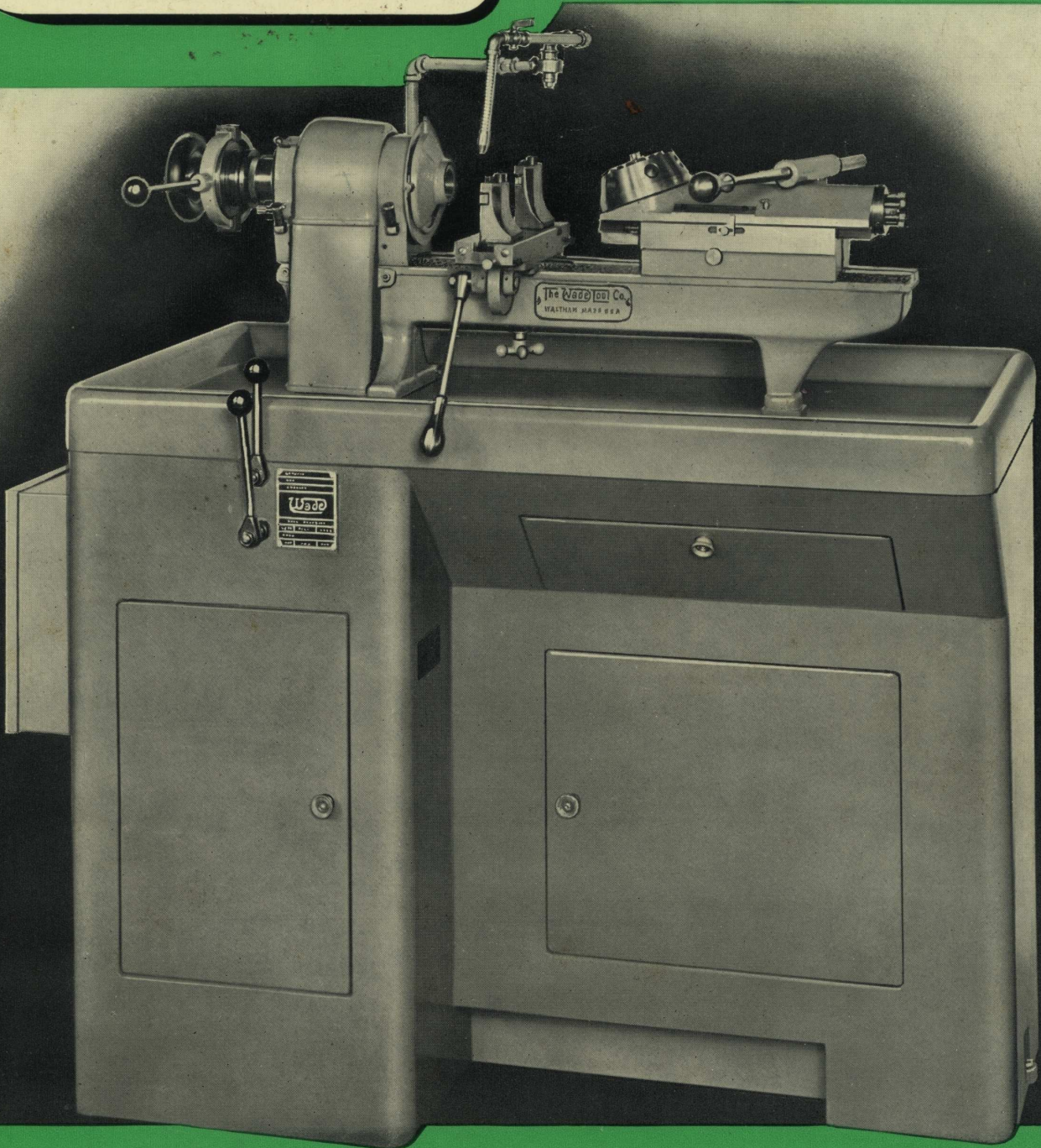


Models No. 5 and No. 7

Wade

HAND SCREW MACHINE



FOR MODERN, FAST, ECONOMICAL PRODUCTION OF SECOND OPERATION WORK

DOALL CLEVELAND COMPANY

6527 Euclid Ave. — EXpress 1-1177

CLEVELAND, OHIO

Jed Bursnell
The Do All Company
6517 Euclid Ave
Cleveland 3, Ohio

Akron phone: University 4-2688

Akron address: 1052 W. Market St.

Best to call between 5:30 and 6:30 -
7:00

new phone no. University 47320



Guarantee

Because of the superior features inherent in the Wade design, the lathes described in this catalog are guaranteed to out-produce and out-perform any make of lathe within their size and capacity.



PRICE LIST

Nos. 7, 5 & 3 STANDARD PRECISION LATHES
and SCREW MACHINES

THE WADE TOOL CO.

WALTHAM 54, MASS., U. S. A.

MARCH 15, 1952

400.
1700
27.6

6%

1/3 down - 1300
30 900-
60 900-
90 900-

Prices — boxed for domestic shipment F.O.B. Waltham — subject to change without notice —
superseding all previous issues.

The Wade System comprises two different, general types of Precision Lathes and a complete line of attachments for each. Each type serves a distinct field and together cover all requirements for fast and convenient lathe work in their size range.

The Standard Precision Lathes, Models No. 7, No. 5 and No. 3, listed below, are of a plain type in which size and complex design have been exchanged for handiness, sensitiveness and lower investment. On the simple structure of this type of lathe all kinds of set ups and attachments can be applied to do a wide variety of operations with speed and precision.

Collet capacity No. 7 — 1": No. 5 — ¾": No. 3 — ½".

Swing 7": Length of Bed 32": Between Center approx. 16".

The most important items of equipment are the Standard Equipment, Compound Slide Rest, Screw Machine Equipment, Collets, Chucks, and Driving Equipment, and these are listed first. Other items are grouped according to function.

Attachments not included in this list will be quoted on request.

Motors and Switches are priced separately and are for 3 P-60C-220 or 440 or 550V.

Prices for DC, or unusual Phases or Cycles quoted on request.

STANDARD PRECISION LATHES	No. 7	No. 5	No. 3
Standard Equipment — consists of Bed, Headstock, Tailstock, Dog Face Plate, Centers, Center Collet, and Draw-in Spindle	\$ 566.00	\$ 520.00	\$ 412.00
Compound Slide Rest	232.00	232.00	232.00
Metric Screws and Dials, extra	37.50	37.50	37.50
Standard Lathe and Compound Slide Rest mounted on Steel Cabinet with Oil Pan, Collet Board, No. 7 or No. 3 Motor Drive, Handwheel, Clutch, Brake and Controls all installed ready to run (Motor not included — See below)	1550.00	1492.00	1386.00
Optional: Above Cabinet furnished with laminated maple top 2¼" thick instead of Oil Pan upon request, at same price			
Precision Screw Machine Unit — consists of Bed, Headstock, Lever Closer, Double Cross Slide with front and back Tool Blocks and Automatic Turret Attachment	1126.00 ✓	1058.00	
Same — mounted on Steel Cabinet with Collet Board, No. 7 Motor Drive, Clutch, Brake, Pump and Tank, Pan, Piping and Controls ready to run (Motor not included — See Below)	2010.00 ✓	1940.00	
*Motor and Switches for No. 7 Drive giving 6 speeds from 315 to 3300 RPM	110.00 ✓	110.00	98.00
*Motor and Switches for No. 3 Drive giving 6 speeds from 210 to 2180 RPM	125.40 ✓		
*Two Speed Motor and Switches for No. 7T Drive giving 12 speeds from 156 to 3300 RPM	172.00	172.00	
Motor Drive with Clutch, but without Bench or Motor — for customer installation.....			305.00
Simplified Motor Drive without Clutch, Bench or Motor — for customer installation			128.00
Auxiliary Drive for Grinding attachments			135.00
Steel Bench only — with 2¼" laminated maple top 30" x 60" and 2 steel drawers — set up and crated.....			240.00
Same, K. D. without Side Boards or Maple Shelf underneath			118.00
Motor Pump, Tank, Piping, and Switch, installed in cabinet			140.00
*Motor Pump & Tank			72.00
Oil Pan with Strainer			46.00
Short Pan			34.00
Machine Light			10.50
2 Speed Wall Countershaft — Ball Bearing and Latch Treadle			64.00
3 Speed Wall Countershaft — Ball Bearing and Latch Treadle			87.00
Auxiliary Drive Attachment for Countershaft			51.00
Wall Rod Brackets (2) and Clamps			14.00
Uprights to carry countershaft			27.00

2-30 days - 2-60 days -

COLLETS, CHUCKS, PLATES AND CENTERS
Figures indicate approx. maximum capacities

	No. 7	No. 5	No. 3
Collets, Standard Round sizes 1/16" and over	\$ 6.25	\$ 5.50	\$ 4.65
Odd Round sizes — under 1/16" or decimal or metric	9.35	8.25	7.00
Standard Hex or Square, No. 8 — 7/8", 3/4": No. 5 — 11/16", 9/16": No. 3 — 7/16", 11/32"	12.25	11.00	9.50
Step, hardened & Ground. No. 8 — 1 1/4": No. 5 — 1": No. 3 — 11/16"	14.85	13.20	12.00
Pot, hardened and ground	20.35	19.00	16.25
Soft Blank	5.10	4.35	3.65
Soft Blank, with 1" extension	6.35	5.45	4.55
Center Collet	9.35	8.25	6.75
Adjustable Collet Stop with 2 pads and spring ejector	19.50	19.50	19.50
Step Chuck, Sawed Blanks, No. 8 — 2": No. 5 — 1 1/2": No. 3 — 1 1/8". No closers required	13.20	11.85	11.55
Sawed Blanks, No. 8 — 4": No. 5 — 3" — 2 1/2"	19.00	16.25	12.85
Closer for same	18.50	15.00	12.00
Sawed Blanks, No. 8 — 6": No. 5 — 5": No. 3 — 4"	24.75	21.45	18.40
Closer for same	23.50	21.00	16.50
Centers, Male	3.50	3.50	2.75
Female	6.25	6.25	3.85
Bull No. 8 — 1 1/2": No. 5 and 3 — 1 1/8"	7.60	7.60	6.00
"V" Revolvable	14.85	14.85	13.50
Chuck, Drill, No. 7 — 1/2" (No. 14 Bl. Brg.) No. 5 and No. 3 — 3/8" (No. 32)	15.40	11.55	11.00
1/8" (Light)	9.65	9.65	9.35
Universal 3 Jaw, 2 sets jaws, mounted. No. 7 & No. 5 — 4": No. 3 — 3"	82.00	74.00	66.00
Independent 4 Jaw, mounted; No. 7 & No. 5 — 5": No. 3 — 4"	71.00	66.00	63.00
Plate, Chuck, Dog, or Plain Face	14.85	12.00	11.00
7" Tapped 1/4" — 20	29.00	27.00	27.00
Drill, 3"	11.50	11.50	7.50
Drill, 5"	16.00	16.00	10.40

BED, HEADSTOCK AND TAILSTOCK ATTACHMENTS

	No. 7	No. 5	No. 3
Headstock, Regular, with draw-in spindle, dog plate, center collet and center	314.00	270.00	192.00
Lever Closer Attachment	128.00	105.00	105.00
Draw-in Spindle	31.50	28.00	20.50
Treadle Attachment for Lever Closer	72.00	72.00	Nos. 3, 5 & 7
Tailstock, Regular with center			140.00
Lever Tailstock			158.00
Lever Attachment — for application to Regular Tailstock			54.00
Half Open Tailstock with 2 Tool Spindles			160.00
For Lever Add			11.00
Extra Tool Spindles			26.50
Revolving Spindle Tailstock			154.00
*Turret — for Tailstock, with taper shank			37.50
Turret Attachment — Automatic Indexing, Automatic Clamping			412.00
Bed, Standard			115.00
Single Pedestal 21"			86.00
Steady Rest			39.50
Hand Rest, with Tee			12.75

SLIDE REST ATTACHMENTS AND ACCESSORIES

Compound Slide Rest		235.00			
Double Cross Slide with Front and Back Tool Block		160.00			
Same with Swivel Slide in place of front tool block		252.00			
Swivel Slide, Only		112.00			
Tool Block — Front or Back		23.00			
✓ Multiple Tool Block		33.00			
Turret Tool Post — also used on Compound Slide Rest		50.00			
*Tool Post for Circular Tools		54.00			
*Cutting-off Tool Holder (Luers) without blade	21.00	*Blade for Same	2.50		
Grinding Attachment, External with arbor		91.00			
Internal, traverse spindle with arbor		88.00			
*Unit Motor Driven — Internal-external		115.00			
Screw Cutting Attachment, including B&T Tool Holder for internal and external threading		225.00			
Thread Chasing Attachment, with one leader and nut		325.00			
Extra Leaders with nut, each		31.50			
Radius Turning Attachment		335.00			
Turning Tools, Boring and Turning Tool Holder with eccentric bushing		18.00			
Boring Bar for same with 2 cutters		5.80			
Knurling, Hand, (Two-way) with 1 set Knurls		12.00			
Knurls	ea. .95	Per set of 3	2.75		
Hard Wood Case for Hand Knurling Tool			3.50		
*Holder for Tool Post, R. H. or L. H., turning, including H. S. S., Cutter			6.46		
*Clamp Dog			5.50		
Turret Tools,* R & L Box Tool	\$61.00	*Knee Tool (Simple Box Tool)	42.00		
*Releasing Die Holder	26.00	*Bushings with clamp shoes, with specified hole			
*Releasing Tap Holder	19.50	5/8" O.D.	6.00		
*Adjustable Knurl Holder	41.00	*Same, but without specified hole	1.25		
*Floating Holder	13.00	Drill Chuck (3/4" shank) 1/2"	14.00		
*Drill Holder	9.00	3/8"	11.50	1/4"	9.50

*Commercial item at manufacturer's price

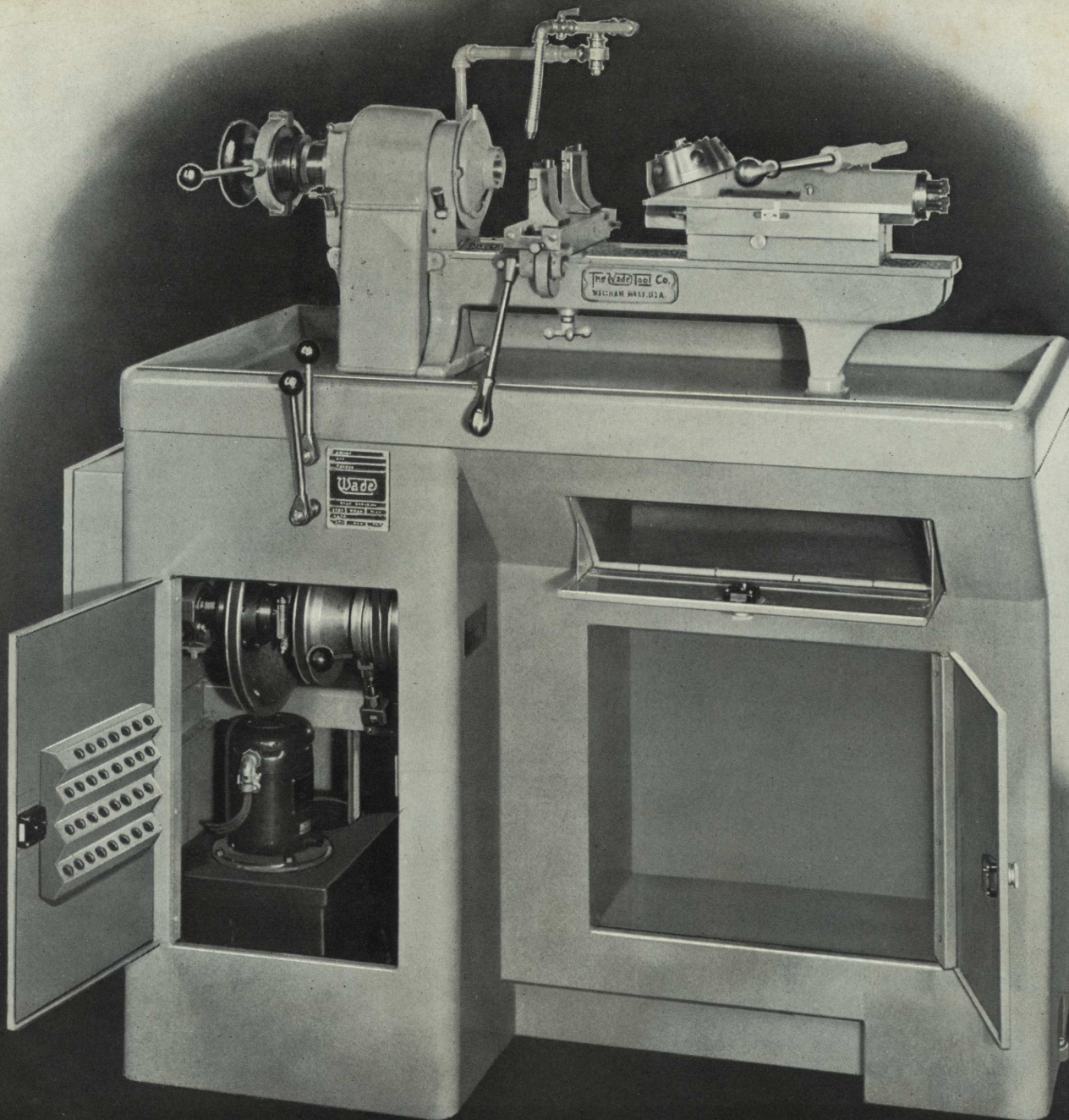


Fig. 1—Front View of Wade Precision Hand Screw Machine—Showing Drive Unit, Coolant System Unit, and Ample Storage Space

The Wade Precision Hand Screw Machine combines speed, power and ease of operation to make it an exceptionally high producer of small duplicate parts. It is engineered with one main objective: to provide its owner with a machine that will give the maximum production per dollar invested.

This Wade machine is especially designed for **SECOND OPERATION WORK**, or work which can be chucked individually. It embodies typical Wade advanced developments to enable it to meet the most severe requirements of present day, continuous operation. Eight successive operations can be performed at one chucking.

A modern machine throughout, the Wade has the power and the rigidity to use carbide and diamond tools. Properly proportioned, "Dynetrically" balanced rotating parts make it free from vibration at all spindle speeds. If you are a producer of small duplicate parts, you will find its use profitable on a great variety of work now being produced on heavier, more costly machines.

The Wade Hand Screw Machine is available in two models: the No. 7 with 1" collet capacity and the No. 5 with $\frac{3}{4}$ " collet capacity. The spindle speeds of both models, in ratio of 4 : 1, are 315, 515, 825, 1270, 2065 and 3300 r.p.m.



Some of the special features and innovations of the Wade Hand Screw Machine are:

HEADSTOCK AND DRIVE

- ★ SKF heavy-duty, high speed, staggered *double-row* cylindrical roller bearing on front end of spindle, Fig. 3.
- ★ Both front and rear spindle bearings are preloaded.
- ★ Headstock belt drive is *between* the bearings.
- ★ All rotating parts, such as pulleys, sheaves, spindles, etc., are "Dynetrically" balanced to maintain vibrationless machine operation at all speeds.
- ★ 4 : 1 Speed Ratio — selected with a clutch.
- ★ Spherical bearings in control linkage result in "finger-tip" control.
- ★ A simple, accurate, 60-hole dividing head mechanism for tool-making work.
- ★ Convenient locking of spindle (when mounting or demounting chucks) by means of a locking pin inserted into any one of six holes.

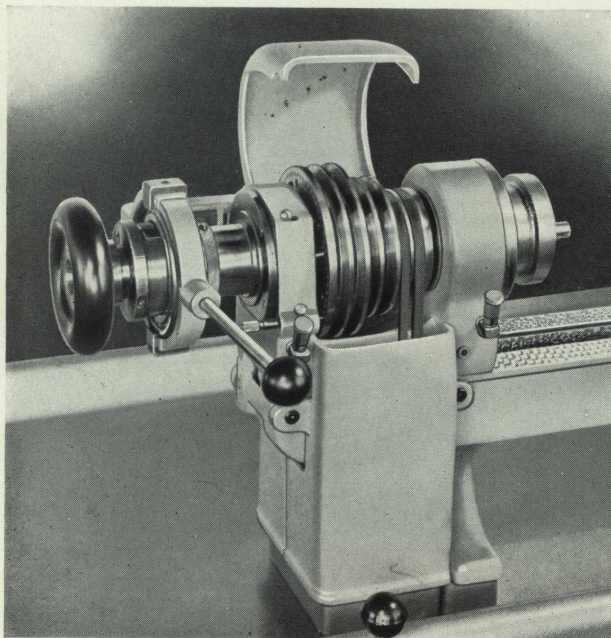


Fig. 2 — Model No. 7 Headstock (Model No. 5 same except 3-step cone pulley arranged for single flat-belt drive)

THE HEADSTOCK (shown with cover lifted and in section, Figs. 2 and 4) is designed in accordance with the most advanced principles of precision lathe construction.

The spindle runs in precision anti-friction preloaded bearings. An SKF heavy-duty, high-speed, *double-row* roller bearing is mounted as close as possible to the spindle nose in order to supply the most solid support radially. This bearing is a special machine

tool spindle bearing having the proper number of cylindrical, *staggered* rollers to impart high radial capacity, extreme rigidity and smoothness of operation.

Just back of the roller bearing (also in the front housing) is a precision *thrust* bearing. In this construction, the functions of radial and axial loads are separated — with each bearing absorbing that type of load for which it was specifically designed.

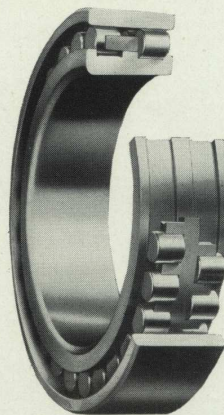


Fig. 3 — SKF Double-Row Cylindrical Roller Bearing

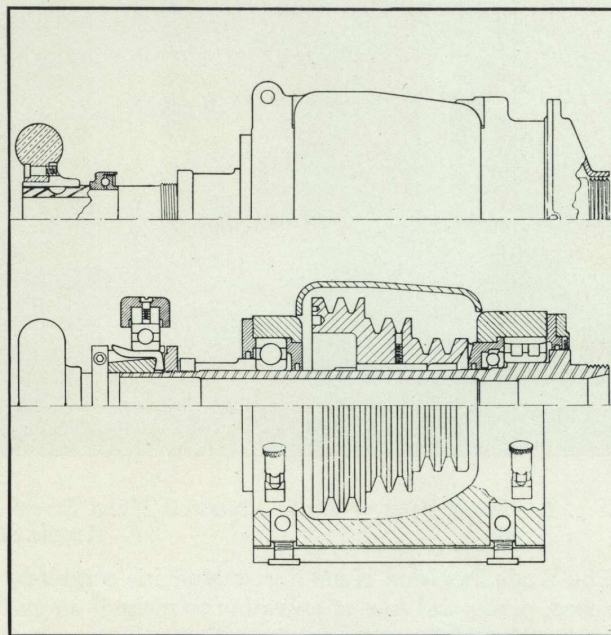


Fig. 4 — Model No. 7 Headstock (Sectional view)

The above construction — with a slight preload in each bearing — almost completely eliminates deflection or yield within the bearings. It is much to be preferred over the use of one or even two angular contact bearings (considerably preloaded) which is still the common practice of many manufacturers.

The Charts "A" and "B" illustrate the reason for the superiority of the Wade system. In order to show



some yield in the Double-Row Cylindrical Roller Bearing, the values shown are for bearings without preload. The difference in the yields is even greater proportionately when the bearings are preloaded.

The rear end of the spindle is supported in a precision, deep-groove, ball bearing.

TURRET AND SLIDE

- ★ Turret locating pin is situated *underneath* the turret, and locates at the *turret front* for maximum accuracy.
- ★ Turret head is *automatically clamped* and *unclamped* — as well as automatically indexed — by

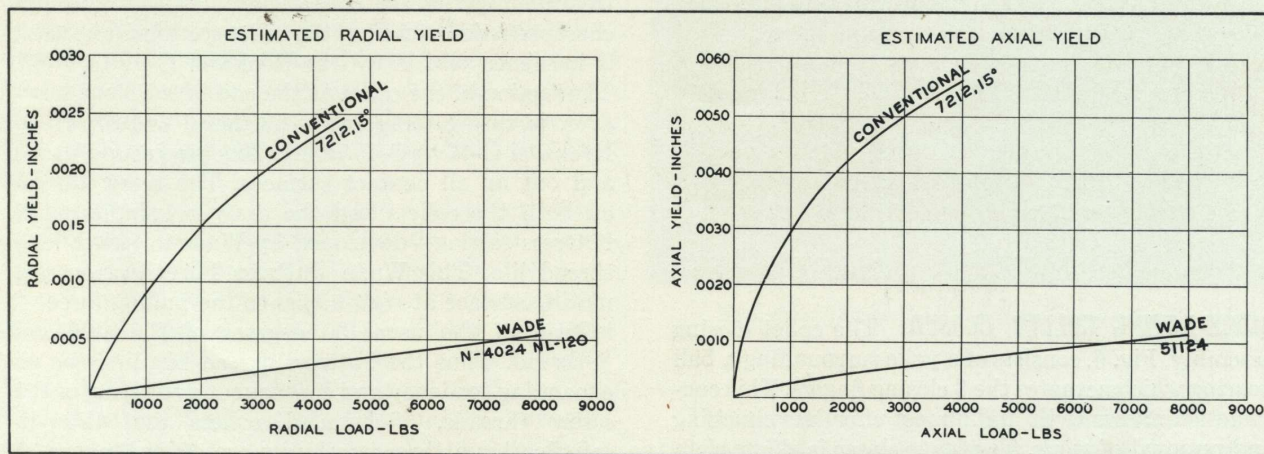


Chart A. Radial Yield Fig. 5 (Courtesy SKF) Chart B. Axial Yield
Comparison of Yields — under Various Loads — of Cylindrical Roller Spindle Bearing with Conventional Angular Contact Spindle Bearing

The result of this advanced Wade design is an extremely rigid spindle — both radially and axially. This enables the rapid production of parts to exacting limits, with fine finish, even when produced at high speeds with coarse feeds. The performance of the Wade spindle should really be seen to be appreciated. Furthermore, with the Wade system—because of its very low temperature rise under operating conditions — *continuous* production is possible from the initial starting of the machine. The heating-up period is eliminated — as are the minor adjustments in tools due to the variations caused by temperature expansions. Thus, *maintained accuracy* of work is assured because the spindle constantly maintains its true running position.

Finally, the Wade spindle design provides outstanding ability to resist wear and maintain the initial setting and accuracy even after a long period of continuous service.

THE HEADSTOCK SPINDLE material is a high carbon, chrome-molybdenum alloy steel, comparable with SAE 52100 alloy steel, except that it is an advanced development over that type. After hardening, the spindle is ground all over — with particular attention to the threads on the spindle nose, the shoulder, the collar, and the inside taper for the collets — to make certain that they are all ground true. The chucks and collets, therefore, have perfectly true seating surfaces to insure a solid and true running mounting.

one complete movement of the slide lever.

- ★ Center clamping pin (on turret) is actuated through powerful leverage, thus positively locking the turret even when high speeds and coarse feeds are used.
- ★ The slide has long taper gibs on *both sides* of the dovetail to enable easy and accurate line-up of slide to spindle.
- ★ A scale on the slide simplifies setting of the automatic stops when setting tools. Pointer on scale is adjustable so that it can be set at "0" or wherever convenient, Fig. 9.

ASSEMBLY: The Wade Precision Cabinet Type Hand Screw Machine consists of an enclosed headstock with heavy-duty high-speed, ball and roller bearing spindle construction, a draw-in spindle, a quick-acting hand lever collet closer, precision hand-scraped bed ways, a double tool cross slide, and a six-position, tilted-head turret.

The machine is mounted on a pedestal cabinet of heavy sheet-metal construction with tool and collet storage space. Installed in the cabinet is the motor and the featured drive. The motor is reversing, ball bearing — with centralized controls. Also provided is a countershaft clutch for instantaneous 4 : 1 ratio high-low speed control.

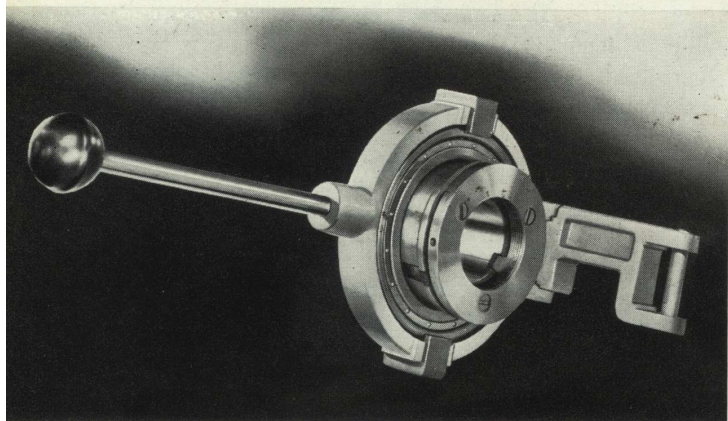


Fig. 6 — Quick-Acting Collet Closer Removed from Machine

QUICK-ACTING COLLET CLOSER: The collet closing assembly, Fig. 6, consists of a yoke surrounding a ball bearing which actuates the 3 closing fingers. This construction allows swift and almost effortless chucking and removal of work. The lever closer is clamped to the draw-in spindle, therefore, by moving the hand lever to the right or left it *positively* and *instantly* opens or closes the draw-in collets — while the machine is either running at speed or stopped.

The draw-in spindle is made of a heat-treated alloy steel with a tensile strength of 125,000 lbs. per sq. in.

THE COLLETS fit the precision-ground headstock spindle, therefore no adapter is necessary. Special attention has been given to the design features to insure accuracy during continuous operation over a long life.

A 10-degree closing angle grips the work with the least collet tension. It also gives greater accuracy near the spindle mouth, because the gripping surfaces are more nearly parallel with the axis than is the case with a greater closing angle. The collets are of sufficient length to insure true running. The heat treatment given the collets produces the optimum characteristics in each of the collet sections. The head is hardened and drawn to Rockwell C-61 to C-62. The section of the collet at the end of the slots, however, is spring tempered — hardened and drawn to Rockwell C-42 to C-45. The collets are ground inside and out on all contact surfaces. The screw thread on both the collets and the draw-in spindle has a buttress section—developed by Wade to insure long thread life. This Wade Buttress Thread presents a mating surface at *right angles* to the pulling force — instead of the usual 30 degrees of the standard V-thread. Thus the buttress thread has little or no expanding tendency and consequent overriding of the screw threads. V-threaded collets and draw-in spindles have thread failure more often because of the above-mentioned expansion and overriding, rather than because of wear.

In addition to long thread life, the Wade Buttress Thread permits the application of much greater work-holding pressures than would be otherwise possible. Wade Collets in the standard round sizes may be ordered individually or in sets, by $\frac{1}{32}$ " or $\frac{1}{64}$ ", or in any desired combination. Odd round (decimal and metric), standard hex and square sizes are also available.

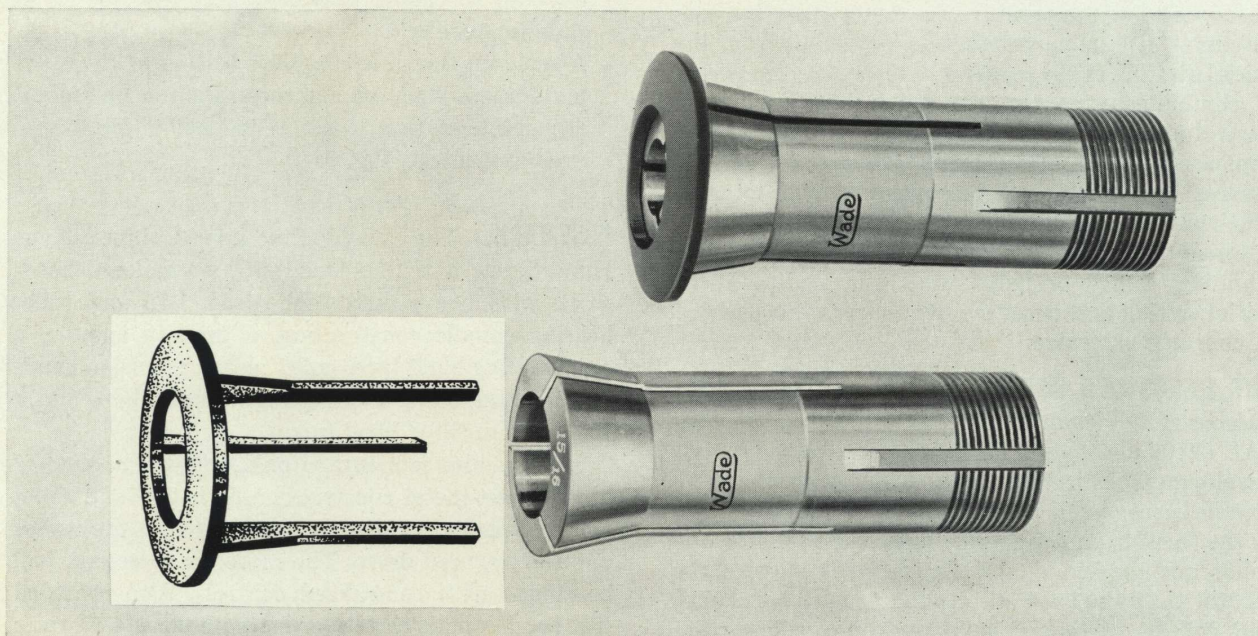


Fig. 7 — Collet Seal

Wade Collet

Seal Inserted in Collet

WADE NEOPRENE COLLET SEALS (patents applied for) are available to keep dirt, chips, and coolant out of collet slots, see Fig. 7. Drilling, reaming and boring operations push chips through the work and into the collet interior. When the collet has no seal, the centrifugal force of the rotating spindle forces the chips into and through the collet slots. Aided by the opening and closing of the collet, the continued action of the centrifugal force causes the chips to work themselves *between* the bearing surfaces (both straight and taper) of the collet and the spindle. The result is improper seating of the collet and inaccurate work.

The prongs of Wade Neoprene Collet Seals are quickly and easily inserted into the collet slots. Their sealing action is effective when the collet is opened as well as when it is closed. Collets sealed in this manner can be lubricated — the seal prevents the washing away of the lubricant by the coolant. Made of Neoprene, the collet seals are unaffected by oil and have a high degree of mechanical strength and heat resistance. They will pay for themselves in a short time by increasing the life of collets and spindles many times.

THE PEDESTAL CABINET is of heavy sheet-metal welded construction. With the installed featured drive, it is a complete unit — ready for operation. (The machine or the drive can be ordered separately, if desired.) The cabinet provides ample storage space for tools, collets and attachments. The cabinet front is recessed to provide knee room and foot space for the operator. Three pads, for 3-point contact, are provided for bolting the machine to the floor, if desired. The motor compartment is adequately ventilated and easily accessible from front and rear.

THE DRIVE: The complete drive unit, Fig. 8, is mounted on a hinged bracket attached to the back of the drive compartment. This type of mounting completely isolates from the machine any vibration that may be generated by the drive. The hinged bracket is raised or lowered by a screw for fine adjustment of the belt tension.

The motor — which is single-speed, reversing — has a two-step pulley attached to its driving shaft. This pulley drives — by means of two V-belts — two separate pulleys mounted on ball bearings on a countershaft. The pulleys are arranged to give a 4 : 1 ratio of high speed to low speed. A clutch, which separates the two countershaft pulleys, gives instantaneous selection of the high or low range (or ratio). A push button control, for starting and stopping the motor, is located conveniently at the left side of the pedestal cabinet.

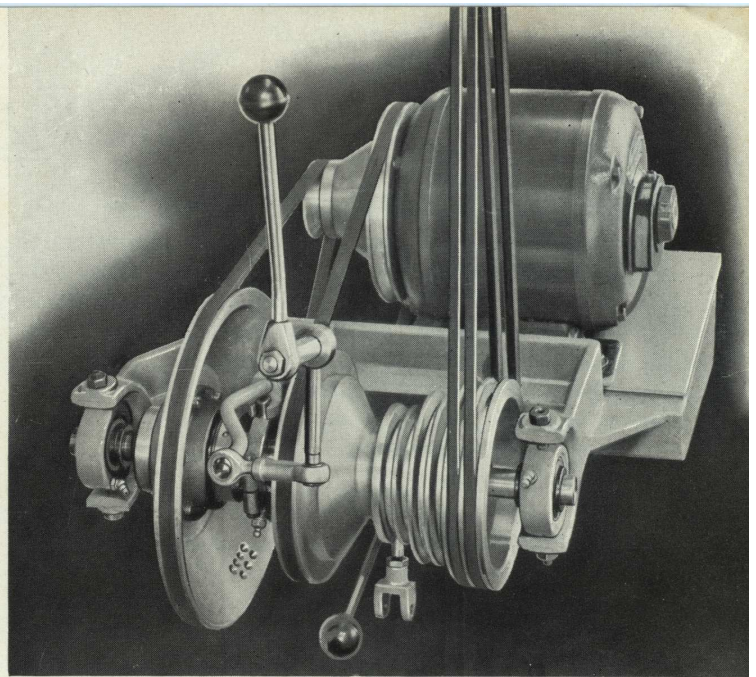


Fig. 8 — Drive Unit Removed from Machine

The three-step cone pulley on the countershaft revolves, therefore, at a speed which is dependent on whether the high- or the low-range pulley is being driven.

In the Model No. 7 machine, the driving unit which is illustrated, two V-belts are used to transmit the drive from the countershaft to the headstock spindle. In the Model No. 5 machine, this is accomplished by the use of one flat belt.

The above arrangement makes available, in the most economical and efficient manner possible, the *ideal* 4 : 1 ratio. The use of this ratio enables the combining of the greatest number of operations without the necessity of making belt changes. For example — on most work — drilling and turning can be performed on the high range. A flip of the control lever makes available *instantly* the low range for tapping, reaming and threading. Furthermore, the use of a single-speed motor makes possible *continuous operation* of the machine because there is no overheating of the motor. The motor is fully protected by a time lag thermal overload relay. All pulleys used in the drive unit are made of aluminum to reduce the "flywheel-effect." The countershaft is mounted on self-aligning, grease-lubricated ball bearings. The pulley bearings are sealed for life. The clutch — which is the best obtainable — requires no lubrication. The linkage from the control lever to the clutch is of the spherical, aircraft type. A brake is incorporated which is automatically applied when the clutch control lever goes into neutral position. This brake stops the driving step-cone pulley, so that the motor is running at all times — a definite advantage in that the motor never heats up because of frequent starting and stopping of the spindle.



THE COOLANT SYSTEM is a complete unit which (except for the piping) is mounted in the bottom of the drive compartment of the pedestal cabinet. It includes a motor (protected by a time lag thermal overload relay), a centrifugal pump for long life, a tank, piping, and switch. The tank is easy to clean and fill. The pedestal cabinet has a strainer located in the chip pan at the mouth of the coolant return pipe.

SPINDLE SPEEDS: There are six spindle speeds available, both forward and reverse. When the speed-control lever (the lower one) is on the low range, the speeds available are 315, 515 and 825 r.p.m. With the control lever on the high range, the available speeds are 1270, 2065 and 3300 r.p.m.

The speed-control lever governs the high and low (4 : 1) speed ratio changes. Thus, operation of the lever gives 315 and 1270 r.p.m. without changing belts. The speed combinations for the other two belt positions are 515 and 2065 r.p.m., 825 and 3300 r.p.m.

The upper lever controls the forward and reverse rotation of the spindle. Raising of the drive — by means of a toggle-action lever — relieves the belt tension to enable quick and easy shifting of belts.

THE BED has a three-point contact with the top of the cabinet, with extra wide support at the head end. The pedestals are so located that they give an equal distribution of load under all conditions. The material of the bed is close-grained, alloyed iron possessing the high non-abrasive quality necessary for maximum durability. The ways are precision hand-scraped to provide accurate bearing surfaces. The bed has — as standard equipment — a T-slot running the length of the back. This T-slot is used for clamping thread chasing attachments, etc., to the machine.

THE TURRET: The six-station turret, Fig. 9, has a tilted head in order to clear tools as they are indexed. The holes in the turret head are each $\frac{3}{4}$ " diameter to take standard tools with $\frac{3}{4}$ " shanks. The six independent adjustable stops index automatically with the turret head. Operation of the hand lever automatically unlocks the turret head, indexes it to the next station, and clamps it. When the ram is flush with the front of the turret base, the turret head may be revolved freely — in either direction — to any desired tool position. This allows skipping some of the turret stations or turning back to a previously used tool with a minimum expenditure of time and effort.

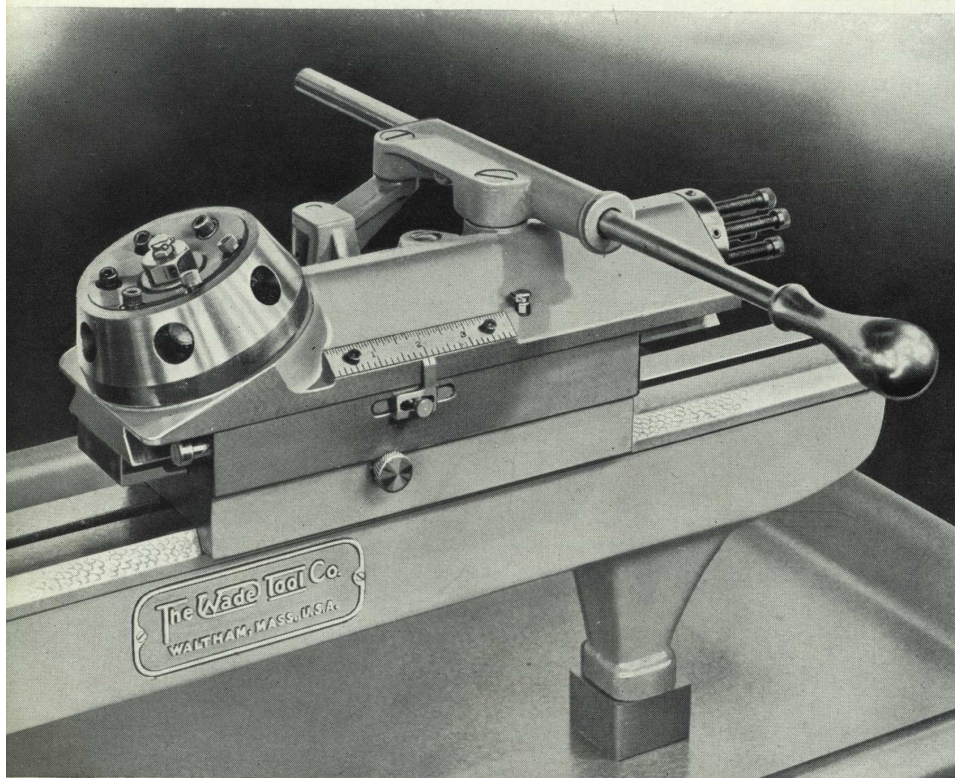


Fig. 9 — The Turret Assembly

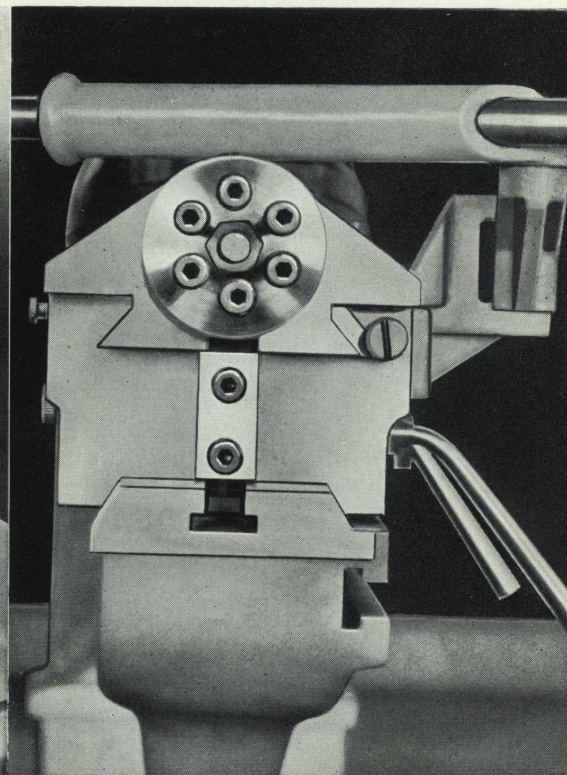


Fig. 10 — Rear View Showing Right-Hand Gib Adjustment, Stops, Binders and Bed Section

The length of the hand lever is adjustable to suit the convenience of the operator, thereby relieving operation fatigue. Even the lever handle is proportioned to fit the operator's hand.

The ram has a working travel of $3\frac{1}{4}$ ", the indexing travel is 1" — making a total movement of $4\frac{1}{4}$ ". The dovetail bearing surfaces of the slide are scraped-in for enduring accuracy. To enable the maintenance of correct alignment, each side of the slide dovetail has a long, adjustable taper gib.

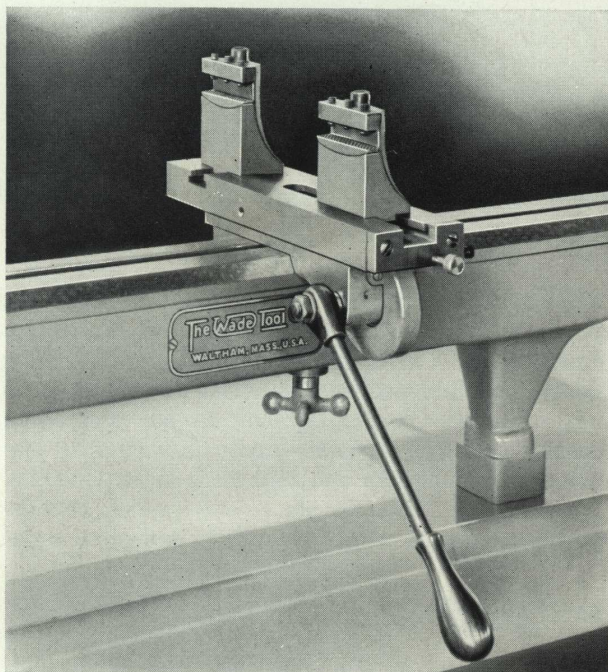


Fig. 11 — The Double Cross Slide with Rocker Tool Holders

THE DOUBLE CROSS SLIDE — otherwise known as a cutting-off and forming rest — is unusually rigid with special attention to make it trouble-free and easy-operating. Shown mounted on the cross slide, Fig. 11, are the solid-steel, casehardened tool blocks—complete with rockers. The Cross Slide has a movement of $2\frac{3}{4}$ ", more than sufficient to clear turret tools. Adjustable stops are provided for accurate control of depth of cut.

The double cross slide is actuated by a rack and pinion, carefully guarded to keep out chips, etc. The operating lever is adjustable radially to the most convenient operating position by means of a novel taper clamping arrangement.

THE SWIVEL SLIDE is usually mounted on the front of the double cross slide for straight or taper turning. It can also be mounted on rear of the cross slide by the use of a standard adapter plate. Both

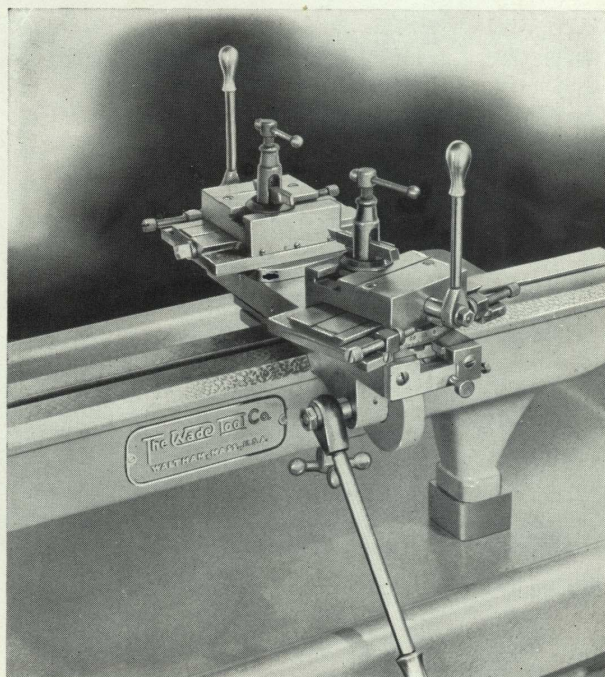


Fig. 12 — Swivel Slides Mounted on Double Cross Slide

of these arrangements are illustrated in Fig. 12. The slide has a movement of $2\frac{1}{2}$ " and has adjustable stops. Either the standard tool posts or the multiple tool holder (shown in Fig. 13) can be mounted on the swivel slide.

THE MULTIPLE TOOL HOLDER — as usually used — replaces the front tool post on the swivel slide, see Fig. 13. The use of a standard adapter block allows it to replace the back tool post. Up to four cutters can be held in various positions for combined operations such as forming, facing, turning multiple diameters, necking, chamfering, etc. — in many cases eliminating the necessity of using expensive forming tools. The open ends of the holder allow close-to-the-spindle work. The holder is casehardened to give maximum strength.

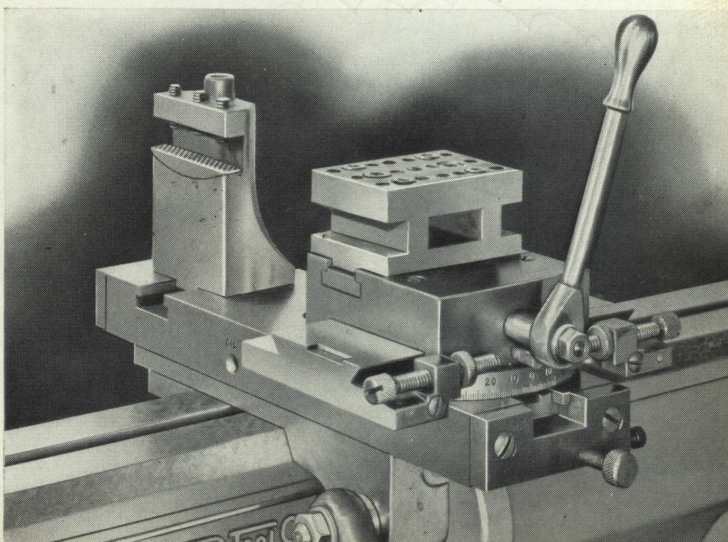


Fig. 13 — Multiple Tool Holder Mounted on Front of Swivel Slide

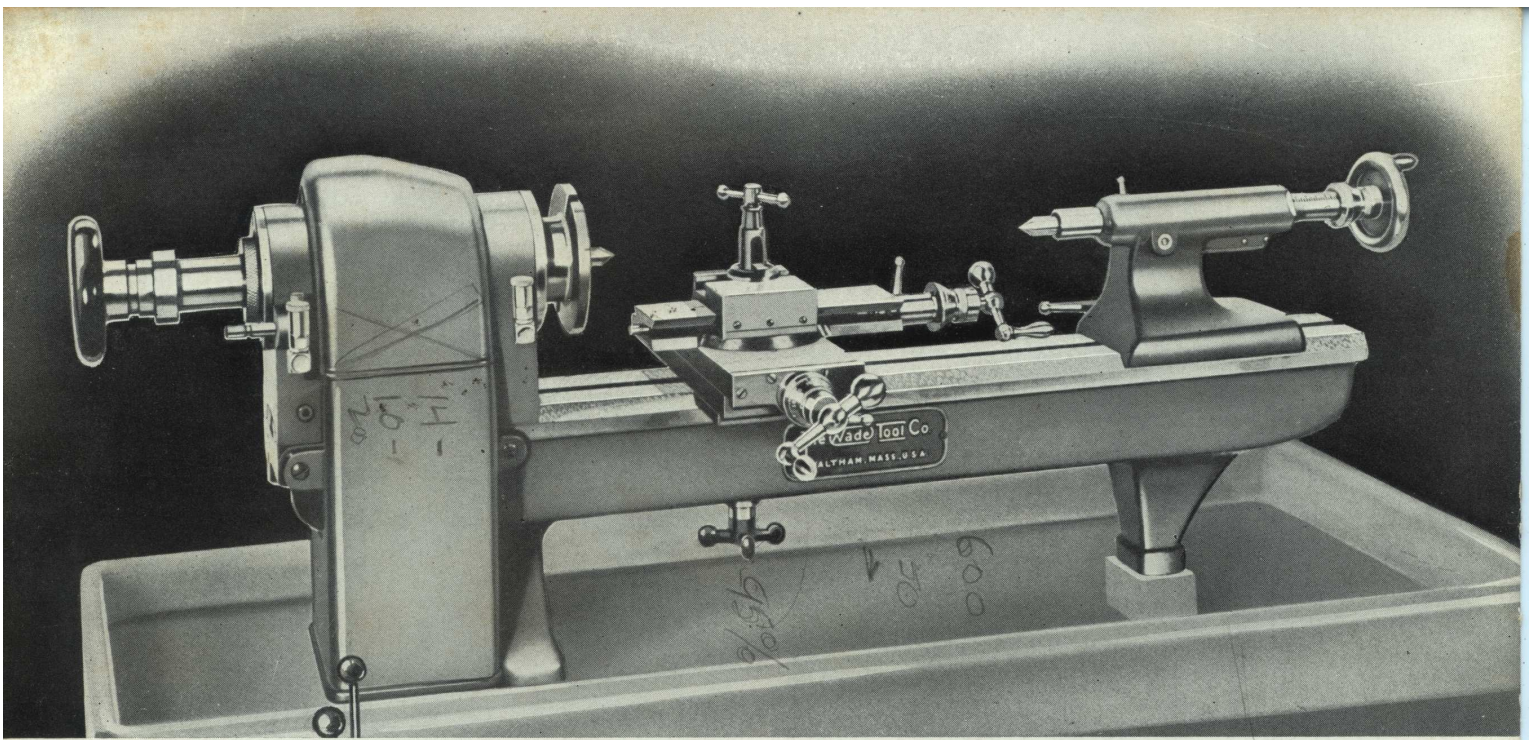


Fig. 14—Wade Hand Screw Machine Equipped with Tailstock and Compound Slide Rest for Tool Room Work

TOOL ROOM WORK: The Wade Hand Screw Machine can be changed over quickly to handle tool room work by substituting a tailstock and a compound slide rest for the turret and cross slide, see Fig. 14. These attachments have the typical Wade advantages of easy mounting and removal, sturdy accuracy, and ease of operation. They are standard units which can be obtained with the original machine or at any subsequent time.

OPTIONAL EQUIPMENT: Coolant System—includes pump, tank, piping and switch (located within cabinet base); 3-Jaw Universal Chuck for threaded spindle nose; 4-Jaw Independent Chuck for threaded spindle nose; Thread Chasing Attachment for production cutting of screw threads—easily mounted on machine with one leader and nut; Slide Rest, Grinding Attachment, Tailstock, etc.—allow quick change-over from second operation work to tool room work.

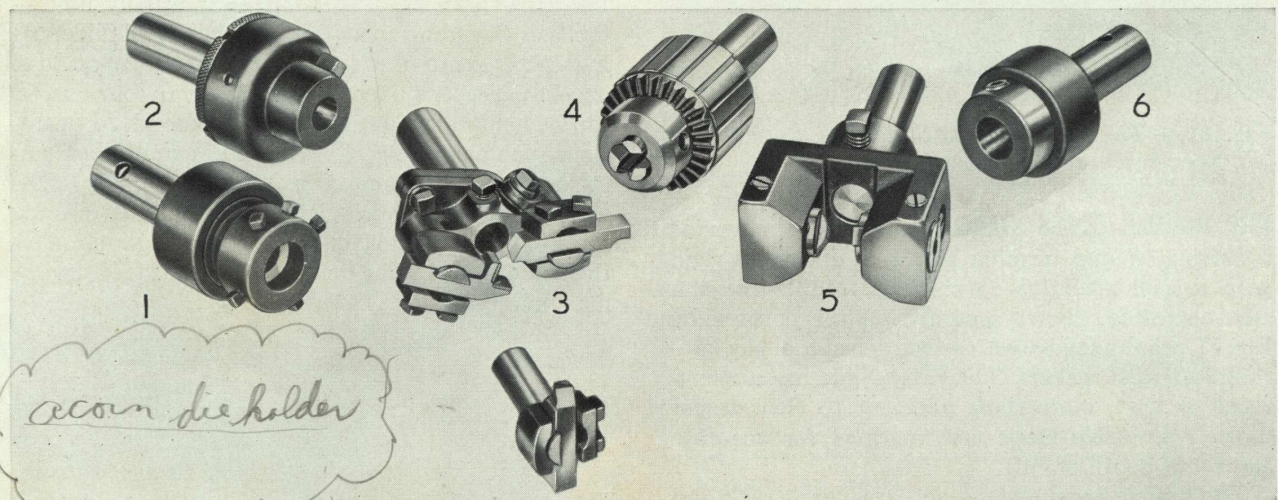


Fig. 15—Group of Wade Standard Tools for Use on Hand Screw Machine

TURRET TOOLS:

1. Button Die Holder.
2. Floating Reamer Holder.
3. Right and Left Box Tool — for turning, chamfering, etc. Takes cutters ground from standard $\frac{3}{8}$ " square high speed steel shapes.
4. 3-Jaw Drill Chuck, $\frac{1}{2}$ " capacity.
5. Knurling Tool — uses standard knurls of any pattern or pitch. Can be quickly adjusted for any diameter within its capacity. Capacity: $\frac{1}{8}$ " to $\frac{9}{16}$ ".
6. Tap Holder — for holding drills, reamers, counterbores, etc.

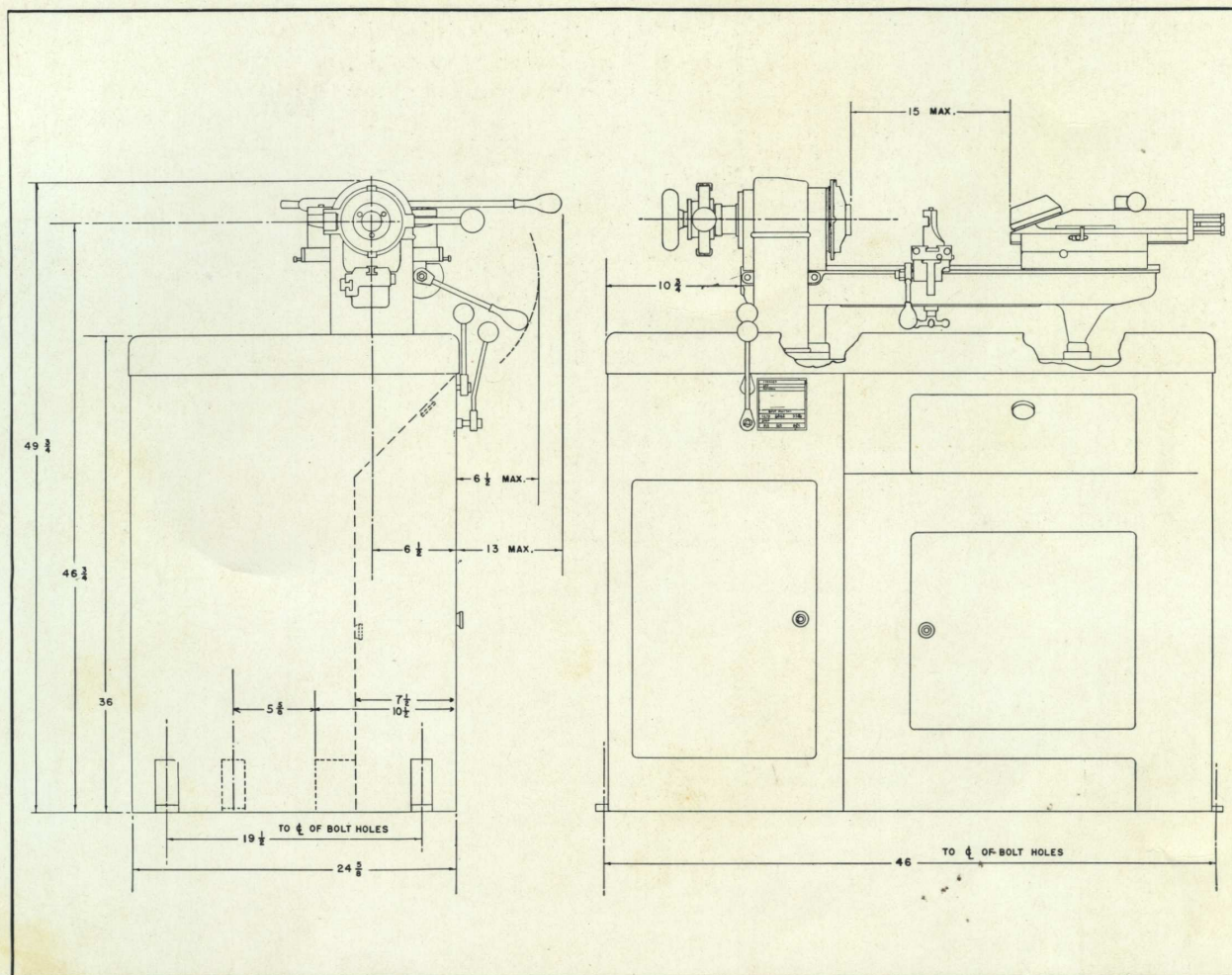


Fig. 16 — Principal Dimensions of the Wade Hand Screw Machine

SPECIFICATIONS

	No. 5	No. 7
COLLET CAPACITY	$\frac{3}{4}$ "	1"
SPINDLE SPEEDS (Both Models)	315, 515, 825, 1270, 2065, 3300 R.P.M.	
SWING	7"	7"
SPINDLE NOSE	$1\frac{3}{4}$ " x 12 TPI	2" x 10 TPI
CROSS SLIDE TRAVEL	$2\frac{3}{4}$ "	$2\frac{3}{4}$ "
WEIGHT COMPLETE	650 lb. net	650 lb. net
CRATED WEIGHT: Domestic (Approx.)	950 lb. gross	950 lb. gross
Export (Approx.)	1000 lb. gross	1000 lb. gross
CRATE SIZE: Domestic (Approx.)	Height $54\frac{1}{2}$ ", Width $34\frac{1}{2}$ ", Length $57\frac{1}{2}$ "	
Export (Approx.)	Height 57", Width 36", Length 57"	
ELECTRICAL EQUIPMENT:		
MAIN MOTOR: $\frac{3}{4}$ or 1 H.P. 220 or 440 Volt, A.C., 3-phase, 60 Cycles		
PUMP MOTOR: 1/10 H.P. 220 or 440 Volt, A.C., 3-phase, 60 Cycles		

Wade

The Wade Tool Company

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PRINTED IN U. S. A.
3M-7-51