The New South Bend 9-inch "WORKSHOP" LATHE

For Servicing and Repairing Automobiles, Buses, Trucks, Tractors, Airplanes, and General Machinery

DOES THESE PROFITABLE JOBS

1. Armature Truing
2. Commutator Undercutting
3. Valve Refacing
4. Piston Finishing
5. Screw Thread Cutting
6. Differential Truing
7. Drilling and Boring
8. Reamer Sharpening
9. Making Bushings
10. Lapping
11. Connecting Rod Boring
12. Testing and Straightening
13. Filing and Polishing
14. Milling Keyways
15. Reaming and Honing

THE LATHE ALSO DOES HUNDREDS OF OTHER AUTO SERVICE JOBS

SOUTH BEND LATHE WORKS

562 Niles Avenue - - - - South Bend, Indiana, U. S. A.

The Lathe in the Service Machine Shop

The Back-Geared Screw Cutting Metal Working Lathe is known among mechanics as the "universal tool" because it can be used for so many different kinds of work. No other single piece of equipment will handle such a wide variety of jobs with the same speed, accuracy and economy. This is why shops which are equipped with modern lathes can turn out good work at reasonable prices and make a nice profit.

One Lathe with a few attachments will take care of the important automotive service jobs such as boring rebabbitted connecting rods, truing and undercutting armature commutators, honing piston pin hole bearings, refacing valves, finishing pistons, etc. In addition, the lathe can be used for general machine work of all kinds in connection with the repair and maintenance of automobiles, buses, trucks, tractors, airplanes and other machinery.

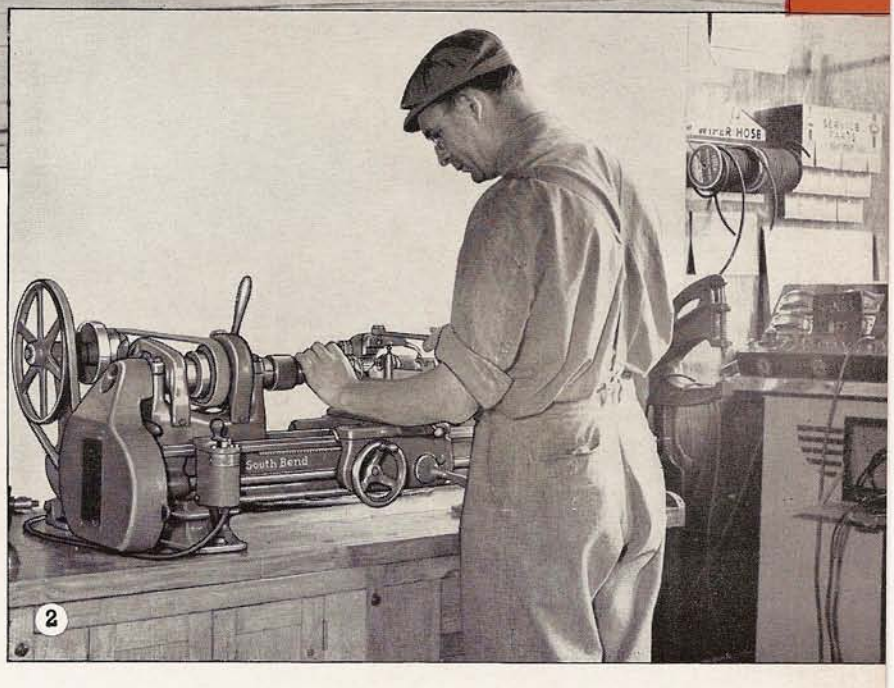
With the South Bend Lathe and attachments in your shop, you will be entitled to put a sign over your door reading "Machine Work Done Here." The practical South Bend attachments greatly increase the usefulness of the lathe, save time, and assure precision accuracy. With this equipment you can give your customers prompt service on jobs that would otherwise have to be sent out to a machine shop.

Increased Profits and a larger volume of business will result from the installation of a lathe in your shop. Not only will the lathe increase your volume of business by inspiring customer confidence, but it will also increase your margin of profit, as it will enable you to do work in your own shop which you are now obliged to send outside. A good lathe is the most useful and profitable single piece of equipment you can install.

Instruction Books which explain in detail how to use the lathe for truing armature commutators, finishing pistons, refacing valves, making bushings, boring rebabbitted connecting rods, cutting screw threads, etc., are illustrated and described on the back cover of this booklet. These books make it easy for any mechanic to learn to operate the lathe and will be supplied free of charge when ordered with the lathe.

SOUTH BEND LATHE WORKS

1



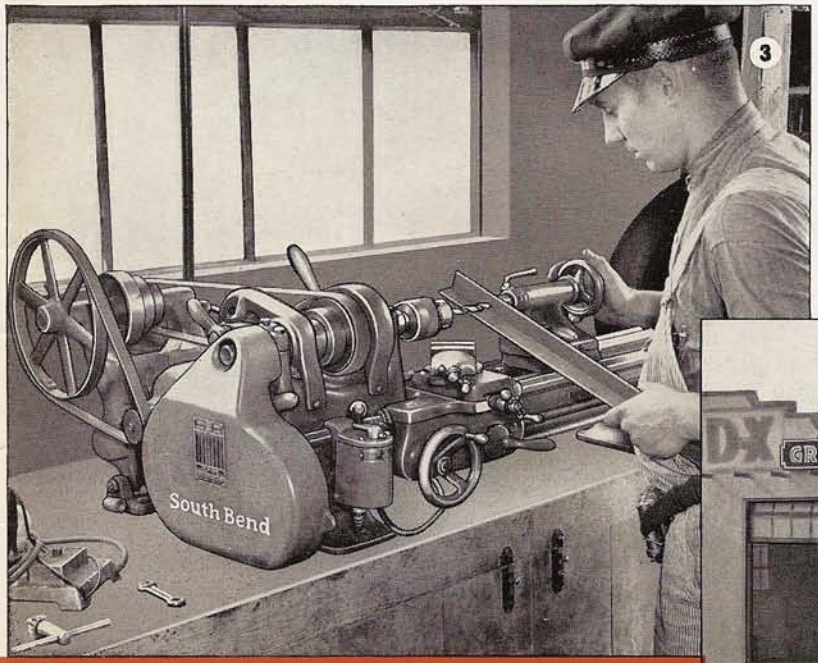
2

LAKESIDE AUTO REPAIR COMPANY

LAKESIDE, MICHIGAN

Fig. 1 Above
This is the exterior of the Lakeside Auto Repair Company, located on U.S. 12 at Lakeside, Michigan, and equipped with a South Bend 9-inch "Workshop" Lathe.

Fig. 2. Right
Undercutting an Armature Commutator on the South Bend 9-inch "Workshop" Lathe in the shop of the Lakeside Auto Repair Company.



3

RELIANCE SERVICE

STEVENS POINT, WISCONSIN

Fig. 3. Left
Dayton Schwartz drilling an angle iron on the South Bend 9-inch "Workshop" Lathe in his well-equipped shop.

Fig. 4. Below
Exterior of Reliance Service, which is located on U.S. 10 in Stevens Point, Wisconsin, and is equipped with a 9-inch "Workshop" Lathe.

4

UNITY SERVICE
DOWAGIAC, MICHIGAN

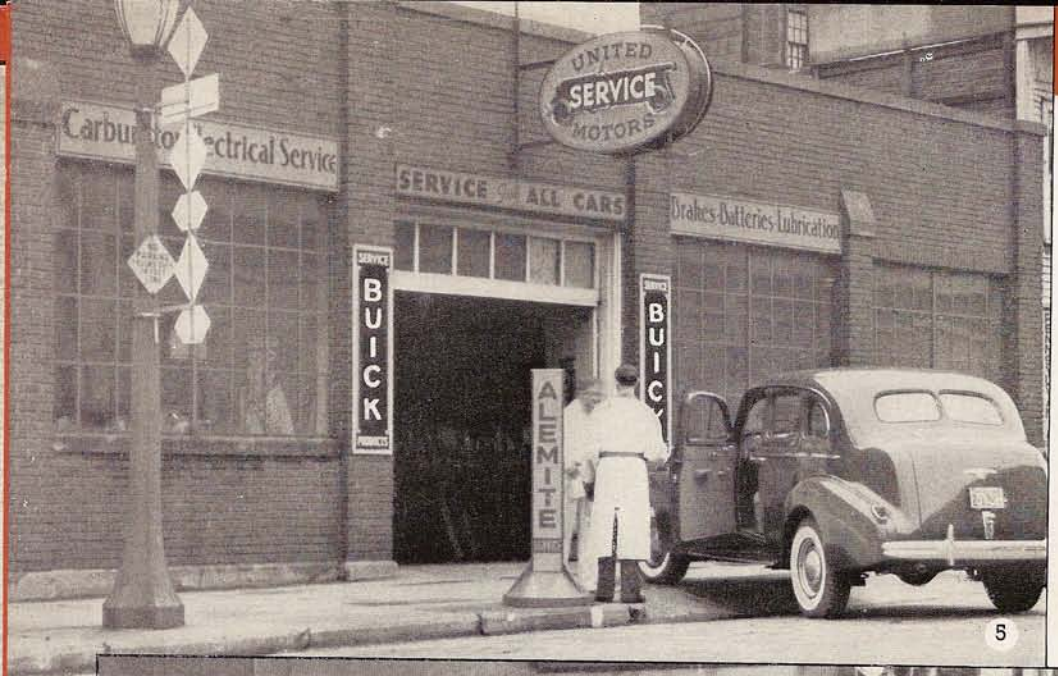


Fig. 5. Left

The entrance to the service shop of the Unity Service at Dowagiac, Michigan, which is equipped with a South Bend 9-inch "Workshop" Lathe.

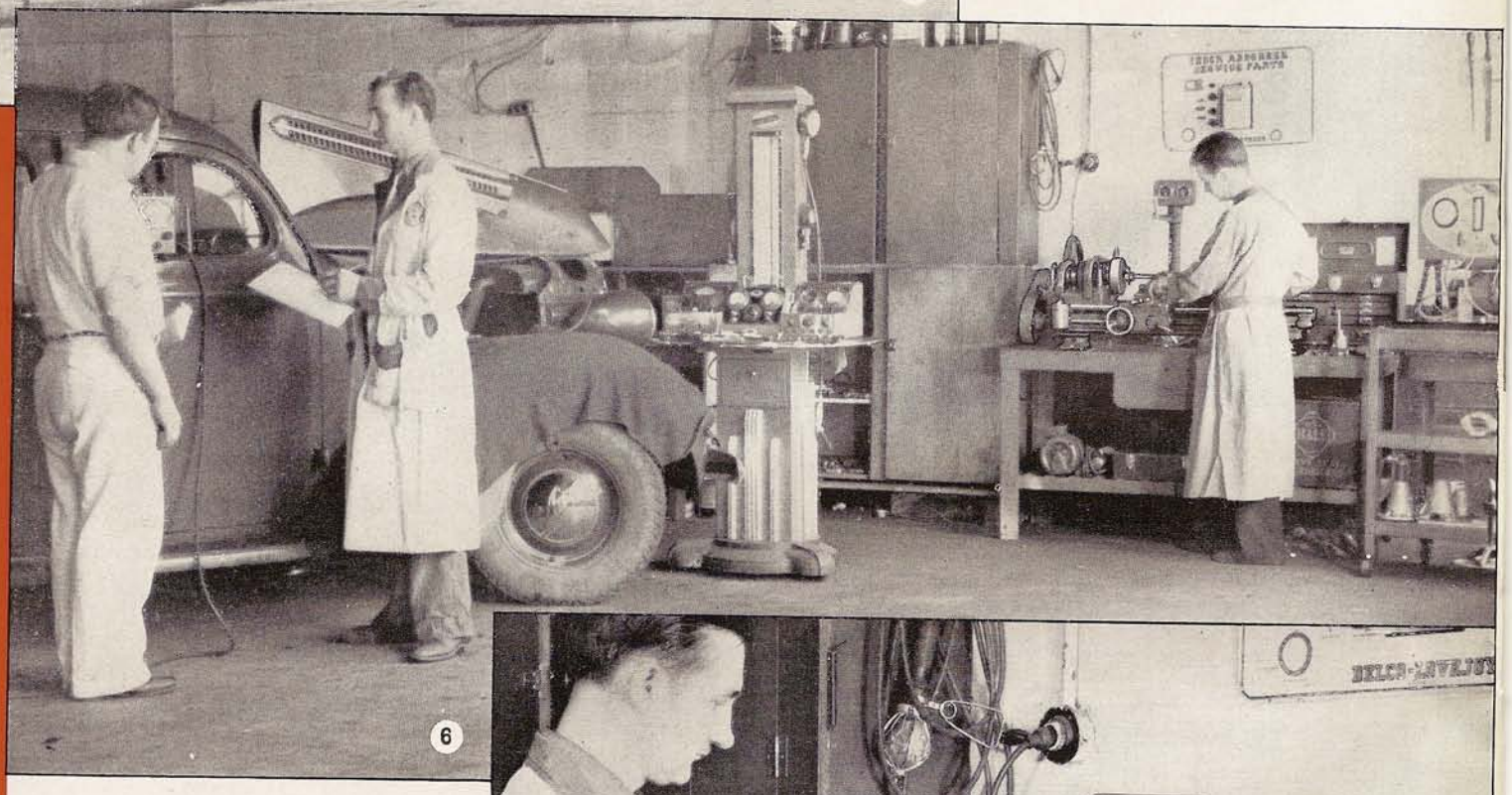


Fig. 6. Above

The interior of the well-equipped shop of the Unity Service at Dowagiac, Michigan. The mechanic at the right is operating the South Bend 9-inch "Workshop" Lathe.

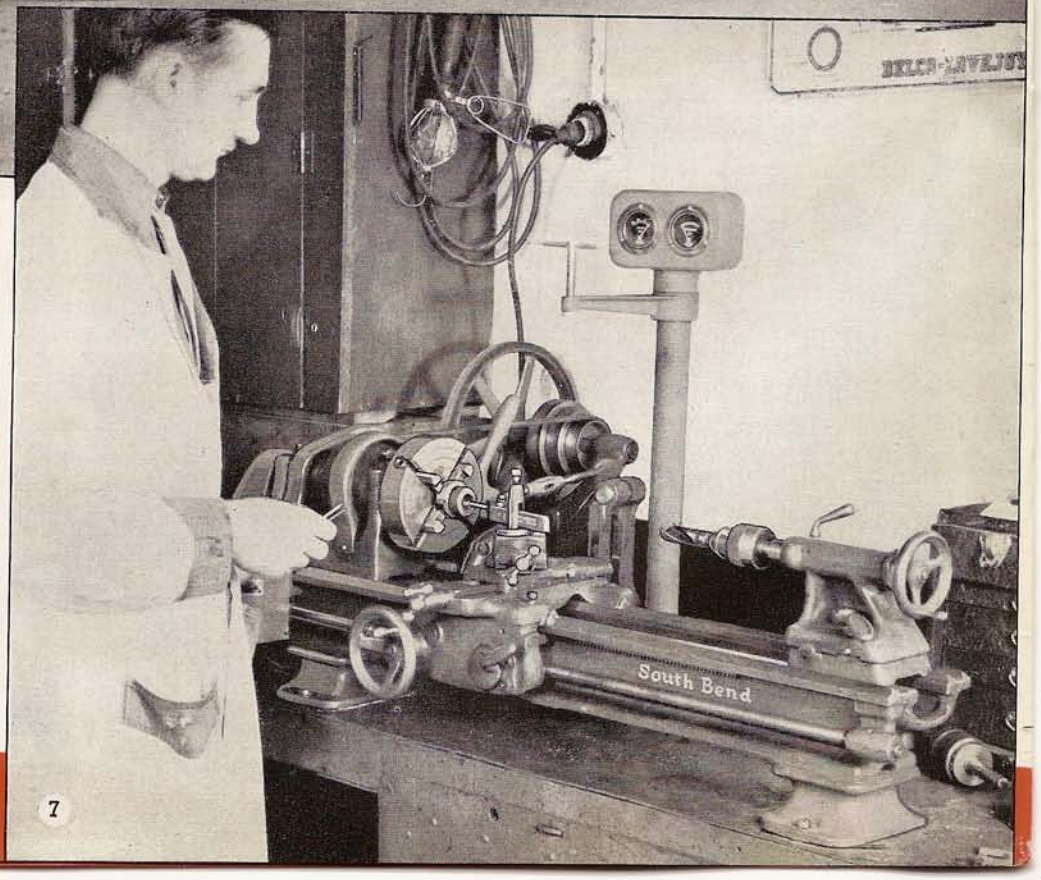


Fig. 7. Right

Making a replacement bearing in the 9-inch "Workshop" Lathe in the shop of the Unity Service, Dowagiac, Michigan.

E SHOPS EQUIPPED WITH 9-inch "WORKSHOP" LATHE

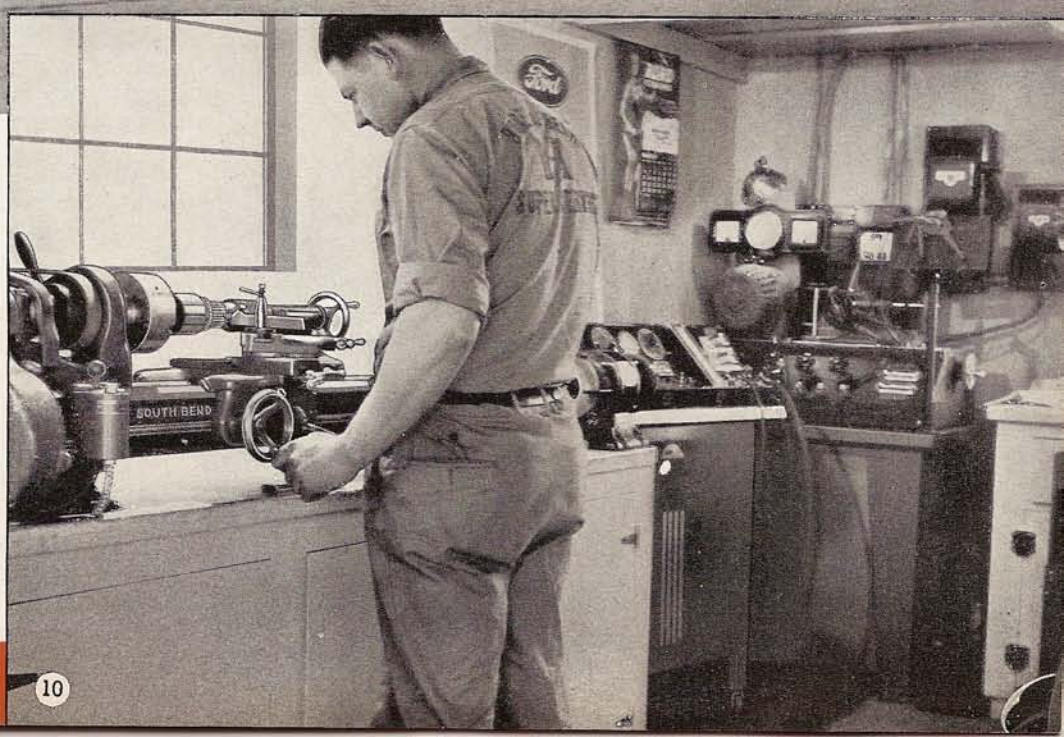
BARE & HEIM SUPER SERVICE

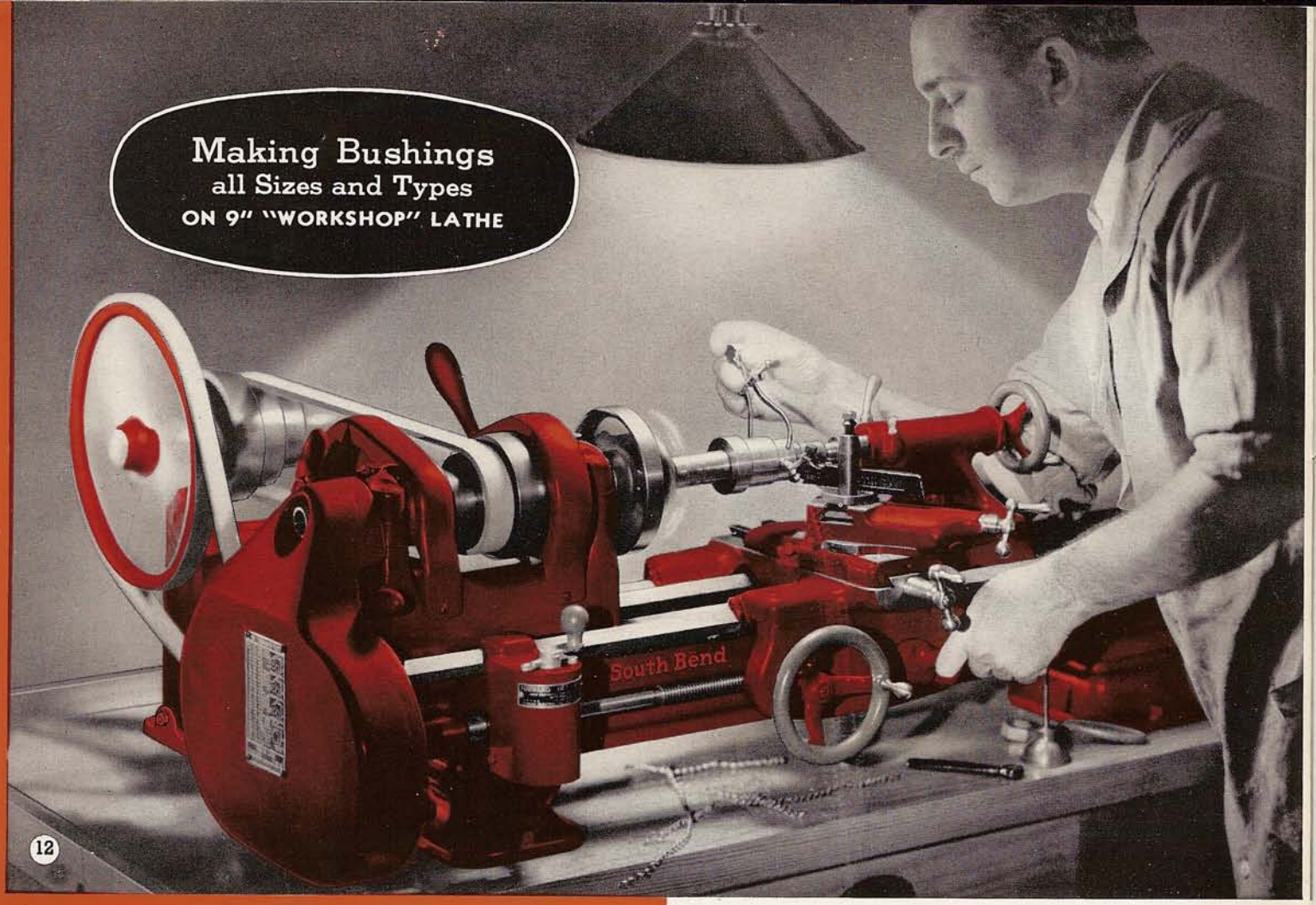
NORTH LIBERTY
INDIANA

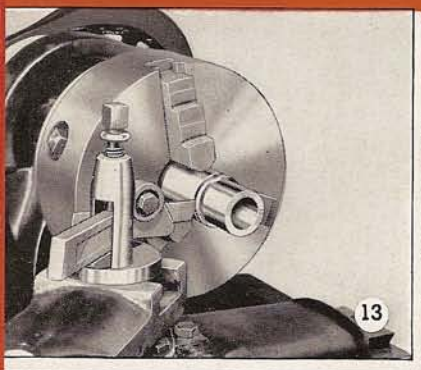
Fig. 8. Left
Interior of the Bare & Heim Super Service Station on State Road 23, at North Liberty, Indiana. A South Bend 9-inch "Workshop" Lathe was one of the first pieces of equipment installed in this modern shop.

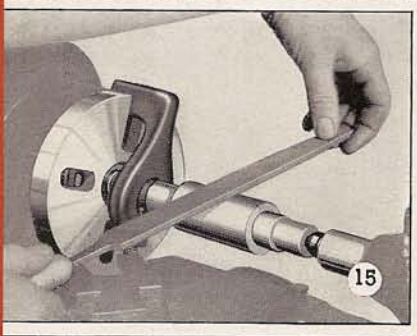
Fig. 9. Above
Exterior of the Bare & Heim Super Service at North Liberty, Indiana. The activity shown proves that the well-equipped shop gets the business.

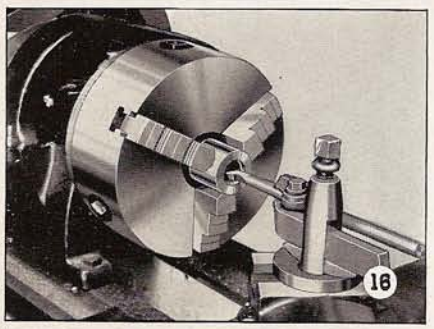
Fig. 10 Right
Truing an Armature Commutator on the 9-inch "Workshop" Lathe in the Bare & Heim Super Service Shop.

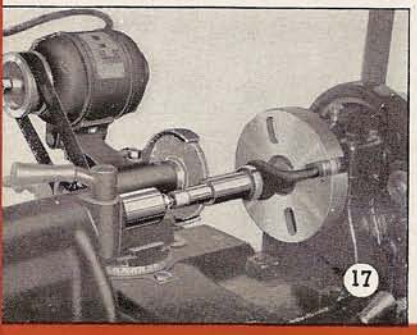


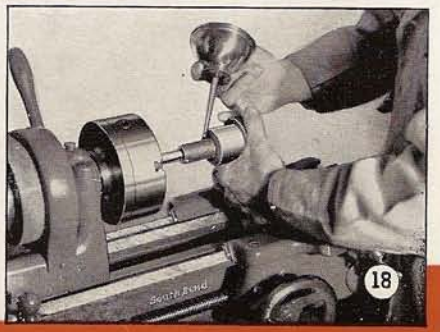












MAKING BUSHINGS

On the 9-inch "Workshop" Lathe

All sizes and all types of bushings can be made quickly and accurately on the lathe. It is more economical and more satisfactory to make bushings as they are required than to carry a large stock of finished bushings.

Write for a copy of Bulletin No. 7-S, "How to Make Bushings." Price postpaid 10c.

Fig. 12. Making a Bushing on the 9-inch "Workshop" Lathe.

Fig. 13. Cutting off a Bushing Made Complete in One Operation.

Fig. 14. Drilling an Oil Hole in a Bushing, Using Crotch Center.

Fig. 15. Filing and Polishing Outside Diameter of Bushing.

Fig. 16. Boring a Bushing to Fit an Odd Diameter Shaft.

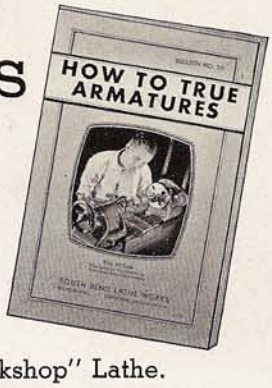
Fig. 17. Grinding Outside Diameter of a Hardened Steel Bushing.

Fig. 18. Lapping the Inside of a Hardened Steel Bushing.

Truing Commutators and Undercutting Mica ON 9" "WORKSHOP" LATHE

TRUING ARMATURES

On the 9-inch "Workshop" Lathe



Armature commutators for all sizes and types of generators and starting motors can be trued and undercut quickly and accurately in the South Bend 9-inch "Workshop" Lathe.

Write for a copy of Bulletin No. 2-A, "How to True Armatures." Price postpaid 10c.

Fig. 19. Truing an Armature Commutator on the "Workshop" Lathe.

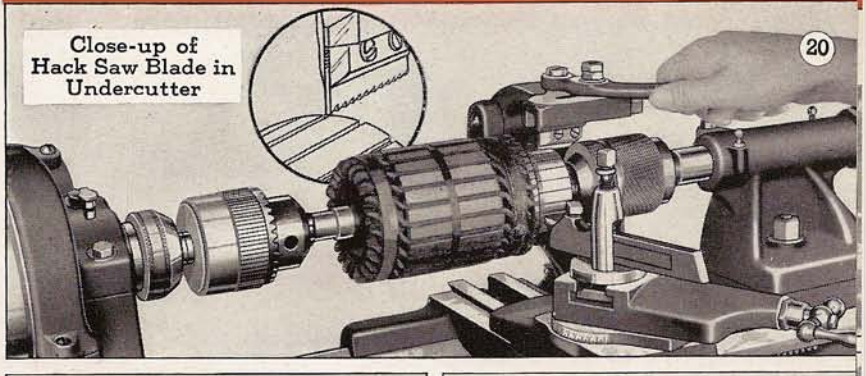
Fig. 20. Undercutting an Armature Commutator with Mica Undercutting Attachment on Lathe.

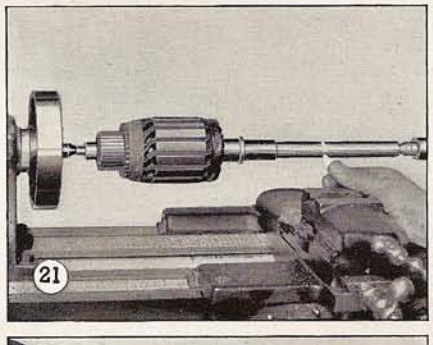
Fig. 21. Testing and Straightening a Bent Armature Shaft.

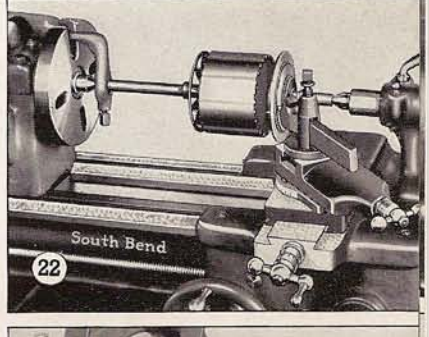
Fig. 22. Facing Collector Rings of a Split Phase Motor Armature.

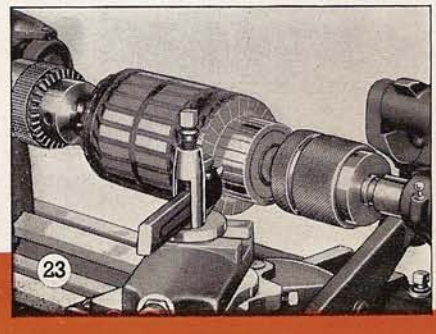
Fig. 23. Close-up of Truing an Armature Commutator on the Lathe.

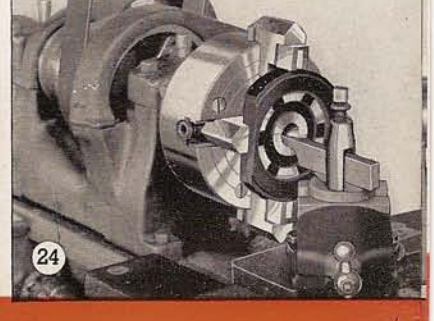
Fig. 24. Truing a Distributor on the 9-inch "Workshop" Lathe.

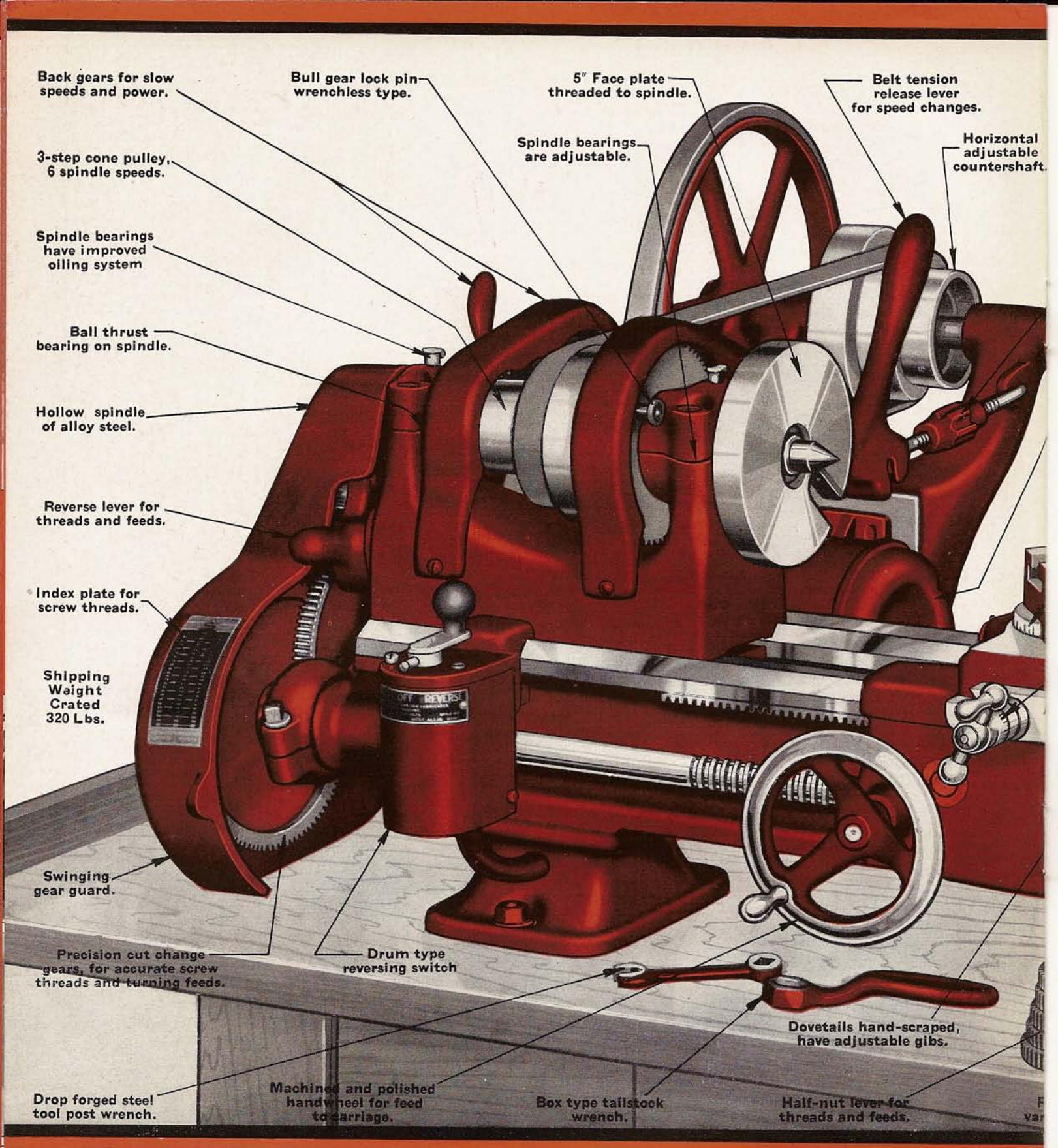








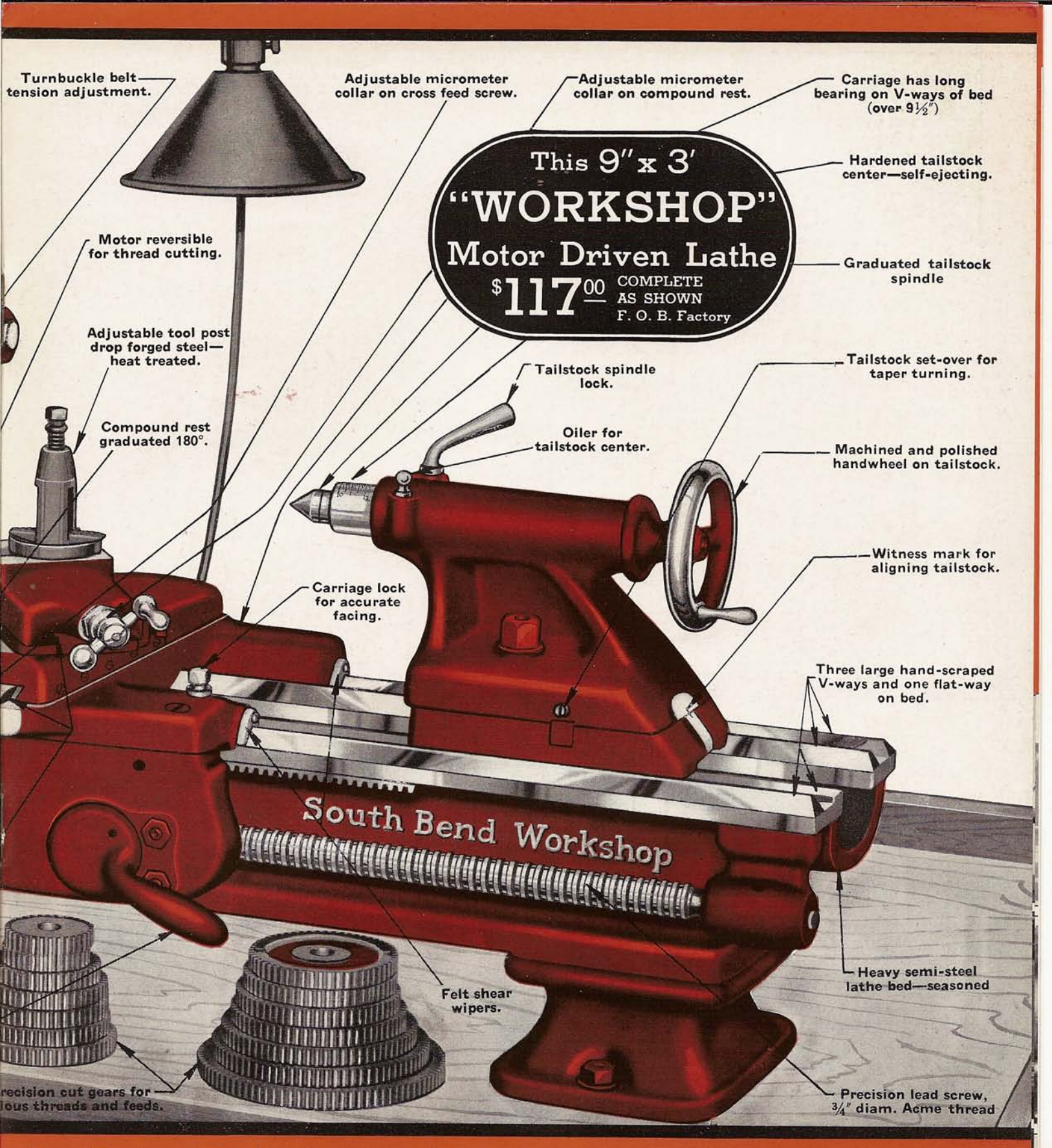




This 9-inch "Workshop" La

(1) Armature Truing (2) Commutator Undercutting (3) Valve Refacing
(7) Drilling and Boring (8) Reamer Sharpening (9) Making Bushings (
(13) Filing and Polishing (14) Milling

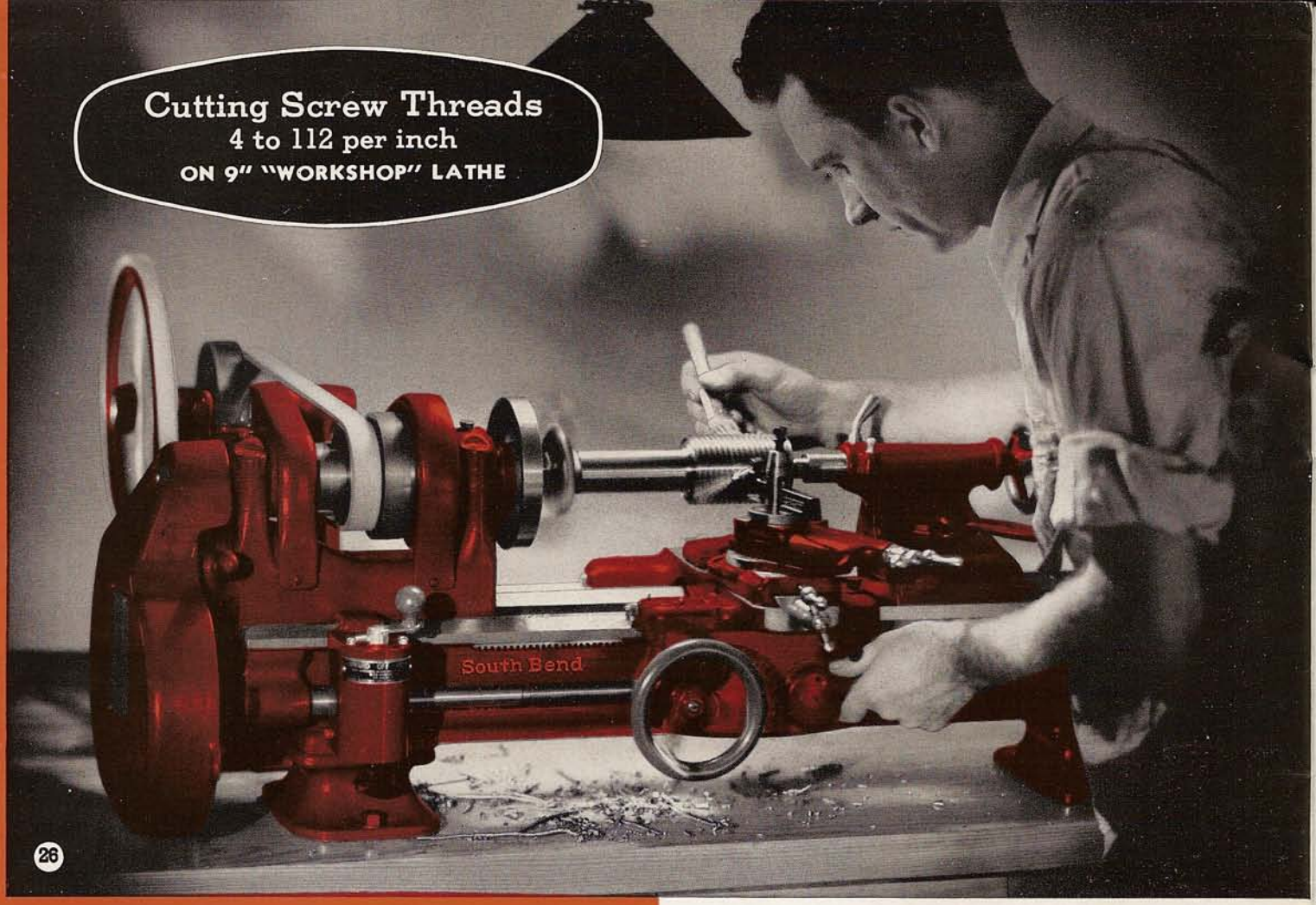
The South Bend 9-inch "Workshop" Lathe will also take care of hundreds of profitable machine jobs in addition to those listed above. Attachments and accessories for handling various classes of work may be purchased with the lathe or separately.

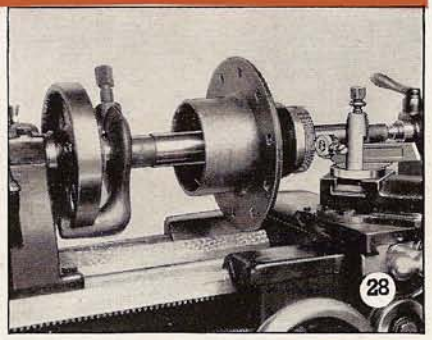


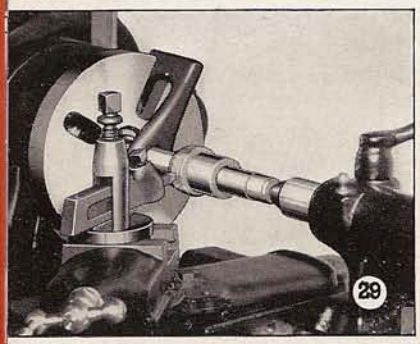
athe Does All These Jobs

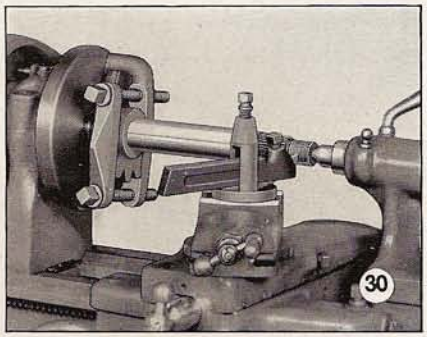
(4) Piston Finishing (5) Screw Thread Cutting (6) Differential Truing
10) Lapping (11) Connecting Rod Boring (12) Testing and Straightening
Keyways (15) Reaming and Honing

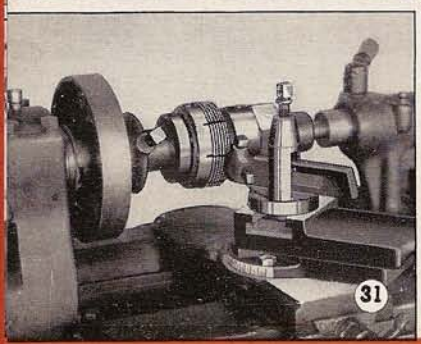
The illustration shows the South Bend 9-inch "Workshop" Lathe with 3-foot bed. This lathe is also made with 3½-foot, 4-foot, and 4½-foot beds, and with several other types of drive. See description on page 14; also send for illustrated Catalog No. 64.

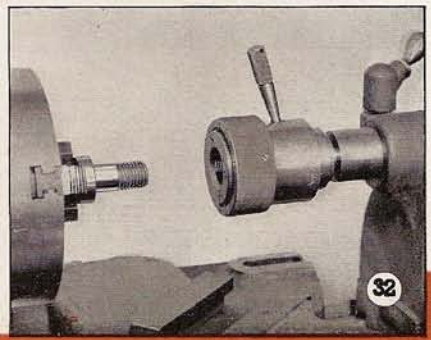












CUTTING SCREW THREADS

On the 9-inch "Workshop" Lathe

Right and left hand screw threads, either standard or special, may be cut quickly and accurately on the lathe. Any thread form desired may be produced in various fine and coarse pitches.

Write for a copy of Booklet No. 36-A, "How to Cut Screw Threads." Price postpaid 10c.

Fig. 26. Cutting a Screw Thread on the 9-inch "Workshop" Lathe.

Fig. 27. Restoring the Thread on the End of an Axle Shaft.

Fig. 28. Restoring the Thread on a Damaged Hub.

Fig. 29. Cutting a Thread on a Replacement Packing Gland.

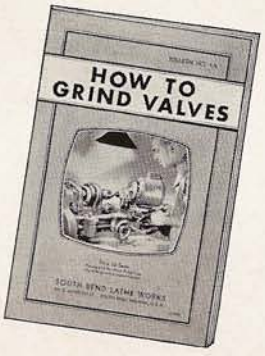
Fig. 30. Cutting a Screw Thread on a Steering Cross Shaft.

Fig. 31. Cutting a Screw Thread on a Bearing Retainer.

Fig. 32. Using a Die to Thread Studs in the Lathe.

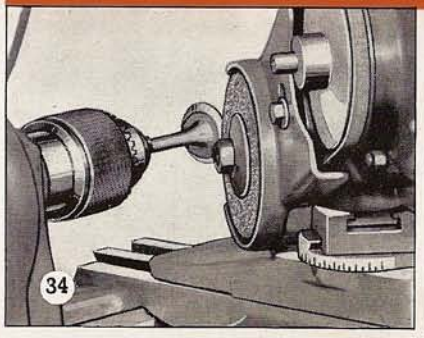
REFACING VALVES

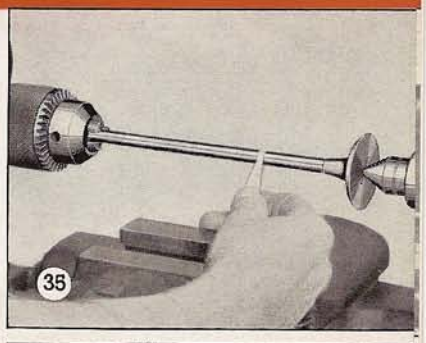
On the 9-inch "Workshop" Lathe

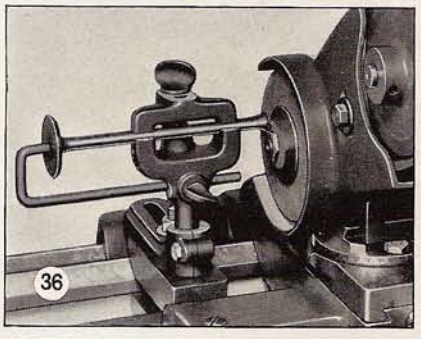


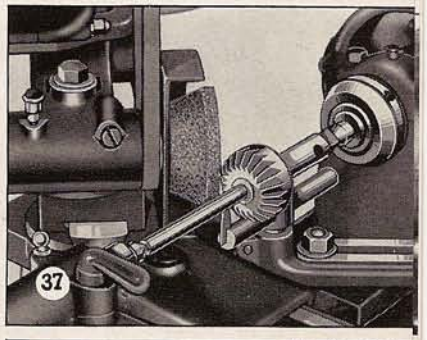
Automobile, truck and tractor valves of all sizes and types can be refaced quickly and accurately by grinding in the lathe.

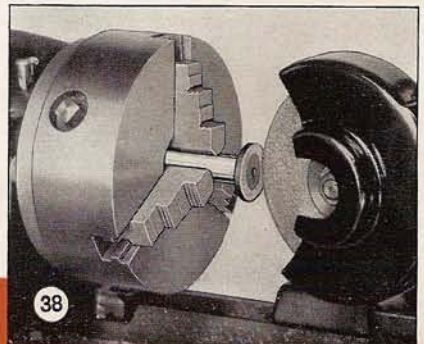
Write for Bulletin No. 1-A, "How to Grind Valves." Price postpaid 10c.











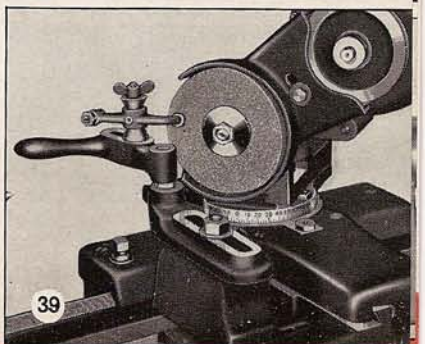


Fig. 33. Refacing a Tractor Valve by Grinding in the Lathe.

Fig. 34. Close-up of Refacing a Valve by Grinding in the Lathe.

Fig. 35. Testing and Straightening a Bent Valve Stem in the Lathe.

Fig. 36. Grinding the End of a Ford Valve Stem for Clearance Adjustment.

Fig. 37. Sharpening a Valve Seat Reamer in the Lathe.

Fig. 38. Grinding the End of a Worn Valve Tappet.

Fig. 39. Truing a Worn Rocker Arm Face on the Lathe.

All These Profitable Jobs

Done on the South Bend 9-inch "Workshop" Lathe

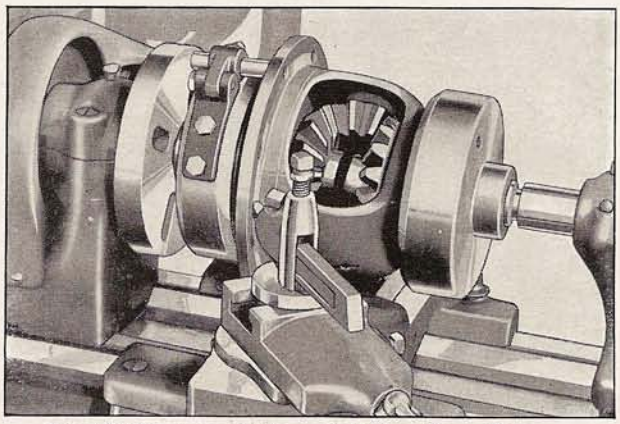


Fig. 40. Truing a Differential Gear Case Flange.

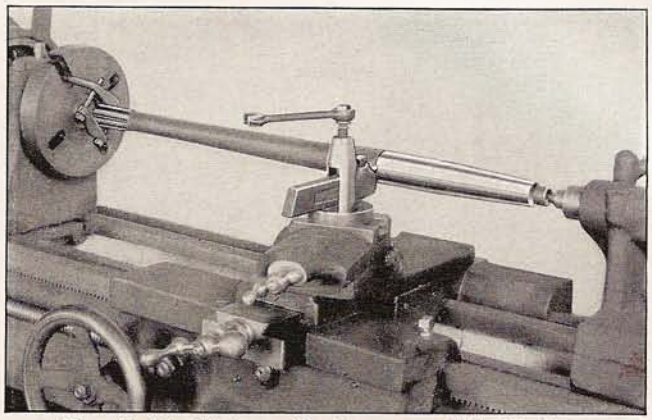


Fig. 41. Machining a Replacement Axle Shaft.

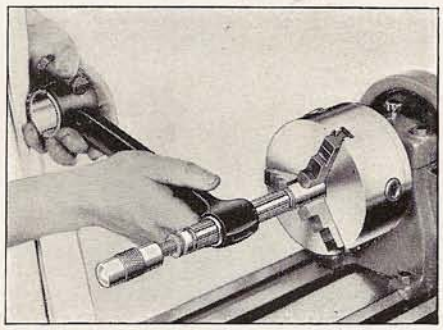


Fig. 42. Honing Piston Pin Bearing in a Connecting Rod.

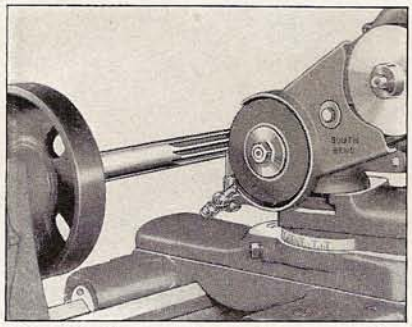


Fig. 43. Sharpening a Reamer with Grinding Attachment.

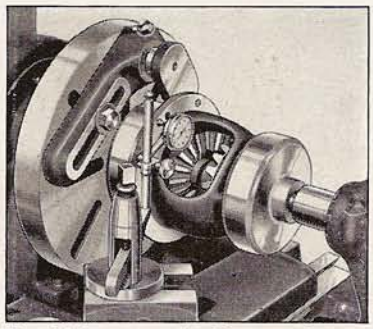


Fig. 44. Testing a Differential Gear Case Flange.

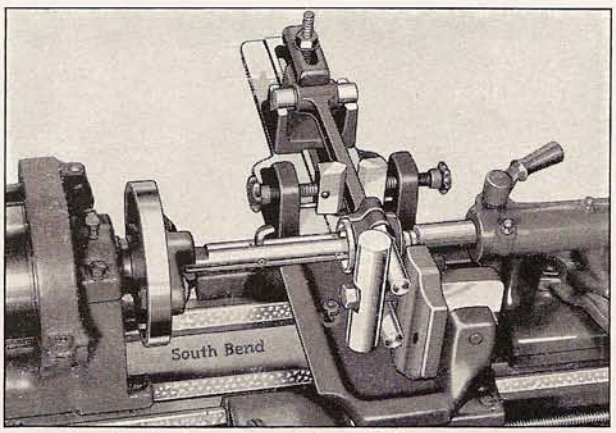


Fig. 45. Boring a Rebabbitted Connecting Rod.

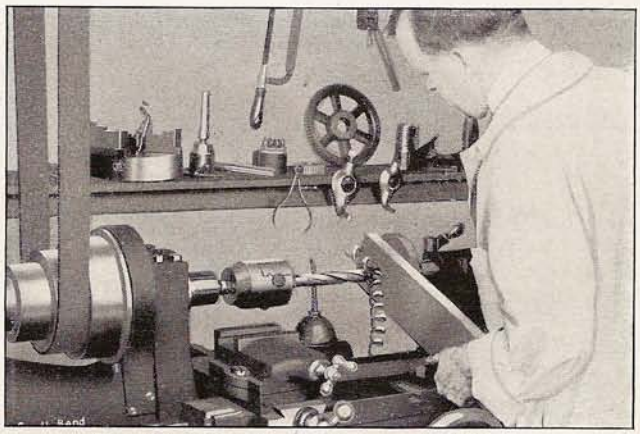


Fig. 46. Using the Lathe as a Drill Press.

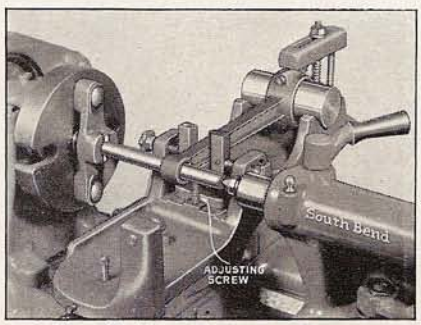


Fig. 47. Line Boring a Piston Pin Bearing.

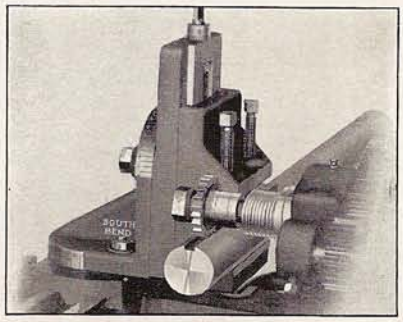


Fig. 48. Milling a Keyway in a Shaft.

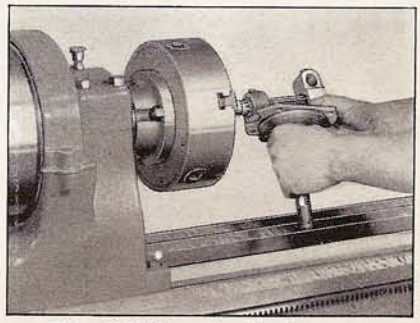


Fig. 49. Using the Lathe as a Reamer Driver.

FINISHING PISTONS

On the 9-inch "Workshop" Lathe

All sizes and types of pistons, cast iron or alloy, for automobiles, trucks, tractors, buses, etc., can be quickly and accurately finished in the 9-inch "Workshop" Lathe. With a correctly sharpened cutter bit, a smooth, bright finish equal in every way to a ground surface may be easily obtained.

Write for a copy of Bulletin No. 9, "How to Finish Pistons." Price postpaid 10c.

Fig. 50. Finishing a Semi-machined Piston on the South Bend 9-inch "Workshop" Lathe.

Fig. 51. Reaming Bevel in Piston Skirt.

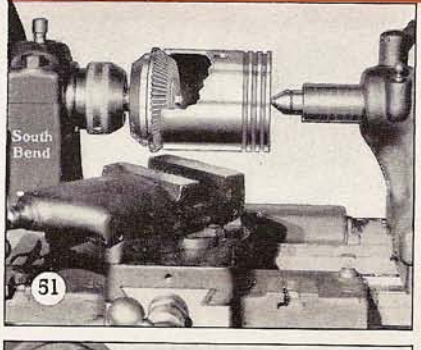
Fig. 52. Machining the Ring Lands of an Aluminum Piston.

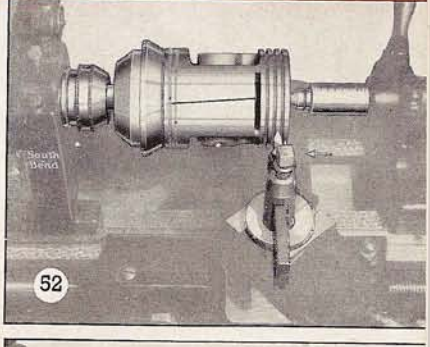
Fig. 53. Re-machining Worn Piston Ring Grooves for Oversize Piston Rings.

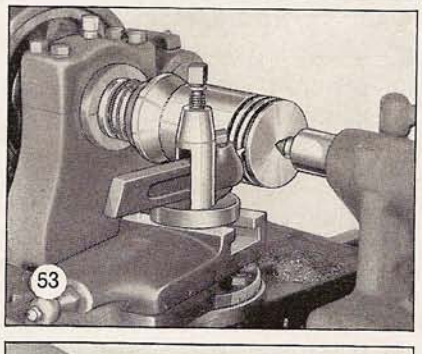
Fig. 54. Machining an Oil Relief Groove in a Piston to Stop Oil Pumping.

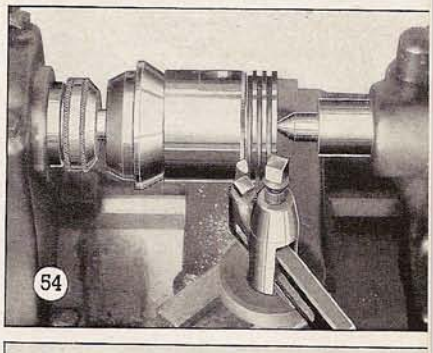
Fig. 55. Using Lathe to Drive Reamer for Reaming Piston Pin Bearings.

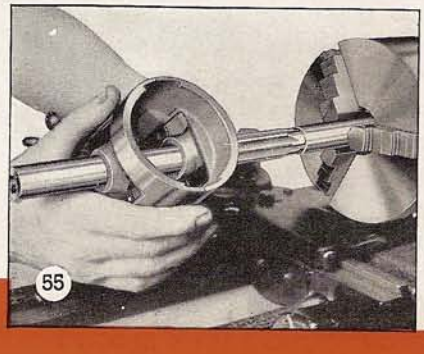
Fig. 56. Honing Piston Pin Bearings to Fit Piston Pin.

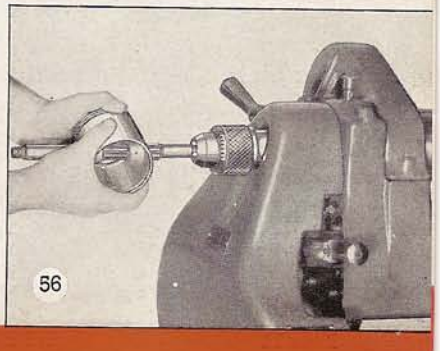


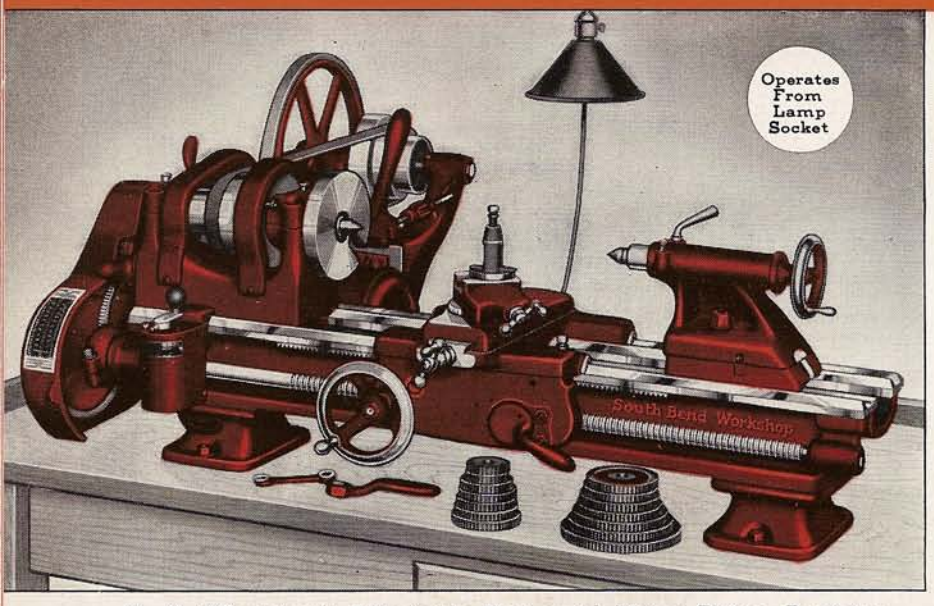












9" x 3' "Workshop" Adjustable Horizontal Motor Driven Precision Bench Lathe, complete as shown but less bench.....$117.00

9-inch "Workshop"

Motor Driven Bench Lathe

With Adjustable Horizontal Motor Drive Equipment

The 9-inch "Workshop" back-geared screw cutting lathes have 9¼-inch swing over the bed, 5½-inch swing over the carriage, and ¾-inch hole through the spindle.

The back-geared headstock provides six spindle speeds, 40 to 630 R.P.M. Change gears are supplied for automatic power longitudinal feeds and for cutting standard screw threads, right or left hand, from 4 to 112 per inch. For more complete information send for Catalog No. 64.

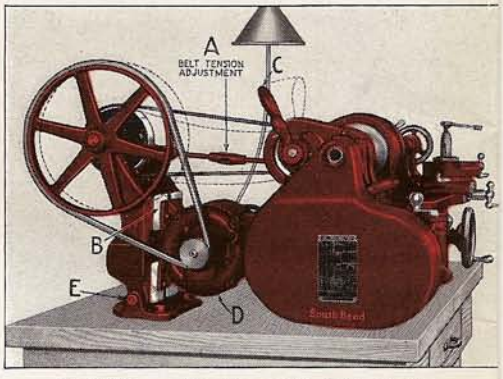
Choice of Colors. Lathe is finished in either red or gray enamel as desired. When ordering Lathe specify color wanted.

Equipment included in price consists of: adjustable horizontal motor drive; ¼ H.P. 1725 R.P.M., A.C. 1-phase, 110-volt, 60-cycle, start-stop reversing motor; reversing switch; V-belt; flat belt; motor pulley; graduated compound rest; face plate; tool post; two 60-degree lathe centers; spindle sleeve; wrenches; change gears; installation plan, and book, "How to Run a Lathe."

Prices of 9-inch "Workshop" Horizontal Motor Driven Bench Lathes

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Through Spindle Inches	Swing Over Carriage Inches	Size of Motor H.P.	Approx. Ship. Wt. Crated Pounds	Catalog Number of Lathe	Code Word for Lathe	Price F.O.B. Factory
9¼	3	17	¾	5½	¼	320	415-YA	Magla	**$117.00**
9¼	3½	23	¾	5½	¼	345	415-ZA	Mahik	**129.00**
9¼	4	29	¾	5½	¼	370	415-AA	Manaf	**141.00**
9¼	4½	35	¾	5½	¼	420	415-RA	Mandi	**158.00**

TIME PAYMENT TERMS: 10% down. Balance monthly.



End View of Lathe with Adjustable Horizontal Motor Drive.

A Small Down Payment Puts Lathe in Your Shop

You Deal Direct With Us

You can install a South Bend 9-inch "Workshop" Lathe with tools and attachments now and pay for the lathe as you use it. This is good business because the lathe is income producing equipment and if you have use for a lathe you cannot afford to be without it.

The South Bend Time Payment Plan is simple, economical and convenient. The low financing charge covers the entire cost for the service rendered. There is no increase in the price of the lathe.

You Deal Direct with Us when you purchase a South Bend Lathe on our Time Payment Plan. We have no connection with any finance company. Payments are made directly to our office. Should illness or other unfortunate circumstances prevent payment of any monthly installment when due, we shall be glad to arrange reasonable extensions.

We invite inquiries as to our reputation and responsibility. Ask your banker about our standing and reputation.

No. 2 TIME PAYMENT SCHEDULE— FOR SMALL LATHES

10% Down Payment—Balance 18 Months

Total Amount of Order	Payment With Order	Average Monthly Payments	Number of Months to Pay	Charge for Financing Balance
$ 85.00 to $ 100.00	$15.00	$ 6.00	18	$ 8.00
100.01 to 110.00	15.00	6.50	18	9.00
110.01 to 120.00	15.00	7.00	18	10.00
120.01 to 130.00	15.00	7.50	18	11.00
130.01 to 140.00	15.00	8.00	18	12.00
140.01 to 150.00	15.00	9.00	18	13.00
150.01 to 160.00	10% of Total	9.50	18	14.00
160.01 to 170.00	10% of Total	10.00	18	15.00
170.01 to 180.00	10% of Total	10.50	18	16.00
180.01 to 190.00	10% of Total	11.00	18	17.00
190.01 to 200.00	10% of Total	12.00	18	18.00
200.01 to 210.00	10% of Total	12.50	18	19.00
210.01 to 220.00	10% of Total	13.00	18	20.00
220.01 to 230.00	10% of Total	13.50	18	21.00
230.01 to 240.00	10% of Total	14.00	18	21.50
240.01 to 250.00	10% of Total	15.00	18	22.50
250.01 to 260.00	10% of Total	15.50	18	23.00
260.01 to 270.00	10% of Total	16.00	18	24.00
270.01 to 280.00	10% of Total	16.50	18	25.00
280.01 to 290.00	10% of Total	17.00	18	26.00
290.01 to 300.00	10% of Total	17.50	18	27.00

WHEN ORDERING LATHE SPECIFY COLOR DESIRED—RED OR GRAY.

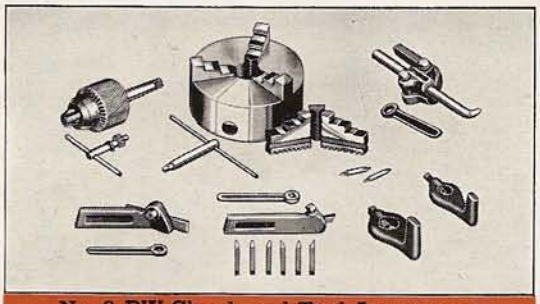
Attachments for the 9-inch "Workshop" Lathe

Practical attachments and accessories for the 9" Workshop Lathe are illustrated, described and priced below. These attachments and accessories may be purchased with the lathe, or they may be ordered later.

No. 9-BW Chuck and Tool Assortment

This equipment is practical for general machine work, making bushings, etc.

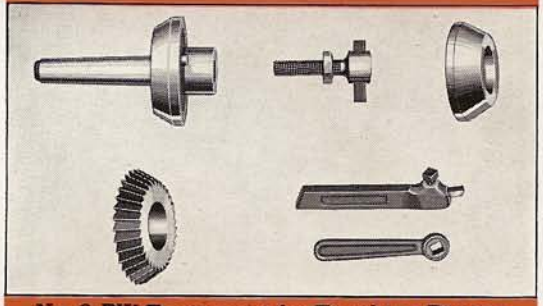
1 No. 3005—5" 3-Jaw Universal Chuck, fitted	$28.00
1 No. 220—½" 3-Jaw Drill Chuck	5.25
1 No. 709-W Arbor fitted to Drill Chuck	1.00
1 No. 833-R Right-hand Cutting-off Tool	1.50
1 No. 847-S Straight Turning Tool	1.25
1 No. 291 Set of 6 Cutter Bits Ground to Form	1.65
1 No. 505-F Boring Tool, Style "D"	3.00
2 Malleable Lathe Dogs: (1 No. 2MJ—50c; and 1 No. 6MJ—70c)	1.20
1 No. 898-A, 1/16" Center Drill and Countersink	.30
1 No. 898-B, 3/32" Center Drill and Countersink	.35
Total Cost of No. 9-BW Chuck and Tool Assortment	$43.50



No. 9-BW Chuck and Tool Assortment

No. 9-PW Equipment for Finishing Pistons

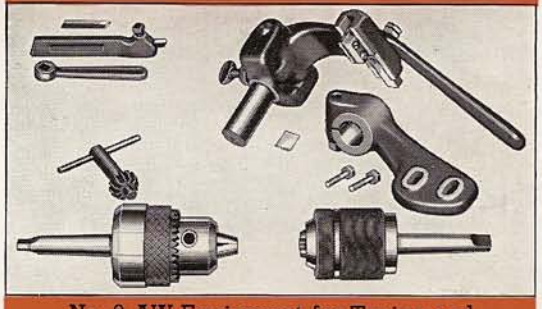
1 No. 44-W Piston Adapter, Driving Dog and Cone Ring for Pistons 2½" to 3⅛" Outside Diameter	$10.00
1 No. 1-R Piston Skirt Reamer for Pistons 2½" to 3⅛" Outside Diameter	7.50
*1 No. 847-S Straight Turning Tool	1.25
Total Cost of No. 9-PW Piston Equipment	$18.75



No. 9-PW Equipment for Finishing Pistons

No. 9-AW Equipment for Truing and Undercutting Armature Commutators

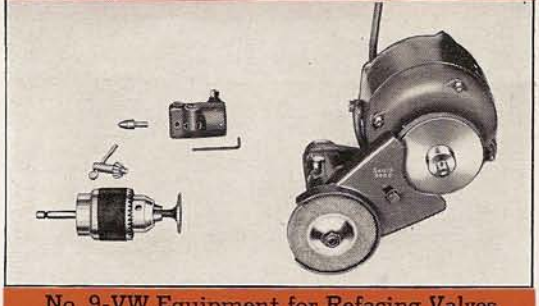
1 No. 327-W—¾" Headstock Driving Chuck	$ 7.50
*1 No. 709-W Arbor fitted to above Chuck	1.00
1 No. 340-W Armature Support Chuck (⅜" to ¾" capacity) fitted to Lathe	9.00
*1 No. 847-S Straight Turning Tool	1.25
1 No. 673-W Mica Undercutter complete with one Cutter	15.00
1 No. 1363-W Cutter Bit Ground for Armature Work	.45
Total Cost of No. 9-AW Armature Equipment	$34.20



No. 9-AW Equipment for Truing and Undercutting Armature Commutators

No. 9-VW Equipment for Refacing Valves

1 No. 30-W, ¼ H.P. Electric Grinder (1-phase, 60-cycle, 110-volt, A.C. with cord and switch)	$45.00
1 No. 907-W Precision Valve Chuck (⅛" to ⅝" capacity)	10.00
1 No. 91-W Diamond Holding Fixture	4.00
1 No. 406-W Diamond Dresser for truing Grinding Wheel	6.00
Total Cost of No. 9-VW Valve Grinding Equipment	$65.00

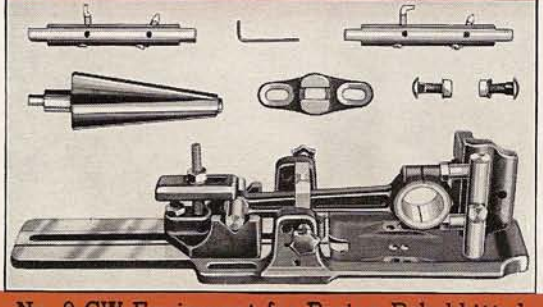


No. 9-VW Equipment for Refacing Valves

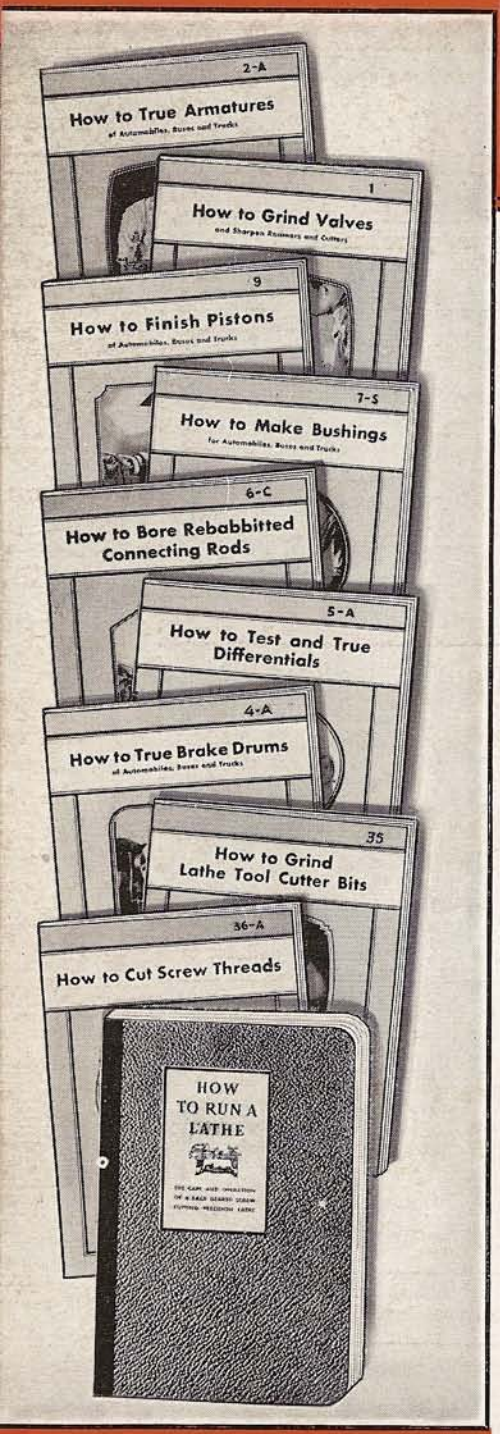
No. 9-CW Equipment for Boring Rebabbitted Connecting Rods

1 No. 1229-W Connecting Rod Boring Attachment for Rods 13" between Bearings and 4⅝" across Bolt Lugs	$55.00
2 No. 461-W Boring Bars for Bearings 1¼" to 2½" diameter	20.00
1 No. 228-W Driver for Boring Bars	1.00
1 No. 581-W Centering Cone for Bearings 1¼" to 2½" diameter	3.50
Total Cost of No. 9-CW Connecting Rod Equipment	$79.50

*This tool also listed in No. 9-BW Chuck and Tool Assortment.



No. 9-CW Equipment for Boring Rebabbitted Connecting Rods



VALUABLE BOOKS *for the* MOTOR MECHANIC

THE bulletins listed below illustrate and describe how to handle general lathe work and the major auto service jobs according to the latest shop practice that is followed in the most successful shops and plants in the United States.

"How to True Armature Commutators and Undercut Mica" Bulletin No. 2-A. Contains information on truing armature commutators and undercutting mica in the lathe. 12 pages, size 6" x 9", 35 illustrations. Price postpaid. (Coin or stamps of any country accepted).....10c

"How to Grind Valves and Sharpen Reamers" Bulletin No. 1-A. Contains information on refacing automobile engine valves, sharpening valve seat reamers, cutters, etc. 12 pages, size 6" x 9", 23 illustrations. Price postpaid. (Coin or stamps of any country accepted).....10c

"How to Finish Pistons" Bulletin No. 9. Contains detailed information on finishing semi-machined pistons in the lathe, reaming and honing wrist pin holes, etc. 12 pages, size 6" x 9", 31 illustrations. Price postpaid. (Coin or stamps of any country accepted).10c

"How to Make Bushings" Bulletin No. 7-S. Contains information on making bushings, lathe mandrels, press fits and running fits. 12 pages, size 6" x 9". 28 illustrations. Price postpaid.....10c

"How to Bore Rebabbitted Connecting Rods" Bulletin No. 6-C. Illustrates and describes the latest shop practice for boring, facing, and finishing rebabbitted connecting rods. 12 pages, size 6" x 9", 25 illustrations. Price postpaid. (Coin or stamps of any country accepted).....10c

"How to Test and True Differentials" Bulletin No. 5-A. Contains information on removing the old ring gear, testing and truing the ring gear seat, testing bearings of drive pinions, etc. 8 pages, size 6" x 9", 20 illustrations. Price postpaid. (Coin or stamps of any country accepted).....10c

"How to True Brake Drums" Bulletin No. 4-A. Shows how to mount various types of brake drums in the lathe for truing the drum so that it will be concentric, round and true. 16 pages, size 6" x 9", 40 illustrations. Price postpaid. (Coin or stamps of any country accepted).....10c

"How to Grind Lathe Tool Cutter Bits" Bulletin No. 35. Explains in detail how to sharpen various types of cutter bits for lathe work. 16 pages, size 6" x 9", 50 illustrations. Price postpaid. (Coin or stamps of any country accepted).....10c

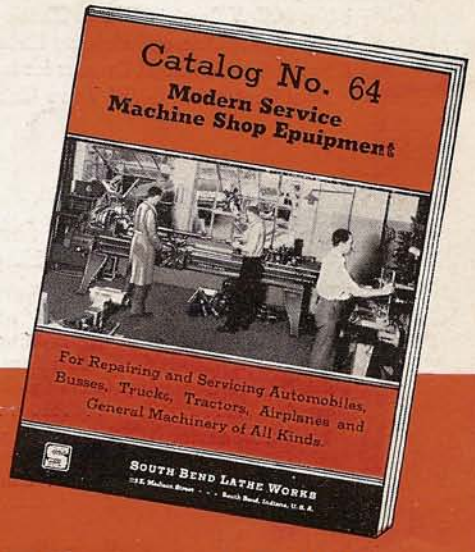
"How to Cut Screw Threads" Bulletin No. 36-A. Explains various screw thread forms and how to cut screw threads in the lathe. 24 pages, size 6" x 9", 65 illustrations. Price postpaid. (Coin or stamps of any country accepted).....10c

"How to Run a Lathe." Contains complete information on the care and operation of a back-geared, screw cutting lathe and explains in detail how to grind lathe tool cutter bits, cut screw threads, turn, bore, face, drill, ream, etc. 128 pages, 5¼" x 8". One copy supplied free of charge with each South Bend Lathe. Price postpaid. (Coin or stamps of any country accepted).....25c

CATALOG NO. 64

Modern Service Machine Shop Equipment

Write for a copy of this 32-page catalog No. 64, shown at right. This catalog illustrates, describes and prices various sizes of South Bend Lathes, tools and attachments for use in the modern service machine shop for repairing and servicing automobiles, buses, trucks, tractors, airplanes, and general machinery of all kinds. Mailed to any address on request postage paid, no charge.



SOUTH BEND LATHE WORKS

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