

THE WADE TOOL CO.

Waltham, Massachusetts

Successor of the American Watch Tool Company

Established in 1872



Manufacturers of

Precision Bench Machines and Tools

Precision Lathes

Automatic Pinion Cutters and Automatic Wheel Cutters

Wire Chucks

Bench Profilers

Tools, Guages, Dies, Fixtures

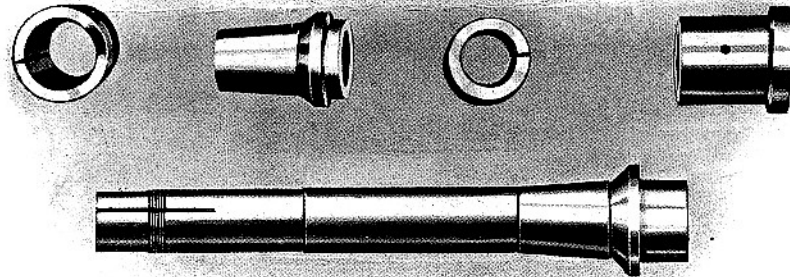
Cable Address, AMWATCO.

LATHE SPINDLE AND BEARINGS

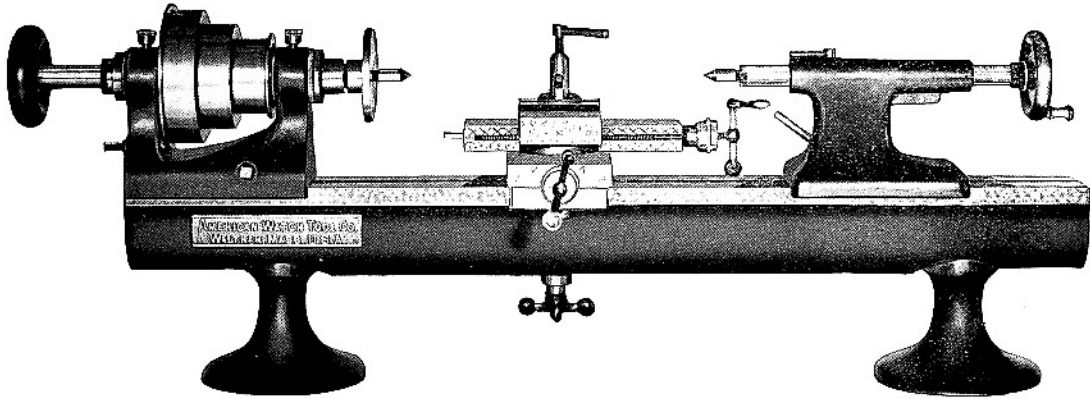
Our spindle bearings are double cones having angles of four and forty-five degrees. They have ample means for lubrication, and are well protected from dust and grit.

Cone bearings and bushings are ground on machines especially designed for the purpose. Spindles are hollow and receive spring chucks, which are closed by means of a draw-in spindle. The spindles are ground perfectly true inside *while running in their own bearings* in the headstock.

The rear ends of spindles are ground to a standard guage for holding index plates, and also the gears to be used with the thread-cutting attachment. Front ends of spindles are ground to a taper standard guage to permit chuck closers to interchange.



These angles for bearing have been proved by test and in practice since the beginning of American watch making, to be the longest wearing and accuracy maintaining of any design for spindles of precision tools. They are an adaptation of the Schiele or Anti-friction Curve, which is the theoretically correct design for withstanding wear and pressure.



NO. 3 BENCH LATHE WITH SLIDE REST

NO. 3 BENCH LATHE

Length of bed, 32 inches. Distance between centers, 18 inches. Swings 7 inches.

The bed of this lathe has been made much heavier, thereby giving additional stiffness and solidity. Each bed is scraped to standard, thus insuring interchangeability of all attachments.

The headstock is made in two sizes, either for $\frac{1}{2}$ inch or $\frac{3}{4}$ inch collet.

The headstock and tailstock are interchangeable and can be changed from one lathe to another without losing fit or alignment.

The tailstock spindle has micrometer adjustment and is accurately graduated.

Particular attention is called to the slide rest. It fits on the bed instead of attaching to a shoe; the slides are longer and heavier than previous models, giving greater capacity. Each slide has micrometer adjustment.

Lathe is complete with bed, headstock, tailstock, and handrest.

Weight, 125 lbs.

Weight, boxed, 200 lbs.

Dimensions of box, 41 x 10 x 16 inches.

SLIDE REST

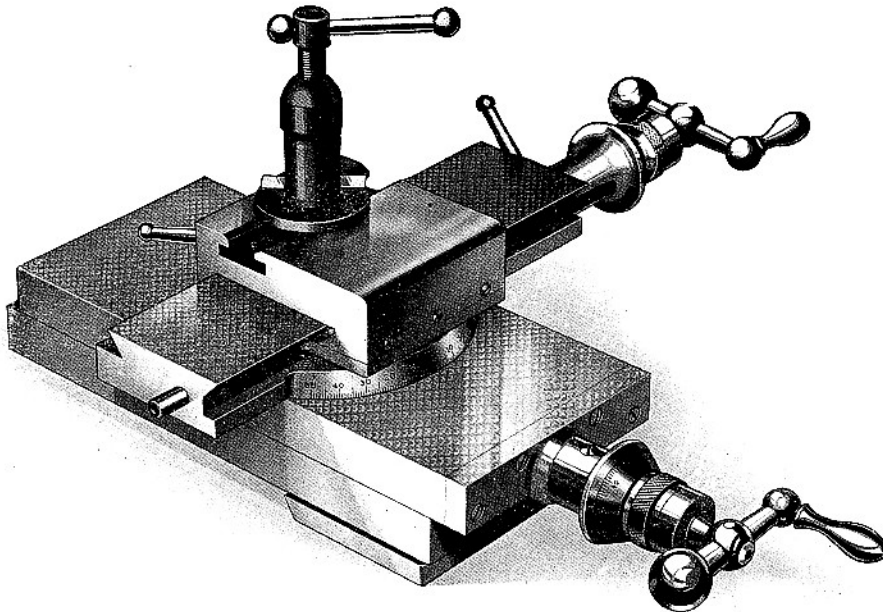
Slide Rests are made to correspond to the lathes herein described. They have accurately cut screws in both slides.

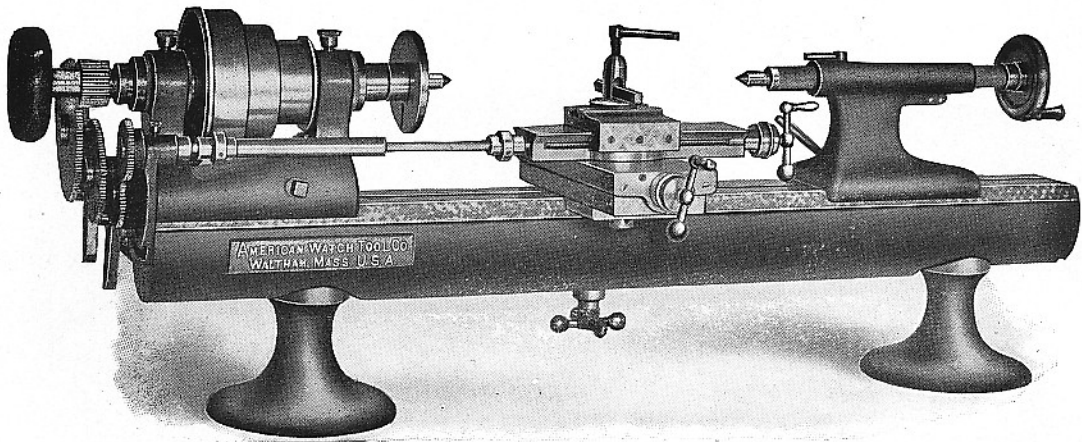
In the No. 3 size feed screws have adjustable friction micrometer rings which permit the reading of a fraction of a thousandth of an inch, or centimeter, as desired. Travel of slides, $4\frac{1}{4}$ inches.

The swivel slide is graduated into degrees, on a bevel surface in front where it can be seen by the operator, and can be used at any angle desired. It is also provided with an extra bearing under front of tool post slide. This is a valuable feature, as it resists strains due to comparatively heavy turning, and prevents distortion and wear of tool post slide.

The bottom of the rest is provided with an aligning shoe, which has an angle to conform to the side of way on lathe bed, and is adjustable to any position desired on the lower slide.

This slide rest can also be used on any other make of No. 3 lathe.





NO. 3 LATHE AND SCREW-CUTTING ATTACHMENT

SCREW-CUTTING ATTACHMENT

The Slide Rest Thread-cutting Attachment is quickly applied to the lathes, and reduces to a minimum the cost of cutting accurate threads. The possibilities of this tool where experimental work and tool making are being done will at once be appreciated by the progressive mechanic. Internal and external threads are cut with this attachment on either straight or tapering work. It can be quickly detached from lathe, or replaced, and will cut both English and metric threads with the same screw, by means of translating gears.

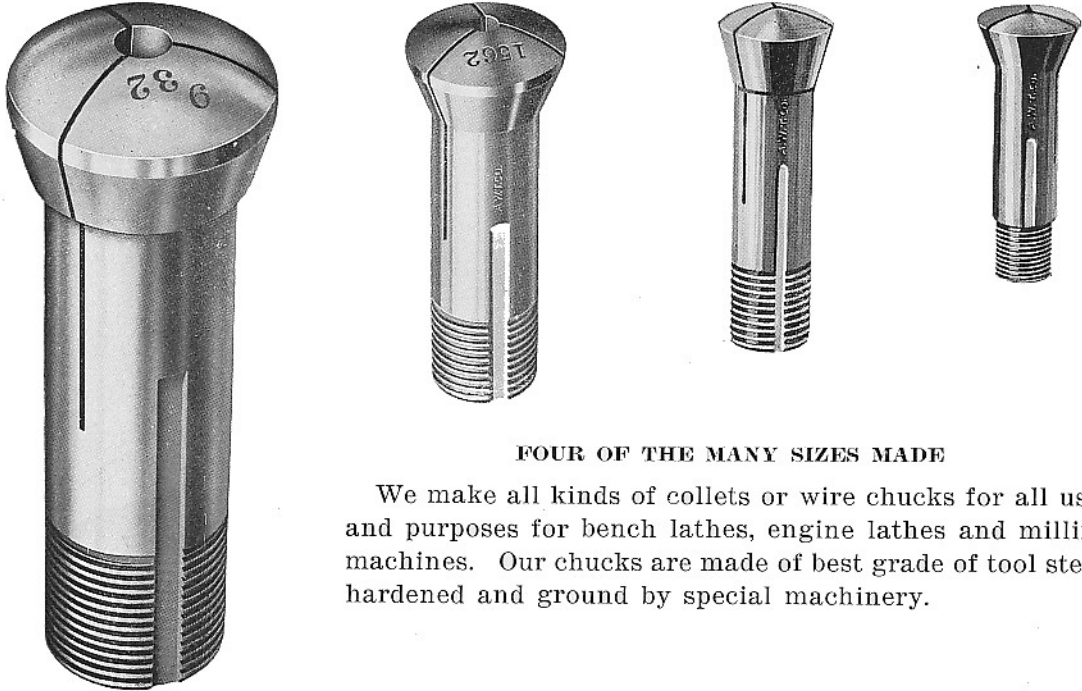
Gears for cutting threads given in the following table are regularly furnished.

WADE TOOL CO.—THREAD CHART																					
THREADS	10	11	12	13	14	15	16	18	20	22	24	26	28	30	32	36	40	48	50	56	60
GEAR on SPINDLE	40																				
2nd GEAR on STUD	80	40	80	50	40	80	80	80	80	80	80	80	80	80	80	80	100	80	100	80	100
1st GEAR on STUD	50	50	50	50	50	40	50	50	50	50	50	40	50	50	25	25	25	25	25	25	25
GEAR on SCREW	25	55	50	52	70	30	40	45	50	55	60	52	70	75	40	45	40	60	50	70	60
For Metric Pitches Use Gears 50 and 127.																					

Slide Rest Screw, 10 threads per inch.

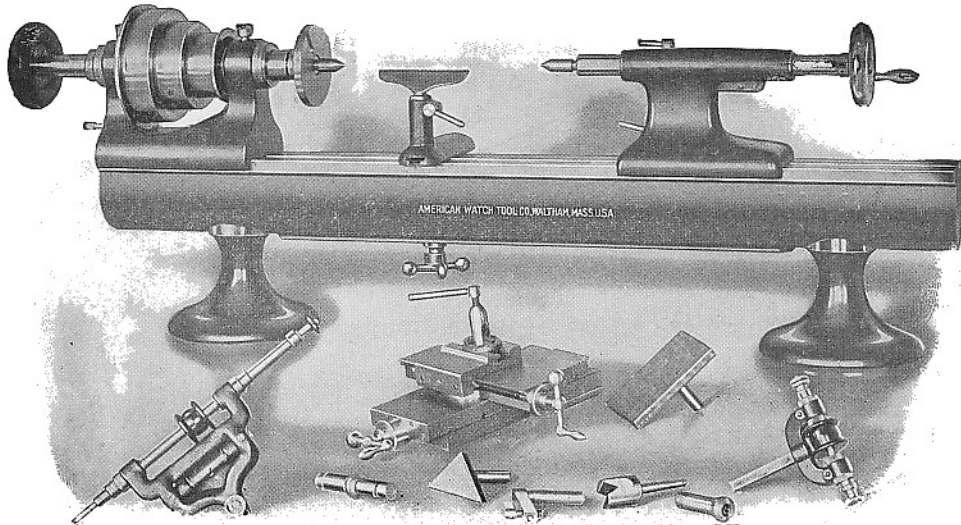
For metric threads use intermediate stud carrying Translating Gears 50 and 127.

These two gears are not furnished except to order.



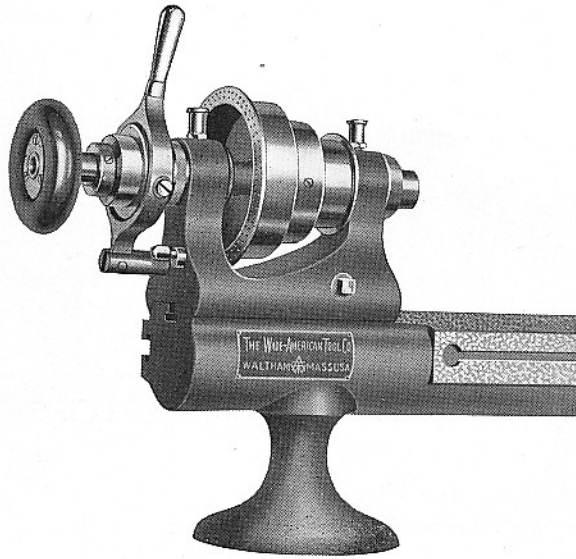
FOUR OF THE MANY SIZES MADE

We make all kinds of collets or wire chucks for all uses and purposes for bench lathes, engine lathes and milling machines. Our chucks are made of best grade of tool steel, hardened and ground by special machinery.



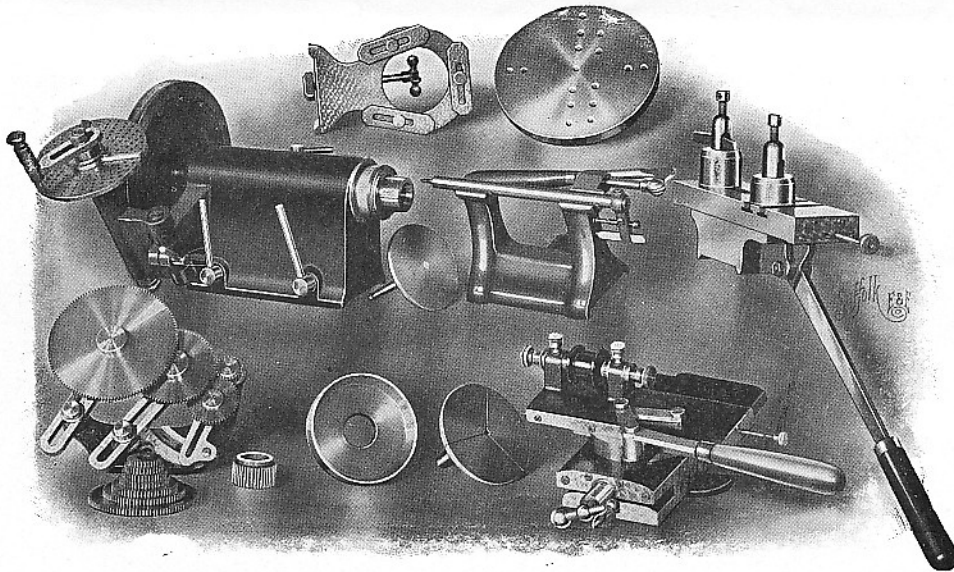
NO. 3 LATHE AND ATTACHMENTS

Hand Rest Chucking Rest Swivel V Center Triangular and Oblong Table Saw Arbor



QUICK-ACTION LEVER CHUCK CLOSER

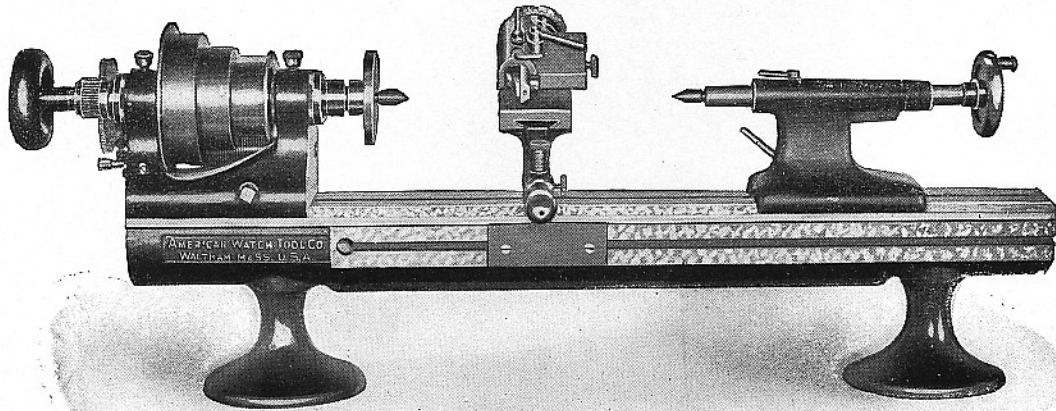
This automatic Chuck Closer is used in connection with the regular draw-in bar, for quickly closing and releasing chucks, when machining a quantity of parts.



ATTACHMENT FOR NO. 4 BENCH LATHE

**Back-Rest, Dividing Head, Half-Open Tailstock with Lever
7-Inch Face Plate with Tapped Holes or T-Slots and 4 Clamps**

Blank step chucks and closers of tool steel or cast iron with hole through center, sawed but not recessed up to 6 inch diameter. Under 2 inches furnished without closer.



NO. 3 SCREW-CHASING BENCH LATHE (Front)

NO. 3 SCREW-CHASING LATHE

No. 3 Screw-chasing Lathe has special bed and headstock arranged to hold chasing bar and lead screw hob.

With this arrangement threads can be cut very rapidly, as the nut is raised out of engagement with the lead screw and the tool returned by hand to the beginning of the cut without stopping or reversing the lathe.

The gears furnished with this attachment permit the cutting of multiples of the lead screw thread from 1 to 12, *i. e.*, if the lead screw has ten threads, 10, 20, 30, 40, and so on up to 120 can be cut.

The leader is provided with a hob at one end for cutting the sectional nut.

One lead screw or hob of any pitch desired is furnished with the lathe. Extra hobs can be ordered at any time.

Length of bed, 32 inches.

Distance between centers, 18 inches.

Swings, 7 inches.

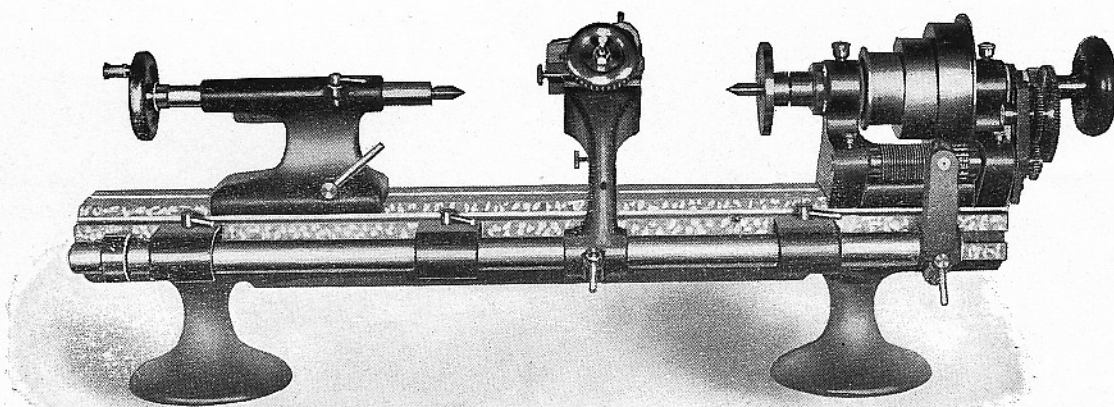
Capacity of chuck, $\frac{1}{2}$ inch.

Weight, 150 lbs.

Weight, boxed, 250 lbs.

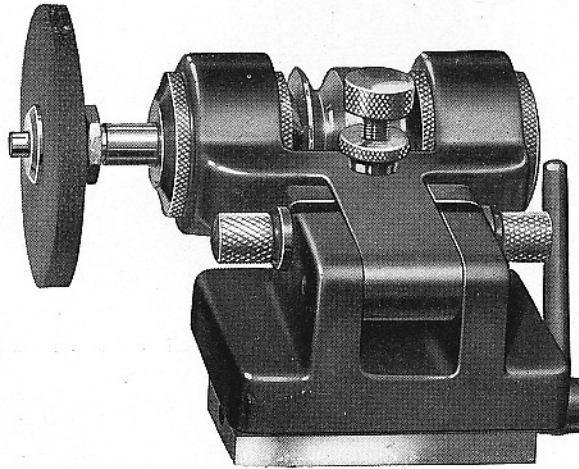
Dimensions of box, 45 x 12 x 20 inches.

Number of Times Thread on Hob	To Cut the Number of Times Thread on Hob, Use			
	Gear on Spindle	2d Gear on Stud	1st Gear on Stud	Gear on Screw
1	40	80	72	36
2	40	80	60	60
3	40	80	48	72
4	40	80	36	72
5	40	80	24	60
6	40	80	24	72
7	40	120	24	56
8	40	120	24	64
9	40	120	24	72
10	40	120	24	80
11	40	120	24	88
12	40	120	24	96



NO. 3 SCREW-CHASING BENCH LATHE (Back)

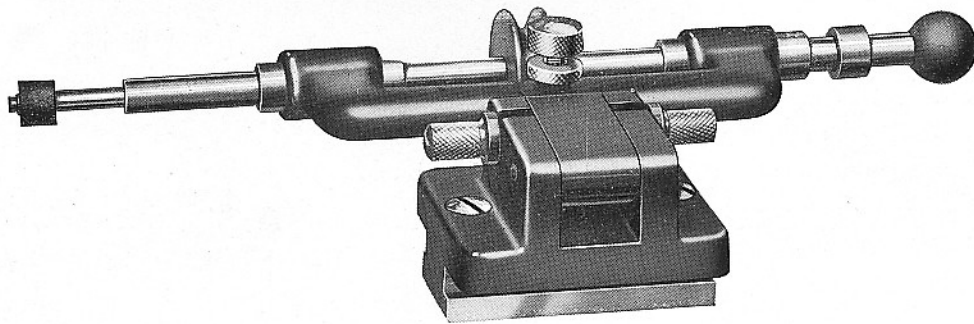
OUTSIDE GRINDER FOR NO. 3 LATHE



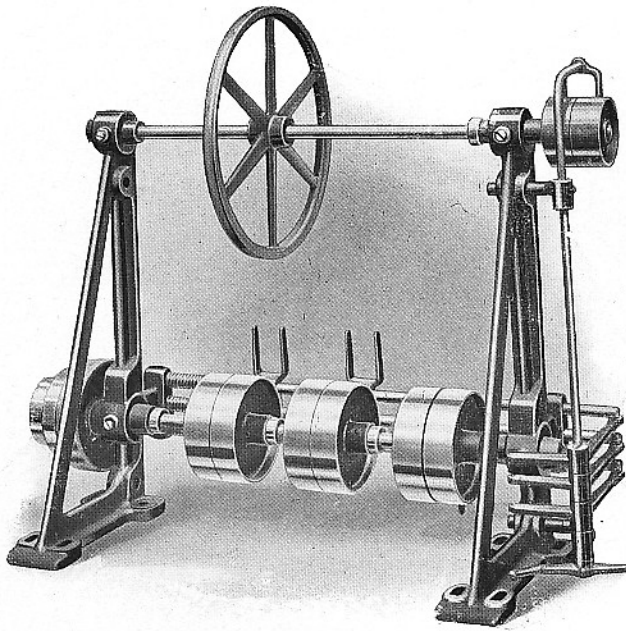
These grinding attachments are made to fit in tool post slide of the Wade Precision Lathe.

They are designed with necessary adjustments and can be swung out of position for fitting or measuring.

The outside grinding fixture is of the ball bearing type and provided with adjustment.



INSIDE GRINDING ATTACHMENT FOR NO. 3 LATHE

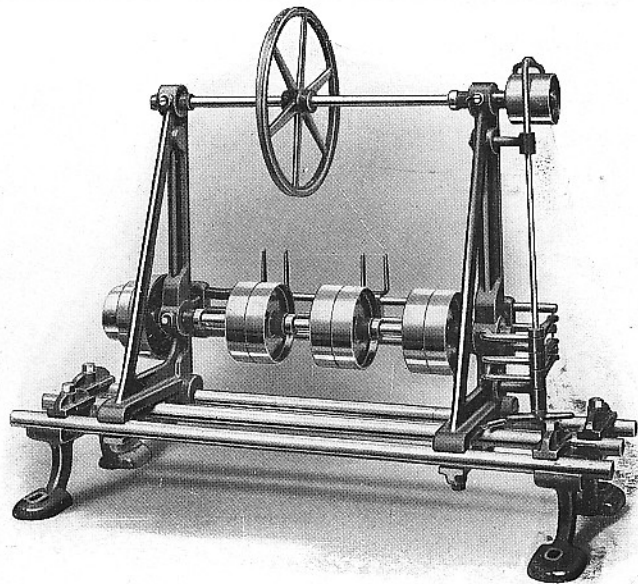


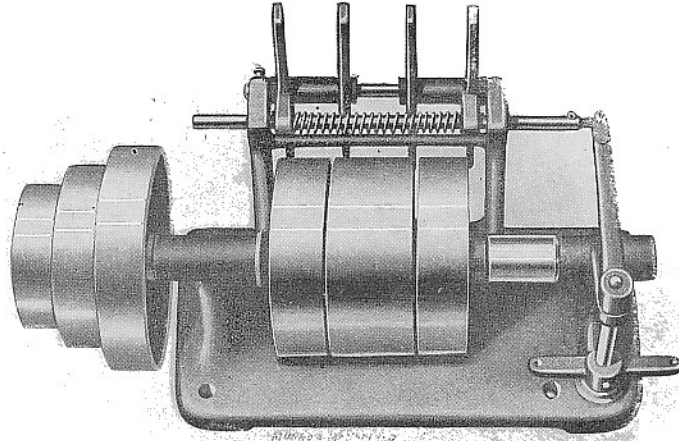
WALL COUNTERSHAFT

Wall Counters are designed to fasten direct to the wall or counter shaft plank and have the same advantages regarding speeds. Unless otherwise advised this system is supplied.

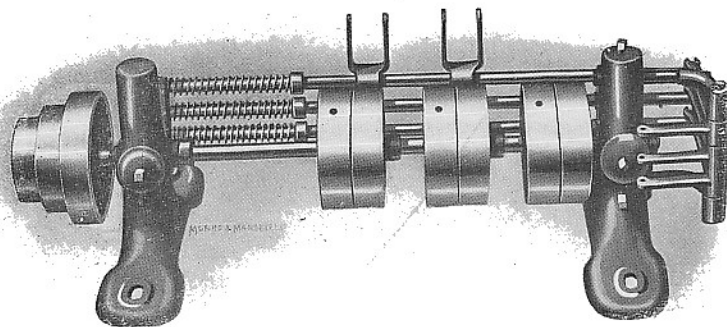
COUNTERSHAFTS Wall Rod System

Our Wall Rod System provides for wall brackets, using either one, two or three rods. The Single Wall Rod is for light Countershafts, usually where single speed is used, and the two Wall Rods or Double Wall Rod System is for Bench Lathes or Bench Machinery where two or three speeds are required. The Third Rod is used for Grinding Countershafts, giving the opportunity to use a more rigid hanger. The Rods are 1 inch in diameter and 4 inches center distance. Driving pulleys are 5-inch diameter and can be arranged for driving in either direction. Wall brackets and rods not supplied unless specified.





NO. 3 WALL COUNTERSHAFT—TWO SPEEDS



NO. 3 WALL COUNTERSHAFT—THREE SPEEDS