



FACTORY OF THE SOUTH BEND LATHE WORKS
LATHE BUILDBERS FOR 25 YEARS

RETURN POSTAGE GUARANTEED
SOUTH BEND LATHE WORKS
472 EAST MADISON STREET
SOUTH BEND, IND., U. S. A.

Turning an Armature



1936 MODEL

SOUTH BEND
9-inch "WORKSHOP"
PRECISION LATHE

A Back-Geared, Screw Cutting
Metal Working Lathe

Bulletin No. 7

August, 1935

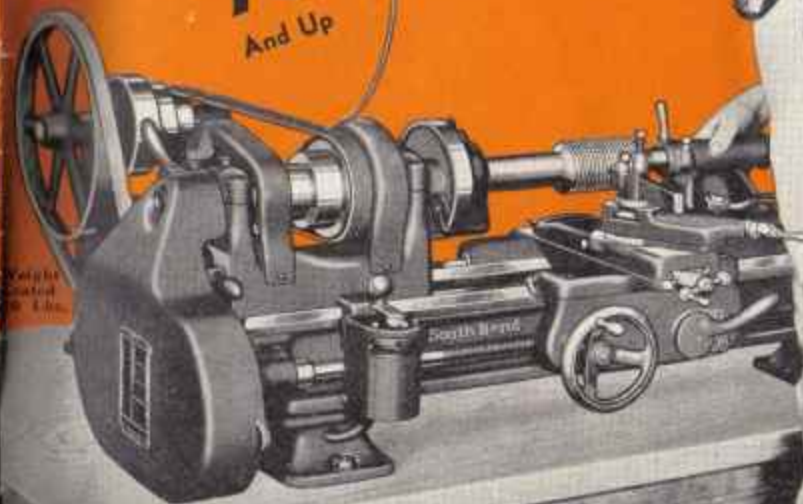
The 9-inch
"WORKSHOP" Lathe

is Used By

Manufacturing Plants
Machine Shops, all Kinds
Laboratories
Automotive Repair Shops
Electrical Shops
Home Workshops
Inventors
School Shops
Repair Shops

\$75
And Up

Operates
From
Electric
Lamp
Socket.



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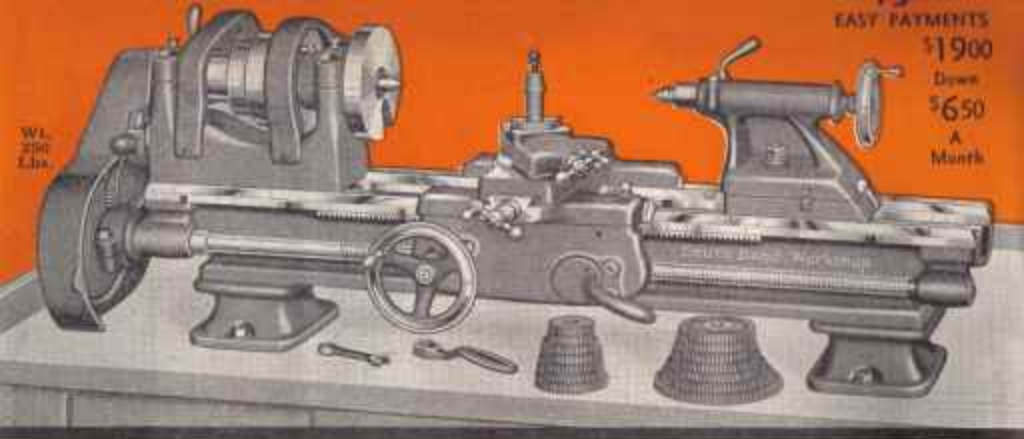


Fig. 1. 9-inch x 3-ft. "Workshop" Bench Lathe with Wrenches and Gears as Shown on Bench, But Less Drive Equipment and Bench.....\$78.00

1936 Model 9-inch "Workshop" South Bend Lathe

A Back-Geared, Screw Cutting Precision Lathe for the Working of Metals

The 9-inch "Workshop" Back-Geared Screw Cutting Precision Lathe illustrated above and referred to throughout this bulletin is the 1936 Improved Model. It has ten major improvements and new features which make it the greatest value we have offered in 29 years as builders of fine lathes.

This 9-inch Precision Lathe is as carefully and accurately built and is made of the same high quality material as our \$900.00 Tool Room Lathe. It is a South Bend Lathe in every respect and is built by the same skilled craftsmen that build the more expensive line of South Bend Lathes. The same Accuracy, Precision and Dependability that have characterized the South Bend Lathe for a quarter century are to be found in this new lathe.

The Lathe Shown Above is identical to the one illustrated and described on pages 4, 6 and 7, except that it is shown and priced without countershaft and without motor, so that the shop owner wishing to provide his own motor and driving arrangement can purchase the bare lathe and regular equipment. If you are interested in more than the bare lathe shown you will find various motor driven models and other adaptations shown throughout this booklet. See pages 4, 5, 6 and 7.

Regular Equipment included in the price consists of: graduated compound rest; face plate, 5-inch in diameter; forged steel tool post, ring and wedge; two 60-degree lathe centers; No. 2 Morse Taper; headstock spindle sleeve; wrenches; set of independent change gears for screw thread cutting; large turning gears for automatic longitudinal power feeds; installation plan blue print and instruction book, "How to Run a Lathe."

Complete Specifications and Features for the lathe shown above and for the entire line of 9-inch "Workshop" South Bend Precision Lathes are given on page 3 of this book.

The "Workshop" Lathe has come to be known as the universal tool because of its wide versatility. It is ideally suited to the small machine shop, electrical shop, manufacturing plant, repair shop, automotive repair shop, home shop, laboratory, school machine shop and for a variety of specialized work.

The Expert Machinist and the skilled toolmaker take particular pride in the "Workshop" Lathe because of its unusual precision and accuracy and because it can be readily fitted with accessories and attachments so necessary for their work.

EASY PAYMENTS!
\$1900
Down
\$650
A
Month

General Description of 9-inch "Workshop" Precision Lathes

Applying to All 9-inch "Workshop" Lathes Shown in This Booklet

The 9-inch "Workshop" South Bend Precision Lathes illustrated and described throughout this booklet are basically the same regardless of drive, model, type or bed length. The same specifications and improvements apply to all 9-inch "Workshop" Lathes shown in this booklet.

10 New Features. The 1936 Model 9-inch "Workshop" Lathe has many new and improved features including:

1. Twin Gear Reverse for Right and Left Hand Screw Threads and Automatic Feeds.
2. Ball Bearing Thrust Collar on Headstock Spindle.
3. New and Improved Tailstock.
4. Improved Compound Rest.
5. New and Heavier Designed Saddle.
6. Simplified Gearing for Threads and Feeds.
7. Polished Hand Wheel on Tailstock.
8. Polished Hand Wheel on Carriage.
9. Improved Back Gears.
10. Felt Oilers and Shear Wipers on Saddle.

Made in 4 Bed Lengths. The 9-inch "Workshop" Precision Lathe is available in six bench and two floor leg models and each model can be supplied in four different bed lengths, as follows: 3 feet, 3½ feet, 4 feet and 4½ feet. Prices for the various bed lengths are shown in the price tabulation which accompanies each lathe illustration. For further information regarding the various models see pages 2, 4, 5, 6 and 7.

Principal Units of the Lathe, such as headstock, compound rest, saddle, tailstock, lathe bed, leadcrew, reverse bracket and other units are fully illustrated and described in detail on pages 8 to 10, inclusive.

Lathe Features

Back-geared headstock, six spindle speeds.
Hollow steel spindle, ½-inch hole.
Reverse bracket for right-hand and left-hand screw threads and automatic feeds.
Compound rest graduated 180°.
Tailstock has ½-inch set-over for taper turning.
Micrometer graduations on compound rest screw.
Micrometer graduations on cross feed screw.
Automatic longitudinal power feeds to carriage.
Precision lead screw for screw thread cutting.
Half-nuts for thread cutting and power feeds.
Three V-ways and one flat way on lathe bed.
Adjustable bearings for headstock spindle.
Adjustable gib on cross feed.
Adjustable gib on compound rest.

Lathe Specifications

Swing over bed.....9"
Swing capacity.....3 1/2"
Collet capacity.....1/2" to 3/4"
Hole through spindle.....1/2"
Cuts standard screw thread.....4 to 40 per in.
Spindle speeds.....39, 68, 122, 202, 353, 630 R.P.M.
Width of cone pulley belt.....1"
Lathe tool shank 3/8"x3/4" Cutter bits 1/4"x1/2"x2"
Size of spindle nose.....1 1/2" diam. 8 threads
Lathe Spindle Centers.....No. 2 Morse Taper
Lead screw, Acme thread.....3/4" diam. 8 threads
Tool cross slide travel.....5 1/2"
Angular travel compound rest top.....2 1/2"
Tailstock spindle travel.....2"

Machines Metals of all kinds. The 9-inch "Workshop" Lathe will machine metals of all kinds such as cast iron, steel, cast steel, steel forgings, wrought iron, brass, bronze, copper, babbitt, aluminum and the various alloy steels and metals. It is also practical for working wood, hard rubber, catalin, celluloid, plastics, alabaster, fibre, and all other materials.

38 Practical Attachments can be fitted to each size, type and model 9-inch "Workshop" Lathe for handling a wide variety of work. These attachments include automotive servicing attachments, manufacturing attachments and general machine shop attachments. For details and prices see pages 12, 13, and 23.

Standard Screw Threads 4 to 40 per Inch, Right or Left Hand, including 1 1/2 pipe thread can be cut on the 9-inch "Workshop" Lathe. The accuracy and precision of this lathe are such that we guarantee it for machining the finest precision gauges, taps, tool and die work.

For High Quality Precision Work, the 9-inch "Workshop" Lathe is unequalled in the small lathe field today. We recommend the lathe for use in groups on production of small duplicate parts in the manufacturing plant, for the tool room, machine shop, auto service shop, laboratory, school shop, repair shop and for modern shops of all kinds engaged in light accurate machine work.

Free Instruction Book. Each 9-inch "Workshop" Lathe is supplied with a copy of the book "How to Run a Lathe." This valuable reference book contains 160 pages with more than 300 illustrations showing how to handle the various machine operations on a lathe. The inexperienced operator will find this book indispensable and the experienced mechanic will find it both interesting and valuable. For description see page 30.

9-inch "Workshop" Lathe Catalog No. 15-W—Free

More complete information, including specifications and description of the 9-inch "Workshop" Lathe will be found in this valuable 32-page, 8 1/2"x11-inch catalog. Illustrates, describes and prices all attachments, accessories and equipment which can be used on the 9-inch "Workshop" Lathe. A copy will be sent free, postpaid, to any address in the world. Write us or use coupon at bottom of page 30 of this book.



Prices of 9-inch "Workshop" Lathe, Without Drive

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Power Required H.P.	Approx. Shipping Weight Crated Pounds	Cash Price			Easy Payment Plan*		
					Cat. No.	Code Word	F.O.B. Factory	Amount Payment	Payment Each Month	Approx. No. of Payments
9 1/2	3	17	1/4	250	13-YH	Nasty	\$ 78.00	\$18.00	\$6.30	10
9 1/2	3 1/2	23	3/4	275	13-ZB	Mozno	87.00	21.00	7.00	10
9 1/2	4	29	3/4	300	13-AH	Mupng	99.00	24.00	7.50	11
9 1/2	4 1/2	35	3/4	325	13-BH	Mapek	116.00	29.00	8.60	12

*For details on Easy Payment Plan see page 22.

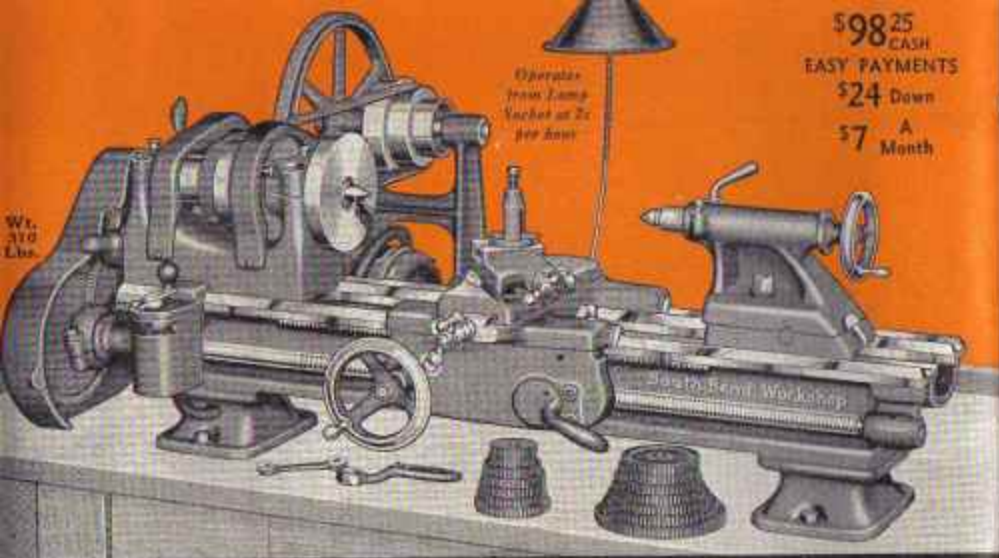


Fig. 2. 9-inch x 3-ft. "Workshop" Bench Lathe with Plain Type Horizontal Motor Drive Countershaft, Motor, Switch and Lathe Equipment, But Less Bench.....\$98.25

1936 Model 9-inch "Workshop" Horizontal Motor Driven Lathe

With Plain Type Horizontal Motor Drive Countershaft—See Next Page

The 9-inch "Workshop" Horizontal Motor Driven Precision Bench Lathe, shown above, is a complete unit consisting of the basic lathe shown on page 2, drive unit, reversing motor and reversing switch, as priced below. The entire unit may be mounted on any bench in any part of the shop and operated from the nearest lamp socket or outlet. For features and specifications see page 3.

Two Types of Horizontal Motor Drive Countershafts are available as described on the opposite page. The Plain Type Countershaft is illustrated with lathe above. The Adjustable Horizontal Countershaft may also be used with the lathe shown above and is recommended for the shop doing a large amount of work.

Prices of 9-inch "Workshop" Lathes equipped with Plain and Adjustable Type Horizontal Drive Countershafts are shown in the tabulation below. Prices are itemized so the entire equipment may be purchased with the lathe or any item not wanted may be omitted.

Regular Lathe Equipment included in the price consists of: graduated compound rest; face plate, 5 inch diameter; forged steel tool post, ring and wedge; two 60-degree lathe centers, No. 2 Morse Taper; headstock spindle sleeve; wrenches; set of independent change gears for screw thread cutting; large turning gears for automatic longitudinal power feeds; installation plan blue print and instruction book, "How to Run a Lathe."

Prices of 9-inch "Workshop" Horizontal V-Belt Motor Driven Bench Lathe

9-inch "Workshop" South Bend Bench Lathe with Graduated Compound Rest and Regular Equipment but not Bench.	9" x 3' No. 415-Y	9" x 3 1/2' No. 415-Z	9" x 4' No. 415-A	9" x 4 1/2' No. 415-B
Prices of Horizontal V-Belt Motor Drive Equipment				
Horizontal Countershaft, Plain Type	7.00	7.00	7.00	7.00
1/4 H.P. Start-and-Stop Reversing Split-Phase Motor, 1725 H.P.M. (1-phase, 60-cycle, A.C. 110-volt)	6.75	8.75	8.75	6.75
V-Groove Pulley for Motor	.50	.50	.50	.50
Drum Reversing Switch (Style R-12) and Brackets	5.00	5.00	5.00	5.00
V-Belt, Motor to Drive Unit	1.00	1.00	1.00	1.00
Flat Leather Belt and Lacing	1.00	1.00	1.00	1.00
Cash Price, Lathe and Motor Drive Equipment.	\$98.25	\$110.25	\$122.25	\$139.25
Code Word	Macon	Macer	Mafab	Magel
EASY PAYMENT TERMS:				
Down Payment with order	\$24.00	\$29.00	\$30.00	\$31.00
11 to 12 Equal Monthly Payments	7.00	8.00	8.50	9.00
Distance Between Spindle Centers of Lathe	17 in.	23 in.	30 in.	35 in.
Shipping Weight, Lathe and Motor Drive Equipment	310 lbs.	335 lbs.	360 lbs.	410 lbs.

*Note: For Adjustable Type Horizontal Countershaft, as shown on page 3, instead of Plain Type Horizontal Countershaft, add \$5.00.

\$98.25 CASH
EASY PAYMENTS
\$24 Down
\$7 A Month

Two Types of Horizontal Motor Drive Countershafts

For the 1936 Model 9-inch "Workshop" Precision Lathe

1. The Plain Type Horizontal Motor Drive Countershaft

The Plain Type Horizontal Motor Drive Countershaft, shown at right, is used mostly in small workshops where a limited amount of machine work is to be done.

The Countershaft is held in position by three bolts screwed through slotted holes in its base. Belt tension is varied by changing the position of the countershaft and motor. For example, to increase belt tension, the bolts are loosened and the countershaft is moved away from the lathe and the motor toward the lathe.

The Plain Type Horizontal Countershaft can be used for the lathe on page 2; and for lathes 1, 2, and 4 on page 6; and for lathes 5 and 6 on page 7. The Adjustable Type Horizontal Motor Drive Countershaft shown below is required for lathes 7 and 8 on page 7.

The Large Pulley on the Horizontal Countershafts, both Plain type and Adjustable type, are not grooved for the V-belt but have flat faces as the friction area is many times that of the motor pulley. The

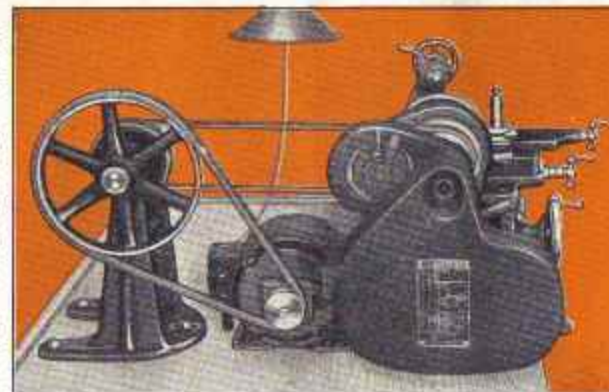


Fig. 3. End View of 9-inch "Workshop" Precision Lathe with Horizontal Motor Drive Countershaft—Plain Type

small motor pulleys are grooved for the V-belt.

Cat. No. 932. Plain Type Horizontal Motor Drive Countershaft for 9-inch "Workshop" Lathe. Code Word, "Ewird." Shipping Weight, 35 lbs.....\$7.00

2. The Adjustable Type Horizontal Motor Drive Countershaft

The Adjustable Type Horizontal Motor Drive Countershaft, shown at right, is used in shops that do a great amount of machine and tool work, as it permits adjustments to any desired belt tension between countershaft cone pulley and lathe cone pulley.

In Actual Operation the Adjustable Type Horizontal Countershaft is held in an upright position by rod "A," fitted with a turnbuckle and a pivot at the base of release lever "C." Operating lever "C" permits the top of the drive unit to tilt about 2", slacking the belt so it can be shifted from step to step on the cone pulley. The turnbuckle on rod "A" provides an accurate tension adjustment.

Independent Adjustment of the V-belt is accomplished by moving the motor up or down.

V-Belt instead of Flat Belt may be used to drive lathe when adjustable Horizontal Countershaft is used. See pages 7 and 23.

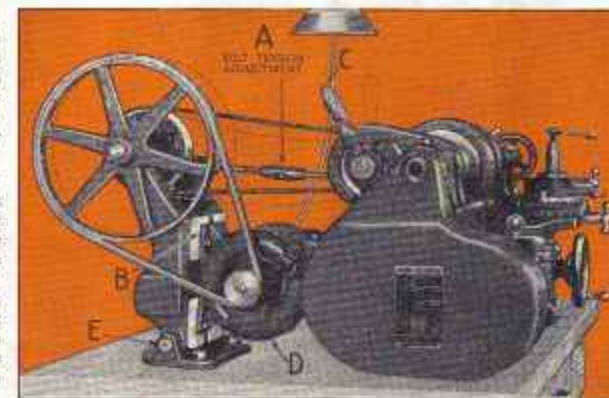
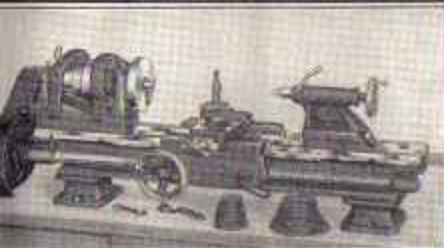


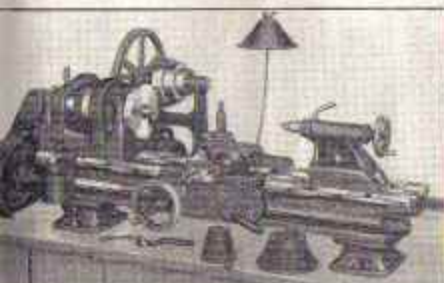
Fig. 4. End View of 9-inch "Workshop" Precision Lathe with Horizontal Motor Drive Countershaft—Adjustable Type

Cat. No. 238. Adjustable Type Horizontal Motor Drive Countershaft for 9-inch "Workshop" Lathe. Code, "Aghap." Shipping Weight 45 lbs.....\$12.00

8 Models of New 1936 9-inch "Workshop" A Type and Drive to Meet the Requirements



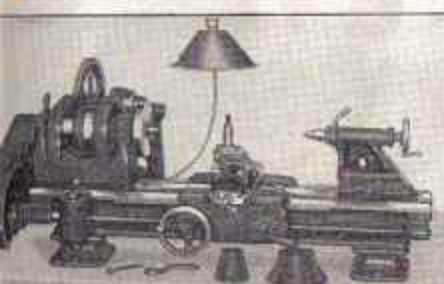
1 No. 15-YB, 9 1/2"x3' "Workshop" Bench Lathe with Regular Lathe Equipment..... \$75.00



2 No. 415-Y, 9 1/2"x3' "Workshop" with Horizontal Motor Drive, Plain type..... \$98.25



3 No. 415-YA, 9 1/2"x3' "Workshop" with Horizontal Motor Drive, Adjustable Type.... \$103.25



4 No. 6410-Y, 9 1/2"x3' "Workshop" with Raising Blocks and Horizontal Motor Drive, Plain Type..... \$123.25

1 "Workshop" Lathe Less Drive

The 9 1/2-inch Swing "Workshop" Less Drive, illustrated at the left, is the same lathe as that illustrated, described and priced on pages 2 & 3.

Net Factory Prices, f.o.b. Cars, South Bend, Ind.

Length of Bed Feet	Approx. Ship. Wt. Crated Pounds	Cash Price		Easy Payments*	
		Cat. No.	F.O.B. Factory	Amount Down Payment	Payment Each Month
3	250	15-YB	\$ 75.00	\$19.00	\$6.50
3 1/2	275	15-ZB	87.00	21.00	7.50
4	300	15-AB	99.00	24.00	7.90
4 1/2	330	15-RB	116.00	29.00	8.00

2 "Workshop" Lathe with Horizontal Motor Drive—Plain Type

The 9 1/2-inch Swing "Workshop" with Horizontal V-Belt Motor Drive, Plain Type, illustrated at the left, is the same lathe as that illustrated, described and priced on pages 3, 4 and 5. It will operate from any A.C. electric lamp socket.**

Net Factory Prices, f.o.b. Cars, South Bend, Ind.

Length of Bed Feet	Approx. Ship. Wt. Crated Pounds	Cash Price		Easy Payments*	
		Cat. No.	F.O.B. Factory	Amount Down Payment	Payment Each Month
3	310	415-Y	\$ 98.25	\$24.00	\$7.90
3 1/2	335	415-Z	110.25	26.00	8.00
4	360	415-A	122.25	29.00	8.50
4 1/2	410	415-R	139.25	31.00	9.00

3 "Workshop" Lathe with Horizontal Motor Drive—Adjustable Type

The 9 1/2-inch Swing "Workshop" with Horizontal V-Belt Motor Drive, Adjustable Type, illustrated at the left, is the same lathe as that illustrated, described and priced at 2 above except that it has the Adjustable Type Countershaft.**

Net Factory Prices, f.o.b. Cars, South Bend, Ind.

Length of Bed Feet	Approx. Ship. Wt. Crated Pounds	Cash Price		Easy Payments*	
		Cat. No.	F.O.B. Factory	Amount Down Payment	Payment Each Month
3	320	415-YA	\$103.25	\$28.00	\$ 8.00
3 1/2	345	415-ZA	115.25	29.00	8.00
4	370	415-AA	127.25	30.00	8.50
4 1/2	420	415-RA	144.25	32.00	10.00

4 "Workshop" with Raising Blocks

Raising Blocks may be added to any 9-inch "Workshop" to increase the swing from 9 1/2 inches to 11 1/2 inches. Prices of Raising Block models other than those listed below may be determined by adding \$25.00 to the regular Lathe price.**

Net Factory Prices, f.o.b. Cars, South Bend, Ind.

Length of Bed Feet	Approx. Ship. Wt. Crated Motor Drive Lathe Pounds	Plain Lathe See Pages 2 and 3		Horizontal Drive Plain Type See Pages 4 and 5		Raising Blocks for Other Lathes Add to Regular Price
		Cat. No.	Price	Cat. No.	Price	
3	300	6015-YB	\$100.00	6015-Y	\$123.25	\$23.00
3 1/2	355	6015-ZB	112.00	6015-Z	135.25	25.00
4	390	6015-AB	124.00	6015-A	147.25	25.00
4 1/2	430	6015-RB	141.00	6015-R	164.25	25.00

South Bend Precision Lathes to Select from of Practically Every Kind of Shop, Plant and Industry

5 "Workshop" Lathe with Wall Motor Drive

The 9 1/2-inch Swing "Workshop" Lathe shown at the right is the same lathe as is illustrated and described on pages 2, 3, 4 and 5 except it is fitted with floor legs and the drive unit is mounted on the wall.

Net Factory Prices, F.O.B. Cars, South Bend, Indiana

Length of Bed Feet	Distance Between Centers Inches	Approx. Ship. Wt. Crated Pounds	Cash Price		Easy Payments*	
			Cat. No.	F.O.B. Factory	Amount Down Payment	Payment Each Month
3	17	590	415-VF	\$108.25	\$20.00	\$ 7.00
3 1/2	23	665	415-ZF	120.25	20.00	8.00
4	29	630	415-AF	132.25	21.00	9.00
4 1/2	35	480	415-RF	149.25	22.00	10.00

6 Lathe with Oil Pan and Floor Legs

The 9 1/2-inch Swing "Workshop" Lathe shown at the right with double friction countershaft, is the same lathe as shown throughout this catalog, except it is fitted with oil pan and floor legs which can be mounted on any "Workshop" Lathe.

Net Factory Prices, F.O.B. Cars, South Bend, Indiana

Length of Bed Feet	Distance Between Centers Inches	Approx. Ship. Wt. Crated Pounds	Cash Price		Easy Payments*	
			Cat. No.	F.O.B. Factory	Amount Down Payment	Payment Each Month
3	17	410	215-YW	\$116.00	\$22.00	\$ 8.00
3 1/2	23	485	215-ZW	129.00	20.00	8.50
4	29	465	215-AW	142.00	22.00	10.00
4 1/2	35	410	215-RW	160.00	25.00	11.50

7 Lathe with 4-Step Single V-Belt Drive

The 9 1/2-inch Swing "Workshop" Lathe illustrated at the right is fitted with 4-step cone pulley for single V-belt drive, providing eight spindle speeds, four on open belt and four in back gear. Used only with adjustable type countershaft, also equipped with V-pulley.

Net Factory Prices, F.O.B. Cars, South Bend, Indiana

Length of Bed Feet	Approx. Ship. Wt. Crated Pounds	Cash Price		Easy Payments*	
		Horizontal Drive with Adjustable Type Countershaft	Price F.O.B. Factory	Amount Down Payment	Payment Each Month
3	320	4415-YA	\$113.25	\$29.00	\$ 8.00
3 1/2	345	4415-ZA	125.25	30.00	8.50
4	370	4415-AA	137.25	31.00	9.00
4 1/2	420	4415-RA	154.25	33.00	11.00

Prices above include 1/2 H.P. Start-Stop Type Reversing Motor and Drum Reversing Switch.

8 Lathe with Single Step Triple V-Belt Drive

The 9 1/2-inch Swing "Workshop" Lathe illustrated at the right is equipped with a single step three-groove pulley suitable for triple V-belt drive. Countershaft is similarly equipped. Practical where unusual power is required. Must be driven by adjustable type countershaft. Prices on other V-Belt Drives on request.

Net Factory Prices, F.O.B. Cars, South Bend, Indiana

Length of Bed Feet	Approx. Ship. Wt. Crated Pounds	Cash Price		Easy Payments*	
		Horizontal Drive with Adjustable Type Countershaft	Price F.O.B. Factory	Amount Down Payment	Payment Each Month
3	365	3415-YA	\$158.00	\$35.00	\$11.20
3 1/2	390	3415-ZA	167.00	36.00	11.50
4	415	3415-AA	179.00	40.00	13.00
4 1/2	465	3415-RA	195.00	43.00	13.90

Prices above include 1/2 H.P. 1-Phase Instant Reversing Motor, special Reversing Switch and special Adjustable Type Horizontal Countershaft.

For details on Easy Payment Plan, page 22.



5 No. 415-YF, 9 1/2"x3' "Workshop" Floor Leg Lathe with Wall Motor Drive..... \$108.25



6 No. 215-YW, 9 1/2"x3' "Workshop" Floor Lathe with Oil Pan and Overhead Countershaft... \$116.00



7 No. 4415-YA, 9 1/2"x3' "Workshop" with Four Step Single V-Belt Drive... \$113.25



8 No. 3415-YA, 9 1/2"x3' "Workshop" with Single Step Triple V-Belt Drive... \$158.00

**Frame of above Motor Drive Lathes include 1/2 H.P. 1-Phase 60 Cycle A.C. Start-Stop Reversing Motor and Drum Reversing Switch.

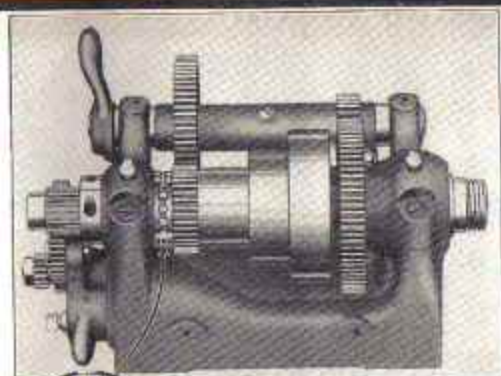


Fig. 13. Headstock of 1936 Model 9-inch "Workshop" Lathe

Fig. 14. Closeup of Ball Bearing Thrust Collar

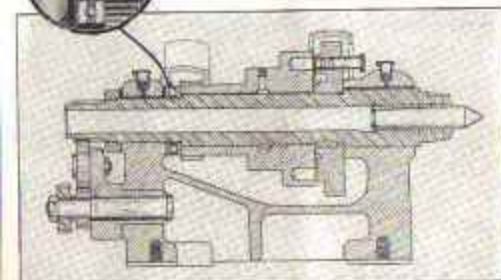


Fig. 15. Cross Section Drawing of 9-inch "Workshop" Lathe Headstock

New Improved Back-Gear Headstock

The New Improved Back Geared Headstock used on the 1936 model 9-inch "Workshop" Lathe is strong and rigidly built with several new features and improvements, among which are the following:

1. New twin gear reverse for threads and feeds
2. Ball bearing thrust collar
3. Improved back gear mechanism
4. Accurately threaded and ground spindle with pilot for face plate and chuck alignment
5. Improved split take-up nut for adjustment of spindle end play
6. Larger spindle bearings, adjustable for wear
7. Improved lubricating system on spindle bearings
8. All gears machine cut and tested
9. Simplified gearing for threads and feeds
10. Hardened spindle optional \$10.00 extra
11. Cone pulley takes 1-inch belt
12. Wrenchless bull gear lock

The Headstock Casting is reinforced and webbed, giving it strength and rigidity. The base is accurately machined and hand scraped to fit the lathe bed, is aligned by the inside V-way and inside flat way on the bed and is clamped permanently in place.

Six Spindle Speeds are provided on the standard headstock, ranging from 39 to 630 R.P.M. Three speeds are obtainable on open belt and three speeds in back gear. Back gear ratio is 5 to 1. Quick acting bull gear lock permits engaging or disengaging back gears quickly.

Special Headstock Cone Pulleys for operation by V-belt with 4-step cone providing 8 spindle speeds; 2-step double V-belt drive cone providing 4 spindle speeds, and single step triple V-belt drive providing two spindle speeds, are available. Prices on request. See pages 7 and 23.

New Improved Headstock Spindle



Fig. 16. Take-up Nut



Fig. 17. Ball Bearing Thrust Collar



Fig. 18. New Improved Headstock Spindle

The Headstock Spindle of 1936 9-inch "Workshop" Lathe is bored from solid bar of alloy steel, is ground all over and has $\frac{3}{16}$ -inch hole its entire length. Tapered hole in spindle is fitted with a reducing sleeve which takes No. 2 Morse Taper Center.

A New Ball Bearing Thrust Collar takes the thrust of spindle against the rear bearing. Spindle Nose is $1\frac{1}{2}$ -inch diameter and has 8 pitch U.S.F. thread. A ground pilot back of the threads provides accurate alignment of face plate and chuck.

New Design Tailstock

The New 1936 Model Tailstock on the "Workshop" Lathe is a new solid type design with long accurately hand scraped bearing on the lathe bed. Features include $\frac{3}{8}$ -inch set-over for taper turning, improved spindle lock, No. 2 Morse Taper self-ejecting center, alloy steel spindle ground and lapped, spindle travel 2 inches and witness marks for convenient aligning. Tailstock design permits compound rest to swivel over base parallel to the lathe bed.

Graduated Tailstock Spindle for greater convenience in measuring depth of hole when drilling with drill chuck held in tailstock spindle. Price extra when fitted to include in line of regular spindle, at factory \$1.50

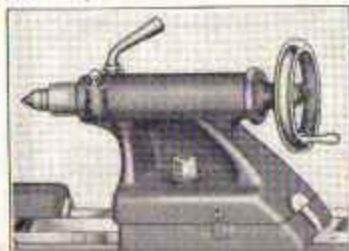


Fig. 19. New Design Tailstock



Fig. 20. Saddle and Compound Rest Used on the 9-inch "Workshop" Lathe with Close-up Showing Micrometer Graduated Collars on Compound Rest and Cross Feed Screws

Saddle and Compound Rest

The Saddle of the 9-inch "Workshop" Lathe is strong and rigid with long accurate hand scraped bearings on the two outside V-ways of the lathe bed. Adjustable gibs are provided at both front and rear of saddle for taking up wear. Dovetail cross slide is accurately hand scraped and has gibs for taking up wear. Cross feed travel is $5\frac{1}{2}$ inches.

The Compound Rest is graduated 180° and can be swivelled and locked at any angle. Compound Rest dovetail slide is hand scraped and has adjustable gibs for taking up wear. Both Compound Rest and Cross Feed Screws have coarse pitch Acme threads and are fitted with micrometer graduated collars reading in thousandths of an inch.



Fig. 21. View of 9'x3' "Workshop" Lathe Bed. Bed has 3 V-ways and 1 Flat Way

Strong Rigid Lathe Bed

50% Steel, 50% Nickel Iron
Weight 3-ft. bed, 90 lbs.
3-ft. Bed has 3 box braces
3 $\frac{1}{2}$ -ft. Bed has 4 box braces
4-ft. Bed has 5 box braces
4 $\frac{1}{2}$ -ft. Bed has 6 box braces
3 V-Ways on all beds
1 Flat way on all beds
Planned, hand-scraped
One-Piece casting
.001-inch Accuracy
Felt Shear Wipers

The Bed of the 1936 "Workshop" Lathe is a strong one-piece casting of 50% steel and 50% nickel iron with box braces cast in its entire length, insuring strength and rigidity. Three V-ways and one flat way on bed accurately planned and hand-scraped align headstock, tailstock and carriage within limits of .001-inch. Bench legs and floor legs are interchangeable.

Each Bed Length is made from a separate pattern so that the long bed lengths are equally stiff and rigid as the short bed lengths. All bed lengths will withstand the strain of the heaviest cuts. With proper care and lubrication the 9-inch "Workshop" Lathe will last a lifetime and continue doing accurate and precise work.



Fig. 22. Precision Leadscrew Used on 9-inch "Workshop" Lathe

Precision Leadscrew

The Precision Lead Screw used on the 1936 Model 9-inch "Workshop" Lathe is $\frac{3}{8}$ -inch in diameter and has 8 Acme standard threads per inch. Leadscrew threads are tested for accuracy of lead, form of thread and pitch diameter and may be used for the most accurate gauge work, tool work, etc.

1936 Model Apron

The Apron of the "Workshop" Lathe is strong, powerful and simple. Split-nuts or half-nuts are engaged with the leadscrew for cutting screw threads and provide power feed to the carriage. Both halves of split-nuts are threaded. Hand feed to the carriage either right or left is provided by means of polished hand wheel on front of apron.

An Improved Oiling System lubricates half-nuts, apron gearing and leadscrew threads. The Apron of the 1936 Model "Workshop" will be found capable of withstanding the heaviest cuts as well as a practical for doing the finest and most accurate work.

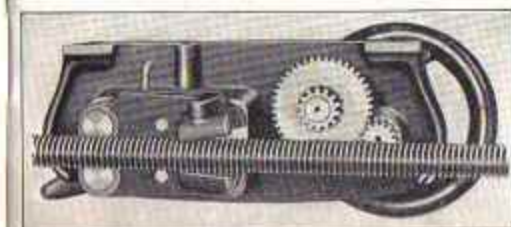


Fig. 23. Interior View of the Apron Used on the 1936 9-inch "Workshop" Lathe

Standard Screw Threads right or left hand from 4 to 40 per inch including 1 1/2 pipe thread as listed on the chart below, can be cut on the 9-inch "Workshop" lathe according to any of the standard formulas including those shown at the right. Single and multiple threads can be cut.

Automatic Longitudinal Power Feeds as fine as .0028 inches per revolution of lathe spindle and other feeds both fine and coarse, are obtainable with the gears furnished as standard equipment on "Workshop" Lathes.

SCREW THREAD CUTTING CHART FOR 9" WORKSHOP LATHE			
THREAD	END	SPIND	GEARING
4	64	32	FOR 4-5-4
5	64	40	FOR 4-5-4
6	64	40	FOR 4-5-4
7	64	56	FOR 4-5-4
8	64	56	FOR 4-5-4
9	64	72	FOR 10-11
10	32	40	FOR 11-12-13
11	32	44	FOR 14-15-16
11 1/2	32	46	FOR 16-17-18
12	32	40	FOR 18-19
13	32	56	FOR 20-21-22
14	32	56	FOR 22-23
16	32	64	FOR 24-25
18	32	72	FOR 26-27-28
20	32	90	FOR 28-29-30
22	16	44	FOR 30-32-35
24	16	48	FOR 32-35
26	16	52	FOR 35-37-38
27	16	54	FOR 37-38
28	16	56	FOR 38-39
30	16	64	FOR 39-40
32	16	72	FOR 40-42-44
36	16	80	FOR 44-46-48

Fig. 24. Screw Thread Cutting Chart Attached to Each Lathe

Extra Fine threads and threads of metric pitch can be cut by using special attachments. Write for prices.



Fig. 25 Master Thread Gauge
Fig. 26 "V" Thread Tap

SCREW THREAD FORMULAS



Fig. 27. National Coarse Screw Thread



Fig. 28. Acme Screw Thread



Fig. 29. Whitworth Standard Screw Thread



Fig. 30. Brown & Sharpe 29° Worm Screw Thread



Fig. 31. International Standard Metric Screw Thread

The Highest Standards of precision accuracy are maintained in manufacturing the 9-inch "Workshop" Lathe, from the planing of the bed to the final inspection of the lathe prior to shipment. 64 major accuracy tests are made on every lathe by the use of precision measuring instruments, gauges, test bars, master templates, etc. This insures accuracy and interchangeability of parts.

The 9-inch "Workshop" Lathe has the capacity for all classes of small work, and will reduce the diameter of a .45 carbon steel shaft 3/8 of an inch in one cut using .005 inches feed per revolution of lathe spindle, and driven by 1/2-H.P. motor.

The Illustrations Below show a few examples of the power and accuracy of the New Model 1936 "Workshop" Lathe.

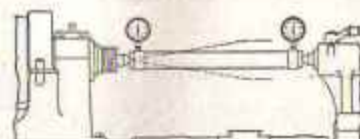


Fig. 39. Testing Alignment of Tailstock Spindle with Headstock Spindle

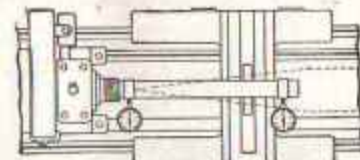


Fig. 40. Testing Alignment of Headstock Spindle with Bed

Maximum error allowed on any one of 64 accuracy tests on lathes is .001 inch. Accuracy tests on chucks are held to chuck-manufacturers limits of .003 in.

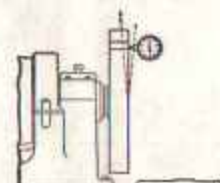


Fig. 41. Testing for Amount of Convexity of Face Plate with Dial Indicator

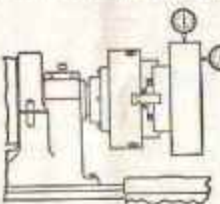


Fig. 42. Testing Accuracy of Chuck Jaws on Diameter and Face

New Twin Gear Reverse For Right and Left Hand Screw Threads and Feeds

The New Twin Gear Reverse for the lead screw will be appreciated by the mechanic as it permits changing from right to left

hand threading and feeding quickly by means of the convenient reverse lever which is located on the headstock of the lathe. The new design is similar to that used on large expensive lathes, and has several distinct advantages: (1) Simplifies gear arrangement, (2) Permits using special gears for special threads of all kinds, (3) Provides two positions for changing gears.

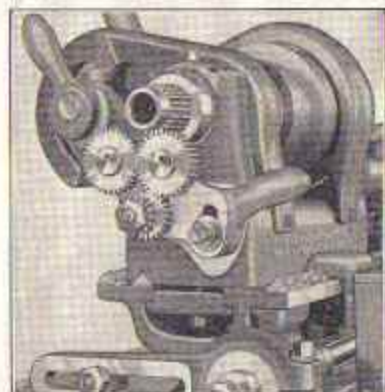


Fig. 32. New Twin Gear Reverse Furnished on 1936 Model "Workshop" Lathe



Fig. 33. Right Hand Screw Thread Gearing Arrangement



Fig. 34. Left Hand Screw Thread Gearing Arrangement



Fig. 43. Taking a Heavy Cut with Coarse Feed on a Bar of Machinery Steel in the 9-inch "Workshop" Lathe

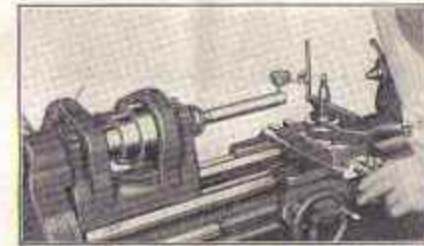


Fig. 45. Testing Alignment of Headstock Spindle with Lathe Bed Using 6-inch Test Bar and Dial Indicator

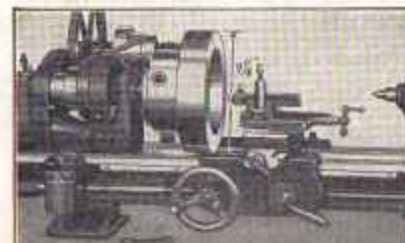


Fig. 44. Chucking Capacity of the 9-inch "Workshop" Lathe is 9 1/2 inches in Diameter at Shop

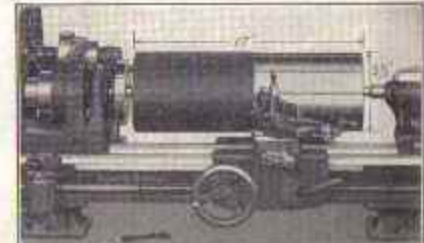


Fig. 46. 9-inch x 3-ft. "Workshop" Lathe Takes Work 8 1/2 inches in Diameter and 17 inches Long Over the Tool Carriers

The 1936 Model 9-inch South Bend "Workshop" Bench Lathe can be equipped with a variety of practical attachments for handling special work, such as milling, keyway cutting, grinding, taper turning, manufacturing and production work, etc.

A few of the most popular attachments for the "Workshop" Lathe are illustrated and priced below and on page 13. Additional attachments, chucks, tools and accessories are listed on pages 13, 14 and 15.

Most of the attachments supplied for the "Workshop" Lathe may be purchased with the lathe or they may be ordered later as they are needed. Many of these attachments are manufactured by us and are designed for South Bend Lathes only, and are not guaranteed to fit other lathes.

For complete details and prices on attachments for the "Workshop" Lathe write for free Attachment Bulletin No. 77-W, illustrated and described on page 13.

Draw-in Collet Chuck Attachments

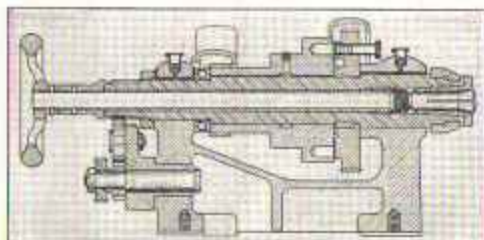


Fig. 47. Section of Headstock Showing Draw-in Chuck



Fig. 48. Hand Wheel Draw-in Collet Chuck

Hand Wheel Draw-in Collet Chuck

The Hand Wheel Draw-in Collet Chuck Attachment is recommended for making small tools and parts where the greatest accuracy is essential and for small lot production work. Work is held in the collet chuck by turning hand wheel to the right and is released by turning it to the left. Lathe spindle must be stopped in order to operate chuck.

Cat. No. 4300. Code Word, "Acnut." Shipping wt. 4 lbs. Price with one collet.....\$25.00



Fig. 49. Hand Lever Draw-in Collet Chuck

Hand Lever Draw-in Collet Chuck

The Hand Lever Draw-in Collet Chuck Attachment is recommended for rapid production work on small interchangeable parts where accuracy is required. Hand lever chuck closing mechanism permits feeding or releasing bar stock through the collet without stopping the lathe. Collet can be adjusted to any desired tension.

Cat. No. 5206. Code Word, "Abpat." Shipping wt. 10 lbs. Price with one collet.....\$70.00

Split Collets for Round Work

Split collets for holding round work are made of tool steel hardened and tempered. They are ground outside and inside to insure accuracy. Supplied with hole sizes from $\frac{1}{8}$ -inch up to and including $\frac{1}{2}$ -inch in steps of $\frac{1}{32}$ -inch; for example, $\frac{1}{8}$ -inch, $\frac{9}{32}$ -inch, $\frac{1}{2}$ -inch, etc. When ordering specify hole size of collet. A $\frac{1}{4}$ -inch collet holds work exactly .250-inch diam., or .001-inch undersize (.249-inch diam.). A separate collet must be used for each step of increase or decrease in diameter of work.

Cat. No. 609-W. Code Word, "Cetra." Shipping wt. 6 oz. \$2.50

Prices of square, hexagon and metric collets quoted on request.



Fig. 50. Round Split Collet



Fig. 51. Group of Collets with Holes Ranging from $\frac{1}{8}$ -inch up

Partial List of Attachments

For 9-inch "Workshop" Lathes

Milling Attachment
Electric Grinder for Lathes
Draw-in Collet Chucks, Hand Wheel and Hand Lever Types
Collets for Draw-in Chucks
Step Chuck and Closer
Thread Dial Indicator
Plain Carriage Stop
Micrometer Carriage Stop
Hand Rest for Wood Turning
Fine Thread Cutting Attach.
Metric Transposing Gears
Graduated Taper Attachment
Milling and Boring Table
Milling Cutters and Arbors
Diamond Holding Fixtures
Industrial Diamond Dresser
Hand Lever Tailstock
Gear Cutting Attachment
Double Tool Slides
Torrets, Bed, Tool Post and Tailstock Types
Die Holder for Tailstock
Spring Winding Attachment
Internal Electric Grinder
Sanding and Polishing Disc
Indexing Face Plate
Oil Pan and Oil Pump

Chucks, Tools, etc.

Lathe Chucks, and Drill Chucks
Lathes Tools, Centers, Lathes Dogs
Center Rest
Large Face Plate
Follower Rest
Adjustable Thread Cutting Stop
Electric Tool Grinder
V-Belt Drive Tool Grinder
Knocked-Down Benches
Precision Level
Spindle Oil and Oil Can

Automotive Attachments

Armature Support Bushing
Hard Type Mica Undercutter
Piston Adapters, Adapter Rings and Piston Skirt Reamers
Valve Chuck
V-Block for Holding Valves When Grinding Clearance
Rocker Arm Grinding Fixture
Connecting Rod Boring Attach.



Fig. 52

Electric Grinder

Cat. No. 75-K. Code, "Rihip." Shipping wt. 55 lbs....\$40.00



Fig. 53

Milling Attachment

Cat. No. 9-W. Code, "Vabil." Shipping wt. 13 lbs.... \$35.00



Fig. 54

Graduated Taper Attachment

Cat. No. 428. Code, "Hapwo." Shipping wt. 15 lbs....\$45.00



Fig. 55

Milling and Boring Table

Cat. No. 904. Code, "Yason." Shipping wt. 8 lbs.....\$12.50



Fig. 56

Thread Dial Indicator

Cat. No. 810. Code, "Adook." Shipping wt. 2 lbs.....\$5.00



Fig. 57

Fine Screw Thread Cutting Attachment

Cuts Threads 44 to 80 per inch
Cat. No. 1565. When ordered with lathe, Code, "Baxoo." Shipping weight 6 lbs. \$8.00
Cat. No. 1870. When ordered as extra equip. "Atary." \$10.00



Fig. 58

Plain Carriage Stop

Cat. No. 758. Code, "Tahro." Shipping wt. 1 $\frac{1}{2}$ lbs....\$2.25



Fig. 59

Hand Rest for Wood Turning

Cat. No. 896-W. Code, "Adows." Shipping wt. 6 lbs.....\$4.00



Fig. 60

Micrometer Carriage Stop

Cat. No. 908-W. Code, "Cappys." Shipping weight 2 lbs. \$8.00

Attachment Bulletin No. 77-W

This illustrated Bulletin, size 8 1/2 x 11 inches, contains complete description, illustrations and prices on over 38 practical attachments for South Bend Lathes, including Draw-in Collet Chuck Attachment, Milling Attachment, Electric Grinder, Taper Attachment, etc. A complete line of chucks, tools, and accessories for the lathe is also shown. We will be glad to mail you a copy of this Bulletin, postpaid, upon request.



4-Jaw Independent Lathe Chuck



A Light Weight Chuck
This precision chuck has four reversible independent jaws with individual screw adjustment for chucking round or irregular work, either in a concentric or eccentric position. Price includes wrench and screws for chuck-back. See fitting charges below.

Cat. No. 4806, 6-inch Chuck, 7 1/2-inch capacity, shipping wt. 6 1/2 lbs. Code word, "Kapno." Price\$15.25*

4-Jaw Independent Lathe Chuck

An Extra Light Weight Chuck
This is a good quality chuck. Has four reversible independent jaws, wrench and screws for chuck-back. See fitting charges below.



No. 4906, 6-inch Chuck, 7-in. cap. "Abhd." Wt. 5 1/2 lbs. Price\$10.00*

*Prices for Fitting Chucks to Lathe

A chuck-back is needed to fit 4-Jaw Independent Chucks and 3-Jaw Universal Chucks to lathes. See illustration at left. Chuck should be fitted to lathes at factory.

No. 126, Semi-Machined Chuck-Back, "Acmin." Shipping weight 5 lbs.\$2.50
No. 236, Fitting Chuck-Back, "Acump." 1.50
No. 258, Total Price, Code word, "Acors."\$4.00

Chuck Jaws for Face Plate

Used on No. 48-W Face Plate on page 15. Capacity 4 1/2 inches.

Cat. No. 97-W, Code word, "Cuyil." Wt. 3 lbs.\$5.00

Headstock Spindle Chuck



Chuck screws on spindle nose of lathe. Has hollow spindle for holding small rods, bar work and engine valves for refacing. No. 907-B, 3/4-inch to 5/8-inch cap. Wt. 3 lbs. Code "Robal"\$9.00

3-Jaw Universal Lathe Chuck



A Light Weight Chuck
This self-centering precision chuck holds round and hexagonal work in a concentric position. Price includes two sets of jaws, wrench and screws for chuck-back. See fitting charges in column at left.

Cat. No. 3805, 5-inch Chuck, 5-inch capacity, shipping wt. 6 1/2 lbs. Code word, "Kasap." Price\$17.00*

3-Jaw Universal Lathe Chuck

An Extra Light Weight Chuck
A self-centering chuck. Has two sets of jaws, wrench and screws for chuck-back. See fitting charges in column at left.



Cat. No. 3905, 5-inch Chuck, "Abhd." Wt. 6 1/2 lbs. Price\$13.00*

3-Jaw Drill Chuck (Standard Weight)

A practical, powerful and accurate drill chuck. Price includes pinion key but not arbor.

No. 1200, 0 to 3/8" cap. "Cleva." Wt. 1 lb.\$4.25
No. 1201, 0 to 1/2" cap. "Wauko." Wt. 1 1/2 lbs.\$6.75
No. 1202, 0 to 3/4" cap. "Faloo." Wt. 2 1/2 lbs.\$9.00

3-Jaw Drill Chuck (Medium Weight)

An accurate chuck for general drilling in the lathes. Prices include pinion key, but not arbor.

No. 219, 0 to 3/8" cap. "Acpsn." Wt. 1 1/2 lbs.\$3.85
No. 220, 0 to 1/2" cap. "Acpsp." Wt. 1 1/2 lbs.\$5.25
No. 327, 1/4 to 3/8" cap. "Rulid." Wt. 2 1/2 lbs.\$7.50



Arbor for Drill Chucks

Cat. No. 709, Code "Achuk." Ship. wt. 1 lb.\$1.00

No. 105 Chuck and Tool Assortment \$35.10



The assortment shown at left and listed below for use on "Workshop" Lathes is the basic equipment required for general machine work.

Cat. No.	Description	Price
4806	6-in. 4-Jaw Indep't. Chuck	\$15.25
258	Fitting Chuck to Lathe including Chuck-Back	4.00
220	1/2-in. 3-Jaw Drill Chuck	5.25
709	Arbor for Drill Chuck	1.00
847-S	Straight Tool Holder	1.25
1714	7 H. S. Cutter Bits, Ground	1.50
565F	Boring Tool, Style "D"	3.00
833R	Cutting-off Tool, Right Hand	1.50
176	4 Lathe Dogs 1/2, 3/4, 1, and 1 1/4 inch	2.25

No. 105, Assortment, Code, "Adpol" \$35.10 Shipping weight 15 lbs.



Turning Tool Holder Straight Shank

Made of drop-forged steel, heat treated and hardened. Price includes tool holder, wrench and one unground high speed steel cutter bit.

No. 847-R, "Acant." Wt. 1 lb.\$1.25
No. 847-L, "Acost." 1.25
Straight—No. 847-S, "Acamp." 1.25



High Speed Steel Cutter Bits
Cutter Bits can be supplied either ground or unground. When ordering ground bits specify cutting number and form wanted.

Cutter Bit not Ground to Form
No. 1460, Unground Cutter Bit, 1/2"x1 1/2"
"Acavv." Weight 2 oz. Each\$0.15
No. 1469, 6 Unground Cutter Bits, "Acava"
Weight 12 oz.\$3.00

Cutter Bit Ground to Form
No. 1355, Cutter Bit, ground to Forms A to G, shown below. Size 1/2"x1 1/2"
"Acadv." Weight 2 oz. Each\$0.25
No. 1714, Set of 7 Cutter Bits, ground to Forms A to G, shown below. "Acpr"
Weight 10 oz.\$1.50

Cutter Bits Ground to Form



A B C D E F G
Left Hand Turning
Right Hand Turning
Left Hand Bore
Thru-cutting
Right Hand Bore
Bore



Head Center
725-W "Adgs" \$2.00 (Ship. wt. 8 oz.)



Tail Center
728-W "Acem" \$2.25 (Ship. wt. 8 oz.)



Crutch Center
726-W "Fand" \$2.50 (Ship. wt. 10 oz.)



Spur Center
732-W "Kald" \$2.50 (Ship. wt. 8 oz.)



Cup Center
733-W "Jalak" \$2.00 (Ship. wt. 8 oz.)



Center Rest
125-W "Cegka" \$6.00 (Ship. wt. 15 lbs.)



Large Face Plate
40-W "Cehnk" \$4.00 (Ship. wt. 6 lbs.)



Drill Pad
727-W "Doms" \$2.50 (Ship. wt. 1 1/2 lbs.)



Screw Center
731-W "Kald" \$2.50 (Ship. wt. 1 1/2 lbs.)



Thread Cutting Stop
62-W "Gasp" \$2.00 (Ship. wt. 8 oz.)



Follower Rest
54-W "Cegka" \$4.00 (Ship. wt. 6 lbs.)



Center Drill and Countersink
No. 830 Center Drill, Code "Kald" \$5.25



Turning Tool Holder (Drop Forged Steel)

With wrench and one high speed steel unground cutter bit. Ship. wt. 1 1/2 lbs.

No. 847-R, "Acant." \$1.25
No. 847-L, "Acost." 1.25
Straight—No. 847-S, "Acamp." 1.25



Cutting-Off Tool (Drop Forged Steel)
With wrench and H.S. ground blade. Ship. wt. 3 lb.

No. 833-R, "Acem" \$1.50
Straight—No. 833-S, "Acad" 1.50
Extra Cutter No. 819, "Acamp." 3.00



Threading Tool (Drop Forged Steel)
With wrench and turned H. S. cutter, stock of V, U, R, S, or Whitworth thread, specially stock or number of threads per inch required. Ship. wt. 3 lb.

No. 845, Code word, "Adad" \$2.50
Extra Cutter No. 814, "Acavv." 1.50



Knurling Tool (Drop Forged Steel)
With one set of knurl, dia. medium or coarse; straight or diamond pattern. 8010, wt. 1 1/2 lbs.

No. 826, Code word, "Doms" \$2.00
No. 817, Knurls "Digns" pair, 1.50



Boring Tool Holder Style "C"

With wrench, 1/2" ground boring bar, and one high speed steel unground cutter bit. Ship. wt. 1 1/2 lbs.

No. 486, Code word, "Jasek" \$3.00
No. 483, 1/2" Boring bar, "Adadv." 30
No. 485, 3/4" Boring bar, "Adadv." 35



Boring Tool Holder Style "D"

With wrench and 1/2" section bar, ground, ship. wt. 1 1/2 lbs.

No. 485-F, Code word "Adadv" \$3.00
No. 486-B, 3/4" Boring bar, "Adadv" 35

Standard Lathe Dogs

Made of heavy malleable iron, designed for strength and service.

1/2" cap. No. 1-WJ, "Adadv"\$0.40
3/4" cap. No. 2-WJ, "Adadv" 45
1" cap. No. 3-WJ, "Adadv" 50
1 1/4" cap. No. 4-WJ, "Adadv" 60
1 1/2" cap. No. 5-WJ, "Adadv" 70
2" cap. No. 10-WJ, "Adadv" 80

Clamp Lathe Dog

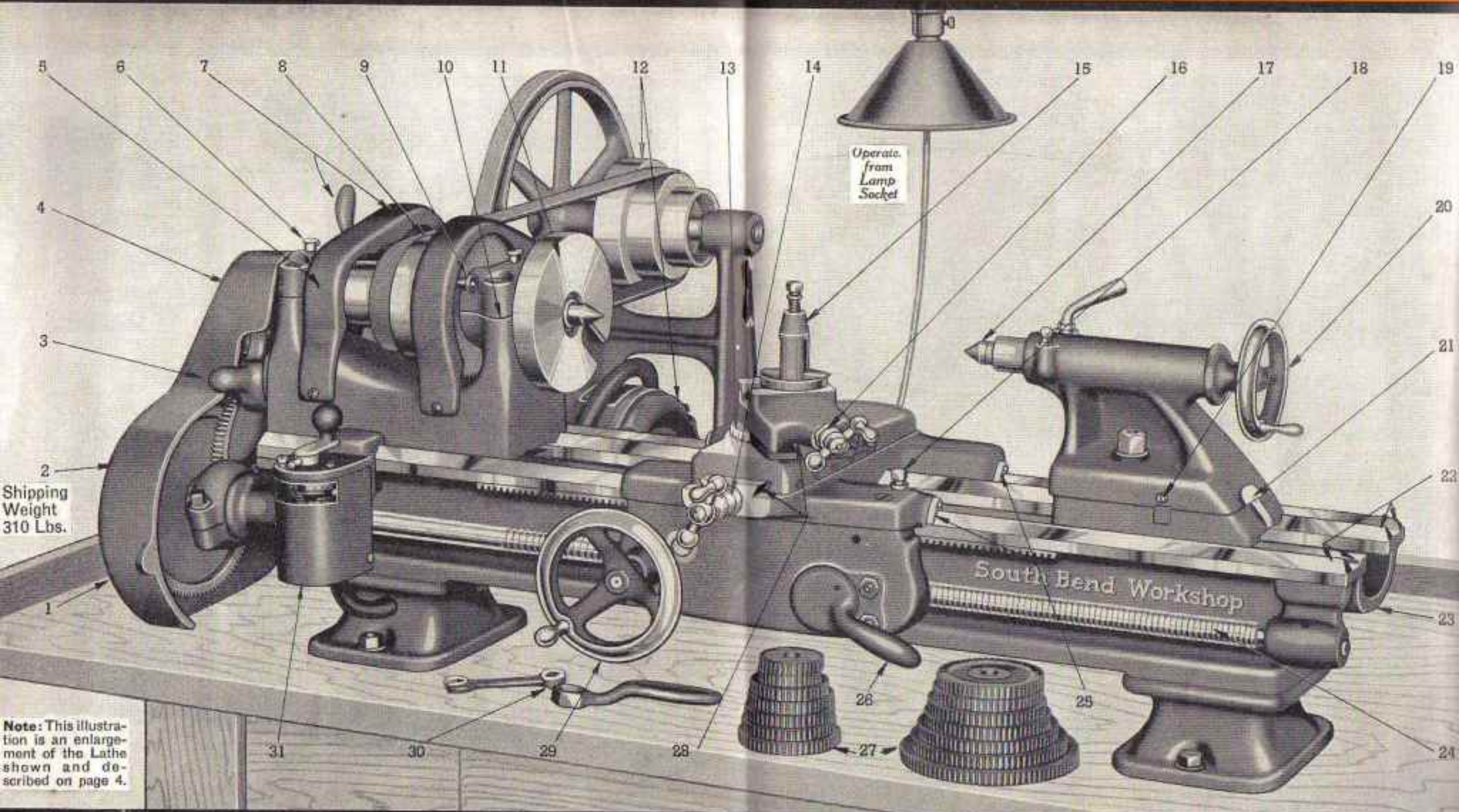
Made of Drop Forged Steel
No. 160, 1 1/2" cap. Code "Acant." \$1.00
1 lb.\$1.00
No. 161, 2 1/2" cap. Code word "Acant" Wt. 1 1/2 lbs. \$2.00

No. 2 Morse Taper Sleeve

May No. 1 Morse Taper bars, Code word "Acant" \$3.00 (Ship. wt. 8 oz.)

Center Drill and Countersink

1/2" dia. No. 830-A, Code word "Kald" \$5.25
3/4" dia. No. 830-B, Code word "Kald" \$5.25
1" dia. No. 830-C, Code word "Kald" \$5.25
1 1/4" dia. No. 830-D, Code word "Kald" \$5.25
1 1/2" dia. No. 830-E, Code word "Kald" \$5.25



Shipping Weight 310 Lbs.

Note: This illustration is an enlargement of the Lathe shown and described on page 4.

Principal Features of the 1936 Model 9-inch "Workshop" Precision Lathe

These Features Apply to Every 9-inch "Workshop" Lathe Shown in this Booklet

- | | | | | |
|--|---|---|---|--|
| <ul style="list-style-type: none"> 1. Swinging Gear Guard. 2. Index Plate for threads and feeds. 3. Reverse Bracket for threads and feeds. 4. Hollow Spindle of high carbon steel. 5. Ball Bearing Thrust Collar for spindle. 6. Felt Lubricators and patent oil cups on spindle bearings. | <ul style="list-style-type: none"> 7. Back Gears provide power for heavy cuts. 8. Three-step cone pulley takes 1-inch belt—provides 6 spindle speeds, 3 direct belt and 3 back gear. 9. Bull Gear Lock Pin—wrenchless type. 10. Adjustable Headstock Spindle Bearings. 11. Face Plate threaded to spindle. | <ul style="list-style-type: none"> 12. Horizontal Countershaft—plain type and reversing motor. 13. Compound Rest graduated 180°. 14. Micrometer graduated collar. 15. Adjustable Hardened Tool Post. 16. Micrometer graduated collar. 17. Self-ejecting spindle center. | <ul style="list-style-type: none"> 18. Carriage Lock for accurate facing. 19. Set-over for taper turning. 20. Hand Wheel on tailstock. 21. Witness Mark for aligning tailstock. 22. Three V-ways and one flat way on bed. 23. Cast iron, semi-steel seasoned bed. 24. Precision Lead Screw, Acme thread. | <ul style="list-style-type: none"> 25. Felt Shear Wipers and oilers. 26. Half-nut Lever for threads and feeds. 27. Change Gears for threads and feeds. 28. Adjustable Gibs on dovetail slides. 29. Hand Wheel for feed to carriage. 30. Wrenches for lathe. 31. Drum Type Reversing Switch. |
|--|---|---|---|--|

The Wide Variety of automotive service work and general machine work which the 9-inch "Workshop" South Bend Lathe will handle makes it the ideal tool for the Auto Service Shop. The price of this lathe, with attachments, is much less than the cost of single purpose machines required to do the same work. No other shop tool is the equal of the lathe in versatility, and accuracy.



Fig. 63. Grinding a Valve on the "Workshop" Lathe

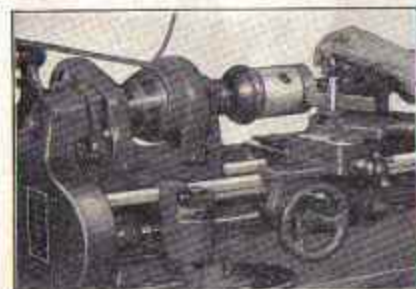


Fig. 65. Turning Ring Lands to Size on a Semi-Machined Piston

"Motor Mechanics Hand Book" No. 33-W

If you are interested in Automotive repair work write for a free copy of the bulletin listed below. It contains the latest and most authoritative information on modern methods of servicing the important mechanical units of the automobile, truck and bus. Shows how the largest and most successful shops are handling this profitable work. Sent free, postpaid to any address.

Partial List of Contents

- How to:
- Grind Valves
 - Service Armatures
 - Service Flywheels
 - Service Brake Drums
 - Service Connecting Rods
 - Make Bushings
 - Finish Pistons
 - Service Differentials
 - and Hints for the Auto Mechanic



Write for This Free Book

The Profitable Auto Service Jobs which can be handled on the "Workshop" Lathe include: Truing armature commutators, undercutting mica insulation, making bushings, finishing pistons, grinding valves, sharpening reamers of all kinds, and many other operations of a general nature, such as cutting screw threads, turning, boring, drilling, etc. The illustrations below show but a few of the auto service jobs.

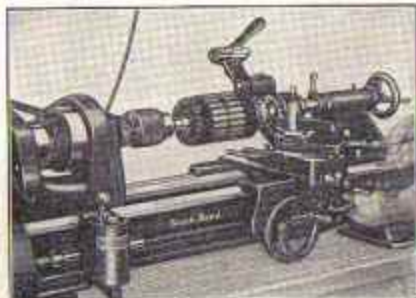


Fig. 64. Truing on Armature and Undercutting Mica in One Set-up



Fig. 66. Making a Bushing on a Mandrel in the "Workshop"

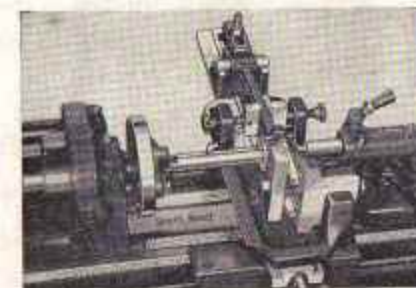


Fig. 67. Boring a Connecting Rod in the 9-inch "Workshop"

The Service Manuals of most of the leading manufacturers of automobiles and trucks recommend South Bend Lathes to their Service Shops and Dealers, General Motors, Yellow Cab, Studebaker, Chrysler, White Truck, Reo and several others follow this policy.

The 9-inch "Workshop" Lathe is the practical size and type for the school machine shop, general shop, laboratory, auto mechanic's shop, as it is suitable for all kinds of project work and exercise work. Many schools use these lathes in large groups with twenty to thirty lathes in the same class room so that every student has full time use of the lathe.



Fig. 68. Machine Shop of Junior Pre-Vocational School, Flint, Michigan. Uses 11, 9"x3" "Workshop" Lathes

For purposes of economy the 9-inch "Workshop" Lathe offers great advantages. The low initial cost and the low operating cost permit purchasing ten or twelve of these lathes for the price formerly paid for one lathe only. Over one thousand of the 9-inch "Workshop" Lathes are now in use in educational institutions all over the world.



Fig. 69. A Very Practical Junior High School Installation of 9-inch Swing South Bend Lathes



Fig. 70. Sample Job Sheet and Blueprint from South Bend Machine Shop Course



Fig. 71. A Typical General Shop Equipped to Handle Machine Shop, Mechanical Drawing, Auto Mechanics, Forging, Electricity and Woodworking

"Modern School Shops" Booklet No. 55-W

This interesting and valuable 24-page bulletin, 8 1/2 inches, contains actual photographs of over 25 outstanding machine shops in schools, colleges and universities in the United States where vocational and technical education are receiving the attention of the foremost educators in the United States today.

The book also contains complete information on the South Bend Machine Shop Course and the four Deferred Payment Plans for schools. Contains several new ideas on shop practice in the modern school. A valuable book to any vocational director, supervisor or other school official. Sent postpaid on request. Write or use coupon on page 10.



South Bend Machine Shop Course

This practical course was developed nearly eleven years ago as a course in apprentice training for teaching the fundamentals of machine shop practice. It consists of 52 projects made up in blueprint and job sheet form as illustrated above. Complete information is contained in the booklet illustrated at the right.

Deferred Payment Plans

Any school district or board of education may install one or more 9-inch "Workshop" Lathes and pay for them over an extended period of time. The lathe or lathes are shipped immediately at the request of the school officials, and payments are made according to any one of the 4 plans which have been devised especially for school installations. Complete information on deferred payment plans will be found in the bulletin shown at right.

Write for This Free Book

The 9-inch "Workshop" South Bend Back-Geared Screw Cutting Lathe is the ideal tool for the homeshop as it is practically a machine shop in itself and occupies but a small space. It permits the operator to do all classes of machine work, drilling, screw thread cutting in metal and wood, and all kinds of woodworking.

With the 9-inch "Workshop" Lathe the model builder can handle all machine work



Fig. 72. Rod LaRocque, Movie Star, Skilled Machinist and Inventor, Uses a South Bend Lathe in His Shop



Fig. 74. Workshop of the New York Society of Model Engineers Equipped with a 9-inch "Workshop" South Bend Lathe

"The Home Workshop"

Booklet No. 11-W

If you own a homeshop or would like to own one you will be interested in the book illustrated below. It is the latest homeshop manual and contains complete and authoritative information about all of the things in which the homeshop owner is interested. Actual photographs of Homeshops are shown. Layouts for practical homeshops are included. A special section tells where to obtain castings, hardware, supplies and accessories for the model builder. Copy free, on request.



Write for This Free Book

on model locomotives, steam engines, etc. The inventor will find the 9-inch "Workshop" Lathe the most practical tool for developing his ideas.

The 9-inch "Workshop" Lathe can be fitted at small additional cost, with special attachments such as milling attachment, grinder, etc., for handling hundreds of jobs ordinarily requiring expensive single purpose tools.



Fig. 73. Ivar Nordstrom, Winner of the Popular Mechanics Magazine 1933 DeWitt Clinton Model Railway Contest. He Machined His Model on a South Bend Lathe



Fig. 75. Frederic Craven, LaPorte, Indiana, Well Known Builder of Ship Models Uses a South Bend Lathe



Fig. 76. Pilot C. C. Coppin of the United Air Lines with His "Workshop" Lathe

The 1936 9-inch "Workshop" Lathe is unexcelled for work in the engineering shop, the scientific laboratory and the experimental shop because of its precision accuracy and its wide range of adaptability to all classes of work.



Fig. 77. A Modern Laboratory Equipped with a 9-inch South Bend Lathe



Fig. 79. Technician's Shop in the Adler Planetarium, Chicago, Ill.

The illustrations on This Page are just a few of the hundreds of similar South Bend installations throughout the world. These "South Bends" help make possible the mechanical developments and equipment required by modern industry.



Fig. 78. Physics Department Laboratory, Purdue University, Lafayette, Indiana



Fig. 80. Shop of the Bell Telephone Laboratories, New York City

Exporters to 96 Countries of the World

Cable Address TWIN3, South Bend, All Commercial Codes Used

South Bend Lathes have been exported to nearly every country and colony throughout the entire world during the last 25 years. Their reputation is worldwide and users everywhere testify to their high quality.

The latest export information is available in our offices at all times. You may write us for information on any size lathe and we will send you a quotation showing the C.I.F. delivered price to your nearest port. Correspondence in any language.

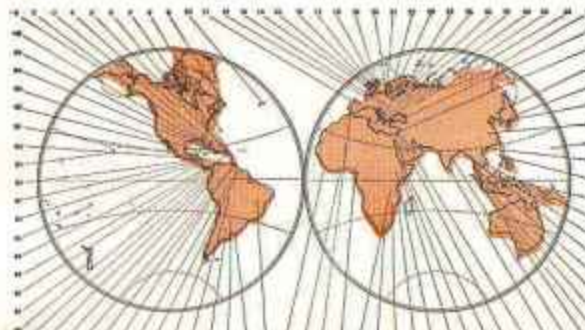


Fig. 81. 96 Countries and Colonies Where South Bend Lathes Are in Use

"Exporting to 96 Countries"

Book No. 96-W

This valuable, 6"x9" book contains a wealth of information regarding export transportation rates and methods we use in dealing with our foreign friends that will be of interest to prospective purchasers overseas. Mailed only to addresses outside the United States. Copy free, postpaid on request.



Write for This Free Book

South Bend Easy Payment Plan—12 Months to Pay

For the Purchase of 9-inch "Workshop" Lathes, Attachments and Tools

You Can Purchase any 9-inch "Workshop" Lathe priced in this catalog with attachments, chucks and tools and pay for the entire equipment by making a small down payment with order and paying the balance monthly while you are using the lathe in your own shop.

You Deal Direct With Us when you use the Easy Payment Plan, as we have no connection with any finance company. Make up your order and send it to us with the down payment. We ship the lathe immediately and you pay us the balance monthly.

How to Order on the Easy Payment Plan

To make out an order for a South Bend Lathe on the Easy Payment Plan, simply add the prices of the lathe, chuck, tools and attachments selected and the total will be the cash price.

In the first column of the schedule of easy payment terms, shown below, find the amount nearest the total price of your order. On the same line you will find the amount of down payment, the amount for monthly payments, the amount for financing balance, and the number of monthly payments.

The example order, below, shows the use of the Easy Payment Plan for buying a 9" x 3 1/4" "Workshop" Lathe and a chuck and tool assortment. Any other model or type "Workshop" Lathe with attachments, chucks and tools, can be purchased in the same manner.

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*
\$ 70.01 to \$ 80.00	\$19.00	\$ 6.50	\$ 6.00	10
80.01 to 90.00	21.00	7.00	6.50	10
90.01 to 100.00	24.00	7.00	7.00	11
100.01 to 110.00	28.00	7.00	7.50	12
110.01 to 120.00	29.00	8.00	7.50	12
120.01 to 130.00	30.00	8.50	8.00	12
130.01 to 140.00	31.00	9.00	8.50	12
140.01 to 150.00	32.00	10.00	9.00	12
150.01 to 175.00	35.00	11.50	10.00	12
175.01 to 200.00	40.00	13.00	11.50	12
200.01 to 225.00	45.00	15.00	13.00	12
225.01 to 250.00	50.00	17.00	14.50	12

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

Example Order

1 No. 415-Z, 9"x3 1/4" "Workshop" South Bend Horizontal Motor Driven Bench Lathe complete with electrical equipment and regular lathe equipment, as shown on pages 4 and 5.....\$110.25
1 No. 105 Chuck & Tool Asser't. (Pg. 14)..... 35.10
Total Price f.o.b. Cars, South Bend, Ind.....\$145.35

Easy Payment Terms on Above Order

Total Price of Above Order.....\$145.35
Amount of Down Payment..... 32.00

Balance Due.....\$113.35
Amount for Financing Balance..... 9.00
Amount to be paid in monthly installments.....\$122.35
Payment Each Month..... 10.00
Number of Months to Pay—12 Months.

Fig. 52. An Example of an Easy Payment Order for a 9-inch "Workshop" Lathe

"Easy Payment Plan"

Booklet No. 10-W

Complete information on the South Bend Easy Payment Plan which has been used by more than 10,000 purchasers of South Bend Lathes will be found in this interesting and valuable booklet. Explains in detail how to determine the down payment, monthly payment, time extensions when necessary and other facts.

A copy of this booklet will be sent free, postpaid, on request, to any address. Write us, in a letter or use coupon shown at the bottom of page 30.



Manufacturing and Production Attachments

For the 9-inch "Workshop" Precision Lathe

The 9-inch "Workshop" Back-Geared, Screw Cutting Precision Lathe is a practical tool for use in manufacturing plants, tool rooms and for special machine operations of all kinds. More than 18 practical attachments may be fitted to the "Workshop."



Fig. 83. Hand Lever Bed Turret. Takes Six Tools. Indexes by Hand Only
Cat. No. 176-W. "Systp".....\$115.00 Fitted



Fig. 85. Hand Lever Double Tool Slide, including One Tool Post, Ring and Wedge
Cat. No. 738. "Abotr".....\$60.00

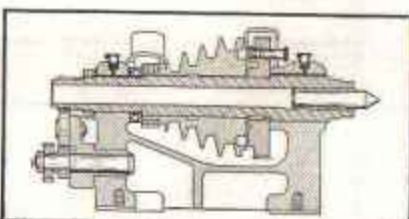


Fig. 87. Section of "Workshop" Headstock with 4-Step V-Belt Cone Pulley. For Further Details See Cut Below and Page 7

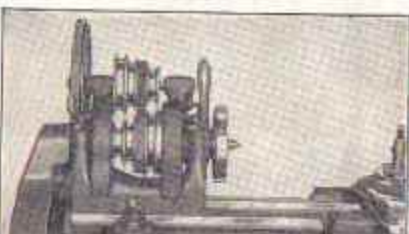


Fig. 87A. Close-up Showing Lathe and Drive with 4-Step V-Belt Pulleys. For Prices See Tabulation Under Lathe No. 477 on Page 7

Lathes for Handling Production Jobs. The illustrations below show the application of several of the more popular manufacturing attachments. Further information and details will be supplied on any or all of the attachments shown below.

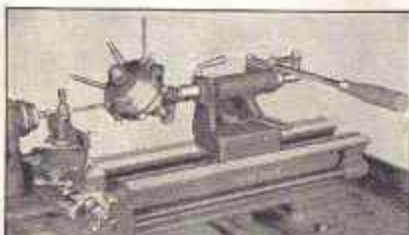


Fig. 84. Turret Mounted on Spindle of Hand Lever Tailstock, Takes Six Tools
Cat. No. 948-W. "Tysta".....\$39.00 Fitted

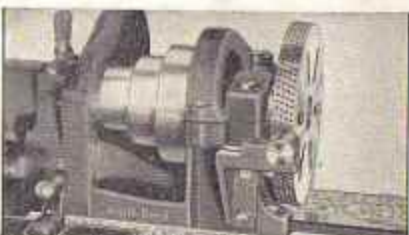


Fig. 86. Face Plate Indexed with 360 Holes for Indexing Work of All Kinds
Cat. No. 99-W. "Inho".....Price on Request

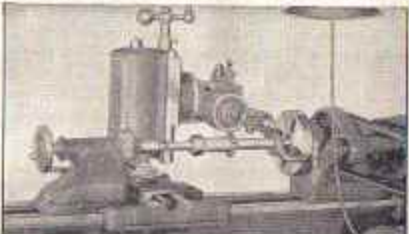


Fig. 88. Gears Up to 4 1/2-inch Diameter Can Be Cut with This Gear Cutter on "Workshop" Lathe.
Cat. No. 270-W. "Hapno".....\$165.00 Fitted

"The Small Lathe in the Manufacturing Plant"

Booklet No. 44-W

This 32-page, 6"x9" booklet shows the application of the "Workshop" Lathe on manufacturing jobs of all kinds. Includes actual photos taken in manufacturing plants, laboratories and engineering shops. A valuable book to anyone interested in manufacturing. Sent free, postpaid, on request.



Write for This Free Book

Industry—Transportation—Communications—Science—Invention

Every field of activity in the world today uses mechanical equipment, and South Bend Lathes are used in every field. Their versatility, accuracy and rigidity adapt them to all mechanical uses of which a few are mentioned below.

Automobile manufacturers recommend these lathes for their service shops, for their dealers and distributors and many are in use in their own plants. We have prepared a special hand book covering this subject for those who are interested. See page 18 of this booklet.

Municipal, State and Federal Governments operating water works, power plants, penal institutions, hospitals, arsenals, etc., use these lathes for every type of maintenance and repair work. We have data available which will help you in selecting equipment for this work.

Manufacturing plants of all kinds use the lathes for production of duplicate parts, tool room work and for miscellaneous operations. A special booklet has been prepared for those interested in this type of work. See page 23.

Laboratories, commercial and governmental, find the 9-inch "Workshop" Lathes their most valuable piece of equipment. We have accumulated considerable information of interest to any official in charge of laboratory work. Details sent free, on request.

Radio Operators and Radio Stations including large government and commercial broadcasting stations, ships and amateurs use the 9-inch "Workshop" Lathes for maintenance and development work. We can assist you if you are doing radio work.

Maintenance work in industries such as textile plants, mines, refineries, etc., is one of the important uses of the 9-inch "Workshop." If your work belongs in this field we can serve you. Write to us.

Home Shop Enthusiasts by the thousand will be interested in the new special booklet we have prepared covering the subject of home shop work. An entire page is devoted to this interesting subject in this booklet. See page 20.

Aviation Activities have had South Bend Lathes associated with them since their infancy. We have assisted in working out many problems for airports, manufacturers of aircraft and aeronautical instruments and will be glad to give you the benefit of this experience.

Schools of all kinds, both commercial and public, elementary and advanced, for teaching every technical and mechanical subject, find the 9-inch "Workshop" Lathes to fit in to their educational program. We have a special department for taking care of educational problems. See page 19.

Marine Activities of all kinds including ships, navies, repair shops, naval bases, shipyards, navigation instrument work, etc., are extensive users of the 9-inch "Workshop" Lathes. Write us for suggestions on your marine equipment problems.

There may be a shop near you doing the same type of work in which you are interested. You will find South Bend Lathes in use for every purpose from Alaska to Little America, and from Addis Ababa to the Zuyder Zee—Over 65,000 lathes all over the world. We will gladly give you addresses of users where you may see the lathes in operation.

Our Engineering Department has had years of experience in dealing with all kinds of shops. Drawings, sketches, photographs and blueprints covering hundreds of mechanical subjects are available if you are interested in seeing what other shops are doing. Take advantage of our experience by writing to us.

"IT IS SO EASY TO HANDLE"

"The Lathes has arrived all in good shape and it is a better machine than I expected. It is so easy to handle."—F. A. Mansfield, Pocatello, Idaho.

"BEST TOOL VALUE"

"I have been a proud owner of a 9-inch South Bend Lathes for three months. I am more than pleased with it and feel it to be positively the best tool value."—Holt Condon, Pasadena, Calif.



"LATHE MORE THAN PAID FOR ITSELF"

"We are very much pleased with the performance of our recently purchased "Workshop" Lathes. It has lived up to our every expectation in accuracy, economy, and power. Needless to say, we find it worthy of the name "SOUTH BEND."

"We have been able to not only make it pay for itself, but also to increase the capacity of our shop. Enclosed is money order covering three payments."—William Darrach, Buffalo, N. Y.

"PROVEN ITS WORTH"

"This machine has proven its worth and I am more than pleased with it."—H. W. Whipple, Boston, Mass.

"A VERY SUPERIOR LITTLE MACHINE"

"I am delighted with my 9-inch Lathes and its Attachments. I find that it is all you claim for it and is a very superior little machine."—Barry MacNutt, Gloucester, Mass.

"CURE FOR THE DEPRESSION"

"Here it is, the last payment and she is all mine now, and may I say my lathes is sure the King-pin of my shop. I have had many hours of sterling pleasure from it and look forward to many more. Even the misuses it ever once in a while."

A workshop with a South Bend Lathes is about the only thing that can make a person forget about the depression for a while because almost everybody is bothered with this panic either directly or indirectly, and a lathes will take your mind off of other things in a hurry."—Earl H. Schaub, Indianapolis, Ind.



"VERY SATISFACTORY INDEED"

"The South Bend Lathes that we purchased from you has been working very satisfactorily indeed."—Rolls Royce of America, Inc., Springfield, Mass.

"OPERATING VERY NICELY"

"Our South Bend Lathes has been operating very nicely and has been very satisfactory."—Waltham Oil Burner Corp., Waltham, Mass.

"IT'S A MARVEL"

"Received Lathes in good order. Very well pleased with the machine—it's a marvel."—P. E. Johnson, Stuart, Neb.

"FULLY MET ALL REQUIREMENTS"

"Perhaps you may wish to know that this Lathes has been used for extremely accurate experimental tool work and that it has fully met all requirements."—H. F. Jones, Chicago, Ill.

"TOOK A SHINE TO IT IMMEDIATELY"

"The Lathes has arrived and is set up and working. It is one of the finest looking and working small machines I have ever seen or used and I am more than pleased with it. My father, who is an old lathes hand, took a shine to it immediately."—Rev. Leo C. McManmon, Beaver Island, Mich.



"ENTIRE DEAL SATISFACTORY"

"The Lathes and money in which you handled the entire deal has been very satisfactory."—J. B. Ward, Walsenburg, Colo.

"BUSINESS RELATIONS PLEASANT"

"I am enclosing money order for \$24.15, this being the 10th and final payment on the Lathes purchased from you. I assure you it has been a pleasure to do business with you. In closing I wish to state that my hobby is good tools and the South Bend Lathes is the most accurate tool I have had the pleasure of operating. Everyone that has seen it has commented on what a beautiful piece of machinery it is."—Byron L. Prickett, Afton, Okla.

"NEVER RECEIVED A BETTER DEAL"

"I boast your Lathes because I believe it to be a mighty good machine which can be bought and paid for without unduly straining one's pocketbook. What other producer of high quality lathes give such service as I have been getting? Personally I am satisfied with my lathes. Also, I am perfectly satisfied that I have never received a better deal from anyone I ever dealt with. I am boasting your lathes."—Anthony O'Kray, Detroit, Mich.

"What Users Say About Their South Bend Lathes"

Booklet No. 4-W

This interesting booklet shows reproductions of some of the more interesting letters we have received from users telling about their experiences with South Bend Lathes. Sent free, postpaid to any address on request.



Write for This Free Book

MECHANICAL UNITS MANUFACTURED AND SERVICED

On the 9-inch "Workshop" Precision Lathe

Listed below are a few of the hundreds of mechanical devices manufactured and serviced on the 9-inch "Workshop" Lathes. These devices are used in factories, offices, laboratories, homes and in every other branch of modern activity. The largest and most prominent firms in America are among the list of users of these lathes.

The popularity of the 9-inch "Workshop" lathes is due to its accuracy and wide adaptability. The versatility of the lathes is further increased by the use of 31 practical attachments which may be fitted to the lathes if desired. For further information refer to page 13 where attachments are listed and illustrated or write for Bulletin No. 77-W.

Typewriters
Cash Registers
Firearms
Motors, Generators
Electrical Appliances
Auto, Bus and Truck Parts
Tractor Parts
Farm Equipment
Radio Equipment
Refrigerators
Vacuum Sweepers
Cameras and Projectors
Vending Machines
Locks, Safe Mechanism
Tools and Dies
Engineering Equip.
Construction Equip.
Metal Pattern Work
Electrotypes Equip.
Gasoline Pumps
Invention Development
Artificial Limb Makers Equip.

Bottlers' and Brewers' Apparatus
Refining Apparatus
Television Apparatus
Railroad Traffic Signal Equip.
Marine and Nautical Instruments
X-Ray Equip.
Gas and Water Equip.
Agricultural Implements
Watches, Clocks & Chronometers
Telegraph and Signal Equip.
Dental and Medical Instruments
Optical Instruments and Equip.
Die Stamping & Embossing Equip.
Scientific Apparatus
Sewing Machines
Bicycles, Motorcycles
Laboratory Equipment
Model Parts
Microscopes
Battery Service Station Equip.
Silk, Cotton & Fabric Mills Equip.

Navigation Instruments
Pattern Makers Equip.
Blacksmith Shops
Toys and Playground Equip.
Jewelry and Novelties
Scales, Meters and Gauges
Hydraulic Equip.
Barometrical Instruments
Hardware Parts
Electric Railway Equip.
Engraving Equip.
Lubricating Instruments
Surgical Instruments
Vacuum Controlled Equip.
Plumbing Shops
Hoists and Cranes
Animated Signs
Traffic Signal Equip.
Fishing Tackle
Outboard Motors
Aeronautical Instruments

All sizes and types of South Bend Lathes are manufactured in a modern plant which utilizes the most modern equipment and facilities. Special machines, fixtures, and tools are employed to produce all sizes in large quantities. The 9-inch Workshop is manufactured in factory lots of 1000 lathes at a time.



Fig. 89. Final Assembly Line Where from 25 to 50 Lathes of One Size Are Assembled at One Time

The illustrations below show a few of the manufacturing departments in this plant. By these methods production is increased, cost of manufacturing is reduced and the quality of the finished lathe is improved. The savings are in turn passed on to our customers in the form of lower selling prices.



Fig. 90. Headstocks, Tailstocks, Carriage and Other Lathe Units in Stock Ready for Final Assembly



Fig. 91. Gear Cutting Department



Fig. 92. Engineering Department



Fig. 93. Factory and Office Employees of the South Bend Lathe Works

"Factory Views of South Bend Lathe Works"

Booklet No. 51-W

An illustrated booklet 6x9 inches showing actual photographs taken in our factory. Seeing this booklet is next best to an actual visit to our plant. Mailed on request, postpaid.

Brief History and Policy

The South Bend Lathe Works was organized in 1906 and has operated continuously under the same management for 29 years. Plant (See Back Cover) and equipment represent an investment of more than \$2,000,000 all of which are devoted exclusively to the manufacture of South Bend Lathes.

The broad principles upon which the business was founded and under which it continues to operate are to produce lathes of the highest quality that will give long service and complete satisfaction to their users.



Fig. 84. Factory Display and Demonstration Room in Plant of South Bend Lathe Works

An interesting and instructive display of more than 75 different sizes and types of South Bend Lathes has been set up in our plant for demonstration purposes. All lathes are under power, fitted with necessary tools and may be operated at all times.

Special attachments and tools are also set up on the various lathes and can be seen in operation on a wide variety of machining jobs such as production work, tool work, automotive service, etc.

You are invited to visit this display and demonstration floor at any time. Expert demonstrators are in attendance ready to operate any lathe on any class of work. You will find the visit valuable and worth the time required. There is no obligation—we are glad to have you visit us.

South Bend is 90 miles east of Chicago and is easily reached by airplanes, auto, or train. Hundreds of visitors call at our plant each year from all over the world.

Installation and Erection Plan Blueprints

Blueprints showing details of setting up and installing 9-inch "Workshop" lathes are included in the equipment furnished with each lathe. For example, lathes shipped with Adjustable type Horizontal Countershafts are also supplied with

an installation and erection plan blueprint. This blueprint shows how to set up the lathe, how to space the bolt holes, how to locate motor, etc. Other information of practical and valuable use is also contained in each blueprint.

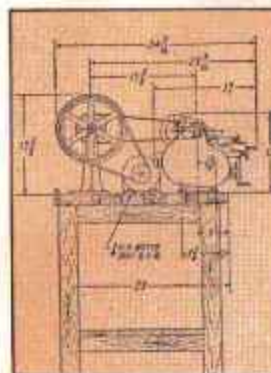


Fig. 95. A Section of Blueprint for Plain Type Horizontal Countershaft Installation

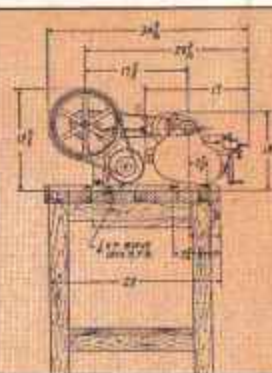


Fig. 96. A Section of Blueprint for Adjustable Type Horizontal Countershaft Installation

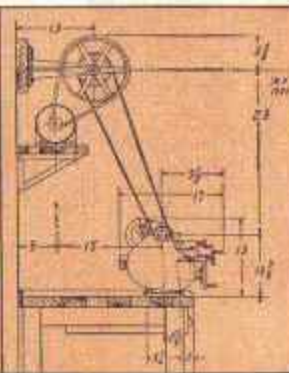


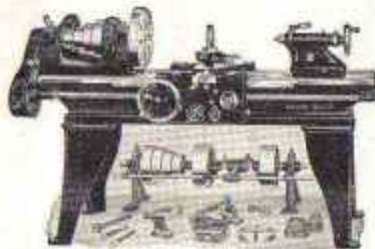
Fig. 97. A Section of Blueprint for Wall Type Motor Drive Bench Lathe Installation





If you are interested in a lathe of larger size and capacity than the 9-inch "Workshop" South Bend Lathe, as described in this catalog, write for a copy of our General Catalog No. 94 containing 72 pages, size 8 1/4" x 10 3/4".

This complete general catalog illustrates, describes and prices the complete 9" to 18" swing line of New Model South Bend Precision Lathes as well as the new South Bend line of attachments, chucks, tools and accessories. A copy will be mailed without obligation, on request, anywhere in the world, postpaid, without charge.



16"x8" Standard Change Gear Lathe Including Regular Lathes Equipment. \$480.00



16"x8" Quick Change Gear Underneath Motor Driven Lathe Complete. . . \$782.00

NET FACTORY PRICES OF 9-INCH SWING SOUTH BEND BENCH LATHES

Prices below are net f.o.b. main factory South Bend, Indiana, crated for domestic shipment. Counter shaft Drive Lathes include Counter shaft, and Regular Equipment. Motor Drive Lathes include Regular Lathes Equipment and 1/2 H.P. Split Phase Generating Motors and Switches.

Brief Specifications				Countershaft Drive Lathes				Horizontal Motor Drive			
Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Power Required H.P.	Quick Change		Standard Change		Quick Change		Standard Change	
				Weight Crated Pounds	Cat. No.	Net. Factory Price	Cat. No.	Net. Factory Price	Weight Crated Pounds	Cat. No.	Net. Factory Price
9-inch Toolmaker South Bend Bench Lathes											
9 1/2	3	18	3/4	350	30-YDW	\$140.00	340	Not made in	420-YN	\$150.00	
9 1/2	3 1/2	24	3/4	245	30-ZDW	120.00	309	Not made in	420-ZN	160.00	
9 1/2	4	30	3/4	285	30-ADW	160.00	330	Quick Change	420-AN	178.00	
9 1/2	4 1/2	36	3/4	325	30-BDW	170.00	330	Gear Type	420-BN	189.75	
9-inch Junior South Bend Bench Lathes											
9 1/2	3	16 1/2	3/4	275	Not made in	22-YH	\$170.00	430	Not made in	422-YN	\$198.00
9 1/2	3 1/2	21 1/2	3/4	300	Quick Change	22-ZB	185.00	441	Quick Change	422-ZN	190.00
9 1/2	4	27 1/2	3/4	325	Gear Type	22-AD	195.00	440	Gear Type	422-AN	200.00
9 1/2	4 1/2	33 1/2	3/4	350		22-BD	200.00	491		422-BN	210.00
9-inch South Bend Quick Change Gear and Standard Change Gear Bench Lathes											
9 1/2	3	16 1/2	3/4	430	30-YD	\$280.00	30-YB	\$270.00	471	430-YN	\$284.00
9 1/2	3 1/2	21 1/2	3/4	430	40-ZD	272.50	30-ZB	235.00	496	430-ZN	294.00
9 1/2	4	27 1/2	3/4	490	30-AD	285.00	30-AB	240.00	521	430-AN	304.00
9 1/2	4 1/2	33 1/2	3/4	505	30-BD	295.50	30-BB	235.50	545	430-BN	314.00

NET FACTORY PRICES OF 9-INCH TO 16-INCH SWING SOUTH BEND FLOOR LEG LATHES
Countershaft Drive Lathes include Counter shaft and Regular Equipment. All Motor Drive Lathes listed below include regular equipment and are equipped with 3-Phase Indirect Starting Electrical Equipment.

Brief Specifications				Countershaft Drive Lathes				Underneath Belt Motor Drive					
Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Power Required H.P.	9-inch South Bend Quick Change Gear and Standard Change Gear Floor Leg Lathes		11-inch South Bend Quick Change Gear and Standard Change Gear Floor Leg Lathes		13-inch South Bend Quick Change Gear and Standard Change Gear Floor Leg Lathes		16-inch South Bend Quick Change Gear and Standard Change Gear Floor Leg Lathes			
				Weight Crated Pounds	Cat. No.	Net. Factory Price	Weight Crated Pounds	Cat. No.	Net. Factory Price	Weight Crated Pounds	Cat. No.	Net. Factory Price	Weight Crated Pounds	Cat. No.	Net. Factory Price
9 1/2	3	16 1/2	3/4	442	30-Y	\$375.00	30-Y	\$375.00	790	100-Y	\$372.00	120-Y	\$332.00
9 1/2	3 1/2	21 1/2	3/4	497	30-Z	385.00	30-Z	345.00	830	100-Z	382.00	120-Z	342.00
9 1/2	4	27 1/2	3/4	532	30-A	395.00	30-A	355.00	845	100-A	392.00	120-A	352.00
9 1/2	4 1/2	33 1/2	3/4	557	30-B	405.00	30-B	365.00	870	100-B	402.00	120-B	362.00
11-inch South Bend Quick Change Gear and Standard Change Gear Floor Leg Lathes													
11 1/2	3 1/2	18	3/4	495	31-Z	\$328.00	32-Z	\$288.00	835	100-Z	\$447.00	120-Z	\$427.00
11 1/2	4	24	3/4	520	31-A	340.00	32-A	300.00	845	100-A	479.00	120-A	438.00
11 1/2	4 1/2	30	3/4	545	31-B	352.00	32-B	312.00	1035	100-B	491.00	120-B	451.00
13-inch South Bend Quick Change Gear and Standard Change Gear Floor Leg Lathes													
13 1/2	3	20	3/4	1110	32-C	\$482.00	32-C	\$330.00	1510	100-C	\$575.00	120-C	\$525.00
13 1/2	3 1/2	26	3/4	1100	32-D	477.00	32-D	327.00	1500	100-D	590.00	120-D	540.00
13 1/2	4	32	3/4	1225	32-E	485.00	32-E	433.00	1675	100-E	624.00	120-E	579.00
16-inch South Bend Quick Change Gear and Standard Change Gear Floor Leg Lathes													
16 1/2	3	24	1	1875	33-C	\$540.00	33-C	\$480.00	2390	100-F	\$757.00	120-F	\$692.00
16 1/2	3 1/2	30	1	1925	33-D	540.00	33-D	470.00	2400	100-G	792.00	120-G	732.00
16 1/2	4	36	1	2190	33-E	524.00	33-E	584.00	2620	100-H	836.00	120-H	776.00

Safe Delivery Guaranteed.

The illustration below shows a 1936 Model South Bend "Workshop" Lathe skidded and crated for shipment by rail to any point in the United States, Canada or Northern Mexico. In preparing lathes for shipment all finished parts are greased to prevent rusting and each unit is

wrapped securely with heavy waterproof paper so as to prevent dust or dirt accumulating in the mechanism.

The lathe is skidded and crated and the small parts are packed in a box which is nailed to the skids.

Lathes for domestic shipment are not knocked down but are crated and shipped completely assembled. All that is necessary on arrival is to remove the crating and wrapping and install the lathe in its proper place.

We guarantee safe delivery of your South Bend Lathe to the freight depot in your city and protect you against any loss or damage while in transit. Any part damaged in transportation will be replaced immediately without question and at no cost to you.



Fig. 98. Lathe Crated for Domestic Shipment

To Determine the Correct Size of the 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 the 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."

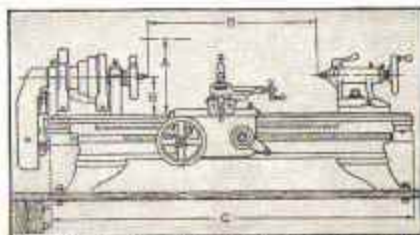


Fig. 99. How to Determine the Size of a Lathe

Freight Rates—South Bend to Principal Cities

	Rate per 100 lbs.	Rate per 100 lbs.	Rate per 100 lbs.
Baltimore, Maryland	\$1.20	Philadelphia, Pa.	\$1.25
Boise, Idaho	4.68	Pittsburgh, Pa. . . . .	.84
Boston, Massachusetts	1.35	Portland, Oregon	5.36
Chicago, Illinois . . . . .	.48	Richmond, Virginia	1.29
Charleston, S. Carolina	2.00	St. Louis, Missouri . . . . .	.81
Cleveland, Ohio . . . . .	.71	Salt Lake City, Utah	4.57
Denver, Colorado	2.58	San Antonio, Texas	3.00
Detroit, Michigan . . . . .	.61	San Francisco, California	5.36
Hartford, Connecticut	1.32	Seattle, Washington	5.36
Helena, Montana	4.68 1/2	Wichita, Kansas	1.97
		Los Angeles, California	\$5.36
		Louisville, Kentucky . . . . .	.71
		Miami, Florida	2.67
		Milwaukee, Wisconsin . . . . .	.60
		Minneapolis, Minnesota	1.45
		Montgomery, Alabama	1.73
		New York, New York	1.32
		New Orleans, Louisiana	1.99
		Oklahoma City, Oklahoma	2.45
		Omaha, Nebraska	1.57

WE GUARANTEE the South Bend 9-inch "Workshop" Lathe to be accurate and mechanically perfect; to give entire satisfaction and the service you have a right to expect.

We will ship a 9-inch "Workshop" Lathe to you for a 30-day trial in your own shop—safe delivery guaranteed. If you are dissatisfied with the lathe, in any way, within that time, ship it back to us. We will pay the return freight charges and refund your money.

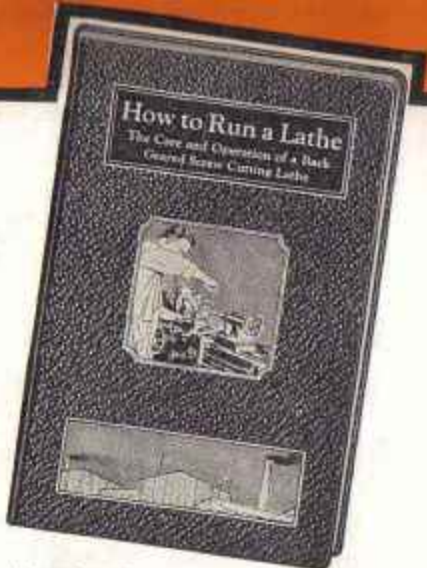
South Bend Lathe Works

A Valuable Reference Book for the Mechanic

"How to Run a Lathe," now in its 32nd edition, is a practical and authoritative text book for the student and a valuable reference book to the experienced mechanic. Over 1,500,000 copies have been printed in four languages and are used all over the world.

The book contains 160 pages, 300 illustrations, more than 300 shop kinks and gives correct and modern methods for handling over 400 machine operations on the lathe.

A copy of "How to Run a Lathe" is included with every South Bend Lathe shipped. Additional copies may be secured at 25c each for the paper bound edition and 75c each for the leather bound edition.



Paper Bound price 25c
Leatherette (as shown) price 75c

PARTIAL LIST OF CONTENTS

How to Level a Lathe
How to Lay Out a Shop
How to Set Up the Lathe
How to Lace a Belt
Cutting Screw Threads
Chucks and Face Plates

How to Hang a Countershaft
Calculating Size and Speed of Pulleys
Grinding and Setting Lathes Tools
Reading Micrometer Calipers
Using Outsides and Inside Calipers
Drilling, Boring, Reaming, Tapping

Cutting Speeds and Feeds
Operating Automatic Feeds
Aligning Lathe Centers
Use of Compound Rest
Turning and Boring Tapers
Grinding and Milling Work

Request for Information

Filling in this blank places you under no obligation whatever.

SOUTH BEND LATHE WORKS,
472 E. Madison St., South Bend, Indiana, U. S. A.

Date _____, 1935

Please send me, postpaid, no charge, the Booklets or Bulletins I have checked below:

- | | |
|--|--|
| <input type="checkbox"/> "Motor Mechanics Handbook," No. 33-W
<input type="checkbox"/> "Modern School Shops," Booklet No. 33-W
<input type="checkbox"/> "Factory Views of the South Bend Lathes Works," Booklet No. 31-W
<input type="checkbox"/> "9-inch 'Workshop' Lathe," Catalog No. 15-W
<input type="checkbox"/> "The Home Workshop," Booklet No. 11-W
<input type="checkbox"/> "Easy Payment Plan," Booklet No. 10-W | <input type="checkbox"/> "What Users Say About Their South Bend Lathes," Booklet No. 4-W
<input type="checkbox"/> "The Small Lathes in the Manufacturing Plant," Booklet No. 44-W
<input type="checkbox"/> "Attachments for the Lathe," Bulletin No. 77-W
<input type="checkbox"/> "Exporting to 96 Countries," Booklet No. 98-W
<input type="checkbox"/> "How to Run a Lathe," Book—25c
<input type="checkbox"/> "General Catalog," No. 94 |
|--|--|

Please send me free quotation and illustration on the following lathe:

Swing _____ Length of Bed _____
 Countershaft Drive Motor Drive

My work is _____
 Name _____
 Street and Number _____
 City _____ State _____

Mail to SOUTH BEND LATHE WORKS
 472 East Madison Street South Bend, Indiana, U. S. A.

USE FOR CASH OR EASY PAYMENT ORDERS

Fill out and mail to

SOUTH BEND LATHE WORKS

472 E. Madison St.,

SOUTH BEND, IND., U. S. A.

Date _____ 1935

Please enter my order for the following items, subject to your "money back guarantee", and make prompt shipment:

QUANTITY	CATALOG NO.	SIZE	DESCRIPTION	PRICE

A.C. _____ phase _____ cycles _____ volts D.C. _____ volts	Motor Specifications	Terms: <input type="checkbox"/> All Cash With Order <input type="checkbox"/> Balance C.O.D. <input type="checkbox"/> Easy Payment Plan	Total \$ _____ Amount Enclosed \$ _____
---	----------------------	--	--

EASY PAYMENT PLAN BUYERS PLEASE FILL IN AT RIGHT	Buyer's Age _____ Married or Single _____ Occupation _____ Personal Reference _____ Business Reference _____ <small>(NAME AND ADDRESS OF COMPANY FROM WHICH YOU HAVE BOUGHT ON CREDIT)</small>
---	--

Shipping Address _____
 Mailing Address _____
 Buyer's Signature _____

CUT OUT ALONG THIS LINE



Phone 3-1176

ESTABLISHED 1908
INCORPORATED 1919



CABLE ADDRESS:
"TWIN" SOUTH BEND



SOUTH BEND LATHE WORKS

MANUFACTURERS OF SOUTH BEND LATHES

ADDRESS ALL CORRESPONDENCE TO THE COMPANY

425 E. MADISON STREET

SOUTH BEND, INDIANA, U.S.A.

Nov. 27, 1955

WHEN REPLYING REFER TO

J. S. Daurer

Mr. Jean V. Giesler
Westmoreland Heights
Knoxville, Tenn.

Dear Mr. Giesler:

A man with an inventive mind, who has a well equipped workshop can make much better progress in patent development than the man who has to take his invention to some outside shop. That is why so many inventors are equipping their laboratories or workshops with the new South Bend Workshop Lathe.

The new South Bend 9" Workshop Lathe is a universal tool--it is adapted for all types of experimental work, general machine work, manufacturing, etc. Inventors and craftsmen throughout the world find it ideal for practically any job that comes up in their shop. Many of the largest industries use South Bend Lathes in their experimental laboratories and Engineering Departments for developing new ideas.

The United States Government is using our lathes in the shops of various scientific bureaus for making scientific instruments where absolute accuracy is essential. This, alone, should prove the accuracy of the South Bend Lathe, as you undoubtedly know that the United States Government is very particular in selecting machines for this type of work.

Please do not feel that you are compelled to pay cash--a small down payment will put the lathe in your shop and the balance can be paid in monthly installments. You will find the South Bend Easy Payment Plan completely described on the back of the enclosed order blank.

Will you drop us a line, today, and let us know if there is any way in which we can help you select a lathe for your workshop? Don't bother about writing a formal letter, merely use the back of this letter and the business reply envelope which is enclosed--no postage is necessary.

Yours truly,

SOUTH BEND LATHE WORKS

By:

JSD:PF

P. S. We are preparing a booklet that will contain many helpful hints for the home shop craftsman. If you would like a copy of this instructive booklet just check on the line below and return this letter--it's FREE.