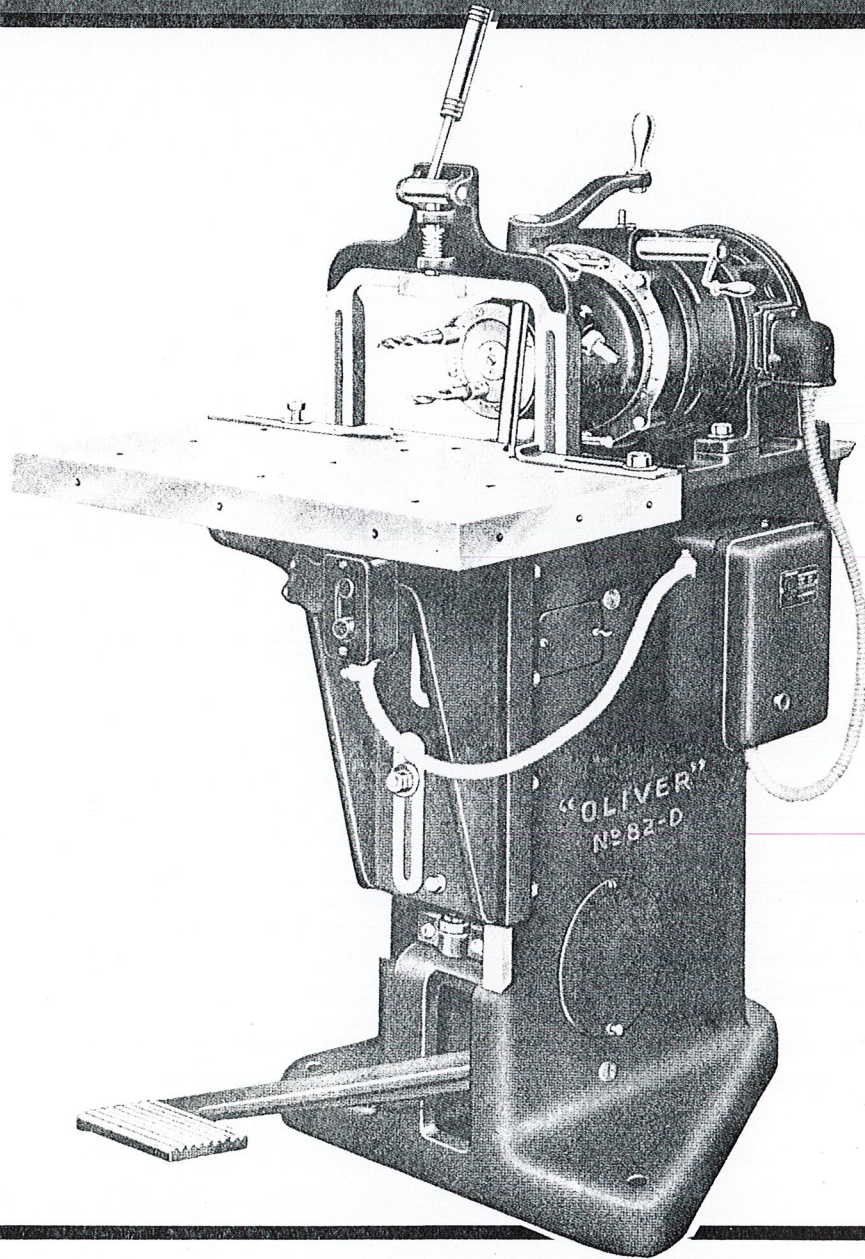


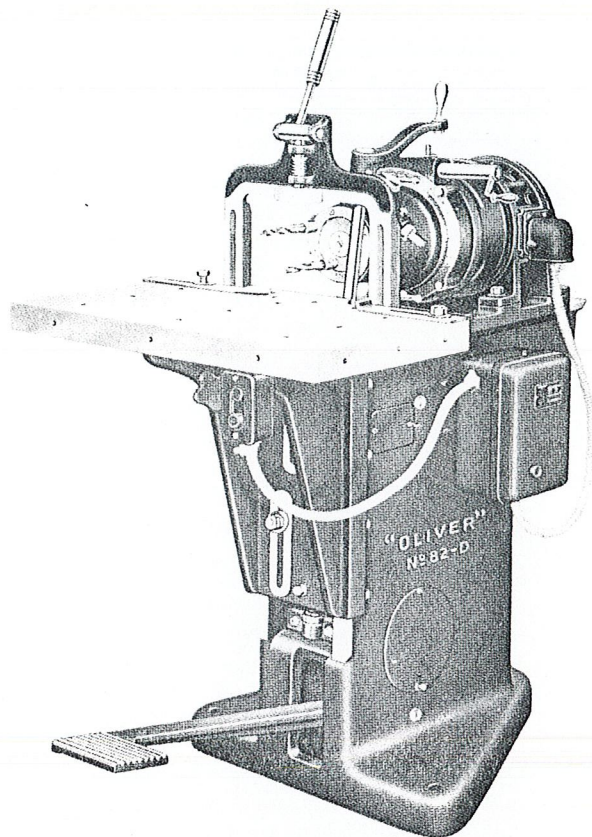
No. 82 TWO-SPINDLE BORER



OLIVER

OLIVER MACHINERY COMPANY, GRAND RAPIDS, MICH. 49504

*Superior quality of
this Horizontal
Two-Spindle Borer
assured by
exhaustive tests and
careful inspections.*



"Oliver" No. 82-D Two Spindle Horizontal Borer, with 1½ H.P. motor.

ADAPTATION

To meet the demand for a low priced horizontal two-spindle borer for boring two holes in a horizontal direction at either horizontal and vertical alignment, or at any angle in between, we have, after a careful study, designed and brought out the "Oliver" No. 82-D Horizontal Two-Spindle Borer, with hand clamp for holding the work.

DESIGN

The superior quality and workmanship of this "Oliver" borer is assured by exhaustive tests and careful inspections. Advanced ideas in machine design with quick setting up adjustments and the new Universal Head, are some of the salient features of this "Oliver" No. 82-D Close Center Borer. The turning of a small hand crank is all that is required to change the setting of the spindles. A 3½" diameter circle represents the scope of the head. Micrometers and dial indicators are used by all inspectors which accounts for the precision workmanship resulting in the smooth, noiseless operation of the head mechanism. The table is very quickly raised and lowered for different thicknesses of stock by conveniently located crank and screw. The head unit is instantly moved forward or backward on the main slide to keep the foot lever operating as close to the floor as the depth of desired hole will permit.

CAPACITY

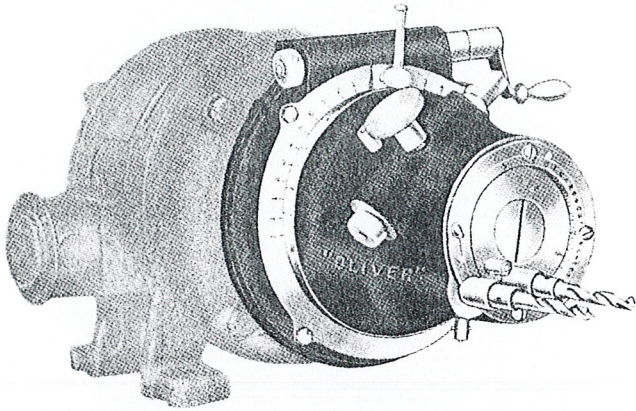
Stock up to 6" thick can be clamped and bored between the table and the clamp. Standard 7/16" — 14 threads to the inch, screw shank bits, any diameter up to 5/8", will bore two holes in a horizontal direction from 7/8" center to center up to and including 3½" center to center, in any position. Depth of holes normally up to 3", but can be furnished to bore up to 5" deep if desired. If it is desired to bore only one large hole, the Universal Two-spindle Adjustable Head and motor are omitted, and the machine furnished with either a 2 h.p. or 5 h.p. motor with a three-jaw chuck for boring single holes only. When it is desired to bore closer than 7/8", we can furnish a two-spindle fixed center head unit, arranged for ½", 5/8", or ¾" center to center boring. This unit is made to fit at the front end of the motor exactly in the same manner as the adjustable head is carried.

MAIN SLIDE

Directly back of the table is the cross slide which supports the head unit. This slide carries the boring head towards the work and recedes after the holes are bored. Slide is a semi-steel casting with dovetailed gibbed ways carefully hand scraped, and equipped with set screws and lock nuts for correct sliding adjustment. Two large oil cups supply lubrication for the slide ways.

UNIVERSAL HEAD

Motor head is ball bearing, 1½ h.p., 1800 r.p.m. The spindles rotate at 3600 r.p.m., and are designed to hold standard 7/16" - 14 threads to the inch screw shank bits. Lubrication of all bearings is accomplished by means of a central chamber filled with grease from high pressure grease gun fittings. This head unit is securely bolted to the main slide. An adapter ring is fastened to the motor frame and the boring head bolts to the adapter. Near



"Oliver" Universal Head Spindles Set for 7/8" Center to Center Bore
Accomplished by Turning Hand Crank Shown in Illustration.

the top of the adapter is a short shaft to which a small hand crank can be attached for the purpose of rotating the head by a worm and worm gear arrangement having a hand locking device. On the face of the flange of this adapter is a series of 1/8" graduations that line up with similar graduations on the head. A worm and worm gear imparts a circular movement to both spindles in a complete circle. The separate revolving of the inner spindle is accomplished by similar mechanism only the design is smaller and turns the inner spindle unit from 7/8" to 3½" distance center to center of spindles. A ring, with accurate 1/8" graduations, is attached to the face of the outer spindle casing and shows the amount of movement the inner spindle makes when the hand crank is turned. Facing the spindles, the 1/8" divisions on the rim of the head adapter are in the horizontal directions to the left; and in the vertical directions to the right of the perpendicular center. Ball bearings are used throughout the driving mechanism of the head unit, with the exception of the chuck end of the spindles which are equipped with high speed bronze bushings (easily replaced), which makes it possible to build this Universal Head with a minimum distance of 7/8" between spindle centers. Master mechanics use micrometers and dial indicators previous to stamping all graduations on the heads, assuring absolute accuracy.

SINGLE BORING HEAD

In place of the Universal Head described above, we can furnish either a 2 h.p. or a 5 h.p. motor (depending on the size of holes to be bored), so that a single large hole may be bored one at a time. On the end of the

motor shaft a suitable three-jaw chuck would be furnished for holding the boring bit.

FOOT FEED MECHANISM

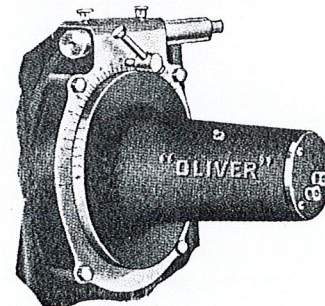
By means of a foot pedal, connecting links, and bell crank, the boring head and motor are brought to the work on the table, having the depth of boring adjusted by means of a knob underneath the table, and with spring return for the head. By means of a unique arrangement it is possible to bring the foot pedal always to the base of the machine for reaching the end of the holes; so that no matter whether shallow or deep holes are bored the foot pedal always remains nearest to the floor line.

CLAMPING MECHANISM

An eccentric clamp mechanism is attached to the rear side of the table, so located as to be very easily adjusted for any thickness of stock up to 6", with cam action lever for holding the stock while boring. Cam action lever gives 3/8" vertical movement, and is fitted with spring for quick return.

COLUMN

Is a semi-steel cored casting with a large flanged triangular shaped base, 18" x 20", forming an exceptionally



TWO SPINDLE FIXED CENTER HEAD (SHOWN ABOVE)

Two Spindle Fixed Center Heads, Interchangeable as a Mounting with the Two Spindle Adjustable Center Head are Available in Spindle Spacings of 1/8", 3/4", 5/8", and 1/2" Center to Center. The Method of Mounting is the Same as the Adjustable Center Head.

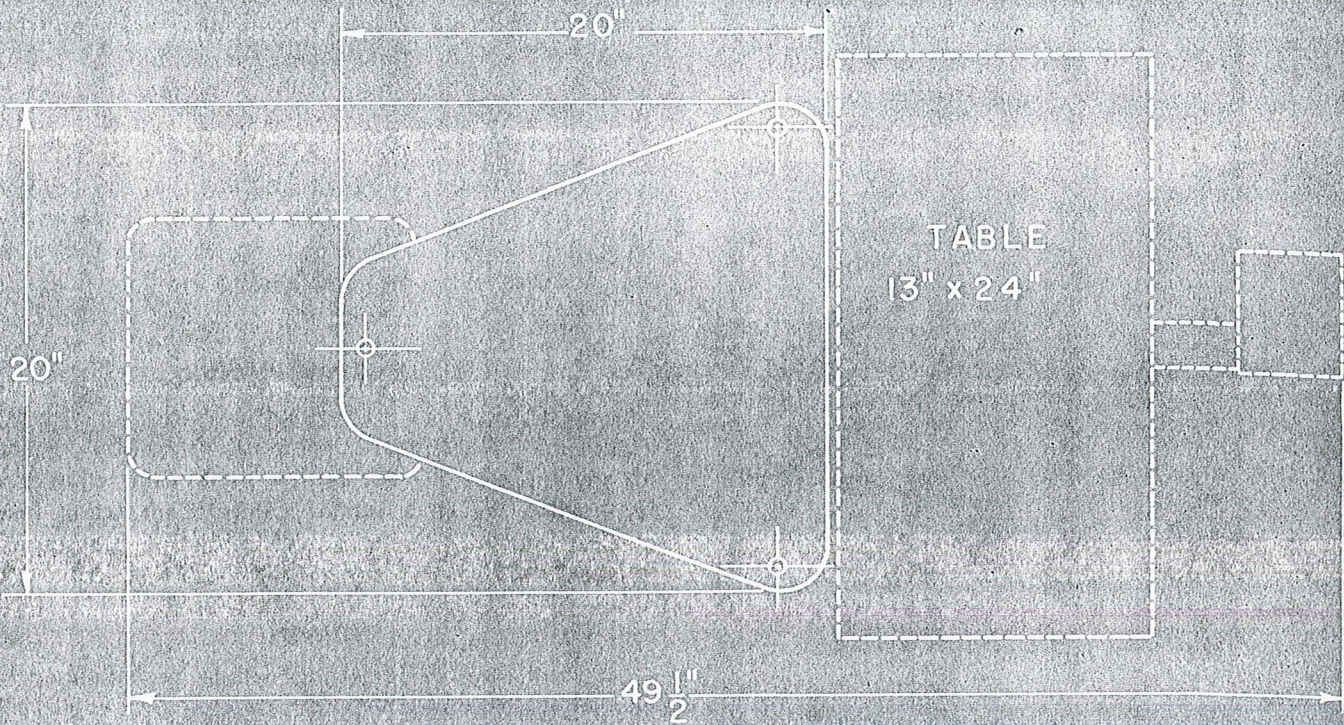
sturdy, rigid support for the entire mechanism. Gibbed machined ways at the front of this column allow the table to be raised or lowered in vertical directions, to accommodate different thicknesses of stock. In the right side of this column is a large opening for inspection or oiling of the feeding mechanism. On the top of the column is a hand scraped dovetailed way assuring a perfect sliding fit of the main slide which carries the boring head.

TABLE

Size 13" x 24", made of semi-steel, accurately machined top and sides with square cross ribbed cross sections underneath, tapped holes on the top to accommodate all

FLOOR PLAN

SOLID LINE - FLOOR CONTACT AREA
DOTTED LINE - PROJECTED AREA
DIMENSIONS ARE APPROXIMATE



set-ups. At each end of the table there are tapped holes for fastening extensions. Underneath the table, within easy reach, is a locking device for clamping the table firmly at the desired height. The control switch for the motor is conveniently located under the table. The normal height of the table from the floor is approximately 33", from which level the table can be moved 1 1/2" downward, or 3" upward, making a total vertical movement of 4 1/2" in adjustable gibbed ways by means of a quick acting screw and nut device.

ELECTRICAL CONTROL

A push button start and stop switch is mounted under the table convenient to the operator, with overload and undervoltage protection, wired in conduit to the motor.

EQUIPMENT

Regular equipment includes the Universal Two-Spindle Head Unit, cam action clamp for holding the work, push button remote control switch, and two brad point dowel bits 3/8" diameter.

SPECIFICATIONS

CAPACITY

Will bore two holes from 7/8" centers to 3 1/2" centers. Either vertical or horizontal or any position in between. Bores up to 3" deep.

TABLE

24" long, 13" deep.
Vertical adjustment 4 3/4".

BORING HEAD

Type UN-B Two spindle.
7/8" centers to 3 1/2" centers.
Spindle has standard 7/16" - 14 thread for bits.

MOTOR

1 1/2 H.P., 1800 R.P.M., 3 phase, 60 cycle, 230/460 V.

CONTROL

Magnetic type giving overload and low voltage protection.

CLAMP

Manually operated.
6" capacity under clamp.

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