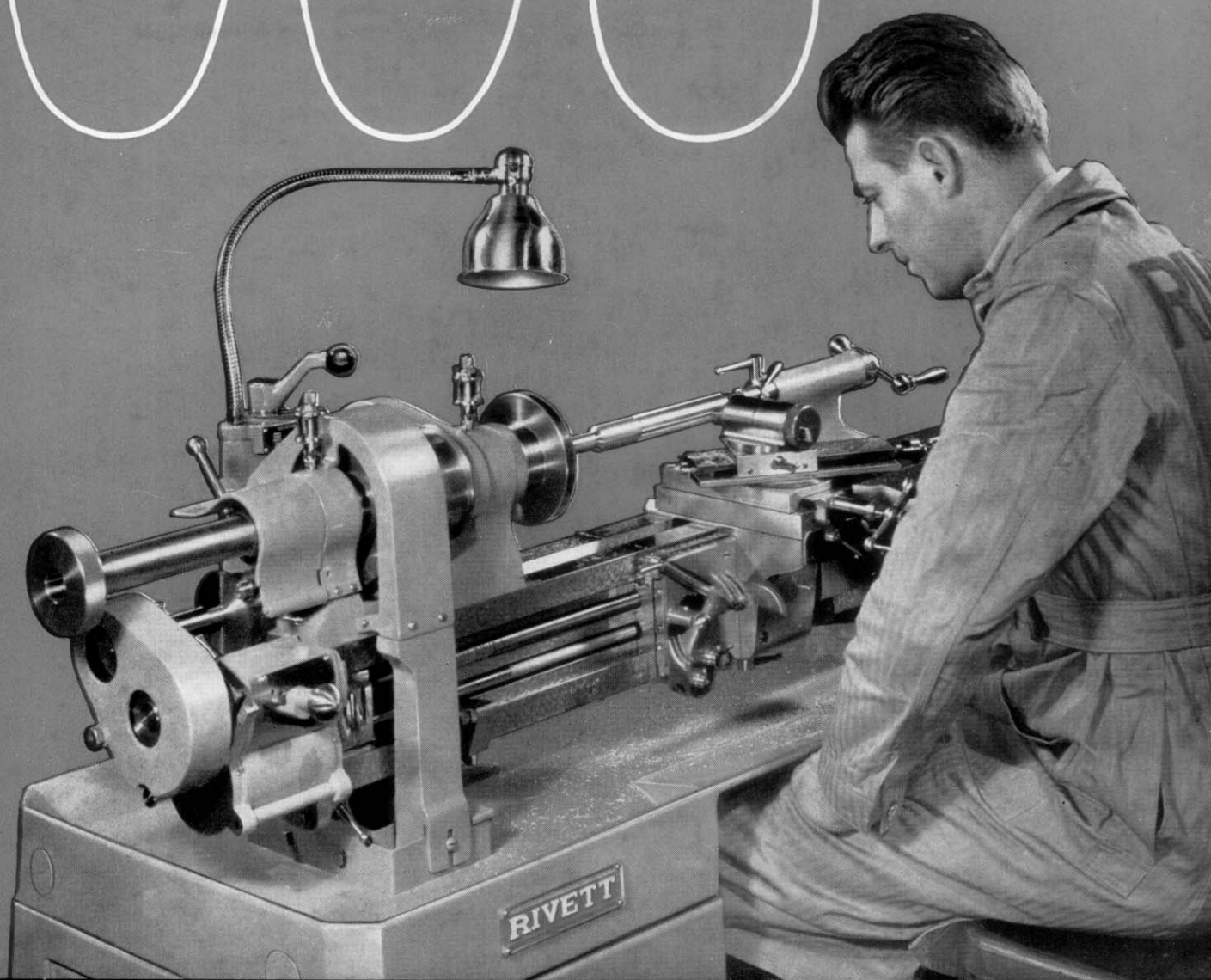


RIVETT

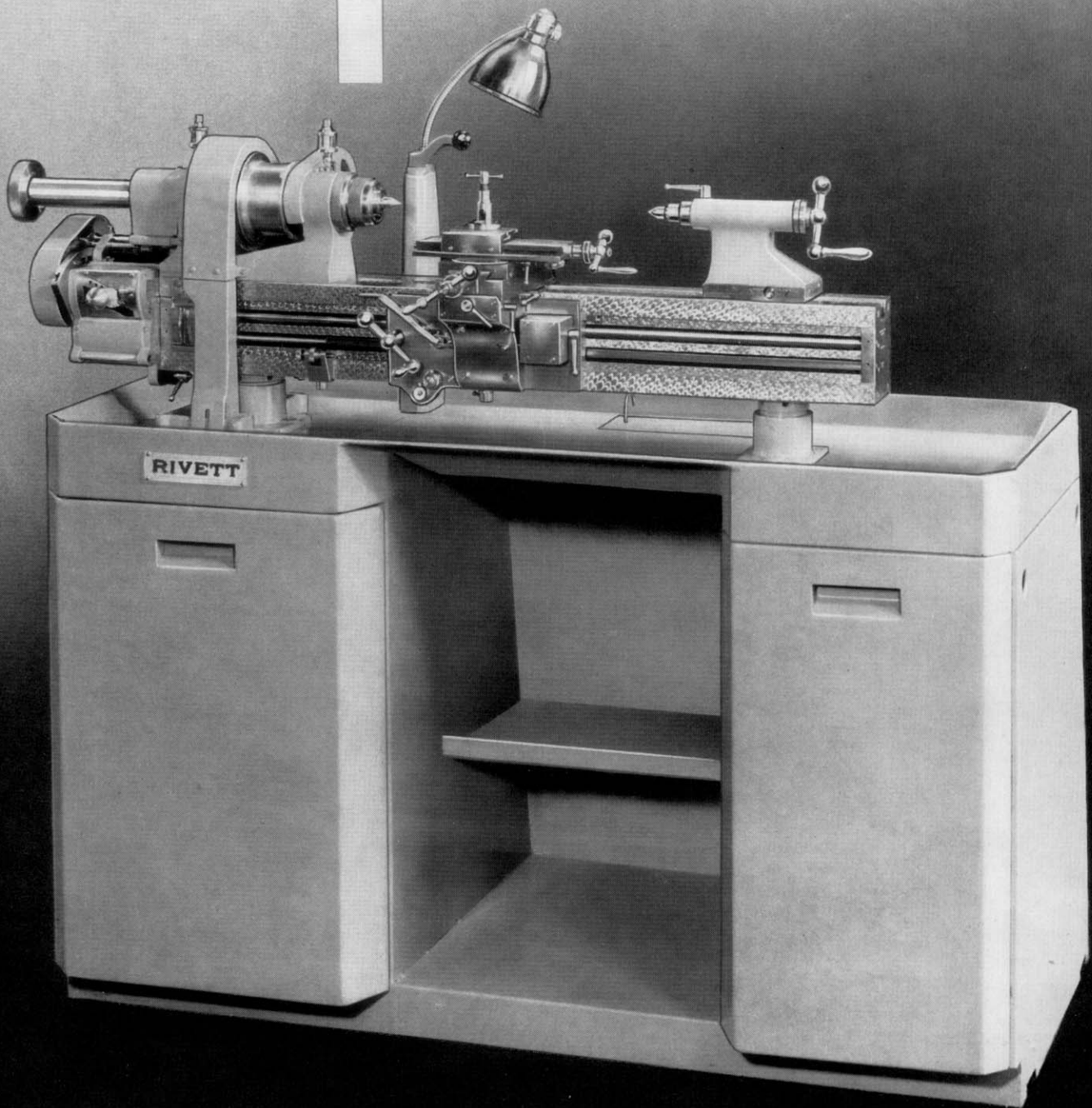
PRECISION SCREW CUTTING LATHE



a symbol of accuracy in machine tools

RIVETT LATHE & GRINDER, Inc., Brighton 35, Boston, Massachusetts

More precision work Some 70 years ago Rivett developed its first machine tool. It built into this machine a quality which enabled the operator to produce more accurate pieces of work than ever before. "More Precision Work" thus became the objective for all Rivett tools. Adherence to this policy through the years has made Rivett Lathes and Grinders symbolic of extreme accuracy all over the world.



Dec 1956

THE 608

SCREW CUTTING LATHE

The 608 is made with such accuracy that it is possible to guarantee its performance to the exacting limits shown below. As a sensitive, 8½" swing, back-gear, screw cutting lathe, taking a complete assortment of attachments, it is designed for the finest instrument, repair and experimental work. In tool making and instrument shops, it will handle a variety of parts in minimum time and maximum accuracy.

STEEL CABINET MOUNTING

The welded steel cabinet mounting provides a rigid support with minimum floor space. Right-hand compartment has fitted shelves for chucks, sliding collet tray and space for attachments and tooling below. Electrical panel is fully enclosed and access door may be controlled by disconnect switch. Knee-hole design of cabinet allows operator to sit in a comfortable position.

OPTIONAL DRIVES

Optional motor drives with variable or set spindle speeds are available. Drive is bolted to the foundation plate of the cabinet to isolate motor and belt vibration from the lathe. All vee belts are adjustable and replaceable without disturbing lathe spindle. Control of motor is fully magnetic.

The variable speed drive offers easy and convenient control of spindle speeds with infinite adjustment between 11 and 1500 r.p.m. using a constant speed motor. Located on the front of the cabinet, the speed control lever allows the operator to make infinitely variable speed changes by varying the pitch diameter of two pairs of sheaves in the drive assembly. The selected speed registers on a dial at the base of the selector lever.

The motor jackshaft drive provides twelve set spindle speeds 25 to 1500 r.p.m. using a two-speed motor.

Distinctive RIVETT Features

- **Bronze-Bearing Spindle** assures extreme turning accuracy and finish.
- **Slide Areas** equal to those of lathes twice its size and hand scraped for bearing and finish.
- **3-Point Bed Mounting** protects lathe performance within guaranteed limits.
- **Double Bevel Alignment** for head and tailstock.
- **Compound Rest** is removable from carriage saddle for mounting gauges and various attachments.
- **Separate Carriage Feed** for thread cutting and turning.
- **Feed Screws** are heat treated and precision ground.
- **Attachments** available for milling, slotting, taper-turning, spherical turning, grinding, forming, and multiple operations.
- **List of Users** includes the leading universities, technical schools, industrial concerns and governments the world over.

GUARANTEE

The Rivett 608 will turn or bore within 0.0001" in six inches work held in collet, and turn between centers within 0.0001" in six inches. The Rivett 608 will face to eight inches diameter within a limit of 0.0002" concave, 0.0000" convex. The Rivett 608 will cut threads within 0.0005" in twelve inches, or within 0.0003" in any three inches, or within 0.0002" in any inch of a specimen piece.

HEADSTOCK VEE BELT DRIVE

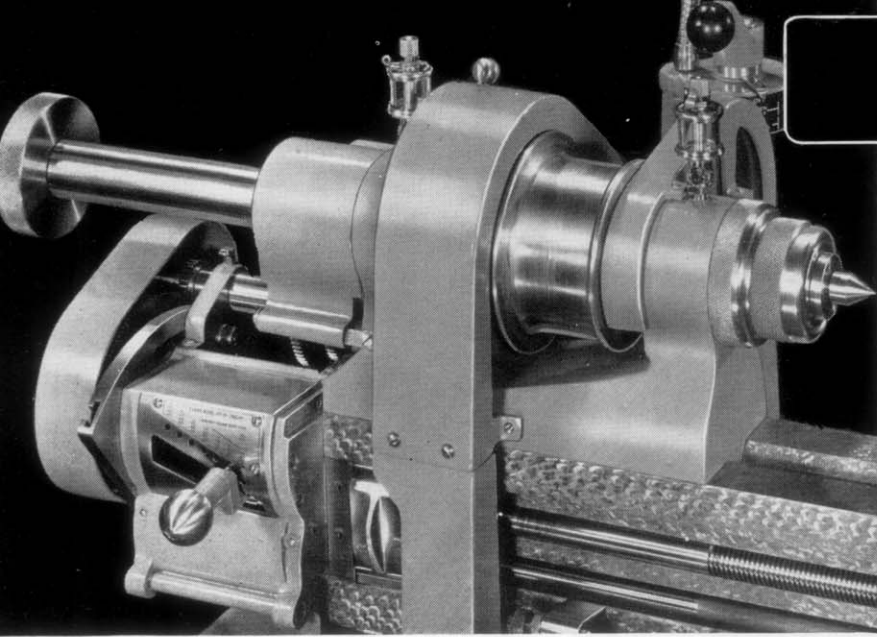


Fig. 2

The headstock for vee belt drive is semi-enclosed. The finished surface to right of the guard permits holding the spindle by hand or turning to inspect or measure work. The front spindle bearing is bronze, double cone, having angles of 3° and 45° with the center line. Rear bearing is straight, tapered on the outside and split for convenient adjustment. The mouth, chuck seat and threaded nose are ground with spindle running in its own bearings. Collets mount directly in spindle mouth. Plates and attachments screw onto nose and lock against shoulder of spindle.

HEADSTOCK FLAT BELT DRIVE

The cone pulley headstock for endless flat belt, of essentially the same design as the semi-enclosed headstock, may be driven from speed box or horizontal safety drive, which latter arrangement on oak cabinet or bench also provides power for relieving attachment and, with attachment drive, for slide rest grinding attachments, traverse miller and its thread milling and spiral milling attachments.

The "608" headstock is back-gearred affording a wide range of selective forward and reverse spindle speeds through gearing or by open belt.

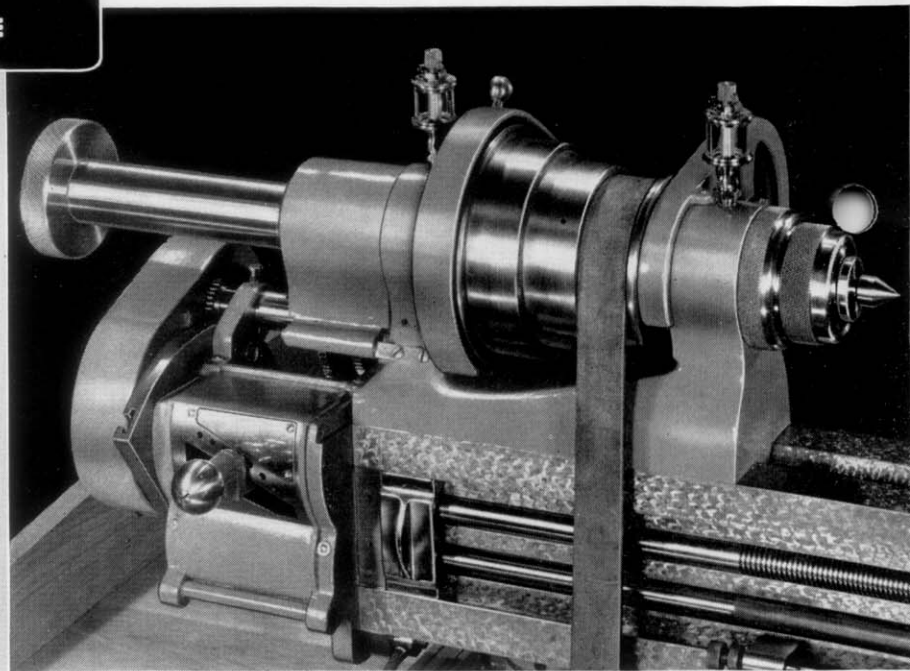
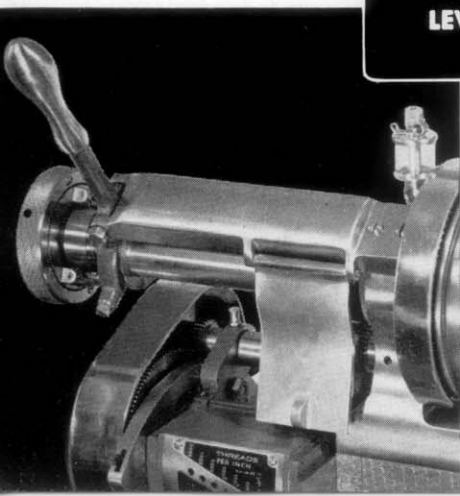


Fig. 3

LEVER CHUCK CLOSER



The lever chuck closer is used in place of screw draw-in spindle to operate collets and step chucks. It quickly and uniformly closes the collet or step chuck on the work and materially reduces wear on chuck and draw-in spindle threads as well as insuring uniform draw-in of duplicate parts having the same diameters. For toolroom and experimental work the screw draw-in spindle may be preferable, but for chucking duplicate parts the lever closer is far more efficient. It saves operator effort, productive time and spoilage.

Fig. 4

GEAR BOX

The quick change gear box is so mounted as not to interfere with vertical belt from underneath drive or telescopic driving shafts used with spiral and relieving attachments and may be replaced in the event of injury.

By sliding the stud and compound gears to detented positions and moving index lever to appropriate settings, thirty different threads from 10 to 144 pitch are available through gear box. By mounting pick-off gears on auxiliary quadrant provided, additional threads may be cut. Pick-off gears for $11\frac{1}{2}$, 15 and 27 pitch threads are included with lathe — see table, Fig. 36. Metric translating gears are available — see table, Fig. 37.

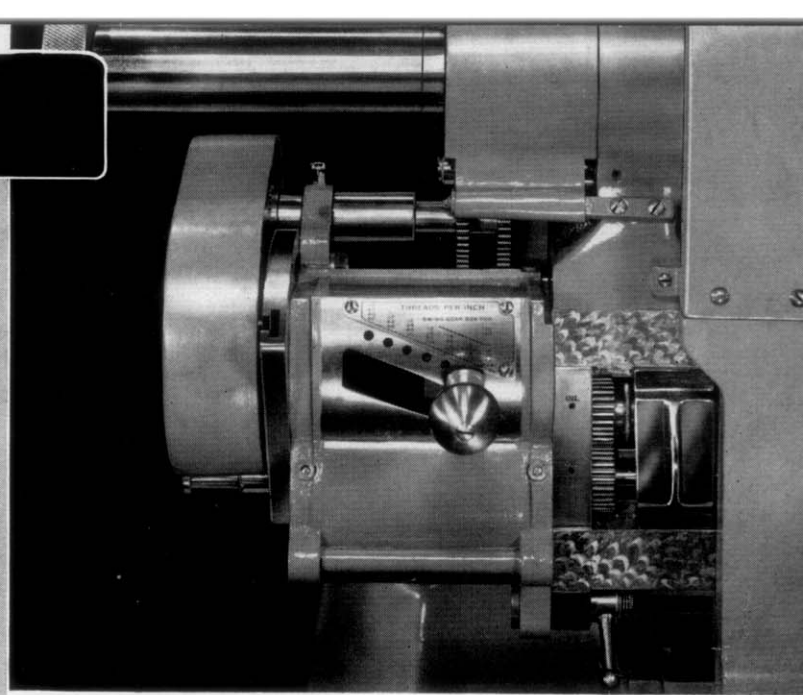


Fig. 5

CARRIAGE AND SADDLE

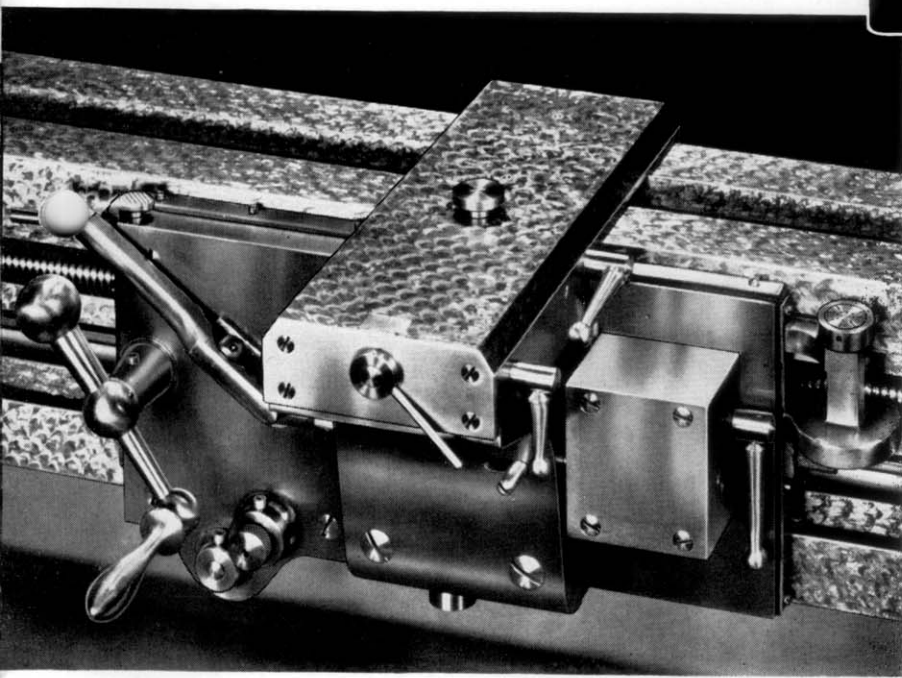


Fig. 6

The carriage saddle has angular guideways scraped to provide positive and accurate mounting for the slide rest and attachments.

When cutting threads, a bronze half-nut, controlled by an eccentric lever, engages the lead screw. A threading dial is offered to pick up threads without reversing the lathe. Power longitudinal feed is from the feed rod through a friction clutch and gears to a rack. This clutch is controlled by a latched lever and may be released either by hand or automatically by an adjustable stop. Micrometer stop is available in place of standard screw stop.

LATHE BED

The bed is made from a strongly-ribbed box casting of close-grained alloy iron. The top, central vee guideway, dovetail and plane surfaces on front, and plane surface on rear of bed are hand-scraped in most accurate possible relation to each other to assure equalization of bearing fundamental to long precision life. The lead screw has bearings in the end plates. An independent feed rod with a sliding gear provides power feed for the carriage without employing the lead screw, thus preserving the precision quality of the latter.

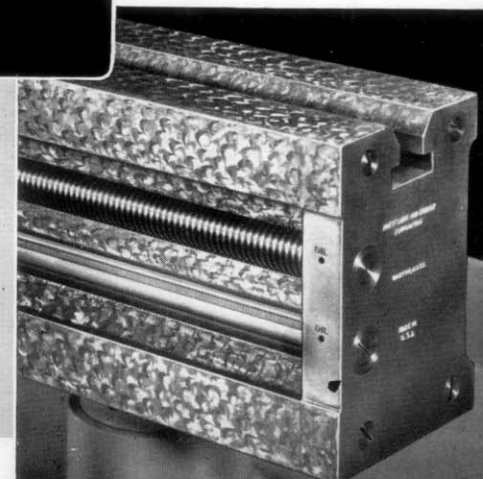


Fig. 7

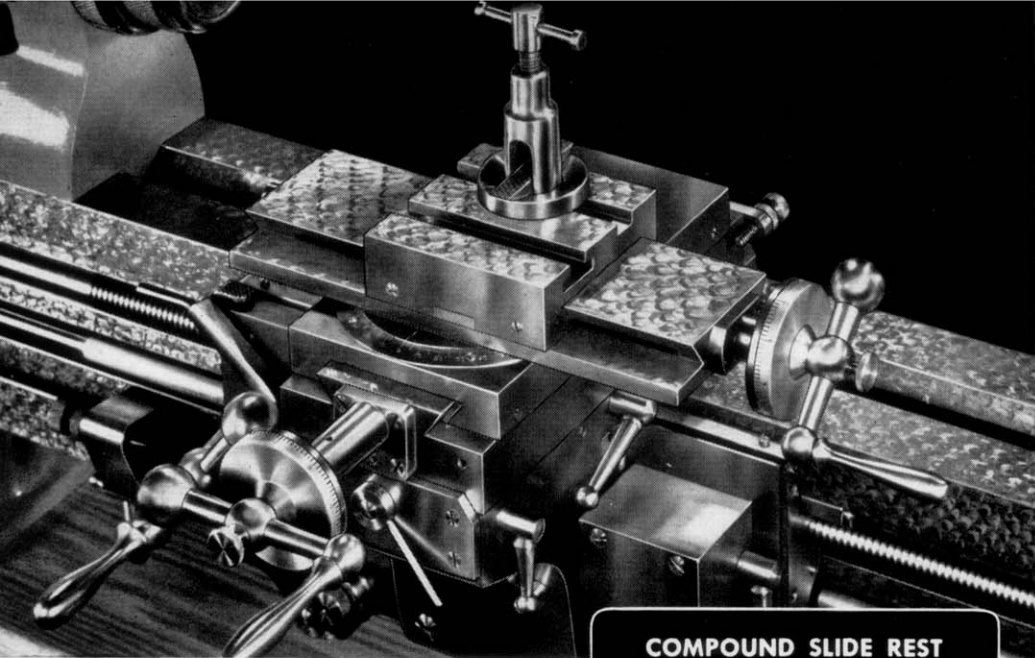
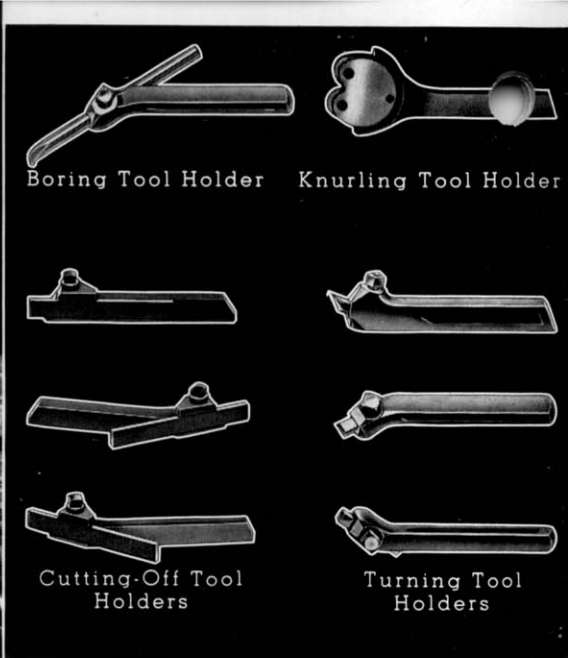


Fig. 8

**COMPOUND SLIDE REST
WITH ROCKER TOOL POST**



Boring Tool Holder

Knurling Tool Holder

Cutting-Off Tool Holders

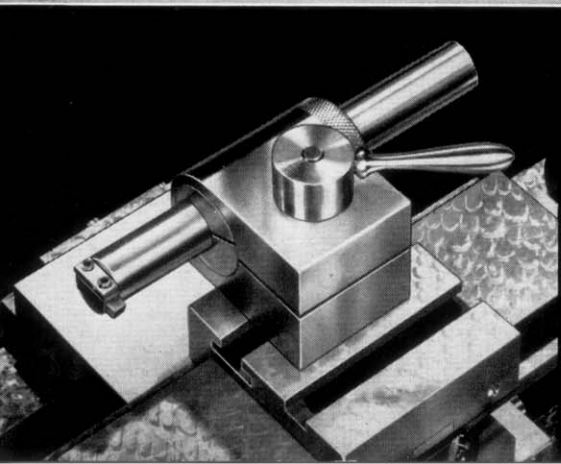
Turning Tool Holders

The compound precision slide rest consists of a base, an upper and lower slide with swivel between and feed screws to provide slide movements. It is removable as a whole from the lathe carriage to permit the use of dial gage, height gage, surface gage and other measuring and locating tools when setting-up and laying out work. With slide rest off, various attachments such as the thread tool, traverse miller, tee rest, slotting and milling fixture and universal milling attachment may be mounted on the lathe carriage. Swivel movement is registered on a bevel-edged dial graduated in degrees over the full circumference.

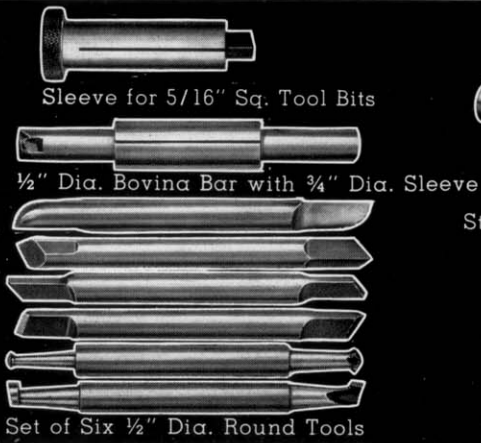
An adjustable stop for the lower slide is provided for thread-cutting and for repetition of sizes in turning and grinding. Provision is made at front of base to locate this stop for internal threading and duplication of boring sizes.

Slide rest may instantly be locked in any transverse location for straight boring by power feed, taper turning or boring with taper attachment, Fig. 12, and bevel turning by hand feed. For power cross feed, slide rest is located and locked flush with front of saddle, and the saddle cross feed gear is meshed with the cross feed screw driving pinion.

The eccentric tool holder attachment takes $\frac{1}{2}$ " round high speed steel tools and split bushing carried in an eccentric compressible sleeve. Rotation of the sleeve adjusts the height of the tool. Rotation of the tool in the sleeve gives proper rake and clearance angle settings. The attachment swivels on its binder stud and clamps in the tee slot of the slide rest top slide in place of rocker tool post. A split bushing for $\frac{5}{16}$ " square tool bits may also be used in eccentric sleeve. Straight cutter holder and angle cutter holder fit directly in $\frac{5}{8}$ " dia. of eccentric sleeve. Boring bar $\frac{1}{2}$ " dia. requires use of bushing.



**ECCENTRIC TOOL HOLDER
ATTACHMENT WITH TOOLING**



Sleeve for 5/16" Sq. Tool Bits

$\frac{1}{2}$ " Dia. Bovine Bar with $\frac{3}{4}$ " Dia. Sleeve

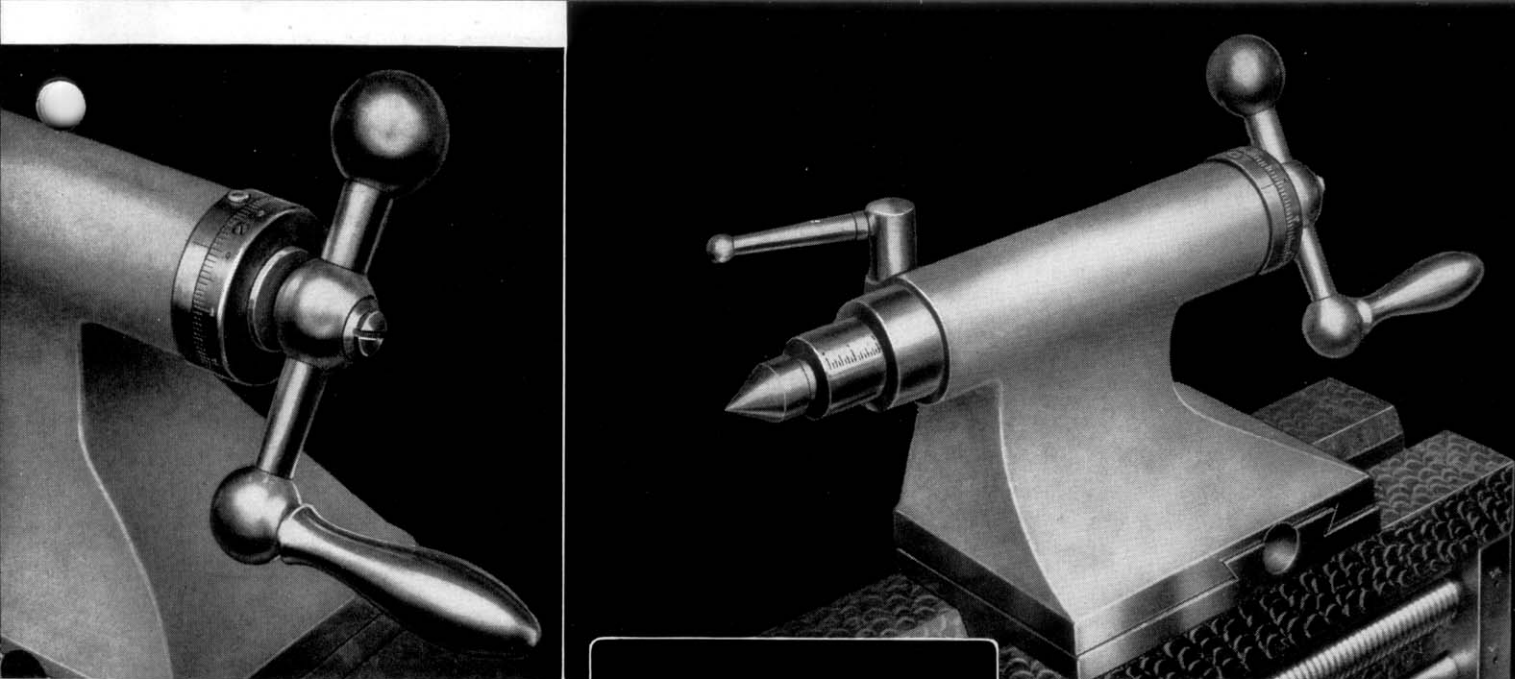
Set of Six $\frac{1}{2}$ " Dia. Round Tools



Straight Cutter Holder

Angle Cutter Holder

Fig. 9



TAILSTOCK

Fig. 10

The screw tailstock is offset set-over type with hardened and ground spindle traversed by a high carbon steel screw working in a bronze nut, operated by a ball handle. The tailstock frame is precision honed and is clamped in any position by an eccentric binder and T-bolt fitting a slot in the bed. Spindle movement is indicated by $\frac{1}{16}$ " graduation on spindle. For fine adjustment and duplication of setting, the spindle is fitted with a large adjustable dial graduated to .001". The dial is provided with friction binder to permit resetting.

The set-over dove-tail slide and screw permits $\frac{5}{16}$ " movement forward. Set-over positions are used for occasional taper turning when taper attachment is not available. Conventionally, tailstock is fitted to point .00025" higher than headstock center to provide for initial wear. The hole in the spindle is ground to Rivett special center taper gage, approximately 3° included angle. Center or other attachment is automatically ejected when spindle is fully retracted. Binder handle locks spindle.

All castings for "608" are relieved by scientific heat treatment before machining and after rough machining are seasoned for long periods of time to assure that the exacting standards of precision to which the lathe is built will not be defeated by distortion due to changes in temperature or normal shock or stresses in use.

The tailstock lever attachment takes the place of ball handle for quick and sensitive traversing of tailstock spindle, when drilling, tapping, reaming or using tailstock turret attachment, Fig. 27.

The device is typical of the many ingenious accessories which at low cost can solve a production problem where the quantity of parts required at one time does not justify putting in a special machine or even setting up a valuable automatic. The lever is easily operable while either sitting or standing.

LEVER TAILSTOCK

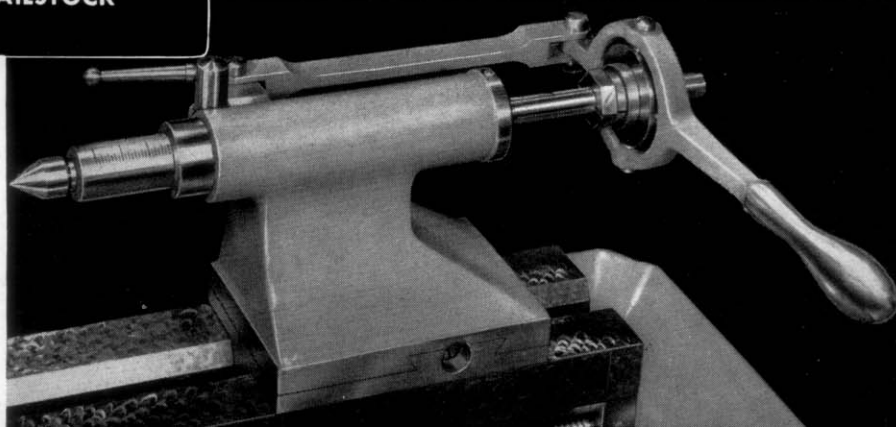
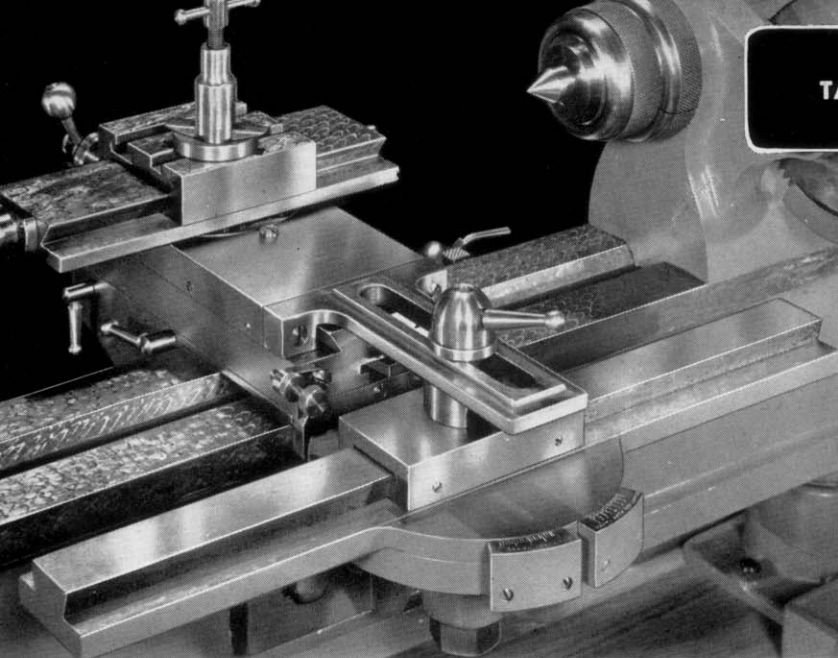


Fig. 11



TAPER ATTACHMENT

The taper attachment is extremely valuable for taper turning and boring with power feed. It affords the only means for accurate cutting of taper threads. Guide bar bracket is permanently fitted to lathe bed. Connecting yoke detachably mounts on the rear end of the slide rest cross slide. Dovetailed guide bar swivels and is graduated for setting to any angle up to 10° or 4" per foot taper in either direction. Tapered work maximum 13" long may be turned or threaded.

Fig. 12

AUTOMATIC INDEXING TURRET

The "608" equipped with automatic indexing turret, double tool cross slide or double tool cross and turning slide and lever chuck closer is an efficient high precision hand screw machine. Turret head has six stations for holding tools with $\frac{3}{4}$ " diameter shanks and is carried on slide dovetailed and gibbed to base which mounts in any position on lathe bed. The turret automatically indexes with the slide movement and has six independently adjustable stops which are geared to and index with the turret head.

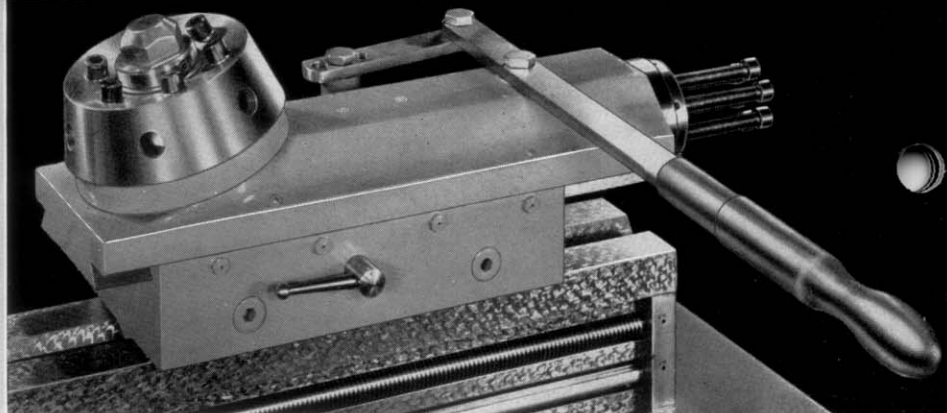
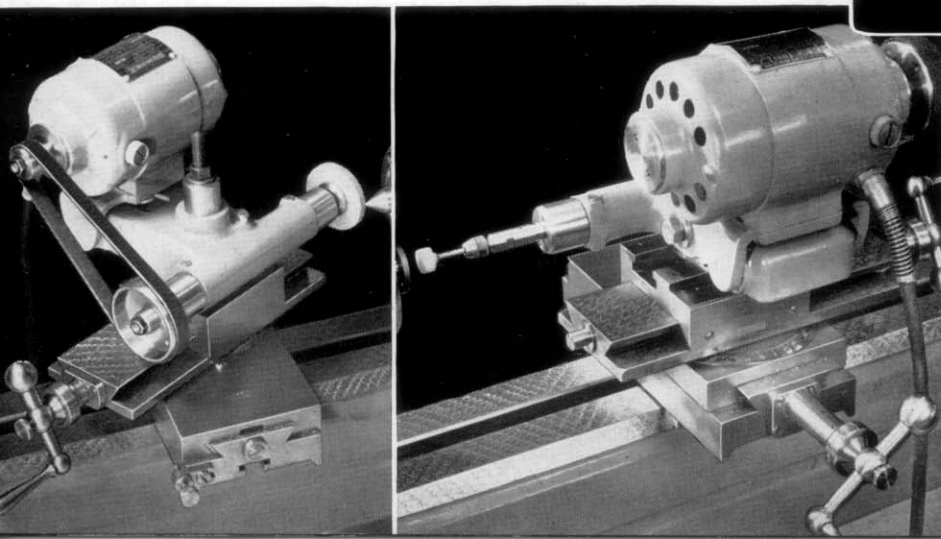


Fig. 13

GRINDING ATTACHMENT MOTOR DRIVE



The unit motor drive grinding attachment has ball bearing spindle with range 6900 to 30,000 r.p.m. Equipment includes $\frac{1}{8}$ " collet type chuck for mounted wheels, two plain wheels, three mounted wheels, motor, cord, switch and case. Motor is universal, single phase to operate on either 110-115 volts or 220-230 volts as specified.

Fig. 14

BALL TURNING REST

The ball turning rest will accurately generate spherical surfaces 3" max. dia., concave and convex. Valuable for machining ball reamers, cutters, punches, balled valve seats and discs, knuckles, universal and swing joints, knobs and hemispherical ends. It mounts directly on the bed. Lower slide has transverse screws for centering and tee slot for location of tool post. Feed screw adjusts tool position for radius. Adjustable dial graduated to .001" is used for duplication of work.

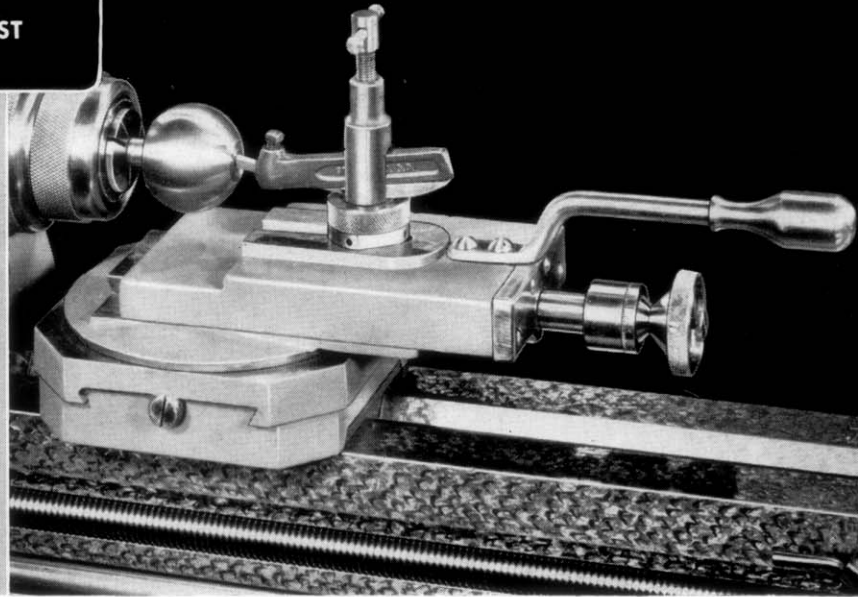


Fig. 15

THREAD TOOL

The thread tool takes the place of single point tools generally used for cutting external threads on engine lathes. Base mounts on raising block on lathe saddle in place of slide rest. It carries a 10 tooth high speed steel cutter with means for indexing to present each of the teeth successively to the work and has fine screw adjustment to control final depth of cut. First tooth is widely topped and cuts only a very shallow groove. Second tooth cuts a little deeper but no wider and each succeeding tooth progressively deepens the groove. The tenth tooth takes a very light finishing cut to exact form and smooth finish. A separate cutter is required for each form and pitch of thread. Range of threads, six pitch or finer. Diameter 4" max.

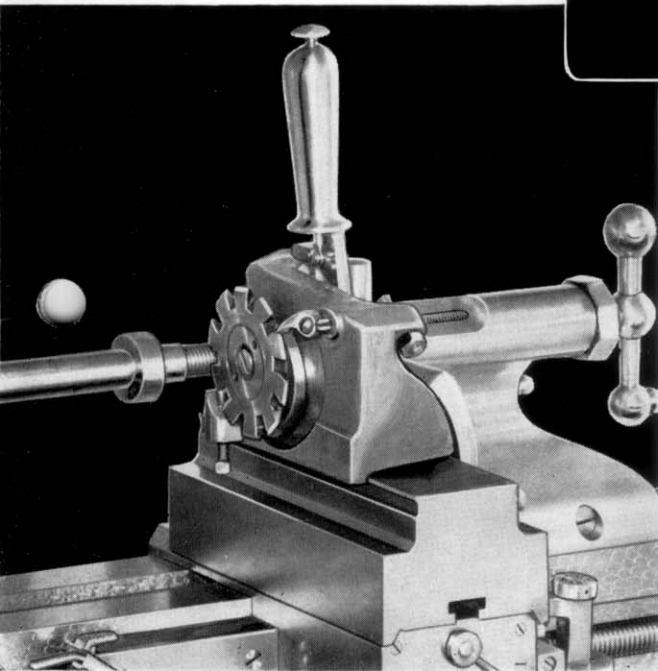


Fig. 16

INDEXING ATTACHMENT AND SLOTTING ATTACHMENT

The indexing attachment divides work held in headstock spindle. Bracket mounts on headstock and carries finger which engages index plate; standard divisions 45, 56, 60, 64, 72, 80, 84 or 100.

The slotting attachment is used for cutting keyways, slots and holes of odd contour. Tool holder has vertical screw adjustment and secondary adjustment for cutting rake.

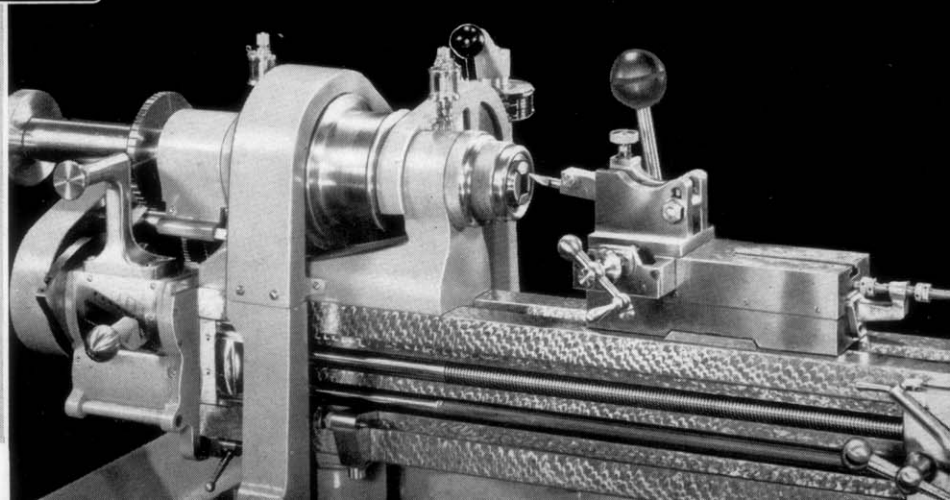


Fig. 17

ATTACHMENTS

Hinged steady rest, mounts on lathe bed, has three brass jaws with screw adjustment and lock screws, max. capacity 4" diameter.

Plain tee rest, mounts on saddle in place of slide rest and carries standard 3" tee. Base also used for L REST, 6" TEE, TRIANGLE REST and SAW TABLE.

Hinged tee rest, mounts on saddle and is same as plain tee rest except upright swings away from work when not in use.

Follower rest attaches to base of slide rest. Used to support work held on centers. Brass jaws have adjustable capacity to 3" diameter.

Angle iron, used on slide rest and universal milling attachment. Has tee-slots and vee-grooves for round work. Length 4 1/4", width 3 1/4", height 3".

Tailstock knurling attachment for production diamond knurling, work held in collet. Cross slide carrying knurls is controlled by feed screw. Capacity 3/16" to 5/8" diameter.

Tailstock turret attachment, mounts in tailstock spindle by tapered shank, efficient on small parts. The head is rotated by hand and locked in position by index pin.

Slotting and milling fixture mounts on saddle. Vee block, adjustable for height, carries square holder for collets. Work, held in collet, advances against saw or cutter on arbor held in lathe spindle. Depth of cut, max. 1", controlled by adjustable stop nuts.

Live center, ball bearing type, for tailstock.

Blank center, of annealed tool steel, 1" diameter by 1 3/8" long. May be turned to any desired form.

Spur center, used for wood turning.

Half male center, has hard head, slabbed to provide clearance for turning tools when facing ends of work or external grinding small diameters.

Solid vee center, has soft head 1 1/16" diameter and groove with 90° included angle.

Male center, has head with 60° included angle. Furnished hard for tailstock and soft for headstock.

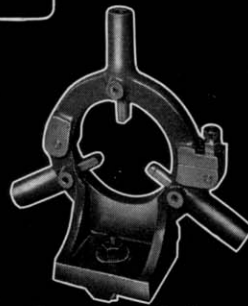
Revolvable vee center, has soft head which turns freely on shank.

Female center, has hard head with 60° included angle and center hole with 60° included internal angle.

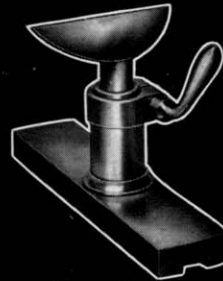
Large male center, has 1 1/2" diameter hard head with 60° included angle.

Adjustable off-center, has slide with max. 1/4" screw adjustment carrying 1/2" diameter hard male and female removable centers.

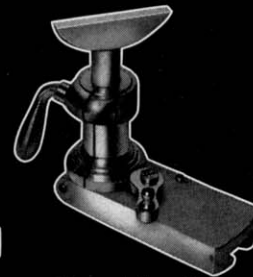
Center and center chuck, consists of soft male center with taper fit in center chuck. Solid center chuck fits headstock spindle and carries all forms of centers.



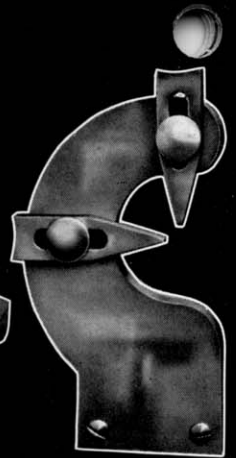
Hinged Steady Rest



Plain Tee Rest



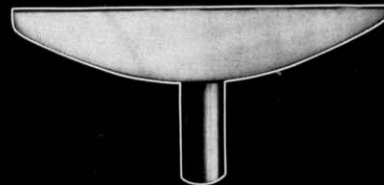
Hinged Tee Rest



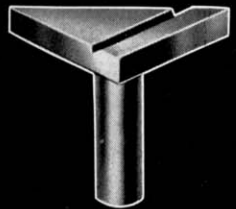
Follower Rest



El Rest



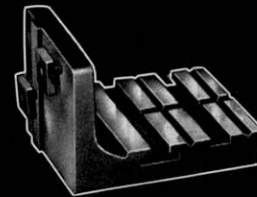
6-Inch Tee



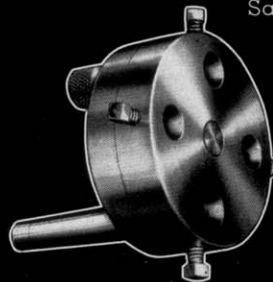
Triangle Rest



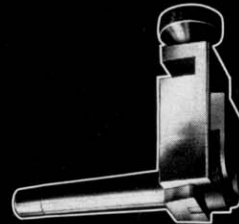
Saw Table



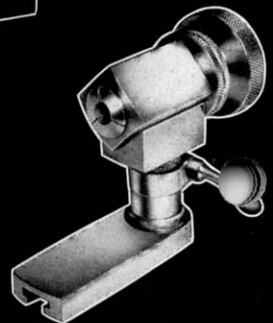
Angle Iron



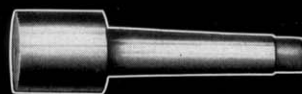
Tailstock Turret Attachment



Tailstock Knurling Attachment



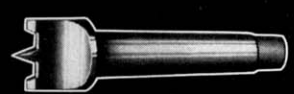
Slotting and Milling Fixture



Blank Center



Live Center



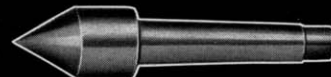
Spur Center



Half Male Center



Solid Vee Center



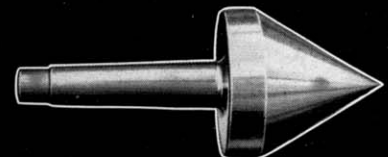
Male Center



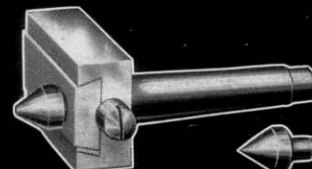
Revolvable Vee Center



Female Center



Large Male Center



Adjustable Off-Center

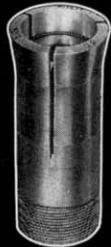


Center and Center Chuck

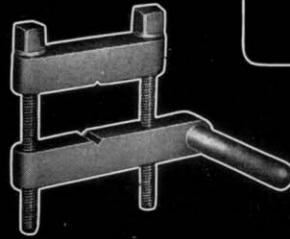
ATTACHMENTS



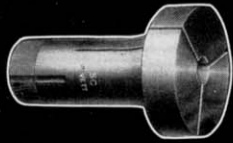
Draw-In Collet



Pot Collet



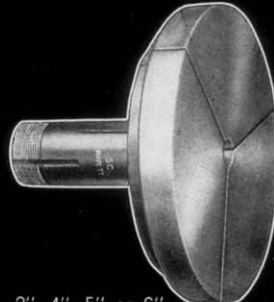
Clamp Dog



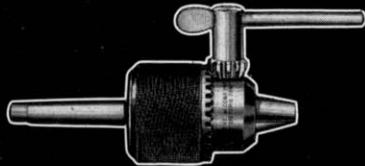
2" Step Chuck Blank



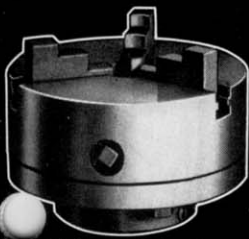
Closing Ring



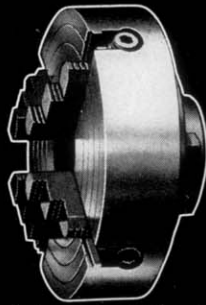
3", 4", 5" or 6" Step Chuck Blank



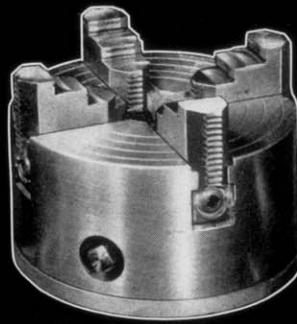
Drill Chuck



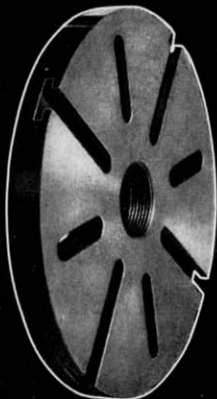
Universal Chuck



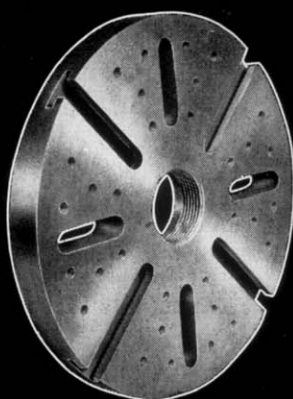
Independent Chuck



Combination Chuck



Slotted Face Plate



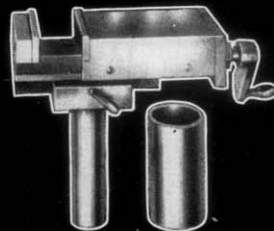
Slotted and Tapped Face Plate



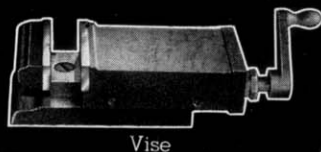
Plain Face Plate



Driving Plate



Vise for Eccentric Tool Holder Attachment



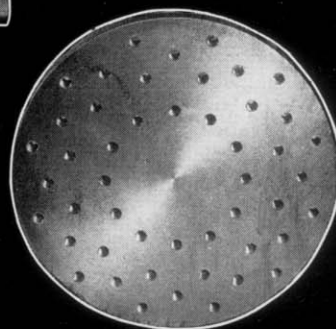
Vise



Emery Face Plate



Drill Plate



Tapped Face Plate

Draw-in collet, mounts directly in spindle mouth, is split, spring-tempered and ground.

Pot collet is split, spring-tempered and ground. Max. diameter and depth of hole limited by head dimensions.

Clamp dog, $\frac{3}{4}$ " capacity, used for driving work held between centers.

2" step chuck blank, is soft, split, with $\frac{9}{16}$ " dia. hole to be bored to desired diameters. Closes by drawing into spindle mouth..

3", 4", 5" or 6" step chuck blank, requires closing ring. It is soft, split, with $\frac{9}{16}$ " dia. hole to be bored to desired diameters.

Closing ring, screws on threaded spindle nose and is furnished in two sizes, one for 3" and 4" step chucks and one for 5" and 6" step chucks.

Drill chuck, with taper shank for tailstock spindle or headstock center chuck or straight shank for collet or turret. Capacities: $\frac{1}{4}$ ", $\frac{3}{8}$ " and $\frac{1}{2}$ " diameter.

Universal chuck, 3-jaw geared scroll with inside and outside jaws. Mounts on threaded spindle nose. Furnished in 5" size.

Independent chuck, 4 reversible jaws. Mounts on threaded spindle nose. Furnished in 6" size.

Combination chuck, 4-jaw geared scroll reversible type, independent and universal movement. Mounts on threaded spindle nose. Furnished in 6" size.

Slotted face plate, 8" dia., has four plain and four tee slots.

Slotted and tapped face plate, 8" dia., has four plain and four tee slots and 32 holes tapped $\frac{1}{4}$ "-20.

Plain face plate, $4\frac{1}{4}$ " or $5\frac{1}{8}$ " dia.

Driving plate, $3\frac{3}{4}$ " dia., $\frac{3}{8}$ " wide slot for lathe dogs.

Vise, for slide rest, mounts on top slide. Hardened steel jaws $1\frac{3}{4}$ " maximum opening. Also used on angle iron and milling attachment.

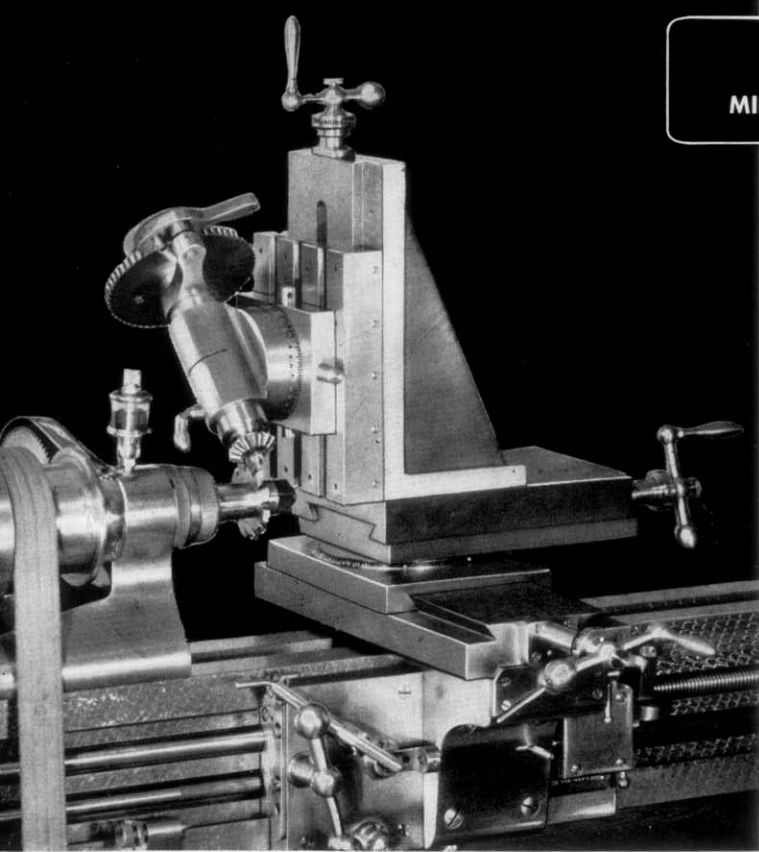
Vise, for slide rest eccentric tool holder attachment. Also, with 1" collet, used in lathe spindle and milling attachment.

Emery face plate, 7" dia., has circular scoring for emery discs.

Drill plate, 2", 3", 4" and 5" dias. Fits tailstock spindle and headstock center chuck.

Tapped face plate, 7" dia., forty-nine holes tapped $\frac{1}{4}$ "-20.

CARRIAGE MILLING ATTACHMENT



The carriage milling attachment mounts on saddle in place of slide rest. Longitudinal power feed is by carriage travel. Power cross feed is from cross feed gear in carriage. Universal movements in three directions are by three feed screws and ball handles fitted with adjustable dials graduated to .001". Range: 5½" vertical, 2¾" longitudinal and 8½" cross. Base is fitted with transverse slide carrying graduated swivel, on which mounts upper slide carrying vertical-faced knee. Swivel is locked by eccentric binder. Knee is fitted with a vertically-fed slide having three tee slots, for positioning top swivel in which mounts the spindle with index plate on rear. Top swivel swings to any position and carries spindle for 5C collets max. 1" diameter.

Fig. 20

DOUBLE TOOL CROSS SLIDE

The double tool cross slide mounts two tools for forming plain or irregular shapes and for rapid cutting off. Base mounts on beveled shoe scraped to alignment with bed. Cross slide is traversed by rack and pinion max. 3½". Circular forming tool block at front is mounted in a gibbed dovetail affording 1¼" longitudinal adjustment. Cutting-off block at rear is clamped in slot affording transverse adjustment of 2" and carries ⅜" x ½" blade. Swing over cross slide 3⅛". Adjustable stop at rear limits cross slide travel for duplication of sizes.

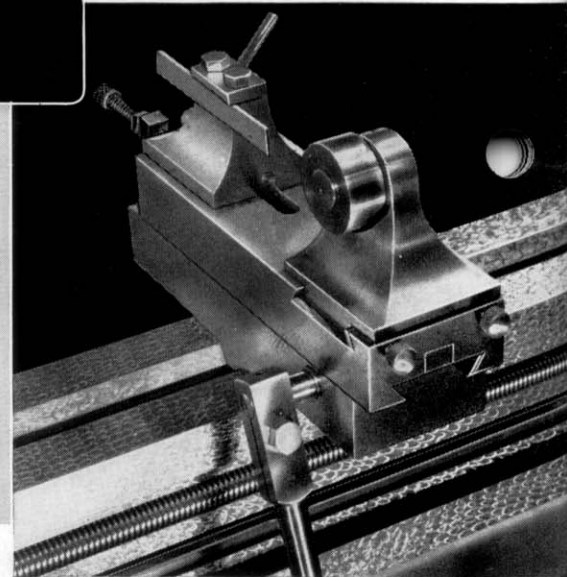
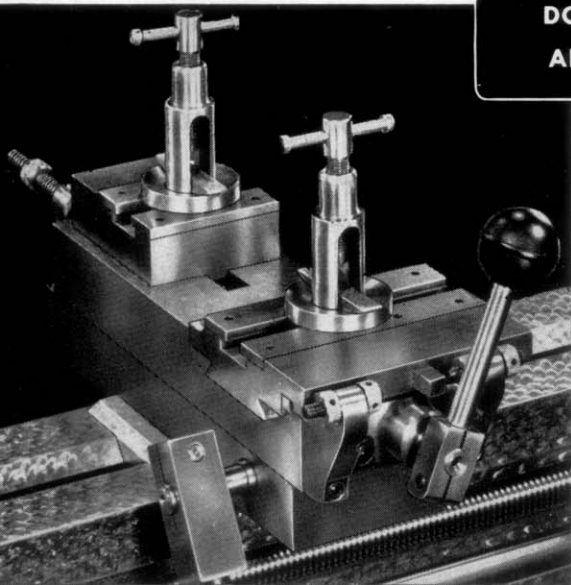


Fig. 21

DOUBLE TOOL CROSS AND TURNING SLIDE



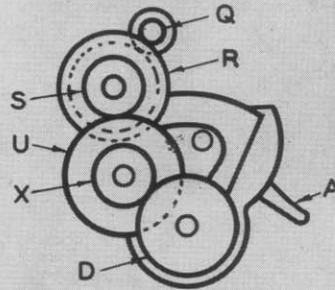
The double tool cross and turning slide is used for straight turning to close limits and for rapid cutting off. Base mounts on beveled shoe scraped to alignment with bed. Cross slide is traversed by rack and pinion max. 2¼". Rear tool block mounts in slot affording transverse adjustment of 2". Front tool slide has longitudinal movement by rack and pinion max. 1½". A single stop at rear of base and a two-way stop at front control all tool movements for duplication of sizes.

Either double tool cross slide may be used with turret attachment or singly.

Fig. 22

**GEAR TABLE
FOR ENGLISH THREADS**

LEAD SCREW - 8 PITCH
LATHE SCREW CONSTANT = 4



SET-UP FOR SPECIAL SCREW THREADS

FORMULA FOR SPECIAL SET-UP - $N = \frac{PQSX}{4RU}$
WHERE N = NO OF TEETH IN GEAR D
P = NO OF THDS PER INCH TO BE CUT
AND S-Q-R-U-X = NO OF TEETH IN GEARS
S-Q-R-U-X RESPECTIVELY

THREADS CUT DRIVING THRU REGULAR GEAR BOX											
NO OF THREADS PER INCH							STUD		COMP'ND		
POSITION OF LEVER 'A'							DRI- VER	DRI- VEN	DRI- VER	DRI- VEN	
LEFT			RIGHT								
10	11	12	13	14	16	18	30	60	70	70	
20	22	24	26	28	32	36	18	72	70	70	
40	44	48	52	56	64	72	30	60	28	112	
80	88	96	104	112	128	144	18	72	28	112	
SWING GEAR BOX TO ENGAGE 18T.							30	18	60	70	70
GEAR ON STUD WITH 60T SLIDING GEAR							120	18	60	28	112

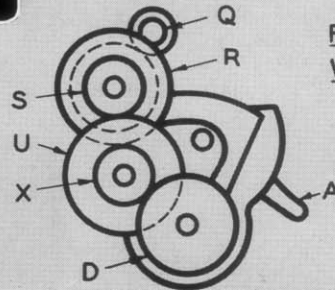
THREADS CUT WITH SPECIAL SET-UP PER SKETCH - LEVER 'A' IN NEUTRAL							
THDS PER INCH	STUD		S	T	COMP'ND		D
	Q DRI- VER	R DRI- VEN	DRI- VER	CONN ECT ING	U DRI- VEN	X DRI- VER	LEAD SCR.
11½	30	60	48	90			69
15	30	60	48	90			90
17*	30	60	48	90			102*
25*	18	72	48	90			75*
27	18	72	48	90			81
34*	18	72	48	90			102*
38*	18	72	32*	90			76*
42*	18	72	32*	90			84*
50*	18	72	32*	90			100*
54*	18	72	32*	90			108*
60*	18	72	32*		80*	60*	90
68*	18	72	48		90*	45*	102*
76*	18	72	32*		90*	45*	76*
100*	18	72	32*		90*	45*	100*
150*	18	72	48		90*	45*	100*

* SPECIAL THREADS - GEARS NOT FURNISHED WITH STANDARD EQUIPMENT

Fig. 23

**GEAR TABLE
FOR METRIC THREADS**

LEAD SCREW = 3M.M. PITCH
LATHE SCREW CONSTANT = 4



SET-UP FOR SPECIAL SCREW THREADS

FORMULA FOR SPECIAL SET-UP - $N = \frac{MRD}{6Q}$
WHERE N = NO. OF TEETH IN GEAR S
M = MILLIMETERS LINEAR PITCH
OF THREAD TO BE CUT
Q = NO. OF TEETH IN GEAR Q
R = NO. OF TEETH IN GEAR R
T = NO. OF TEETH IN CONN. GEAR
D = NO. OF TEETH IN GEAR D

THREADS CUT DRIVING THRU REGULAR GEAR BOX											
MILLIMETERS PITCH							STUD		COMP'ND		
POSITION OF LEVER 'A'							DRI- VER	DRI- VEN	DRI- VER	DRI- VEN	
LEFT			RIGHT								
4.80	4.36	4.00	3.69	3.43	3.00	2.67	18	72	80	20	
2.40	2.18	2.00	1.85	1.71	1.50	1.33	30	60	70	70	
1.20	1.09	1.00	0.92	0.85	0.75	0.67	18	72	70	70	
0.60	0.55	0.50	0.46	0.43	0.375	0.33	30	60	28	112	
0.30	0.27	0.25	0.23	0.21	0.187	0.17	18	72	28	112	
SWING GEAR BOX TO ENGAGE 18T.							0.80	18	60	70	70
GEAR ON STUD WITH 60T SLIDING GEAR							0.20	18	60	28	112

THREADS CUT WITH SPECIAL SET-UP PER SKETCH - LEVER 'A' IN NEUTRAL							
M.M. PITCH	STUD		S	T	COMP'ND		D
	Q DRI- VER	R DRI- VEN	DRI- VER	CONN ECT ING	U DRI- VEN	X DRI- VER	LEAD SCR.
0.15	18	72	30		120	40	100
0.35	18	72	42		100	50	90
0.40	18	72	72		120	40	90
0.45	18	72	30	90			100
0.70	18	72	28	90			60
1.25	30	60	30	90			72
1.75	30	60	42	90			72
2.50	30	60	60	90			72
3.50	30	60	42	120			36

Fig. 24

SPECIFICATIONS

HEADSTOCK

Max. dia. round hole in collet	1"
Max. size square hole in collet	23 ³ / ₈ "
Max. size across flats, hex. hole in collet	7 ⁷ / ₈ "
Max. dia. round stock held in jaw chuck, passed through spindle	11 ⁷ / ₈ "
Swing over bed, dia.	81 ¹ / ₂ "
Height, top of bed to center of spindle	41 ¹ / ₄ "
Swing over compound swivel of slide rest, dia.	25 ⁵ / ₈ "
Swing over bottom slide of compound slide rest, dia.	41 ¹ / ₄ "
Swing over carriage, dia.	71 ¹ / ₂ "
Threads on spindle nose	Form US O.D. 21 ¹ / ₁₆ " Pitch 10
Headstock bearing area on bed	sq. in. 35
Back gear reduction ratio	1 to 6 ² / ₃

GEAR BOX

Range of rod feeds	
Maximum per revolution	0.0220"
Minimum per revolution	0.0028"
Range of threads: thirty-three (including 11 ¹ / ₂ , 15 and 27) see tables Fig. 23-24	10 to 144

CARRIAGE

Bearing area on bed	sq. in. 76
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BED

Length of bed	40"
Distance between centers, tailstock flush	18 ¹ / ₄ "
Distance between centers, tailstock overhung	21 ¹ / ₄ "
Width	3 ³ / ₄ "
Depth	5 ¹ / ₄ "

TAILSTOCK

Travel of spindle	31 ¹ / ₄ "
Dia. of spindle	1"
Taper in mouth, Rivett special, approx.	3°
Dia. of hole at mouth	541"
Scale graduations	3" x 1 ¹ / ₁₆ "
Dial graduations	.001"
Bearing area on bed	sq. in. 18

SLIDE REST

Travel of top slide	51 ¹ / ₄ "
Travel of cross slide	41 ¹ / ₂ "
Tool post slot	1 ¹ / ₂ " x 3 ³ / ₈ "

SPEED RANGE

Motor jackshaft drive, twelve speeds	25-1500 rpm
Variable speed drive, infinite speeds	11-1500 rpm

FLOOR DIMENSIONS

Steel Cabinet	53" x 26"
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WEIGHTS

Lathe and standard attachments	375 lbs.
Lathe, steel cabinet and drive	1100 lbs.
Domestic boxing lathe, mount and drive, add.	250 lbs.
Export boxing lathe, mount and drive, add.	350 lbs.

CUBIC FEET, BOXED FOR EXPORT

Lathe, steel cabinet and drive	.75
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BALL TURNING REST

Max. dia. concave or convex	3"
Dial graduations	.001"

CARRIAGE MILLING ATTACHMENT

Vertical Travel	51 ¹ / ₂ "
Longitudinal Travel	23 ³ / ₈ "
Cross feed	81 ¹ / ₂ "
Dial graduated	.001"

DOUBLE TOOL CROSS SLIDE

Width of base	3"
Length of base	9"
Travel of cross slide	31 ¹ / ₂ "
Dia. of circular forming tool	111 ¹ / ₁₆ "
Width of circular forming tool	3 ³ / ₄ "
Size of cutting-off blade	3 ³ / ₈ " x 1 ¹ / ₂ "
Swing over cross slide	31 ¹ / ₈ "

DOUBLE TOOL CROSS AND TURNING SLIDE

Width of base	3"
Length of base	9"
Travel of cross slide	21 ¹ / ₄ "
Travel of front tool slide	11 ¹ / ₂ "
Swing over cross slide	31 ¹ / ₈ "

GRINDING ATTACHMENT, MOTOR DRIVE

Internal hole, dia.	1 ¹ / ₈ " or larger
Collet chuck cap.	1 ¹ / ₈ "
Mounted wheels — three furnished	3 ³ / ₄ " x 1 ¹ / ₄ " 1 ¹ / ₂ " x 1 ¹ / ₄ " 1 ¹ / ₄ " x 1 ¹ / ₄ "
External wheels — two furnished	2" x 1 ¹ / ₄ " x 1 ¹ / ₄ " 1 ¹ / ₄ " x 1 ¹ / ₄ " x 1 ¹ / ₄ "
Spindle speeds	6900-30,000 rpm

RELIEVING ATTACHMENT

Tool holders, square shank	1 ¹ / ₂ "
No. of flutes, max.	30

SLIDE REST ECCENTRIC TOOL HOLDER ATTACHMENT

Hole dia.	1"
Dia. hole in sleeve	5 ⁵ / ₈ "
Dia. hole in split bushing	1 ¹ / ₂ "
High speed steel tools, dia.	1 ¹ / ₂ "
Boring bar, dia.	1 ¹ / ₂ "
Straight cutter holder, dia.	5 ⁵ / ₈ "
Angle cutter holder, dia.	5 ⁵ / ₈ "

SLOTING ATTACHMENT

Width of base	3"
Length of base	9"
Width of slide	3"
Length of slide	9"
Travel of slide	31 ¹ / ₂ "
Traverse feed	2"
Vertical adjustment	11 ¹ / ₈ "

TAPER ATTACHMENT

Max. angle, degrees	10
Max. angle per foot taper	4"
Max. length	13"

THREAD TOOL

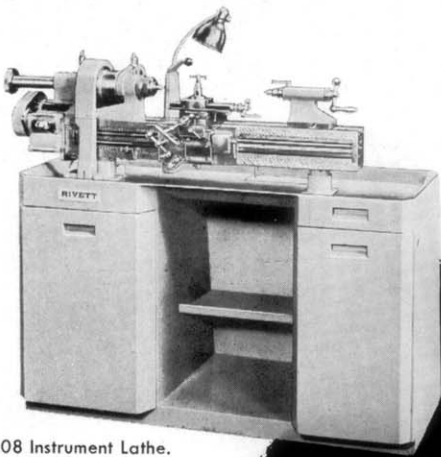
Max. dia. of work	4"
Min. number of threads per inch	6

TRAVERSE MILLER

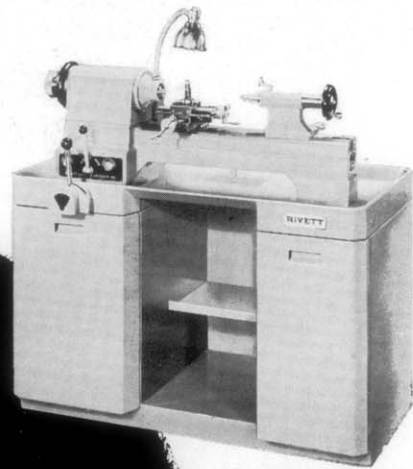
Vertical adjustment	23 ³ / ₈ "
Spindle speeds with auxiliary motor overhead drive	120-1295 rpm

TURRET

Length of base	11"
Travel of slide after indexing, max.	411 ¹ / ₁₆ "
Number of tool holes in head	6
Diameter and depth of tool holes	3 ³ / ₄ " x 1 ¹ / ₈ "



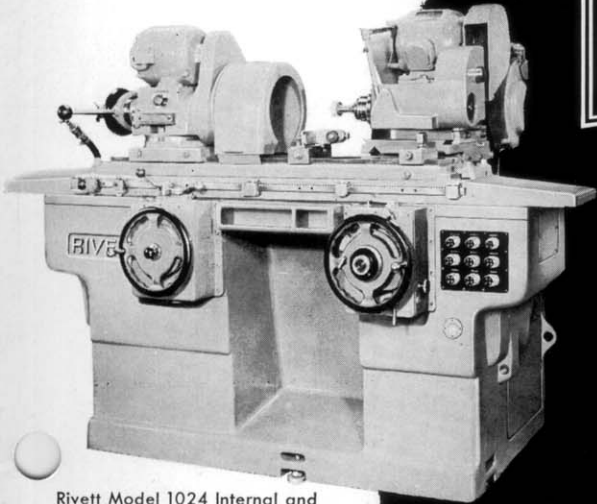
Rivett Model 608 Instrument Lathe. 8½" swing, 18¼" between centers, 1" collet capacity. Write for Bulletin 608.



Rivett Model 918 "Steelway" Cabinet Lathe. 9" swing, 18" between centers, 1½" draw-in, or 1⅝" stationary collet capacity. Write for Bulletin 918-SL.

RIVETT

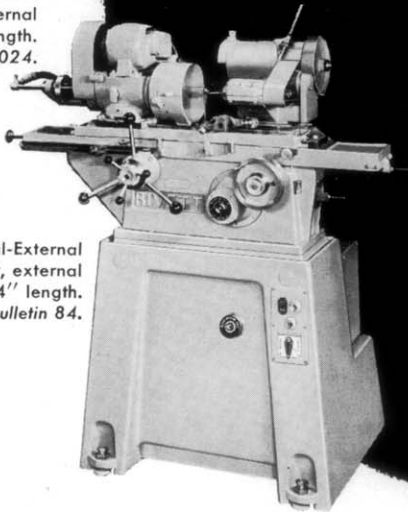
A SYMBOL OF ACCURACY IN MACHINE TOOLS



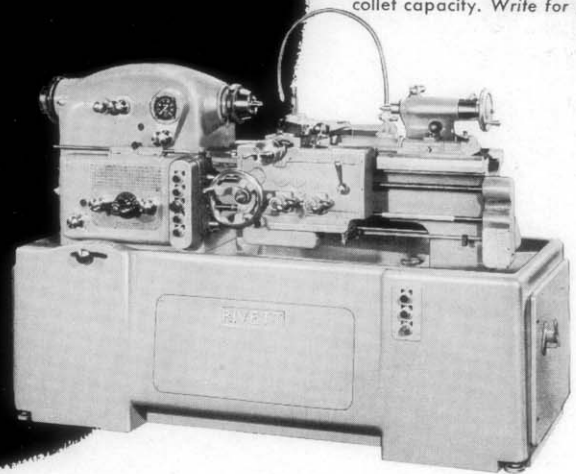
Rivett Model 1024 Internal and Universal Hydraulic Grinder. Hole grinding ⅛" to 9" dia.; external grinding to 12" dia. up to 21" length. Write for Bulletin 1024.



Rivett Model 918 "Steelway" Turret Lathe. 9" swing, 20" between collet and turret face, 1⅛" draw-in, or 1⅝" stationary collet capacity. Write for Bulletin 918-ST.



Rivett Model 84 Internal-External Grinder. Hole grinding and, or, external grinding up to 3" dia. and up to 4" length. Write for Bulletin 84.

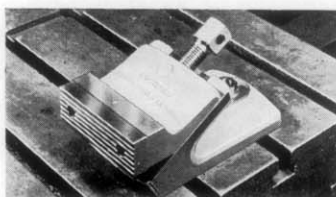


Rivett Model 1020S Precision Toolroom Lathe. 12½" swing, 20" between centers, 1⅛" draw-in collet capacity. Write for Bulletin 1020.

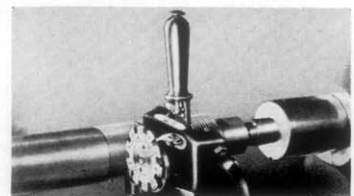
RIVETT ACCESSORIES



DRAW-IN COLLETS — are made in many standard and special styles for lathes, millers, grinders, etc. Carried in stock. Write for Bulletin 100



LOCKJAW — all purpose work clamps furnished in several sizes for planers, shapers, millers, etc. Eliminates expensive clamping and bolting. Write for Bulletin 140



THREAD TOOL — used on any screw-cutting lathe, and takes the place of single point threading tools. Ten teeth of a cutter are progressively indexed to form a perfect finished thread. Write for Bulletin 110

RIVETT

LATHE & GRINDER, Inc.

BRIGHTON 35, BOSTON, MASSACHUSETTS

