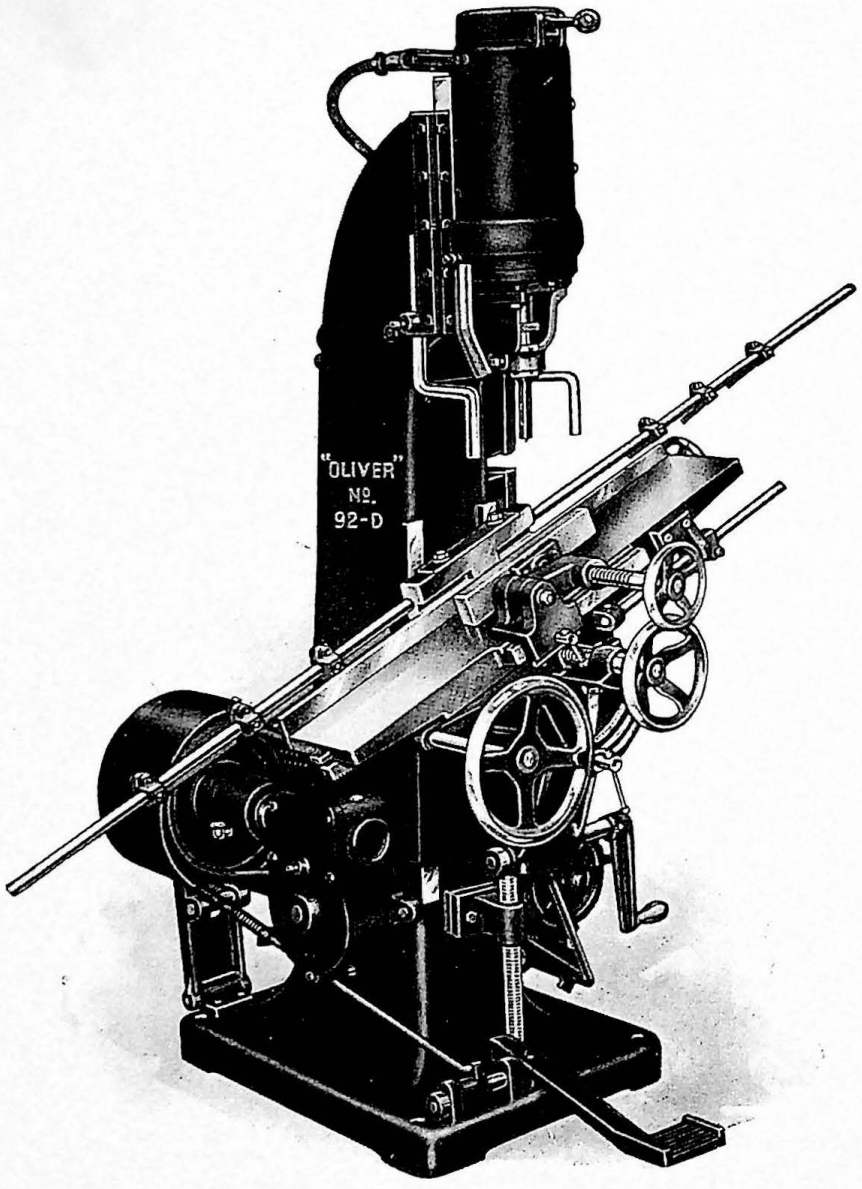
Oliver Machinery Company

Grand Rapids, Michigan, U. S. A.

BRANCH SALES OFFICES:

New York, St. Louis, Minneapolis, Los Angeles, San Francisco
Chicago, Denver, Salt Lake City, Seattle, Detroit, Cleveland.

NO. 92 "OLIVER" POWER FEED HOLLOW CHISEL MORTISER



This illustration shows the 5 h.p. Mortising Head with Ball Bearing Motor. The Universal Compound Table is tilted for angle mortising.

Adaptation

The "Oliver" No. 92 Power Feed Hollow Chisel Mortiser is a machine especially designed to meet the present day requirements for greater production and accuracy of work than is possible with machines having the old style foot feeding devices. It is particularly adapted for use in woodworking factories making quantity lots of cabinets, sash and door, furniture, etc. Many new features of design have been incorporated in this mortiser which will be greatly appreciated by all production plants. These important improvements are sure to make this machine most popular with all up-to-date woodworking establishments.

Design

Some of the new features in this "Oliver" mortiser are the variable speed transmission for feed strokes with quick return —new twin ball bearing clutch with positive drive—V type belt drive from ball bearing motor—new head construction with ball bearing fan cooled motor—the spindle equipped with quick detachable tool holders — indicators at the front of the machine showing right or left cutting angles of the table—indicator for showing the power strokes per minute—at the rear of the machine is another indicator showing short, medium or long position of the chisel when completing down stroke. A removable guard covers all working parts at the rear of the machine.

Capacity

This mortiser is capable of handling chisels from ¼-inch to ¾ inch in hardwood, 1¼ inches in softwood. The stroke can be regulated in length from 2½ to 4 inches. Stock up to 6 inches wide can be clamped on the table. Hollow chisels with 4-inch blades will mortise in 12-inch high material; chisels with 2¾-inch blades are commonly used in ¼-inch and $\frac{5}{16}$-inch sizes.

Column

Consists of a rigid, hollow, box type, heavily ribbed one piece semi-steel casting having a wide flanged floor support accurately machined on the bottom surface, through which four anchor bolts are fastened to the

floor. It encloses the power feed mechanism with the exception of the motors and transmission unit; these are securely bolted to the sides of column.

Mortising Head

It reciprocates on adjustable gibbed ways and allows the spindle to travel 2½ to 4 inches in a vertical direction. Directly back of this head is an indicator that shows the lengths of the stroke: different lengths of stroke are possible by turning a crank located at the end of a screw shaft or rocker arm. The rotor of the motor is mounted directly on the spindle. This spindle rotates 3600 r.p.m. on two large ball bearings having ample lubrication and is bored out to fit the adapter of the various sizes of bits. The bit adapter is a closed end type with a screw collar for adjusting bit to chisel. The chisel adapter, fastened to the lower end of the head, is centered with a tongue and groove arrangement which locates the chisel holder concentric with the bit or spindle at all times. The chisel bushing is a split sleeve with a collar which acts as a positive stop for the chisel. A set screw on a milled flat tightens the sleeve and prevents the chisel from turning.

Foot Lever

The clutch is operated by a foot lever at the front of the column. This lever directly controls the vertical movement of the spindle. With the operator's foot placed on this lever a slight movement to the right engages a locking device, which holds the pedal down, thereby allowing a continuous movement of the spindle. A slight movement to the left disengages the lock and the automatic feeding ceases.

Head Motor

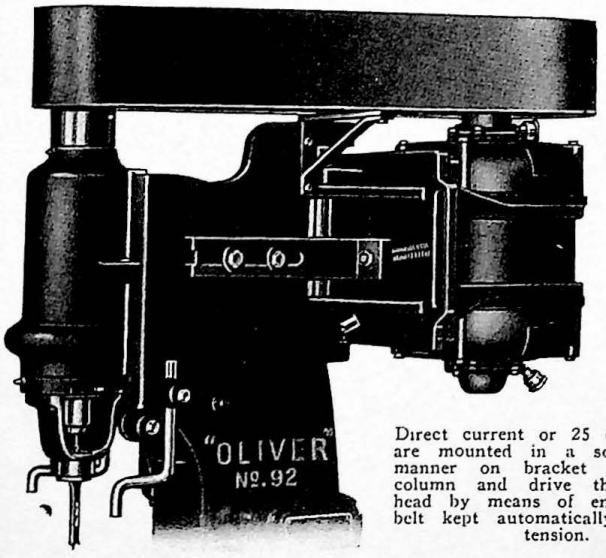
This motor is ball bearing, totally enclosed fan cooled in a one-piece casting, and is rated 5 h.p., 3600 r.p.m., 3 phase, 60 cycle, 220 or 440 volt A.C. Blower fan with an exhaust pipe is built into the frame and supplies a constant blast of air, which cools the motor and tools, also keeps the work free from chips. Hand operated brake located at the upper end of the motor head provides quick stopping of boring spindle when so desired.

Feed Motor

Is equipped with ball bearings which are easily lubricated. This motor is rated 1 h.p., 1200 r.p.m Mounted directly on the armature shaft is a variable pitch pulley with V type belt which in turn drives the clutch pulley. A metal guard encloses the drive mechanism.

Table

Is a universal compound table 6 inches wide by 36 inches long and made of semi-steel machined on three surfaces. Table has a gib with adjustment for correct sliding fit. It has a removable screw clamp that slides in a groove on the table, with hand wheel adjustment for holding stock. A rack and pinion, also having a hand wheel adjustment, moves the table horizontally. This movement is gauged by adjustable stops which can accommodate a mortise 13 inches long. There is also a hand wheel and screw for cross traverse of 4 inches. This also assists in lining up the work with the chisel. Two spiral gears through a screw attachment give a vertical movement of the table, a movable gib assures correct



Direct current or 25 cycle motors are mounted in a self-contained manner on bracket at rear of column and drive the mortising head by means of endless woven belt kept automatically in proper tension.

sliding fit, and there is also a locking device to hold the table at the desired height. The table also can be tilted 45 degrees either right or left, an indicator at the front of the machine shows the amount of tilt. It is also fitted with a vertical adjustable back fence which has a lip holddown and also carries a six-foot stop rod with six spring stops for automatic locating of mortises on the stock. A rod and two adjustable stops directly in front of the table govern the length of mortises. Two swinging hold-down fingers, which are held in the column of the machine by set screws, project over the table and prevent the work from climbing up when the chisel lifts out of the work.

Specimens of stock finished by the "Oliver" Mortiser on a production basis.

Electrical Parts

Each motor is controlled by individual automatic push button starters with overload and undervoltage protection integral with the boxes. All wiring is enclosed in flexible conduit. This complete electrical protection makes a positive, safe operating machine.

Clutch and Transmission

Has a cone type clutch that revolves on double ball bearings, which are lubricated by a fitting located in the top flange. It has cast iron friction surfaces of ample dimensions; the contact tension is supplied by means of a steel spring mounted on the rear of the clutch adapter shaft, and is held on the shaft by means of a steel collar locked securely with a set screw. When the operator steps on the foot lever the clutch is engaged, which allows the spindle to move in a vertical direction. Any speed from 16 to 40 strokes per minute are transmitted to the spindle and are easily changeable by means of a lever situated on the right side of the column, easily reached by the operator. The worm shaft turns on ball bearings, the worm gear shaft has a heavy bronze bushings and all are easily lubricated. All working parts are accessible and interchangeable.

Equipment

The regular equipment for this mortiser consists of one ½-inch square, 4 inches long hollow chisel with bit, set of chisel and bit bushings, layout stop rod with six spring stops, also necessary wrenches.

Types of Machines

In addition to the regular "Oliver" Mortiser, which we have just illustrated, we also manufacture this machine with a belt drive to spindle as shown on page 3. This design is used for 25 or 30 cycle and direct current applications.

Floor Space

The base of this machine covers 22 inches by 30 inches; actual operating space, 44 inches by 46 inches. Overall height, 6 feet.

CODE, WEIGHT, ETC.

CODE	MACHINE DESCRIPTION	WEIGHT IN POUNDS CRATED	BOXED	CUBIC FEET
Fagid	No. 92-D—Motor-in-Head Power Feed Hollow Chisel Mortiser, including two motors—one on spindle, one on feed mechanism, also push button magnetic control for both motors. This machine is the same as the halftone illustrations shown in this circular	1500	2000	105

EXTRAS

Fagax	Direct Current or 25 cycle application, including motor bracket, belt tightener, belt and belt guard—motors and switches as specified.			