

BULLETIN No. 16-G

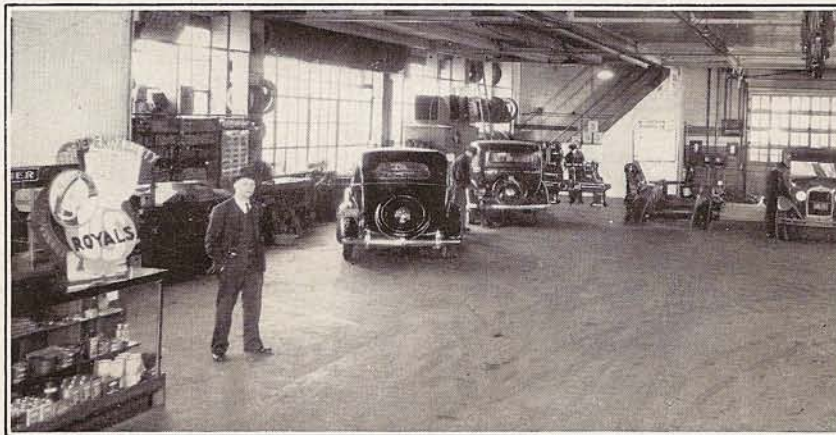
The Motor Service Machine Shop

For The Maintenance of

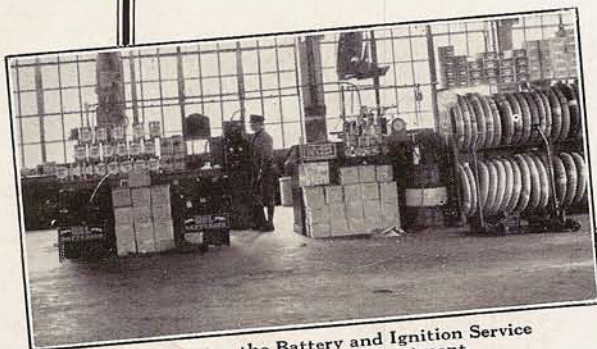
Automobiles, Trucks, Buses, Tractors, Etc.



A Modern Motor Service Machine Shop Equipped to Give Complete Service in the Maintenance of Automobiles, Trucks, Buses, Tractors, Etc.



An Interior View of the Above Shop. This Shop's Slogan is, "No Expense Spared to Insure the Most Complete and Modern Service for Your Motor Vehicle".



A View Showing the Battery and Ignition Service Department, and Tire Department.



The Machine Shop Department is Equipped for Complete Service of All the Mechanical Parts of the Motor.

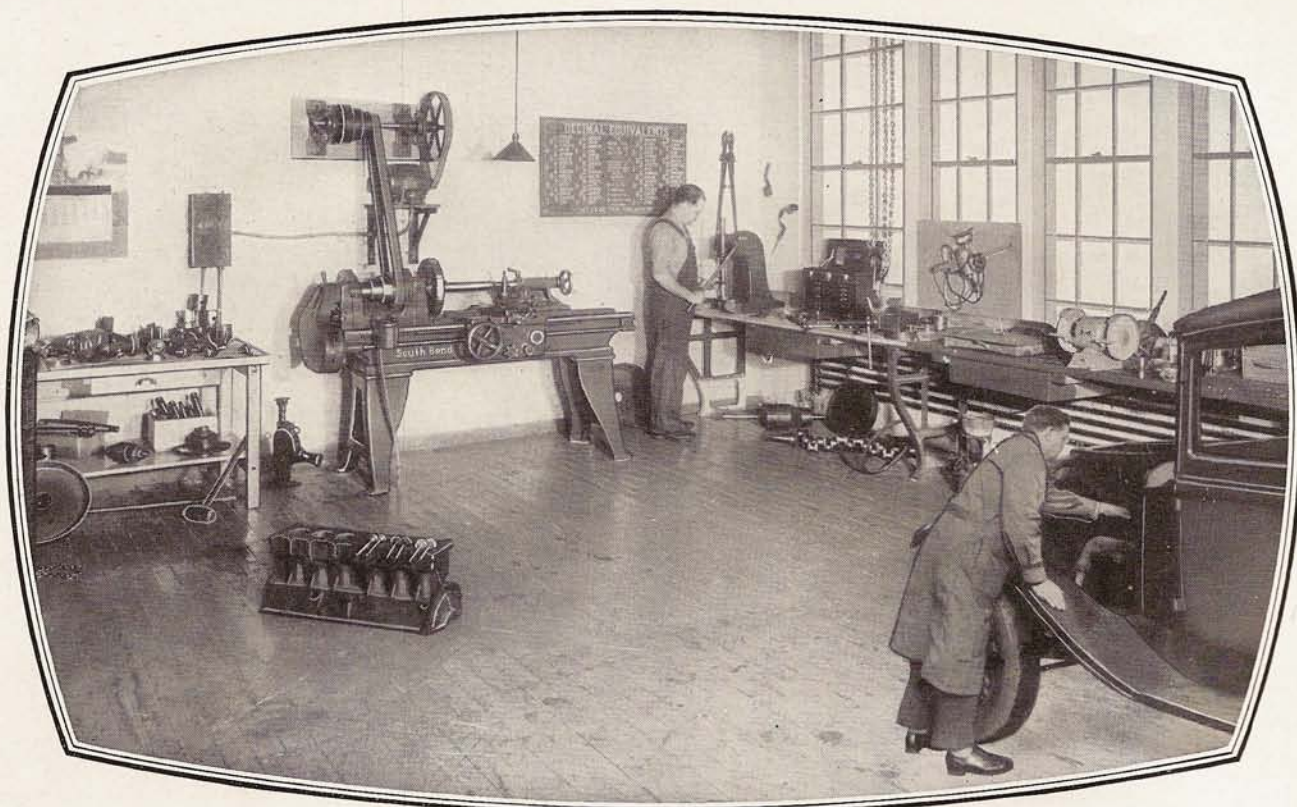


Fig. 1. An Enlarged View of the Motor Service Machine Shop Shown on the Front Cover.

The Motor Service Machine Shop

A General Purpose Lathe for the Maintenance of Automobiles, Buses and Trucks

The Motor Service Machine Shop shown above is a very popular type of shop because it has been found practical and efficient in the maintenance of automobiles, buses, trucks, etc., that are operating on the highways of our cities and towns.

This type of shop and equipment is practical for handling the various repair jobs, such as machining flywheels, truing brake drums and hubs, truing crankshafts, truing differentials, boring connecting rods, machining driveshafts and axleshafts, servicing armatures, finishing pistons, grinding valves, making bushings, and for general machine work of all kinds.

The 16-inch Back-Geared, Screw Cutting Precision Lathe is the backbone of the equipment in the modern service shop. The lathe shown in the shop above is a 1934 improved model, which is capable of handling all the motor maintenance jobs mentioned above and as shown throughout this bulletin. The screw cutting lathe is a universal tool and when operated by a skilled mechanic is practically a machine shop in itself.

The 16-inch Lathe can be supplied in three different types of drive, all of which are shown in this bulletin:

1. Overhead Countershaft Drive: usually used in the shop where a line-shaft is installed and from which several other machines are driven. See page 10 for description.
2. Simplified Wall Motor Drive: an inexpensive but efficient individual motor drive arranged with reversing motor and reversing switch. Illustrated and priced on page 11.
3. Silent V-Belt Motor Drive: a compact self-contained unit with motor and driving mechanism mounted on the lathe itself, used in the larger service shops where many machines and mechanics are employed. Shown on page 11.

The lathe is the most accurate of all shop tools. It is, therefore, the practical machine on which to do automotive machine work. The South Bend Lathe shown in the shop above has unusual power because it is back-geared. It has a screw thread cutting range from 2 to 40 standard threads per inch and if finer threads are required extra gears can be supplied. Automatic turning feeds from .006" to .036" (27½ to 167 per inch) and automatic cross feeds from .0015" to .0093" (108 to 667 per inch) are standard on the lathe.

The length of the lathe most practical for the motor service machine shop depends upon the type of work in which the shop specializes. All illustrations throughout this bulletin show the 16-inch swing lathe with 6-foot bed, which is satisfactory for all of the operations illustrated herein. However, some shops may prefer longer bed lengths, of which the following can be obtained for the 16-inch swing lathe:

- 8-foot bed length: practical for all work shown throughout this bulletin and accommodating shafts up to 58" long.
- 10-foot bed lathe: takes shafts up to 82" long, also practical for all operations shown in this bulletin.
- 12-foot bed lathe: for extremely long work up to 106" long as well as all jobs shown in this bulletin.

A variety of attachments, chucks and tools can be fitted to the 16-inch lathe for performing various special operations on automobile and truck parts, as shown throughout this bulletin. The versatility of the lathe when fitted with these attachments is almost unlimited as more than two thousand operations can be performed on the back-geared screw cutting lathe.

The Easy Payment Plan of the South Bend Lathe Works makes it possible for any shop owner in need of a lathe to install a South Bend Lathe and put it to work immediately so it will increase his earnings. The lathe is shipped immediately on receipt of the small down payment and the balance is spread over the next fourteen to nineteen months. During the last 15 years 12,000 shop owners have taken advantage of the easy payment plan in buying South Bend Lathes. Many of the largest and most successful manufacturers when they started their businesses bought their equipment on time and paid for it out of earnings.

Over 57,000 South Bend Lathes have been manufactured and sold during the past 28 years. On the average 500 South Bend Lathes are in each state of the United States. These lathes are used in industrial plants, manufacturing plants, service shops and general shops of all kinds. There may be one of these lathes in your own city or community. Write us and we will send you the name and address of an owner near you so that you can inspect the lathe and learn what the owner has to say about it.

The Engineering Laboratory

The picture at the right shows our Automotive Engineering Laboratory where a number of machines are fitted with attachments for doing all the various motor service machine jobs.

For more than ten years our engineers have kept in constant touch with the automotive field and have developed modern attachments for the lathe so that the mechanical parts of the motor can be serviced with the same accuracy and precision as when made by the manufacturers. Improvements are constantly being made on the attachments and fixtures, to keep pace with the very latest shop practice in the maintenance of automobiles, buses, trucks, tractors, etc.

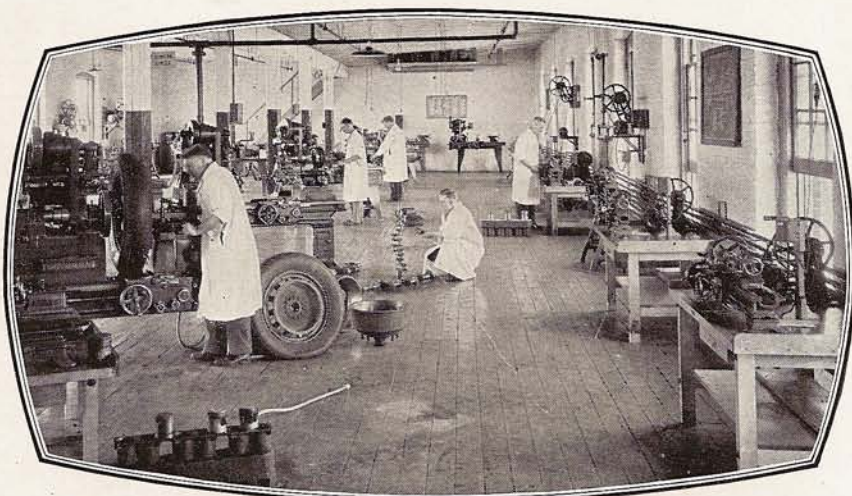


Fig. 2. Automotive Engineering Laboratory of the South Bend Lathe Works.

6,000 Motor Service Machine Shops Are Equipped with 16-inch South Bend Lathes

These shops are getting results which would have been impossible before the installation of the lathe. They make good profits—their operating costs are low—their service is quick and more dependable. Yet some shops try to go on using obsolete equipment and methods—too inadequate—too slow—and too costly.

Here is what some of the users say: "I am using the lathe every day . . . I would rather do without most everything else than go without the lathe, as a man has so many uses for the lathe in the automotive repair work" . . . "We are more than pleased with the work that the lathe will do. It is without a doubt the most needed equipment in the automotive shop" . . . "I would like to tell you that besides the lathe I have between \$600 and \$700 worth of other machinery and the lathe is the master of them all."

"We have one of your lathes and it has enabled us to build up our business to such an extent that we are in need of additional equipment." The letters from which the above excerpts were taken and hundreds of others like them are on file in our office.

Jobs Done on the 16-inch Lathe

Listed below are a few of the important motor service jobs that can be done on the lathe. There are hundreds of other jobs that can be machined on the lathe, but they are too numerous to be listed in a limited space.

- | | |
|--|--|
| Flywheel Servicing (Pg. 4)
Machine Off Old Gear Teeth
Polish Flywheel Clutch Face
Balance Flywheels | Milling Work (Pg. 15)
Cut Keyways, All Kinds
Square End of a Shaft |
| Brake Drum Servicing (Pg. 4)
Test and True Brake Drums
Test Wheel Bearings | Grinding (Pg. 8)
Grind Valves, Reamers, Bushings, and Other Parts |
| Differential Servicing (Pg. 5)
True Differential Flange
Cut Rivets from Flanges
Test Trueness of New Gear | Armature Servicing (Pg. 6)
True Commutators
Undercut Mica
Test and Straighten Shaft |
| Crankshaft Servicing (Pg. 5)
Test and True Main Bearings
Test and True Throw Bearings
Face Crankshaft Flange | Valve Servicing (Pg. 8)
Grind Valves, All Kinds
Test and Straighten Valve Stem
Make Valve Guide Bushings and Valve Replacement Seats
Grind Rocker Arms, Tappets, Valve Ends, etc. |
| Hub Servicing (Pg. 7)
Test and True Hub Flanges
Re-chase Damaged Hub Thread | Piston Servicing (Pg. 6)
Finish Semi-Machined Pistons
Hone, Lap or Ream Piston Pin Holes
Ream Piston Skirts |
| Axle Shaft Servicing (Pg. 7)
Make New Axle Shaft
Test and Straighten Axles
Re-chase Damaged Threads | Bushing Servicing (Pg. 7)
Make Bushings of all kinds, of bronze, steel, cast iron, etc. |
| Connect. Rod Servicing (Pg. 8)
Bore Connecting Rods
Ream, Hone or Lap Connecting Rod Pin Bushing | |
| Miscellaneous Jobs (Pgs. 7 and 9) Lathe will also do all kinds of machine work, cut screw threads, make tools, etc. | |

Bulletins on Motor Service Jobs

To Assist the Mechanic in the Motor Service Machine Shop

The bulletins listed below illustrate and describe the latest improved methods for the service and maintenance of automobiles, buses, trucks, tractors, etc. Each bulletin describes the operations for each job, in sequence. Even the most skilled mechanics appreciate these bulletins because of the thorough manner in which they cover the subject. They are used by hundreds of successful auto service shops. Each bulletin contains from eight to twelve pages, and many illustrations on the latest shop practice and equipment.

The price of each bulletin is 10c, postpaid. Coin or stamps of any country accepted in payment.

A copy of each service bulletin listed below will be included in the equipment of the 16-inch Lathe at no charge.

"How to Grind Valves," Bulletin No. 1 illustrates and describes the modern methods and equipment for grinding motor vehicle valves of all sizes and types. It also shows how to grind valve seat cutters, reamers and hones.

"How to Service Armatures," Bulletin No. 2 describes and illustrates the modern methods and equipment for truing armature commutators, undercutting mica, testing and straightening bent armature shafts, etc.

"How to Machine Flywheels," Bulletin No. 3 contains many valuable suggestions on turning down flywheels for new starter gears.

"How to True Brake Drums," Bulletin No. 4 describes in detail how brake drums of all kinds are turned true. Also explains the South Bend Method of mounting wheels and hubs.

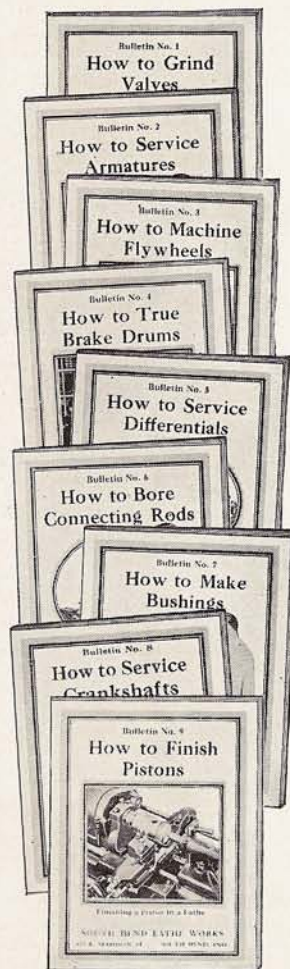
"How to Service Differentials," Bulletin No. 5 describes methods for removing old differential ring gear, testing and truing ring gear seat for the new steel ring gear.

"How to Bore Connecting Rods," Bulletin No. 6 illustrates the latest methods and equipment for boring re-babbitted connecting rods.

"How to Make Bushings," Bulletin No. 7 explains methods and equipment for making replacement bushings of brass, bronze, steel, cast iron, etc.

"How to Service Crankshafts," Bulletin No. 8 describes methods for testing and truing throw bearings and main bearings of crankshafts, etc.

"How to Finish Pistons," Bulletin No. 9 describes methods for finishing semi-machined pistons, also reaming and honing wrist pin hole, etc.



Price 10 Cents Each, Postpaid.

Machining Flywheels for Steel Starter Gears

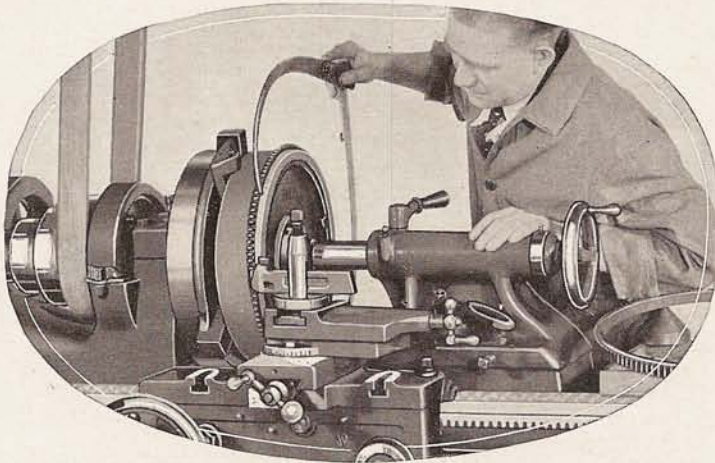


Fig. 4. Machining a Flywheel for a New Starter Gear in a 16-inch Lathe.

THE 16-inch South Bend Lathe will machine flywheels for steel starter gears, true the clutch face of flywheel, and do many other flywheel service jobs.

Detailed and illustrated instructions on "How to Machine Flywheels" will be found in Service Bulletin No. 3 described on page 3 of this booklet.

For all machine operations, the flywheel is centered in the lathe by a centering flange fitted to the tailstock spindle and is driven by a special face plate adapter and driver, both of which are shown in the illustration below.

The time required to set-up the lathe and machine the flywheel to the correct diameter for a new steel gear is about 15 minutes. The actual time for machining the flywheel is about 7 minutes.

No. 16-F Equipment for Servicing Flywheels

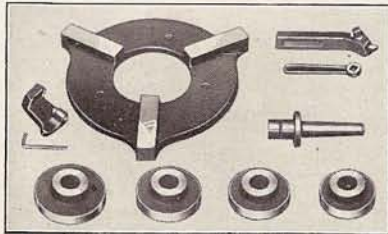


Fig. 6. Flywheel Servicing Equipment.

The equipment illustrated at left and listed below will handle all flywheels up to and including 16 1/4" in diameter, which include practically all popular makes of automobiles, buses, trucks, etc. The equipment may be purchased on easy payment terms.

- | | |
|---|---------|
| 1 No. 1237 Flywheel Adapter Plate and Driver | \$12.00 |
| 4 No. 945 Centering Flanges..... | 12.00 |
| 1 No. 637-E Centering Shank..... | 5.00 |
| 1 No. 853-L Left-Hand Off-Set Turning Tool with Cutter..... | 3.25 |

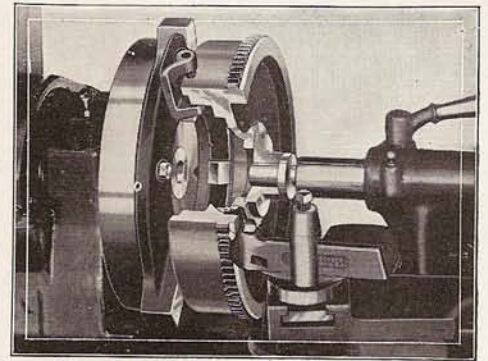


Fig. 5. Section View Showing Method of Mounting and Centering Flywheel in Lathe for Machining.

Truing Demountable Type Brake Drums

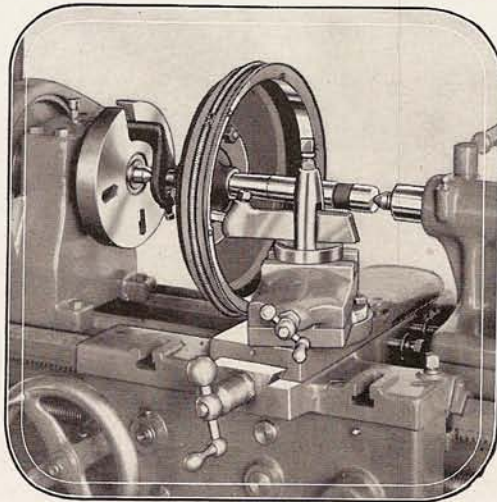


Fig. 7. Truing a Brake Drum of Demountable Type Wheel in the 16-inch Lathe.

BRAKE DRUMS and hubs up to 16 1/4" in diameter, for demountable type wheels, can be trued and serviced in the 16-inch South Bend Lathe. From six to ten minutes are required to set-up lathe and true an ordinary brake drum.

Brake drums of wheels with roller or ball bearings are mounted on a straight mandrel fitted with universal bearing adapters, as shown in Fig. 8. Brake drums of wheels with tapered hole in hub are mounted on a taper mandrel, as shown in Fig. 9. For method of mounting brake drums with hub and axle integral see Fig. 10.

Complete instructions on how to true brake drums is fully covered in Brake Drum Bulletin No. 4, "How to True Brake Drums," described on page 3.

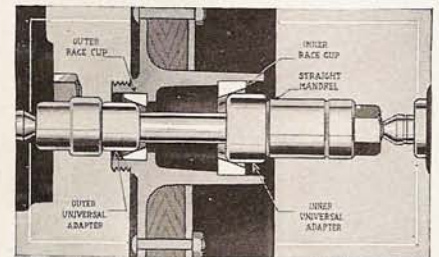


Fig. 8. Wheel Mounted on Straight Mandrel and Universal Bearing Adapters.

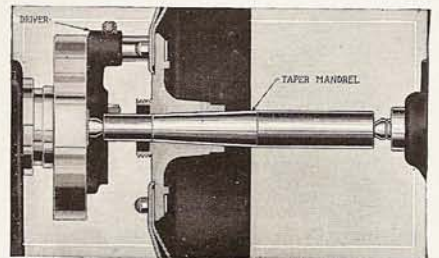


Fig. 9. Rear Wheel of Automobile Mounted on Self-Centering Taper Mandrel.

No. 16-BD Equipment for Servicing Brake Drums



Fig. 11. Brake Drum Servicing Equip.

Trues brake drums up to and including 16 1/4", of most models of Auburn, Chevrolet, Chrysler, DeSoto, Dodge, Essex, Ford, Hudson, Hupmobile, Marmon, Nash, Oakland, Oldsmobile, Packard, Plymouth, Pierce Arrow, Studebaker, Stutz, Terraplane, and Pontiac.

- | | |
|---|---------|
| 1 No. 1800 Straight Mandrel | \$11.00 |
| 10 No. 1801 Univ. Bearing Adapters..... | 15.00 |
| 4 Taper Mandrels, Nos. 1820, 1822, 1823 and 1824 | 18.50 |
| 2 Malleable Lathe Dogs, 1" & 2" cap. | 2.15 |
| 1 No. 855-R Right-Hand Tool Holder, extra long, with cutter | 5.50 |

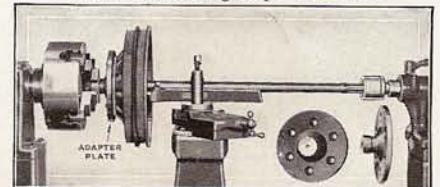


Fig. 10. Truing Brake Drum with Hub and Axle Integral. This Type Used on Rear Wheels of Chevrolet, Pontiac and Buick.

Crankshaft Testing and Truing

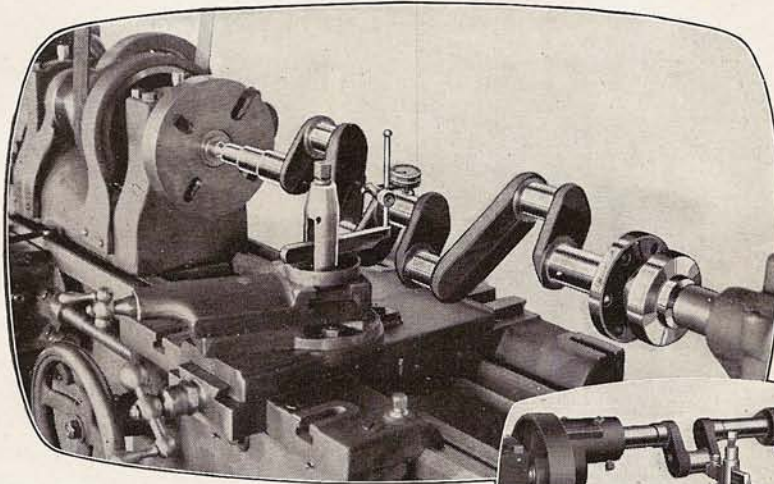


Fig. 12. Crankshaft Mounted Between Lathe Centers for Testing.

THE 16-inch South Bend Lathe is the ideal tool for testing crankshafts, truing main bearings, truing flywheel flanges on crankshafts, balancing crankshafts, etc. For these jobs no special equipment is required. The setting-up time for testing crankshaft is about 10 minutes.

The lathe when equipped with a Weber Crank-pin Tool as shown in Fig. 15, will true and polish both the main bearings and throw bearings of the crankshaft. When using the Weber Crank-pin Tool the machining time is approximately 15 minutes for each bearing of the crankshaft. Weber Tool is priced on page 15.

Bulletin No. 8, "How to Service Crankshafts" gives complete instructions for handling this class of work in the lathe. See page 3.

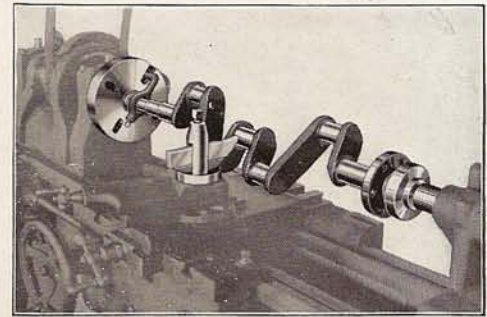


Fig. 13. Truing Main Bearings of Crankshaft Using a Straight Turning Tool.

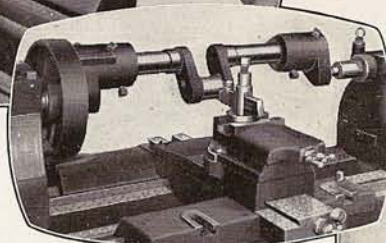


Fig. 14. Offset Centers are Sometimes Used for Machining Crankshaft Throw Bearings.



Fig. 15. Truing Main Bearings and Throw Bearings of Crankshaft with Weber Crank-pin Tool.

Differential Testing and Truing

FOR machining damaged or bent differential flanges for new ring gears, testing the pilot, differential assembly and drive pinion, we recommend the 16" x 6' South Bend Lathe.

For all machining and testing operations, the differential gear case is mounted in the lathe in centering supports, which hold and center the case the same as when in the car; therefore, any machining done on the differential flange will be concentric with bearing cups.

The average time required to set-up the lathe for testing and truing differentials is 3 minutes, and the time required to true each differential gear case flange is about 2 minutes.

Complete information on "How to Service Differentials" will be found in Service Bulletin No. 5, as described on page 3 of this booklet.

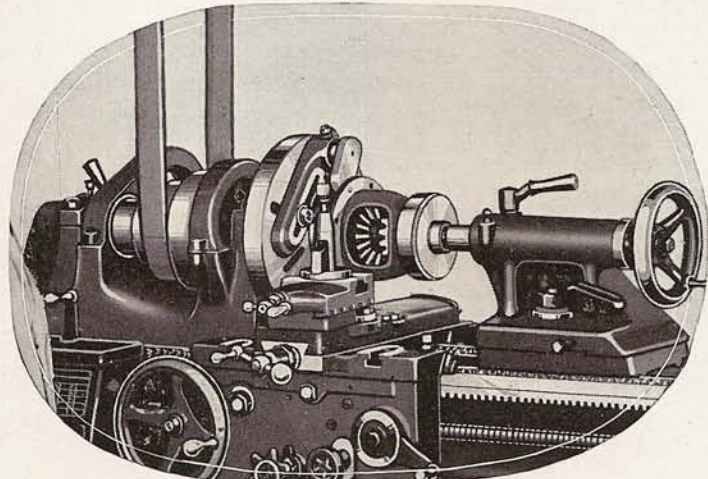


Fig. 16. Truing a Differential Gear Case Flange for a New Ring Gear, in the 16-inch South Bend Lathe.

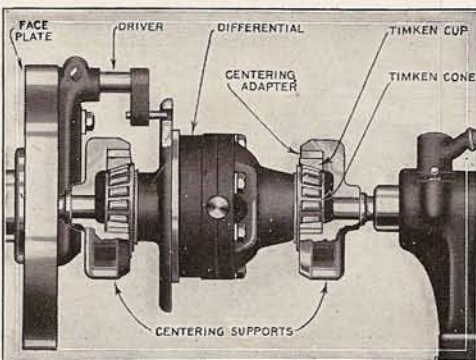


Fig. 17. Centering Supports Hold and Center the Differential Case for Machining and Testing.

No. 16-D Equipment for Servicing Differentials

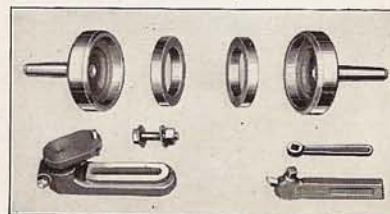


Fig. 18. Differential Servicing Equipment.

Handles differentials of: Chevrolet, Essex, Pontiac, Chrysler, Dodge, Buick, Studebaker, Oldsmobile, Oakland, Hudson, Willys, Willys-Overland, Auburn, Hupmobile, Rockne, Reo, Graham-Paige, Marmon, Continental, Cadillac, LaSalle.

- 2 No. 540-F Differential Centering Supports with Shanks...\$11.00
- 2 No. 283-A Centering Adapters 3.00
- 1 No. 853-S Straight Turning Tool with cutter bit 3.25
- 1 No. 267 Universal Driver..... 2.00

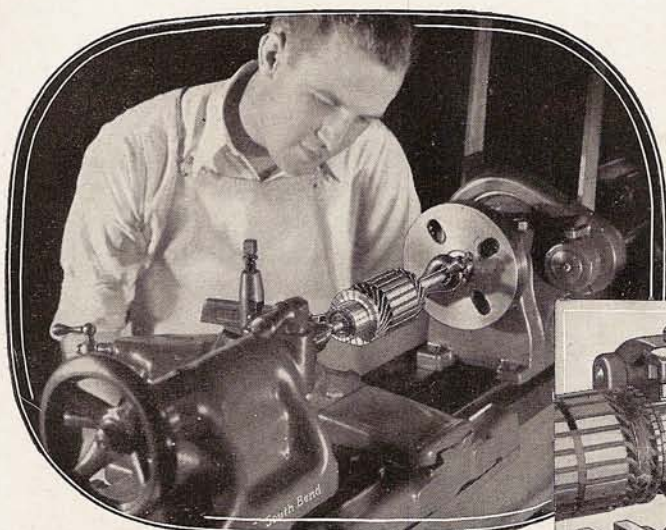


Fig. 19. Truing an Armature Commutator in the 16-inch South Bend Lathe.

Armature and Electrical Work

Armatures of all sizes and types for automobiles, buses and trucks can be trued and undercut in the 16-inch South Bend Lathe. Armatures that have center holes in the ends of shafts are mounted on lathe centers as shown in Fig. 19. Centerless armatures are mounted by holding one end of the shaft in the 3-jaw drill chuck, in headstock, and the other end in the armature support bushing, as shown in Fig. 21. An ordinary turning tool is used for truing the commutator.

The hand lever mica undercutter attachment is rapid and efficient. The cutting is done by a piece of hack saw blade attached to the slide. The lever is operated by hand and the cutting is done on the forward stroke. An adjustable screw regulates the depth of the cut. The left hand rotates the armature to bring the next segment in line. When machining is to be done, the undercutter can be thrown back out of the way. This attachment can be used on any size South Bend Lathe.

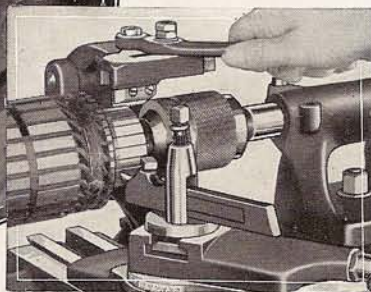


Fig. 20. Undercutting Mica.

No. 16-A Equipment for Servicing Armatures

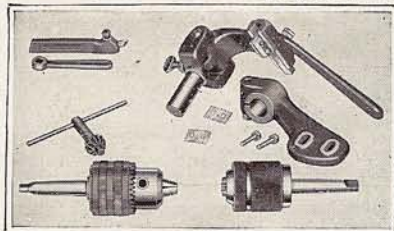


Fig. 22. Armature Servicing Equipment

This equipment will take care of all sizes and types of armatures for automobiles, buses, and trucks, including centerless armatures having shafts up to and including $\frac{3}{4}$ " diameter.

- 1 No. 1203 1" 3-Jaw Drill Chuck, fitted to lathe \$16.00
- 1 No. 823-G Armature Support Bushing ($\frac{3}{8}$ " to $\frac{3}{4}$ " cap.) fitted to lathe 8.50
- 1 No. 853-S Straight Turning Tool with cutter bit 3.25
- 1 No. 679 Hand Type Mica Undercutter Attachment 14.00

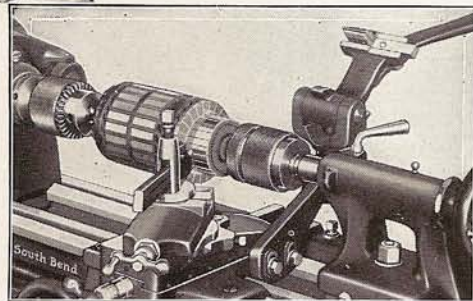


Fig. 21. Truing the Commutator. Undercutter Attachment is Thrown Back Out of Way.

Finishing Semi-Machined Pistons

Semi-machined pistons, solid or split skirt type, cast iron, aluminum, or other alloys, can be quickly and accurately machined in the 16-inch Lathe. Other practical piston jobs for this lathe include: Reaming piston skirts, honing wrist pin holes, machining ring lands, machining ring grooves, etc. Complete instructions for handling these jobs are shown in Bulletin No. 9, "How to Finish Pistons," described on page 3.

Pistons can also be finished by grinding, but turning is three to four times as fast and just as satisfactory.

One-half hour is the average time required to set up the lathe and machine a set of six Chrysler aluminum pistons.

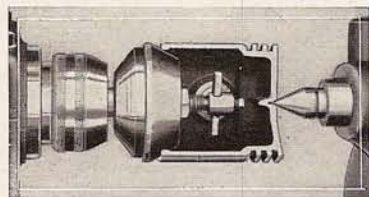


Fig. 24. Cross Section View of Piston Showing Use of Piston Adapter.

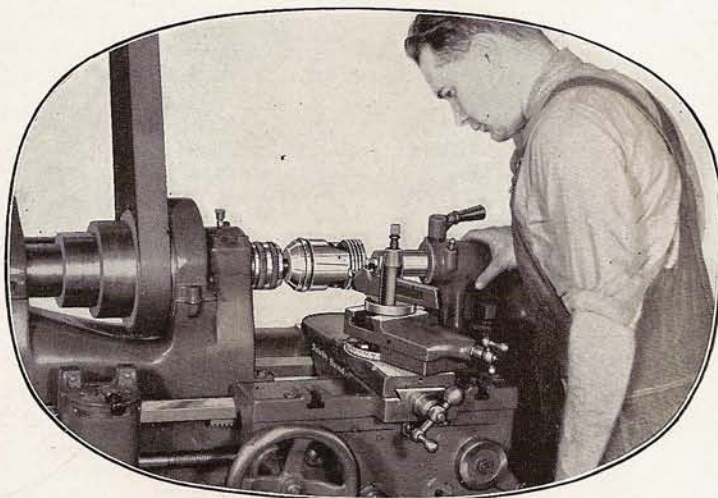


Fig. 23. Finishing a Semi-Machined Piston in the 16-inch Lathe.

No. 16-P Piston Finishing Equipment

The following tools equip the lathe for finish machining semi-machined pistons, all types and all sizes ranging from $\frac{3}{16}$ " to $\frac{3}{4}$ " outside diameter.*

- 1 No. 44-P Piston Adapter, Driving Dog and Cone Ring for Pistons $\frac{3}{16}$ " to $\frac{3}{4}$ " outside diameter \$13.25
- 1 No. 2-R Piston Skirt Reamer for Pistons $\frac{3}{16}$ " to $\frac{3}{4}$ " outside diameter 6.50
- 1 No. 853-S Straight Turning Tool 3.25

*Cone rings and reamers for larger and smaller pistons are available at extra cost.

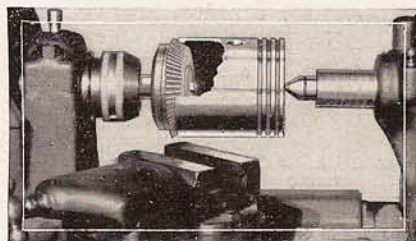


Fig. 25. Reaming the Piston Skirt.

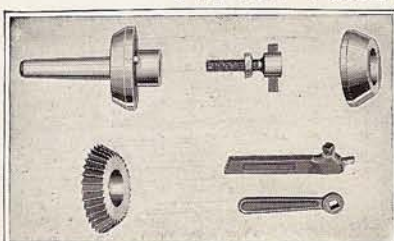


Fig. 26. Piston Servicing Equipment.

Making New and Replacement Bushings in the 16-inch Lathe

Bushings and sleeve bearings of all sizes and types, of any material, for automobiles, buses, trucks and other machinery can be made complete in the 16-inch South Bend Lathe. Complete instructions for making bushings will be found in Bulletin No. 7, "How to Make Bushings," as described on page 3 of this booklet.

Machining bushings in the lathe is more economical than carrying them in stock and the shop that is equipped to make its own bushings is in a position to render its customers prompt and economical service.

The practical equipment recommended for making bushings complete in the lathe consists of a No. 142 Chuck and Tool Assortment as listed and priced on page 13, several sizes of center drills and countersinks as listed on the same page, and a few twist drills.

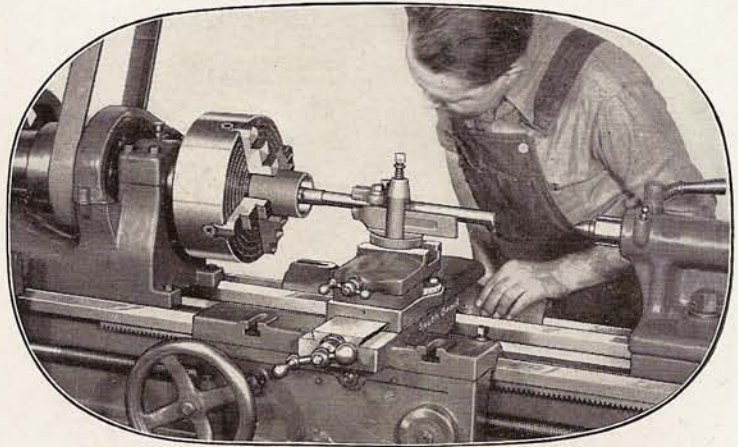


Fig. 27. Making a Bushing in a Chuck in the 16-inch South Bend Lathe.

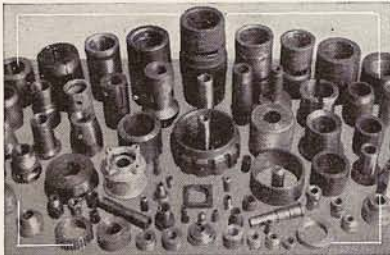


Fig. 28. Typical Bushings Which Can Be Made in the 16-inch Lathe.

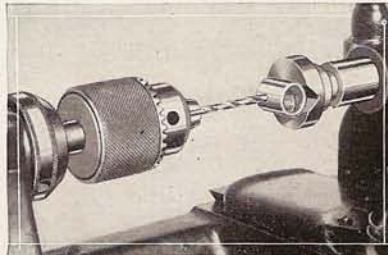


Fig. 29. Drilling an Oil Hole in a Bushing Held in a Crotch Center.

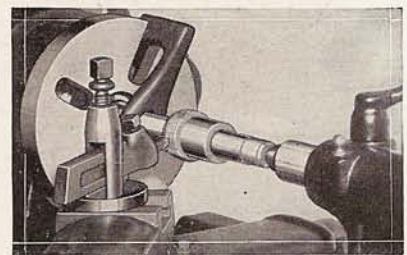


Fig. 30. Cutting a Screw Thread on a Bushing in the 16-inch South Bend Lathe.

Other Practical Auto Servicing Jobs for the 16-inch Lathe

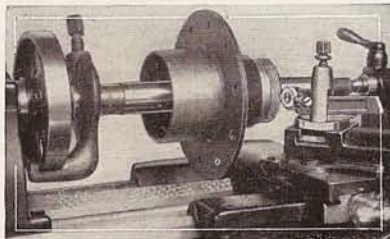


Fig. 31. Chasing a Damaged Thread on a Front Wheel Hub Mounted on a Mandrel.

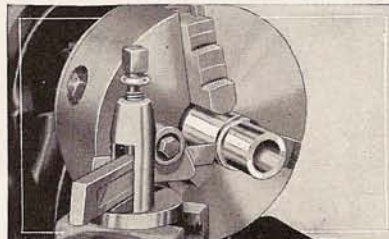


Fig. 32. Cutting Off a Bushing Which Has Been Machined Complete in the Chuck.

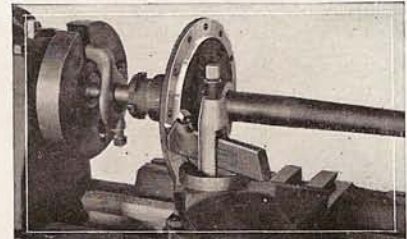


Fig. 33. Truing a Damaged Rear Wheel Hub Flange Mounted on an Axle.

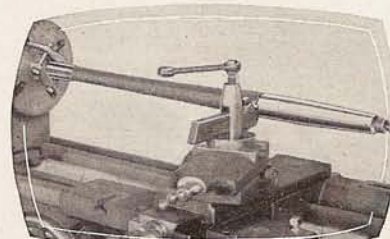


Fig. 34. Making an Emergency Replacement Axle Shaft Complete in the Lathe

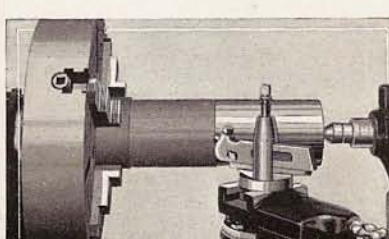


Fig. 35. Finishing a Cast Iron Cylinder Sleeve for Press Fit in a Cylinder Block.

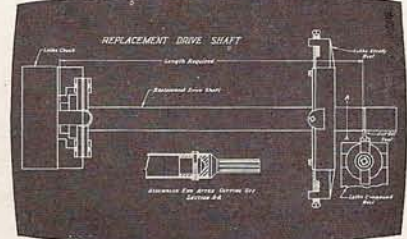


Fig. 36. Cutting Off a Drive Shaft Before Installing Replacement Universal Joint.

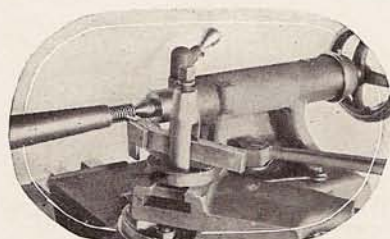


Fig. 37. Re-chasing the Thread of an Automobile Axle Shaft.

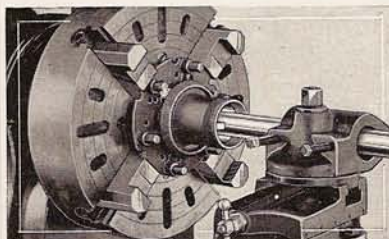


Fig. 38. Boring a Welded Wheel Hub to Form a New Bearing Cup Seat.

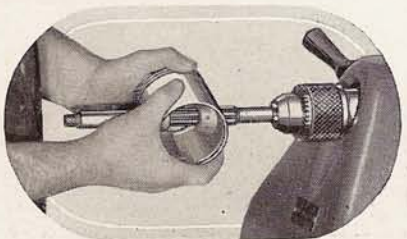


Fig. 39. Honing a Piston Pin Hole in a Piston Using Lathe as a Driver.

Boring Re-babbitted Connecting Rods

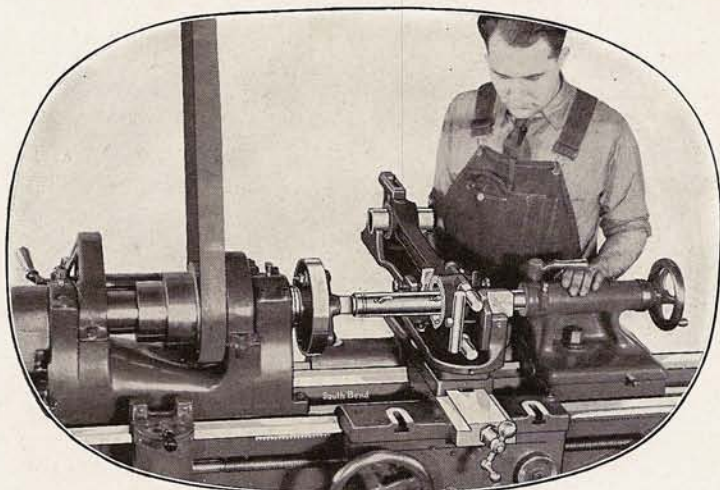


Fig. 40. Boring a Rebabitted Connecting Rod in the 16-inch South Bend Lathe.

The illustration at left shows the 16-inch South Bend Lathe fitted with an attachment for boring connecting rods of automobiles, trucks, buses and tractors. The lathe with this attachment will re bore connecting rods up to 22" between crankshaft and pin bearings and up to 6 1/4" across bolt lugs. The average time required to set-up the lathe is about 5 minutes. An average of 15 minutes is necessary to adjust the attachment and bore the first connecting rod. Additional rods require but from 4 to 5 minutes each.

Two short stiff double-end boring bars are used, one for rough boring and the other for finish boring.

Complete instructions for boring reabitted connecting rods are shown in Bulletin No. 6, "How to Bore Connecting Rods." See page 3.

No. 16-C Equipment for Servicing Connecting Rods

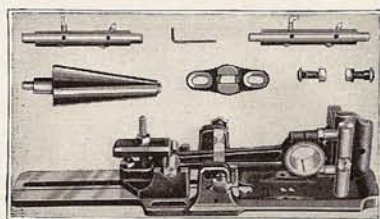


Fig. 41. Connecting Rod Servicing Equip.

With the equipment listed below the 16-inch Lathe will bore all connecting rods up to 22" between crankshaft and piston pin bearings and up to 6 1/4" across bolt lugs.

- 1 No. 1233 Connecting Rod Boring Attachment\$75.00
 - 2 No. 461-B Boring Bars for Bearings 1 1/4" to 2 1/2" diam. 17.00*
 - 1 No. 581 Centering Cone for Bearings 1 1/4" to 2 1/2" diam. 2.50*
 - 1 No. 229 Driver for Boring Bars 1.25
- *Boring Bars and Centering Cones for Bearings from 2 1/2" to 4", are available.

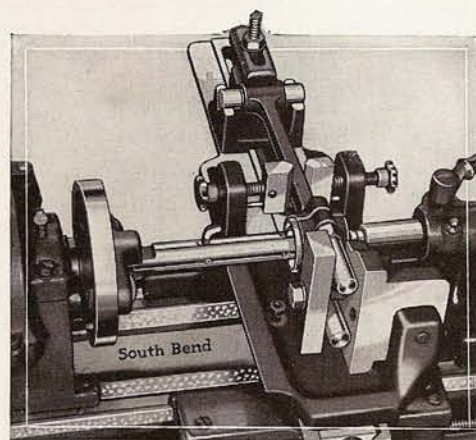


Fig. 42. A Connecting Rod Clamped in Position for Boring and Facing.

Grinding Valves in the Lathe

The 16-inch South Bend Lathe equipped with an electric grinder as shown at right, will grind valves, both intake and exhaust, all makes and materials, and at any angle, for motor vehicles and engines of all kinds. The lathe is also practical for grinding valve stems, valve tappets, tappet adjusting screws, bushings, hardened and tempered tools and parts, valve seat hones and reamers*.

The precision valve chuck used automatically centers and holds all sizes and types of valve stems up to 3/4" in diameter.

Five minutes is ample time to set-up the lathe. From 1 to 2 minutes is required to grind each valve.

Complete information on "How to Grind Valves" is shown in Bulletin No. 1. See page 3.

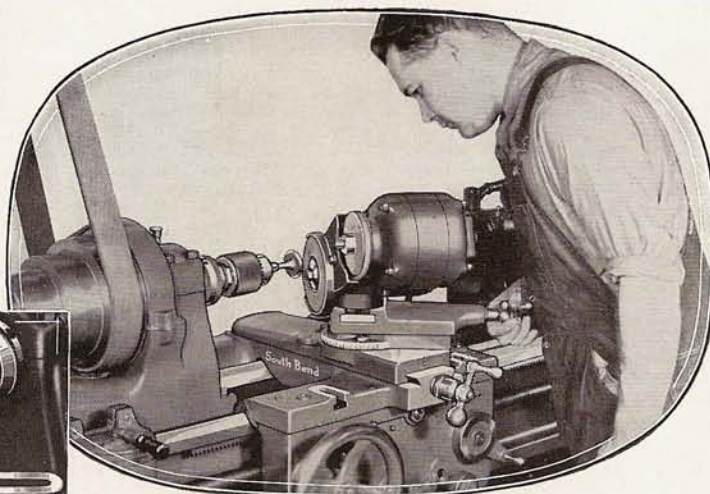


Fig. 43. Grinding a Valve for an Automobile Engine in the 16-inch South Bend Lathe.

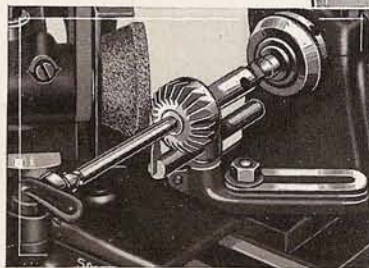


Fig. 44. At Right—Sharpening a Valve Seat Reamer in the Lathe.

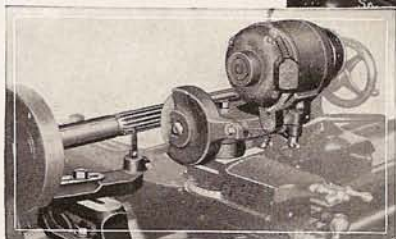


Fig. 45. Sharpening a Straight Reamer in the 16-inch South Bend Lathe.

No. 16-V Equipment for Grinding Valves

This equipment will take care of all valve grinding work in addition to handling a variety of other grinding work.

- 1 No. 14-G 1/4 H. P. Electric Grinder (1-ph., 60-cy., 110-v., A.C.) abrasive wheel, belt, guard, cord and switch....\$60.00
- 1 No. 354-B Precision Valve Chuck, 3/4" capacity, fitted to lathe 14.25
- 1 No. 91-F Diamond Holding Fixture.... 3.50
- 1 No. 406 Diamond Dresser for truing grinding wheels 4.50

*Fixture for sharpening reamers priced on pg. 15.

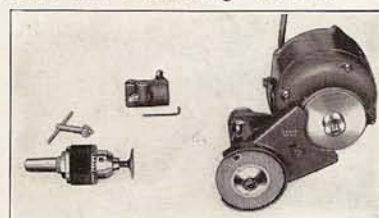


Fig. 46. Valve Servicing Equipment.

Machine Jobs Handled in the 16-inch South Bend Lathe

The 16-inch South Bend Lathe, in addition to handling all the automotive service jobs shown on pages 4 to 8 of this bulletin, will handle machine work of all kinds including: Boring, facing, drilling, turning, tapping, forming, reaming, knurling, polishing, recessing, bar work, cutting-off, taper turning, countersinking, chucking work, tap and die work, and cutting all standard and special screw threads. A few of these operations are shown below and on page 7.

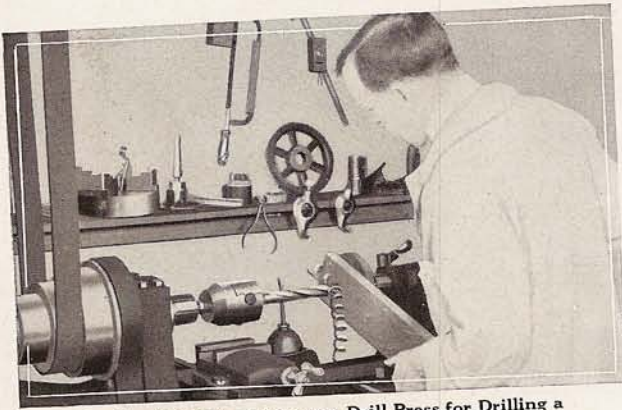


Fig. 47. Using the Lathe as a Drill Press for Drilling a Hole in a Flat Piece of Work.

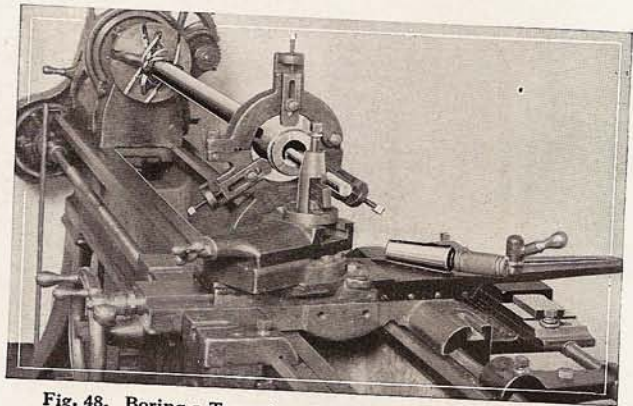


Fig. 48. Boring a Taper in a Driveshaft Held in Center Rest in the 16-inch South Bend Lathe.

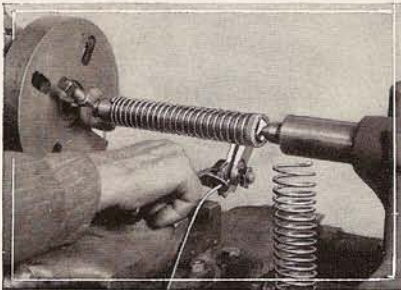


Fig. 49. Winding a Valve Spring in the Lathe Using a Spring Winding Attachment. Attachment makes springs from wire 0" to 3/16" diam. Cat. No. 367. Code "Balun" \$2.50

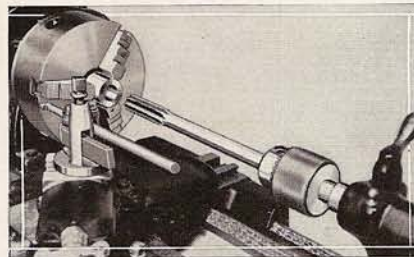


Fig. 50. Reaming the Hole to Size in a Piece of Work After the Rough Boring Operation.

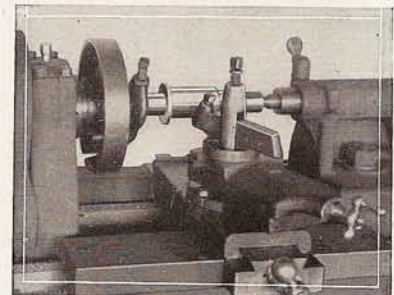


Fig. 51. Machining a Steel Sleeve Held on a Mandrel Between Lathe Centers.

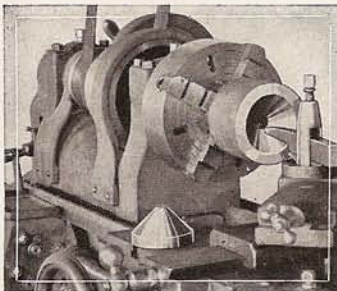


Fig. 52. Application of the Compound Rest for Boring a Short Taper.

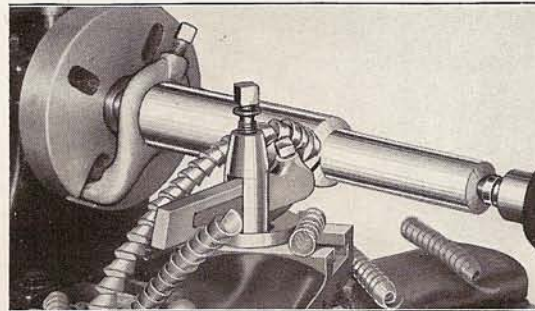


Fig. 53. Close-up of the 16-inch Lathe Reducing the Diameter of a Steel Bar 3/4-inch in One Cut.

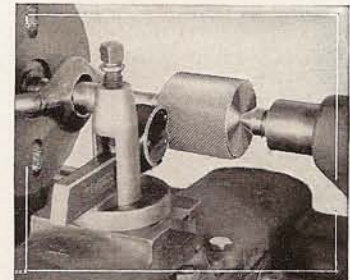


Fig. 54. Knurling a Large Handle Between Centers in the 16-inch South Bend Lathe.

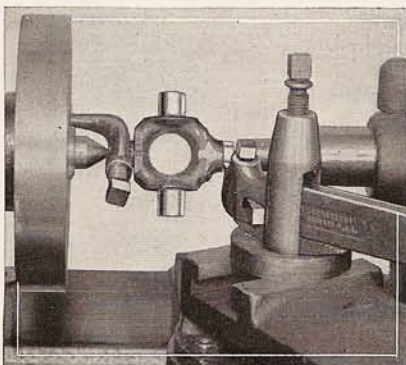


Fig. 55. Worn Universal Joint Salvaged by Re-Machining and Bushing.

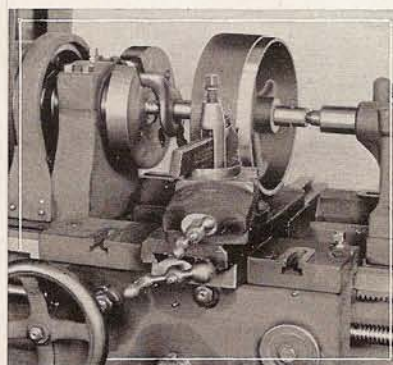


Fig. 56. Machining a Driveshaft Brake Drum Mounted on a Mandrel.

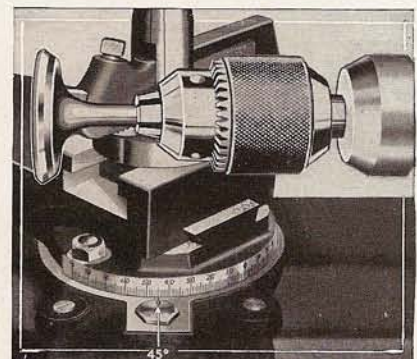
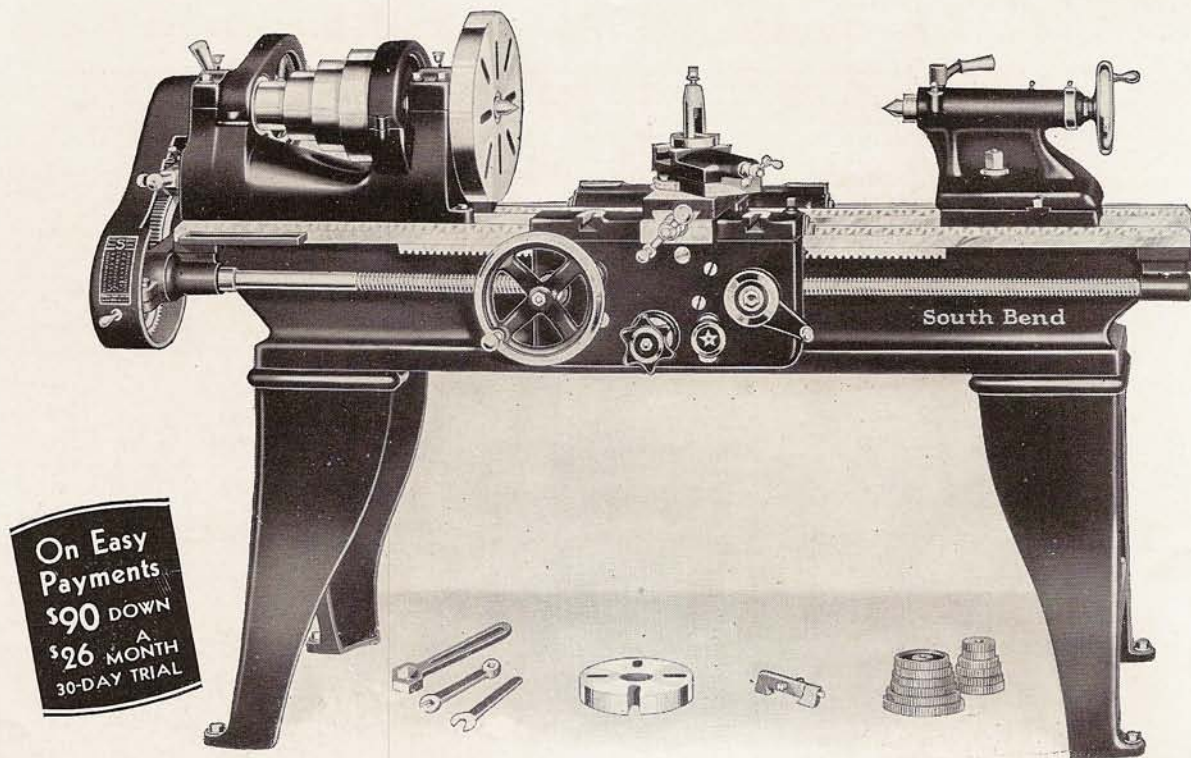


Fig. 57. Cutting Down a Large Valve for the Engine of an Orphan Car.



16" x 6' South Bend Standard Change Gear Countershaft Driven Lathe—\$436.00.

On Easy Payments \$90 DOWN \$26 A MONTH 30-DAY TRIAL

16-inch South Bend Standard Change Gear Lathe—Countershaft Drive A Back-Geared, Screw Cutting, General Purpose Precision Lathe

The 16-inch South Bend Lathe is the most practical and efficient lathe for use in the motor service machine shop. The lathe is rigidly and sturdily built and has the accuracy, power and capacity for servicing flywheels, brake drums and hubs, demountable type wheels, differentials, crankshafts, axles, drive-shafts, connecting rods, pistons, bushings, valves, armatures and hundreds of other jobs. This lathe is the most popular in the 6' and 8' bed lengths. For features, specifications and description of the principal units of the lathe, such as the headstock, apron, saddle, compound rest, etc., see page 12.

Overhead Countershaft Drive. The 16-inch lathe illustrated above is designed to operate by means of an overhead countershaft. This type of drive is inexpensive and is ideal for the shop that is equipped with an overhead lineshaft.

Regular Equipment included in the price of the 16-inch Countershaft Driven Lathe consists of large face plate, small face

plate, tool post, ring and wedge, thread cutting stop, two 60° lathe centers, spindle sleeve, set of independent change gears for threads and feeds, wrenches, installation plan and instruction book, "How to Run a Lathe."

Double friction countershaft for driving the above lathe is not included in price of lathe but is extra; for illustration, description and prices see bottom of page.

Other Types of Drives. The 16-inch South Bend Lathe is also supplied in the Simplified V-Belt Motor Drive and Silent V-Belt Motor Drive, which are illustrated and described on page 11.

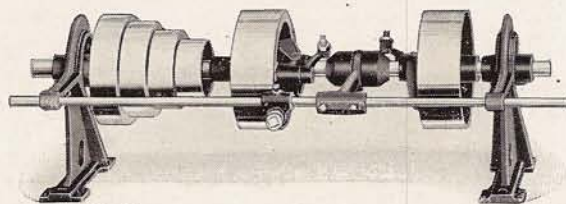
All the jobs shown throughout this bulletin can be done on the 16-inch South Bend Lathes, illustrated above and on page 11. Many of the jobs require no other equipment than the chuck and tool assortment as illustrated and priced on page 14. Some of the jobs require special attachments and tools; these are illustrated and priced where the jobs are shown.

Prices of 16-inch Countershaft Driven Standard Change Gear Precision Lathe

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Hole Thru Spindle Inches	Swing Over Carriage Inches	Cone Pulley Belt Inches	Countershaft Speed R.P.M.	Power Required H.P.	Approx. Ship. Wt. Crated Pounds	Cash Price			Easy Paym't Plan		
									Cat. No.	Code Word	F.O.B. Factory	Amount Down Payment	Payment Each Month	Approx. No. of Payments
16 1/4	6	34	1 3/8	11 1/2	2 1/4	225	1	1629	41-CO	Gagfo	\$436.00	\$ 90.00	\$26.00	14
16 1/4	7	46	1 3/8	11 1/2	2 1/4	225	1	1709	41-DO	Gagir	456.00	100.00	29.00	14
16 1/4	8	58	1 3/8	11 1/2	2 1/4	225	1	1789	41-EO	Gagox	476.00	100.00	29.00	14
16 1/4	10	82	1 3/8	11 1/2	2 1/4	225	1	1949	41-GO	Gagpy	520.00	107.50	30.50	15
16 1/4	12*	106	1 3/8	11 1/2	2 1/4	225	1	2179	41-HO	Gagra	583.00	115.00	33.50	15
16 1/4	14*	130	1 3/8	11 1/2	2 1/4	225	1	2404	41-KO	Gagzi	638.00	125.00	34.00	16

*Includes center leg.

If Quick Change Gear Lathe is wanted, add \$60.00 to above prices.



Double Friction Countershaft for 16-inch Lathe.

Double Friction Countershaft

The Double Friction Countershaft for the lathe is equipped with two friction clutch pulleys, one of which is driven by a straight belt and the other by a crossed belt from the lineshaft. This permits the spindle to be operated both forward and in reverse. The countershaft may also be arranged as a two-speed drive, by using a small and a large pulley on the lineshaft and driving both countershaft clutch pulleys forward.

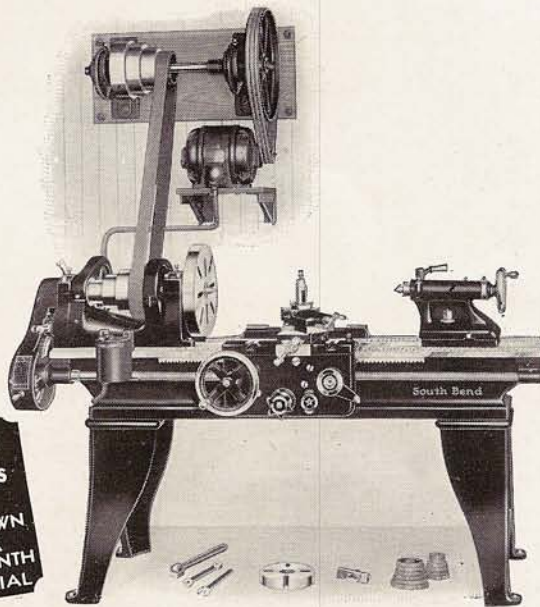
Cat. No. 937. Code Word "Cirds".....\$31.00

SCREW THREAD CUTTING CHART		
STANDARD CHANGE GEAR LATHE		
19"-15"-16"		
THREADS PER INCH	STUD GEAR	SCREW GEAR
2	72	24
3	48	24
4	48	32
5	48	40
6	48	48
7	48	56
8	48	64
9	48	72
10	48	80
11	24	44
11 1/2	24	46
12	24	48
13	24	52
14	24	56
15	24	64
16	24	72
18	24	84
20	24	96
22	24	108
24	24	120
26	24	132
28	24	144
30	24	156
32	24	168
36	24	180
40	24	200

Metal Screw Thread Cutting Chart Attached to each 16-inch Lathe.

16" Simplified V-Belt Motor Driven Lathe

Back-Gearred, Screw Cutting Precision Lathe



On Easy Payments
\$107⁵⁰ DOWN
\$30⁵⁰ A MONTH
30 DAY TRIAL

16" x 6' Simplified V-Belt Motor Driven Lathe...\$529.00

The 16-inch Simplified V-Belt Motor Driven Standard Change Gear Lathe shown at the left, is exactly the same as the 16-inch Countershaft Driven Lathe illustrated on page 10, except that this lathe is equipped with a Simplified V-Belt Motor Drive instead of Countershaft Drive. For mechanical features and specifications of lathe, see page 12.

The Simplified V-Belt Motor Driven Lathe is a practical lathe for the shop not equipped with lineshaft. The simplified V-belt countershaft and reversing motor can be mounted on the wall or on a post behind the lathe. The drive is by three V-belts from motor to countershaft and by flat leather belt to the lathe spindle cone. The motor used is a 1 H.P. reversing type and is controlled by a drum reversing switch. See page 12.

Prices of Lathe, countershaft, motor, switch, belting, etc., are itemized in the price tabulation below so that you may order them complete with the lathe or individually.

Regular Equipment included in price of lathe consists of: Large face plate; small face plate; tool post, ring and wedge; set of change gears for threads and feeds; adjustable thread cutting stop; two 60° lathe centers; spindle sleeve; wrenches; lag screws and washers; installation plan and instruction book, "How to Run a Lathe."

Instant Reversing Motors for operation from 1-phase, 60-cycle, A.C. and Direct Current can be supplied for the above lathe at the following prices: For 1-phase, 60-cycle, A.C. motor in lieu of 3-phase motor, add \$12.00. For D.C. motor and suitable reversing switch in lieu of 3-phase motor and 3-phase switch, add \$77.00.

When Ordering a Motor Driven Lathe always give the following information:

- If Alternating Current state exact voltage, phase, cycle, and number of wires.
- If Direct Current state exact voltage only.

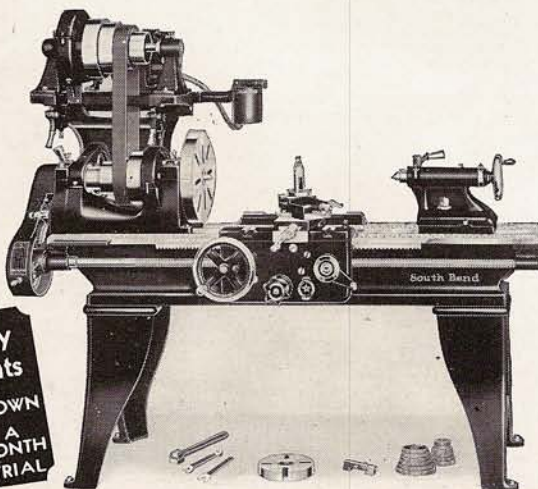
For lathe with quick change gear box add \$60.00 to prices of lathes listed at left.

Prices of 16-inch Simplified V-Belt Motor Driven Lathes

16-inch South Bend Standard Change Gear Floor Leg Lathe and Equipment as shown beneath lathe.....	16" x 6' 541-CS	16" x 7' 541-DS	16" x 8' 541-ES	16" x 10' 541-GS	16" x 12' 541-HS	16" x 14' 541-KS
Price of Motor Drive Equipment						
Simplified V-Belt Countershaft.....	26.00	26.00	26.00	26.00	26.00	26.00
1 H.P. Instant Reversing Motor, 1800 R.P.M. (3-ph., 60-cy., A.C. 110 or 220-volt).....	48.00	48.00	48.00	48.00	48.00	48.00
V-Groove Pulley for Motor.....	2.00	2.00	2.00	2.00	2.00	2.00
Reversing Switch (Drum Type).....	7.00	7.00	7.00	7.00	7.00	7.00
Three V-Belts, Motor to Cshft. at \$1.00 each.....	3.00	3.00	3.00	3.00	3.00	3.00
Flat Leather Belt (2¼ x 98").....	7.00	7.00	7.00	7.00	7.00	7.00
Cash Price, Lathe and Equipment Complete.....	\$529.00	\$549.00	\$569.00	\$613.00	\$676.00	\$731.00
Code Word.....	Bewgo	Beyen	Beyfo	Beyir	Beyox	Beyra
Easy Payments: Down Payment.....	\$107.50	\$107.50	\$115.00	\$125.00	\$135.00	\$145.00
Monthly Payments.....	30.50	30.50	33.50	34.00	37.00	40.00
No. of Payments.....	15	15	15	16	16	16
Distance Between Spindle Centers of Lathe.....	34 in.	46 in.	58 in.	82 in.	106 in.	130 in.
Shipping Weight, Lathe and Motor Drive.....	1893 lbs.	1973 lbs.	2053 lbs.	2213 lbs.	2443 lbs.	2668 lbs.

16" Silent V-Belt Motor Driven Lathe

Back-Gearred, Screw Cutting Precision Lathe



On Easy Payments
\$125 DOWN
\$34⁰⁰ A MONTH
30-DAY TRIAL

16" x 6' Silent V-Belt Motor Driven Lathe.....\$609.00

The 16-inch Silent V-Belt Motor Driven Standard Change Gear Lathe shown at the left is exactly the same as the 16-inch Countershaft Driven Lathe illustrated on page 10, except that this lathe is equipped with the Silent V-Belt Motor Drive instead of Countershaft Drive. For features and specifications, see page 12.

Silent V-Belt Motor Drive is efficient, powerful and noiseless in operation. Motor and driving cone are mounted on a tilting table above headstock of lathe and are adjustable for belt tension. Drive is by three V-belts from Motor to driving pulley and by flat leather belt to spindle cone pulley. A drum reversing switch controls the motor.

Regular Equipment included in price consists of: Silent motor drive unit; large and small face plates; tool post, complete; change gears for threads and feeds; thread cutting stop; two 60° lathe centers; spindle sleeve; wrenches; installation plan and book, "How to Run a Lathe."

Electrical Equipment included in price consists of: 1 H.P. 1200 R.P.M. instant reversing motor, 3-phase, 60-cycle, A.C. (General Electric, Westinghouse or equal); drum reversing switch; wiring enclosed in metal conduit; three V-belts, flat leather belt, and wiring diagram blue print.

Instant Reversing Motors for operation from 1-phase, 60-cycle, A.C. and Direct Current can be supplied for the lathe at the following prices: For 1-phase, 60-cycle, A.C. motor and suitable reversing switch in lieu of 3-phase motor, add \$38.00. For D.C. motor and suitable reversing switch in lieu of 3-phase motor and switch, add \$66.00.

Prices of 16-inch Silent V-Belt Motor Driven Lathe

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Size Motor Used H. P.	Approx. Ship. Weight Crated Pounds	Cash Price			Easy Paym't Plan		
					Cat. No.	Code Word	3-phase 60-cycle A. C. Motor	Amount Down	Payment Each Month	Approx. No. of Payments
16¼	6	34	1	2160	341-CV	Cizat	\$609.00	\$125.00	\$34.00	16
16½	7	46	1	2240	341-DV	Cizex	629.00	125.00	34.00	16
16¾	8	58	1	2320	341-EV	Cizfy	649.00	125.00	34.00	16
16¾	10	82	1	2480	341-GV	Cizha	693.00	135.00	37.00	16
16¾	12*	106	1	2710	341-HV	Cizib	758.00	155.00	40.00	17
16¾	14*	130	1	2935	341-KV	Cizpi	811.00	165.00	42.50	17

*Includes center leg.

If Quick Change Gear Box is wanted, add \$60.00 to the above prices.

Features and Specifications of the 16" General Purpose Lathe

The mechanical features described below apply to all the 16-inch South Bend Lathes illustrated and described on pages 10 and 11 of this bulletin.

16-inch Lathe Features

Back-geared headstock, eight spindle speeds
Hollow steel spindle, 1 1/8" hole
Spring latch reverse for threads and feeds
Graduated compound rest, swivels 180°
Carriage lock for accurate facing & cutting-off
Tailstock has 1" set-over for taper turning
Steel Rack for hand and power feed
Graduated tailstock spindle
Semi-steel seasoned lathe bed
Micrometer graduations on both feed screws
Automatic cross and longitudinal feeds
Precision lead screw for screw thread cutting
Independent change gears for threads and feeds
Half-nuts for screw thread cutting
Three V-ways and one flat-way on lathe bed
Adjustable phosphor bronze bearings
Adjustable gibbs on cross feed and compound rest

16-inch Lathe Specifications

Swing over bed	16 1/4 in.
Swing over carriage	11 1/2 in.
Hole through spindle	1 1/8 in.
Collet capacity	1/64 in. to 3/8 in.
Screw thread cutting range	2 to 40 per in.
Spindle speeds	18, 29, 45, 75, 141, 228, 360, 598 R.P.M.
Width of cone pulley belt	2 1/4 in.
Size of lathe tool shank	5/8 in. x 1 1/8 in.
Size of turning tool cutter bits	3/8 in. x 3/8 in.
Size of spindle nose	2 3/8 in. diam., 6 threads
Head & tail spindle centers	No. 3 Morse Taper
Lead screw, Acme thread	1 1/8" dia., 6 thr'ds.
Tool cross slide travel	10 3/8 in.
Angular travel of compound rest top	3 3/4 in.
Countershaft speed	225 R.P.M.
Tailstock spindle travel	5 3/4 in.
Tailstock set over	1 in.
Back gear ratio	8 to 1

Back-Geared Headstock is hand-scraped to lathe bed; has four-step cone for 2 1/4" belt; eight changes of spindle speeds from 18 to 598 R.P.M., four direct and four back-geared; wrenchless bull gear lock; and spring latch reverse.

Headstock Spindle is made of high carbon steel, finish ground, and has 1 1/8" hole its entire length. Has hardened and ground steel thrust collar. Spindle nose 2 3/8" diameter, six threads. Collet capacity 1/64" to 3/8".

Phosphor Bronze Bearings for headstock spindle are line bored and lapped to a perfect bearing and are adjustable for wear. An improved oiling system lubricates the bearings.

Tailstock is hand-scraped to bed; has 1" set-over for taper turning; graduated spindle; double plug spindle lock; No. 3 Morse Taper spindle center, hardened, ground and self-ejecting; spindle travel 5 3/4".

Apron has worm drive for automatic cross feeds and automatic longitudinal feeds. Half-nuts and lead screw thread are used only for screw thread cutting. An automatic safety device prevents engaging half-nuts and automatic feeds at the same time.

Carriage has wide deep bridge; is hand-scraped to bed; has T-slots for clamping work or fixtures; has carriage lock for facing and cutting-off; and felt wipers for V-ways.

Compound Rest is graduated 180°; swivels to any angle, and has angular travel of 3 3/4". Compound rest screw and cross feed screw have micrometer collars graduated in thousandths. Tool holder shank 3/8" x 1 1/8" for cutters 3/8" square.

Lathe Bed is 50% steel, heavily constructed and reinforced by box braces its entire length. Three V-ways and one flat way accurately planed and hand-scraped, align and support the headstock, carriage and tailstock of lathe.

Precision Lead Screw, 1 1/8" diameter, 6 Acme standard screw threads per inch; guaranteed to meet the most exacting require-

ments for cutting screw threads. The thread of the lead screw is used only for cutting screw threads and not for operating the automatic feeds. A spline in the lead screw drives a worm gear in the apron for operating the automatic feeds.

Screw Thread Cutting. The equipment of each 16-inch Standard Change Gear Lathe includes a set of independent change gears which provide for cutting all standard screw threads from 2 to 40 per inch, right or left-hand, including 1 1/2 pipe thread. The change gears also provide for a wide range of automatic longitudinal feeds and automatic cross feeds.

A Metal Screw Thread Cutting Chart, as illustrated on page 10, is attached to each lathe and shows how to arrange the change gears for the various screw threads and automatic feeds.

Automatic Feeds. The set of change gears supplied with the 16-inch Standard Change Gear Lathe provide for a wide range of automatic longitudinal feeds from .006" to .036" (27 1/2 to 167 per inch) and for automatic cross feeds from .0015" to .0093" (108 to 667 per inch). The fineness or coarseness of feeds is determined by changing the gears the same as when cutting screw threads.

Quick Change Gear Box. The 16-inch Lathe can be supplied with quick change gear box at an additional cost of \$60.00. The gear box provides 48 changes for cutting screw threads from 2 to 112 per inch, right or left-hand and for a wide variety of automatic cross and longitudinal feeds.

Attachments, Chucks and Tools for the 16-inch South Bend Lathe are illustrated, described and priced on pages 4 to 8 and on 14 and 15.

Power. The 16-inch Lathe has the power to reduce the diameter of a steel shaft 3/4" in one cut—taking a chip 3/8".

Accuracy. The 16-inch South Bend Lathe undergoes 64 accuracy tests and is held to accuracy limits of one thousandth.



Instant Reversing Motor

The Instant Reversing Motor illustrated at left is furnished with all 16-inch Motor Driven Lathes shown throughout this booklet. Motors listed are for 3-phase, 220 or 440-volts, 50 or 60-Cycle. Prices of motors for 1-phase, 110 or 220-volts, 50 or 60-cycles, and 115 or 230-volts, Direct Current, also special motors for 30 and 40-cycle, A.C. on request. Motors furnished are Westinghouse, G.E. or equal make.

Drum Type Reversing Switches. A Westinghouse Drum Type Reversing Switch, as shown at right, is included with the electrical equipment supplied with each 16-inch Silent V-Belt Motor Driven Lathe. The switch has three positions: "Left" for starting; "Center" for stopping; and "Right" for reversing the rotation of the lathe spindle.

A lower priced Drum Type Reversing Switch, similar to the one illustrated at right, is included in the electrical equipment with 16-inch

Electric Motors and Control Switches

Simplified Motor Driven Lathes fitted with 1-phase and 3-phase motors. This switch is also used for starting, stopping and reversing the lathe spindle.

All 16-inch Silent V-Belt Motor Driven Lathes and 16-inch Simplified Motor Driven Lathes equipped with D.C. motors are supplied with the Westinghouse Drum Type Reversing Switch, shown at left, and a Magnetic Control Panel with Resistance Unit for correct operation of motor in forward or reverse directions.

When Ordering a Motor Driven Lathe give the following information regarding the electric current to be used:

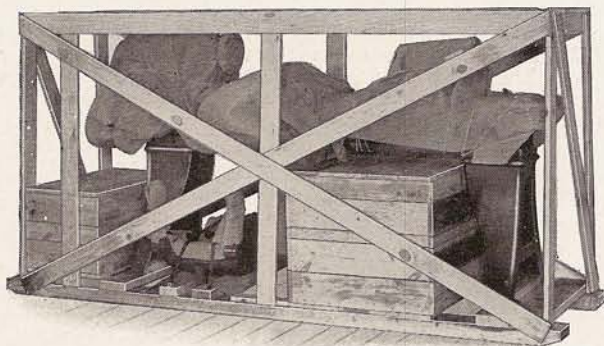
—If alternating current, state exact voltage, phase, cycle and number of wires.

—If direct current, state exact voltage only.

Motors of double voltage rating such as 110-220-volt can be supplied at extra cost and on special order only.



Drum Type Reversing Switch



16-inch Lathe Crated for Shipment

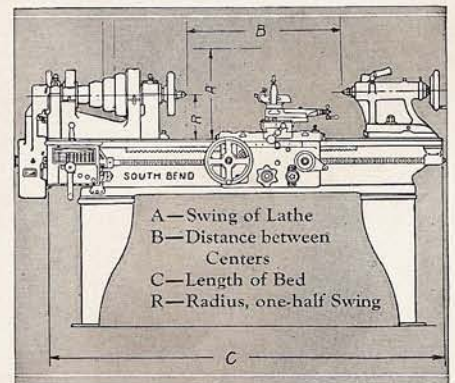
The illustration shows a 16-inch South Bend Lathe skidded and crated for shipment by rail to any point in the United States, Canada or Northern Mexico.

Safe delivery of your 16-inch South Bend Lathe at your freight station is guaranteed. Any part damaged in transportation will be replaced immediately without question and at no cost to you.

Selecting the Correct Size of Lathe

When selecting the size of lathe for your work, take into consideration the largest diameter and the greatest length of the work to be handled as at "A" and "B" in the illustration at right. Then select the lathe that has a swing over bed and distance between centers at least 10% greater than the dimensions of largest work to be handled.

The size of a Screw Cutting Lathe is determined by the swing over bed "A", and the length of bed "C". European tool manufacturers determine the size of a lathe by its radius or center distance "R". What the European terms an 8-inch center lathe, United States manufacturers term a 16-inch swing lathe.



How to Determine the Size of a Lathe

South Bend Easy Payment Plan—14 to 19 Months to Pay For the Purchase of 16-inch South Bend Lathes, Attachments and Tools

Under the South Bend Easy Payment Plan any shop in the United States may install any size or type 16-inch South Bend Lathe, together with any of the attachments, chucks and tools shown in this bulletin, by making a small down payment with the order and paying the balance in small monthly installments while the lathe and equipment is being used. See schedule of easy payment terms at right.

The lathe and equipment you select will be shipped immediately after we receive the order and the down payment. More than 12,000 South Bend Lathes have been sold on the South Bend Easy Payment Plan. We have no connection with any finance company. We deal directly with you in the collection of your payments.

The example order below illustrates how simple it is to order your lathe and equipment on the South Bend Easy Payment Plan.

Example Easy Payment Order

1 No. 541-CS, 16" x 6' South Bend Standard Change Gear Simplified V-Belt Motor Driven Lathe, complete with electrical equipment and regular lathe equipment, as shown on page 11	\$529.00
1 No. 142 Chuck and Tool Assortment (page 14)	84.25
Total Price f.o.b. Cars South Bend, Ind.	\$613.25

Easy Payment Terms on Above Order

Total Price of Above Order	\$613.25
Amount of Down Payment	125.00
Balance Due	\$488.25
Amount for Financing Balance	47.00
Amount to be paid in monthly installments	\$535.25
Payment Each Month	\$ 34.00
Number of Months to Pay—16 Months.	

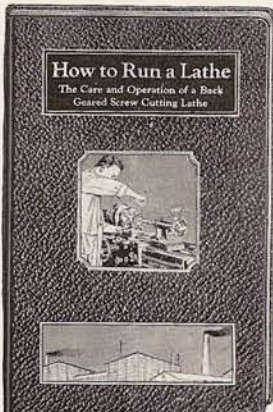
SCHEDULE OF EASY PAYMENT TERMS

If Total Price of Your Order Amounts to	Amount of Down Payment	Payment Each Month	Amount for Financing Balance	Number Months to Pay*
\$ 400.01 to \$ 450.00	\$ 90.00	\$26.00	\$ 29.00	14
450.01 to 500.00	100.00	29.00	32.50	14
500.01 to 550.00	107.50	30.50	38.00	15
550.01 to 600.00	115.00	33.50	41.00	15
600.01 to 650.00	125.00	34.00	47.00	16
650.01 to 700.00	135.00	37.00	50.00	16
700.01 to 750.00	145.00	40.00	54.00	16
750.01 to 800.00	155.00	40.00	61.00	17
800.01 to 850.00	165.00	42.50	65.00	17
850.01 to 900.00	175.00	45.00	69.00	17
900.01 to 950.00	185.00	45.00	77.00	18
950.01 to 1000.00	195.00	48.00	81.00	18
1000.01 to 1100.00	210.00	52.00	87.50	18
1100.01 to 1200.00	230.00	54.00	100.00	19
1200.01 to 1300.00	250.00	58.50	110.00	19
1300.01 to 1400.00	270.00	63.00	120.00	19

*In some cases there will be one more month depending on the amount of the total order.

Freight Rates—South Bend to Principal Cities in the U. S. A.

City	State	Rate per 100 lbs.	City	State	Rate per 100 lbs.	City	State	Rate per 100 lbs.	City	State	Rate per 100 lbs.
Baltimore	Maryland	\$1.12	Detroit	Michigan	\$0.63	Montgomery	Alabama	\$1.64	Portland	Oregon	\$5.27
Boise	Idaho	4.60	Hartford	Connecticut	1.23	New York	New York	1.23	Richmond	Virginia	1.20
Boston	Mass.	1.27	Helena	Montana	4.46	New Orleans	Louisiana	1.90	St. Louis	Missouri	.80
Chicago	Illinois	.48	Los Angeles	California	5.27	Oklahoma City	Oklahoma	2.36	Salt Lake City	Utah	4.46
Charleston	So. Carolina	1.89	Louisville	Kentucky	.72	Omaha	Nebraska	1.48	San Antonio	Texas	2.91
Cleveland	Ohio	.70	Miami	Florida	2.58	Philadelphia	Pa.	1.17	San Francisco	California	5.27
Denver	Colorado	2.49	Milwaukee	Wisconsin	.62	Pittsburgh	Pa.	.84	Seattle	Washington	5.27
			Minneapolis	Minnesota	1.39				Wichita	Kansas	1.88



"How to Run a Lathe"—31st Edition

Copy Free with Each 16-inch South Bend Lathe

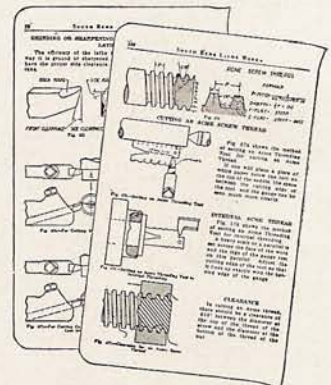
"How to Run a Lathe," a 160-page manual, 5 1/4 x 8-inches, covers the fundamental operations of the screw cutting lathe and contains over 300 illustrations, devoted to the installation and operation of the lathe. Correct and modern methods for handling over 400 machine operations on the lathe are fully described and illustrated.

More than 1,500,000 copies of this book are in use. Printed in English, Spanish, Portuguese and Chinese. Used as a textbook in trade and industrial schools, also by machinists' apprentices.

Paper Binding or Leatherette. Price of book, "How to Run a Lathe", with paper binding 25c; with leatherette binding 75c. Coin or stamps of any country accepted. A paper bound copy supplied free with Lathe.

THIS VALUABLE BOOK SHOWS

- How to set up the lathe.
- How to care for the lathe.
- How to lay out a shop.
- How to calculate size and speed of pulleys.
- How to grind and set lathe tools.
- How to cut screw threads.
- How to turn and bore tapers.
- How to do grinding and milling work.
- How to do centering and countersinking.
- How to drill, bore and ream.
- How to use chucks and arbors.
- The cutting speeds and feeds for metals.
- Tables of information.
- 300 other shop kinks.



Two Sample Pages of Book, "How to Run a Lathe"

WE GUARANTEE every South Bend Lathe to be accurate and mechanically perfect; to give you entire satisfaction and the service you have a right to expect. We will replace, free of charge, within one year from the date of purchase, any lathe part that proves defective, either in material or workmanship.

We will ship a South Bend Lathe anywhere in the United States for a thirty-day trial in your own shop. If you are dissatisfied in any way, within that time, ship it back to us; we will pay the return freight charges and refund your money.

South Bend Lathe Works

Write for An Itemized Quotation

If you are interested in a lathe and are not sure just what size or type you should select or just what the price of the lathe, chucks, tools and attachments will amount to, write direct to the South Bend Lathe Works, 440 East Madison St., South Bend, Ind.

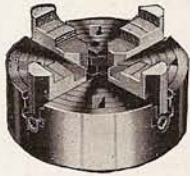
Let us know the class of work you wish to do and we will mail you an itemized quotation on the lathe, chucks, tools and accessories, showing the cash price, the amount of the down payment, and the amount of each monthly payment and the number of months to pay.

This service will place you under no obligation whatever. You may order the lathe or not, just as you prefer, and the benefit of our experience may be of some help to you.

Chucks and Tools for 16-inch South Bend Lathes

4-Jaw Independent Chuck (Class 400)

A Standard Weight Chuck

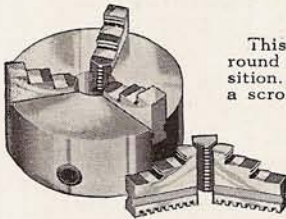


This precision chuck has four reversible independent solid jaws for chucking round or irregular work in a concentric or eccentric position. Face of chuck is ground and is graduated in inches. Prices include wrench and screws for fitting chuck-back but do not include chuck-back or fitting chuck to lathe. See fitting charges in column at right.

- Cat. No. 4408. 8-inch Chuck. 9 $\frac{1}{2}$ " capacity, Ship. Weight 35 lbs. Code "Buzi"....\$32.00*
 Cat. No. 4410. 10-inch Chuck. 12 $\frac{1}{2}$ " capacity, Ship. Weight 51 lbs. Code "Balda".... 40.00*
 Cat. No. 4412. 12-inch Chuck. 14 $\frac{1}{2}$ " capacity, Ship. Weight 90 lbs. Code "Baled".... 48.00*

3-Jaw Universal Chuck (Class 400)

A Standard Weight Chuck



This self-centering precision chuck holds round and hexagonal work in a concentric position. The jaws are moved simultaneously by a scroll. Two sets of jaws are furnished: One set grips work on the outside, the other holds work internally. Prices include wrench and screws for fitting chuck-back but do not include chuck-back or fitting chuck to lathe. See fitting charges in column at right.

- Cat. No. 3407. 7 $\frac{1}{2}$ -inch Chuck. 7 $\frac{1}{2}$ " capacity, Ship. Weight 32 lbs. Code "Patri"....\$41.00*
 Cat. No. 3409. 9 -inch Chuck. 9" capacity, Ship. Weight 45 lbs. Code "Pedal".... 49.00*
 Cat. No. 3410. 10 $\frac{1}{2}$ -inch Chuck. 10 $\frac{1}{2}$ " capacity, Ship. Weight 64 lbs. Code "Perag".... 55.00*

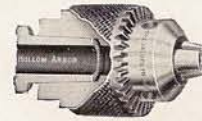
3-Jaw Drill Chuck (Standard Weight)



A powerful, accurate chuck for holding drills, reamers, armature shafts, etc. Price includes pinion key. Arbor is extra, see price below.

- Cat. No. 1203. 3-Jaw Drill Chuck, $\frac{3}{8}$ " to 1" capacity, Shipping Weight 6 $\frac{3}{4}$ lbs. Code Word "Frank".....\$15.00
 Arbor for Drill Chuck. Cat. No. 716. Code "Agate".... 1.00

Hollow Spindle Chuck



This is an ideal chuck for holding small rods and bars for machining in the lathe. It is also practical for holding all kinds of engine valves, centered and centerless, for refacing in the lathe. Prices include pinion key and hollow steel arbor.

- Cat. No. 354-A. 5/8" Chuck. Shipping Weight 2 $\frac{1}{2}$ lbs. Code "Tavif".....\$10.50
 Cat. No. 354-B. 3/4" Chuck. Shipping Weight 4 $\frac{1}{2}$ lbs. Code "Taved"..... 14.25

*Prices for Fitting Lathe Chucks to Lathe



A chuck-back accurately bored and threaded to fit the spindle nose of the lathe, then faced and turned to fit the recess in back of chuck is needed to fit the 4-Jaw Independent and 3-Jaw Universal lathe chucks to the lathe. See illustration at left. We recommend that chucks be fitted to lathe at factory. When ordering a chuck-back without chuck specify serial number of lathe, also give the minimum diameter of chuck-back required for your chuck.

- Cat. No. 402. Semi-Machined Chuck-Back. Code Word "Clame".....\$5.00
 Cat. No. 644. Fitting Chuck-Back to Chuck and to Lathe. Code Word "Abosy"..... 4.00
 Cat. No. 706. Total Price for Chuck-Back Fitted to Chuck Code Word "Eliza"..... 9.00

No. 603-E Tool Holder and Cutter Bit Set \$6.15



Straight Tool Holder with High Speed Steel Unground Cutter Bit



Cutter Bits Ground to Form

A—L. H. Turning; B—Round Nose; C—R. H. Turning; D—L. H. Side; E—Threading; F—R. H. Side.

Tool Holder and Cutter Bit Set consists of: Drop Forged Tool Holder (choice of straight, right-hand or left-hand), wrench, one unground high speed steel cutter bit and six high speed steel cutter bits ground to forms A, B, C, D, E, F, as shown above.

- Cat. No. 603-E. Code Word "Abnew." Price Complete.....\$6.15



Drop Forged Steel

Turning Tool Holder

With wrench and one high speed steel unground cutter bit.

- Right-Hand—No. 853-R, "Amza"....\$3.25
 Left-Hand—No. 853-L, "Ariuf".... 3.25
 Straight—No. 853-S, "Awdpk".... 3.25

High Speed Steel Cutter Bits



Cutter Bit Ground to Form

No. 1316. High Speed Steel Cutter Bit, ground to forms A to F, shown at left. Size $\frac{3}{8}$ " x $\frac{3}{8}$ " x 3". Code "Amquy," Each.....\$0.50

No. 712. Set of Six High Speed Steel Cutter Bits, ground to forms A to F, shown at left. Code "Bayer," Price complete.....\$2.90



Cutter Bit Not Ground to Form

No. 1423. Unground High Speed Steel Cutter Bit. Size $\frac{3}{8}$ " x $\frac{3}{8}$ " x 3". Code "Awaai", Each.....\$0.40

Cutting-Off Tool



Drop Forged Steel

With wrench and H. S. Ground Blade.

- Right-Hand—No. 884-R, "Cmolt"....\$3.70
 Left-Hand—No. 884-L, "Alego".... 3.70
 Straight—No. 884-S, "Akilt".... 3.70
 Extra Cutter—No. 879, "Bezaw"..... 1.10

Threading Tool



Drop Forged Steel

With wrench and formed H. S. Cutter (V, U.S.S., or Whitworth Standard).

- No. 868. Code Word "Acujq".....\$5.10
 Extra Cutter No. 863, "Ahqev"..... 3.30

Knurling Tool



Drop Forged Steel

With pair of knurls, choice of fine, medium or coarse; straight or diamond pattern.

- No. 894. Code Word "Djoma".....\$6.40
 No. 889. Extra Knurls, pair. "Demon" .90



Drop Forged Steel

Style "B" Boring Tool

With two wrenches, $\frac{15}{16}$ " sleeve boring bar, end cap, and two unground high speed steel cutter bits.

- No. 432. Code Word "Hdeal".....\$6.25
 Extra Cutters, $\frac{3}{16}$ " x $\frac{3}{16}$ " x 2 $\frac{1}{2}$ ". No. 457. Code Word "Hdazt".....\$0.25

Standard Lathe Dogs

Made of malleable iron. Designed for strength and service.

- $\frac{1}{2}$ " cap. No. 2-M. Code "Xodfe"....\$0.60
 $\frac{3}{4}$ " cap. No. 4-M. Code "Xdeg".... .70
 1" cap. No. 6-M. Code "Xefhg".... .80
 1 $\frac{1}{2}$ " cap. No. 10-M. Code "Xghjk".... 1.05
 2" cap. No. 12-M. Code "Xijlk".... 1.35

Clamp Lathe Dogs

- 2 $\frac{1}{4}$ " cap. No. 161. Code "Xtyqj"....\$2.40
 2 $\frac{3}{4}$ " cap. No. 162. Code "Xuzrk".... 3.00
 3 $\frac{1}{2}$ " cap. No. 163. Code "Xvasl".... 4.25



Center Drill and Countersink

- $\frac{3}{8}$ " dia. No. 898-B. Code "Xnrjc"....\$0.30
 $\frac{1}{2}$ " dia. No. 898-C. Code "Xoskd".... .35
 $\frac{5}{8}$ " dia. No. 898-D. Code "Xpoez".... .40

No. 142 Chuck and Tool Assortment for 16" Lathe

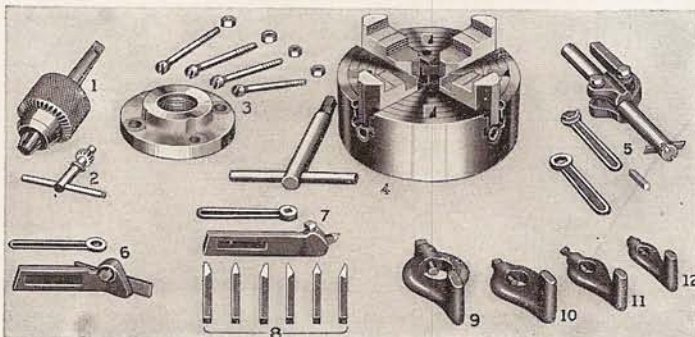


Fig. 58. A Practical Chuck and Tool Assortment for the Auto Service Shop

We recommend the chucks and tools shown in the assortment at left and listed below as the most practical for use on 16-inch South Bend Lathes. This is the basic equipment required in the average auto service shop for handling general machine jobs on automotive equipment such as turning, boring, drilling, cutting-off, chucking, etc.

- | Cat. No. | Description | Price |
|-----------|---|---------|
| No. 4410 | 10" 4-Jaw Independent Lathe Chuck (Class 400).... | \$40.00 |
| No. 706 | Fitting Chuck to Lathe including Chuck-Back..... | 9.00 |
| No. 1203 | 1" 3-Jaw Drill Chuck (Standard Weight)..... | 15.00 |
| No. 716 | Arbor Fitted to Above Drill Chuck..... | 1.00 |
| No. 853-S | Straight Shank Tool Holder with $\frac{3}{8}$ " Cutter Bit.... | 3.25 |
| No. 712 | Six $\frac{3}{8}$ " High Speed Steel Ground Cutter Bits..... | 2.90 |
| No. 432 | Boring Tool, Style "B," with $\frac{15}{16}$ " Boring Bar..... | 6.25 |
| No. 884-R | Cutting-Off Tool, Right Hand, with Ground Blade.. | 3.70 |
| | Four Malleable Lathe Dogs, $\frac{1}{2}$ ", $\frac{3}{4}$ ", 1", 1 $\frac{1}{2}$ "..... | 3.15 |
| No. 142 | Chuck and Tool Assortment. Code "Bedep".... | \$84.25 |

Screw Thread Cutting

Every Important Screw Thread Cutting Job required in servicing automobiles, buses, trucks, etc. can be handled in the 16-inch South Bend Lathe, such as, threading bushings, axles, and drive-shafts; chasing damaged threads in hubs, bearing retaining collars, etc., cutting threads on replacement parts; making special screws, nuts, bolts, etc.

All Standard Screw Threads from 2 to 40 per inch, right or left hand, including 1 1/2 pipe thread, can be cut on the 16-inch Standard Change Gear South Bend Lathe as follows: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 11 1/2, 12, 13, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 36 and 40. See screw thread cutting chart on page 10.

If finer threads are required additional gears can be supplied, at extra cost, for cutting them.

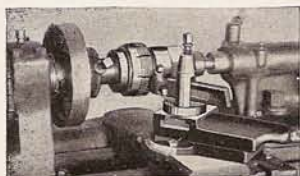


Fig. 59. Threading a Bearing Retaining Collar.

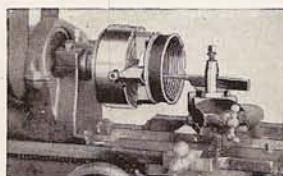


Fig. 60. Chasing the Thread of a Hub Cap.

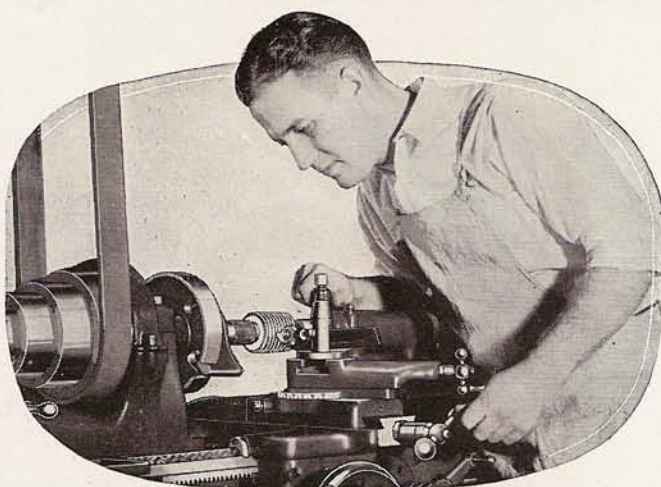


Fig. 61. Cutting a Precision Screw Thread in a 16-inch Lathe.

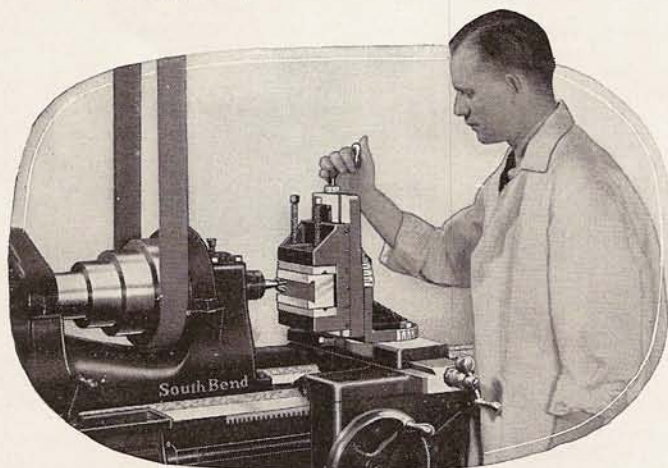


Fig. 62. Milling a Dovetail in Lathe Using Milling Attachment.

Milling & Keyway Cutting Attachment

This practical lathe attachment will cut keyways on drive-shafts, flywheels, axles, etc.; square shafts; mill dovetails, tapers, etc. Attachment fits on the compound rest base and swivels 180° vertically and horizontally. Capacity of vise, 4"; micrometer vertical feed, 6"; hand cross feed, 9 3/4".

Cat. No. 5. Milling & Keyway Cutting Attach. Code "Varen" \$75.00

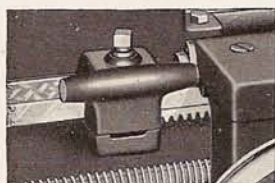


Fig. 65.

Plain Carriage Stop

Stops carriage at any point along lathe bed on accurate facing, turning and boring work. Can be used on either side of the carriage.

Cat. No. 756. Code Word "Talit". Price\$4.00

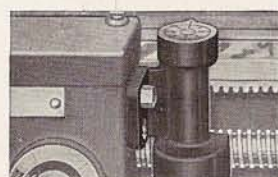


Fig. 66.

Thread Dial Indicator

Attachment fastens to side of carriage. Has a dial showing when to clamp half-nuts on lead screw for the start of each cut when cutting screw threads.

Cat. No. 816. Code Word "Aflot". Price\$13.00

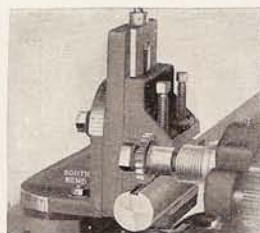


Fig. 63. Milling a Keyway.

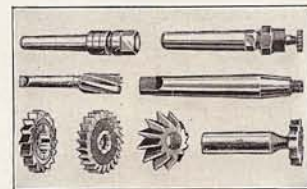


Fig. 64. Milling Cutters and Arbors.

Prices quoted on request.

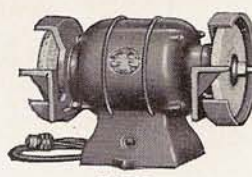


Fig. 67.

Electric Tool Grinder

Grinds tools, drills, etc. Has 1/2 H.P., 1-ph., 60-cy., 110-v. A.C. ball bearing motor, 2 abrasive wheels, 2 guards, 2 rests, switch, cord and plug.

Cat. No. 710-E. Code Word "Jeroz". Price\$20.00

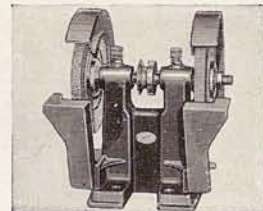


Fig. 68.

V-Belt Drive Grinder

A bench grinder for tools, drills, etc. Has 2 abrasive wheels, 2 guards and rests.

Cat. No. 710-B. Code Word "Jerub". Price\$5.00

Prices of 38 Practical Attachments for the 16-inch South Bend Lathe

Description	Cat. No.	Code	Price
Attachments for Automotive Work			
Equipment for Servicing Flywheels, Differentials, Connecting Rods, Brake Drums, Pistons, Crankshafts, Armatures, Bushings, Valves...	(See prices pages 4 to 8)		
Crankshaft Turning Tool, Weber	403	Balvo	\$175.00
Rocker Arm Grinding Fixture for Valves	822	Bamah	3.00
V-Block for Grinding Valve Stems	409	Bambi	3.00
Attachments for General Work			
Carriage Stop, Micrometer	975	Climb	15.00
Carriage Stop, Plain*	756	Talit	4.00
Center Rest and Follower Rest	Prices on request		
Collet Chuck, Hand Wheel, with One Collet	4316	Adore	50.00
Collet Chuck, Hand Lever, with One Collet	5216	Aster	130.00
Collets for Round Work, Split (1/4" to 3/8" hole diam. by 64ths of an inch) Each	616	Clear	4.75
Diamond Holding Fixture, Adjustable	19-E	Quirt	13.00
Diamond Dresser for above	18	Quaft	5.00

Description	Cat. No.	Code	Price
Diamond Holder, Tailstock Type (See page 8)	91-F	Kiroz	3.50
Diamond Dresser for above (See page 8)	406	Kirwe	4.50
Gear Cutting Attachment	264	Helup	175.00
Grinder, Electric, Tool Post Type (See page 8)	14-G	Risya	60.00
Grinder, Electric, Tool Bench Type*	710-E	Jeroz	20.00
Grinder, V-Belt Drive Tool (Bench Type)*	710-B	Jerub	5.00
Milling and Keyway Cutting Attachment*	5	Varen	75.00
Milling Cutters and Arbors*	Prices on request		
Oil Pan for Lathe	Prices on request		
Oil Pump, Reservoir and Pipe Fittings	1055	Huber	45.00
Pipe Centers for Pipe 1/2" to 3" diam.	663-C	Bamov	8.50
Quick Change Gear Box	must be fitted at factory		
Raising Blocks, Standard Change Gear Lathe	1005	Claro	75.00
Spring Winding Attachment (See page 9)	367	Balun	2.50
Taper Attachment, Graduated	216	Dress	90.00
Thread Dial Indicator*	816	Aflot	13.00
Tool Slides, Screw and Hand Lever Types	Prices on request		
Transposing Gears, Metric (Standard Change)	1446	Tokas	45.00
Turrets, Bed and Tool Post Types	Prices on request		

*These attachments and accessories are illustrated and described above on this page.

Auto and Truck Manufacturers Use South Bend Lathes and South Bend Service Methods in Their Service Shops

The leading bus, truck and automobile manufacturers such as General Motors, White Truck, Studebaker, Auburn, Nash, Chrysler, Ford, Hudson-Essex, Packard, and others are using South Bend Lathes and South Bend servicing

methods in their maintenance shops in the large cities of the United States and abroad. The list below is but a few of the authorized manufacturers' service stations that are equipped with South Bend Lathes.

A Few of the Thousands of Auto Service Stations Using South Bend Lathes

NAME	NUMBER OF SHOPS	NAME	NUMBER OF SHOPS	NAME	NUMBER OF SHOPS
Auburn	98	Ford-Lincoln	1251	Nash	255
Buick	489	Federal Motor Truck	83	Oldsmobile	234
Cadillac	137	General Motors Truck Co.	94	Packard	198
Chevrolet	1703	Graham-Paige	148	Reo	88
Chrysler and Plymouth	927	Hudson-Essex	367	Studebaker	319
Dodge	1554	Hupmobile	129	White Motor Co.	86
		International Harvester	84		

Cash, and Easy Payment Prices of South Bend Lathes—9-inch to 36-inch Swing

Below are listed the Cash and Easy Payment prices of the popular selling sizes of South Bend Lathes, both in Counter-shaft Drive and Simplified V-Belt Motor Drive.

If you are interested in purchasing any of these lathes and desire detailed information, write to us mentioning the size

lathe and we will send you a bulletin illustrating and describing the lathe in all its various types and drives, together with a complete line of lathe chucks, tools and attachments. This bulletin shows cash prices, also Easy Payment Terms and will be mailed to you postpaid, no charge.

Specifications						Lathes Less Countershaft					Simplified V-Belt Motor Drive				
Type of Lathe	Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Weight Motor Driven Lathes Pounds	Power Required H. P.	Cash Price		Easy Payment Plan			Cash Price		Easy Payment Plan		
						Cat. No.	f.o.b. Factory South Bend	Down Payment	Monthly Payments Each	No. of Months to Pay	Cat. No.	f.o.b. Factory South Bend	Down Payment	Monthly Payments Each	No. of Months to Pay
9-inch "Workshop" Bench Lathe	9 1/8	3	18	300	1/4	5-YB	\$ 75.00	\$ 19.00	\$ 6.50	10	405-Y	\$ 94.00	\$ 24.00	\$ 7.00	11
	9 1/8	3 1/2	24	325	1/4	5-ZB	87.00	21.00	7.00	10	405-Z	108.00	28.00	7.00	12
	9 1/8	4	30	350	1/4	5-AB	99.00	24.00	7.00	11	405-A	118.00	29.00	8.00	12
	9 1/8	4 1/2	36	375	1/4	5-RB	116.00	29.00	8.00	12	405-R	135.00	31.00	9.00	12
9-inch Toolmaker Bench Lathe	9 1/4	3	18	340	1/4	20-YB	126.00	30.00	8.50	12	520-YB	149.00	32.00	10.00	12
	9 1/4	3 1/2	24	360	1/4	20-ZB	136.00	31.00	9.00	12	520-ZB	159.00	35.00	11.50	12
	9 1/4	4	30	380	1/4	20-AB	146.00	32.00	10.00	12	520-AB	169.00	35.00	11.50	12
	9 1/4	4 1/2	36	400	1/4	20-RB	156.00	35.00	11.50	12	520-RB	179.00	40.00	13.00	12
9-inch Junior Bench Lathe	9 1/4	3	16 3/8	412	1/4	22-YBW	157.00	35.00	11.50	12	522-YB	181.00	40.00	13.00	12
	9 1/4	3 1/2	21 3/8	437	1/4	22-ZBW	167.00	35.00	11.50	12	522-ZB	191.00	40.00	13.00	12
	9 1/4	4	27 3/8	462	1/4	22-ABW	177.00	40.00	13.00	12	522-AB	201.00	45.00	15.50	12
	9 1/4	4 1/2	34 3/8	487	1/4	22-RBW	187.00	40.00	13.00	12	522-RB	211.00	45.00	15.50	12
9-inch Standard Change Gear Bench Lathe	9 1/4	3	16 3/8	445	1/4	30-YBO	206.00	45.00	15.50	12	530-YBS	230.00	50.00	17.00	12
	9 1/4	3 1/2	21 3/8	470	1/4	30-ZBO	216.00	45.00	15.50	12	530-ZBS	240.00	50.00	17.00	12
	9 1/4	4	27 3/8	495	1/4	30-ABO	226.00	50.00	17.00	12	530-ABS	250.00	50.00	17.00	12
	9 1/4	4 1/2	34 3/8	520	1/4	30-RBO	236.00	50.00	17.00	12	530-RBS	260.00	55.00	18.50	12
11-inch Standard Change Gear F. L. Lathe	11 1/4	3	12	700	1/2	33-YO	254.00	55.00	18.50	12	533-YS	231.00	60.00	19.50	12
	11 1/4	3 1/2	18	730	1/2	33-ZO	266.00	55.00	18.50	12	533-ZS	303.00	65.00	22.00	12
	11 1/4	4	24	760	1/2	33-AO	276.00	60.00	19.50	12	533-AS	315.00	65.00	22.00	12
	11 1/4	5	36	830	1/2	33-BO	290.00	60.00	19.50	12	533-BS	327.00	70.00	24.00	12
13-inch Std. Change Gear F. L. Lathe	13 1/4	5	28	1168	3/4	35-BO	322.00	65.00	22.00	12	535-BS	380.00	80.00	26.00	13
	13 1/4	6	40	1218	3/4	35-CO	337.00	70.00	24.00	12	535-CS	395.00	80.00	26.00	13
	13 1/4	7	52	1273	3/4	35-DO	354.00	75.00	25.00	13	535-DS	412.00	90.00	26.00	14
15-inch Std. Change Gear F. L. Lathe	15 1/4	6	36 1/2	1678	1	39-CO	388.00	80.00	26.00	13	539-CS	480.00	100.00	29.00	14
	15 1/4	8	60 1/2	1833	1	39-EO	426.00	90.00	28.00	14	539-ES	518.00	107.50	30.50	15
	15 1/4	10	84 1/2	1998	1	39-GO	470.00	100.00	29.00	14	539-GS	562.00	115.00	33.50	15
18-inch Standard Change Gear Floor Leg Lathe	18 1/4	6	29 1/2	2490	2	43-CO	525.00	107.50	30.50	15	543-CS	639.00	135.00	37.00	16
	18 1/4	8	53 1/2	2690	2	43-EO	575.00	115.00	33.50	15	543-ES	719.00	145.00	40.00	16
	18 1/4	10	77 1/2	2890	2	43-GO	629.00	125.00	34.00	16	543-GS	773.00	155.00	40.00	17
	18 1/4	12	101 1/2	3190	2	43-HO	707.00	145.00	40.00	16	543-HS	851.00	175.00	45.00	17
16-24-in. Std. Change Gear Gen. Purpose F. L. Lathe	16-24 1/4	6	30	2113	1	58-CO	549.00	107.50	30.50	15	558-CS	643.00	125.00	34.00	16
	16-24 1/4	8	54	2273	1	58-EO	591.00	115.00	33.50	15	558-ES	695.00	135.00	37.00	16
	16-24 1/4	10	78	2433	1	58-GO	637.00	125.00	34.00	16	558-GS	731.00	145.00	40.00	16
	16-24 1/4	12	102	2663	1	58-HO	702.00	145.00	40.00	16	558-HS	796.00	155.00	40.00	17
36-inch Std. Change Gear Brake Drum F. L. Lathe	36 1/4	6	27	2248	1	2-BCO	619.00	125.00	34.00	16	502-BCS	713.00	145.00	40.00	16
	36 1/4	8	51	2408	1	2-BEO	661.00	135.00	37.00	16	502-BES	755.00	155.00	40.00	17
	36 1/4	10	75	2568	1	2-BGO	707.00	145.00	40.00	16	502-BGS	801.00	165.00	42.50	17
	36 1/4	12	99	2798	1	2-BHO	772.00	155.00	40.00	17	502-BHS	856.00	175.00	45.00	17



Lathe Builders for Twenty-eight Years

57,000 S.B. Lathes in use in the U.S. and 96 Other Countries

South Bend Lathe Works, 440 E. Madison St., South Bend, Ind.

FACTORY OF THE SOUTH BEND LATHE WORKS

The illustration at left shows the factory of the South Bend Lathe Works. Established in 1906. For more than 28 years this organization has been devoted exclusively to the manufacture of South Bend Back-Gear, Screw Cutting Precision Lathes. Countershaft and Motor Driven Lathes, 9" to 36" swing inclusive, are manufactured in this modern plant. Visitors are always welcome.