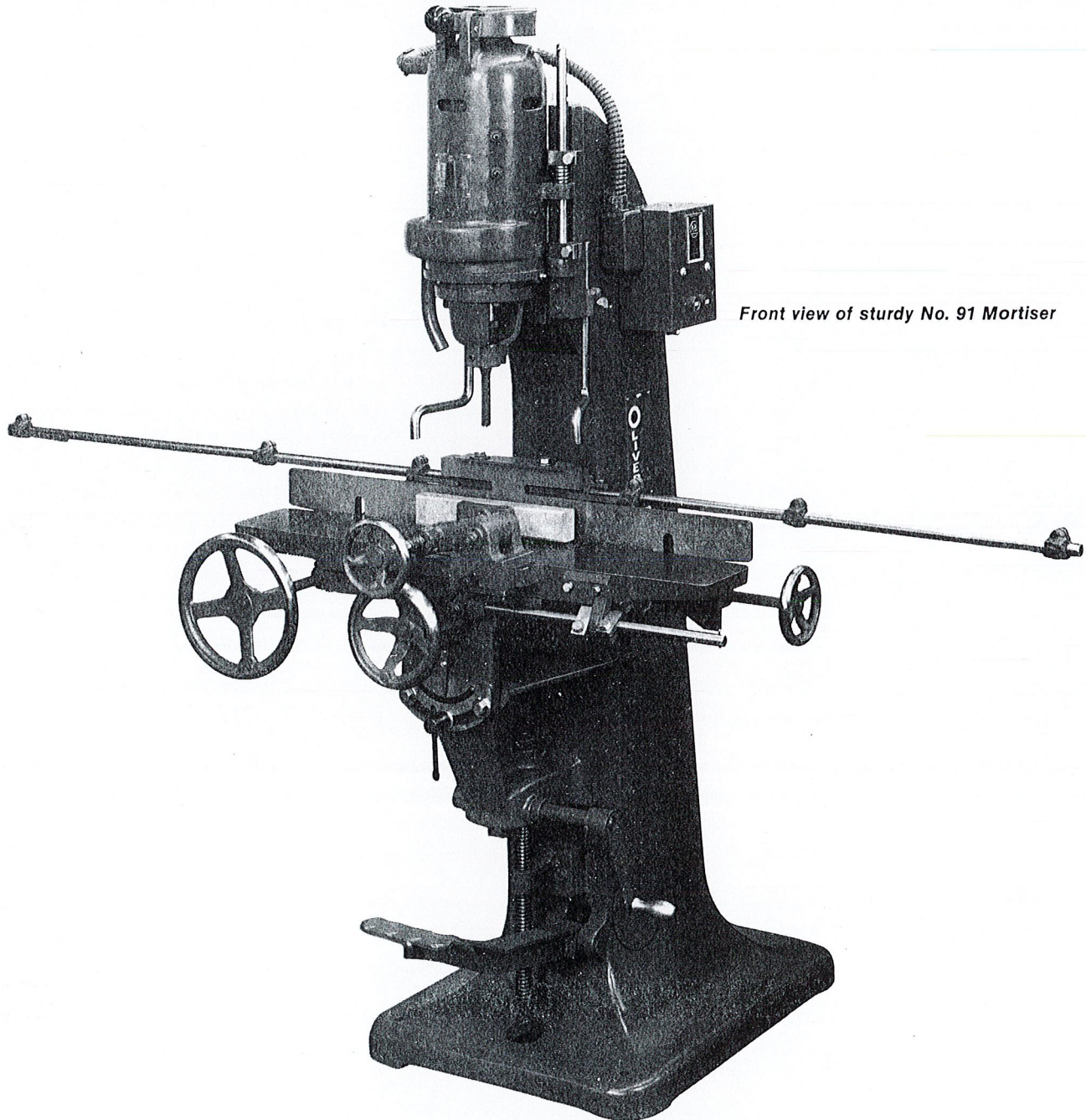




NO. 91 VERTICAL HOLLOW CHISEL MORTISER



Front view of sturdy No. 91 Mortiser

This Mortiser is a work-saver

The Oliver No. 91 Mortiser is especially designed for use in all classes of woodworking plants such as sash and door shops, furniture factories, as well as vocational shops. The mortise is made with a hollow chisel, a tool universally applied to all types of mortising operations. The hollow chisel contains a high-speed revolving bit to bore a hole and remove the chips cut by the corners of the chisel. All chisels are correctly sized. They cut clean, accurate mortises, and operate quietly, without vibration. The high-speed bit and rigidly supported chisel cut rapidly. They are readily adapted to any shape of mortise, of any length or any practical depth.

DESIGN

Modern machine tool design is used throughout this machine. The arrangement of fulcrums, levers and the foot pedal are scientifically determined to facilitate mortising up to full capacity with the least effort. The proportionate length of the upper rocker arm is changed at the will of the operator to the short, medium or long position, as marked on the indicator, by merely turning the lever to actuate the screw and nut connection at the rear of the mortising head. This is important as it keeps the foot lever as close to the floor as possible consistent with the chisel stroke, and supplies the correct leverage to suit the size and depth of the mortise.

CAPACITY

Chisels from $\frac{1}{4}$ " (6.35 mm) to $\frac{3}{4}$ " (19.05 mm) square are used on this Mortiser. The stroke can be regulated in length from $2\frac{1}{2}$ " to 4" (63.5 to 101.6 mm). Stock up to 6" (152.4 mm) wide can be clamped on the table. A hollow chisel 4" (101.6 mm) long will mortise in stock 12" (304.8 mm) thick. Standard depth of mortise is $\frac{1}{8}$ " (47.6 mm) with $\frac{1}{4}$ " (6.35 mm) and $\frac{5}{16}$ " (7.94 mm) chisels, $3\frac{1}{4}$ " (82.5 mm) for $\frac{3}{8}$ " (4.76 mm) to $\frac{5}{8}$ " (15.88 mm), 3" (76.2 mm) for $\frac{3}{4}$ " (19.05 mm).

COLUMN

The head, table, foot lever, etc., bolted to the column are rigidly supported by a one-piece casting. This hollow, box type, heavily ribbed semi-steel casting has a

wide flanged floor support accurately machined on the bottom surface. The floor support is drilled for four anchor bolts.

TABLE

A non-tilting universal compound table 6" (152.4 mm) wide by 36" (914.4 mm) long, is 36" (914.4 mm) above the floor at the lowest position and 44" (1117.6 mm) at the highest. It is constructed of semi-steel with ribbed sections, accurately machined. An adjustable hand-wheel screw clamp with a locking device slides in a groove on the table and holds stock of 6" (152.4 mm) maximum width firmly in place. The table moves $12\frac{1}{2}$ " (317.5 mm) in a horizontal direction by a rack and pinion attached to a handwheel. This movement can be accurately gauged by two adjustable stops directly in front of the operator. A handwheel with a screw attachment controls the cross-traverse movement of the table which has a 4-inch travel. This also assists in lining up the work. A hand crank, turning two spiral gears fastened to a screw shaft, moves the table in a vertical direction on a dovetail. A gib held by set screw equalizers insures correct sliding fit. Two swinging hold-down fingers, fastened to the column by bolts and held in position by set screws, project over the table and prevent the work from climbing up when the chisel recedes.

TILTING TABLE

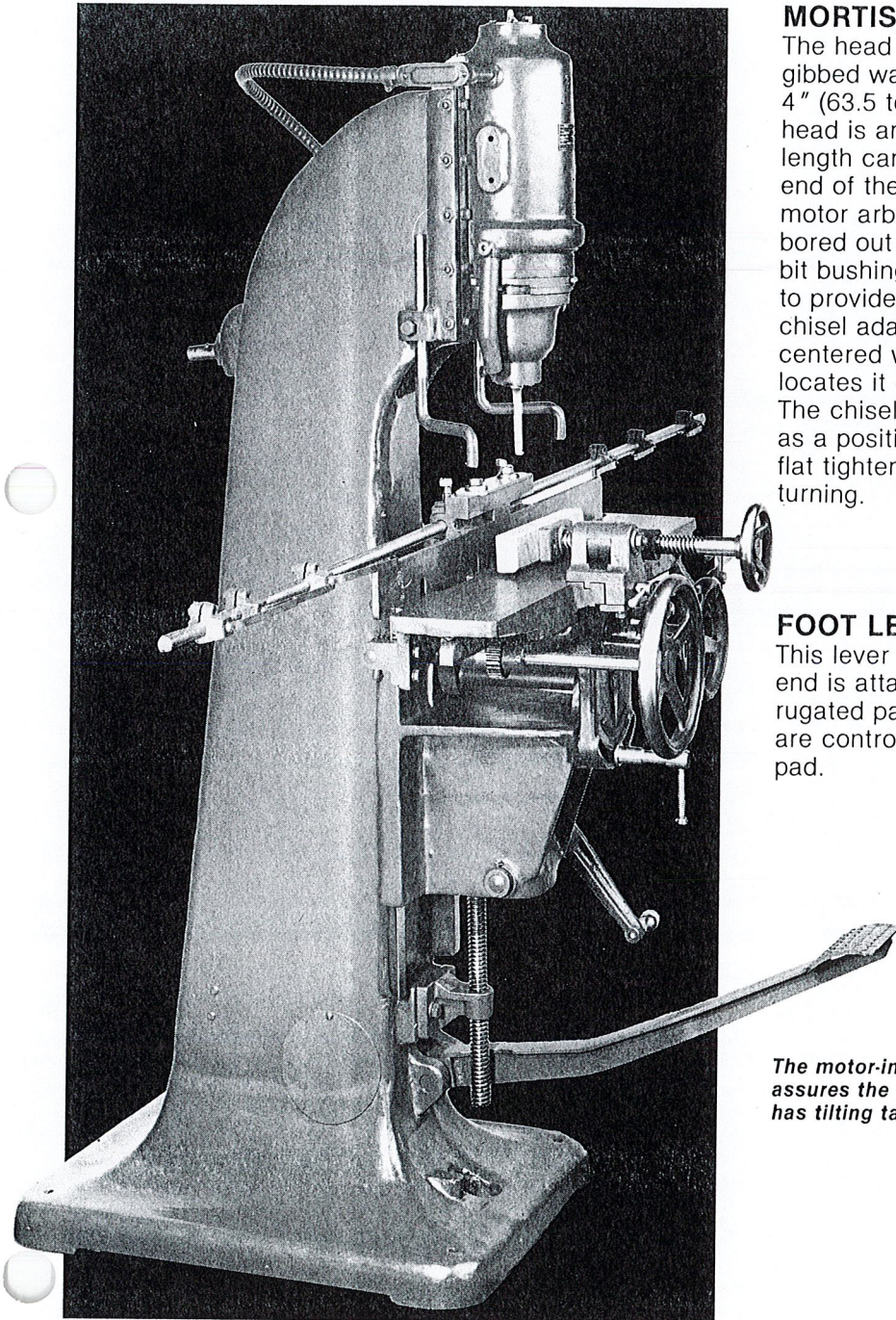
A tilting table can be supplied in place of the plain table if required. It can be tilted and clamped up to 45° either right or left for angle mortises.

HEAD MOTOR

The regular or standard motor is rated 2 h.p., 3600 r.p.m. A heavy duty motor rated 5 h.p., 3600 r.p.m. can also be supplied. Either motor is equipped with ball bearings, totally enclosed in a one-piece ventilated casting. A blower fan with an exhaust pipe is built into the frame. It supplies a constant blast of air to cool the motor and tools, and keeps the work free from chips.

ELECTRICAL CONTROL

A push button magnetic control, with overload and low voltage protection, is conveniently mounted on the column.



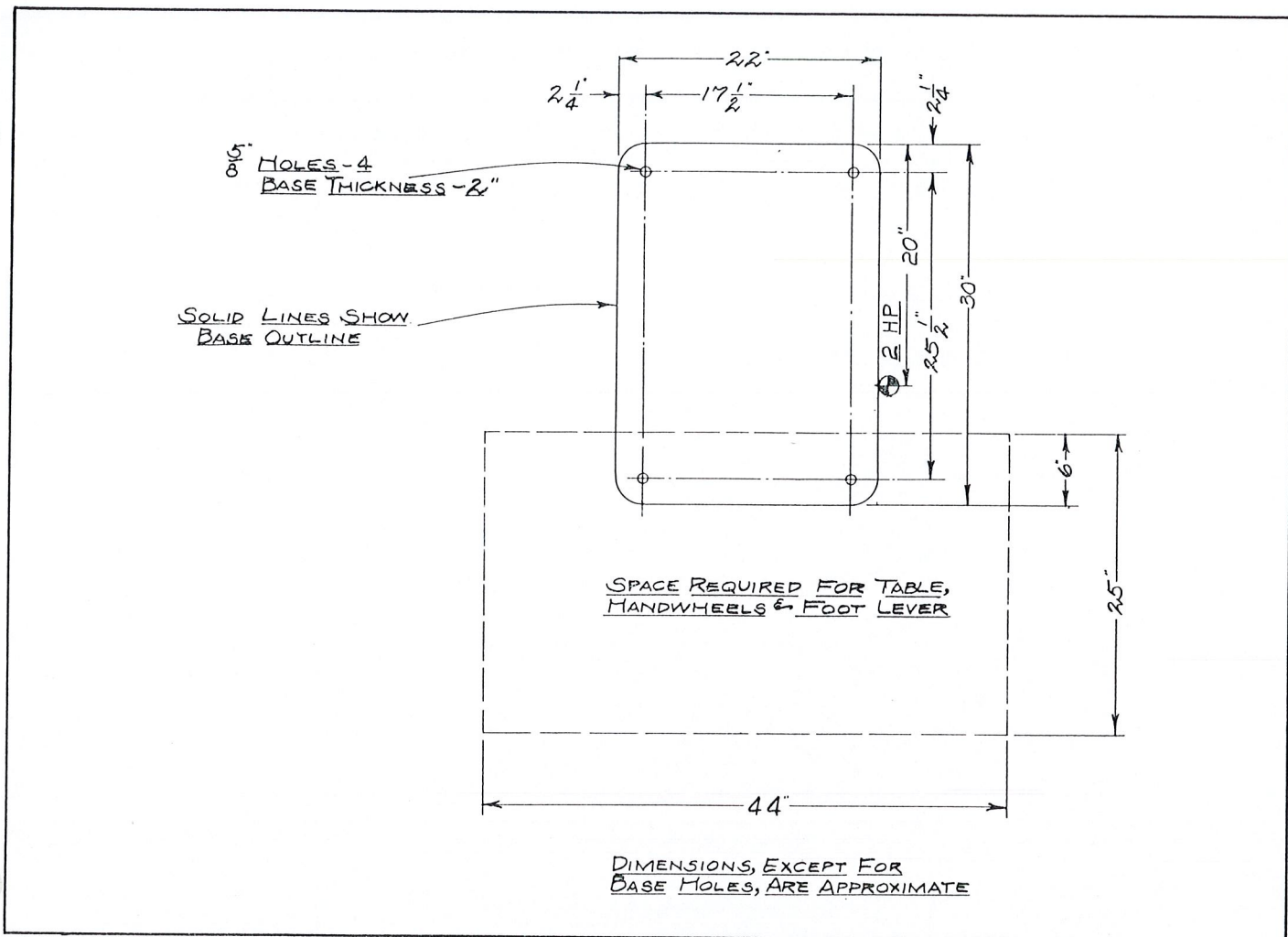
MORTISING HEAD

The head has a reciprocating movement on adjustable gibbed ways that permits the spindle to travel 2½" to 4" (63.5 to 101.6 mm) vertically. Directly back of this head is an indicator to show the length of stroke. The length can be varied by a hand crank attached to the end of the screw shaft or rocker arm. The spindle in the motor arbor rotates on two large ball bearings. It is bored out to fit the adapter of various sizes of bits. The bit bushings are the closed end type with a screw collar to provide adjustment for aligning bit and chisel. The chisel adapter, fastened to the lower end of the head, is centered with a tongue and groove arrangement which locates it concentric with the bit or spindle at all times. The chisel bushing is a split sleeve with a collar to act as a positive stop for the chisel. A set screw on a milled flat tightens the bushing and prevents the chisel from turning.

FOOT LEVER

This lever extends through the base of the column. One end is attached to the rocker arm; the other has a corrugated pad for the foot. All movements for the head are controlled by a slight pressure of the foot on this pad.

The motor-in-head type eliminates all belts, pulleys, etc., and assures the most direct application of power. Mortiser shown has tilting table, which is available on special order.



SPECIFICATIONS

TABLE

6" (152.4 mm) wide by 36" (914.4 mm) long, non-tilting.
12" (304.8 mm) vertical adjustment;
12 1/2" (317.5 mm) horizontal adjustment.

MOTOR

2 H.P., 3600 R.P.M., 3 phase, 60 cycle, 230 or 460 volt.

CONTROL

Push button magnetic, with overload and low voltage protection.

CAPACITY

from 1/4" to 3/4" (6.35 to 19.05 mm). Maximum thickness of stock 12" (304.8 mm).

EQUIPMENT

One 6 foot (1829 mm) layout rod with six spring stops.
One hollow chisel with bit, 3/8" (9.525 mm) square.
Chisel and bit bushings for various sizes.
One set of wrenches.

WEIGHT

Crated 1200 lbs.

OPTIONAL EXTRAS

Tilting table, 45 degrees right or left.
Brake for 2 H.P. motor.
3 H.P., 3600 R.P.M. motor, including brake.
5 H.P., 3600 R.P.M. motor, including brake.
Hollow chisels and bits, as required.

All specifications are subject to change without notice.



OLIVER

OLIVER MACHINERY COMPANY 1025 CLANCY AVE., N.E. GRAND RAPIDS, MICHIGAN 49503 U.S.A.

2 1/2 M 8301
Litho USA