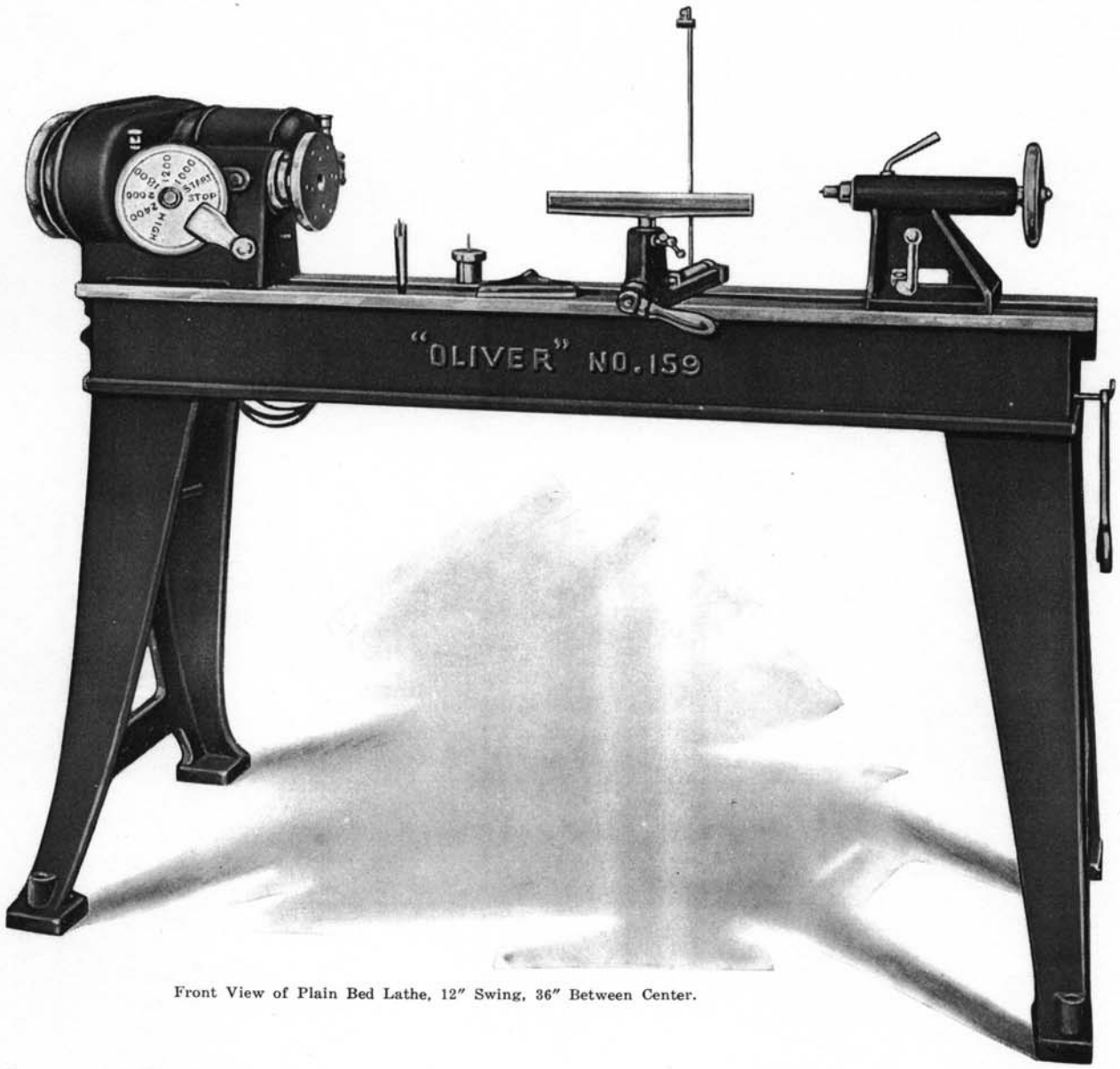
"Every User Is a Booster"

"Oliver" No. 159 "V" Belt

Adjustable Headstock Unit Type

Motor Driven Speed Lathe

For Any Kind of Electric Current



Front View of Plain Bed Lathe, 12" Swing, 36" Between Center.

Prominent Features:

1. ADJUSTABLE SPEED — Any speed 800 to 2400.
2. UNIT CONSTRUCTION — Headstock with motor and control
3. SAFETY CONTROL — Overload relay with reset button.
4. SAFE TO OPERATE — Starts only at low speed.
5. SPINDLE LOCK — Handy in removing face plates.
6. LOW HEIGHT —Bed to top of headstock, 12 inches.

Manufactured by

Oliver Machinery Co.

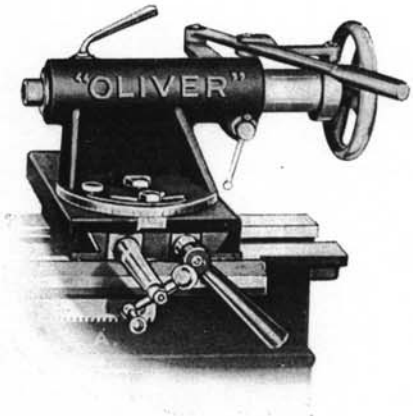
Grand Rapids, Michigan, U. S. A.

BRANCH SALES OFFICES

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

NO. 159 "OLIVER" ADJUSTABLE "V" BELT MOTOR DRIVEN LATHE

Rear View of the No. 159 Lathe Showing Unit Type Headstock.



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 handwheel and screw feed.

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

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

Headstock

The headstock is of the double ended self-contained UNIT TYPE, consisting of a Headblock with Ball Bearing spindle driven by a suitable Ball Bearing motor, operating through a "V" belt on adjustable cone sheaves giving any speed, 800 to 2400 r.p.m. The headstock casting has a broad base with tongue fitting to the bed, rigidly clamped. Bearings are of the very best, deep groove, frictionless ball bearing type, with provision to resist end thrust from either direction. Positive spindle lock facilitates removal of face plates from both front and rear ends.

Variation of Speed

Speed change to get any speed from 800 to 2400 r.p.m. is accomplished by merely shifting the speed control lever at the front side of the headblock to the position desired. Turning this lever operates a cam inside the headblock which shifts the inner half of the spindle sheave allowing the "V" belt to position itself automatically, due to the spring pressure of the outer half of the motor sheave, until a new relation of contact surface is established between the driven and the driving sheaves, causing the spindle to operate at the speed desired. Simple yet very effective.

"V" Belt

The "V" Belt running from the motor sheave to the spindle sheave of the headstock is especially designed for effectiveness and for long life. It is totally enclosed and fully automatic in its adjustments to give the speed desired.

Motor

The motor is mounted directly back of the Headblock and is a unit with the same; ½ h.p., 1800 r.p.m., to suit your electric current. ¾ h.p. motor furnished, without extra charge, if requested. Motor starts only at the low spindle speed, assuring safety.

Electrical Control

The switch for operating the motor is mounted inside the headstock, has overload protection, and is operated by the control handle, so that when the control handle is moved to the stop position the lathe stops, and when moved to the start position it starts, and after starting, any speed may be had by merely turning the lever to the speed desired.

Spindle

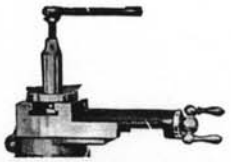
Made of extra hard steel, finished, and ground true has a hole through its entire length and is fitted with No. 2 Morse taper at front end for receiving centers. Spindle nose 1⅛ in. diameter. Has threads on front and rear ends for face plates, and with plunger lock to hold spindle while putting on or removing face plates.

Rear End Turning

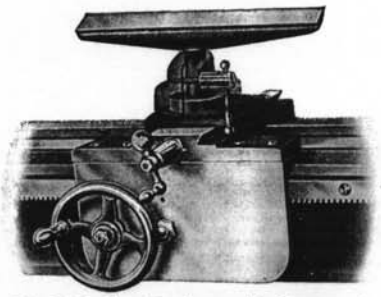
All of these lathes are regularly arranged for rear end turning by making the headstock spindle double ended and mounting on the rear end our 8-inch patented combined rear end hand wheel and face plate.

The Bed

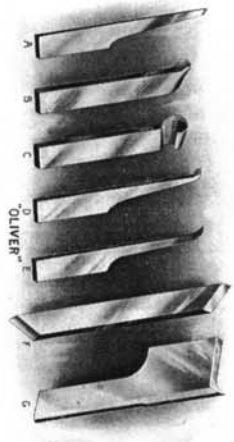
This is a cored casting 6¼ in. deep, 6⅝ in. wide, and regularly either 48 in. or 60 in. long. The top is planed flat so that turning tools, when placed on the bed, will not jar off. The inside edges are machined and act as ways for the alignment of the head- and tailstock. When furnished with a tool 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. Bed is 36 in. from floor to top.



Compound Swivel Slide and Tool Post Easily Removed from Carriage.



Hand Feeding Carriage with Compound Swivel Rest and Hand Tool Rest Socket



Tool Post Tools for use in tool post of carriage of wood lathes.

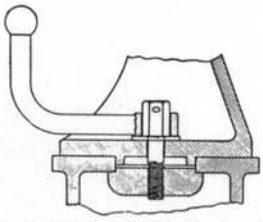
Group "A" Woodturning Tools, recommended for educational institutions. Group "B" is slightly less complete.

Legs

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

Tailstock

This is of the open side design, 7 in. long, 6 in. wide. It is secured to the bed by a positive lever clamp. Spindle is machine ground steel 1¼ in.

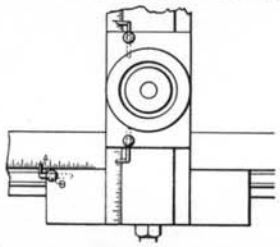


Method of Locking Tailstock to the Bed.

diameter, 8 in. 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 set-over device for taper work when so ordered. Spindle has traverse of 4 in. and on lathes with carriage 1-inch set-over when so ordered.

Tool Carriage

Hand feed tool carriage with cross feed and compound



Carriage and Bed Aid in Exact Turning.

swivel rest may be furnished with this lathe. The apron has a bearing of 10 in. on the bed and a travel of 37 in. on a bed 60 in. 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 5½ in.

Compound Swivel Tool Rest

The compound rest carries the slotted tool post and has a traverse of 3½ in. Its socket base is graduated and swivels on the cross slides. 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 in. long, $\frac{19}{32}$ in. 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

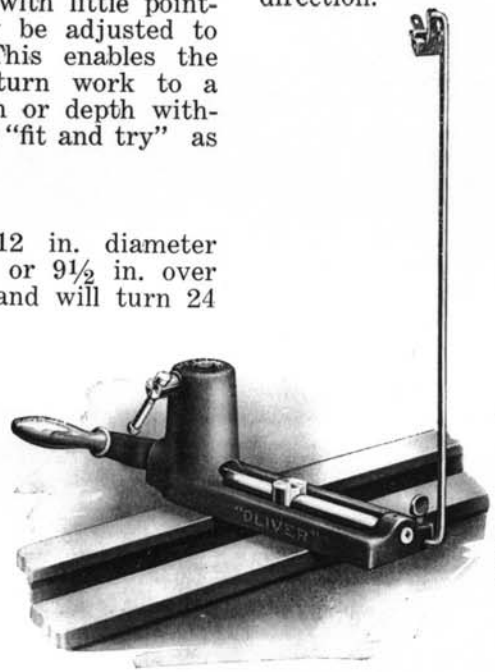
Will swing 12 in. diameter over the bed or 9½ in. over the carriage and will turn 24 in. long between centers on 48-in. bed or 36 in. long on 60-in. bed.

Equipment

Consists of one ¾-in. spur center, one ¾-in. cup center, one screw chuck 2¼ in., one face plate 6 in., one each 6-in. and 12-in. hand tool rest, one complete rest holder and one fully enclosed headstock with proper control for same, combined rear and hand wheel and face plate, blueprint holder, built-in positive spindle lock, knock-out rod, and cutout switch with fuses and cover.

Hand Tool Rest and Socket

The tool rest is provided with a machined edge for turning tools to follow; also has a parallel concave shape which fits the operator's hand. The socket has a double eccentric rapid clamp operated by outside handle clamped in either direction.



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

CODE, WEIGHT, ETC.

CODE	MACHINE DESCRIPTION	WEIGHT IN POUNDS CRATED	WEIGHT IN POUNDS BOXED	CUBIC FEET
Enfal	No. 159-A Adjustable "V" Belt Motor Driven Speed Lathe, with 4-foot plain bed and floor legs	600	750	30
Endram	Hand Feeding Carriage with compound swivel rest and rack for 5-foot bed lathe	100	100	....
Endran	Set-over Tailstock in place of plain tailstock	.....	.....	....