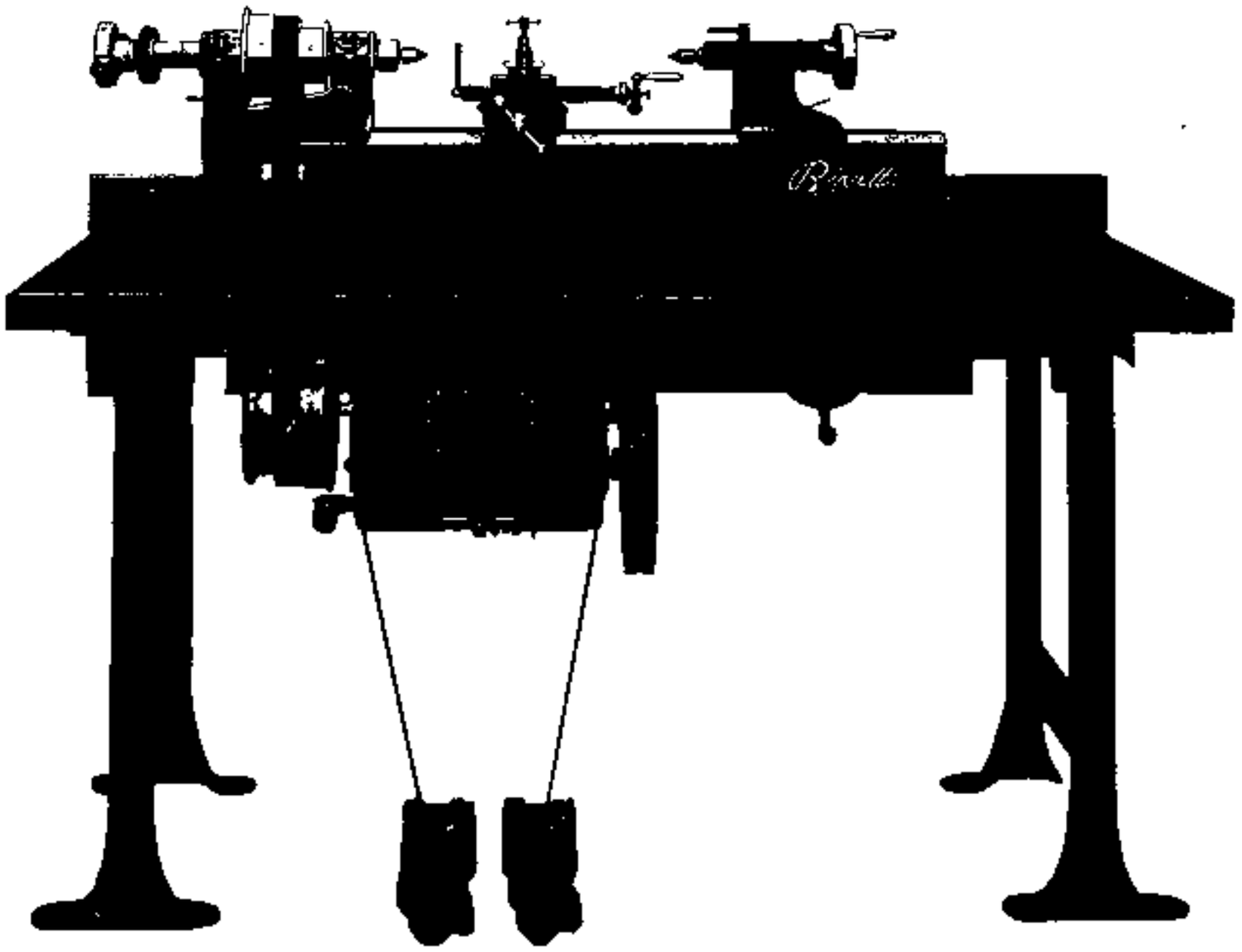
BULLETIN 507-B

Rivett

PLAIN PRECISION BENCH LATHES

SERIES 507



"If it's Rivett it's Right"

Rivett
LATHE AND GRINDER
CORPORATION
BRIGHTON DISTRICT OF BOSTON MASS
U. S. A.

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

THE MILLING ATTACHMENT will be found of value in the tool-room, experimental shop, laboratory and for light production on gears, pinions, milling cutters, end mills, reamers, counterbores and taps. Profiling, flat milling and keyseating can conveniently be done. Having three sides, which may be moved in as many planes, and four swivels, which may be set at any angle, there is hardly a combination of motions that cannot readily be obtained. Work can be held in the indexing work spindle and holder, strapped directly to the top slide of the slide rest, held in the vise mounted on the angle iron or directly on the top slide of slide rest or strapped directly on the angle iron. The vise and angle iron are useful adjuncts, see Figs. 25 and 27.

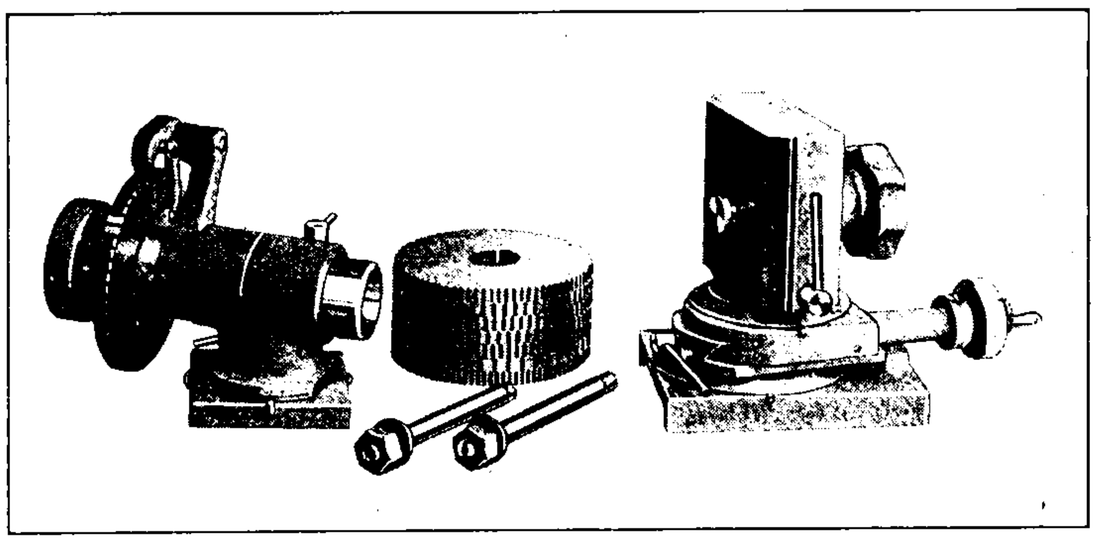


Fig. 17. Milling Attachment

The cutter is held in the lathe headstock, either in collets in the cases of straight or tapered shank end mills, keyway cutters, counterbores, etc., or by arbors held in collets in the cases of saws, gear cutters, and milling cutters having holes. Thus, a range of cutter speeds equal to the headstock spindle speeds can be obtained.

The milling attachment consists of a shoe scraped to fit the top of the lathe bed, fastened firmly thereto by two studs, nuts and washers in any desired location on the bed. On top of the shoe is a swivel which may be set at any angle within the full 360° and locked in position by an eccentric binder. This swivel carries a slide having a travel of 1⅛″ actuated by a feed screw having a large adjustable dial graduated in thousandths, the same as on the slide rest. On this slide is a support for the regular compound slide rest swiveling independently to any angle through the full 360° and locking in position by an eccentric binder. The slide rest is fastened to the support by a T bolt tightened by a handwheel and is positioned through a wide range by the adjustable guide plate on the base of the slide rest. The second feed motion is by the lower slide rest screw and provides a cross feed of 4⅞₁₆″. The third swivel is the swivel on the slide rest carrying the top slide having a travel of 5″ actuated by the upper slide rest screw. This slide is usually used for vertical feed or an angular feed having a vertical component.

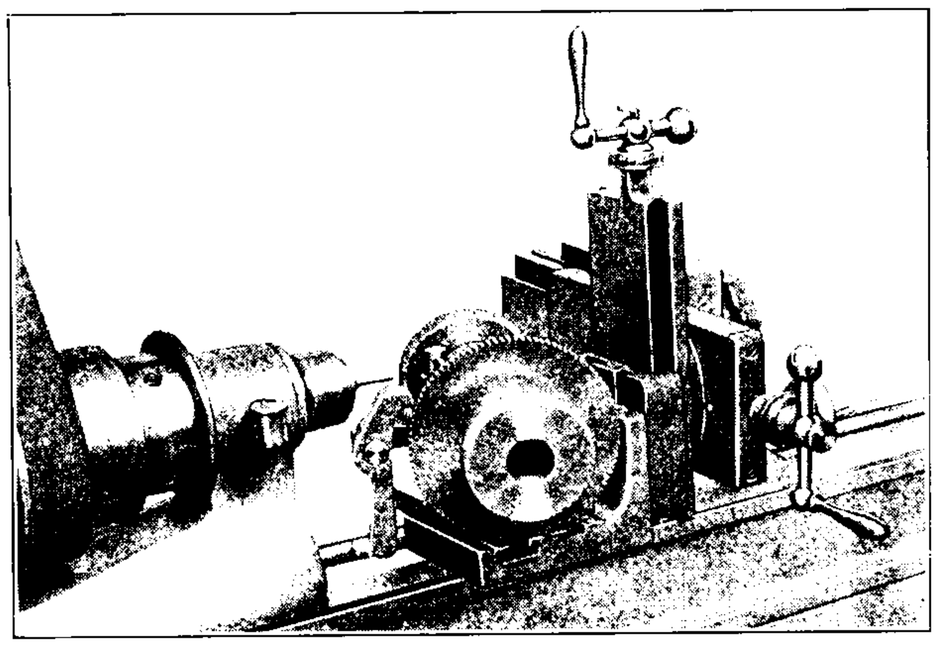


Fig. 18. Milling Attachment Index Head on Angle Iron and Milling Attachment Graduating Bevel Dial

The work spindle or quill holder is mounted on the top slide and fastened by two T washers engaging the T slots in the top slide. The quill holder swivels to any angle and is locked in place by an eccentric binder.

The work-carrying spindle is held in the holder by a clamp screw and consists of a non-rotating sleeve carrying the indexing pawl and a revolvable spindle carrying an index plate and draw-in spindle. The mouth of the spindle is ground to take the same collets as the headstock.

Eight index plates with divisions of 45-56-60-64-72-80-84-100 are included giving a range of all the dividing numbers usually needed.

The eccentric binders and T bolts are very powerful and the various slides can be firmly locked, making the attachment remarkably rigid.

The swivel dials are all cut on bevels so that they are easily read and are graduated in degrees with "lubber" lines permitting readings of full 360°.

The dials on the feed screws are of large size graduated in thousandths of an inch and movable so that they may be set at zero or any other desired reading.

The net weight of the attachment complete is 29 lbs.

For mounting and driving equipment — See Rivett Bulletin 120-A

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MILLING ATTACHMENT — Continued

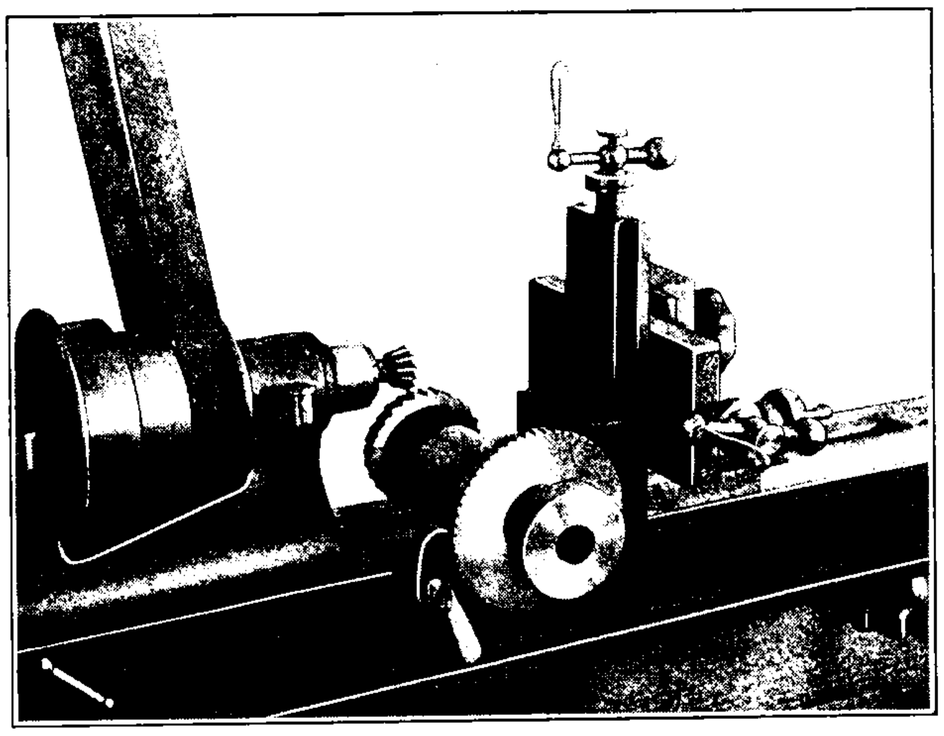


Fig. 19. Head end view of Milling Attachment set to mill teeth in a Milling Cutter

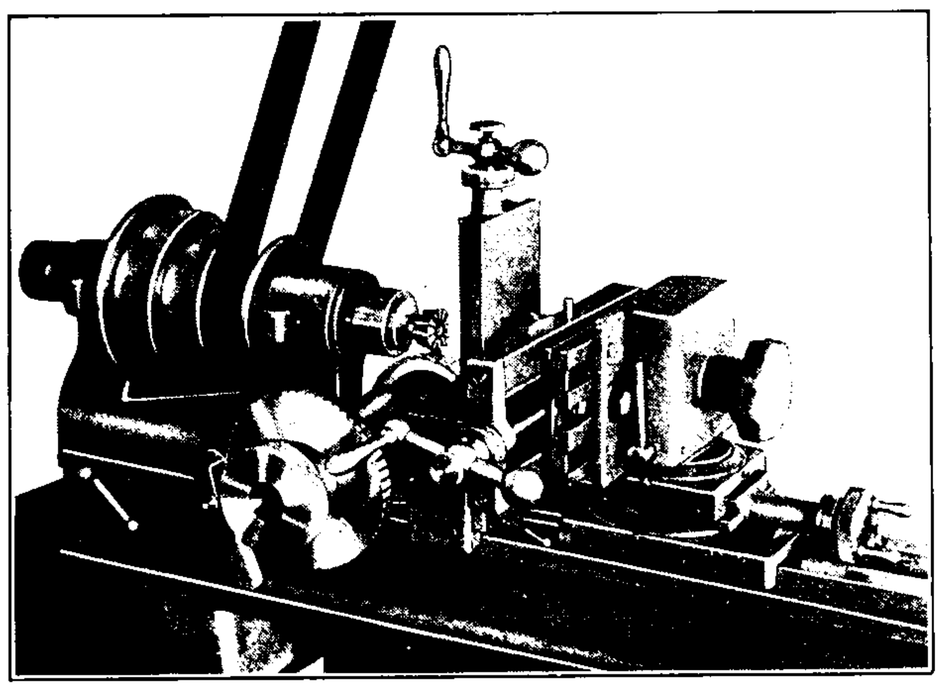


Fig. 20. Tail end view of Milling Attachment set to mill teeth in a Milling Cutter

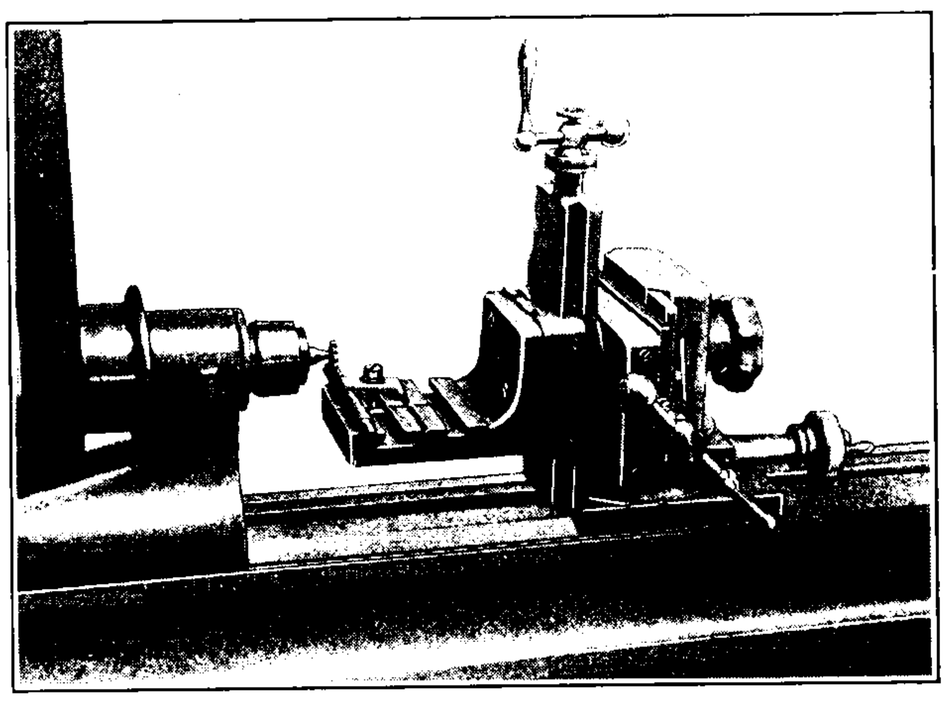


Fig. 21. Milling Attachment with Angle Iron set as plain miller to mill keyway in shaft

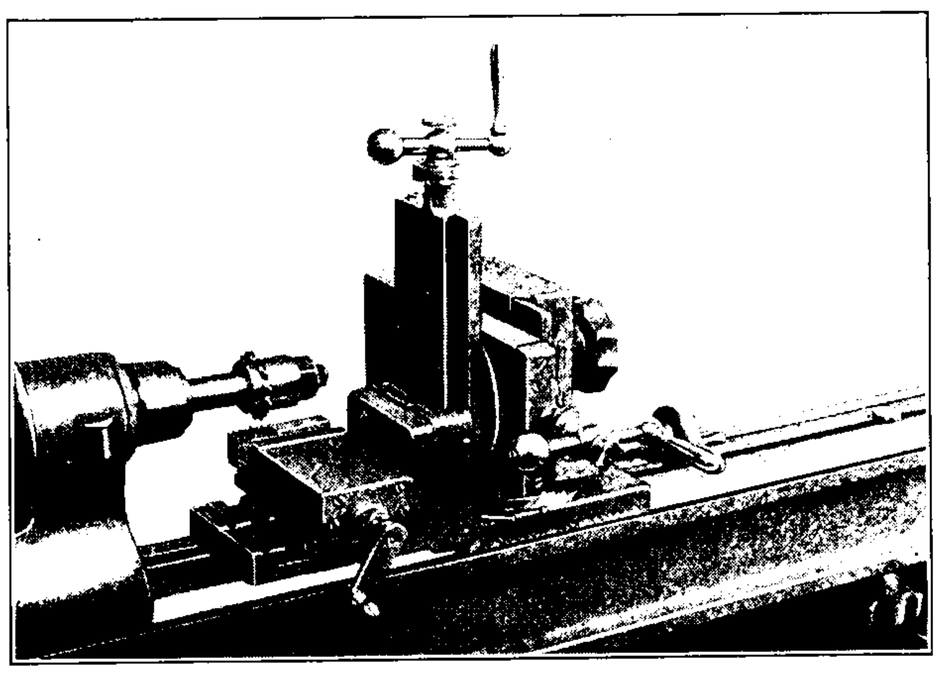


Fig. 22. Milling Attachment with Angle Iron and Vise set as plain miller for milling teeth in rack

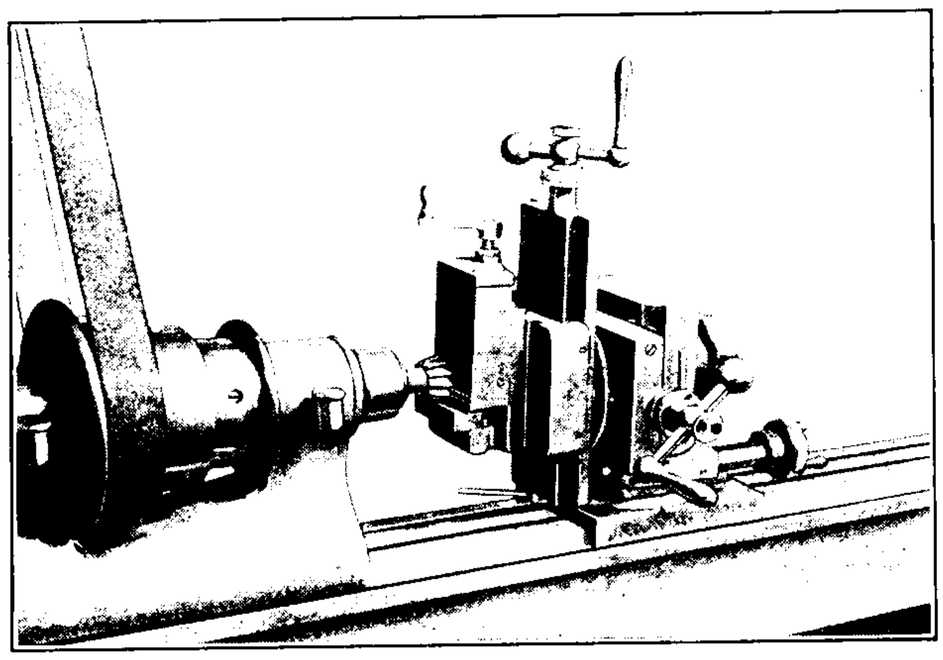


Fig. 23. Milling Attachment with vise set as plain miller for milling dovetail

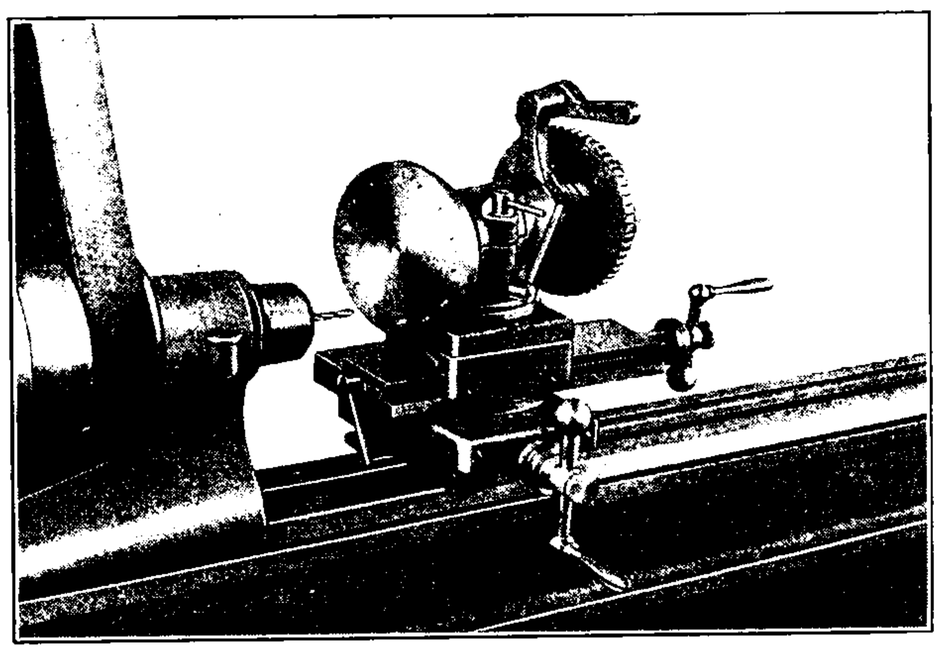


Fig. 24. Milling Attachment Index Head on compound slide rest, drilling equally spaced holes at an angle

For collets, step chucks, jaw chucks, etc. — See Rivett Bulletin 100-A

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

THE SLIDE REST VISE is a handy and powerful device for holding work during turning, milling, drilling and grinding operations. Its tongued base fits the T slot of the top slide of the slide rest, slotted face plate and angle iron, making its application universal. It is held by a T bolt. The jaws are of hardened steel, ground and removable, 1 3/32" wide, opening 1 3/4" and 9/16" deep. The movable jaw is dovetailed and gibbed. The net weight of the attachment is 3 lbs.

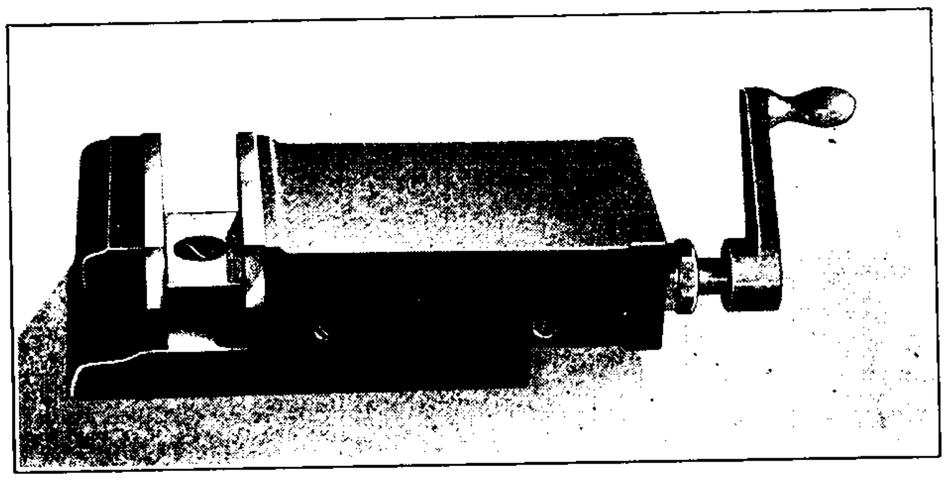


Fig. 25. Vise

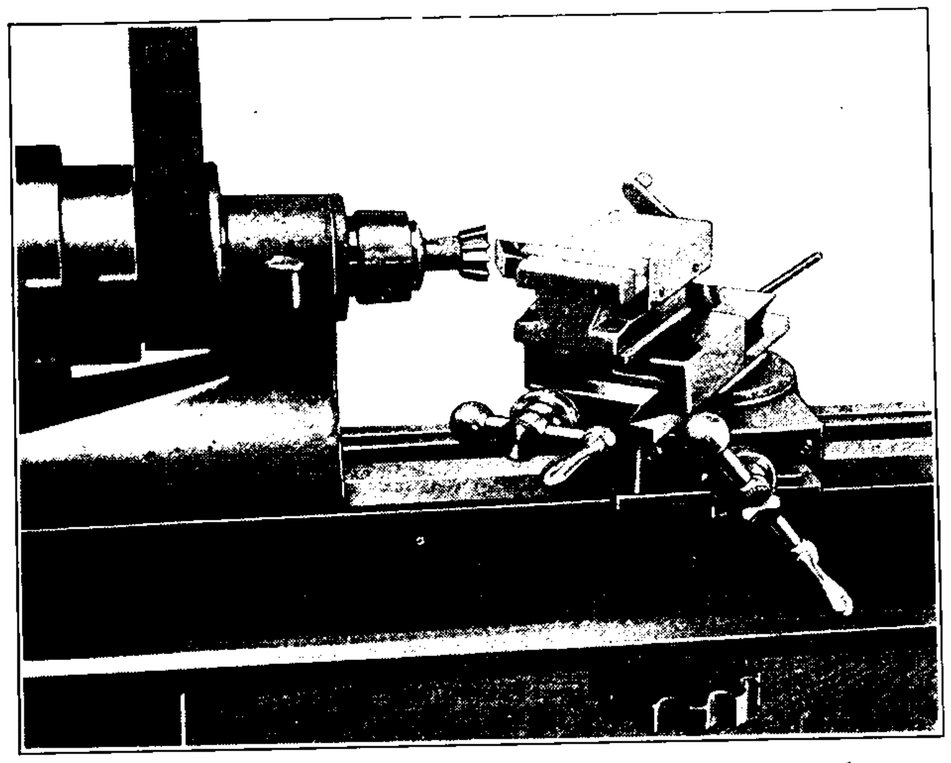


Fig. 26. Vise on Slide Rest, milling bevel on rectangular stock

THE ANGLE IRON is fastened to the top slide of the slide rest by two T washers engaging the T slots therein, thus providing a horizontal and swivelling milling table on which work can be held by straps. The table of the angle has two T slots of the same size and spacing as the top slide of the slide rest and in addition three V grooves two of which are parallel to the slots and the third at right angles to the other two, in which cylindrical work can be clamped. The indexing head and vise also can be held on the table of the angle iron, adding materially to the range of the milling attachment and to the usefulness of the angle iron. The angle iron finds use also when mounted on the slide rest apart from the milling attachment. The net weight is 3½ lbs.

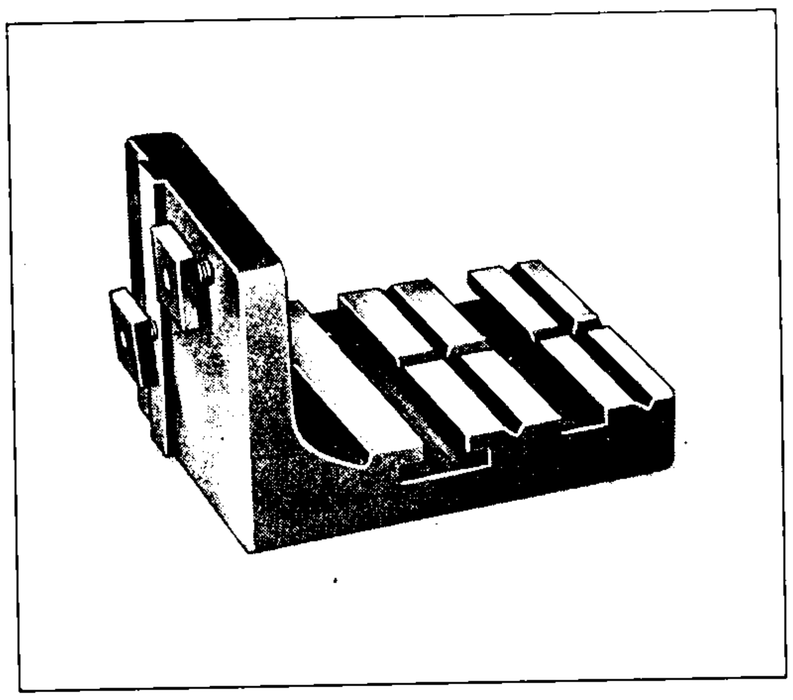


Fig. 27. Angle Iron for Milling Attachment

ARBORS are useful for holding work by the hole in either the headstock spindle or milling attachment spindle using collets to grip the shanks. Being centered on both ends they may be used between lathe centers. They are also used for holding milling cutters, saws, etc. in the lathe headstock for milling. The holding diameter of each arbor is ground and has a spacing collar tightened by a hexagonal nut, all so proportioned that cutters from 1/32" wide to maximum capacity are rigidly held. The other end is ground to a convenient size for holding in round hole collets.

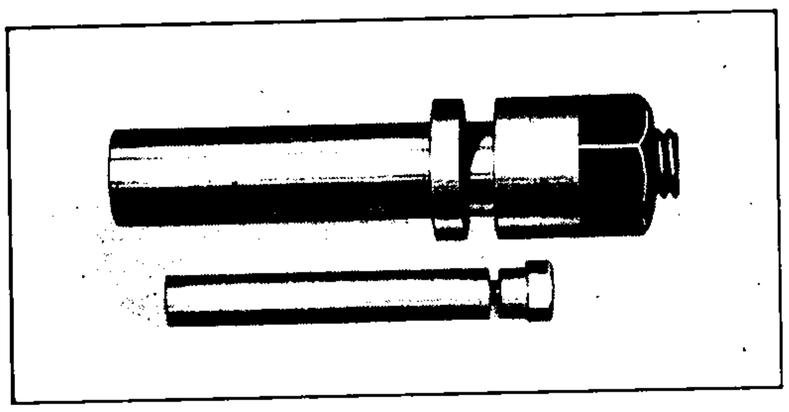


Fig. 28. Arbors

TABLE D — DIMENSIONS OF STANDARD ARBORS

Nominal Diameter	Holding Width		Shank Diameter	Length Over All
	Minimum	Maximum		
3/16"	0	1/8"	3/8"	2 7/8"
1/4"	0	3/16"	1/2"	2 7/8"
5/16"	0	1/4"	9/16"	3 1/4"
3/8"	1/32"	5/16"	5/8"	3 3/8"
7/16"	1/32"	3/8"	5/8"	3 1/2"
1/2"	1/32"	7/16"	3/4"	3 5/8"
9/16"	1/32"	1/2"	3/4"	3 7/8"
5/8"	1/32"	9/16"	3/4"	4"
3/4"	1/32"	5/8"	3/4"	4 1/4"
7/8"	1/32"	11/16"	3/4"	4 3/8"
1"	1/32"	3/4"	3/4"	4 1/2"

—[*page twelve*]—

For mounting and driving equipment — See Rivett Bulletin 120-A

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

THE LEVER CHUCK CLOSER is recommended where many parts of the same size are to be chucked in collets or step chucks. It opens and closes the collets or step chucks by movement of the lever. It gives positive and uniform tension, and reduces very materially the wear on collet and draw-in spindle threads.

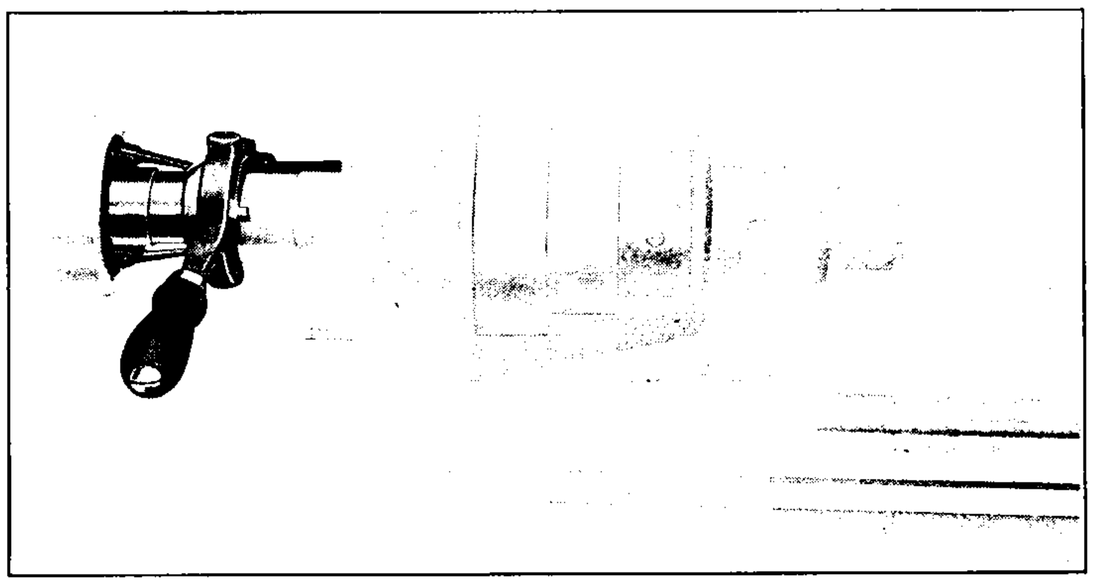


Fig. 29. Lever Chuck Closer

It consists of a bracket bolted to a pad on the rear of the headstock; a lever swiveling in this bracket and carrying two pins engaging a groove in a hardened steel cone sleeve which is free to slide longitudinally on the draw-in spindle; a circular plate, fitting the recess in the draw-in spindle knob, carrying two hardened bell-crank fingers; and a hardened steel sleeve for the draw-in spindle, one end of which is in contact with the short levers of the bell cranks, and the other end of which makes firm contact with the headstock spindle. When the lever is moved to the left, the cone sleeve is moved longitudinally to the left, the cone forcing apart the long arms of the bell-crank fingers. The short arms move and bring pressure against the draw-in spindle sleeve, but as this sleeve is restrained by its contact with the headstock spindle, pressure is exerted by the finger plate on the draw-in spindle knob, causing the draw-in spindle to move slightly but powerfully to the left, pulling with it the collet or step chuck, which, being drawn into a taper, is closed. Moving the lever to the right releases the pressure and opens the collet or step chuck. The desired tension is obtained by turning the draw-in spindle knob, and after this first adjustment, the finger plate is locked to the draw-in spindle knob by tightening two slotted screws. It will be noted that the regular draw-in spindle Fig. 4 is used with lever chuck closer — a saving in cost reflected in the price. The lever chuck closer is simple and powerful. It interferes in no way with any other attachment and its use is strongly recommended. The net weight of the attachment is 2½ lbs.

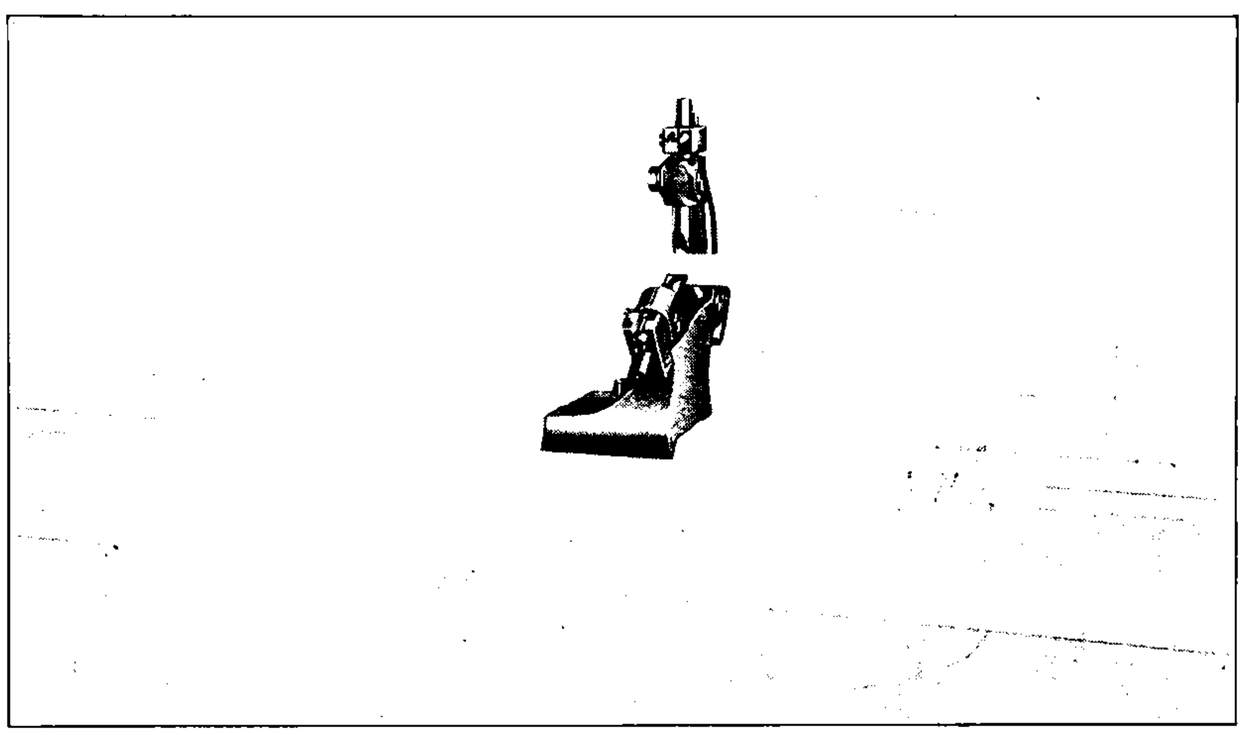


Fig. 30. Steady Rest

THE STEADY REST is indispensable for supporting long cylindrical work held between lathe centers, and for supporting work when performing an operation on one end which prevents the use of tailstock center. The body of the steady rest is a casting, planed to fit the top of the lathe bed, and provided with a T bolt and nut. The three jaws are made of round brass ½" diameter, beveled at the ends, and slide in reamed holes in the main casting. Approximate adjustment is made by sliding the jaws by hand. Fine setting is by screw adjustment. Maximum capacity 3" diameter work. Net weight 5½ lbs.

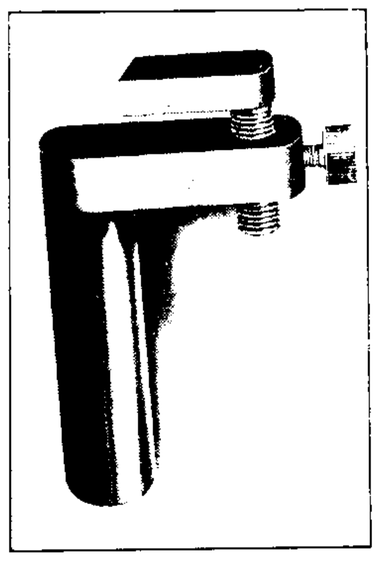


Fig. 31. L Rest

THE L REST fits the tee rest base, Fig. 12 and is indispensable for reaching difficult corners and recesses with a hand tool. The small arm is threaded so that it can be adjusted for height, independently of the adjustment in the base of the tee rest and also swiveled to the desired position. It is locked by a thumb screw. Width of arm rest 1⅛". Length of screw 1⅛".

THE TRIANGLE REST or sawing table is used in the tee rest base as a work rest when grinding, sawing or slitting. It is adjustable in height from ¾" below the center line of the lathe to ½" above. The V groove is useful when slotting heads of screws and when holding other round work. Length of sides 4⅛".

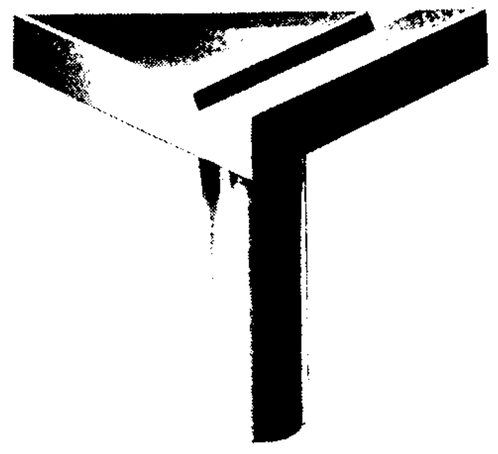


Fig. 32. Triangle Rest

—[*page thirteen*]—

For collets, step chucks, jaw chucks, etc. — See Rivett Bulletin 100-A

THE SUPPORT FOR GRINDING ATTACHMENT is designed for both the external and internal attachments and is, therefore, presented as a separate unit. If one of the grinding attachments is ordered, the support must be ordered with it, but if both attachments are ordered, one support only is necessary. The saving thus effected is reflected in the prices. The support is planed and scraped to rest squarely on the top slide of the compound slide rest, with a tongue for alignment which will fit either slot in the slide rest. A T bolt and eccentric shaft clamp the support rigidly to the slide. The grinding attachments slip on to the round shaft, which is part of the support.

It will be seen that the grinding attachments will rock on the support shaft. This motion is controlled by two set screws which are also used for adjustment to bring the grinding attachment to the lathe center line.

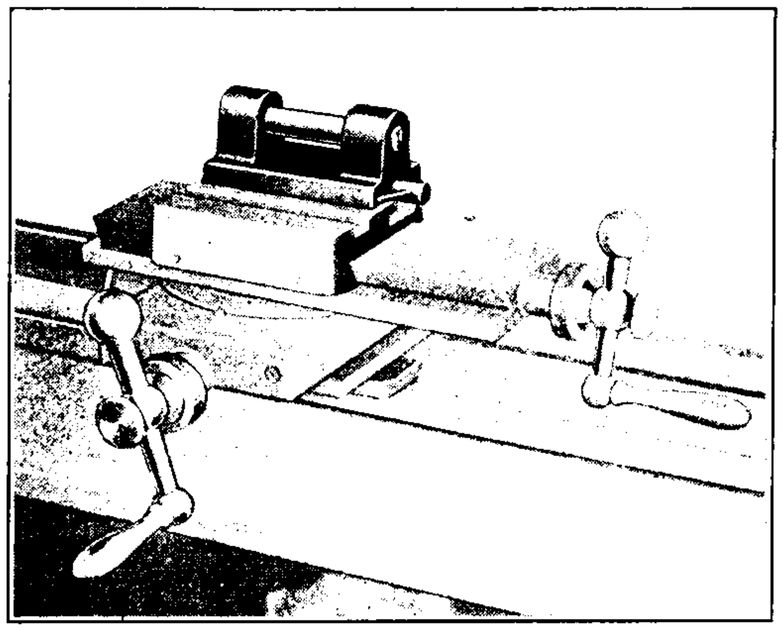


Fig. 33. Support for Grinding Attachments

THE INTERNAL GRINDING ATTACHMENT, while primarily for grinding holes, either straight or taper, can be used for external grinding, sharpening cutters, reamers, end mills, counterbores, etc., lapping and drilling at high speed with small drills held in drill chuck, see Fig. 36.

The spindle is $\frac{3}{8}$″ diameter and $7\frac{3}{4}$″ long, hardened on both ends. The wheel end has a No. 4 P & W Taper hole for the insertion of wheel mounts, wheel arbors and drill chucks. A cross hole is provided for forcing out the arbors with the drift pin furnished with the attachment. On the opposite end is a hard rubber revolving handle to grasp when traversing the spindle. The spindle is driven from the grinding countershaft by a grooved pulley, having a pitch diameter of $1\frac{1}{4}$″. Four speeds may be attained, two from the lathe countershaft and two by interchanging the pulleys driving the grinding countershaft; the available speeds are thus 1100-2580 and 3000-7100 R.P.M. The maximum traverse of the spindle is 2″. This may be shortened by an adjustable stop collar. The spindle is carried in two hard bronze bearings which have straight holes and are split to adjust for wear by screws which compress the split housings. Two oil cups provide lubrication. Cross, longitudinal and angular feeds are accomplished by the feed screws of the slide rest on which the attachment is mounted. The adjustable stop on the cross slide of the slide rest will be found useful to limit the feed on duplicate work.

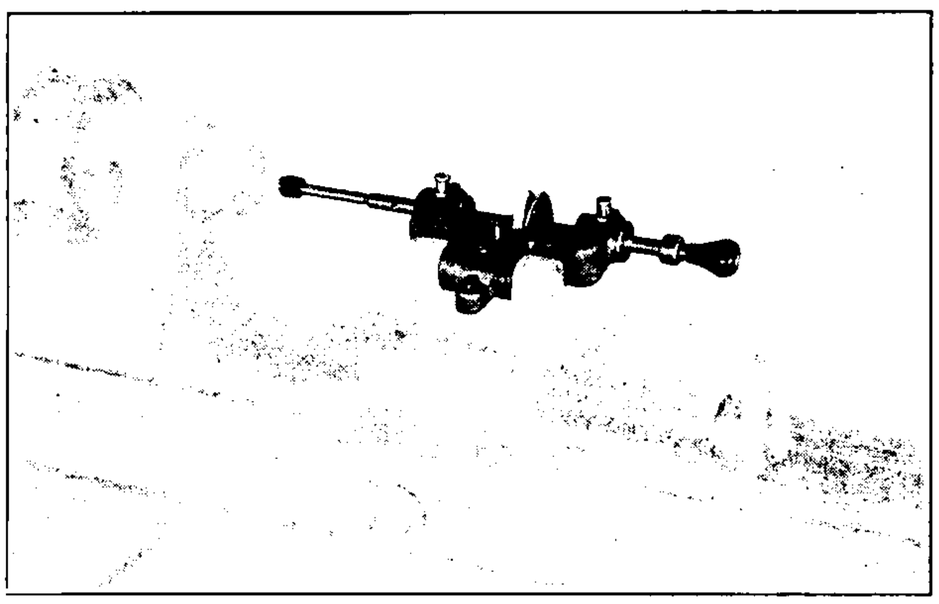


Fig. 34. Internal Grinding Attachment

Two wheel arbors are furnished, one each No. 1 and No. 2. See Fig. 37.

The grinding countershaft, see bulletin 120-A, is used for driving this attachment or individual motor drive may be provided.

The index finger is used as a tooth rest when sharpening cutters with the grinding attachment. Cutters as large as 3″ diameter can be sharpened, and as the tooth rest can be placed in any position, right or left cutters or end mills can be readily handled. The finger is made of spring tempered steel, of correct curve, set in a cylindrical rod fitting the base of the tee rest. This is one of the cases where an extra clamping bolt assembly is required, one to hold the slide rest and one to hold the tee rest base.

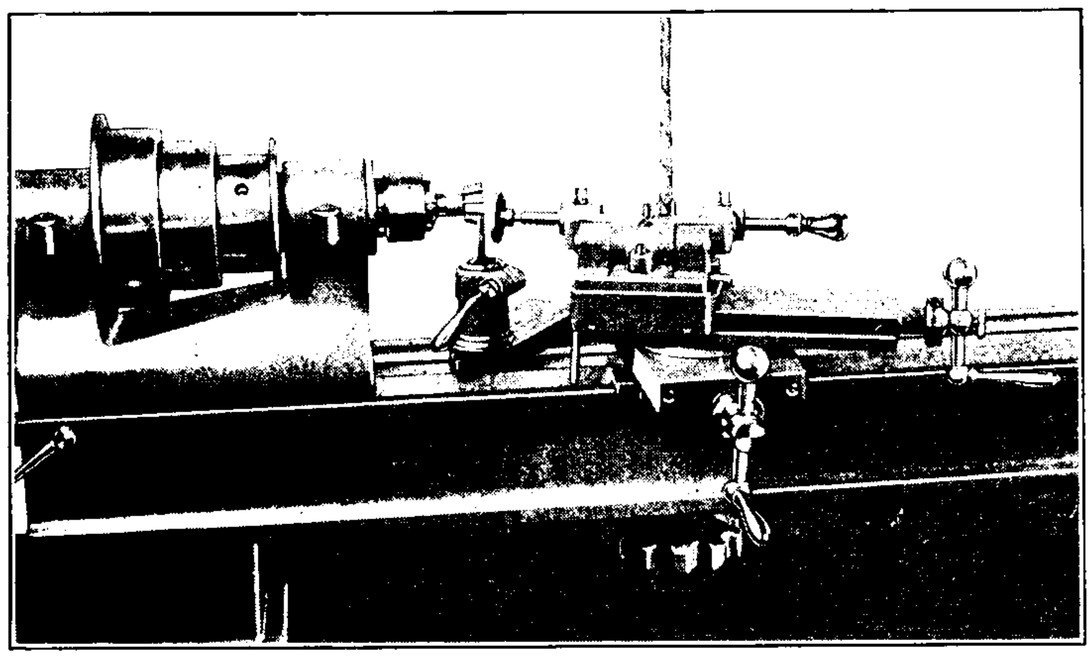


Fig. 35. Lathe arranged for sharpening cutters. Index finger held in tee rest base

For mounting and driving equipment — See Rivett Bulletin 120-A

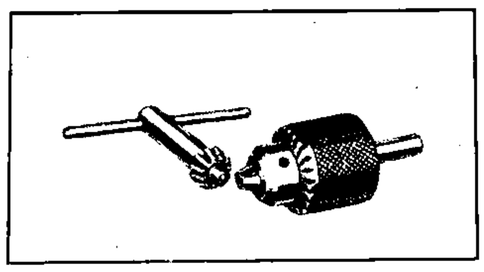


Fig. 36. Drill Chuck for Internal Grinding Attachment

THE DRILL CHUCK for internal grinding attachment is convenient for holding wheel arbors and small drills for grinding and drilling. The drill chuck illustrated is a standard Jacobs No. 0, capacity 0 to 1/8", mounted on a shank to fit the tapered hole in the internal grinding attachment spindle. A chuck wrench is included.

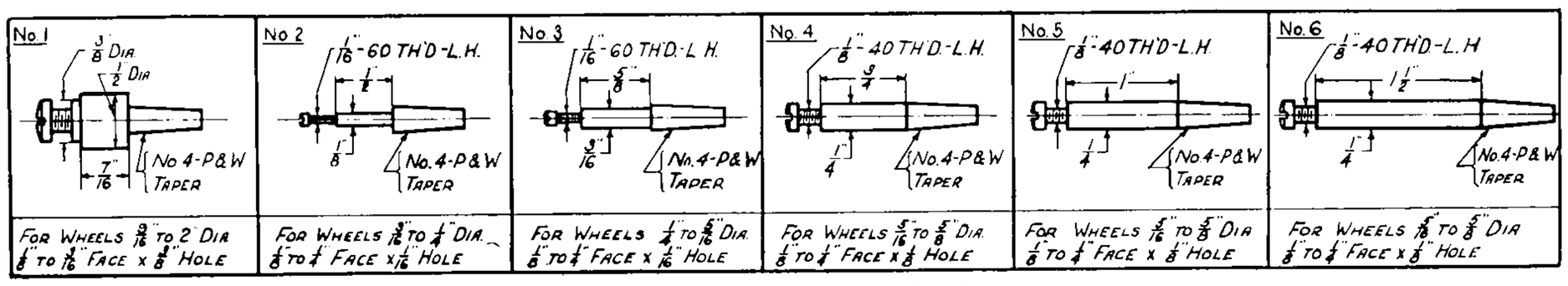


Fig. 37. Standard Grinding Wheel Arbors

GRINDING WHEEL ARBORS are tapered to fit the hole in the internal grinding attachment spindle. They should be slightly smaller in diameter than the holes to be ground and as short as will reach the back of the holes. Furnished with wheel-retaining screws.

THE EXTERNAL GRINDING ATTACHMENT is for external or cylindrical, face and surface grinding. Longitudinal or angular feed is accomplished by the upper slide rest screw, and cross feed by the lower slide rest screw. The attachment mounts on the support for grinding attachments, Fig. 33. Two adjusting screws in the bracket provide means for raising or lowering the grinding wheel in relation to the center line of the lathe.

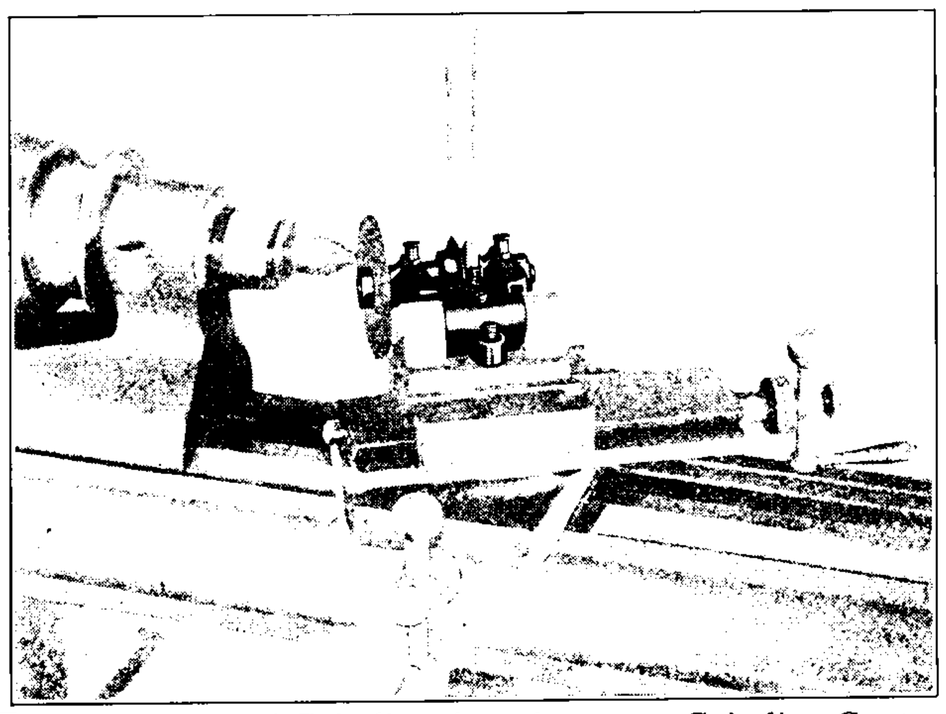


Fig. 38. External Grinding Attachment — Grinding Center

The 3/8" diameter spindle runs in two hard bronze bearings which have straight holes and are split to adjust for wear by screws which compress the split housings. Two oil cups supply lubrication. End thrust is taken by two fibre washers placed between the sides of the pulley and the bearing housings, a threaded nut on the pulley providing the necessary adjustment. The pitch diameter of the pulley is 1 7/8" and four speeds of 740, 1650, 2000 and 4750 R.P.M. are obtainable when the countershaft is driven at the normal suggested rates. The grinding wheel is mounted directly on the spindle and is held by a collar flange and screw. Wheels with 3/8" diameter holes should be used. Wheel widths up to 1/4", and diameters up to 3" can be accommodated. The grinding countershaft, see bulletin 120-A, is used for driving this attachment, or individual motor drive may be provided.

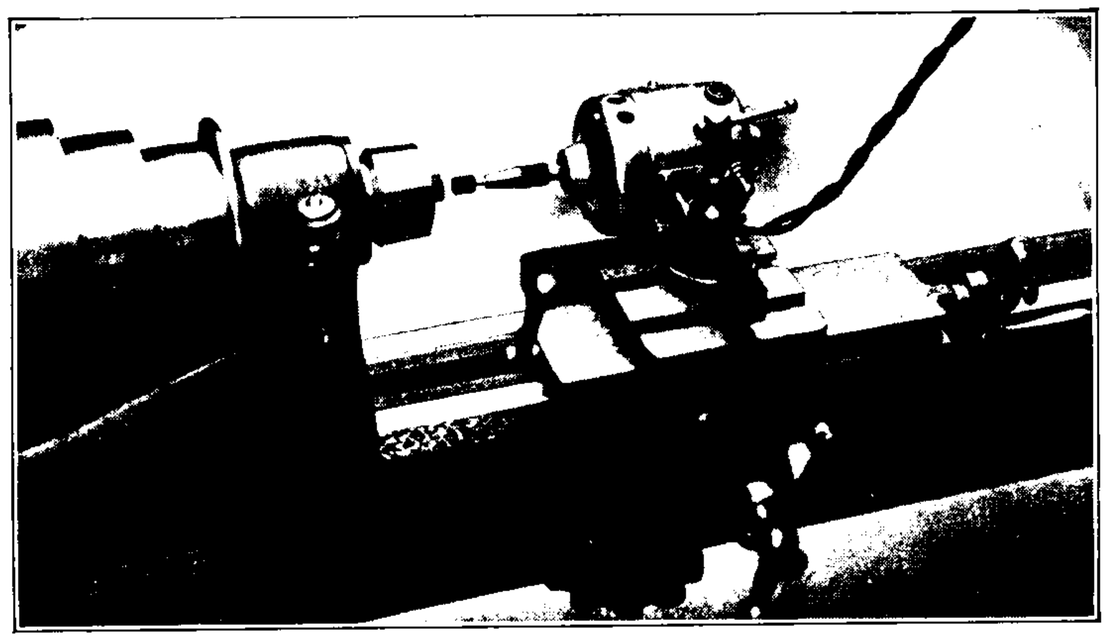


Fig. 39. Electric Motor Slide Rest Grinding Attachment

THE ELECTRIC MOTOR SLIDE REST GRINDING ATTACHMENT is very convenient for internal and light external grinding where the lathe installation provides no overhead drive for the regular internal and external grinding attachments. The cord attaches to a lamp socket. Supplied for either 105-115 A.C. or D.C. or 220-230 A.C. or D.C. Specify voltage when ordering. The spindle speed is 20,000 R.P.M. The armature shaft is provided with chuck of the collet type for holding mounted grinding wheels.

The upper slide rest feed screw provides traverse for the wheel and the lower screw provides feed adjustment. The graduated slide rest swivel permits setting for internal or external angular grinding such as grinding taper holes or centers. An assortment of mounted wheels for internal and external work is furnished with the attachment.

—[*page fifteen*]—

For collets, step chucks, jaw chucks, etc. — See Rivett Bulletin 100-A

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

THE TURRET ATTACHMENT — HAND INDEXING is valuable for making quantities of small duplicate parts where several operations are to be performed. A lathe equipped with turret, cutting-off and forming slide, lever chuck closer, and oil pan and floor legs, Fig. 43, is an inexpensive, efficient and accurate hand screw machine of 3/4" round stock capacity.

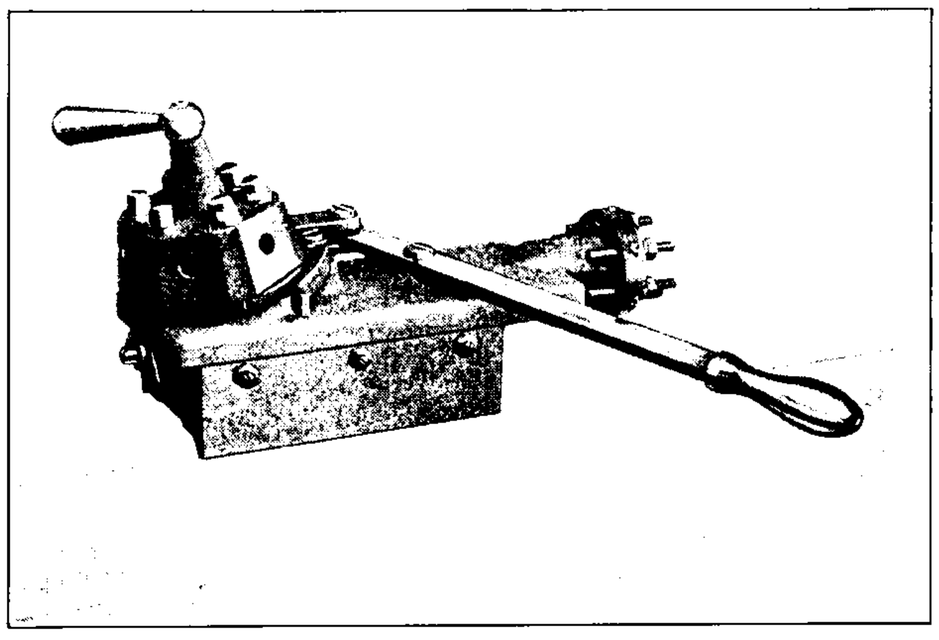


Fig. 40. Turret Attachment—Hand Indexing

The head is tilted to provide ample clearance for all turret tools. Tools are accurately located and clamped in the head by a powerful sleeve device operated by hex head studs and a wrench provided. The head is indexed by hand and securely locked by the binding handle. Six adjustable stops numbered to correspond with the turret holes, are indexed by hand, the independent stops adding to the convenience of setting the tools. The slide, dovetailed and gibbed to the base, is moved by a long hand lever. The turret is clamped in any position on the lathe bed by two studs.

TABLE E — SPECIFICATIONS OF HAND INDEXING TURRET ATTACHMENT

Length of base	7 1/2"
Length of slide	11 7/8"
Travel of slide, maximum	3"
Number of holes for tools	6
Diameter and depth of tool holes	3/4" x 1"
Distance between turret face and headstock spindle, maximum	14 1/2"
Net Weight	40 lbs.

THE TURRET ATTACHMENT — AUTOMATIC INDEXING. Independently adjustable stops are carried in a head which is geared to the turret mechanism and revolves with it. Operation is by long hand lever. The head is of the flat type with six tool holes 3/4" diameter taking box tools, tap and die holders and other turret tool equipment of standard sizes as made by Brown & Sharpe, Warner & Swasey and others. It has the same tool-clamping and head-locking devices as the hand indexing turret.

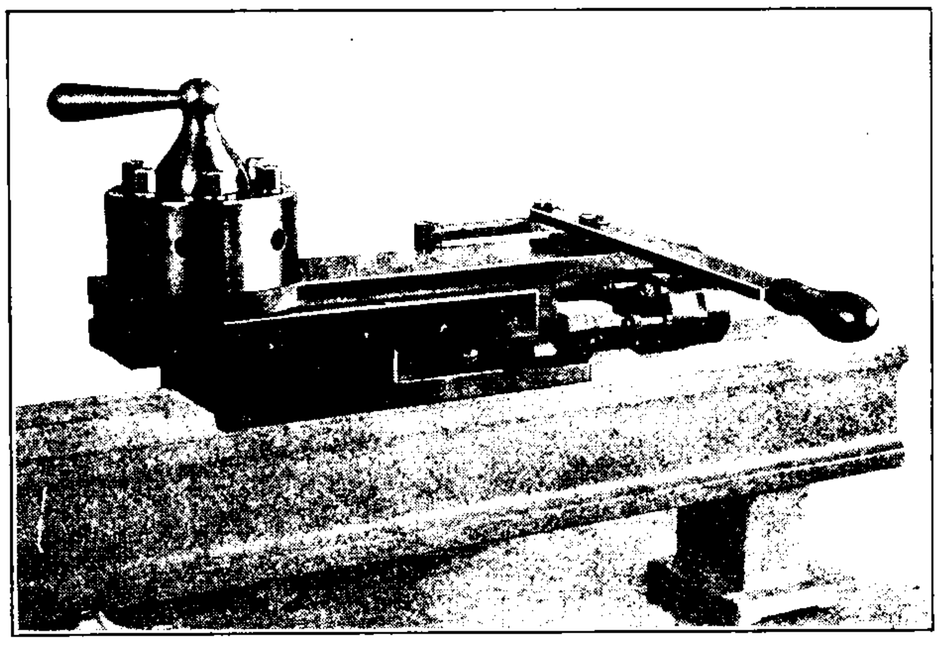


Fig. 41. Turret Attachment — Automatic Indexing

TABLE F — SPECIFICATIONS OF AUTOMATIC INDEXING TURRET ATTACHMENT

Length of base	9 5/8"
Length of slide	15"
Travel of slide, maximum	3 3/4"
Travel of slide, used in indexing	1 5/16"
Travel of slide, available for work	2 7/16"
Number of holes for tools	6
Diameter and depth of tool holes	3/4" x 1"
Distance between turret face and headstock spindle, maximum	13 1/4"
Net Weight	44 lbs.

THE OIL PUMP AND PIPING consists of an adequate oil pump to bolt to the back of the lathe bed, a countershaft pulley for driving the pump, intake piping with strainer, output piping with three swivel joints, shut-off cock and nozzle. It is usually employed with the oil pan on work requiring a copius flow of cutting oil. The strainer is immersed in the well of the oil pan. Net weight 14 lbs.

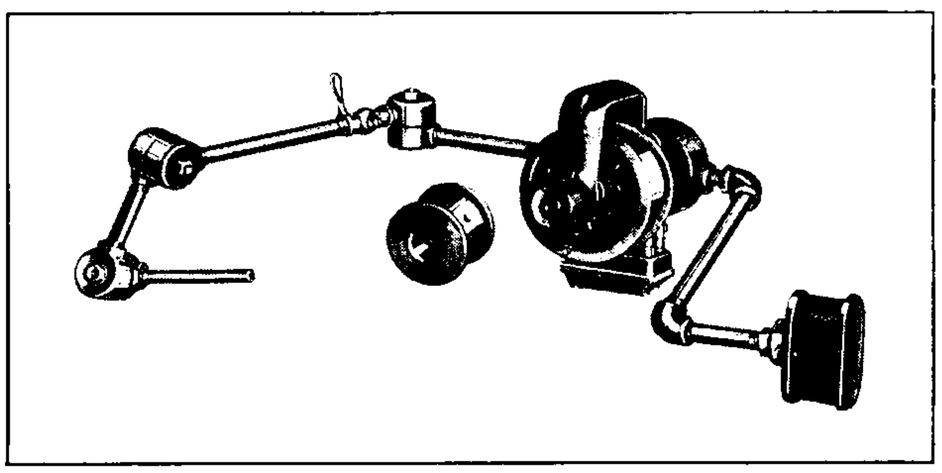


Fig. 42. Oil Pump and Piping

—[*page sixteen*]—

For mounting and driving equipment — See Rivett Bulletin 120-A

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

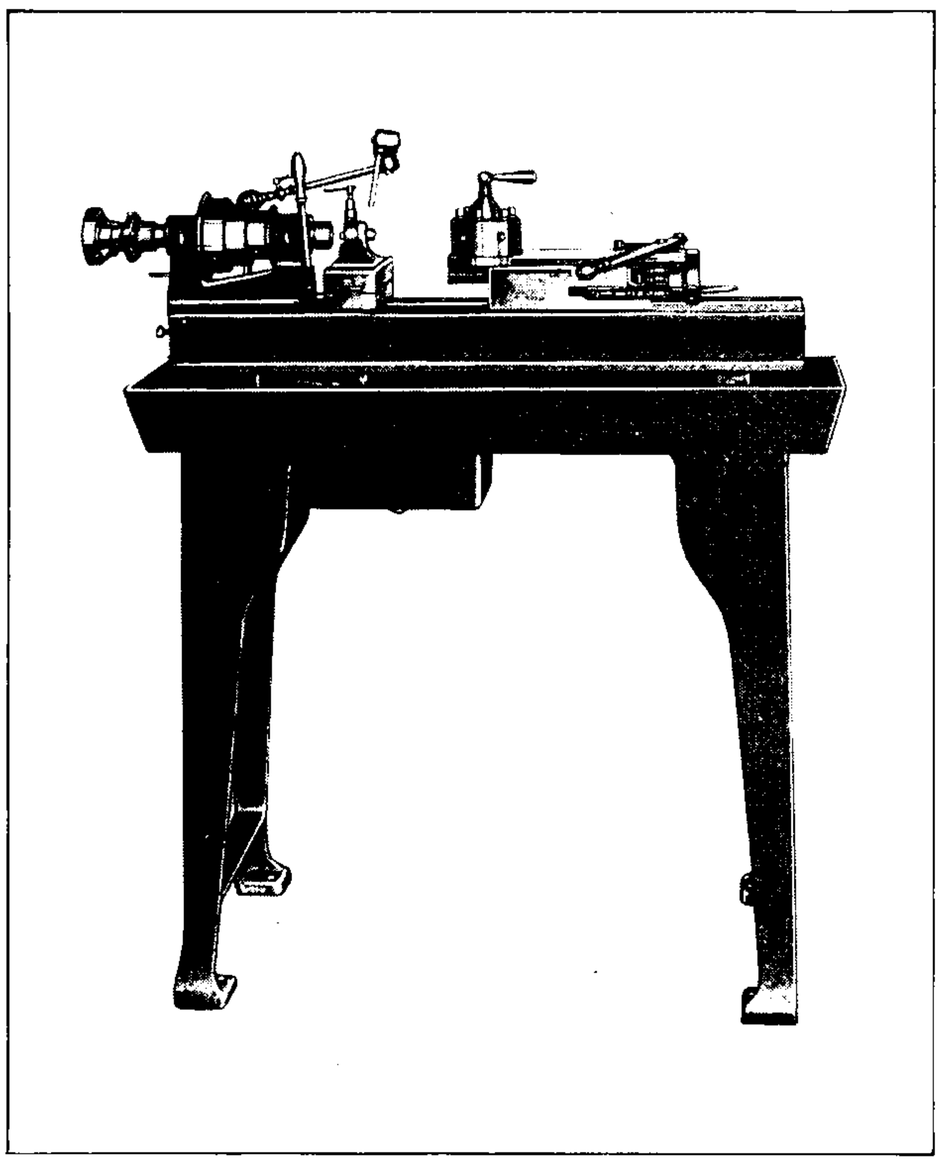


Fig. 43. Lathe with Lever Chuck Closer, Cutting-off and Forming Slide, Turret Attachment-Automatic Indexing, Oil Pan, Floor Legs, Oil Pump and Piping

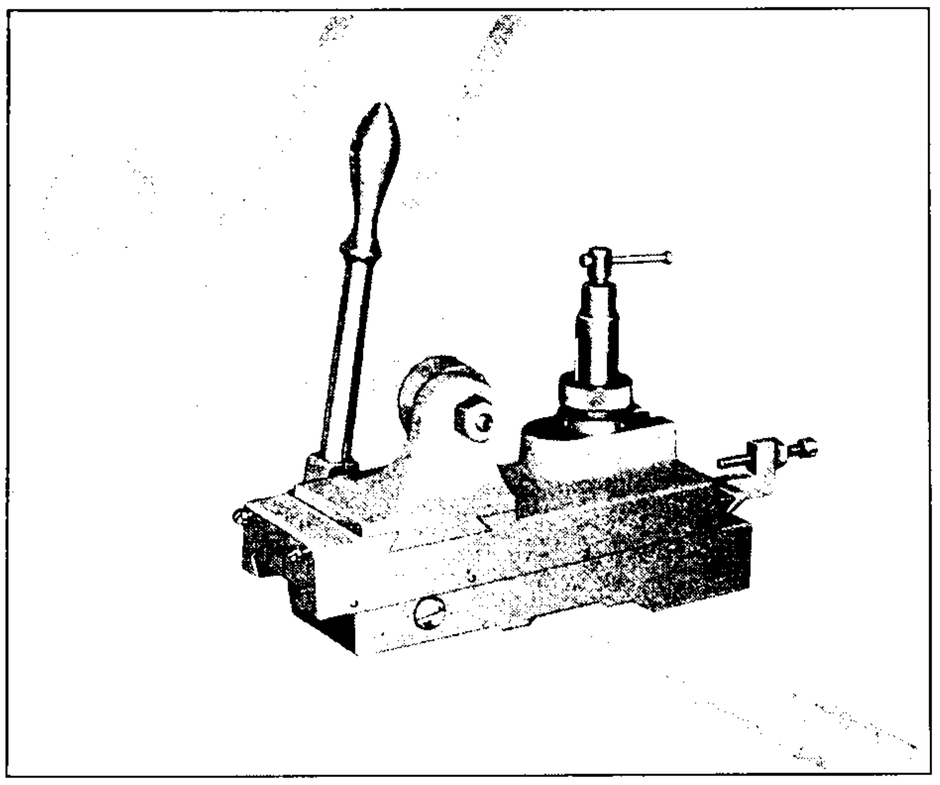


Fig. 44. Cutting-off and Forming Slide

THE CUTTING-OFF AND FORMING SLIDE, fits crosswise on the lathe bed and is held by a stud, washer and nut. Dovetailed and gibbed to the base is a cross slide with a movement of 3½", accomplished by a rack and pinion operated by a hand lever. A holder for a circular forming tool (Fig. 45) is dovetailed and gibbed to the cross slide and is adjustable in position lengthwise so that the forming tool can readily be located in proper relation with the cutting-off tool. A blank forming tool is furnished ¾" wide. Cuts of this width can be made without strain or chatter as this attachment is very rigid and powerful. An adjustable stop, limiting the travel of the cross slide, makes it possible to form any number of duplicate pieces to the same diameter. The rear tool holder is generally used for holding a cutting-off tool or a combination cutting-off and rounding tool, Fig. 46. The holder is clamped in a T slot which allows it a latitude of location of 1¾", and is provided with a threaded adjusting nut to raise and lower the tool.

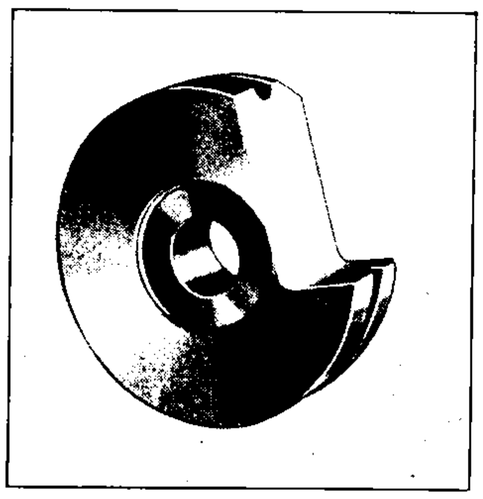


Fig. 45. Forming Tool

TABLE G — SPECIFICATIONS OF CUTTING-OFF AND FORMING SLIDE

Width of base	2 13/16"
Length of base	9"
Width of slide	3 1/16"
Length of slide	9"
Travel of slide	3½"
Diameter of circular forming tools	1 11/16"
Width of circular forming tools, maximum	¾"
Size of cutting-off tools, square	⅜"
Net Weight	21 lbs.

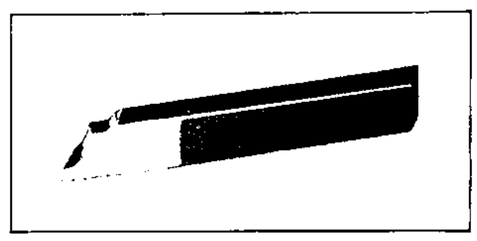


Fig. 46. Cutting-off and Rounding Tool

THE TAILSTOCK TURRET ATTACHMENT is valuable for production of small duplicate parts. It is mounted in the tailstock spindle by a taper shank carrying the attachment base. The turret head is rotated by hand and locked in position by index pin.

TABLE H—SPECIFICATIONS OF TAIL STOCK TURRET ATTACHMENT

Outside diameter of base and head	3 1/16"
No. of tool holes	4
Diameter and depth of tool holes	½" x ⅝"
Shank is standard taper fitting tailstock spindle.	
Net Weight	2½ lbs.

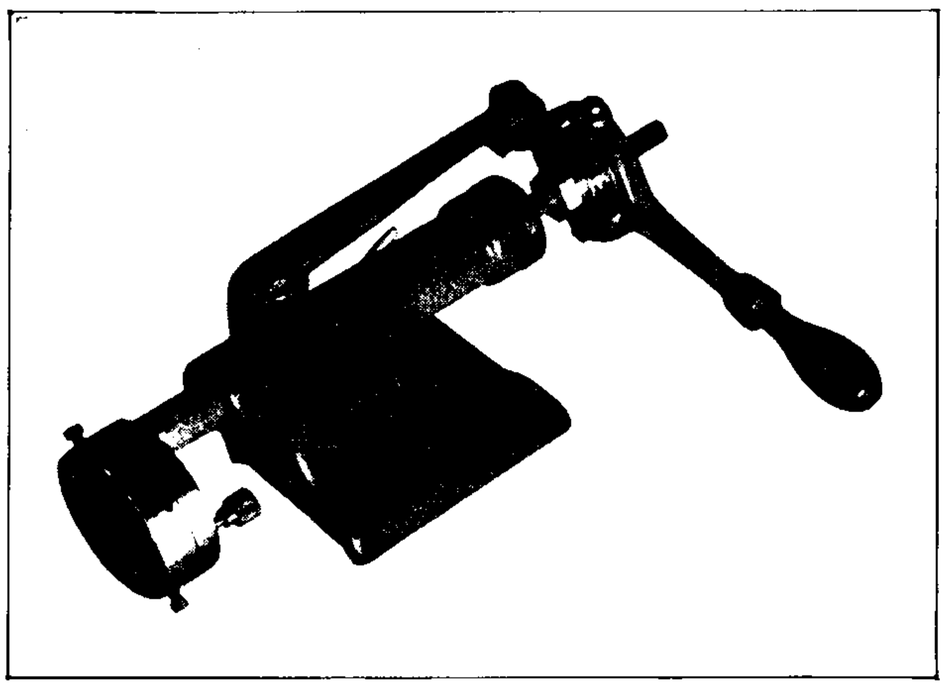


Fig. 47. Tail Stock Turret Attachment

—[*page seventeen*]—

For collets, step chucks, jaw chucks, etc. — See Rivett Bulletin 100-A

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

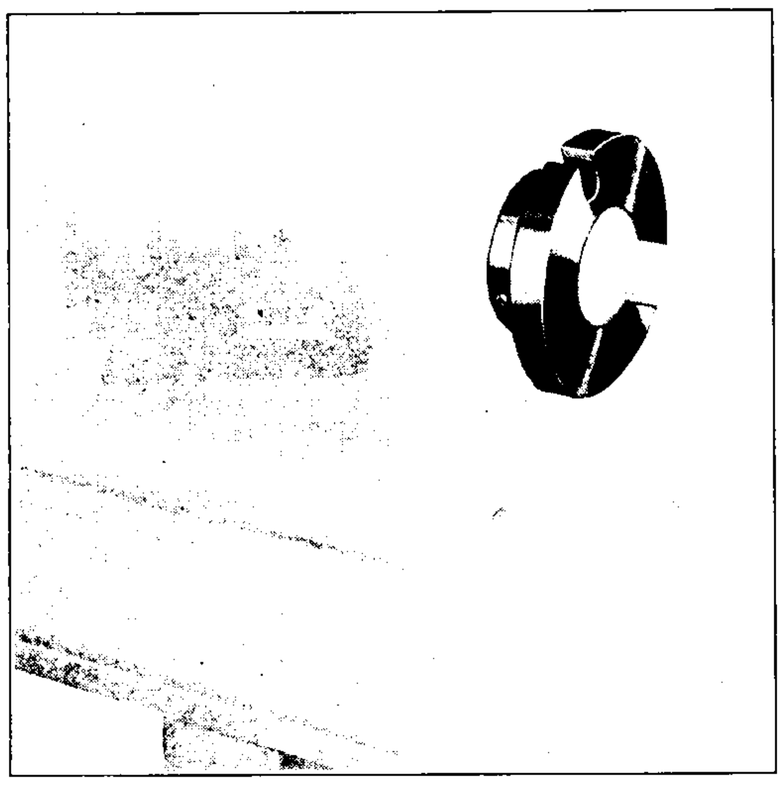


Fig. 48. Driving Plate

DRIVING PLATE is cast iron 3¾″ dia. with ⅜″ wide notch to receive a work-driving dog.

PLAIN FACE PLATES are cast iron in two sizes — 4¼″ dia. and 5⅛″ dia. They are used for mounting jaw chucks and special fixtures and may be recessed, drilled and tapped. Net weight 2½ lbs. and 3 lbs.

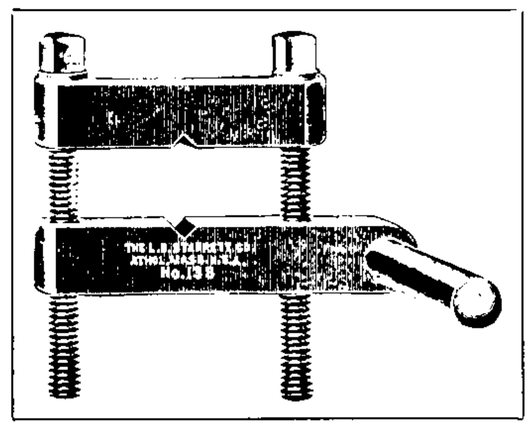


Fig. 49. Clamp Dog, ¾″ capacity

SLOTTED FACE PLATE is cast iron 7½″ dia. and has four plain slots and four T slots for fastening work. The T slots are the same size as those on top of slide rest so various attachments as vise and angle iron can be mounted. Weight 4 lbs.

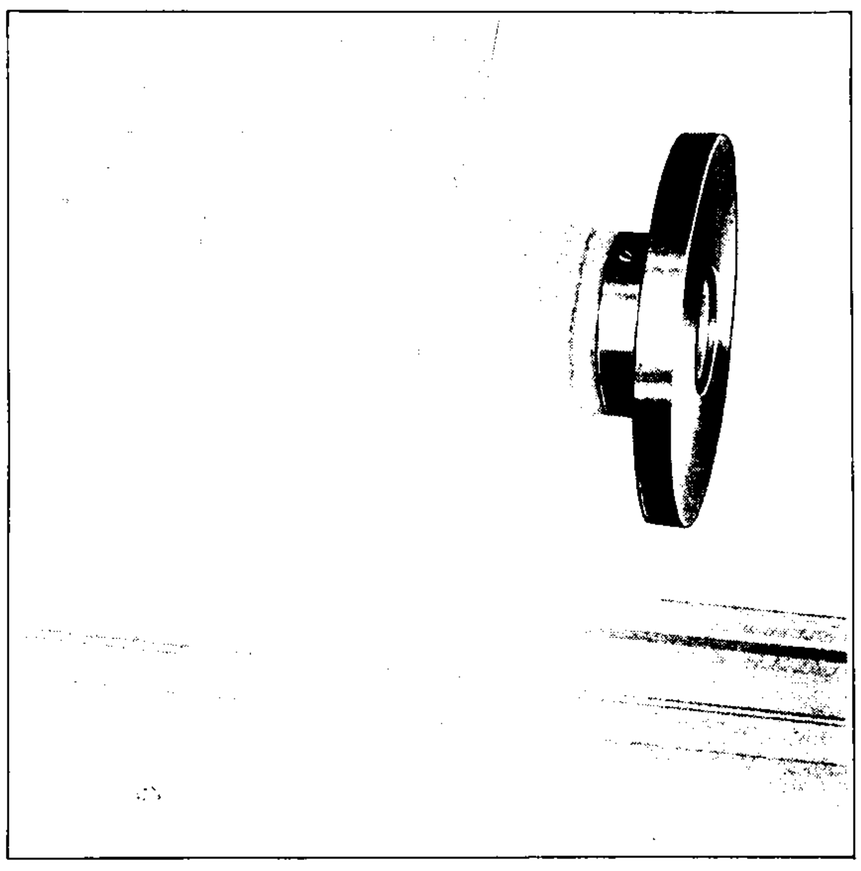


Fig. 50. Plain Face Plate

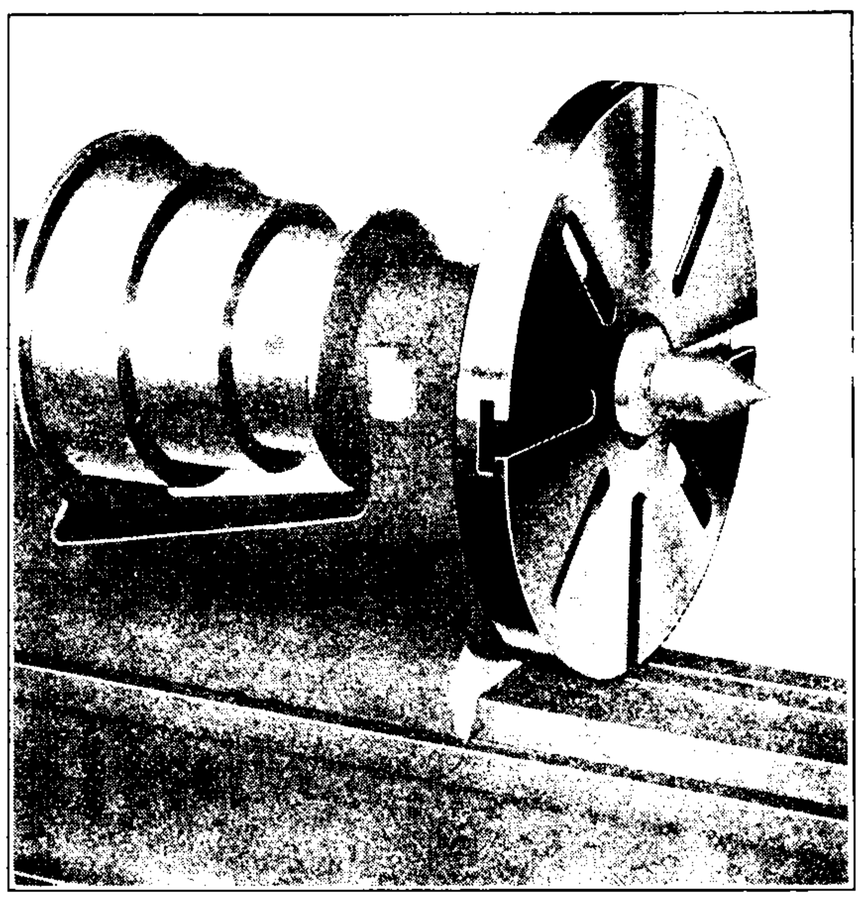


Fig. 51. Slotted Face Plate

THE TAPPED FACE PLATE is of cast iron 7″ diameter and is drilled and tapped with 49 holes ¼″-20 U.S.S. for convenient strapping of work, and for mounting of special fixtures. Weight 6 lbs.

THE TIN FACED LAP is of cast iron 7½″ diameter faced with pure tin ⅜″ thick. The tin facing is easily renewed when worn. Weight 14½ lbs.

THE EMERY FACE PLATE is of cast iron 7″ diameter with circular scoring for mounting emery paper discs. Weight 5½ lbs.

These plates are all fitted to the external taper of the spindle nose and are provided with two cone point screws which contact with the reverse 45° taper on the spindle and lock the plate securely irrespective of direction of rotation of spindle.

Fig. 52
Tapped Face Plate

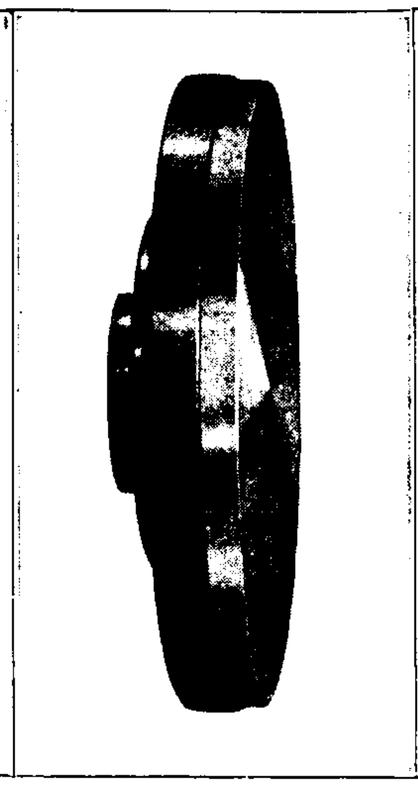


Fig. 53
Tin Faced Lap

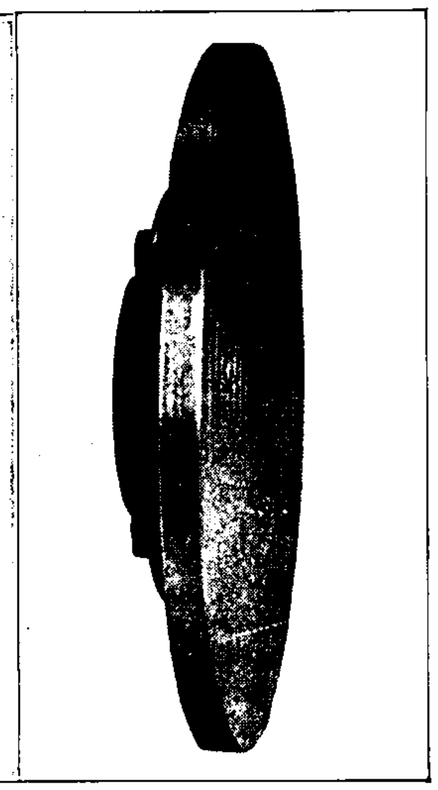


Fig. 54
Emery Face Plate

For mounting and driving equipment — See Rivett Bulletin 120-A

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

DRILL CHUCKS are offered in three sizes, 0 to 3/16", 0 to 5/16", and 0 to 1/2". Drill chucks for use in turret attachment, or in collet held in headstock, are mounted on straight shanks 3/4" diameter by 1 1/8" long. Drill chucks for use in tailstock of lathe, or in headstock center chuck, are mounted on taper shanks. These drill chucks are of standard make, of improved type, with hardened jaws. They are strong and accurate and are similar to Fig. 36.

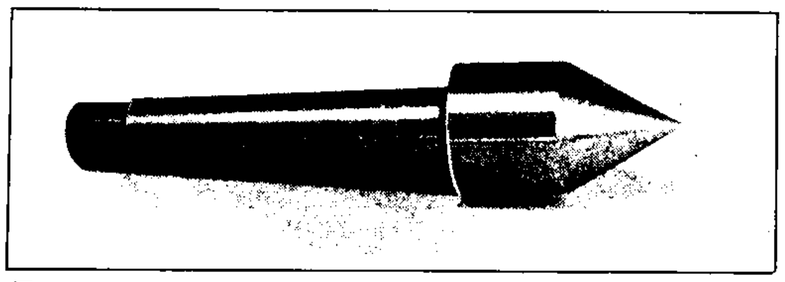


Fig. 55. Male Center — 27/32" diameter, 60° included angle, shank Rivett special 3° taper. Furnished hard for tailstock and soft for headstock

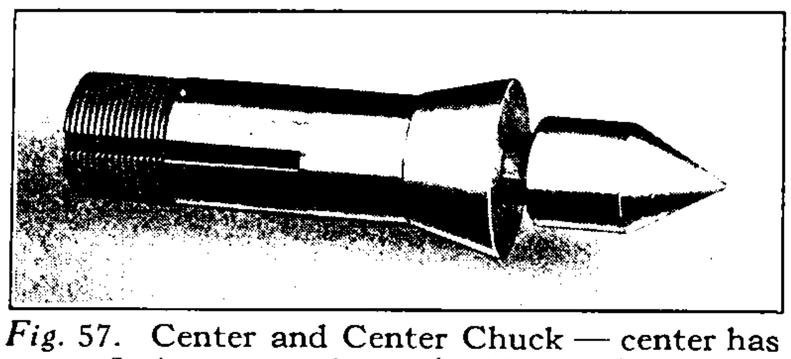


Fig. 57. Center and Center Chuck — center has taper fit in center chuck (solid collet). Center chuck fits headstock spindle

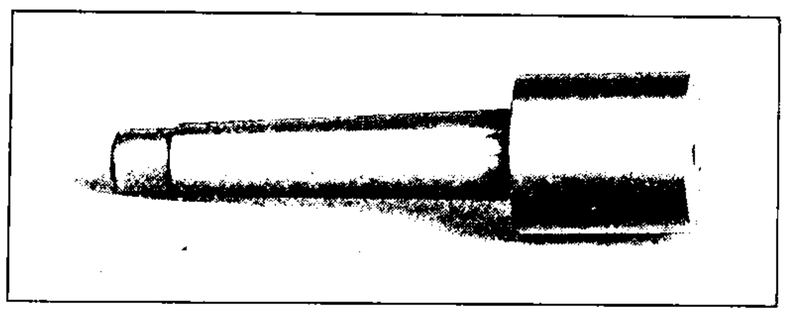


Fig. 59. Blank Center — head is soft, 1" diameter, 1 3/8" long and may be turned to desired form. Taper shank fits center chuck and tailstock spindle

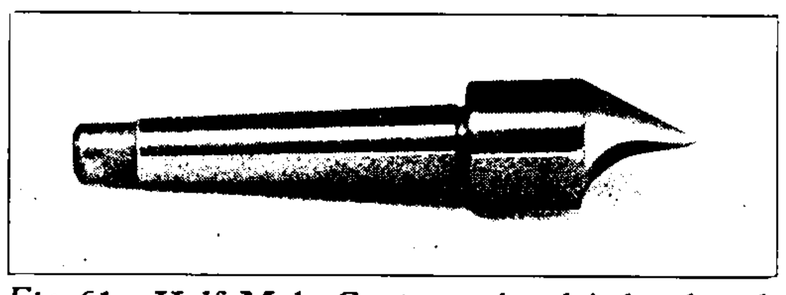


Fig. 61. Half Male Center — head is hardened, 27/32" diameter, half cut away leaving small point, to provide clearance for turning tool when facing ends of work. Also useful for external grinding

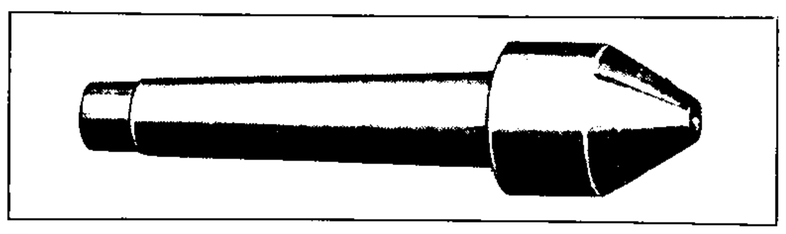


Fig. 63. Female Center — head is hard, 27/32" diameter and is ground to 60° external angle. The hole, 3/16" maximum diameter, is 60° included angle

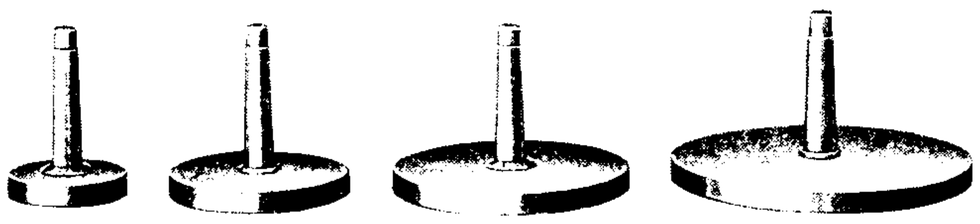


Fig. 65. Drill Plates 2", 3", 4", 5", in diameter

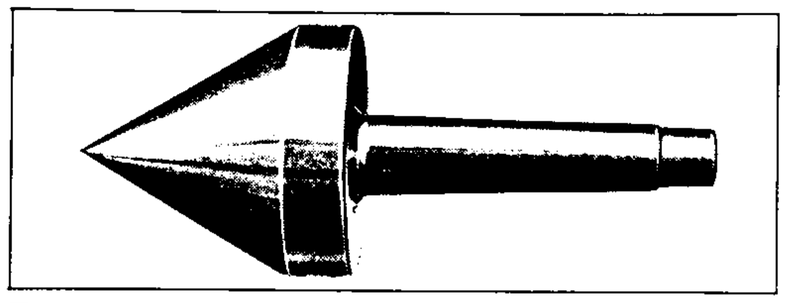


Fig. 56. Large Male Center — head is hard, 1 1/2" diameter with 60° included angle. Useful for turning tubing or work with holes too large to run on standard centers

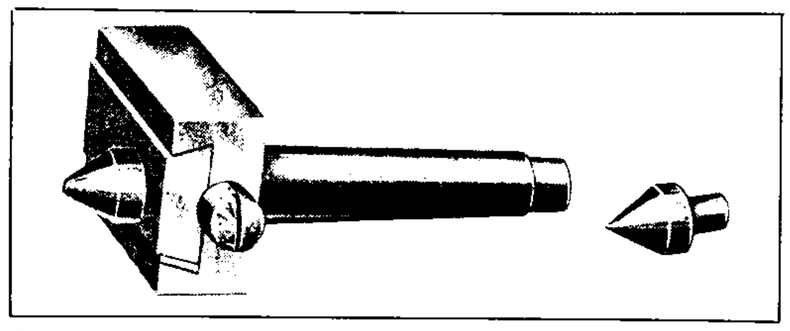


Fig. 58. Adjustable Off-Center — center point is carried on slide with screw adjustment allowing maximum offset of 1/4". Furnished with removable male and female centers 1/2" diameter

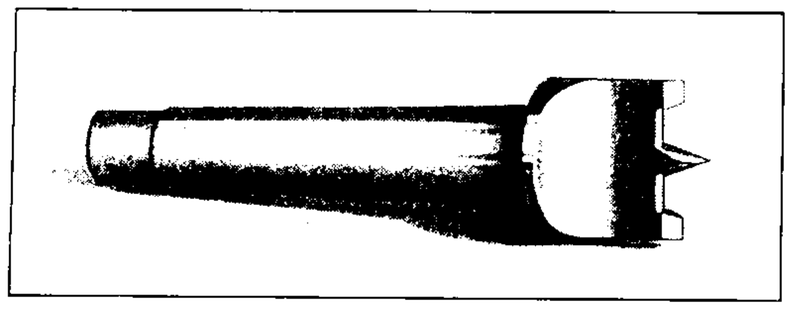


Fig. 60. Spur Center — has conical center point and two knife edges. Useful for wood turning

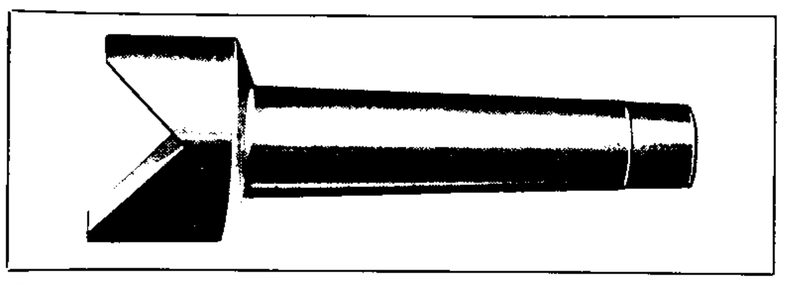


Fig. 62. Solid V Center — head is 1 1/16" diameter and has groove 90° included angle 7/8" wide. Used in tailstock for holding cylindrical work when drilling and spotting to transverse center

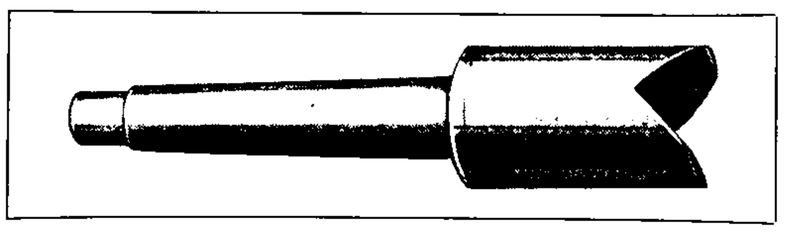
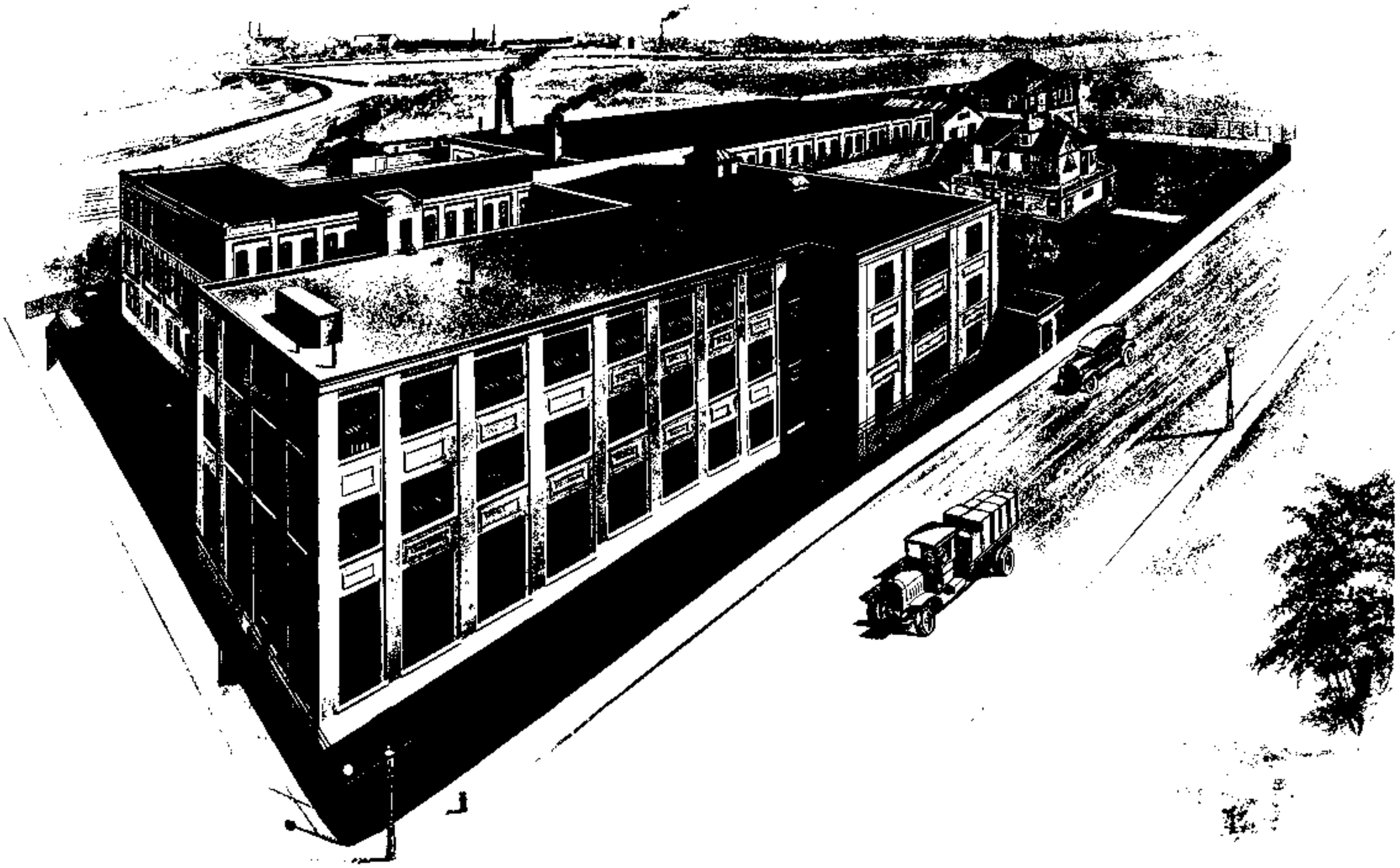


Fig. 64. Revolvable V Center — same as solid V center (Fig. 62) except head turns freely on shank, accommodating itself to position of work

DRILL PLATES are made in four sizes 2", 3", 4" and 5" diameter mounted on shanks to fit both tailstock spindle and headstock center chuck. The plates are cast iron and the shanks are steel accurately ground. They are used as a back support for work being drilled with a drill in the headstock. By fastening guide and stop strips to the plate, duplicate parts can be as quickly and accurately drilled as if jigged.

—[*page nineteen*]—

For collets, step chucks, jaw chucks, etc. — See Rivett Bulletin 100-A



PLANT OF THE RIVETT LATHE AND GRINDER CORPORATION, BRIGHTON, MASS., U. S. A.

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

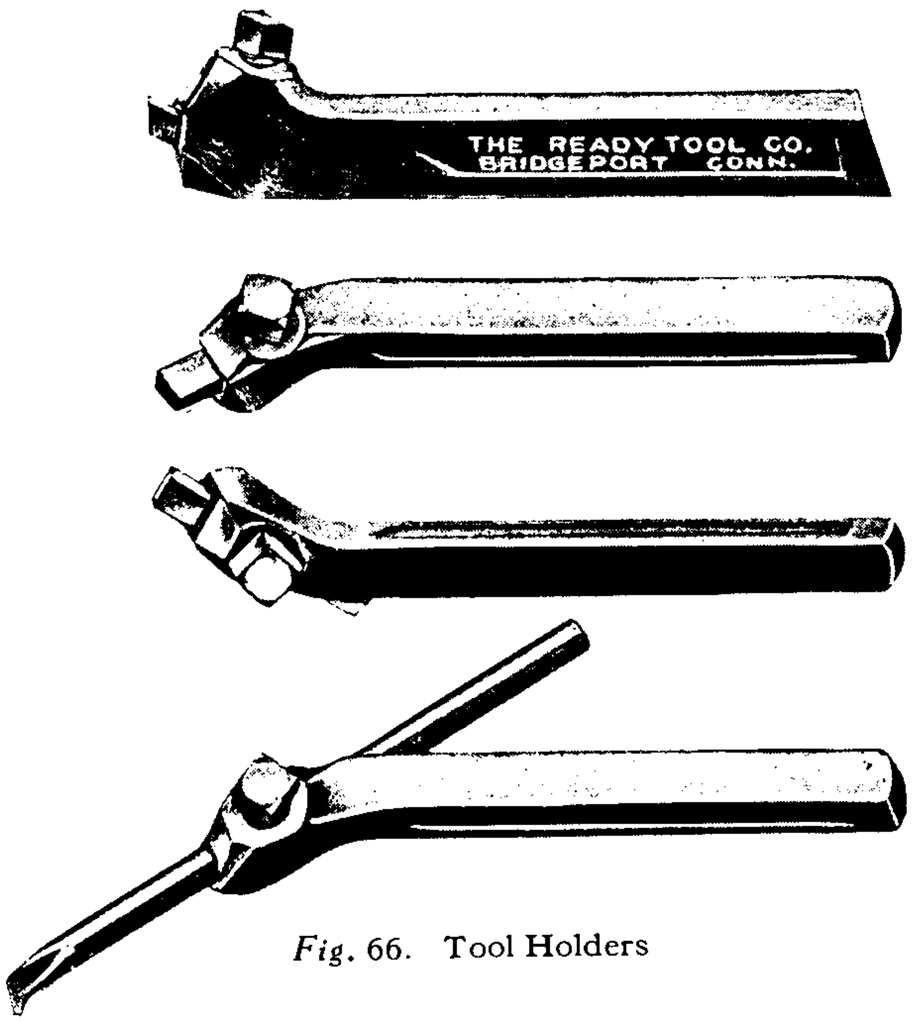


Fig. 66. Tool Holders

THE TOOL HOLDERS specially recommended are the Red-E Style 00, designed for use on bench lathes. These holders are 5/16" x 1/2" x 4", drop forged, broached with true, square holes for the bits. They are made straight, right hand offset, left hand offset and boring, the first three taking 5/16" square high speed steel bits which can be ground to any desired shape. Extra blank bits can be supplied at nominal cost. The boring tool requires a simple, inexpensive boring bar.

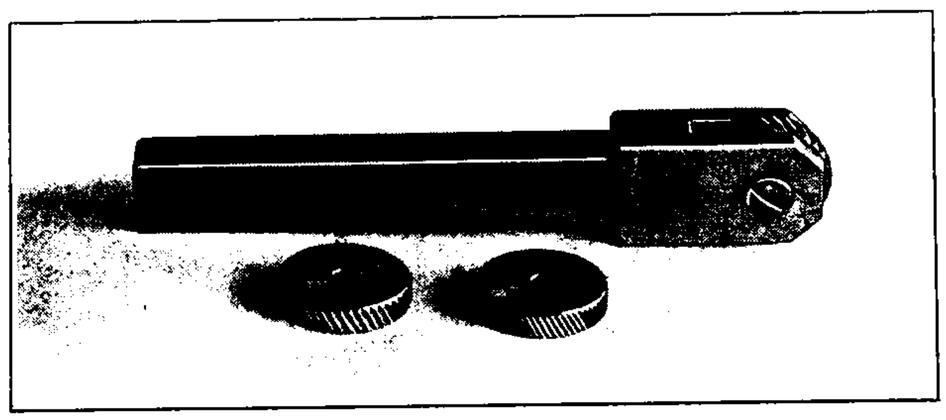


Fig. 67. Knurling Tool

THE KNURLING TOOL with shank 5/16" x 1/2", fits the rocker tool post of the slide rest. Three knurls, hardened, 7/8" diameter, 3/16" wide, are furnished: fine, medium and coarse knurling, 45° diagonal. The threaded stud of the knurling tool facilitates changing knurls.

THE BALL TURNING REST is of great practical service in both manufacturing and tool room work. It will accurately produce parts such as balled valve seats and discs, knuckle, universal and swing joints, knobs, hemispherical ends, and in fact any work where a surface of spherical shape, convex or concave, is required. In the tool room it quickly handles, with great precision, ball reamers, convex and concave cutters, punch and die, forging die, and similar tools.

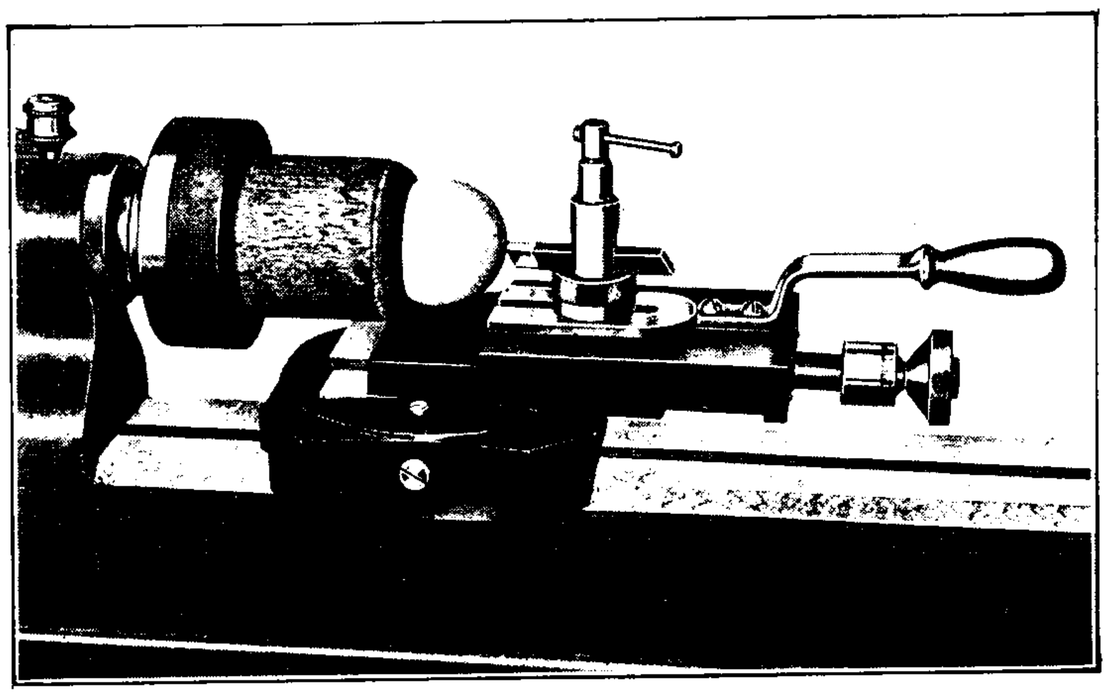


Fig. 68. Rivett Ball Turning Rest arranged for finish turning ivory billiard ball held in chalked wood chuck

Billiard ball makers and re-turners find it the ideal equipment for their work,—fast, exact and inexpensive. This rest is interchangeable with the compound slide rest and is quickly attached, adjusted or removed. It is heavily built with large slides and a six-inch diameter swivel bearing surface. The lower slide carries screw adjustment for centering. The swivel slide feed screw dial is graduated in thousandths of an inch. The tool post is provided with height adjustment for cutting tool. Net weight 22 lbs.

Other Standard **Rivett** *Products*

Bench Lathe Mounting and Driving Equipment — Bulletin 120-A
Draw-in Collets and Chucks — Bulletin 100-A
Manufacturers' Production Bench Lathes and Equipment — Bulletin 505-B
Plain Precision Bench Lathes, Series 505 — Bulletin 505-C
Precision Back Geared Screw Cutting Lathes — Bulletin 608-A
Rivett Improved Thread Tool and Cutters — Bulletin 110-A
Internal-External Precision Grinding Machines — Bulletin 104-B
Blanchard Pulsating Lubrication System — Bulletins B-1, B-2 and B-3
Forkup, Forkan and Forkgun Oilers — Bulletin F-2

RIVETT LATHE AND GRINDER CORPORATION ∴ BRIGHTON, MASS., U. S. A.

The Least Expensive Bench Lathe on the Market— Compare Its Price List

The Most Complete and Modern Bench Lathe Built

IN the march of industrial progress the bench lathe has kept pace. The toolmaker knows that his bench lathe with its attachments is his best mechanical friend. The scientist, electrical engineer, and model-maker acknowledge it as indispensable. Radio, television and arts yet undiscovered owe and will owe their being in part to the simple little bench lathe on which the true inventor deftly makes his experimental parts.

For drilling, finish turning, facing, burring, polishing, tapping and for second operations on small screw machine parts the bench lathe by virtue of its ease of set-up and its high speed is being more and more used in efficient production.

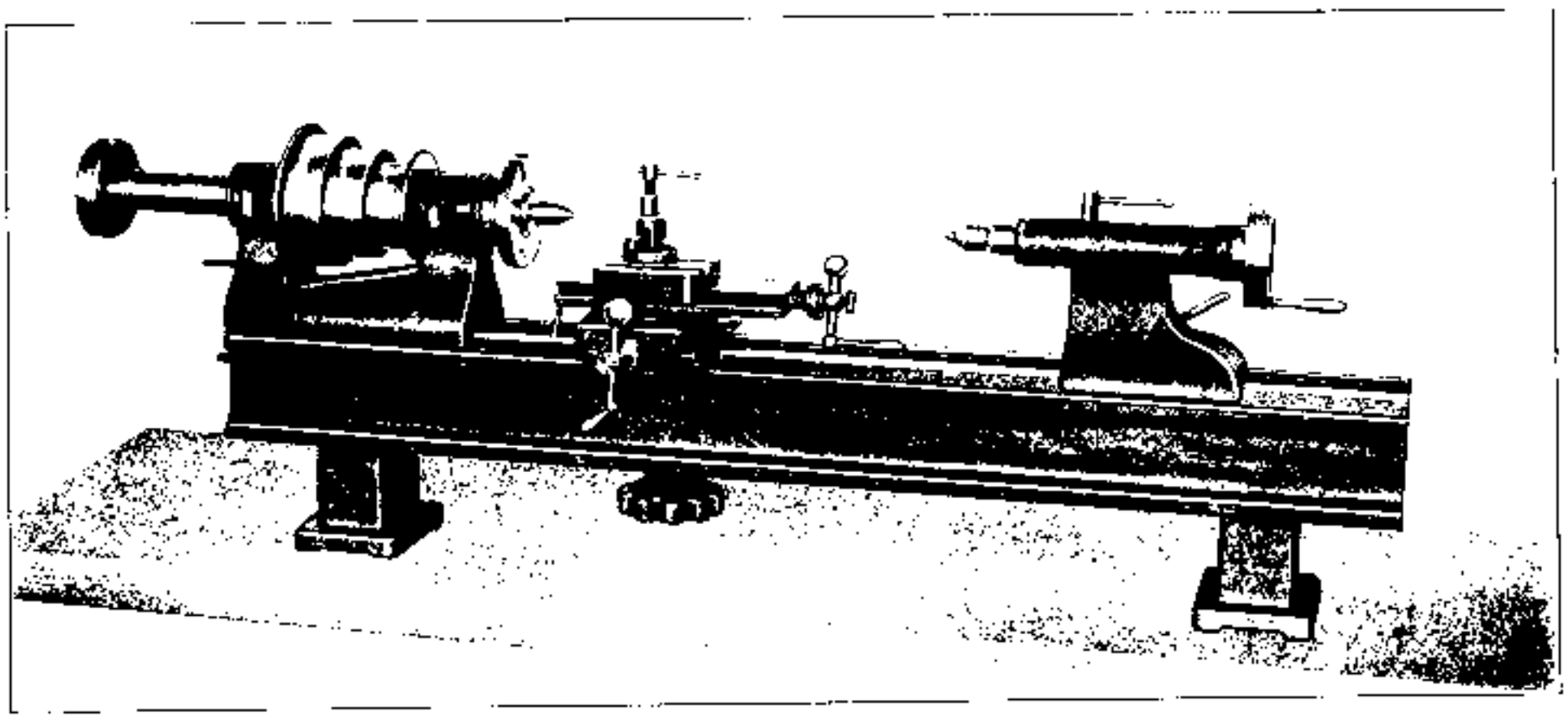


Fig. 1. Series 507 Bench Lathe with Plain Bearing Headstock, Screw Draw-in Spindle, Slide Rest and Plain Tailstock

For nearly fifty years Rivett precision bench lathes have been favorably known the world over. Governments, universities and leading industrials standardize Rivetts because of their superior design and quality. It is recognized that precision machine tools should be rigid and endowed with long-life accuracy. Rivett Bench Lathes are of generous proportions and built to retain precision. Accidental distortion is avoided -- all Rivett beds are provided with *three-point bearing*. Wearing parts are built to withstand the services intended, and simple compensating adjustments are provided. Plain bronze or cast iron, spindle bearings are furnished for general purposes. Preloaded ball bearing headstocks are offered for high speed work. Full ball bearing countershafts and jackshafts are standard, while Rivett Horizontal Safety Drives and Speed Box Motor Drives are in line with modern practices which avoid all overhead countershafting and belting.

Rivett bench lathes and attachments are finished in lacquer (Duco type) of the color standardized by the National Machine Tool Builders' Association.

—[*page three*]—

For collets, step chucks, jaw chucks, etc. — See Rivett Bulletin 100-A

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

BED

THE BED is made of close-grained cast iron in box section, heavily ribbed to give maximum strength. The pedestals, also of box section, are cast separately and fastened to the bed by the pedestal bolts. The pedestal for the tailstock end has a shallow spherical depression in its top in which fits a spherical washer to carry the bed. This gives the lathe a *three-point bearing*, -- an exclusive Rivett feature. The pedestals, the under side, the left hand end and top of the bed are machined. The castings are then allowed to season for a period of time to remove all stresses and strains in the metal. Afterward, the top of the bed is finish machined, hand scraped to standard gauges and frosted finished. All attachments fitting on the bed are interchangeable. In setting up the lathe the bench surface should be made as even as possible, and pads of ¼" fine granulated sheet cork should be placed under the pedestals. Studs, nuts and washers for fastening the lathe to the bench, oil pan or cabinet are included with all equipments.

HEADSTOCK -- Plain Bearing

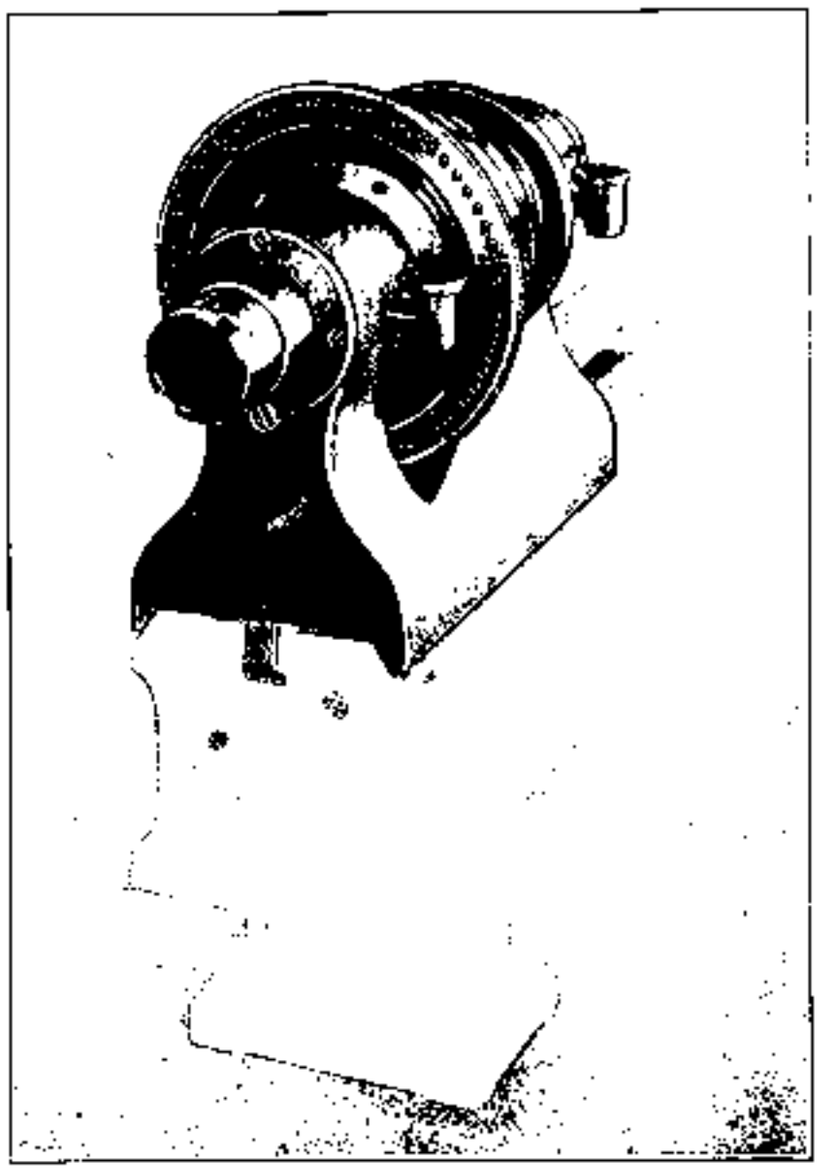


Fig. 2. Plain Bearing Headstock

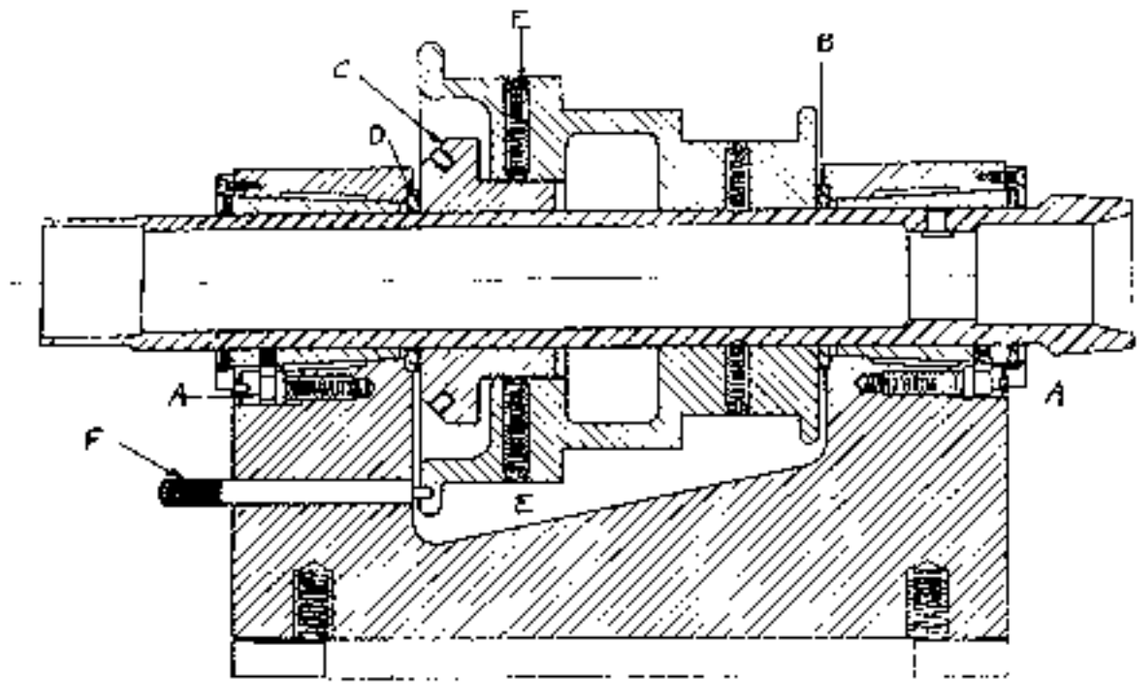


Fig. 3. Sectional Drawing of Plain Bearing Headstock

THE HEADSTOCK is of exceptionally rigid design with adequate means of adjustment to maintain a true running spindle. The external taper on the spindle nose has a 5° included angle and allows driving plate, Fig. 48, face plates, Figs. 50 and 51, chuck plates and other headstock spindle attachments to be mounted and remounted with positive assurance of running true. Two cone-point screws which contact with the reverse 45° taper directly back of the spindle nose, provide means for locking attachments to the spindle. The effectiveness of the screws is surprising, a light contact holding immovably. This unique design is equally effective for both directions of rotation. The external method of mounting chuck plates, in contrast to a collet-shaped projection entering the headstock spindle, leaves the full diameter of the hole in the spindle available for the insertion of bar stock.

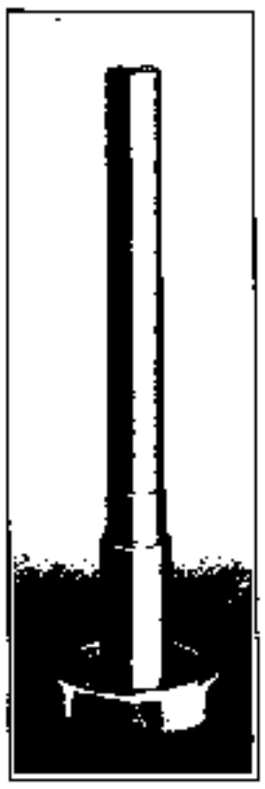


Fig. 4 Screw Draw-in Spindle

The spindle is made of tool steel, hardened and ground all over. The headstock is scraped to a true fit on the bed and is bolted by two studs passing through the bed. The boxes are made of hard bearing bronze (cast iron optional) with straight holes, tapered on the outside, and split so that when drawn into the headstock by screws "A", they are compressed, providing a take-up for wear. Elbow oil cups on the front side of the headstock apply oil to the proper place, that is, at the point of greatest clearance. End thrust is taken in one direction by the pulley and steel washer "B", between two fibre washers, and in the other direction by the face of adjusting nut "C" and washer "D" between its two fibre washers. To adjust the headstock, loosen the two adjusting nut lock screws "E" and by means of a small pin inserted in one of the holes in adjusting nut "C", turn nut until all end shake is removed; after which tighten screws "E". The face of the large flange has 60 drilled holes, engaged by pin "F" for indexing. The small flange is drilled to receive a locking pin to prevent the spindle from turning when tightening draw-in collets and chucks.

—[*page four*]—

For mounting and driving equipment — See Rivett Bulletin 120-A

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

HEADSTOCK—Ball Bearing

THE BALL BEARING HEADSTOCK is the result of research, experimental development and long service tests by experienced ball bearing engineers working in co-operation with the Rivett engineering and designing departments. It is a high production manufacturing unit primarily intended for the use of modern high speed cutting tools such as Tungsten Carbide, and for continuous duty on fine finish work, such as carbureter needles, where maintenance of close adjustment of plain bearing spindles is costly.

The front spindle bearings are of the double, preloaded type in which an initial end thrust of predetermined and measured intensity is imposed by the opposition of the two bearings in assembly. This axial loading is taken up by the elasticity of the metal parts of the bearing. As soon as the bearing goes into service the microscopic ridges in the ball races, which are inevitably left after completion of finish grinding, are burnished down by the balls and the resulting self-generated surfaces are substantially proof against further wear. This condition is attained before any noticeable amount of the preloading is dissipated. As a result, the opposing bearings are always tight endwise and radially and the spindle needs no adjustment.

The rear spindle bearing is single row and properly mounted to take care of expansion and contraction of spindle due to heating and cooling.

All ball bearings are of super-precision quality and selected to have an extra large safety factor in respect to load capacity.

The headstock is equipped with Forkups, controlled feed lubricators.

The bearings are fully protected against entrance of foreign matter.

The spindle assembly is dynamically balanced.

In this ball bearing spindle the following objectives have been attained:

1. Extremely high speed.

Maximum sustained working speed of 4600 R.P.M. entirely meeting the high cutting speed abilities of modern tools of the Tungsten Carbide class on all kinds of metals and materials and making possible the efficient turning and drilling of small diameter work with tools of ordinary steels.

2. Accurate circular rotation of spindle.
   Work is turned to a true circle.

3. Absolute steadiness.

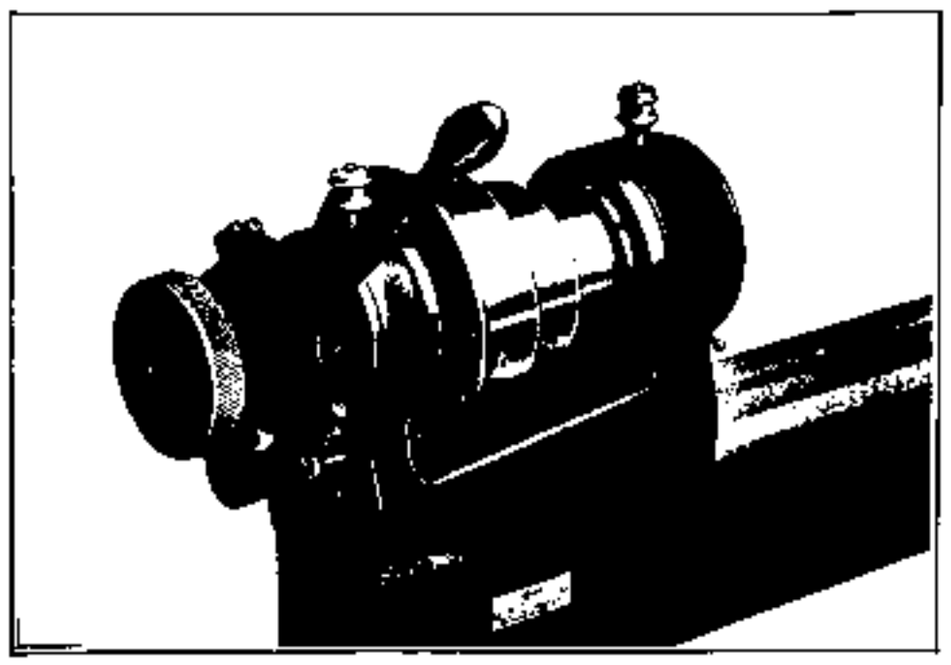
Spindle being entirely free from radial or axial looseness, turned surfaces when examined under a microscope show no tears, pits or chatter marks, even on tough, stringy or hard metals. Edges of cutting tools are held steadily in contact with the work and the number of operations per grinding is greatly increased. This also prolongs the life of cutting tools and justifies the use of the very expensive new materials of the Tungsten Carbide Type.

The headstock may be furnished with screw draw-in spindle only, or with lever chuck closer as shown (Fig. 5). The lever chuck closer resembles the attachment described on page thirteen, but is of special design for high speed operation.

Table herewith shows the full range of cutting speeds with spindle speeds corresponding to maximum of 4600 R.P.M.

TABLE A—SPINDLE SPEEDS AND CUTTING SPEEDS
RIVETT 507 BALL BEARING LATHE

Diam. of Work	Revolutions Per Minute					
	4600	3350	2550	1550	1140	870
⅛"	150	110	83	50	37	28
¼"	300	220	165	100	74	57
⅜"	450	325	250	150	111	85
½"	600	435	330	200	148	113
⅝"	750	545	415	250	185	142
¾"	900	650	500	300	223	170



Fig, 5. Ball Bearing Headstock with Lever Chuck Closer

—[*page five*]—

For collets, step chucks, jaw chucks, etc. — See Rivett Bulletin 100-A

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

THE TAILSTOCK is of the offset type giving ample clearance for the compound slide rest feed screw handle. The spindle is ground outside and in the tapered hole for center. The travel is effected by means of a hand wheel and screw working in a bronze nut. The screw and spindle are so proportioned that when the spindle is fully drawn into the tailstock, the center or other attachment is automatically ejected. The spindle is locked by a small handle on the top of the tailstock. The tailstock is scraped to perfect alignment with the headstock, master gauges being employed throughout, and is clamped to the bed of the lathe by an eccentric binder. The spindle is marked with a zero line, so that holes can be drilled and counterbored to desired depth by scale measurement. A hardened male center is furnished with each tailstock.

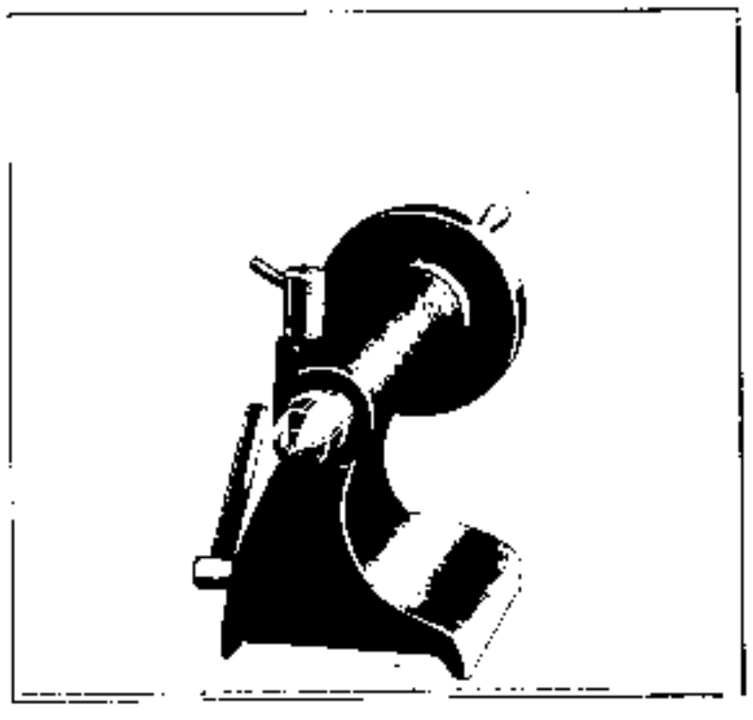


Fig. 6. Plain Tailstock

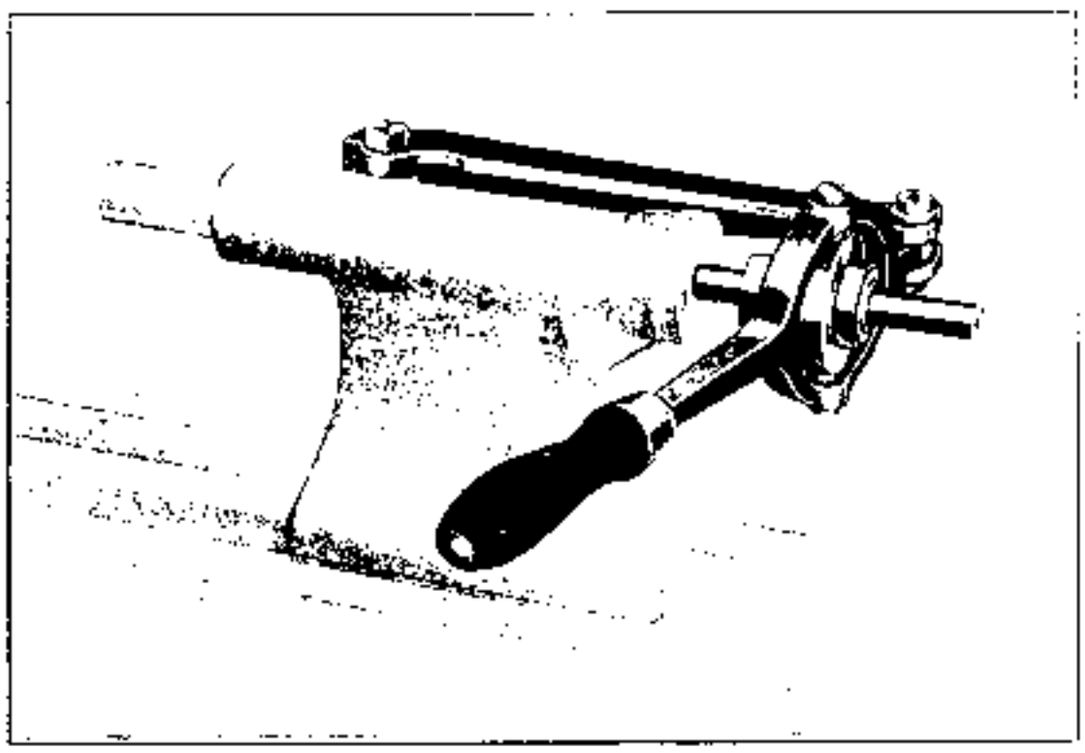


Fig. 7. Tailstock Lever Attachment

THE TAILSTOCK LEVER ATTACHMENT is an aid to production in drilling, tapping, counterboring, etc. The attachment fits the plain tailstock and is easily applied by removing hand wheel, cap and screw, tailstock spindle binder bolt and bushing, and substituting the attachment parts.

When the spindle of the attachment is fully retracted, drill chuck or other tool is automatically ejected.

Maximum travel of spindle is 3″.

THE HALF OPEN TAILSTOCK, furnished with lever (as illustrated), or knob, is built to permit the use of several tools held in separate spindles which may be consecutively used for spotting, drilling, reaming, burring, etc. Spindle and bearing surfaces of hardened steel ground and lapped.

Maximum travel of spindle 1¾″.

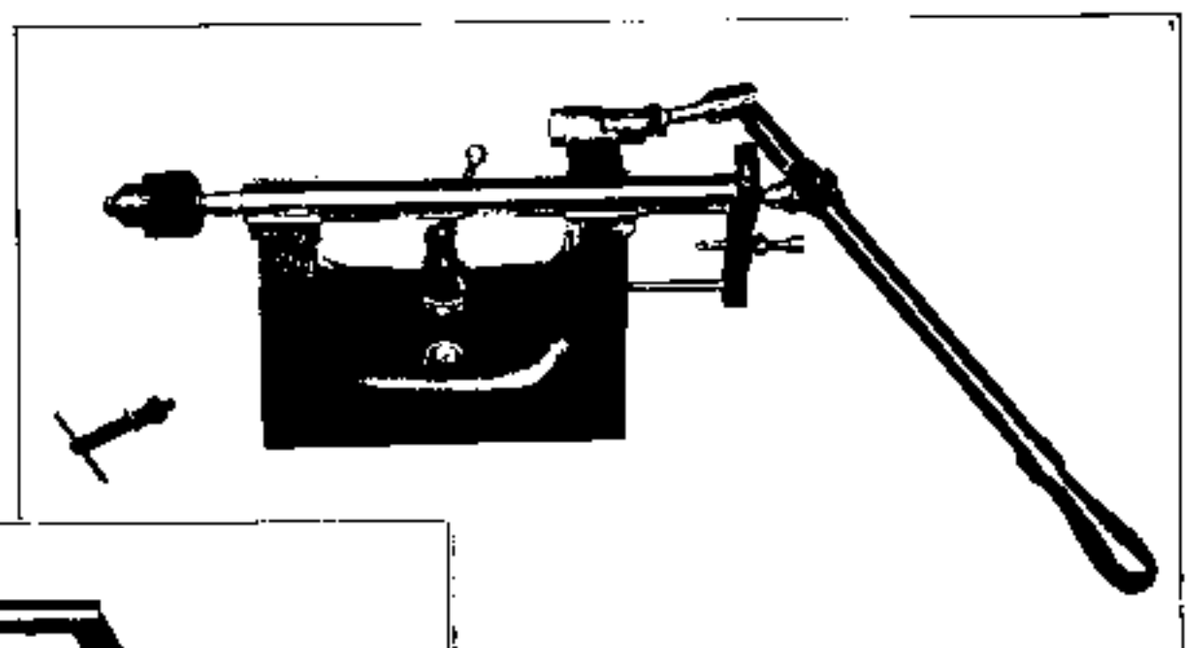


Fig. 8. Half Open Lever Tailstock with Drill Chuck

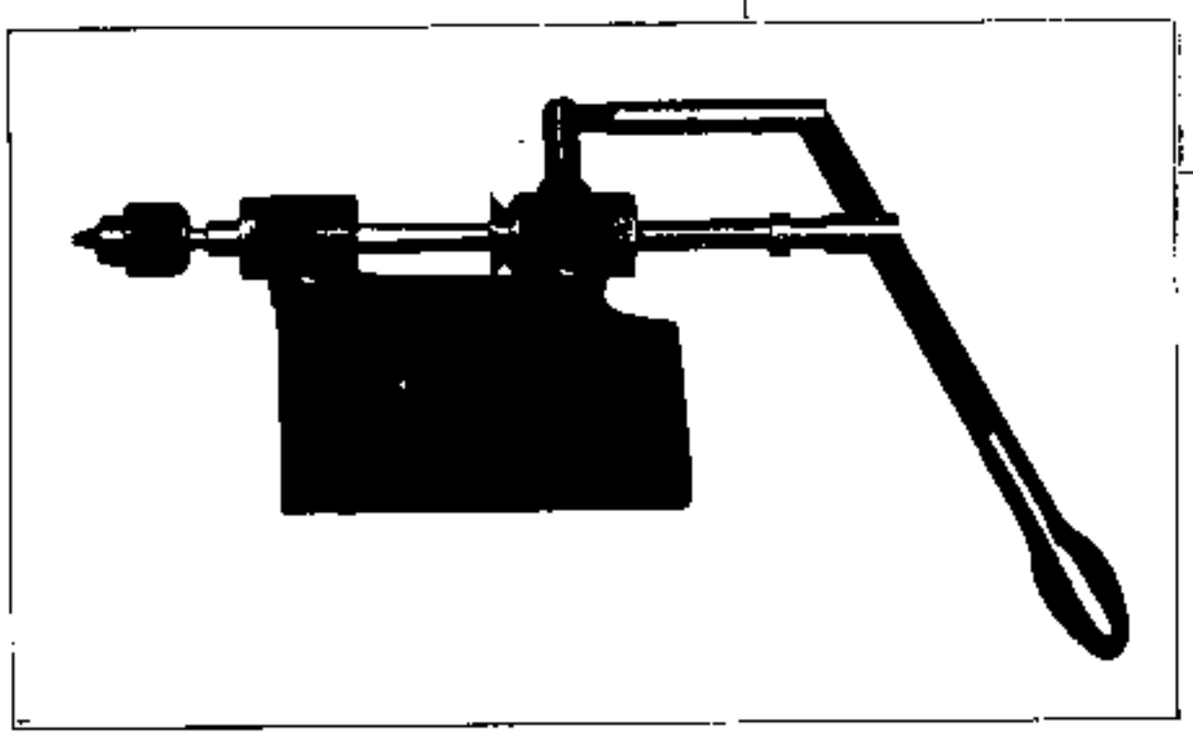


Fig. 9. Revolving Spindle Lever Tailstock with Drill Chuck

THE REVOLVING SPINDLE TAILSTOCK, furnished with lever (as illustrated), or knob, is driven from countershaft or motor in reverse direction from lathe at speeds up to 10,000 R.P.M. Valuable for drilling small holes and for deep holes, straight and concentric. Hardened steel spindle, bronze bearings.

Maximum travel of spindle is 2″.

For mounting and driving equipment -- See Rivett Bulletin 120-A

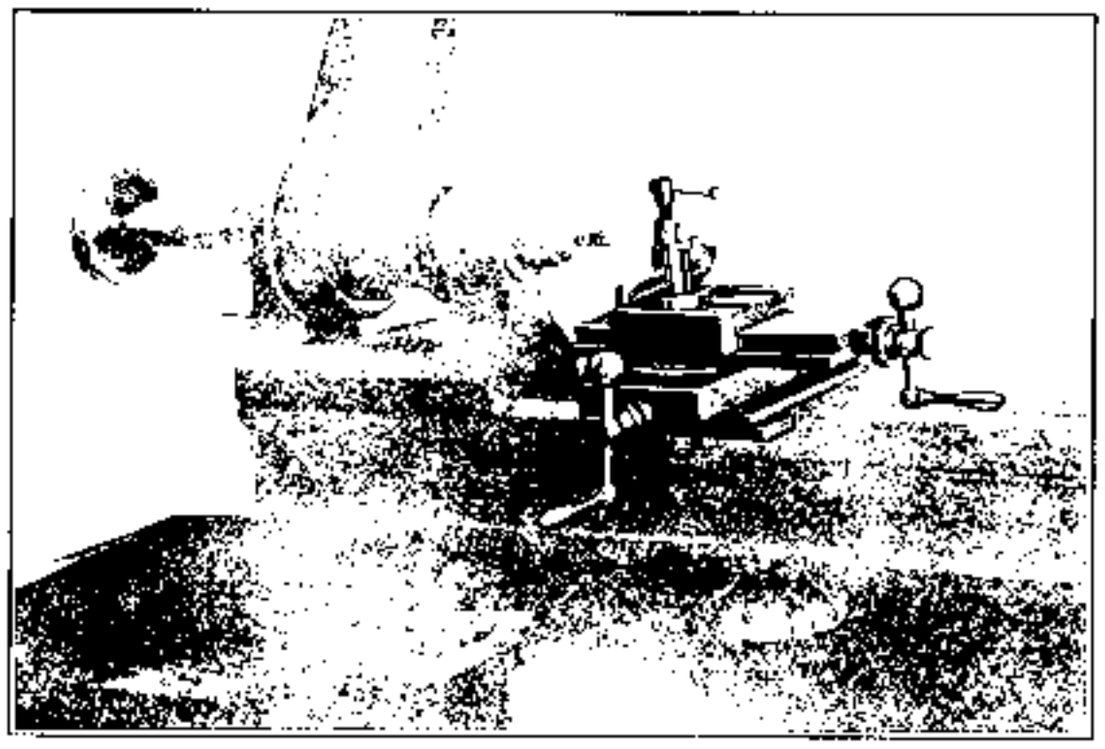


Fig. 10. Compound Slide Rest

THE COMPOUND SLIDE REST consists essentially of two slides with a swivel between them, and feed screws to provide the slide movements. The base has four flat, hand-scraped, bearing surfaces so that the slide rest will bear truly and firmly on the bed. It is quickly clamped in position by means of the clamping bolt, shown in Fig. 11, engaging a T slot in the base and passing through the bed. Adjustable as to position in the T slot is a guide plate 4" long which is scraped square on the surface coming in contact with the front bevel of the bed. This guide plate permits the slide rest being quickly set and reset in proper alignment. As this guide plate is movable along the T slot, adjustments can be made to set the slide rest with maximum forward overhang for large diameter work, or to the rear so that the cutting tool can be passed back of the center line. When the guide is not used, the feeds may be set at two independent angles. The swivel is locked in position on the cross slide by an eccentric binder. The bevel edge dial on the swivel is graduated in degrees, 45° both sides of 0, but three reading lines are inserted in the cross slide so that full 360° may be read. Two T slots are machined in the top slide so that the tool holder may be mounted to give minimum tool overhang. The top slide with its two T slots is also convenient for strapping work to be milled or drilled, for carrying the index head of milling attachment (see Fig. 24), for mounting the vise (see Fig. 23), for mounting the angle iron (see Fig. 21), and for mounting the grinding attachments (see Figs. 33, 34, 38 and 39). The tool post is of the rocker type with hardened rocker and clamping screw. The dials on the feed screws are of extra large diameter, each graduation representing a slide movement of .001" and they can be set at any desired graduation to maintain original tool setting, or for calculation, and are locked in place by the knurled thumb screw in the center of the ball handle.

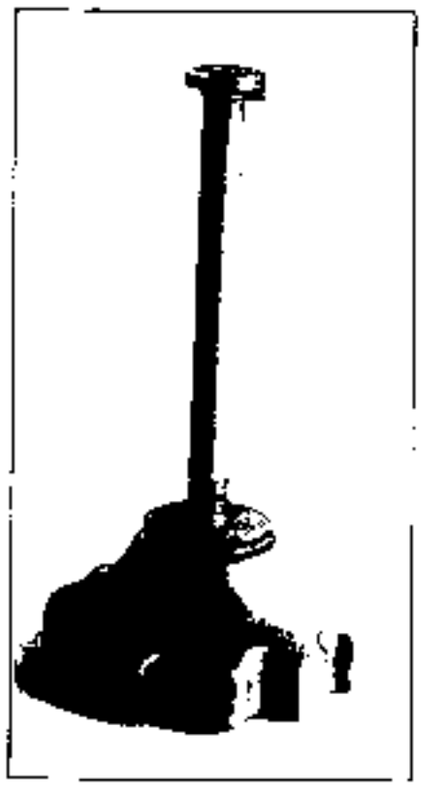


Fig. 11. Clamping Bolt

An adjustable stop for the cross slide is provided, for convenience in thread cutting, grinding, and for maintenance of settings in duplicate work.

The dovetails of the slides are hand scraped to an accurate fit and are provided with gibs for adjustment. The gib for the top slide is placed in front so that the thrust in usual work is taken by the ungibbed surface. The opening for the upper nut is also on the front side to reduce chance entrance of chips. The slide rest is a sturdy, versatile unit designed and built for maximum service.

A metric slide rest can be furnished having feed screws of two millimeter pitch and dials on which each graduation represents a slide movement of 1/50 (.02) millimeter.

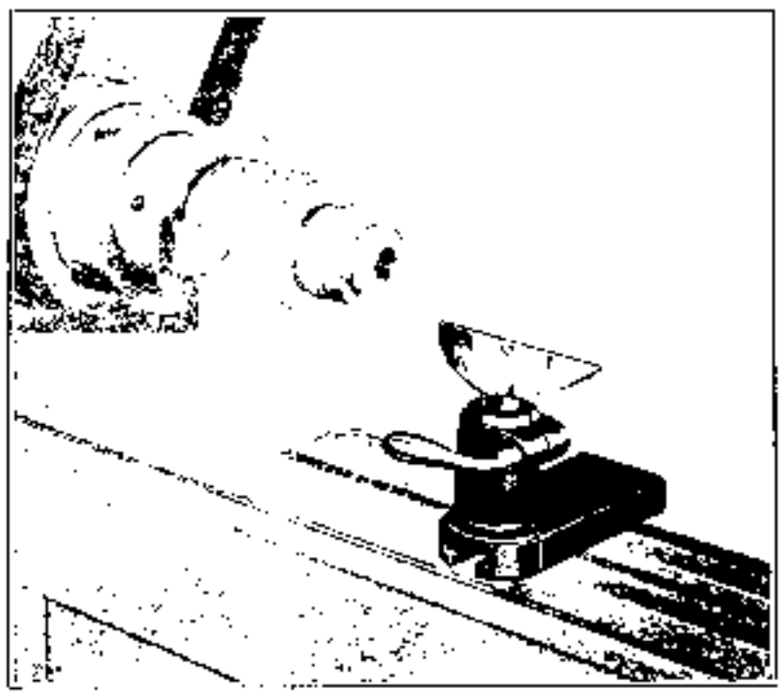


Fig. 12. Tee Rest

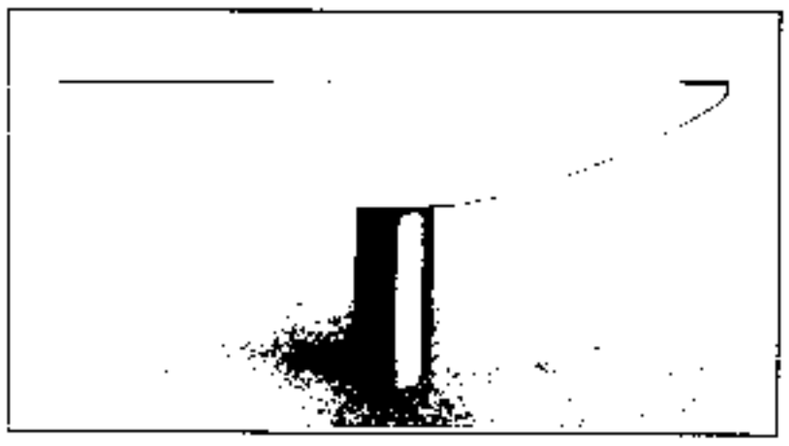


Fig. 13. Six-inch Tee

THE TEE REST or hand rest is used for supporting hand tools during various shaving and hand-tooling operations, and also in wood-turning. The base clamps to the bed of the lathe in any position by means of a clamping T bolt and knob. The clamping bolt for the slide rest can be used unless the slide rest is in operation at the same time, in which case an extra bolt and knob will be required. The standard tee is 3⅛" long, of correct shape to give the best cutting action of the hand tools, and is clamped in the base by a lever screw binder. It is adjustable in height from ⅝" below the center line of the lathe to ⅝" above.

THE 6" TEE fits the regular tee rest base, and is adjustable in height from ½" below center line to ¾" above.

—{ *page seven* }—

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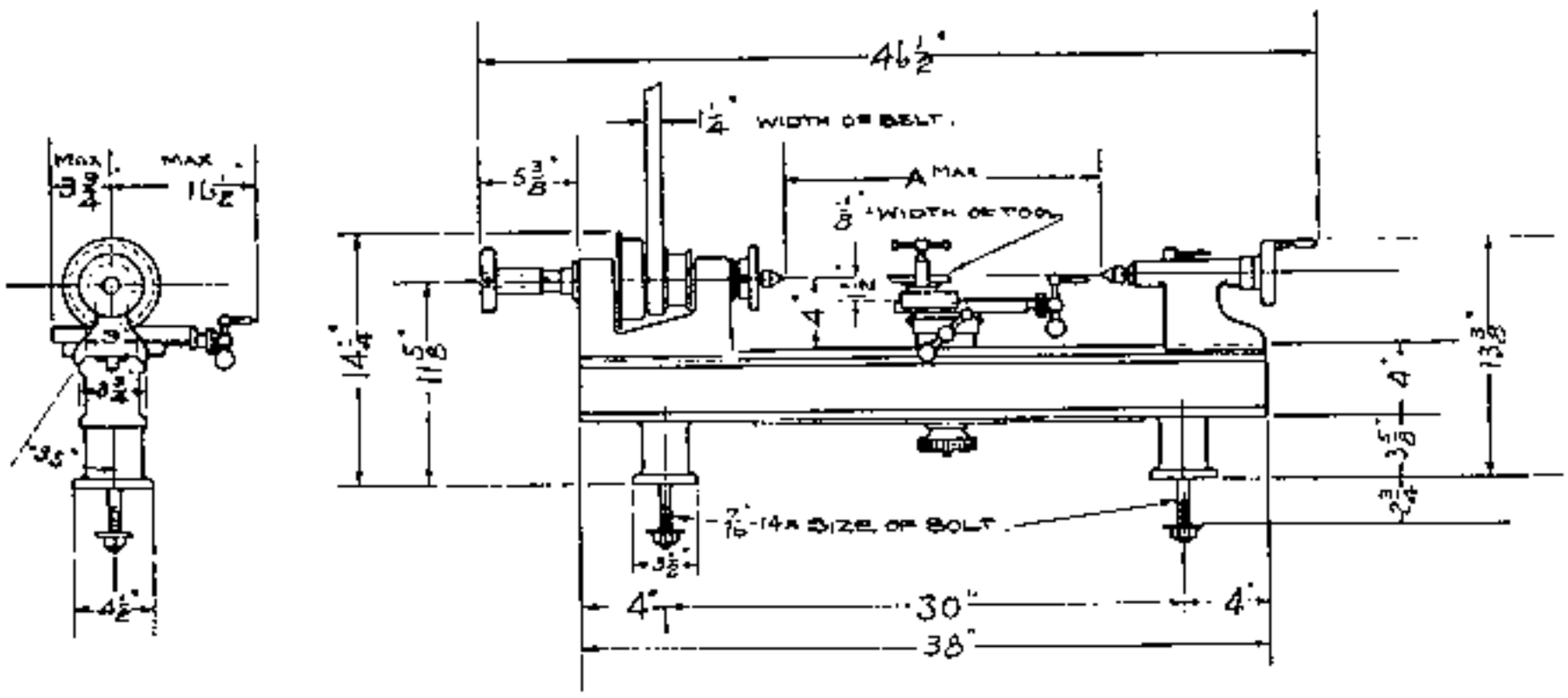

Fig. 14. Dimension Diagram of the Lathe

TABLE B · SPECIFICATIONS OF LATHE

BED

Length	38"
Distance between centres, tailstock flush	17"
Distance between centres, tailstock overhanging	20"
Weight, finished machined	80 lbs.

HEADSTOCK · (Plain Bearing and Ball Bearing)

Diameter of hole in headstock spindle at its smallest portion	1"
Diameter of largest piece of round stock that can be passed through headstock held in jaw chuck	⅞"
Maximum diameter of round hole in collet	¾"
Maximum size of square hole in collet	17/32"
Maximum size across flat of hex. hole in collet	21/32"
Height from top of bed to center line of spindle	4"
Swing over bed, diameter	8"
Swing over top slide of compound slide rest, diameter	1⅞"
Swing over top of bottom slide of compound rest, diameter	5"
Diameters of steps of cone pulley	3", 3¼", 4⅛"
Width of belt	1¼"
Number of index holes in headstock pulley	60
Taper of headstock spindle nose, included angle	5°
Diameter of taper at small end	1.7334"
Length of taper	⅞"

Weight, with draw-in spindle:

Plain bearing headstock	30 lbs.
Ball bearing headstock	45 lbs.

TAILSTOCK

Diameter of spindle	1"
Taper in mouth of spindle, special	3° approx.
Diameter of taper at mouth of spindle	0.541"
Travel of spindle	3⅜"
Weight	15 lbs.

SLIDE REST

Travel of top slide	5"
Travel of cross slide	4⅜"
Upper surface of top slide	3¼" x 3¾"
Height to top of top slide	3 1/16"
Slot in tool post, capacity	⅝" x ½"
Weight	15 lbs.

SPINDLE SPEEDS

Plain bearing and ball bearing headstock standard speeds, countershaft drive	low speeds, 250-370-550 high speeds, 585-860-1270
Plain bearing and ball bearing headstock standard speeds, speed box motor drive	low speeds, 240-315-430 high speeds, 710-935-1270
Ball bearing headstock, high speed, speed box motor drive	low speeds, 870-1140-1550 high speeds, 2550-3350-4600

For mounting and driving equipment — See Rivett Bulletin 120-A

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

Fig. 15. Thread Cutting Attachment Installed on Lathe

THE THREAD CUTTING ATTACHMENT is valuable for cutting threads, either right or left hand, internal or external. It can be used, also, as a power feed for straight and taper turning and boring. The upper slide rest screw is utilized as a lead screw, and therefore the maximum length of thread that can be cut is the travel of the top slide, which is 5". The connection, however, is a telescopic joint with sufficient length to reach a "between center" distance of 14". Every lathe is machined to take this attachment, whether it is ordered originally with the lathe or not.

The attachment consists, essentially, of a 40-tooth gear fastened to the headstock spindle by two set screws; a swinging change gear quadrant and quadrant bracket mounted on the end of the bed on a stud, nut and washer provided; an eccentric binder and T bolt for locking the quadrant bracket in the desired position; a set of change gears for a large range of threads; two studs for carrying the compound and idler gears, and a telescopic shaft with universal joints for connecting the change gear shaft to the upper slide rest screw.

To set up the thread cutting attachment, the swivel slide of the compound slide rest is turned to bring the ball handle to the headstock side. The ball handle is then removed and the telescopic joint connected in its place, care being taken to see that the spacing washer lies snugly between the joint and the dial, to obviate end play in the screw. Depth of cut is regulated by the cross feed of the slide rest in connection with the adjustable stop. At the end of the thread the lathe is reversed by operating the treadles. Pitches of threads or rates of longitudinal feed are determined by the gear trains on the quadrant in accordance with tables furnished with the attachment. It will be seen that this thread-cutting attachment is based on the same principles as any screw cutting lathe. It interferes in no way with the operation of the lathe on other classes of work and may be quickly disconnected or removed entirely. A similar attachment (the set of gears being different) can be supplied for cutting metric threads and is used with a slide rest having metric feed screws.

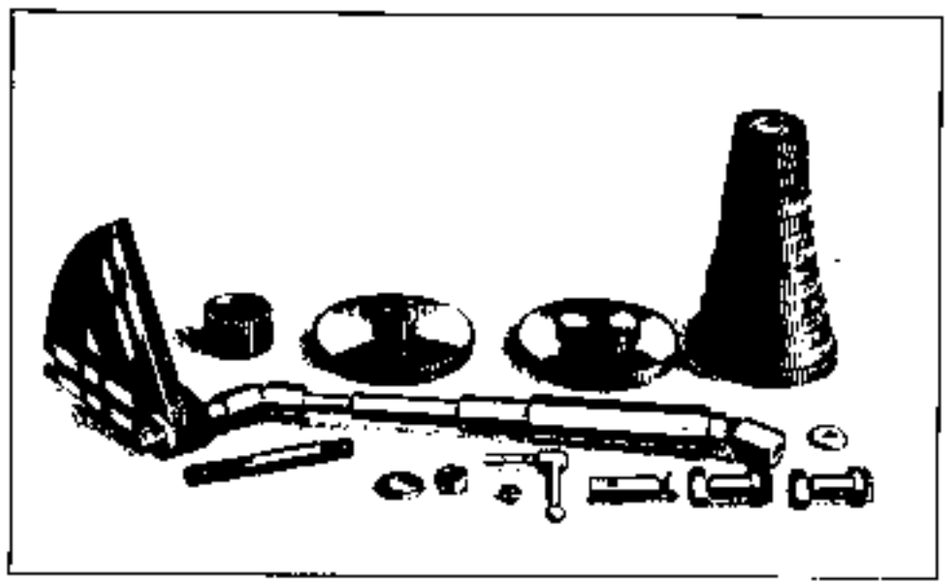

Fig. 16. Thread Cutting Attachment

TABLE C - - SPECIFICATIONS

Maximum length of threads which can be cut . . . . 5"

Distance between lathe centers reached by attachment . . . . . 14"

Set of Gears for ENGLISH attachment consists of: 40 T Spindle Gear, 96-48 Compound Gears, 96-24 Compound Gears, 1 each Change Gears, 40 T, 44 T, 46 T, 48 T, 50 T, 52 T, 54 T, 56 T, 60 T, 64 T, 68 T, 72 T, 76 T, 80 T, 90 T.

Set of Gears for METRIC attachment consists of: 40 T Spindle Gear, 86 T Idler Gear, 1 each Compound Gears with pins 64 T, 96 T, 1 each Compound Gears 24 T, 36 T, 42 T, 48 T, 56 T, 1 each Change Gears, 32 T, 35 T, 40 T, 50 T, 80 T.

Net Weight 16 lbs.

Complete thread cutting gear tables English — G.T. 25; Metric - - G.T. 26 on request.

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For collets, step chucks, jaw chucks, etc. — See Rivett Bulletin 100-A

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

THE MILLING ATTACHMENT will be found of value in the tool-room, experimental shop, laboratory and for light production on gears, pinions, milling cutters, end mills, reamers, counterbores and taps. Profiling, flat milling and keyseating can conveniently be done. Having three sides, which may be moved in as many planes, and four swivels, which may be set at any angle, there is hardly a combination of motions that cannot readily be obtained. Work can be held in the indexing work spindle and holder, strapped directly to the top slide of the slide rest, held in the vise mounted on the angle iron or directly on the top slide of slide rest or strapped directly on the angle iron. The vise and angle iron are useful adjuncts, see Figs. 25 and 27.

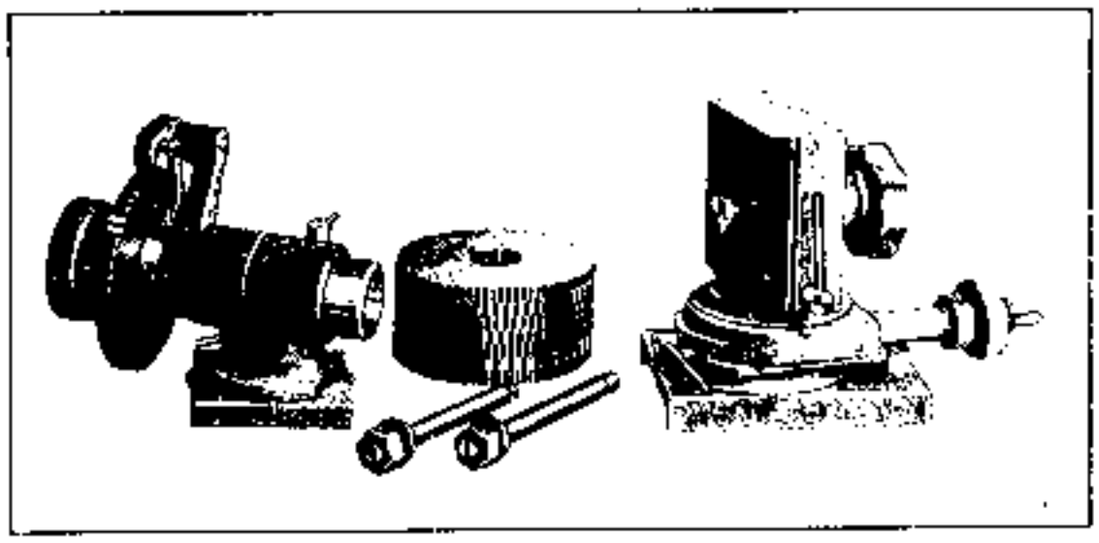

Fig. 17. Milling Attachment

The cutter is held in the lathe headstock, either in collets in the cases of straight or tapered shank end mills, keyway cutters, counterbores, etc., or by arbors held in collets in the cases of saws, gear cutters, and milling cutters having holes. Thus, a range of cutter speeds equal to the headstock spindle speeds can be obtained.

The milling attachment consists of a shoe scraped to fit the top of the lathe bed, fastened firmly thereto by two studs, nuts and washers in any desired location on the bed. On top of the shoe is a swivel which may be set at any angle within the full 360° and locked in position by an eccentric binder. This swivel carries a slide having a travel of 1⅛" actuated by a feed screw having a large adjustable dial graduated in thousandths, the same as on the slide rest. On this slide is a support for the regular compound slide rest swiveling independently to any angle through the full 360° and locking in position by an eccentric binder. The slide rest is fastened to the support by a T bolt tightened by a handwheel and is positioned through a wide range by the adjustable guide plate on the base of the slide rest. The second feed motion is by the lower slide rest screw and provides a cross feed of 4⅞". The third swivel is the swivel on the slide rest carrying the top slide having a travel of 5" actuated by the upper slide rest screw. This slide is usually used for vertical feed or an angular feed having a vertical component.

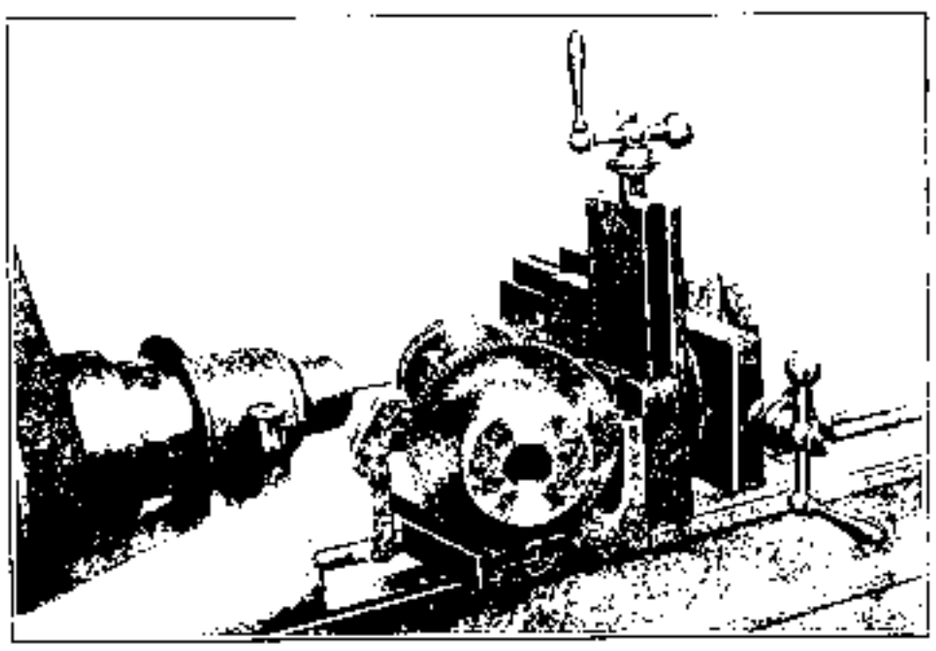

Fig. 18. Milling Attachment Index Head on Angle Iron and Milling Attachment Graduating Bevel Dial

The work spindle or quill holder is mounted on the top slide and fastened by two T washers engaging the T slots in the top slide. The quill holder swivels to any angle and is locked in place by an eccentric binder.

The work-carrying spindle is held in the holder by a clamp screw and consists of a non-rotating sleeve carrying the indexing pawl and a revolvable spindle carrying an index plate and draw-in spindle. The mouth of the spindle is ground to take the same collets as the headstock.

Eight index plates with divisions of 45-56-60-64-72-80-84-100 are included giving a range of all the dividing numbers usually needed.

The eccentric binders and T bolts are very powerful and the various slides can be firmly locked, making the attachment remarkably rigid.

The swivel dials are all cut on bevels so that they are easily read and are graduated in degrees with "lubber" lines permitting readings of full 360°.

The dials on the feed screws are of large size graduated in thousandths of an inch and movable so that they may be set at zero or any other desired reading.

The net weight of the attachment complete is 29 lbs.

For mounting and driving equipment — See Rivett Bulletin 120-A

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

MILLING ATTACHMENT — Continued

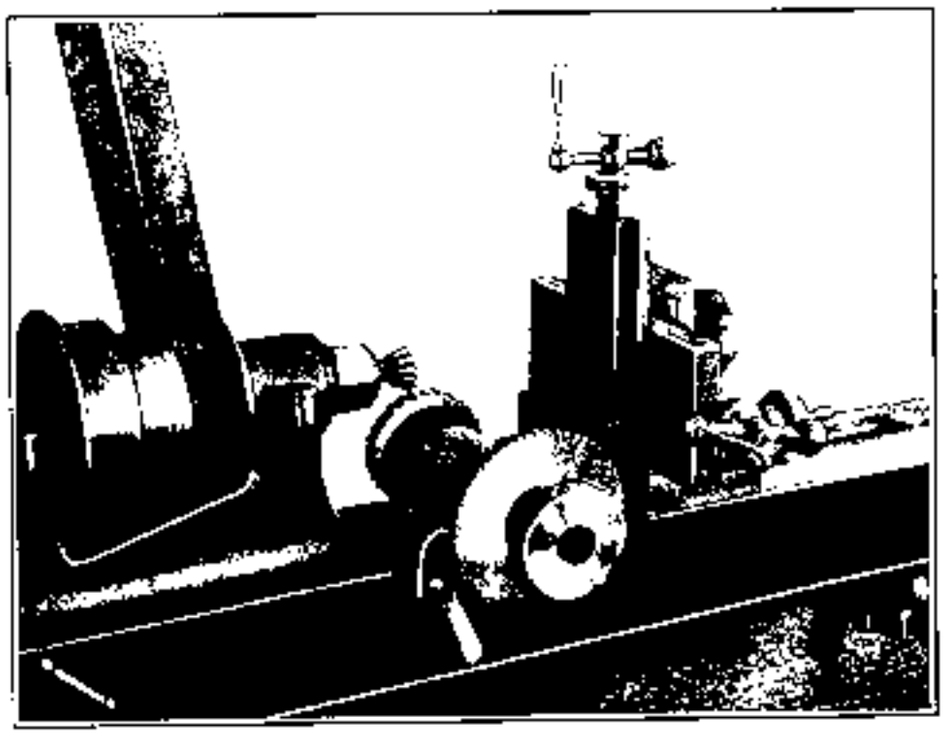

Fig. 19. Head end view of Milling Attachment set to mill teeth in a Milling Cutter

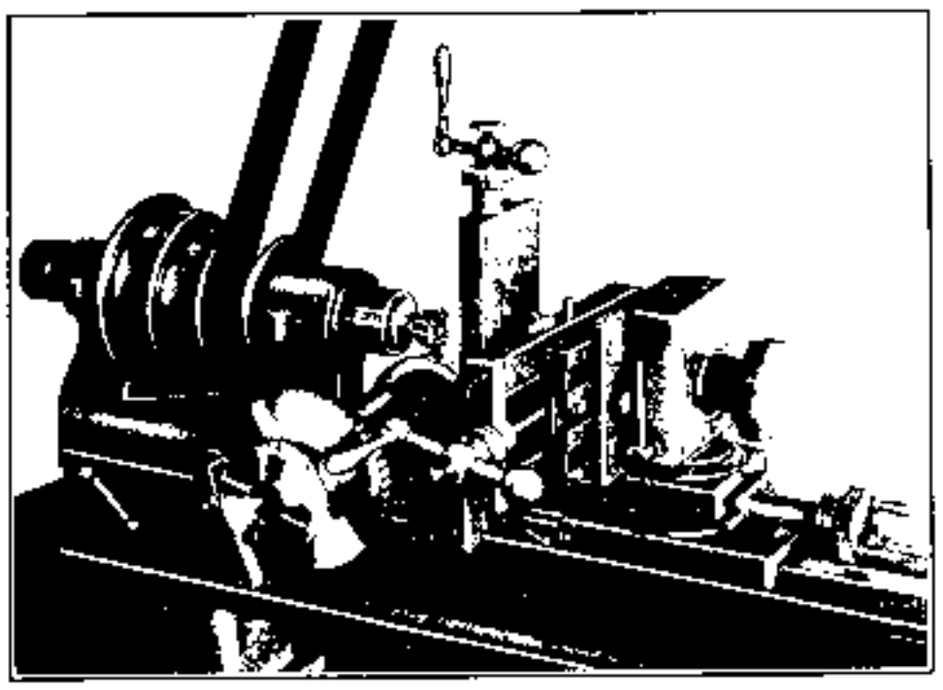

Fig. 20. Tail end view of Milling Attachment set to mill teeth in a Milling Cutter

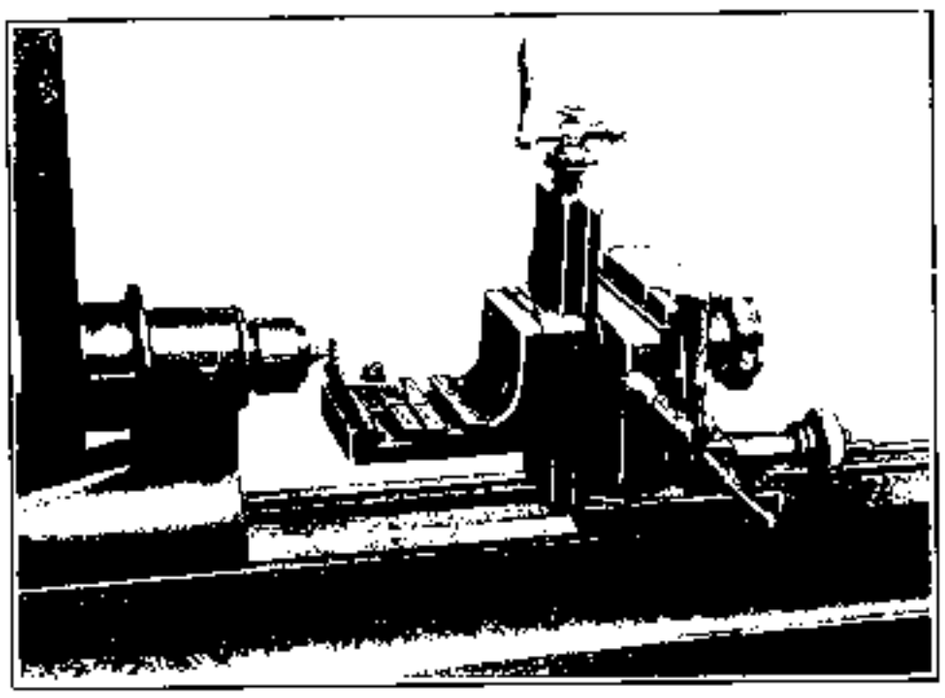

Fig. 21. Milling Attachment with Angle Iron set as plain miller to mill keyway in shaft

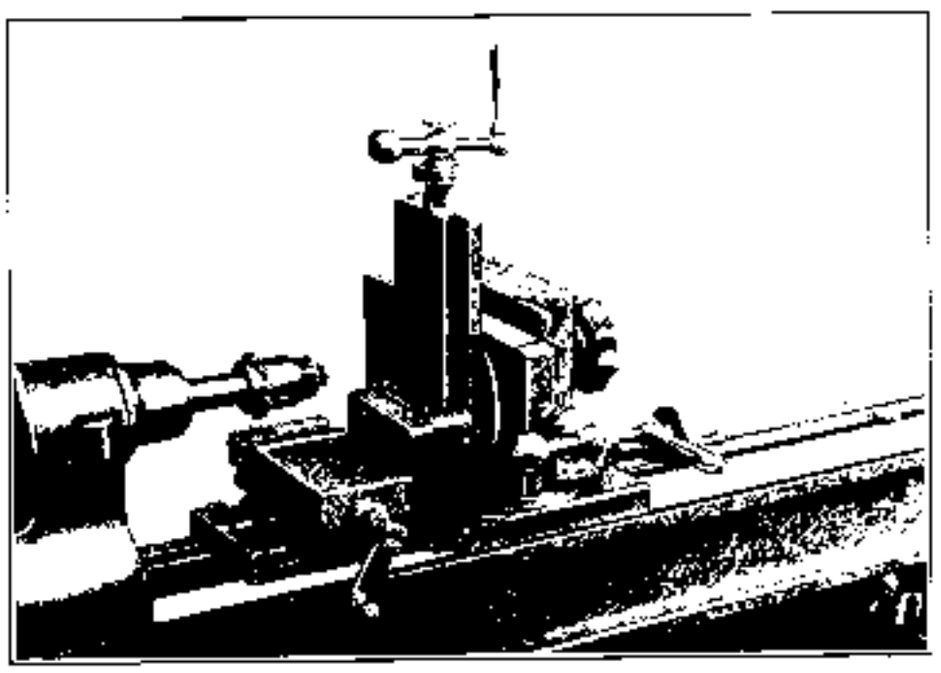

Fig. 22. Milling Attachment with Angle Iron and Vise set as plain miller for milling teeth in rack

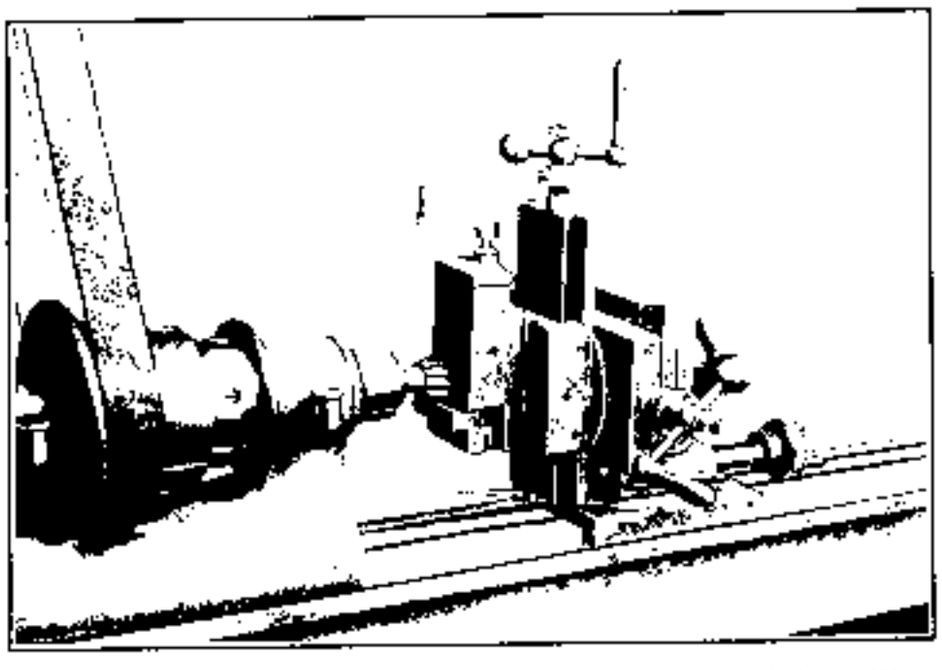

Fig. 23. Milling Attachment with vise set as plain miller for milling dovetail

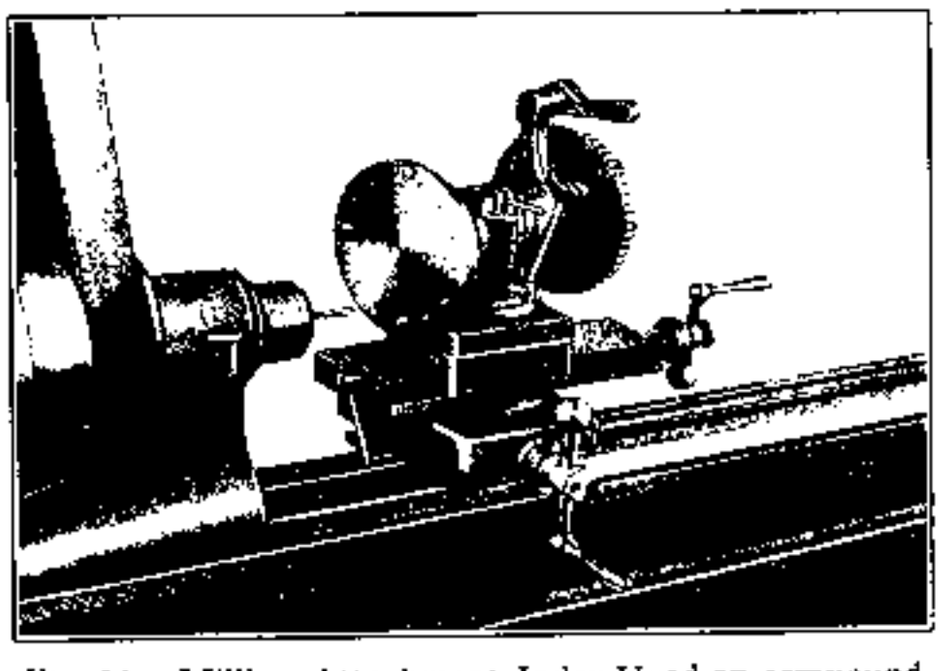

Fig. 24. Milling Attachment Index Head on compound slide rest, drilling equally spaced holes at an angle

—[*page eleven*]—

THE SLIDE REST VISE is a handy and powerful device for holding work during turning, milling, drilling and grinding operations. Its tongued base fits the T slot of the top slide of the slide rest, slotted face plate and angle iron, making its application universal. It is held by a T bolt. The jaws are of hardened steel, ground and removable, 1 1/32" wide, opening 1 3/4" and 11/16" deep. The movable jaw is dovetailed and gibbed. The net weight of the attachment is 3 lbs.

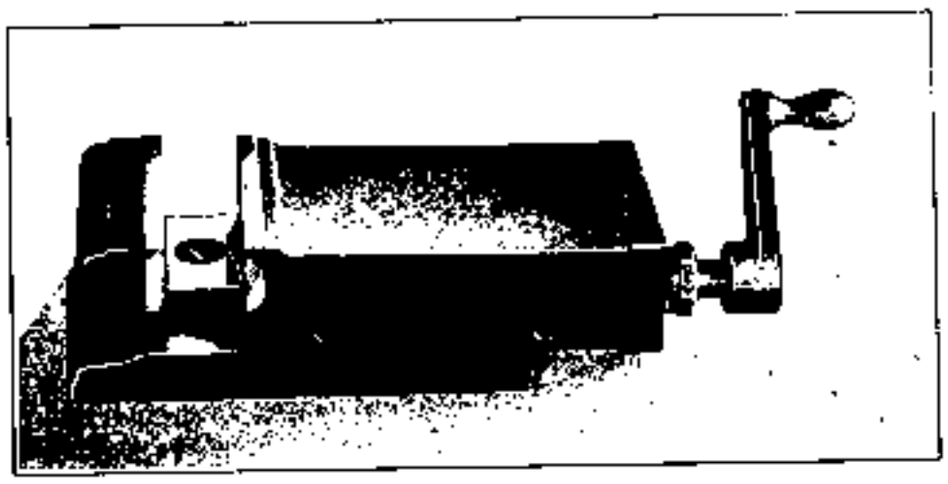

Fig. 25. Vise

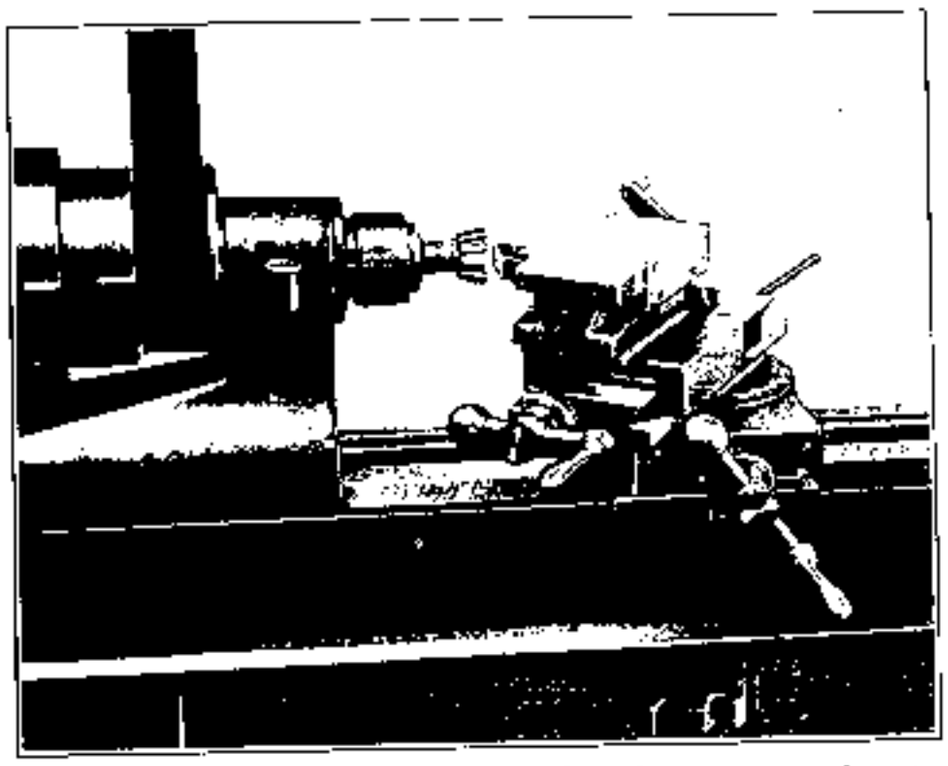

Fig. 26. Vise on Slide Rest, milling bevel on rectangular stock

THE ANGLE IRON is fastened to the top slide of the slide rest by two T washers engaging the T slots therein, thus providing a horizontal and swivelling milling table on which work can be held by straps. The table of the angle has two T slots of the same size and spacing as the top slide of the slide rest and in addition three V grooves two of which are parallel to the slots and the third at right angles to the other two, in which cylindrical work can be clamped. The indexing head and vise also can be held on the table of the angle iron, adding materially to the range of the milling attachment and to the usefulness of the angle iron. The angle iron finds use also when mounted on the slide rest apart from the milling attachment. The net weight is 3 1/4 lbs.

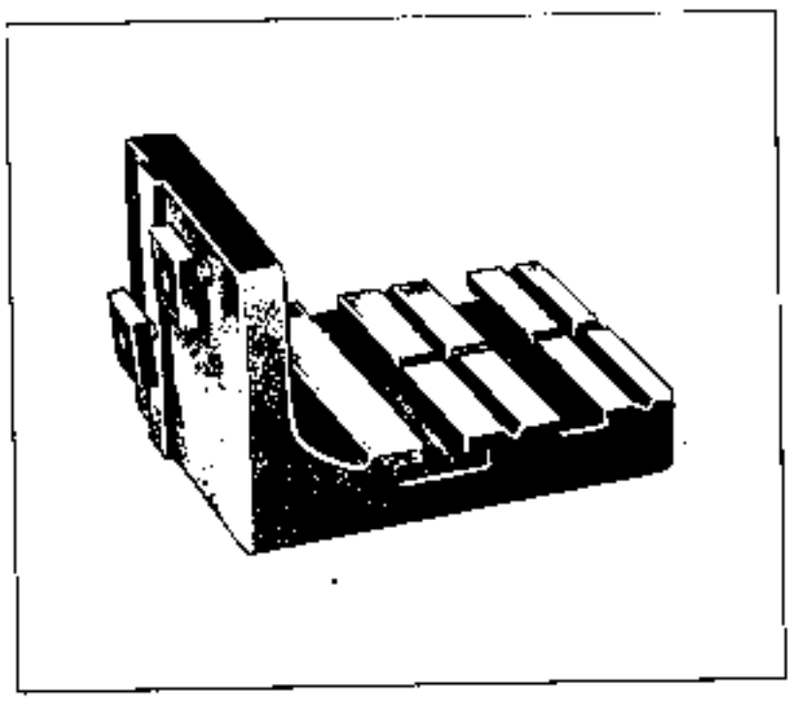

Fig. 27. Angle Iron for Milling Attachment

ARBORS are useful for holding work by the hole in either the headstock spindle or milling attachment spindle using collets to grip the shanks. Being centered on both ends they may be used between lathe centers. They are also used for holding milling cutters, saws, etc. in the lathe headstock for milling. The holding diameter of each arbor is ground and has a spacing collar tightened by a hexagonal nut, all so proportioned that cutters from 1/32" wide to maximum capacity are rigidly held. The other end is ground to a convenient size for holding in round hole collets.

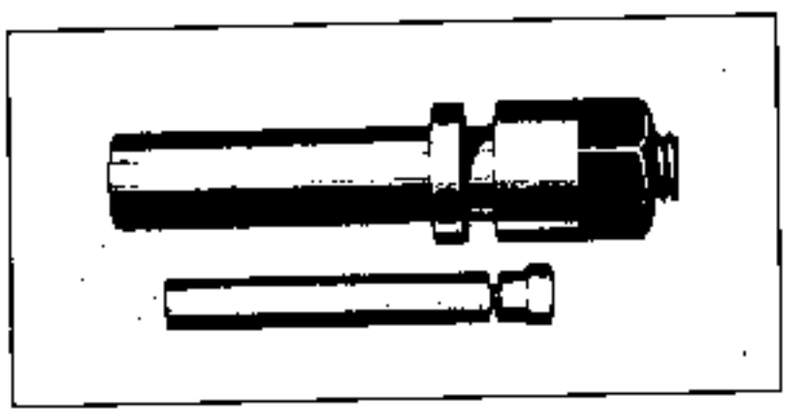

Fig. 28. Arbors

TABLE D — DIMENSIONS OF STANDARD ARBORS

Nominal Diameter	Holding Width		Shank Diameter	Length Over All
	Minimum	Maximum		
3/16"	0	3/8"	1/8"	2 7/8"
1/4"	0	5/16"	1/8"	2 7/8"
5/16"	0	1/2"	5/16"	3 1/4"
3/8"	1/32"	9/16"	5/16"	3 5/8"
7/16"	1/32"	5/8"	5/16"	3 1/2"
1/2"	1/32"	11/16"	3/8"	3 5/8"
9/16"	1/32"	1/2"	3/8"	3 3/8"
5/8"	1/32"	13/16"	3/8"	4"
3/4"	1/32"	5/8"	3/8"	4 1/16"
7/8"	1/32"	11/16"	3/8"	4 1/8"
1"	1/32"	3/4"	3/8"	4 1/2"

[page twelve]

For mounting and driving equipment -- See Rivett Bulletin 120-A

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

THE LEVER CHUCK CLOSER is recommended where many parts of the same size are to be chucked in collets or step chucks. It opens and closes the collets or step chucks by movement of the lever. It gives positive and uniform tension, and reduces very materially the wear on collet and draw-in spindle threads.

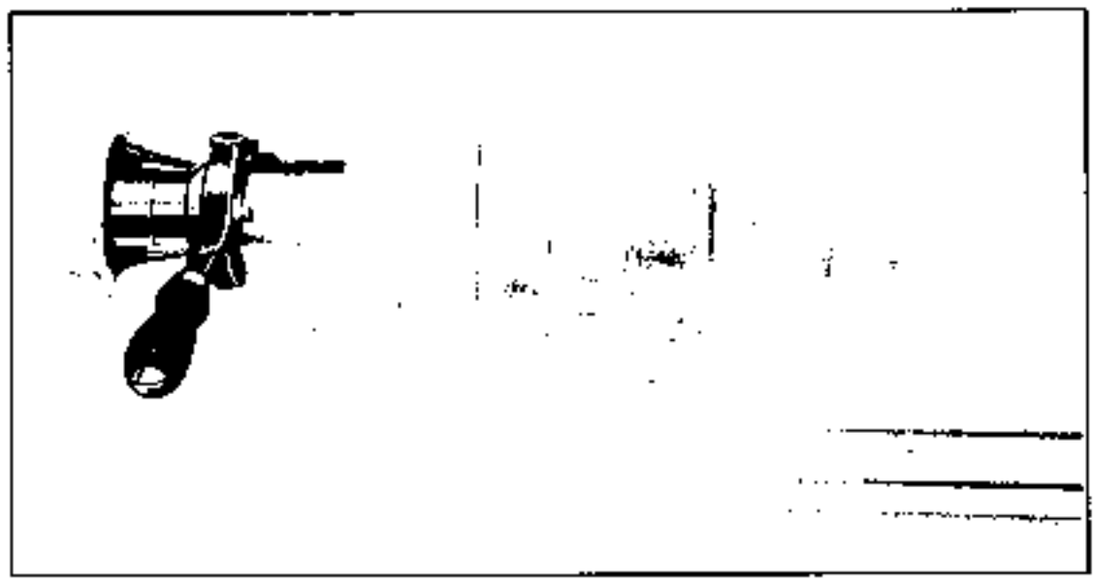

Fig. 29. Lever Chuck Closer

It consists of a bracket bolted to a pad on the rear of the headstock; a lever swiveling in this bracket and carrying two pins engaging a groove in a hardened steel cone sleeve which is free to slide longitudinally on the draw-in spindle; a circular plate, fitting the recess in the draw-in spindle knob, carrying two hardened bell-crank fingers; and a hardened steel sleeve for the draw-in spindle, one end of which is in contact with the short levers of the bell cranks, and the other end of which makes firm contact with the headstock spindle. When the lever is moved to the left, the cone sleeve is moved longitudinally to the left, the cone forcing apart the long arms of the bell-crank fingers. The short arms move and bring pressure against the draw-in spindle sleeve, but as this sleeve is restrained by its contact with the headstock spindle, pressure is exerted by the finger plate on the draw-in spindle knob, causing the draw-in spindle to move slightly but powerfully to the left, pulling with it the collet or step chuck, which, being drawn into a taper, is closed. Moving the lever to the right releases the pressure and opens the collet or step chuck. The desired tension is obtained by turning the draw-in spindle knob, and after this first adjustment, the finger plate is locked to the draw-in spindle knob by tightening two slotted screws. It will be noted that the regular draw-in spindle Fig. 4 is used with lever chuck closer a saving in cost reflected in the price. The lever chuck closer is simple and powerful. It interferes in no way with any other attachment and its use is strongly recommended. The net weight of the attachment is 2½ lbs.

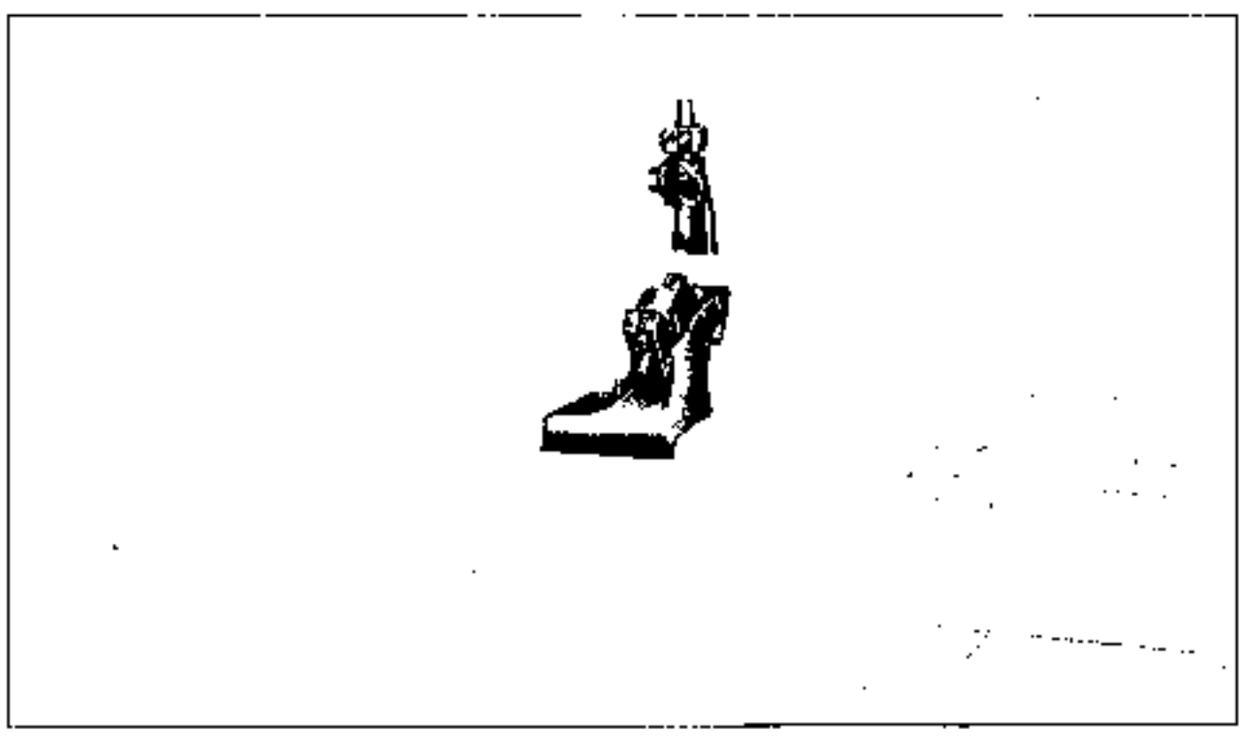

Fig. 30. Steady Rest

THE STEADY REST is indispensable for supporting long cylindrical work held between lathe centers, and for supporting work when performing an operation on one end which prevents the use of tailstock center. The body of the steady rest is a casting, planed to fit the top of the lathe bed, and provided with a T bolt and nut. The three jaws are made of round brass ½" diameter, beveled at the ends, and slide in reamed holes in the main casting. Approximate adjustment is made by sliding the jaws by hand. Fine setting is by screw adjustment. Maximum capacity 3" diameter work. Net weight 5 ½ lbs.

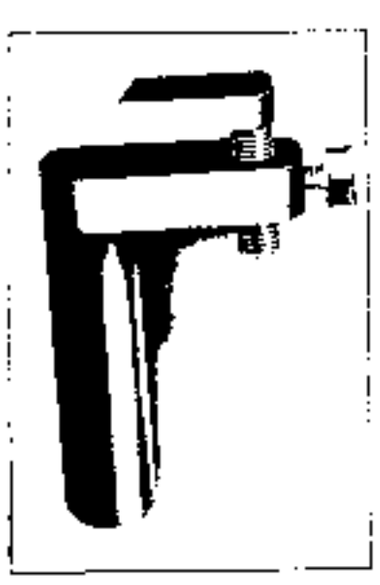

Fig. 31. L Rest

THE L REST fits the tee rest base, Fig. 12 and is indispensable for reaching difficult corners and recesses with a hand tool. The small arm is threaded so that it can be adjusted for height, independently of the adjustment in the base of the tee rest and also swiveled to the desired position. It is locked by a thumb screw. Width of arm rest 1 ⅛". Length of screw 1 ⅛".

THE TRIANGLE REST or sawing table is used in the tee rest base as a work rest when grinding, sawing or slitting. It is adjustable in height from ¾" below the center line of the lathe to ½" above. The V groove is useful when slotting heads of screws and when holding other round work. Length of sides 4 ⅛".

Fig. 32. Triangle Rest

—{ *page thirteen* }—

For collets, step chucks, jaw chucks, etc. — See Rivett Bulletin 100-A

THE SUPPORT FOR GRINDING ATTACHMENT is designed for both the external and internal attachments and is, therefore, presented as a separate unit. If one of the grinding attachments is ordered, the support must be ordered with it, but if both attachments are ordered, one support only is necessary. The saving thus effected is reflected in the prices. The support is planed and scraped to rest squarely on the top slide of the compound slide rest, with a tongue for alignment which will fit either slot in the slide rest. A T bolt and eccentric shaft clamp the support rigidly to the slide. The grinding attachments slip on to the round shaft, which is part of the support.

It will be seen that the grinding attachments will rock on the support shaft. This motion is controlled by two set screws which are also used for adjustment to bring the grinding attachment to the lathe center line.

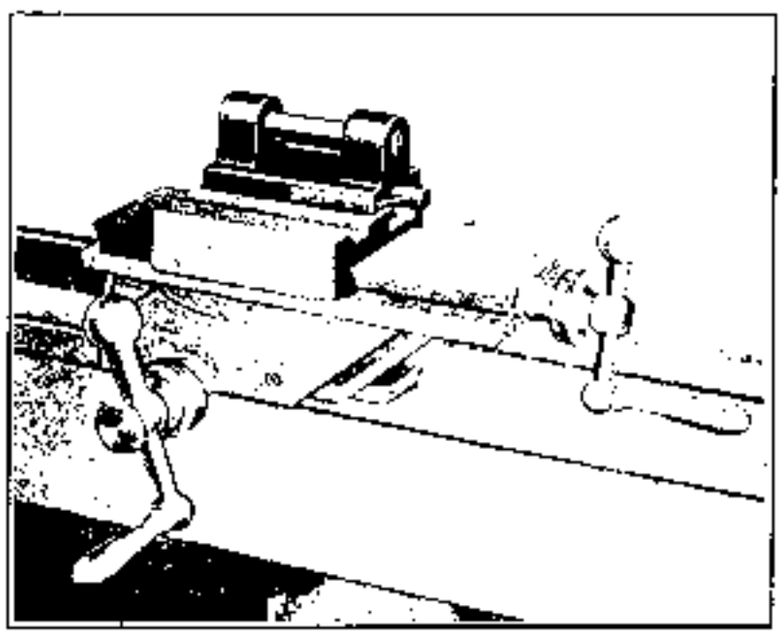

Fig. 33. Support for Grinding Attachments

THE INTERNAL GRINDING ATTACHMENT, while primarily for grinding holes, either straight or taper, can be used for external grinding, sharpening cutters, reamers, end mills, counterbores, etc., lapping and drilling at high speed with small drills held in drill chuck, see Fig. 36.

The spindle is 3/8" diameter and 7 3/4" long, hardened on both ends. The wheel end has a No. 4 P & W Taper hole for the insertion of wheel mounts, wheel arbors and drill chucks. A cross hole is provided for forcing out the arbors with the drift pin furnished with the attachment. On the opposite end is a hard rubber revolving handle to grasp when traversing the spindle. The spindle is driven from the grinding countershaft by a grooved pulley, having a pitch diameter of 1¼". Four speeds may be attained, two from the lathe countershaft and two by interchanging the pulleys driving the grinding countershaft; the available speeds are thus 1100-2580 and 3000-7100 R.P.M. The maximum traverse of the spindle is 2". This may be shortened by an adjustable stop collar. The spindle is carried in two hard bronze bearings which have straight holes and are split to adjust for wear by screws which compress the split housings. Two oil cups provide lubrication. Cross, longitudinal and angular feeds are accomplished by the feed screws of the slide rest on which the attachment is mounted. The adjustable stop on the cross slide of the slide rest will be found useful to limit the feed on duplicate work.

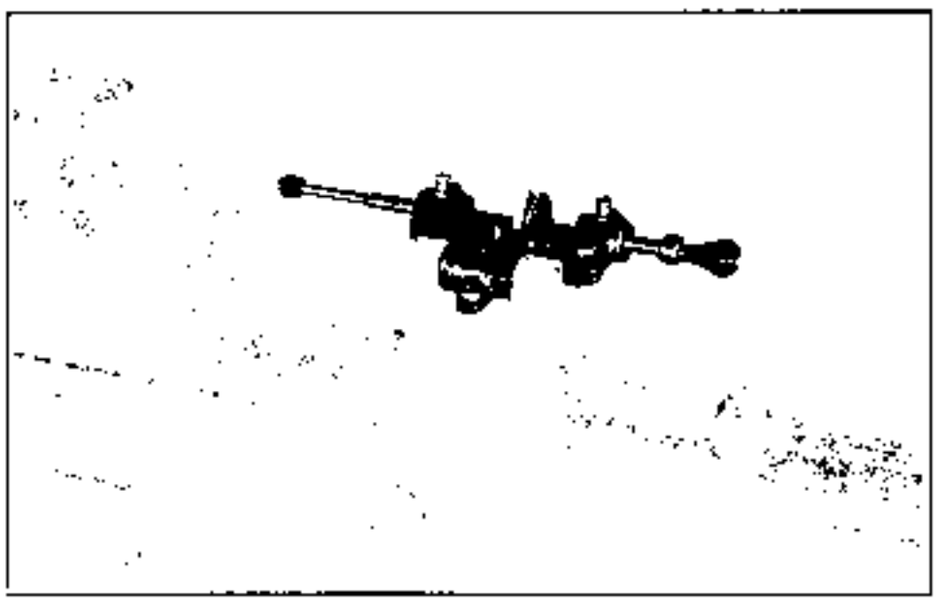

Fig. 34. Internal Grinding Attachment

Two wheel arbors are furnished, one each No. 1 and No. 2. See Fig. 37.

The grinding countershaft, see bulletin 120-A, is used for driving this attachment or individual motor drive may be provided.

The index finger is used as a tooth rest when sharpening cutters with the grinding attachment. Cutters as large as 3" diameter can be sharpened, and as the tooth rest can be placed in any position, right or left cutters or end mills can be readily handled. The finger is made of spring tempered steel, of correct curve, set in a cylindrical rod fitting the base of the tee rest. This is one of the cases where an extra clamping bolt assembly is required, one to hold the slide rest and one to hold the tee rest base.

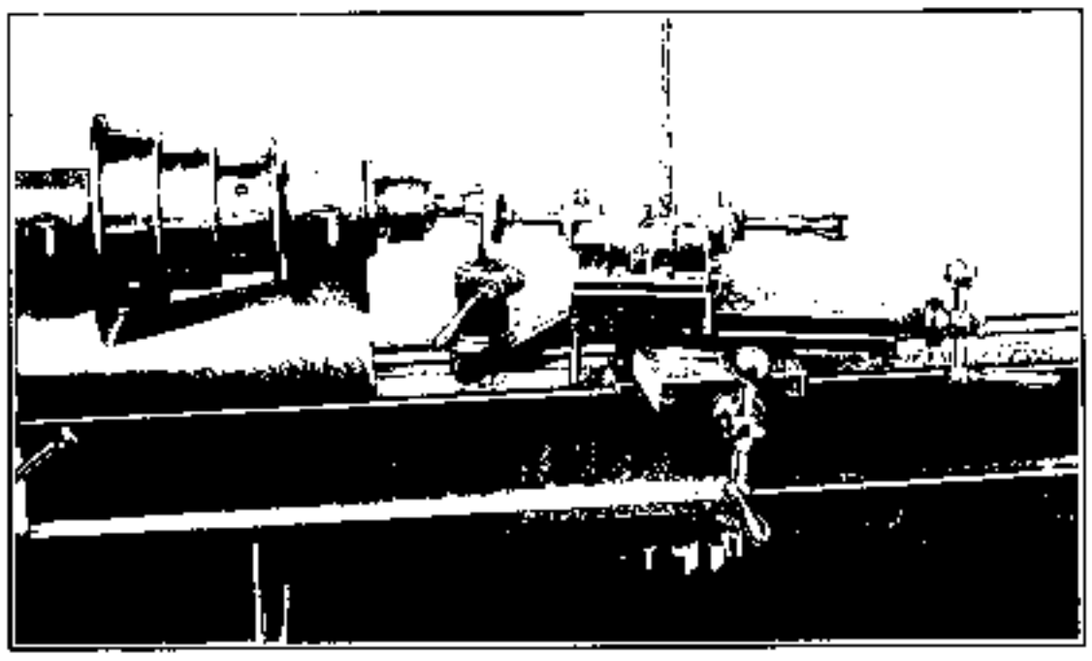

Fig. 35. Lathe arranged for sharpening cutters. Index finger held in tee rest base

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RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

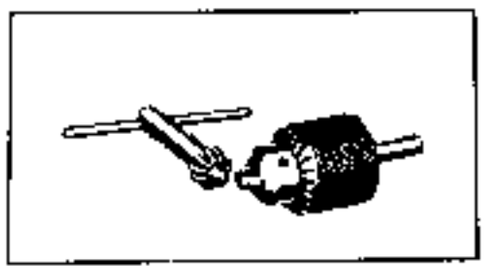

Fig. 36. Drill Chuck for Internal Grinding Attachment

THE DRILL CHUCK for internal grinding attachment is convenient for holding wheel arbors and small drills for grinding and drilling. The drill chuck illustrated is a standard Jacobs No. 0, capacity 0 to $\frac{1}{8}$", mounted on a shank to fit the tapered hole in the internal grinding attachment spindle. A chuck wrench is included.

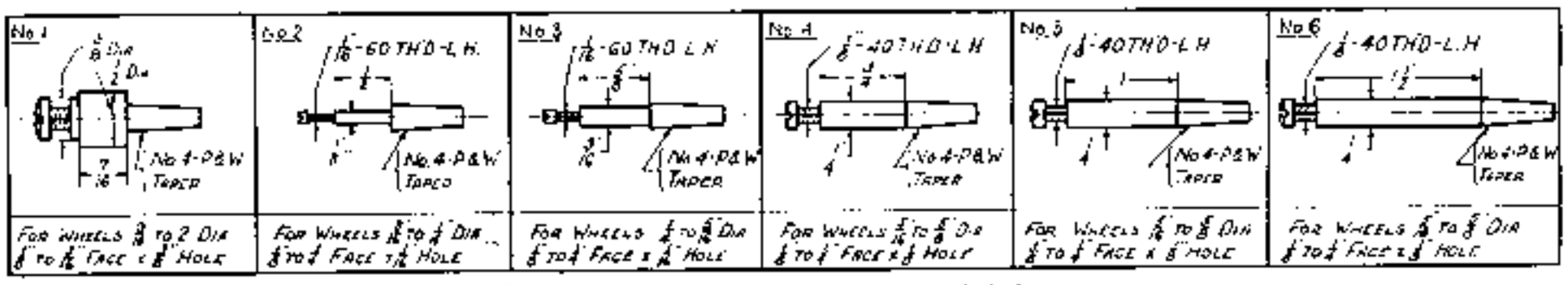

Fig. 37. Standard Grinding Wheel Arbors

GRINDING WHEEL ARBORS are tapered to fit the hole in the internal grinding attachment spindle. They should be slightly smaller in diameter than the holes to be ground and as short as will reach the back of the holes. Furnished with wheel-retaining screws.

THE EXTERNAL GRINDING ATTACHMENT is for external or cylindrical, face and surface grinding. Longitudinal or angular feed is accomplished by the upper slide rest screw, and cross feed by the lower slide rest screw. The attachment mounts on the support for grinding attachments, Fig. 33. Two adjusting screws in the bracket provide means for raising or lowering the grinding wheel in relation to the center line of the lathe.

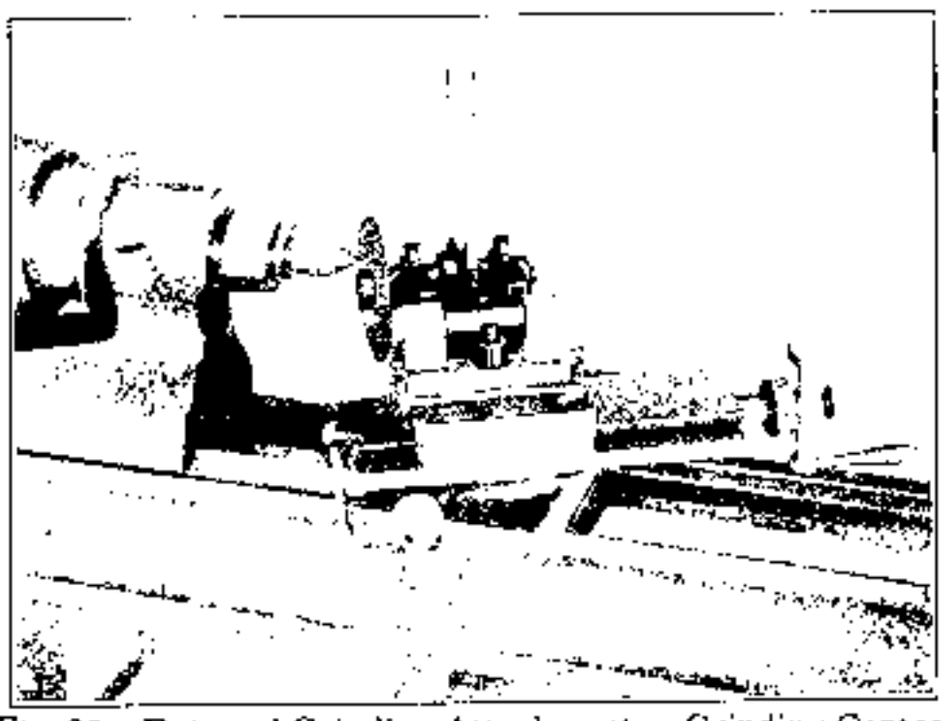

Fig. 38. External Grinding Attachment Grinding Center

The $\frac{3}{8}$" diameter spindle runs in two hard bronze bearings which have straight holes and are split to adjust for wear by screws which compress the split housings. Two oil cups supply lubrication. End thrust is taken by two fibre washers placed between the sides of the pulley and the bearing housings, a threaded nut on the pulley providing the necessary adjustment. The pitch diameter of the pulley is $1\frac{7}{8}$" and four speeds of 740, 1650, 2000 and 4750 R.P.M. are obtainable when the countershaft is driven at the normal suggested rates. The grinding wheel is mounted directly on the spindle and is held by a collar flange and screw. Wheels with $\frac{3}{8}$" diameter holes should be used. Wheel widths up to $\frac{3}{4}$", and diameters up to 3" can be accommodated. The grinding countershaft, see bulletin 120-A, is used for driving this attachment, or individual motor drive may be provided.

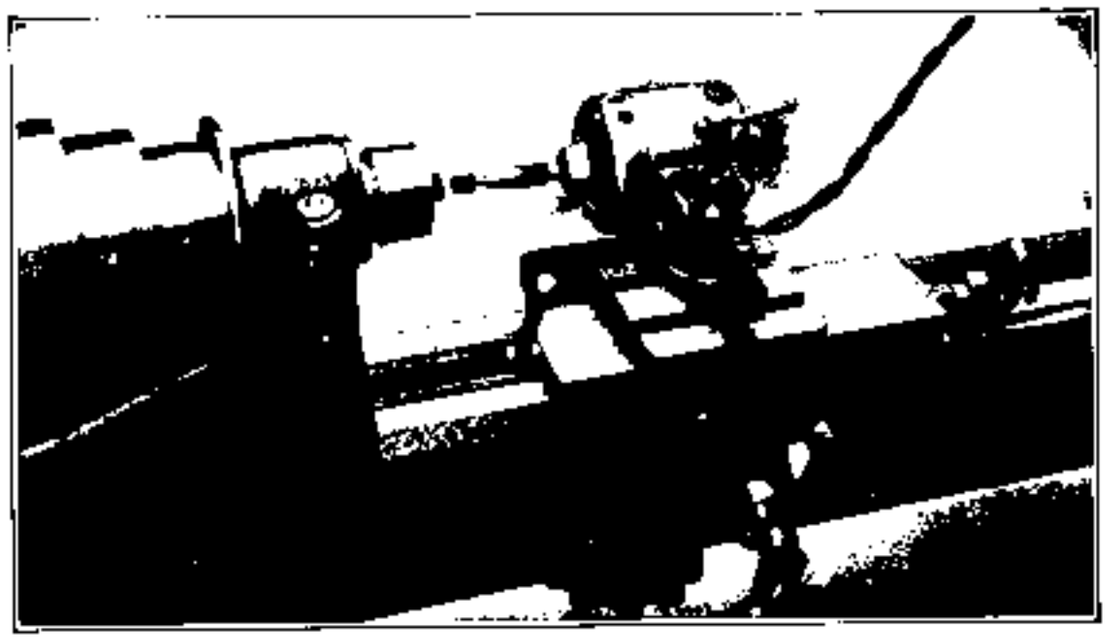

Fig. 39. Electric Motor Slide Rest Grinding Attachment

THE ELECTRIC MOTOR SLIDE REST GRINDING ATTACHMENT is very convenient for internal and light external grinding where the lathe installation provides no overhead drive for the regular internal and external grinding attachments. The cord attaches to a lamp socket. Supplied for either 105-115 A.C. or D.C. or 220-230 A.C. or D.C. Specify voltage when ordering. The spindle speed is 20,000 R.P.M. The armature shaft is provided with chuck of the collet type for holding mounted grinding wheels.

The upper slide rest feed screw provides traverse for the wheel and the lower screw provides feed adjustment. The graduated slide rest swivel permits setting for internal or external angular grinding such as grinding taper holes or centers. An assortment of mounted wheels for internal and external work is furnished with the attachment.

For collets, step chucks, jaw chucks, etc. See Rivett Bulletin 100-A

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

THE TURRET ATTACHMENT -- HAND INDEXING is valuable for making quantities of small duplicate parts where several operations are to be performed. A lathe equipped with turret, cutting-off and forming slide, lever chuck closer, and oil pan and floor legs, Fig. 43, is an inexpensive, efficient and accurate hand screw machine of ¾" round stock capacity.

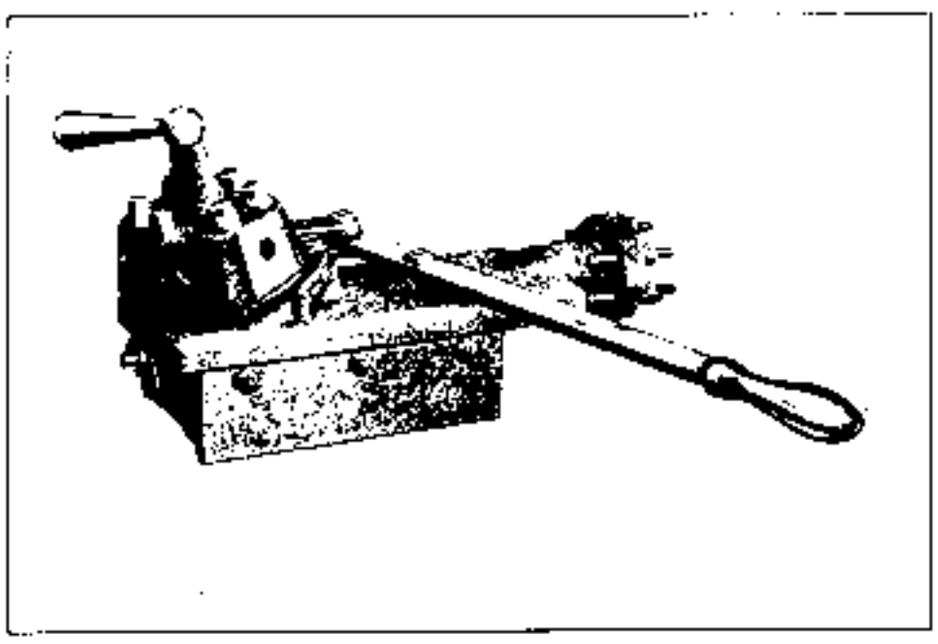

Fig. 40. Turret Attachment Hand Indexing

The head is tilted to provide ample clearance for all turret tools. Tools are accurately located and clamped in the head by a powerful sleeve device operated by hex head studs and a wrench provided. The head is indexed by hand and securely locked by the binding handle. Six adjustable stops numbered to correspond with the turret holes, are indexed by hand, the independent stops adding to the convenience of setting the tools. The slide, dovetailed and gibbed to the base, is moved by a long hand lever. The turret is clamped in any position on the lathe bed by two studs.

TABLE E -- SPECIFICATIONS OF HAND INDEXING TURRET ATTACHMENT

Length of base	7½"
Length of slide	11⅞"
Travel of slide, maximum	3"
Number of holes for tools	6
Diameter and depth of tool holes	¾" x 1"
Distance between turret face and headstock spindle, maximum	14½"
Net Weight	40 lbs.

THE TURRET ATTACHMENT -- AUTOMATIC INDEXING. Independently adjustable stops are carried in a head which is geared to the turret mechanism and revolves with it. Operation is by long hand lever. The head is of the flat type with six tool holes ¾" diameter taking box tools, tap and die holders and other turret tool equipment of standard sizes as made by Brown & Sharpe, Warner & Swasey and others. It has the same tool-clamping and head-locking devices as the hand indexing turret.

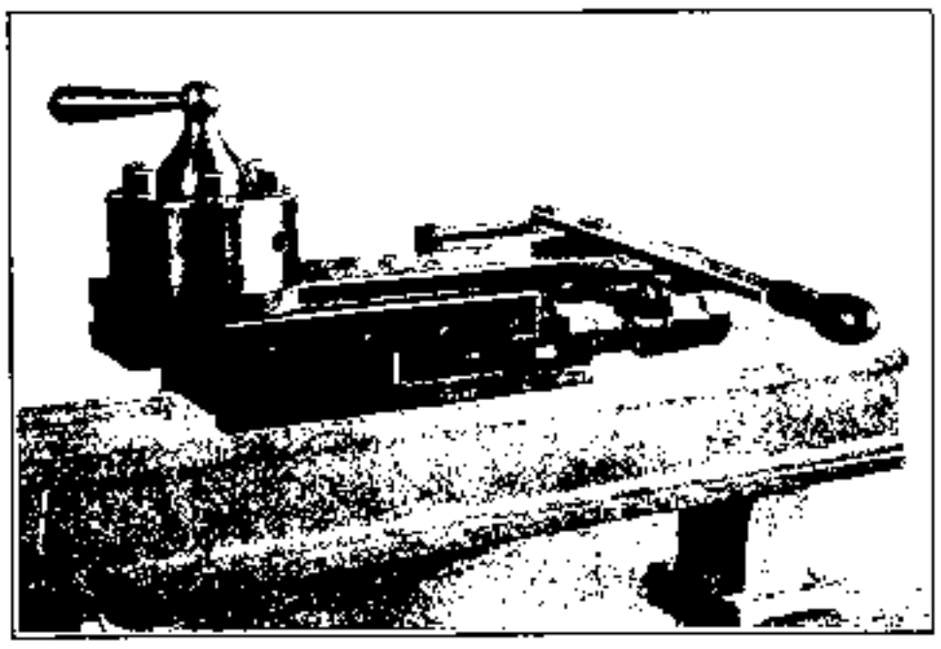

Fig. 41. Turret Attachment -Automatic Indexing

TABLE F -- SPECIFICATIONS OF AUTOMATIC INDEXING TURRET ATTACHMENT

Length of base	9⅝"
Length of slide	15"
Travel of slide, maximum	3¾"
Travel of slide, used in indexing	1⅞"
Travel of slide, available for work	2⅝"
Number of holes for tools	6
Diameter and depth of tool holes	¾" x 1"
Distance between turret face and headstock spindle, maximum	13¼"
Net Weight	44 lbs.

THE OIL PUMP AND PIPING consists of an adequate oil pump to bolt to the back of the lathe bed, a countershaft pulley for driving the pump, intake piping with strainer, output piping with three swivel joints, shut-off cock and nozzle. It is usually employed with the oil pan on work requiring a copius flow of cutting oil. The strainer is immersed in the well of the oil pan. Net weight 14 lbs.

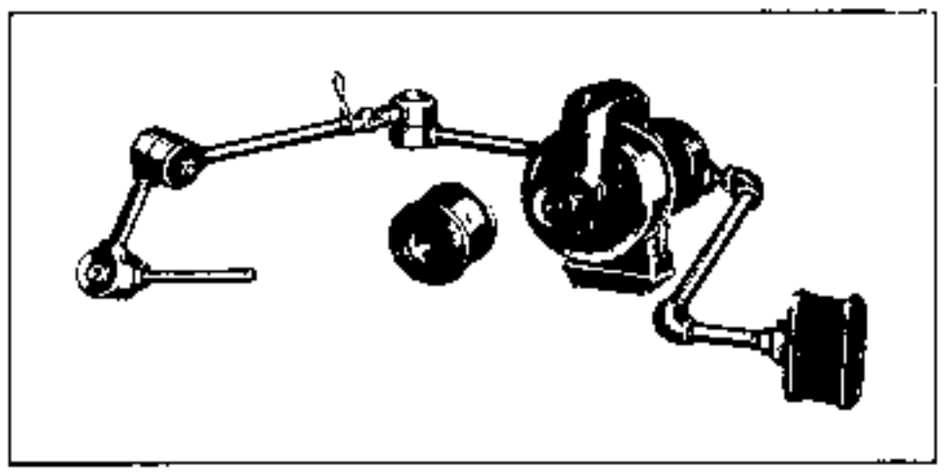

Fig. 42. Oil Pump and Piping

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For mounting and driving equipment -- See Rivett Bulletin 120-A

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

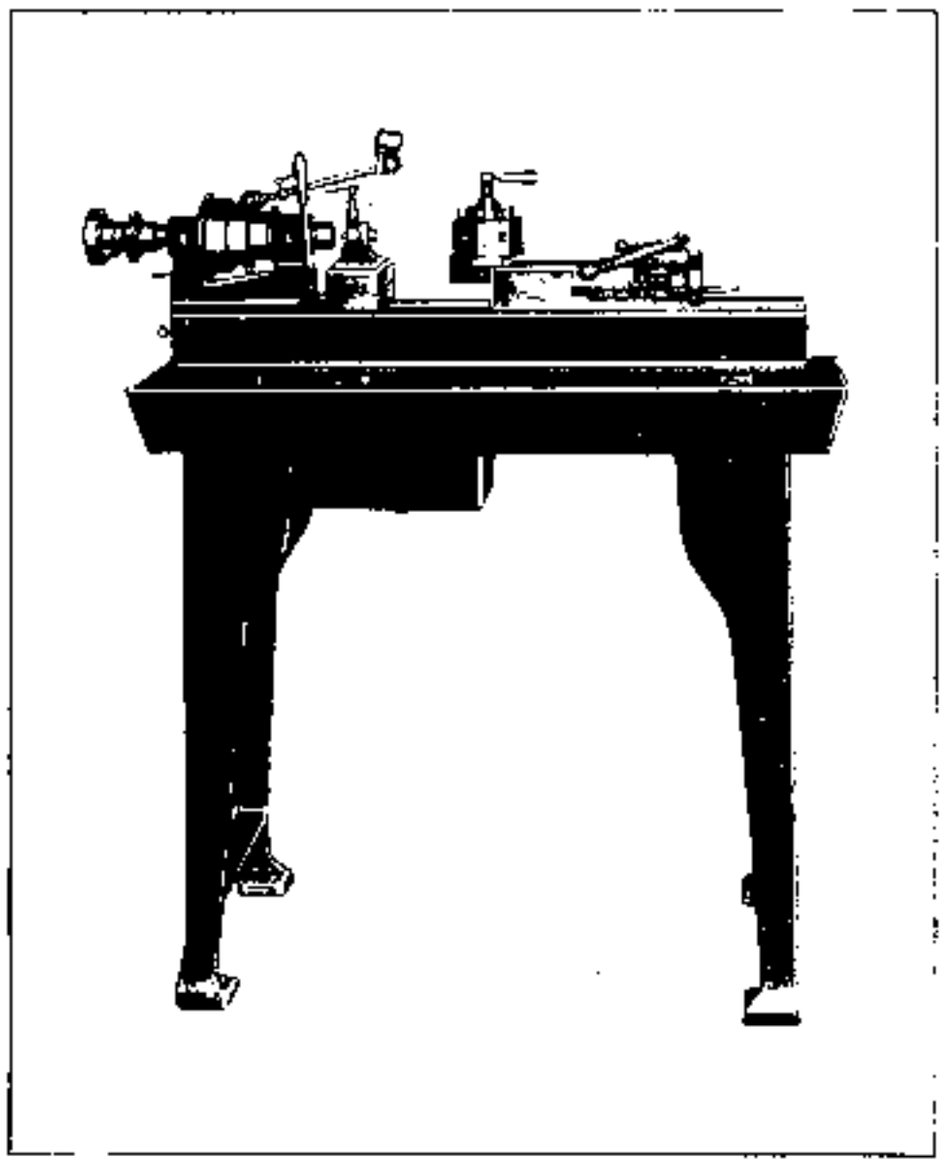

Fig. 43. Lathe with Lever Chuck Closer, Cutting-off and Forming Slide, Turret Attachment-Automatic Indexing, Oil Pan, Floor Legs, Oil Pump and Piping

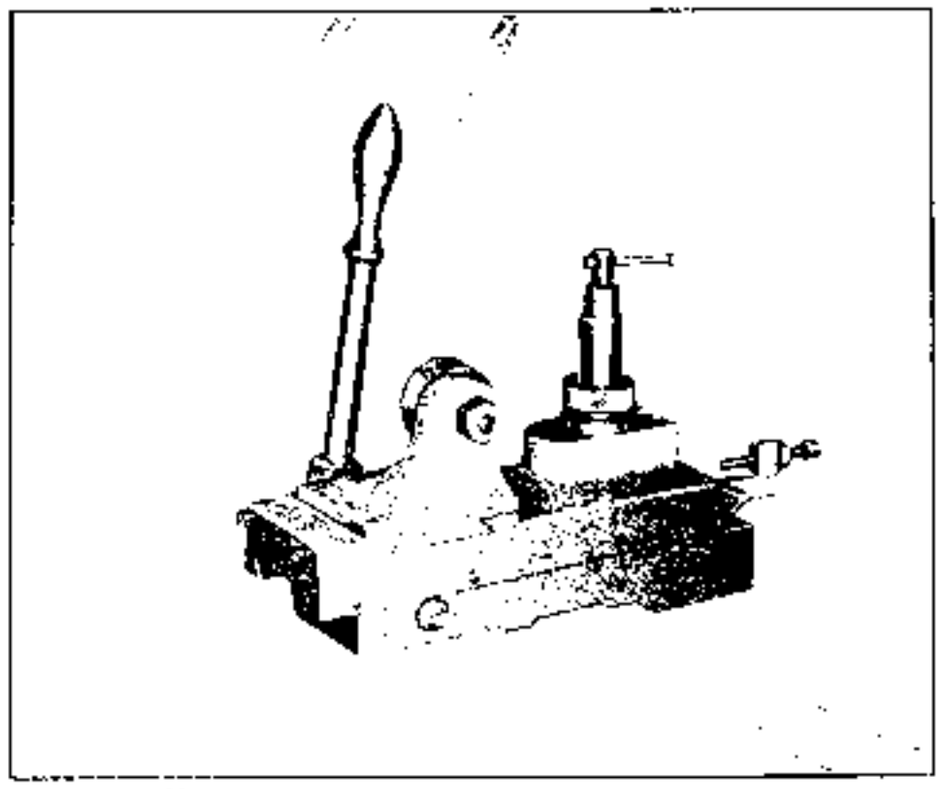

Fig. 44. Cutting-off and Forming Slide

THE CUTTING-OFF AND FORMING SLIDE, fits crosswise on the lathe bed and is held by a stud, washer and nut. Dovetailed and gibbed to the base is a cross slide with a movement of 3½", accomplished by a rack and pinion operated by a hand lever. A holder for a circular forming tool (Fig. 45) is dovetailed and gibbed to the cross slide and is adjustable in position lengthwise so that the forming tool can readily be located in proper relation with the cutting-off tool. A blank forming tool is furnished ¾" wide. Cuts of this width can be made without strain or chatter as this attachment is very rigid and powerful. An adjustable stop, limiting the travel of the cross slide, makes it possible to form any number of duplicate pieces to the same diameter. The rear tool holder is generally used for holding a cutting-off tool or a combination cutting-off and rounding tool, Fig. 46. The holder is clamped in a T slot which allows it a latitude of location of 1¾", and is provided with a threaded adjusting nut to raise and lower the tool.

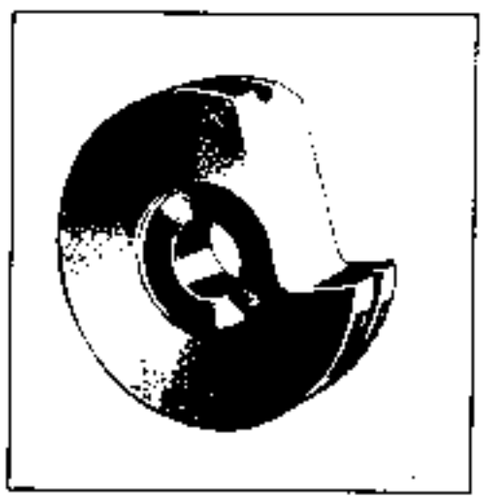

Fig. 45. Forming Tool

TABLE G — SPECIFICATIONS OF CUTTING-OFF AND FORMING SLIDE

Width of base	2 19/16"
Length of base	9"
Width of slide	3 1/16"
Length of slide	9"
Travel of slide	3½"
Diameter of circular forming tools	1 11/16"
Width of circular forming tools, maximum	¾"
Size of cutting-off tools, square	⅜"
Net Weight	21 lbs.

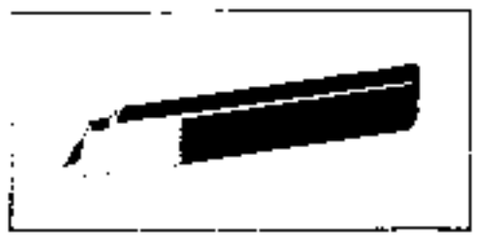

Fig. 46. Cutting-off and Rounding Tool

THE TAILSTOCK TURRET ATTACHMENT is valuable for production of small duplicate parts. It is mounted in the tailstock spindle by a taper shank carrying the attachment base. The turret head is rotated by hand and locked in position by index pin.

TABLE H — SPECIFICATIONS OF TAIL STOCK TURRET ATTACHMENT

Outside diameter of base and head	3 1/16"
No. of tool holes	4
Diameter and depth of tool holes	½" x ⅝"
Shank is standard taper fitting tailstock spindle.	
Net Weight	2½ lbs.

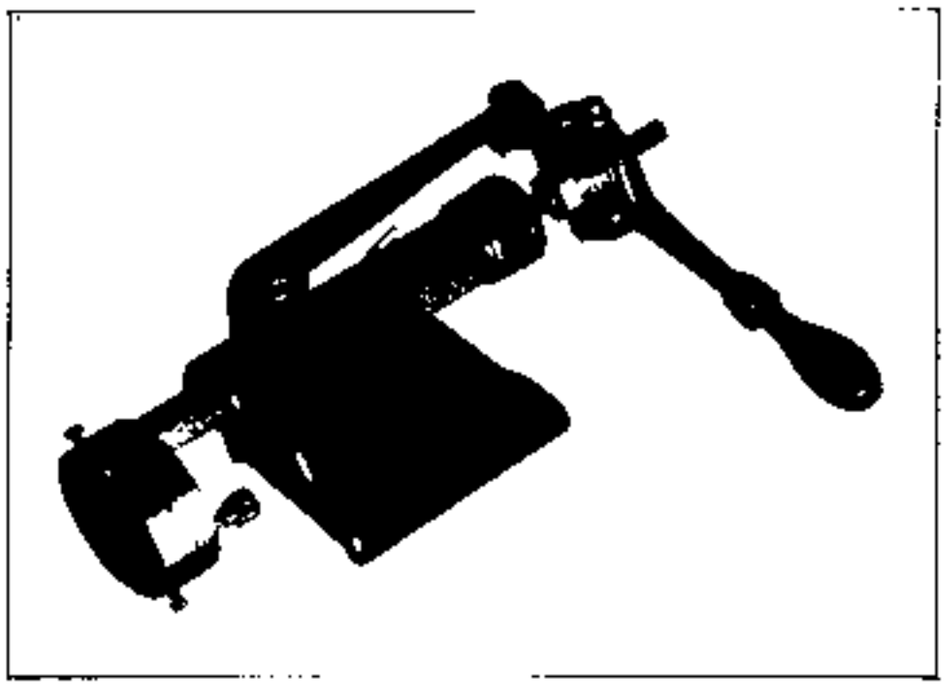

Fig. 47. Tail Stock Turret Attachment

—[*page seventeen*]—

For collets, step chucks, jaw chucks, etc. — See Rivett Bulletin 100-A

Fig. 48. Driving Plate

DRIVING PLATE is cast iron 3¾" dia. with ⅜" wide notch to receive a work-driving dog.

PLAIN FACE PLATES are cast iron in two sizes 4¼" dia. and 5⅛" dia. They are used for mounting jaw chucks and special fixtures and may be recessed, drilled and tapped. Net weight 2½ lbs. and 3 lbs.

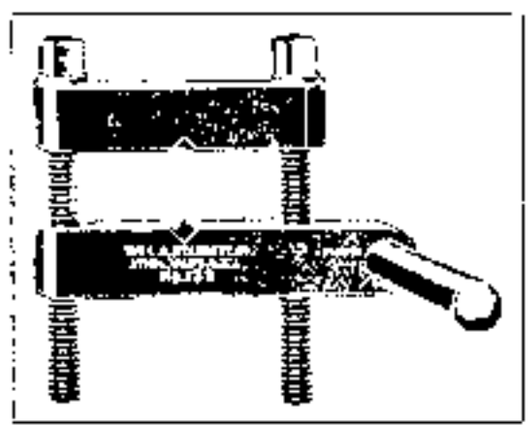

Fig. 49. Clamp Dog, ¾" capacity

SLOTTED FACE PLATE is cast iron 7½" dia. and has four plain slots and four T slots for fastening work. The T slots are the same size as those on top of slide rest so various attachments as vise and angle iron can be mounted. Weight 4 lbs.

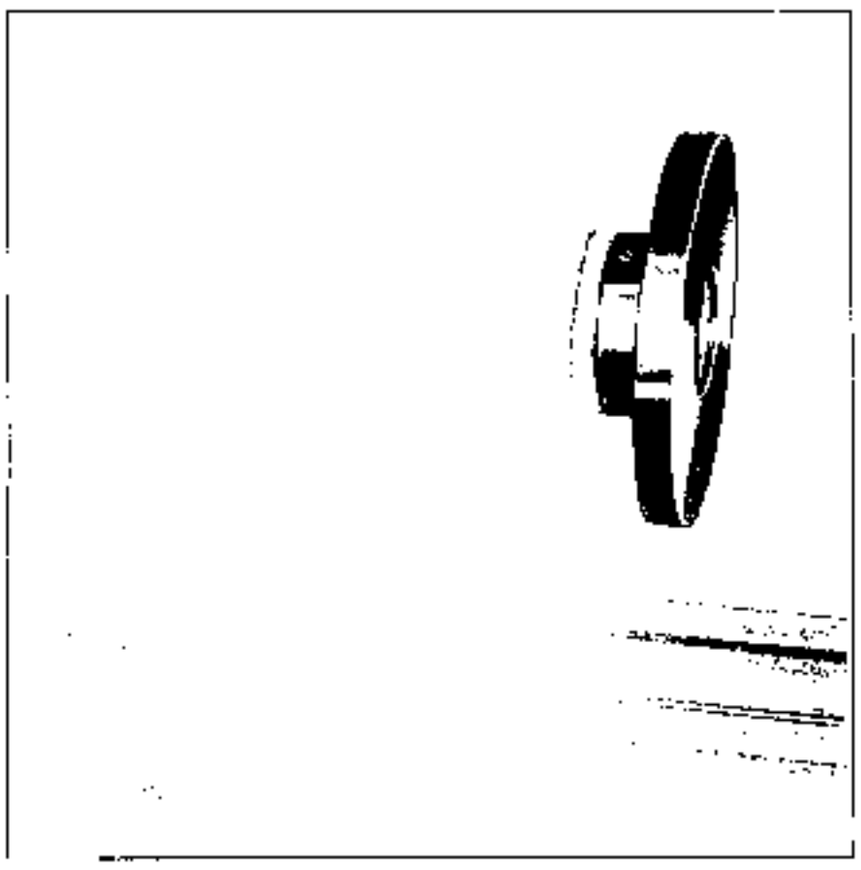

Fig. 50. Plain Face Plate

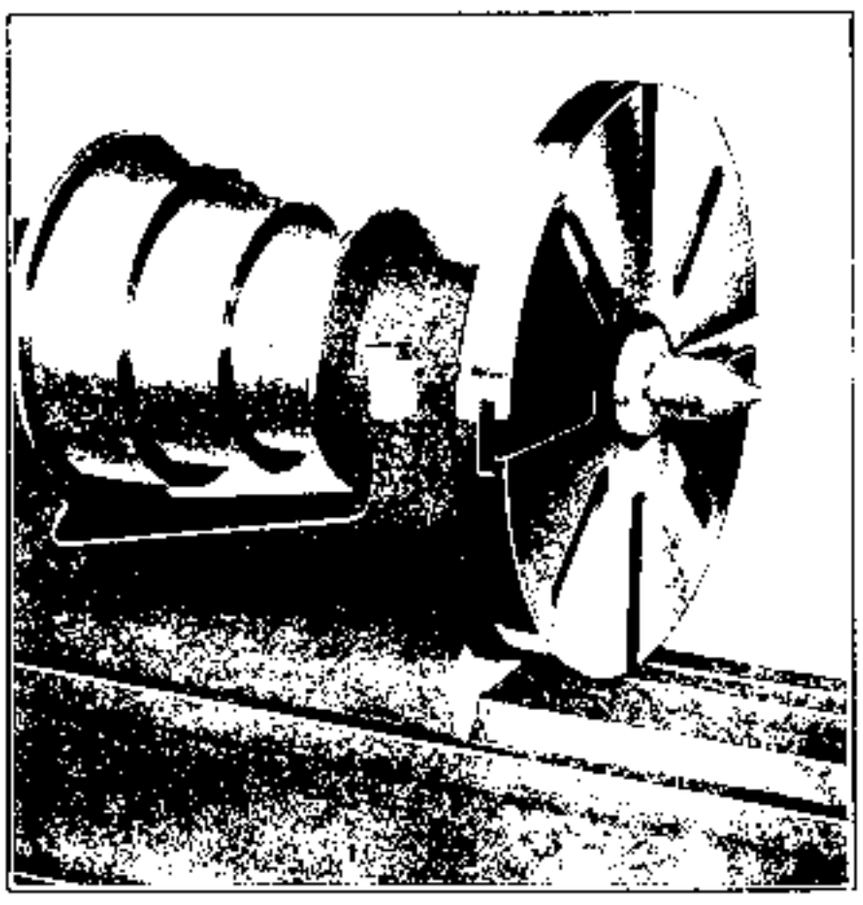

Fig. 51. Slotted Face Plate

THE TAPPED FACE PLATE is of cast iron 7" diameter and is drilled and tapped with 49 holes ¼"-20 U.S.S. for convenient strapping of work, and for mounting of special fixtures. Weight 6 lbs.

THE TIN FACED LAP is of cast iron 7½" diameter faced with pure tin ⅛" thick. The tin facing is easily renewed when worn. Weight 14½ lbs.

THE EMERY FACE PLATE is of cast iron 7" diameter with circular scoring for mounting emery paper discs. Weight 5½ lbs.

These plates are all fitted to the external taper of the spindle nose and are provided with two cone point screws which contact with the reverse 45° taper on the spindle and lock the plate securely irrespective of direction of rotation of spindle.

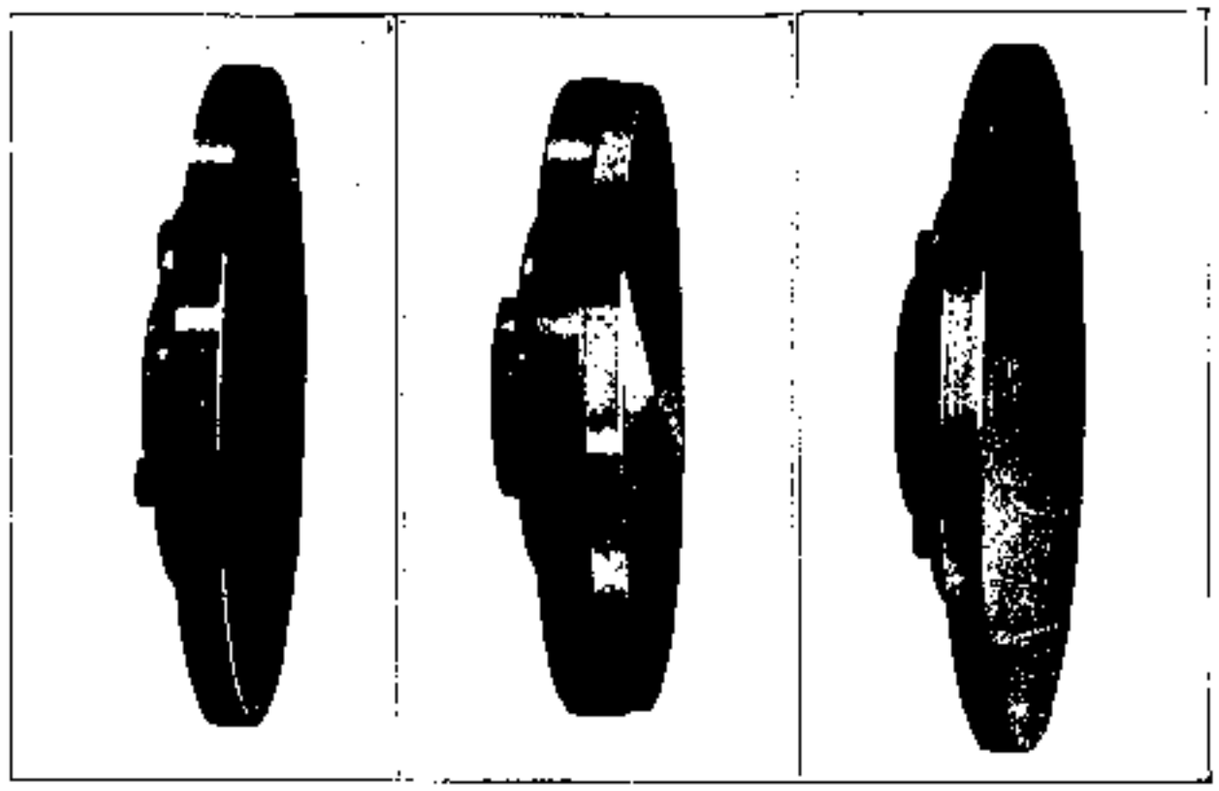

Fig. 52
Tapped Face Plate

Fig. 53
Tin Faced Lap

Fig. 54
Emery Face Plate

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For mounting and driving equipment — See Rivett Bulletin 120-A

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

DRILL CHUCKS are offered in three sizes, 0 to $\frac{3}{16}$", 0 to $\frac{5}{16}$", and 0 to $\frac{1}{2}$". Drill chucks for use in turret attachment, or in collet held in headstock, are mounted on straight shanks $\frac{3}{4}$" diameter by $1\frac{5}{8}$" long. Drill chucks for use in tailstock of lathe, or in headstock center chuck, are mounted on taper shanks. These drill chucks are of standard make, of improved type, with hardened jaws. They are strong and accurate and are similar to Fig. 36.

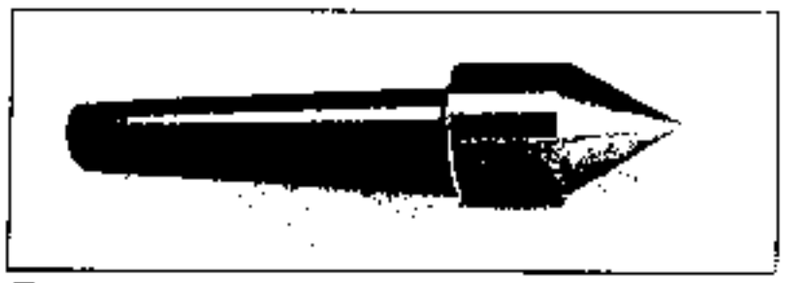

Fig. 55. Male Center — $\frac{3}{16}$" diameter, 60° included angle, shank Rivett special 3° taper. Furnished hard for tailstock and soft for headstock

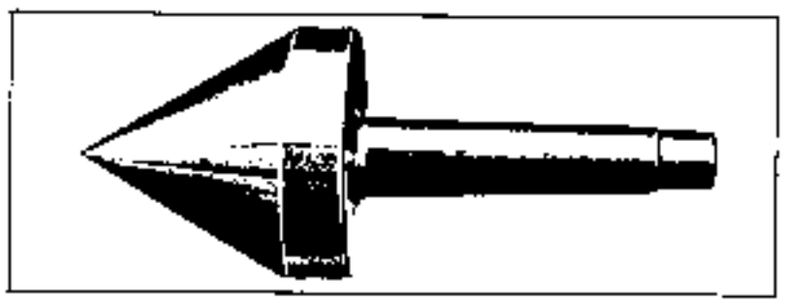

Fig. 56. Large Male Center — head is hard, $1\frac{1}{2}$" diameter with 60° included angle. Useful for turning tubing or work with holes too large to run on standard centers

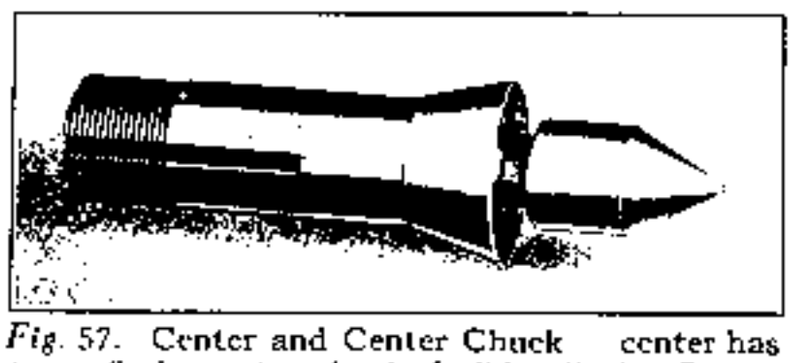

Fig. 57. Center and Center Chuck — center has taper fit in center chuck (solid collet). Center chuck fits headstock spindle

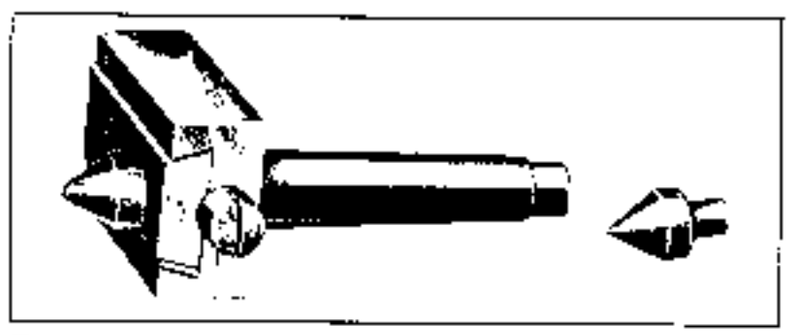

Fig. 58. Adjustable Off-Center — center point is carried on slide with screw adjustment allowing maximum offset of $\frac{1}{4}$". Furnished with removable male and female centers $\frac{1}{2}$" diameter

Fig. 59. Blank Center — head is soft, 1" diameter, $1\frac{3}{8}$" long and may be turned to desired form. Taper shank fits center chuck and tailstock spindle

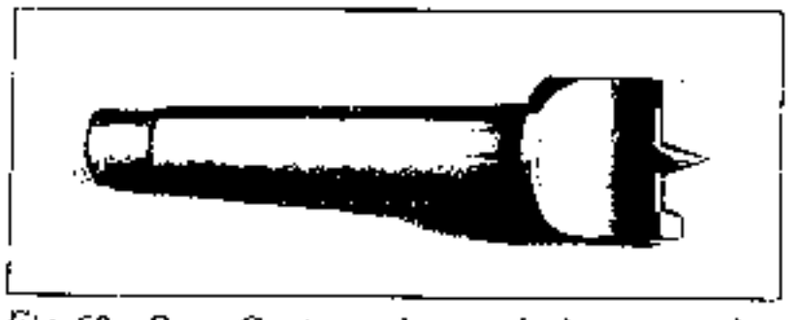

Fig. 60. Spur Center — has conical center point and two knife edges. Useful for wood turning

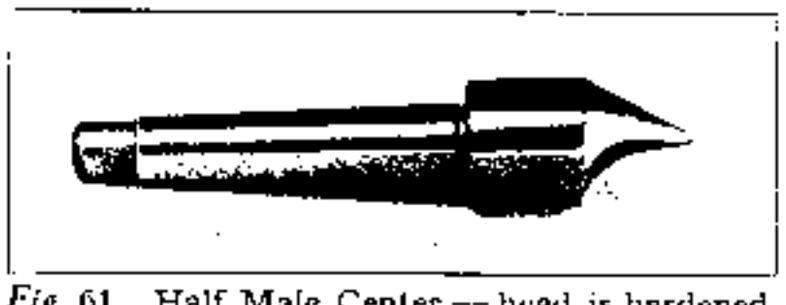

Fig. 61. Half Male Center — head is hardened, $\frac{27}{32}$" diameter, half cut away leaving small point, to provide clearance for turning tool when facing ends of work. Also useful for external grinding

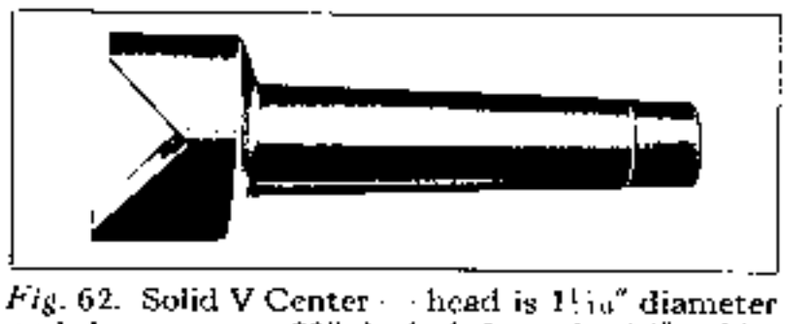

Fig. 62. Solid V Center — head is $1\frac{5}{16}$" diameter and has groove 90° included angle $\frac{3}{8}$" wide. Used in tailstock for holding cylindrical work when drilling and spotting to transverse center

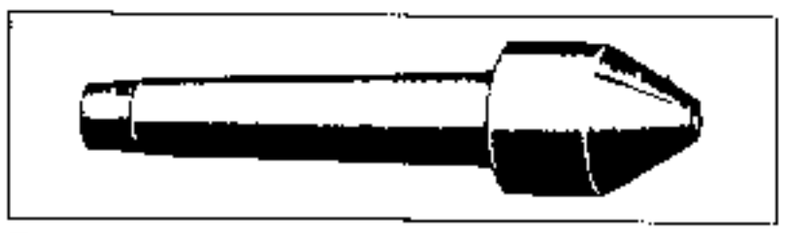

Fig. 63. Female Center — head is hard, $\frac{27}{32}$" diameter and is ground to 60° external angle. The hole, $\frac{5}{16}$" maximum diameter, is 60° included angle

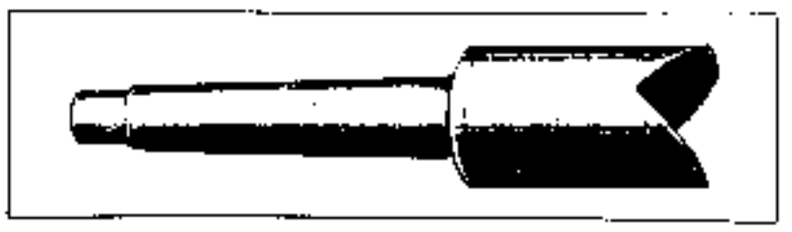

Fig. 64. Revolvable V Center — same as solid V center (Fig. 62) except head turns freely on shank, accommodating itself to position of work

Fig. 65. Drill Plates 2", 3", 4", 5", in diameter

DRILL PLATES are made in four sizes 2", 3", 4" and 5" diameter mounted on shanks to fit both tailstock spindle and headstock center chuck. The plates are cast iron and the shanks are steel accurately ground. They are used as a back support for work being drilled with a drill in the headstock. By fastening guide and stop strips to the plate, duplicate parts can be as quickly and accurately drilled as if jigged.

– [*page nineteen*] –

For collets, step chucks, jaw chucks, etc. — See Rivett Bulletin 100-A

RIVETT PLAIN PRECISION BENCH LATHES: SERIES 507

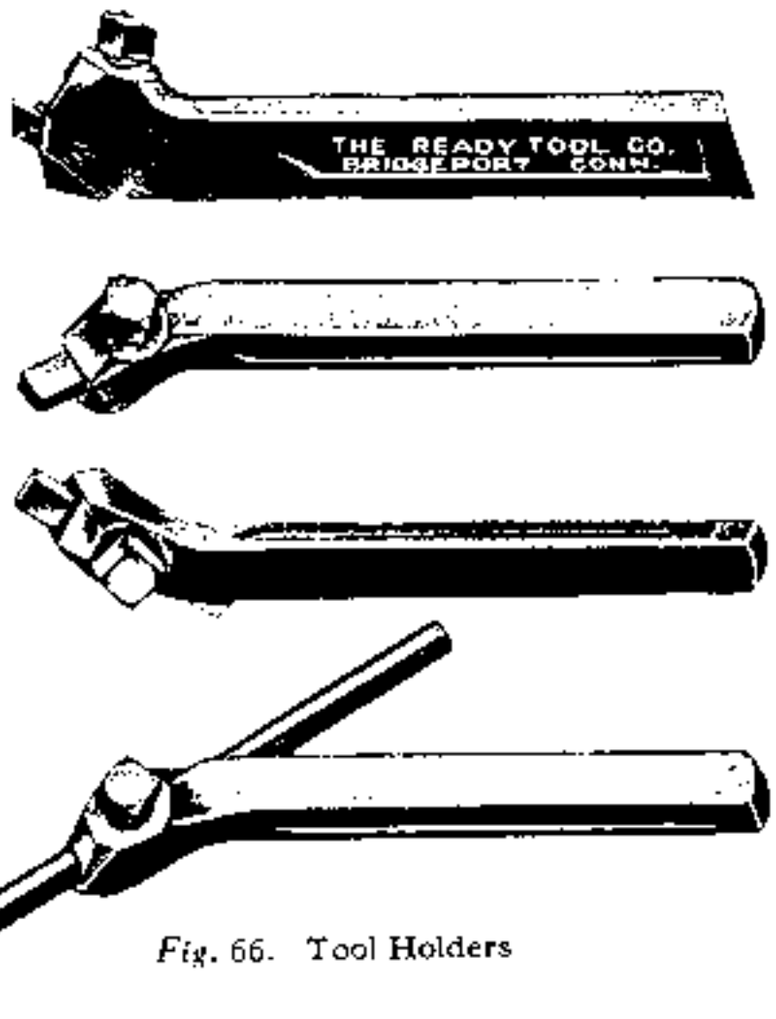

Fig. 66. Tool Holders

THE TOOL HOLDERS specially recommended are the Red-E Style 00, designed for use on bench lathes. These holders are 5/16" x 1/2" x 4", drop forged, broached with true, square holes for the bits. They are made straight, right hand offset, left hand offset and boring, the first three taking 5/16" square high speed steel bits which can be ground to any desired shape. Extra blank bits can be supplied at nominal cost. The boring tool requires a simple, inexpensive boring bar.

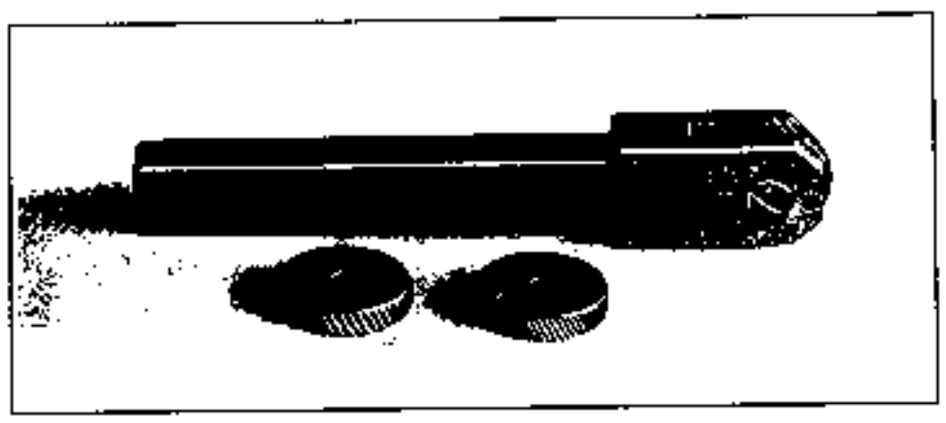

Fig. 67. Knurling Tool

THE KNURLING TOOL with shank 5/16" x 1/2", fits the rocker tool post of the slide rest. Three knurls, hardened, 7/8" diameter, 3/16" wide, are furnished: fine, medium and coarse knurling, 45° diagonal. The threaded stud of the knurling tool facilitates changing knurls.

THE BALL TURNING REST is of great practical service in both manufacturing and tool room work. It will accurately produce parts such as balled valve seats and discs, knuckle, universal and swing joints, knobs, hemispherical ends, and in fact any work where a surface of spherical shape, convex or concave, is required. In the tool room it quickly handles, with great precision, ball reamers, convex and concave cutters, punch and die, forging die, and similar tools.

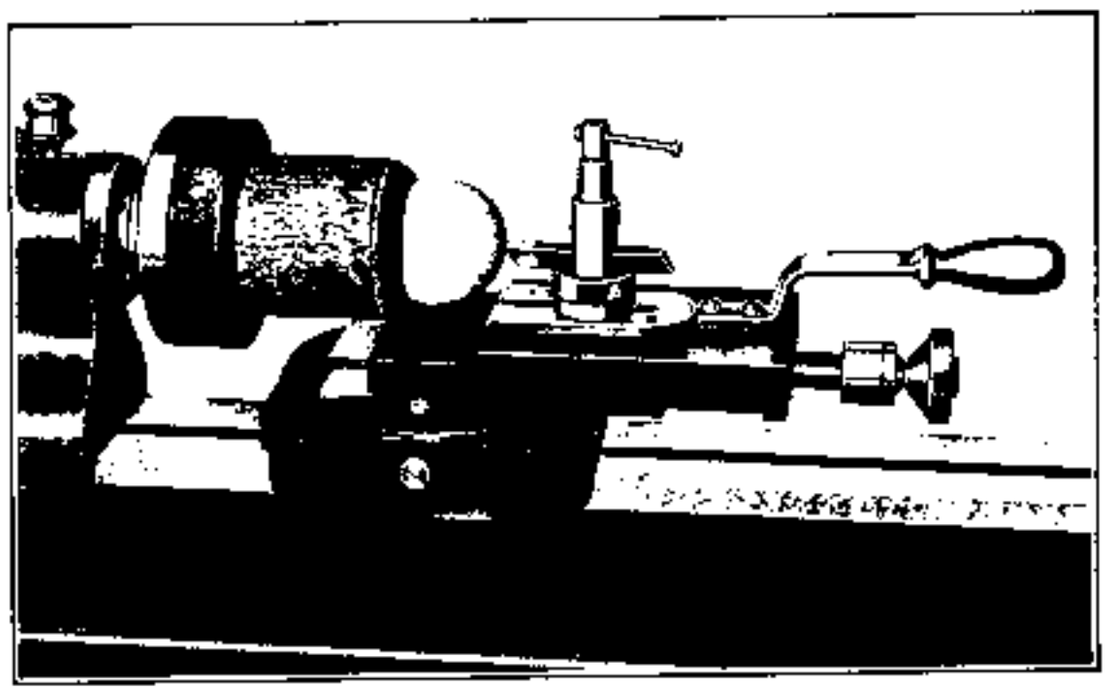

Fig. 68. Rivett Ball Turning Rest arranged for finish turning ivory billiard ball held in chalked wood chuck

Billiard ball makers and re-turners find it the ideal equipment for their work, -- fast, exact and inexpensive. This rest is interchangeable with the compound slide rest and is quickly attached, adjusted or removed. It is heavily built with large slides and a six-inch diameter swivel bearing surface. The lower slide carries screw adjustment for centering. The swivel slide feed screw dial is graduated in thousandths of an inch. The tool post is provided with height adjustment for cutting tool. Net weight 22 lbs.

Other Standard **Rivett** *Products*

Bench Lathe Mounting and Driving Equipment -- Bulletin 120-A
Draw-in Collets and Chucks - Bulletin 100-A
Manufacturers' Production Bench Lathes and Equipment Bulletin 505-B
Plain Precision Bench Lathes, Series 505 - Bulletin 505-C
Precision Back Geared Screw Cutting Lathes -- Bulletin 608-A
Rivett Improved Thread Tool and Cutters - Bulletin 110-A
Internal-External Precision Grinding Machines - Bulletin 104-B
Blanchard Pulsating Lubrication System - Bulletins B-1, B-2 and B-3
Forkup, Forkan and Forkgun Oilers Bulletin F-2

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