



*"Every User
Is a Booster"*

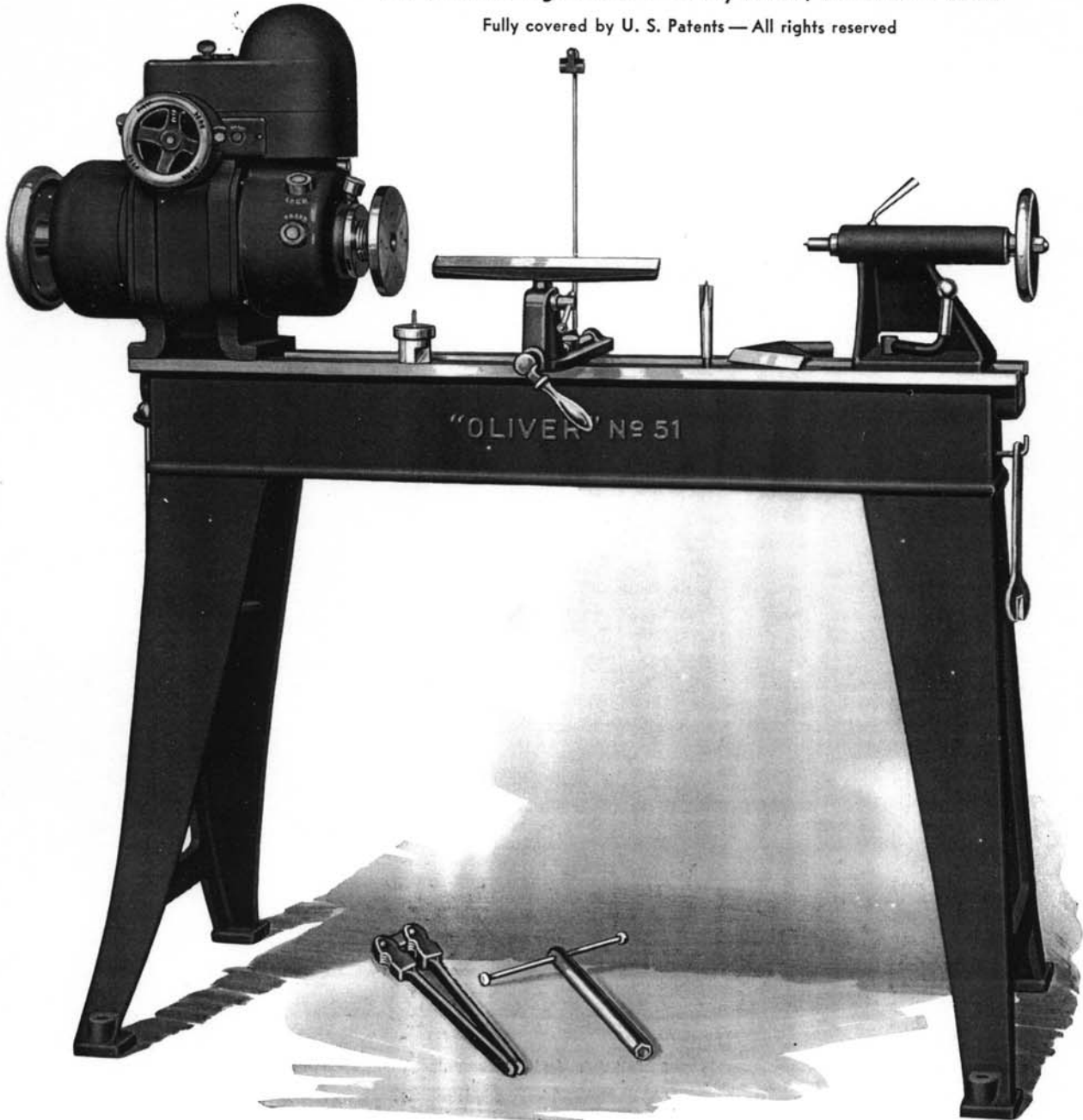
"Oliver" No. 51-K Unit Type

Adjustable Speed

Motor Headstock Lathes

For Alternating Current — Any Phase, 110 or 220 Volts

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No. 51 "Oliver" Adjustable Speed Motor Headstock Lathe. Can be Furnished for any Phase, any Cycle, any Usual Voltage, any Length of Bed and runs at any Desired Speed Between 600 and 3600 R.P.M.

By "Adjustable Speed" we mean that this lathe, by merely turning the hand wheel in front of the headstock, will run at any and all desired speeds between 600 and 3600 R.P.M. — not just four speeds, but any speed desired.

Manufactured by

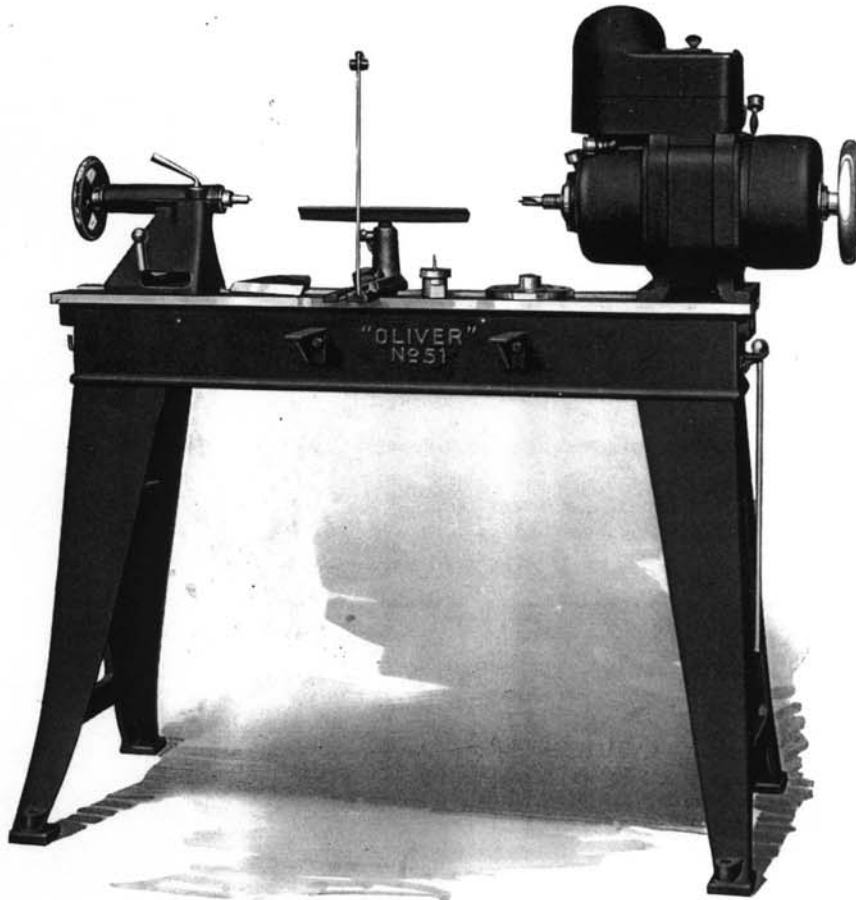
Oliver Machinery Co.

Grand Rapids, Michigan, U.S.A.

BRANCH SALES OFFICES:

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

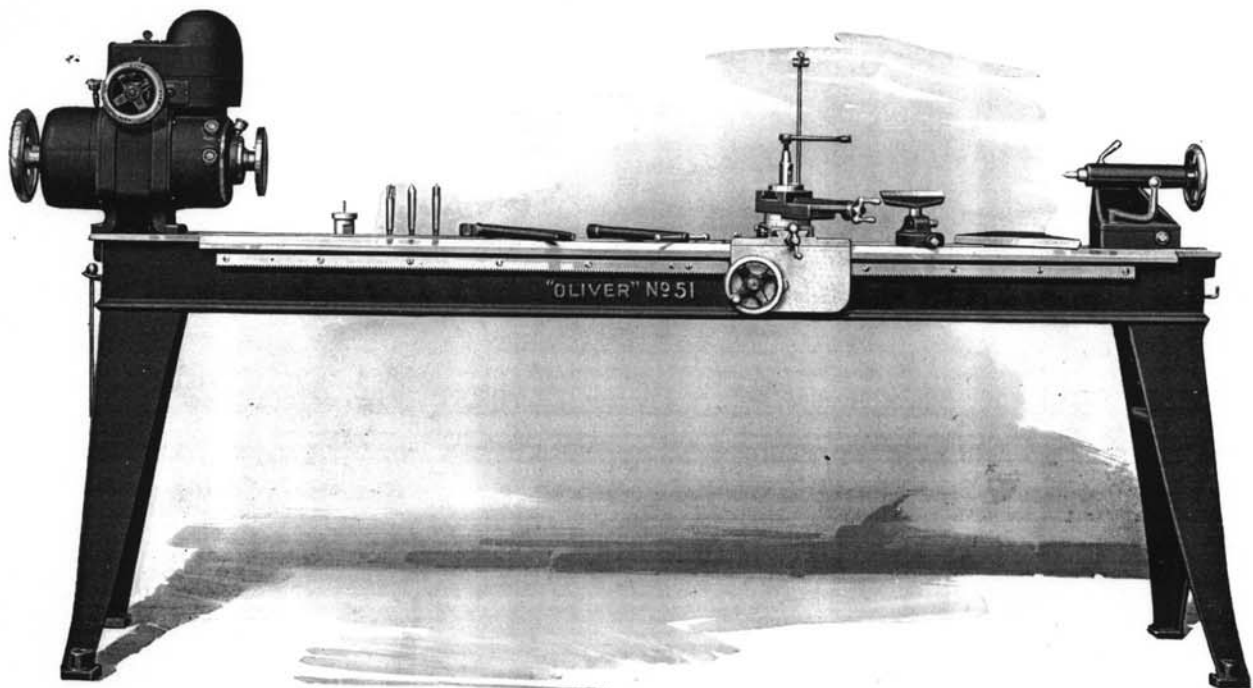
OLIVER MACHINERY COMPANY  GRAND RAPIDS, MICHIGAN, U.S.A.
NO. 51-K "OLIVER" ADJUSTABLE SPEED MOTOR HEAD SPEED LATHES



Prominent Features

1. ADJUSTABLE SPEED — Any and all speeds from 600 to 3600 r.p.m.
2. UNIT CONSTRUCTION — Motor and control built as a unit.
3. SAFETY FIRST CONTROL — Low voltage protection, overload relay with reset button.
4. SAFE TO OPERATE — Starts only at 600 r.p.m., stops quickly at any speed by pushing brake knob.
5. SPINDLE LOCK — Indispensable aid in tightening or loosening faceplates.
6. LOW HEIGHT — Bed to top of motor, 11 inches; to top of controller dome, 18½ inches.

Rear View of "Oliver" No. 51-K patented Unit Type Adjustable Speed Motor Headstock Lathe. Note the brackets in the legs, also back of the bed, giving option of locating a tool shelf either under the bed, back of the bed or at both places.



No. 51 "Oliver" Adjustable Speed Motor Head Lathe with Eight-Foot Bed Fitted with Carriage, Compound Swivel Rest and Set-Over Tailstock—a Real Good Lathe.

Introduction

The "Oliver" No. 51 Alternating Current Unit Type of Motor Headstock Lathes are positively the most modern, the most efficient, the most reliable, the most complete and, at the same time, the simplest and the safest speed lathes obtainable. We invite comparison and careful scrutiny. Ample power, safety to the operator, flexibility, ease of operation and elimination of operating troubles are the outstanding features of these "Oliver" High Quality Lathes.

All electrical apparatus incorporated in this Unit Type Headstock is made expressly for us by the most successful specialists in the industry, whose guarantee is reinforced by our guarantee and responsibility.

Adjustable Speed Motor Head Details

This adjustable speed alternating current motor is built exclusively for and sold only through the Oliver Machinery Co. The motor itself forms the headstock of this lathe and is entirely enclosed, as is also the control apparatus. The range of speeds is really wonderful — any speed from 600 to 3600 r.p.m. is easily secured. It is equipped with high grade, self-aligning ball bearings of sufficient capacity to carry a 4 h.p. radial load

and a 1 h.p. thrust load, much larger bearing capacity than required by the ordinary 1/2 h.p. motor. Motor is of the single phase, series-compensated type. Will operate on any single or polyphase circuit of proper voltage and can be furnished for any frequency from 25 to 60 cycles. The cover on compensator end is removable for internal inspection. The wiring from main line to motor comprises two wires only, making its connection simple through the avoidance of a multiplicity of wires incidental to the use of regulators or rheostats. The control is built as a part of the motor.

Adjustable Speed Motor Head Controller

The entire controlling mechanism is contained in the motor. There are no field rheostats, regulators or relays. Speeds from 600 to 3600 r.p.m. or any intermediate speed may be obtained by simply turning the conveniently placed hand wheel. A governor of the centrifugal type is built-in as a part of the motor and serves the sole purpose of maintaining constant any particular motor speed desired. This is accomplished by increasing or decreasing the intervals during which the motor receives energy from the main line, the tension of the governor spring is adjusted by the conveniently

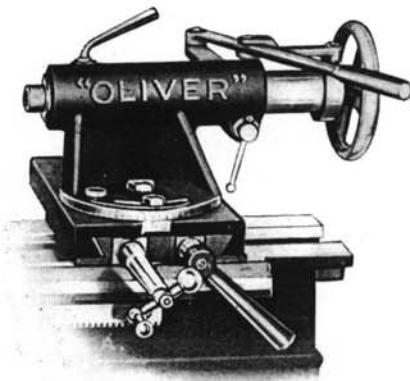
placed "control hand wheel." The motor speed may be varied by turning the same "control hand wheel" while the motor is running. A push button start and stop switch with cartridge type low voltage protection and a positive brake which quickly stops the motor, after current is shut off, complete the excellent, safe control, furnished only on "Oliver" No. 51-K Lathes.

Spindle

Is made of steel tubing selected for strength and durability. It is 1 1/4 inches diameter and has a 1/2-inch hole its entire length to facilitate removal of centers. Front end is threaded for faceplates and bored to receive No. 2 Morse Taper Shanks. Rear end carries an "Oliver" patented combined hand wheel and faceplate for holding the spindle for removing front faceplates, for use as a rear end faceplate, for turning spindle by hand when making adjustments, or for quickly stopping motor.

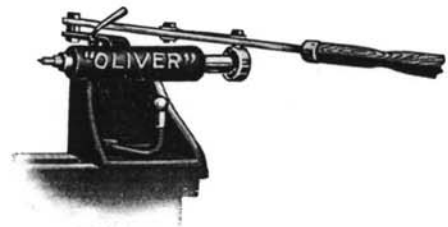
Spindle Lock

A plunger type positive lock when pressed inwardly engages in one of the three equidistant slots in a disk keyed on the spindle inside of the motor and thus gives an easy, yet positive method of locking the spindle for removal or tightening of faceplates.



No. 50 SWIVEL SET-OVER TAILSTOCK — Extra if desired.

The swivel device swings the Tailstock about a central pin for 30 degrees each way and is clamped in position by two hexagonal nuts. The off-set is controlled by lever and screw in a finished dovetail way. A strong lever with eccentric clamp secures the Tailstock to bed. The Spindle may be actuated either instantly by the lever feed or steadily by the hand wheel and screw feed.



No. 49 "OLIVER" SPECIAL TAILSTOCK — Extra if desired.

The quick feed lever part may be securely clamped at any position, making lathe available for regular turning.

The Bed

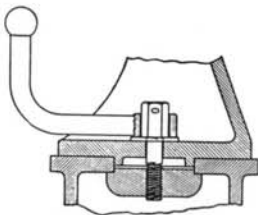
This is a cored casting 6 1/4 inches deep, 6 5/8 inches wide, and regularly either 48 inches or 60 inches long. The top is planed flat so the operator's tools may rest on it securely. The inside edges are machined and act as ways for the alignment of the head and tailstock. When furnished with a tool carriage the ways for same are cast to the side of the bed. Two iron brackets are fastened on the back to support a tool rack.

Legs

Lathe is furnished with long floor legs making top of bed 36 inches from floor, or with short bench legs as may be desired.

Tailstock

This is of the open side design 7 inches long, 6 inches wide. It is secured to the bed by a positive lever clamp. Spindle is machine ground steel 1 1/4 inches diameter, 8 inches long, bored for No. 2 Morse Taper and is held in position by lever clamp. Tail center is removed by backing of screw. On lathes with carriage, the tailstock is furnished with a setover device for taper work, when so ordered.

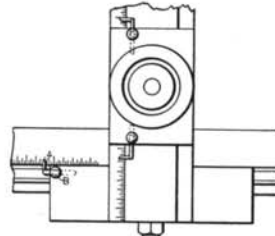


Method of Locking Tailstock to the Bed.

Spindle has traverse of 4 inches and on lathes with carriage 1 inch setover when set-over tailstock is ordered.

Tool Carriage

Hand feed tool carriage with cross feed and compound swivel rest may be furnished with this lathe. The apron has a bearing of 10 inches on the bed and a travel of 37 inches on a bed 60 inches long. It is freely operated in either direction by means of a cut steel rack and pinion actuated by a hand wheel. Traverse of cross feed, 5 1/2 inches.



Carriage and Bed Aid in Exact Turning.

Compound Swivel Tool Rest

The compound rest carries the slotted tool post and has a traverse of 3 1/2 inches. Its socket base is graduated and swivels on the cross slide. This mechanism enables the operator to remove the compound rest and substitute a socket which receives the hand tool rest so that hand turning may be done without having to remove the carriage. Tool post slot 2 inches long, 1 1/2-inch wide.

Carriage Graduations

On lathes having tool carriage, the top of the bed and the guide of the cross slide are

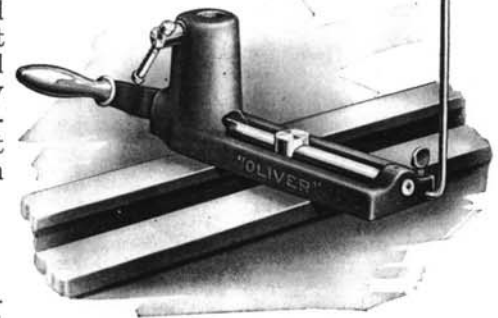
graduated by sixteenths and the end of the carriage as well as the ends of the cross slide, are provided with little pointers that may be adjusted to any work. This enables the operator to turn work to a definite length or depth without having to "fit and try" as formerly.

Capacity

Will swing 12 inches diameter over the bed or 9 1/2 inches over the carriage and will turn 24 inches long between centers on 48-inch bed or 36 inches long on 60-inch bed.

Equipment

Consists of one 3/4-inch spur center, one 3/4-inch cup center, one screw chuck 2 1/4 inches, one face plate 6 inches one each 6-inch and 12-inch hand tool rest, one complete rest holder and one fully enclosed motor head with proper control for same, combined rear end hand wheel and faceplate, blue print holder, built-in positive spindle lock, knock-out rod, and cut-out switch with fuses and cover.



Rear Side View of our New "Faultless" Tool Rest Holder.

CODE, WEIGHT, ETC.

| CODE | DESCRIPTION | WEIGHT IN POUNDS | | CUBIC FEET |
|--------|---|------------------|-------|------------|
| | | CRATED | BOXED | |
| Emeb | No. 51-K—Lathe with plain bed 48 inches long..... | 625 | 775 | 30 |
| Endram | Lathe with hand-feeding carriage and compound rest..... | 765 | 925 | 41 |
| Emite | Extra length of bed furnished any length up to 8-foot. | | | |
| Endran | Setover Tailstock in place of plain Tailstock..... | | | |