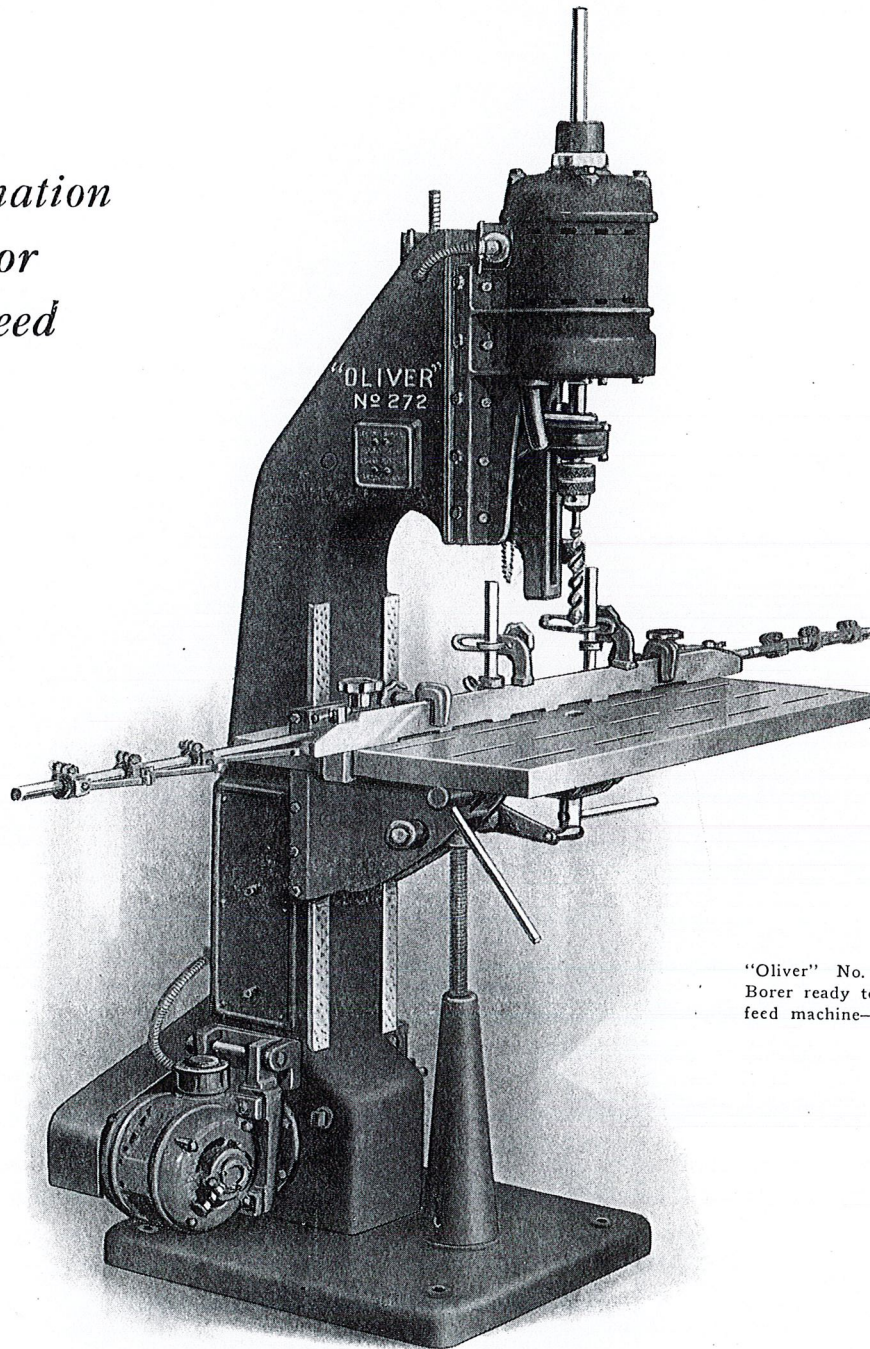




*"Every User
Is a Booster"*

"Oliver" No. 272 Single Spindle Borer

*Combination
Power or
Foot Feed*



"Oliver" No. 272 Single Spindle
Borer ready to operate as a power
feed machine—foot pedal detached.

STATIONARY HEAD
RECIPROCATING SPINDLE
UNIVERSAL ADJUSTMENTS

Manufactured by
Oliver Machinery Co.
Grand Rapids, Mich., U. S. A.

BRANCH SALES OFFICES:
New York, St. Louis, Minneapolis, Los Angeles, San Francisco,
Chicago, Denver, Salt Lake City, Seattle, Manchester, Eng.

Adaptation

This new "Oliver" No. 272 Motor-in-Head Single Spindle Borer is the answer to many vertical boring problems of any woodworking establishment. Realizing the tremendous advantages of an automatic as well as a foot feeding borer our engineers decided to combine both in a single machine. A more versatile Borer has never been manufactured. Acclamations of approval are expressed by pattern shops, sash and door factories; cabinet, chair, furniture, radio, automobile body manufacturers; manual training schools, colleges and vocational institutions; in fact this machine has completely filled the universal request of a combination power and foot feed Borer at a moderate price. This "Oliver" Borer can be purchased as a foot feed operated machine and the automatic feeding device could be added later if desired.

Design

Easily accessible and interchangeability of component parts are very desirable features of this machine. An exceptionally heavy ribbed column rigidly supports the entire mechanism on a wide flaring base. Every unit has been carefully designed to insure flexibility and simplicity of operation. Very little overhead is required to operate this Borer on a high production schedule. There is nothing intricate or complicated about it to confuse the most inexperienced operator.

Capacity

Will bore holes up to 2 inches in diameter any depth up to 6 inches in the center of a 33 inch diameter stock with the power feed and the same diameter hole up to 9 inches deep when using the foot feed. The table is adjustable 16 inches up or down, can be tilted to the right or left, forward or backward and also moved horizontally toward or away from the operator. The spindle has a maximum stroke of 9 inches when using the foot feed. The power feed gives a maximum stroke of 7 inches. The automatic feed regularly gives the operator a choice of three speeds, viz: 12, 18, 26 strokes-per-minute to the spindle; other rates of feed can be arranged for easily when so ordered.

Column

A base 22 x 28 inches of ample proportions is securely bolted to a cored, box shaped, heavy column cast of semi-steel in one piece which rigidly supports the head unit, table, rocker arm and feed motor mechanism. Gibbed ways in the front of the column are accurately machined and fitted to the table slide. These ways act as a rigid support for the table unit.

Head Unit

The boring head motor is ball bearing, 2 H. P., 3600 R. P. M., 2 or 3 phase, 60 cycle, 220 or 440 volts A. C. (3000 R. P. M. on 50 cycle), securely held in place by a yoke bolted to the front of the column. A fan built into the motor directs a blast of air thru the motor to the boring tools and clears the chips from the work. A retainer is fastened to one end of the motor rotor; to this retainer is attached a renewable fibre drive collar with a splined center thru which the spindle reciprocates, the motor remaining stationary. A ball bearing spindle slide bolts to one end of the rocker arm which imparts the strokes to the spindle. A most desirable feature of this head is the reciprocating spindle and the ball bearing spindle slide which are the only parts that are moved by the feed mechanism. Attached to the right side of the head unit support is a case hardened stop bar having two adjustable stops for gaging the amount of travel of the spindle. A precision thumb screw with a lock nut travels with the spindle and engages the bar stops, thus assuring additional accuracy in boring. A Spiral Gear Chuck, 0 to 1/2-inch is regularly supplied with this machine.

Table

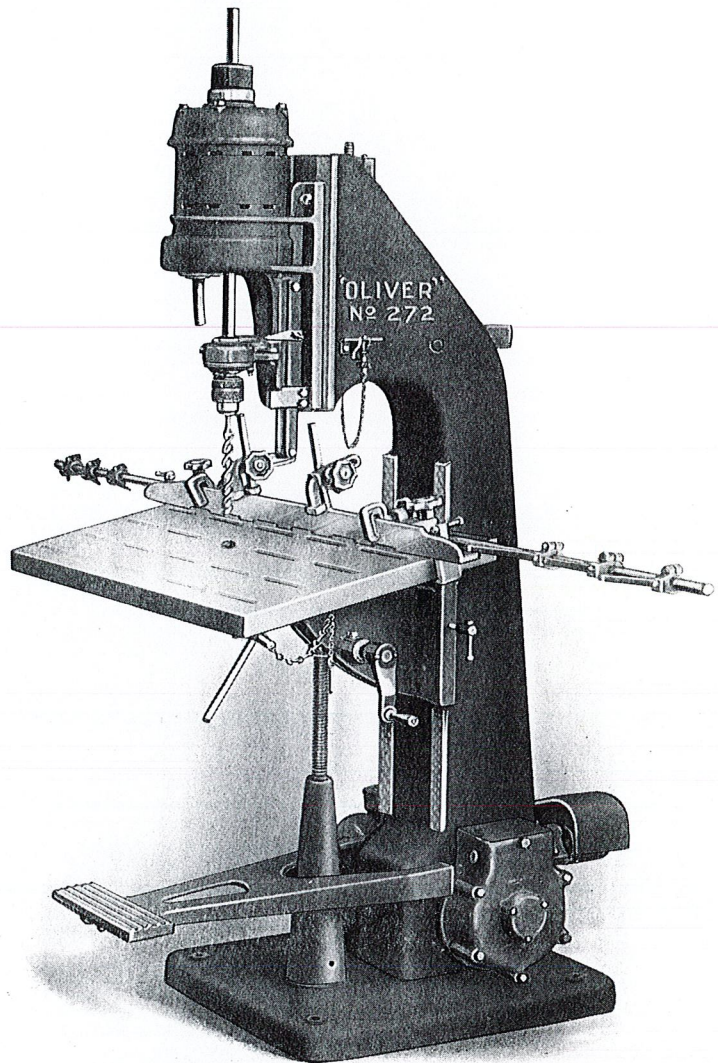
Is cast of semi-steel, reinforced with ribs and is 20 x 36 inches. The top is slotted providing means of bolting forms to the table top, also allowing chips to drop thru. It is firmly supported by a machined adjustable dovetailed gibbed way on the front of the column. The table is raised or lowered by means of an adjustment screw actuated by a hand crank. It can also be moved horizontally forward or backward and may be tilted 45 degrees to the right or to the left and 90 degrees forward until the face of the table is parallel to the boring spindle. Hand locking levers securely hold the table in the desired position.

Power Feed

The motor is ball bearing, 3/4 H. P., 1800 R. P. M., 2 or 3 phase, 60 cycle, 220 or 440 volts A. C. Three rates of feed, viz: 12, 18, 26 strokes-per-minute are regularly furnished by three step cone pulleys, one of which is attached to the motor and the other drives a worm and worm gear completely enclosed speed reducing mechanism rotating encased in a lubricant. This mechanism operates the rocker arm located inside the column. One end of this arm is attached to the spindle support slide which imparts a reciprocating movement to the spindle. A slotted member with a hand clamp adjusts the different lengths of the spindle strokes. The feed motor is mounted on an adjustable bracket that keeps the belt at the correct tension. The foot lever is easily detached and should be removed when operating the power feed.

OUTSTANDING FEATURES

1. Stationary Head.
2. Reciprocating Spindle.
3. Combination Power or Foot Feed.
4. Detachable Foot Lever.
5. Hand crank moves table vertically.
6. Table swings, tilts, slides and locks securely.
7. Fence has multiple adjustment, quickly changed.
8. Individual push button control.
9. Magnetic switch totally enclosed in column receptical.
10. Rigid column, ways cast integral.
11. Power feed mechanism totally enclosed, rotating in oil.
12. Accessible and dependable.



View showing foot lever attached ready to operate as a foot feed machine.

Foot Feed

This boring machine is also equipped with a foot lever that is detachable. Raising the lever disengages it from a pin in the front of the column. This pin moves the rocker arm mechanism which imparts the reciprocating vertical movements to the spindle. A choice of the two methods of feed makes this boring machine exceptionally well adapted to small jobs as a foot operated borer or as a power feed borer for high production work.

Fence

Constructed of semi-steel 43 inches long and extends 2 inches above the top of the table. Slots at each end hold hand lever clamping devices for attaching the fence to the table. There are two clamp knobs for fastening a $\frac{3}{4}$ -inch x 7 foot

round cold rolled steel bar to which are attached six spring clips with clamps as quick stops for long lengths of stock. Ten inches apart from the center of this fence are two adjustable rods which support holding down clamps with hand knob clamping devices. Two hand knob clamp stops are also included in these attachments.

Electrical Control

Two push button switches are mounted inside the column at the left of the operator. A removable cover completely encloses these switches one of which controls the head motor and the other the feed motor. Situated directly above the feed motor is the magnetic switch, with overload and undervoltage protection, mounted in a recess in the column and inspected by removing a plate. The reset push buttons are the only visible parts. All wiring is in conduit.

Equipment

This includes head and feed motors, table, foot lever, fence and attachments, five boring bits—one each 1/4, 3/8, 1/2, 5/8, and 3/4 inch all 6 inch twist. Full magnetic switch and dual push button switch, feed belt and swinging belt guard on feed motor. When the foot feeding machine is

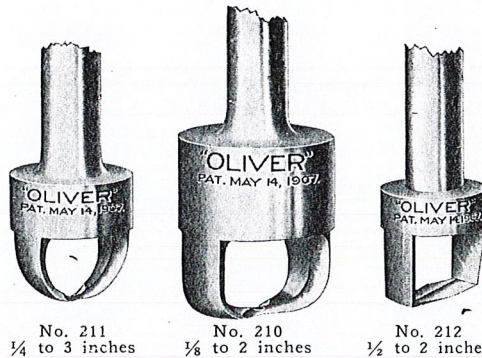
ordered the power feed motor and mechanism is omitted but can be easily attached.

Floor Space

Complete boring machine with attachments covers 3 feet 6 inches x 7 feet. Complete machine without fence rod attachment 36 inches x 42 inches. Base is 22 x 28 inches. Overall height 6 feet 8 inches.

Code	CODE, WEIGHT, ETC.		Weight in Pounds Crated	Cubic Feet
	Machine Description	Boxed		
Ewcab	No. 272-D—Vertical Single Spindle Borer, Motor-in-Head, Power Feed with head and feed motors, safety switches and regular equipment		1060	54
Ewcac	No. 272-DF—Vertical Single Spindle Borer as above except, for foot feed only. Power feed motor and mechanism omitted.....		900	50

"Oliver" Little Pattern Makers



Cutters

These are useful cutters for the purpose of working out small core boxes making fillets and routing. They may be best used on a Boring or Profiling Machine, though they can be used in a lathe or any tool that has a spindle fitted to receive them.

Adaptation

The principle of these cutters is that the broad, circular band of the cutter, just above the knife edge, form a rub-collar and any irregular shape or pattern bandsawed as required (say 1/2-inch to 7/8-inch thick) and tacked temporarily to top of work, allows the work to be pushed or pulled by hand under the cutter with the collar pressed against the pattern, if cutter is sunk into the work beyond the pattern the path just cuts acts as a guide for cutter. A very simple, quick and effective way of working out core boxes, slots, etc.

Fillet Cutter

These cut the fillet into the pattern, and thus avoid using leather or other fillet that must be glued in and which often comes loose after being in the sand. They can be used where it is necessary to cut a recess and level it or in leveling a spotting cut around any shape leaving a fillet in the corner.

Core Box Cutter

These are made to cut a half round in straight angle or curved lines; work out small boxes for taps, dies or other small tools, corrugated work, etc.

Routing Cutter

These are for routing flat grooves, either straight or curved. Will groove stair stringers, shelving, etc. By using a set of these in the shop, a patternmaker can accomplish a great deal more, saves buying destructible fillet; saves money in finishing by hand; saves time in making a pattern. These cutters will be appreciated by the trade, improving the workmanship and raise the standard of quality.

Code	No. 210—Fillet Cutters:														
Fabuf	Nos.	210-A	210-B	210-C	210-D	210-E	210-F	210-G	210-H	210-J	210-K	210-L			
	Radius	1/8"	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	1 3/4"	2"			
Fabuf	No. 211—Core Box Cutters:														
	Nos. 211-A	211-B	211-C	211-D	211-E	211-F	211-G	211-H	211-J	211-K	211-L	211-M	211-N	211-P	
	Dia.	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/4"	2 1/2"	2 3/4"	3"
Fabuf	No. 212—Routing Cutters:														
	Nos.	212A	212-B	212-C	212-D	212-E	212-F	212-G	212-H	212-J	212-K				
	Size	1/2"	5/8"	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 1/2"	1 3/4"	2"				