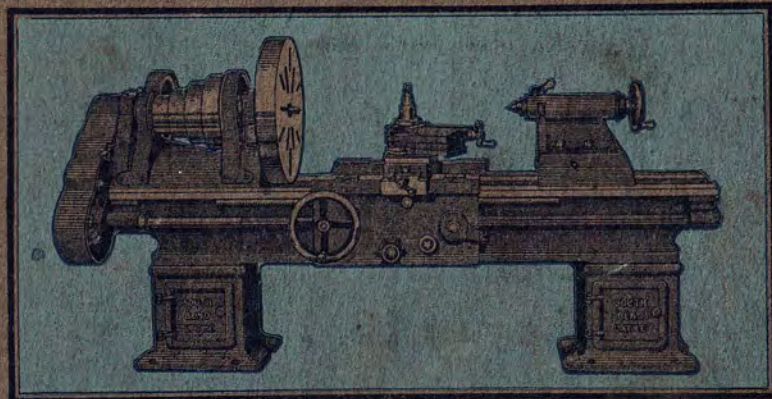


# *SOUTH BEND LATHES*



*Established 1906*

CATALOG No. 75—1922

SOUTH BEND LATHE WORKS

## REDUCED PRICES

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BACK TO NORMALCY

30% Reduction since 1920

10% December 22, 1920

20% August 15, 1921

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SOUTH BEND LATHE WORKS



CATALOG No. 75—Jan. 7, 1922

# SOUTH BEND LATHES

ESTABLISHED IN 1906

Cable Address "Twins" South Bend  
Codes: Western Union, Lieber's, A. B. C. and Bentleys

**SOUTH BEND LATHE WORKS**  
(Incorporated)

*General Offices and Works: 425 E. Madison St., South Bend, Ind., U. S. A.*  
Catalogs also printed in Spanish and Portuguese languages

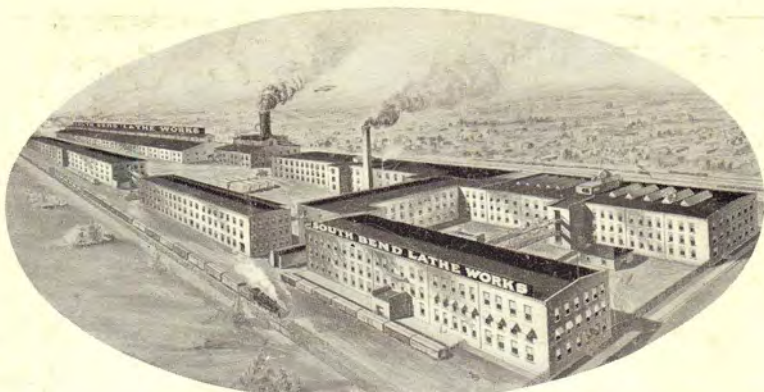
*New York Salesroom*  
166 Centre St.  
New York, N. Y.



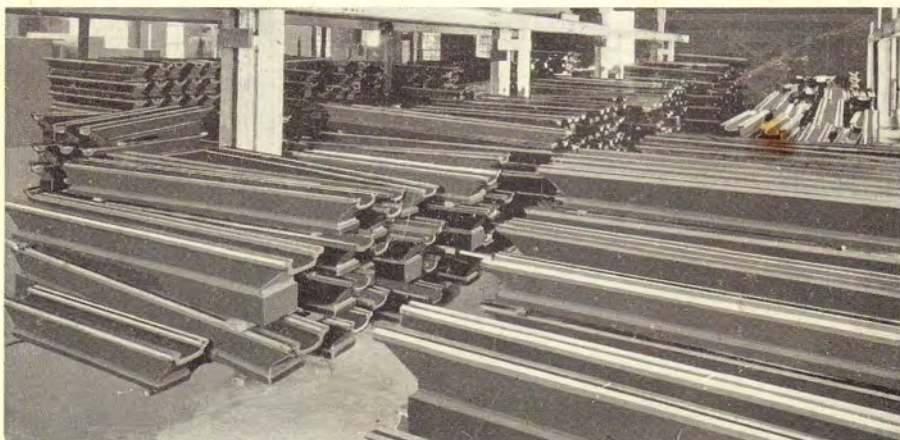
REG. U. S. PAT. OFF.



REG. U. S. PAT. OFF.



**FACTORY OF SOUTH BEND LATHE WORKS**  
This factory is devoted exclusively to the manufacture of "SOUTH BEND" LATHES  
**PRODUCTION CAPACITY 500 "SOUTH BEND" LATHES A MONTH**



**More Than 1,000 Finished Lathe Beds in Stock**

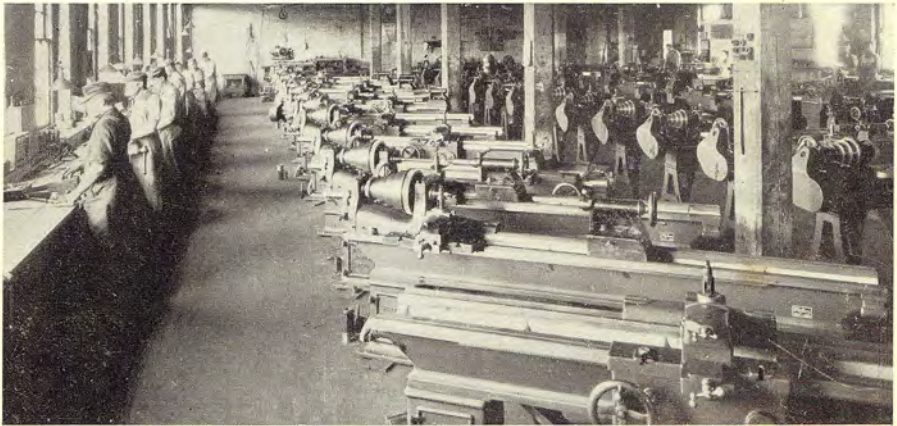


**A few of the 150 "South Bend" Lathes in use in our own plant.**

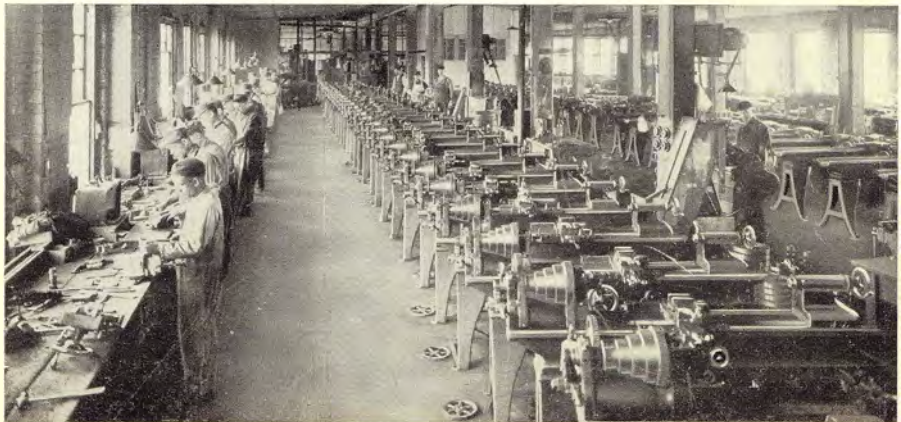
## INTERIOR VIEWS OF THE SOUTH BEND LATHE WORKS



One End of Our Planer Department



Assembling Floor, 18-, 21- and 24-inch Lathes



Assembling Floor for 13-, 15-, and 16-inch Lathes

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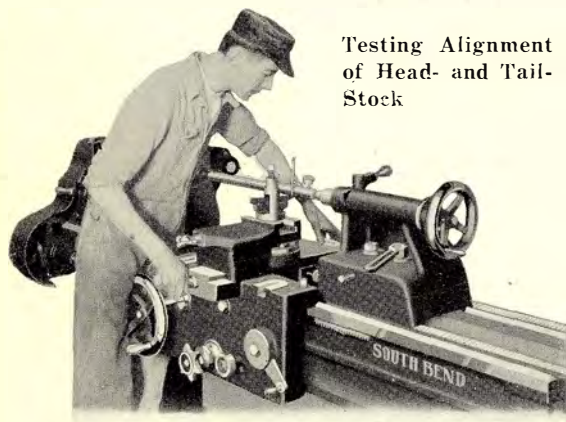
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## OUR GUARANTEE

We guarantee that each and every South Bend Lathe is accurate, mechanically perfect, and is exactly as illustrated and described in this catalog; that each South Bend Lathe will give you perfect satisfaction and that it will give you the service you have a right to expect, because you pay for reliable lathe value.



Testing Alignment  
of Head- and Tail-  
Stock

## ACCURACY TESTS

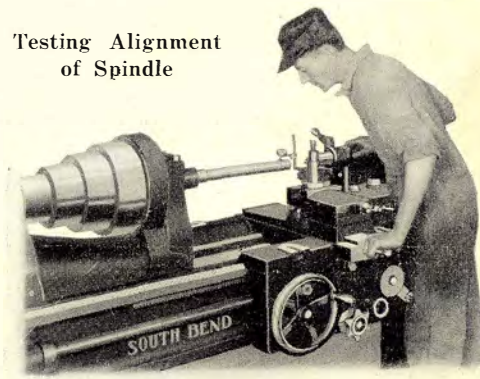
Date Tested	January 4, 1918
Size Lathe	16 x 8 ft.
Serial No. of Lathe	16024
Head Spindle Test	Less than .0005"
Tail Spindle Test	Perfect
Center Test	Perfect
Lead Screw Test	Perfect
Compared to master lead screw	
Saddle Test	Less than .0005"
Face Plate Test	Less than .0005"
Assembled By	E. B. Walliman
Inspected and Tested By	A. C. Schwartz
Lathe Shipped To	Snow Mfg. Co.
	Chicago,
	Ill.
Date Shipped	January 5, 1918
SOUTH BEND LATHE WORKS	

Test Tag

## TESTING

Every South Bend Lathe is operated and tested before leaving the factory. A tag is attached to the lathe, upon which the various tests are recorded, and when the lathe is shipped this tag is filed in our office for future reference. The illustration on the left shows one of the tags.

Testing Alignment  
of Spindle



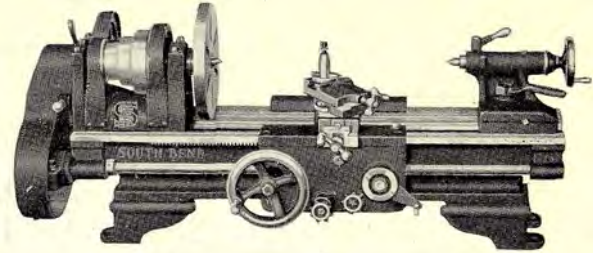
All tests are made with accurate instruments designed for that purpose

Sir

## "SOUTH BEND" SCREW CUTTING BENCH LATHE STANDARD CHANGE GEAR EQUIPMENT

We can supply the 9", 11" and 13" Lathes, fitted with Bench Legs instead of Long Legs.

The description and dimensions of Bench Lathes are the same as that of the Lathes with Long Legs as given on pages 7 to 11 inclusive. Regular equipment as shown under Long Leg Lathes is included in the price of Bench Lathes.



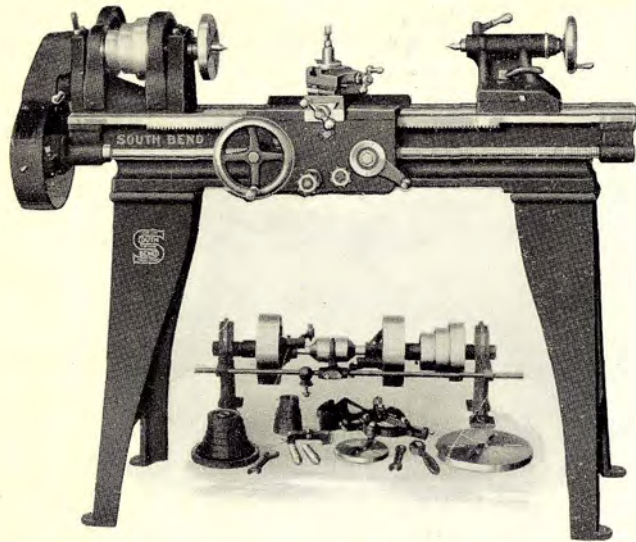
No. 27YB—11" x 3' Bench Lathe  
Standard Change Gear Equipment

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Width of Belt	Opening Tool Post Inches	Counter-Shaft Speed	Approx. Weight on Skids Crated	Weight Boxed for Export
<b>9" Standard Change Gear BENCH Lathe</b>												
25XB	9¼ in.	2½ ft.	12 in.	6⅜ in.	¾ in.	1½ x 8 th.	No. 2	1 in.	⅜ x ⅞"	290 R.P.M.	375	450
25YB	9¼ in.	3 ft.	18 in.	6⅜ in.	¾ in.	1½ x 8 th.	No. 2	1 in.	⅜ x ⅞"	290 R.P.M.	400	480
25AB	9¼ in.	4 ft.	30 in.	6⅜ in.	¾ in.	1½ x 8 th.	No. 2	1 in.	⅜ x ⅞"	290 R.P.M.	450	520
<b>11" Standard Change Gear BENCH Lathe</b>												
27YB	11¼ in.	3 ft.	14 in.	7⅝ in.	⅞ in.	1⅝ x 8 th.	No. 2	1¼ in.	⅜ x ⅞"	275 R.P.M.	525	705
27AB	11¼ in.	4 ft.	26 in.	7⅝ in.	⅞ in.	1⅝ x 8 th.	No. 2	1¼ in.	⅜ x ⅞"	275 R.P.M.	600	775
27BB	11¼ in.	5 ft.	38 in.	7⅝ in.	⅞ in.	1⅝ x 8 th.	No. 2	1¼ in.	⅜ x ⅞"	275 R.P.M.	650	845
<b>13" Standard Change Gear BENCH Lathe</b>												
34AB	13¼ in.	4 ft.	18 in.	9 in.	1 in.	1⅞ x 8 th.	No. 3	1½ in.	½ x 1⅞"	275 R.P.M.	950	1115
34BB	13¼ in.	5 ft.	30 in.	9 in.	1 in.	1⅞ x 8 th.	No. 3	1½ in.	½ x 1⅞"	275 R.P.M.	1000	1185
34CB	13¼ in.	6 ft.	42 in.	9 in.	1 in.	1⅞ x 8 th.	No. 3	1½ in.	½ x 1⅞"	275 R.P.M.	1050	1245

**Extras:** Bench Lathes may be supplied at extra cost with Milling and Key-Way Cutting Attachment, Draw in Chuck Attachment, Electric Drive Attachment, Grinding Attachment, Taper Attachment and Thread Dial.



## No. 25—9-INCH "SOUTH BEND" SCREW CUTTING ENGINE LATHE STANDARD CHANGE GEAR EQUIPMENT



Regular Equipment, as illustrated under lathe, is included in price

Fitted with Automatic Longitudinal-Feed, Automatic Cross-Feed and Graduated Compound Rest

### *The 9" Lathe is recommended for Small, Accurate Work*

**Head Stock** is equipped with improved reverse. Spindle-cone has three steps for 1-inch belt. Spindle is of special spindle steel, accurately ground. Bearings are the best phosphor bronze with ample oiling facilities and are adjustable for wear.

**Tail Stock** is off-set to allow compound rest to swivel parallel to bed and is provided with set-over for turning taper. Tail stock center is self-ejecting.

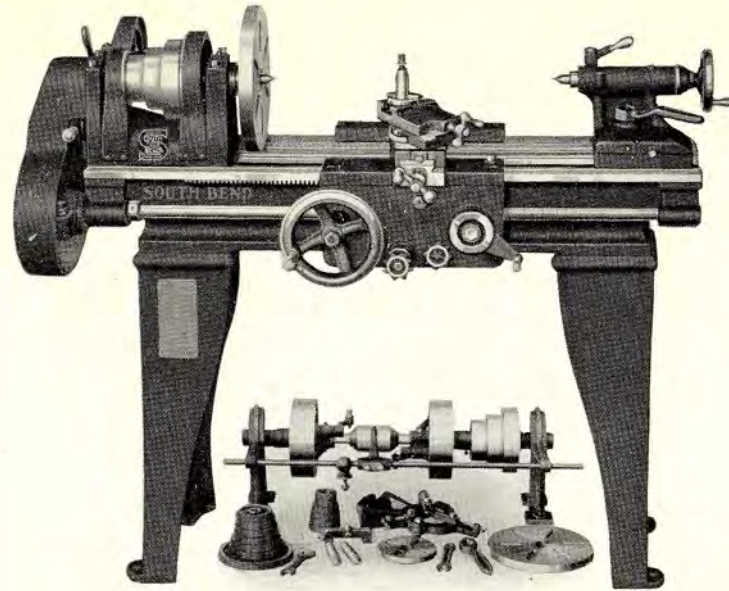
**Thread Cutting.** Lathe is indexed to cut standard threads from 4 to 40, right or left, including 11½ pipe-thread, and by compounding the gears furnished many other threads can be cut. (See page 44.)

**Graduation.** The compound rest is graduated in 180 degrees. The cross-feed screw has micrometer graduated collar reading in one-thousandths of an inch. (See page 48.)

**Equipment,** as shown in cut, is included in the price and consists of large and small face plates, compound rest, two steel centers, center rest, change-gears, adjustable stop for screw-cutting, a set of feed-gears, gear-guards, semi-machined chuck back, necessary wrenches and double friction countershaft.

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Width of Belt	Opening Tool Post Inches	Counter-Shaft Speed	APPROX. Weight on Skids Crated	Weight Boxed for Export
25X	9¼ in.	2½ ft.	12 in.	6¾ in.	¾ in.	1½ x 8 th.	No. 2	1 in.	¾ x 7/8"	290 R.P.M.	440	500
25Y	9¼ in.	3 ft.	18 in.	6¾ in.	¾ in.	1½ x 8 th.	No. 2	1 in.	¾ x 7/8"	290 R.P.M.	460	530
25A	9¼ in.	4 ft.	30 in.	6¾ in.	¾ in.	1½ x 8 th.	No. 2	1 in.	¾ x 7/8"	290 R.P.M.	500	570

**Extras:** The No. 25 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Electric Drive Attachment, Grinding Attachment, Taper Attachment, Oil Pan, Follower Rest and Thread Dial.



Regular Equipment, as illustrated under lathe, is included in price  
No. 27—11-inch "SOUTH BEND" SCREW CUTTING ENGINE LATHE  
Standard Change Gear Equipment

## No. 27—11-INCH "SOUTH BEND" SCREW CUTTING ENGINE LATHE STANDARD CHANGE GEAR EQUIPMENT

Fitted with Automatic Longitudinal-Feed, Automatic Cross-Feed and Graduated Compound Rest

*The 11-inch Lathe is practical in light Manufacturing, in the Tool-Room, the Electrical Shop, the Battery Service Station or in any shop where fine, accurate work is required.*

**Bed** is rigid, cross ribbed by heavy box braces cast in at short intervals its entire length; has three V's and one flat way for front bearing of head stock, tail stock and carriage. The rack attached is of steel, cut from the solid bar.

**Head Stock** is equipped with improved reverse. Spindle-cone has three steps for 1¼-inch belt. Spindle is of special spindle steel, accurately ground, has ⅞-inch hole its entire length. Centers are No. 2 Morse taper. Bearings are the best phosphor bronze with ample oiling facilities and are adjustable for wear.

**Tail Stock** is off-set to allow compound rest to swivel parallel to bed and is provided with set-over for turning taper. Tail stock center is self-ejecting.

**Carriage** is strong, with wide, deep bridge. Both automatic cross feed and automatic longitudinal feed are operated from the front of apron and but one feed at a time can be

engaged. Both feeds are driven by a splined screw and worm so that the thread of the lead screw is used for thread cutting only. (See page 44.)

**Thread Cutting.** Lathe is indexed to cut standard threads from 4 to 40, right or left, including 11½ pipe-thread, and by compounding the gears furnished many other threads can be cut. (See page 44.)

**Graduation.** The compound rest is graduated in 180 degrees. The cross-feed screw has micrometer graduated collar reading in one-thousandths of an inch. (See page 48.)

**Equipment,** as shown in cut, is included in the price and consists of large and small face plates, compound rest, two steel centers, center rest, change gears, adjustable stop for screw-cutting, a set of feed gears, gear guards, semi-machined chuck back, necessary wrenches and double friction countershaft.

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Width of Belt	Opening Tool Post Inches	Counter-Shaft Speed	Approx. Weight on Skids Crated	Weight Boxed for Export
27Y	11¼ in.	3 ft.	14 in.	7⅝ in.	⅞ in.	1⅝ x 8 th.	No. 2	1¼ in.	⅜ x ⅞"	275 R.P.M.	575	765
27A	11¼ in.	4 ft.	26 in.	7⅝ in.	⅞ in.	1⅝ x 8 th.	No. 2	1¼ in.	⅜ x ⅞"	275 R.P.M.	625	835
27B	11¼ in.	5 ft.	38 in.	7⅝ in.	⅞ in.	1⅝ x 8 th.	No. 2	1¼ in.	⅜ x ⅞"	275 R.P.M.	675	905

**Extras:** The No. 27 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Electric Drive Attachment, Grinding Attachment, Taper Attachment, Oil Pan, Follower Rest, Thread Dial, and Raising Blocks so lathe will turn and bore 14-inch swing.



## No. 34—13-INCH "SOUTH BEND" SCREW CUTTING ENGINE LATHE STANDARD CHANGE GEAR EQUIPMENT

Fitted with Automatic Longitudinal-Feed, Automatic Cross-Feed and Graduated Compound Rest

*The No. 34 Lathe is an excellent tool for the Machine Shop, for light, accurate work*

**Bed** is rigid, cross ribbed by heavy box braces, cast in at snort intervals its entire length; has three V's and one flat way for front bearing of head stock, tail stock and carriage. The rack attached is of steel, cut from the solid bar.

**Head Stock** is equipped with improved reverse. Spindle-cone has four steps for 1½-inch belt. Spindle is of special spindle steel, accurately ground, has 1-inch hole its entire length. Centers are No. 3 Morse taper. Bearings are the best phosphor bronze with ample oiling facilities and are adjustable for wear.

**Tail Stock** is off-set to allow compound rest to swivel parallel to bed and is provided with set-over for turning taper. Tail stock center is self-ejecting.

**Carriage** is strong, with wide, deep bridge; has T slots for clamping work for milling and boring. Both automatic cross feed and automatic longitudinal feed are operated

from the front of apron and but one feed at a time can be engaged. Both feeds are driven by a splined screw and worm so that the thread of the lead screw is used for thread cutting only. (See automatic apron, page 44.)

**Thread Cutting.** Lathe is indexed to cut standard threads from 4 to 40, right or left, including 1½ pipe-thread, and by compounding the gears furnished many other threads can be cut. (See page 44.)

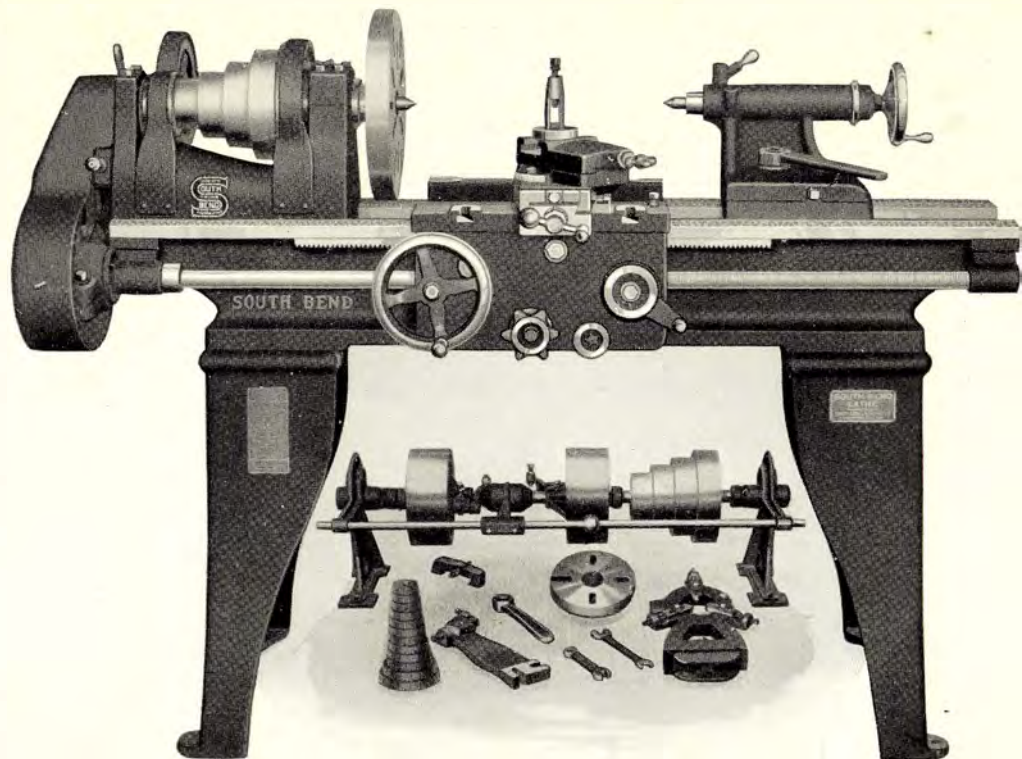
**Graduation.** The compound rest is graduated in 180 degrees. (See page 48.) The cross feed screw has micrometer graduated collar reading in one-thousandths of an inch.

**Equipment,** as shown in cut, is included in the price and consists of large and small face plates, compound rest, two steel centers, center rest, follower rest, change gears, adjustable stop for screw-cutting, a set of feed gears, gear guards, semi-machined chuck back, necessary wrenches and double friction countershaft.

Regular equipment, as illustrated under lathe, is included in price

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Opening Tool Post Inches	Countershaft Speed	Approx. Weight on Skids, Crated	Weight Boxed for Export
34A	13¼ in.	4 ft.	18 in.	9 in.	1 in.	1⅞ x 8 th.	No. 3	½ x 1⅛ in.	275 R.P.M.	1000	1230
34B	13¼ in.	5 ft.	30 in.	9 in.	1 in.	1⅞ x 8 th.	No. 3	½ x 1⅛ in.	275 R.P.M.	1050	1300
34C	13¼ in.	6 ft.	42 in.	9 in.	1 in.	1⅞ x 8 th.	No. 3	½ x 1⅛ in.	275 R.P.M.	1100	1360
34D	13¼ in.	7 ft.	54 in.	9 in.	1 in.	1⅞ x 8 th.	No. 3	½ x 1⅛ in.	275 R.P.M.	1150	1430
34E	13¼ in.	8 ft.	66 in.	9 in.	1 in.	1⅞ x 8 th.	No. 3	½ x 1⅛ in.	275 R.P.M.	1200	1500

**Extras:** The No. 34 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Electric Drive Attachment, Grinding Attachment, Taper Attachment, Oil Pan, Thread Dial, and Raising Blocks so lathe will turn and bore 18-inch swing.



Regular Equipment, as illustrated under lathe, is included in price  
No. 37—15-inch "SOUTH BEND" SCREW CUTTING ENGINE LATHE  
Standard Change Gear Equipment

## No. 37—15-INCH "SOUTH BEND" SCREW CUTTING ENGINE LATHE STANDARD CHANGE GEAR EQUIPMENT

Fitted with Automatic Longitudinal-Feed, Automatic Cross-Feed and Graduated Compound Rest

*No. 37 Lathe is surpassed by none for Manufacturing and for the Machine and General Repair Shop*

**Bed** is rigid, cross ribbed by heavy box braces, cast in at short intervals its entire length; has three V's and one flat way for guiding the head stock, tail stock and carriage. The rack attached is of steel, cut from the solid bar.

**Head Stock** is equipped with improved reverse. Spindle-cone has four steps for 1 $\frac{3}{4}$ -inch belt. Spindle is of special carbon steel accurately ground; has 1 $\frac{1}{8}$ -inch hole its entire length. Centers are No. 3 Morse taper. Bearings are of heavy phosphor bronze with ample oiling facilities and are adjustable for wear.

**Tail Stock** is off-set to allow compound rest to swivel parallel to the bed and is provided with set-over for turning taper. Tail stock center is self-ejecting.

**Carriage** is strong, with wide, deep bridge; has T slots for clamping work for milling and boring. Both automatic cross feed and automatic longitudinal feed are operated

from the front of apron and but one feed at a time can be engaged. Both feeds are driven by a splined screw and worm so that the thread of the lead screw is used for thread cutting only. (See automatic apron, page 44.)

**Thread Cutting.** The lathe is indexed to cut standard threads from 4 to 40, right or left, including 11 $\frac{1}{2}$  pipe-thread. (See page 44.)

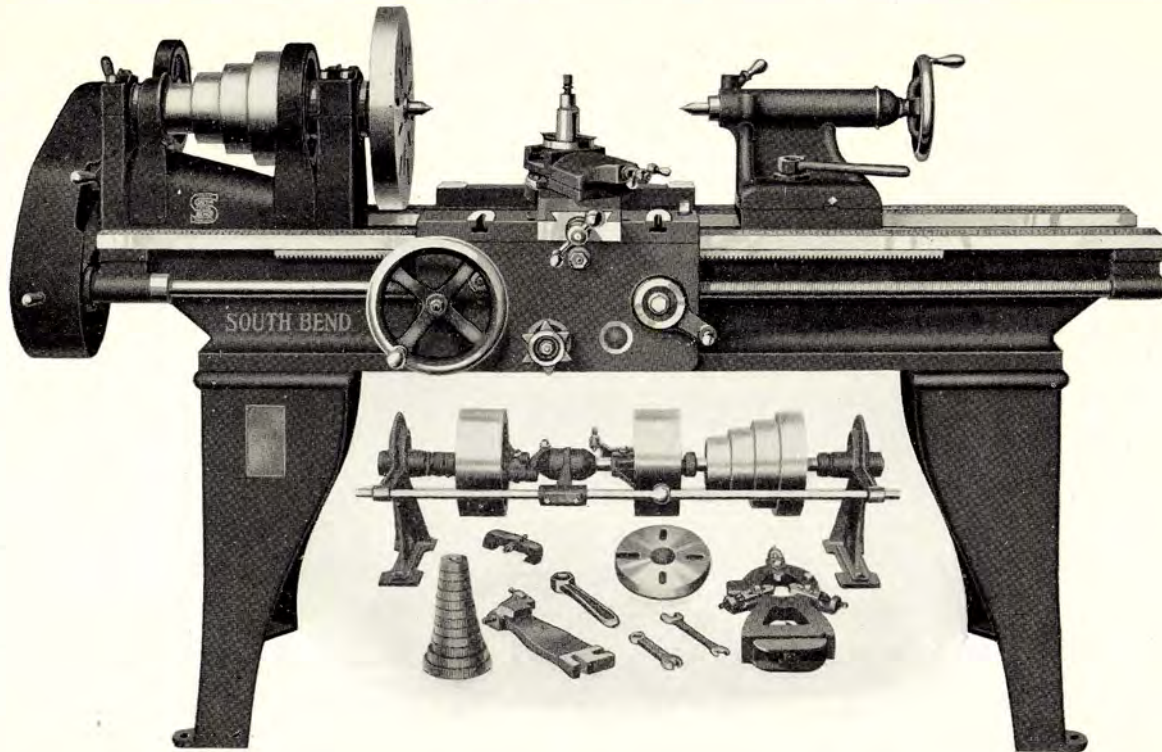
**Graduation.** The compound rest is graduated in 180 degrees. (See page 48.) The cross feed screw has micrometer graduated collar reading in one-thousandths of an inch.

**Equipment,** as shown in cut, is included in the price and consists of large and small face plates, compound rest, two steel centers, center rest, follower rest, change gears, adjustable stop for screw-cutting, a set of feed gears, gear guards, semi-machined chuck back, necessary wrenches and double friction countershaft.

Regular equipment, as illustrated under lathe, is included in price

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Opening Tool Post Inches	Countershaft Speed	Approx. Weight on Skids, Crated	Weight Boxed for Export
37B	15 $\frac{1}{4}$ in.	5 ft.	27 in.	10 $\frac{5}{8}$ in.	1 $\frac{1}{8}$ in.	2 $\frac{1}{4}$ x 8 th.	No. 3	$\frac{9}{16}$ x 1 $\frac{1}{4}$ in.	250 R.P.M.	1400	1650
37C	15 $\frac{1}{4}$ in.	6 ft.	39 in.	10 $\frac{5}{8}$ in.	1 $\frac{1}{8}$ in.	2 $\frac{1}{4}$ x 8 th.	No. 3	$\frac{9}{16}$ x 1 $\frac{1}{4}$ in.	250 R.P.M.	1475	1735
37D	15 $\frac{1}{4}$ in.	7 ft.	51 in.	10 $\frac{5}{8}$ in.	1 $\frac{1}{8}$ in.	2 $\frac{1}{4}$ x 8 th.	No. 3	$\frac{9}{16}$ x 1 $\frac{1}{4}$ in.	250 R.P.M.	1550	1830
37E	15 $\frac{1}{4}$ in.	8 ft.	63 in.	10 $\frac{5}{8}$ in.	1 $\frac{1}{8}$ in.	2 $\frac{1}{4}$ x 8 th.	No. 3	$\frac{9}{16}$ x 1 $\frac{1}{4}$ in.	250 R.P.M.	1625	1925
37G	15 $\frac{1}{4}$ in.	10 ft.	87 in.	10 $\frac{5}{8}$ in.	1 $\frac{1}{8}$ in.	2 $\frac{1}{4}$ x 8 th.	No. 3	$\frac{9}{16}$ x 1 $\frac{1}{4}$ in.	250 R.P.M.	1775	2125

**Extras:** The No. 37 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Electric Drive Attachment, Grinding Attachment, Taper Attachment, Oil Pan, Thread Dial, and Raising Blocks so lathe will turn and bore 20-inch swing.



Regular Equipment, as illustrated under lathe, is included in price  
No. 40—16-inch "SOUTH BEND" SCREW CUTTING ENGINE LATHE  
Standard Change Gear Equipment



## No. 40—16-INCH "SOUTH BEND" SCREW CUTTING ENGINE LATHE STANDARD CHANGE GEAR EQUIPMENT

Fitted with Automatic Longitudinal-Feed, Automatic Cross-Feed and Graduated Compound Rest

*The No. 40 Lathe is a heavy, reliable tool capable of taking powerful cuts with high-speed steel. We recommend it for Manufacturing for the Machine Shop and general all-around work*

**Bed** is rigid, cross ribbed by heavy box braces, cast in at short intervals its entire length; has three V's and one flat way for guiding the head stock, tail stock, and carriage. The rack is of steel, cut from the solid bar.

**Head Stock** is equipped with improved reverse. Spindle-cone has four steps for 2-inch belt, which, with back gears, gives eight changes of spindle speeds. Spindle is of special carbon steel, accurately ground; has  $1\frac{1}{16}$ -inch hole its entire length. Centers are No. 3 Morse taper. Bearings are of heavy phosphor bronze with ample oiling facilities and are adjustable for wear.

**Tail Stock** is off-set to allow compound rest to swivel parallel to the bed and is provided with set-over for turning taper. Tail stock center is self-ejecting.

**Carriage** is strong, with wide, deep bridge; has T slots for clamping work for milling and boring. Has automatic cross feed and automatic longitudinal feed, both of which

are operated from front of apron and but one feed at a time can be engaged. Both feeds are driven by a splined screw and worm so that the thread of the lead screw is used for thread cutting only. (See automatic apron, page 44.)

**Thread Cutting.** The lathe is indexed to cut standard threads from 4 to 40, right or left, including  $11\frac{1}{2}$  pipe-thread. (See page 44.)

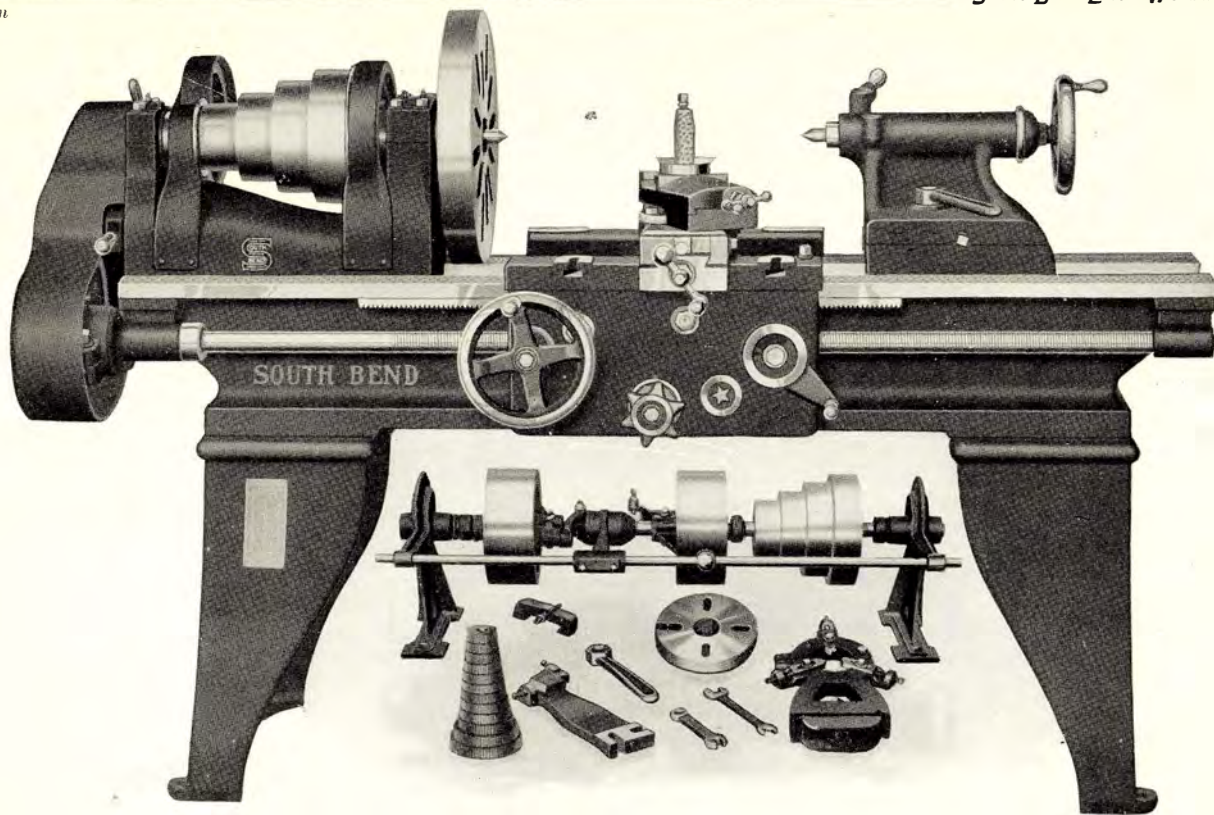
**Graduation.** The compound rest is graduated in 180 degrees. (See page 48.) The cross feed screw has a graduated micrometer collar reading in one-thousandths of an inch.

**Equipment,** as shown in cut, is included in the price and consists of large and small face plates, compound rest, two steel centers, center rest, follower rest, change gears, adjustable stop for screw-cutting, a set of feed gears, gear guards, semi-machined chuck back, necessary wrenches and double friction countershaft.

Regular equipment, as illustrated under lathe, is included in price

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Opening Tool Post Inches	Countershaft Speed	Approx. Weight on Skids, Crated	Weight Boxed for Export
40C	16 $\frac{1}{4}$ in.	6 ft.	36 in.	11 $\frac{1}{8}$ in.	1 $\frac{5}{16}$ in.	2 $\frac{3}{8}$ x 8 th.	No. 3	$\frac{5}{8}$ x 1 $\frac{3}{8}$ in.	225 R.P.M.	1700	1970
40D	16 $\frac{1}{4}$ in.	7 ft.	48 in.	11 $\frac{1}{8}$ in.	1 $\frac{5}{16}$ in.	2 $\frac{3}{8}$ x 8 th.	No. 3	$\frac{5}{8}$ x 1 $\frac{3}{8}$ in.	225 R.P.M.	1780	2070
40E	16 $\frac{1}{4}$ in.	8 ft.	60 in.	11 $\frac{1}{8}$ in.	1 $\frac{5}{16}$ in.	2 $\frac{3}{8}$ x 8 th.	No. 3	$\frac{5}{8}$ x 1 $\frac{3}{8}$ in.	225 R.P.M.	1860	2180
40G	16 $\frac{1}{4}$ in.	10 ft.	84 in.	11 $\frac{1}{8}$ in.	1 $\frac{5}{16}$ in.	2 $\frac{3}{8}$ x 8 th.	No. 3	$\frac{5}{8}$ x 1 $\frac{3}{8}$ in.	225 R.P.M.	2020	2390
40H	16 $\frac{1}{4}$ in.	12 ft.	108 in.	11 $\frac{1}{8}$ in.	1 $\frac{5}{16}$ in.	2 $\frac{3}{8}$ x 8 th.	No. 3	$\frac{5}{8}$ x 1 $\frac{3}{8}$ in.	225 R.P.M.	2280	2750

**Extras:** The No. 40 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Thread Dial, Electric Drive Attachment, Grinding Attachment, Taper Attachment and Raising Blocks so lathe will turn and bore 22-inch swing. Lathe with 12-foot bed equipped with center leg.



Regular Equipment, as illustrated under lathe, is included in price  
No. 45—18-inch "SOUTH BEND" SCREW CUTTING ENGINE LATHE  
Standard Change Gear Equipment

## No. 45—18-INCH "SOUTH BEND" SCREW CUTTING ENGINE LATHE STANDARD CHANGE GEAR EQUIPMENT

Fitted with Automatic Longitudinal-Feed, Automatic Cross-Feed and Graduated Compound Rest

*The No. 45 Lathe has the strength for Manufacturing and general all-around work in the Machine Shop*

**Bed** is rigid, cross ribbed by heavy box braces, cast in at short intervals its entire length; has three V's and one flat way for guiding the head stock, tail stock, and carriage. The rack is of steel, cut from the solid bar.

**Head Stock** is equipped with improved reverse. Spindle-cone has four steps for a 2½-inch belt, which, with back gears, gives eight changes of spindle speeds. Spindle is of special carbon steel, accurately ground; has a 1⅜-inch hole its entire length. Centers conform to No. 3 Morse taper. Bearings are of heavy phosphor bronze, with ample oiling facilities, and are adjustable for wear.

**Tail Stock** is off-set to allow compound rest to swivel parallel to the bed and is provided with set-over for turning taper. Tail stock center is self-ejecting.

**Carriage** is strong, with wide, deep bridge; has T slots for clamping work for milling and boring. Has automatic cross feed and automatic longitudinal feed, both of which

are operated from front of apron and so arranged that only one feed can be engaged at a time. Both feeds are driven by a splined screw and worm so that the thread of the lead screw is used for thread cutting only. (See automatic apron, page 44.)

**Thread Cutting.** The lathe is indexed to cut standard threads from 2 to 40, right or left, including 1½ pipe-thread. (See page 44.)

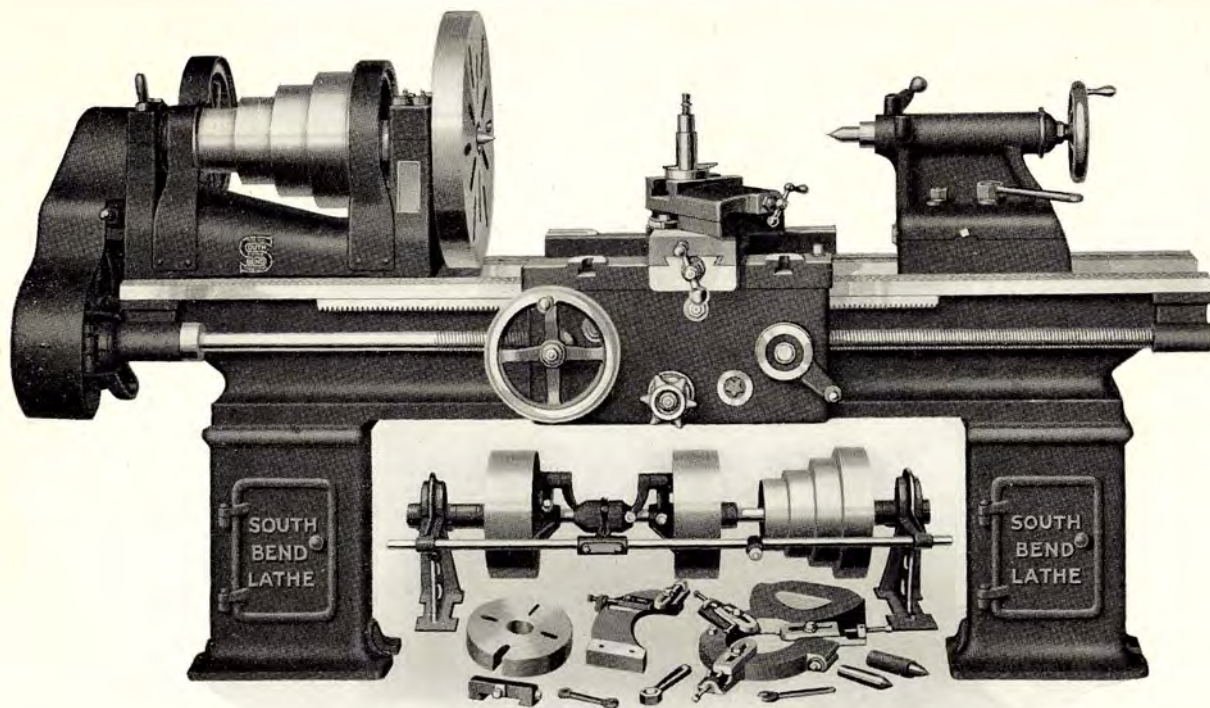
**Graduation.** The compound rest is graduated in 180 degrees. (See page 48.) The cross feed screw has a graduated micrometer collar reading in one-thousandths of an inch.

**Equipment,** as shown in cut, is included in the price and consists of large and small face plates, compound rest, two steel centers, center rest, follower rest, change gears, adjustable stop for screw cutting, a set of feed gears, gear guards, semi-machined chuck back, necessary wrenches and double friction countershaft.

Regular equipment, as illustrated under lathe, is included in price

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Opening Tool Post Inches	Countershaft Speed	Approx. Weight on Skids, Crated	Weight Boxed for Export
45C	18¼ in.	6 ft.	31 in.	12⅝ in.	1⅜ in.	2⅝ x 6 th.	No. 3	⅝ x 1⅜ in.	200 R.P.M.	2300	2600
45D	18¼ in.	7 ft.	43 in.	12⅝ in.	1⅜ in.	2⅝ x 6 th.	No. 3	⅝ x 1⅜ in.	200 R.P.M.	2400	2730
45E	18¼ in.	8 ft.	55 in.	12⅝ in.	1⅜ in.	2⅝ x 6 th.	No. 3	⅝ x 1⅜ in.	200 R.P.M.	2500	2860
45G	18¼ in.	10 ft.	79 in.	12⅝ in.	1⅜ in.	2⅝ x 6 th.	No. 3	⅝ x 1⅜ in.	200 R.P.M.	2700	3210
45H	18¼ in.	12 ft.	103 in.	12⅝ in.	1⅜ in.	2⅝ x 6 th.	No. 3	⅝ x 1⅜ in.	200 R.P.M.	3000	3520

**Extras:** The No. 45 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Thread Dial, Electric Drive Attachment, Grinding Attachment, Taper Attachment and Raising Blocks so lathe will turn and bore 24-inch swing. Lathe with 12-foot bed equipped with center leg.



Regular Equipment, as illustrated under lathe, is included in price  
No. 47—21-inch "SOUTH BEND SCREW CUTTING ENGINE LATHE"  
Standard Change Gear Equipment

## No. 47—21-INCH "SOUTH BEND" SCREW CUTTING ENGINE LATHE STANDARD CHANGE GEAR EQUIPMENT

Fitted with Automatic Longitudinal-Feed, Automatic Cross-Feed and Graduated Compound Rest

*No. 47 Lathe makes an excellent all-around lathe for Manufacturing, also for general Machine and Repair Shop*

**Bed** is rigid, cross ribbed by heavy box braces, cast in at short intervals its entire length; has three V's and one flat way for guiding the head stock, tail stock, and carriage. The rack is of steel, cut from the solid bar.

**Head Stock** is equipped with improved reverse. Spindle-cone has four steps for a 3-inch belt, which, with back gears, gives eight changes of spindle speeds. Spindle is of special carbon steel, accurately ground; has a 1½-inch hole its entire length. Centers conform to No. 4 Morse taper. Bearings are of heavy phosphor bronze, with ample oiling facilities, and are adjustable for wear.

**Tail Stock** is off-set to allow compound rest to swivel parallel to the bed and is provided with set-over for turning taper. Tail stock center is self-ejecting.

**Carriage** is strong, with wide, deep bridge; has T slots for clamping work for milling and boring. Has automatic cross feed and automatic longitudinal feed, both of which

are operated from front of apron and so arranged that only one feed can be engaged at a time. Both feeds are driven by a splined screw and worm so that the thread of the lead screw is used for thread cutting only. (See automatic apron, page 44.)

**Thread Cutting.** The lathe is indexed to cut standard threads from 2 to 40, right or left, including 1½ pipe-thread. (See page 44.)

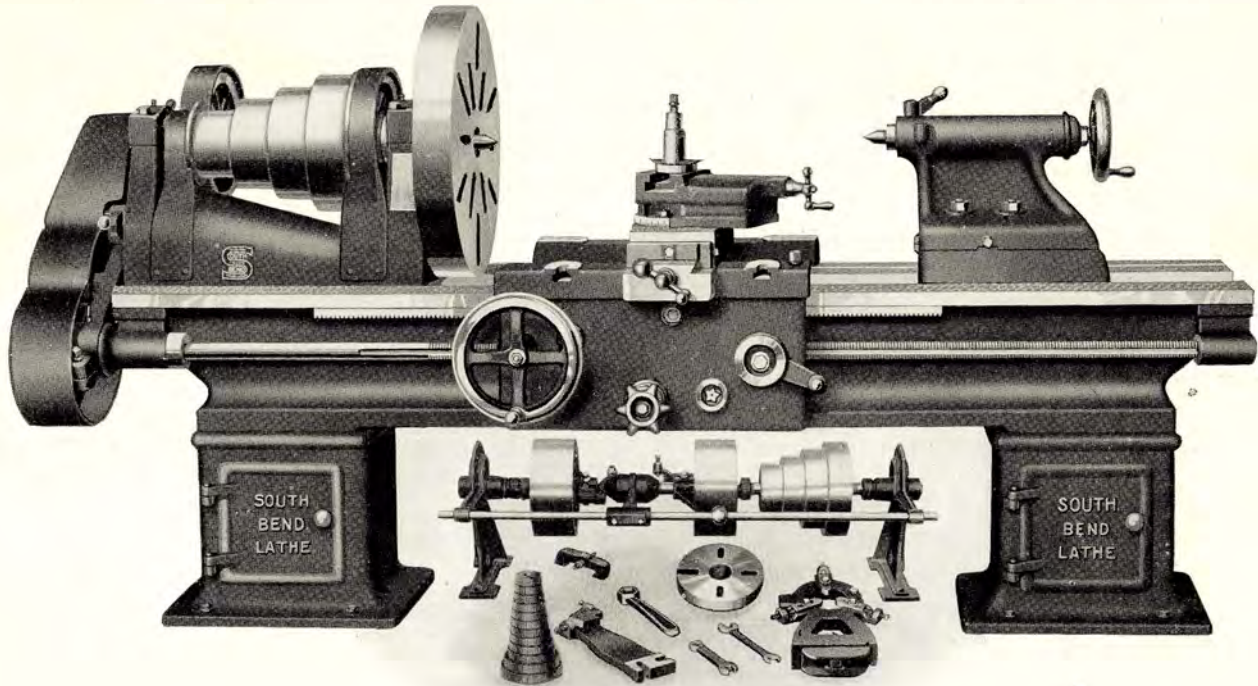
**Graduation.** The compound rest is graduated in 180 degrees. (See page 48.) The cross feed screw has a graduated micrometer collar reading in one-thousandths of an inch.

**Equipment,** as shown in cut, is included in the price and consists of large and small face plates, compound rest, two steel centers, center rest, follower rest, change gears, adjustable stop for screw-cutting, a set of feed gears, gear guards, semi-machined chuck back, necessary wrenches and double friction countershaft.

Regular equipment, as illustrated under lathe, is included in price

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Opening Tool Post Inches	Countershaft Speed	Approx. Weight on Skids, Crated	Weight Boxed for Export
47D	21¼ in.	7 ft.	39 in.	15⅛ in.	1½ in.	3 x 5 th.	No. 4	⅞ x 2 in.	175 R.P.M.	3400	4030
47E	21¼ in.	8 ft.	51 in.	15⅛ in.	1½ in.	3 x 5 th.	No. 4	⅞ x 2 in.	175 R.P.M.	3600	4350
47G	21¼ in.	10 ft.	75 in.	15⅛ in.	1½ in.	3 x 5 th.	No. 4	⅞ x 2 in.	175 R.P.M.	3850	4725
47H	21¼ in.	12 ft.	99 in.	15⅛ in.	1½ in.	3 x 5 th.	No. 4	⅞ x 2 in.	175 R.P.M.	4210	5200
47K	21¼ in.	14 ft.	123 in.	15⅛ in.	1½ in.	3 x 5 th.	No. 4	⅞ x 2 in.	175 R.P.M.	4430	5500

**Extras:** The No. 47 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Thread Dial, Electric Drive Attachment, Grinding Attachment, Taper Attachment and Raising Blocks so lathe will turn and bore 27-inch swing. Lathes with 12- and 14-foot beds equipped with center leg.



Regular Equipment, as illustrated under lathe, is included in price  
No. 54—24-inch "SOUTH BEND" SCREW CUTTING ENGINE LATHE  
Standard Change Gear Equipment

## No. 54—24-INCH "SOUTH BEND" SCREW CUTTING ENGINE LATHE STANDARD CHANGE GEAR EQUIPMENT

Fitted with Automatic Longitudinal-Feed, Automatic Cross-Feed and Graduated Compound Rest

*No. 54 Lathe is the largest size we build, designed to give service for general all-around work. We recommend it for Manufacturing and for the general Machine Shop*

**Bed** is rigid, cross ribbed by heavy box braces, cast in at short intervals its entire length; has three V's and one flat way for guiding the head stock, tail stock, and carriage. The rack is of steel, cut from the solid bar.

**Head Stock** is equipped with improved reverse. Spindle-cone has four steps for a 3½-inch belt, which, with back gears, gives eight changes of spindle speeds. Spindle is of special carbon steel, accurately ground; has a 1¼-inch hole its entire length. Centers conform to No. 4 Morse taper. Bearings are of heavy phosphor bronze, with ample oiling facilities, and are adjustable for wear.

**Tail Stock** is off-set to allow compound rest to swivel parallel to the bed and is provided with set-over for turning taper. Tail stock center is self-ejecting.

**Carriage** is strong, with wide, deep bridge; has T slots for clamping work for milling and boring. Has automatic cross feed and automatic longitudinal feed, both of which

are operated from front of apron and so arranged that only one feed can be engaged at a time. Both feeds are driven by a splined screw and worm so that the thread of the lead screw is used for thread cutting only. (See automatic apron, page 44.)

**Thread Cutting.** The lathe is indexed to cut standard threads from 2 to 40, right or left, including 11½ pipe-thread. (See page 44.)

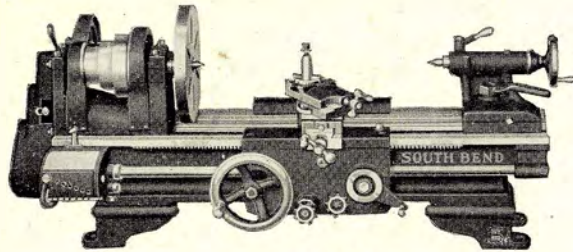
**Graduation.** The compound rest is graduated in 180 degrees. (See page 48.) The cross feed screw has a graduated micrometer collar reading in one-thousandths of an inch.

**Equipment,** as shown in cut, is included in the price and consists of large and small face plates, compound rest, two steel centers, center rest, follower rest, change gears, adjustable stop for screw-cutting, a set of feed gears, gear guards, semi-machined chuck back, necessary wrenches and double friction countershaft.

Regular equipment, as illustrated under lathe, is included in price

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Opening Tool Post Inches	Countershaft Speed	Approx. Weight on Skids, Crated	Weight Boxed for Export
54E	24¼ in.	8 ft.	46 in.	17¾ in.	1¾ in.	3¼ x 5 th.	No. 4	⅞ x 2 in.	150 R.P.M.	4400	5200
54G	24¼ in.	10 ft.	70 in.	17¾ in.	1¾ in.	3¼ x 5 th.	No. 4	⅞ x 2 in.	150 R.P.M.	4650	5600
54H	24¼ in.	12 ft.	94 in.	17¾ in.	1¾ in.	3¼ x 5 th.	No. 4	⅞ x 2 in.	150 R.P.M.	5050	6100
54K	24¼ in.	14 ft.	118 in.	17¾ in.	1¾ in.	3¼ x 5 th.	No. 4	⅞ x 2 in.	150 R.P.M.	5320	6500
54M	24¼ in.	16 ft.	142 in.	17¾ in.	1¾ in.	3¼ x 5 th.	No. 4	⅞ x 2 in.	150 R.P.M.	5600	6900

**Extras:** The No. 54 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Thread Dial, Electric Drive Attachment, Grinding Attachment, Taper Attachment and Raising Blocks so lathe will turn and bore 30-inch swing. Lathes with 12-, 14- and 16-foot beds equipped with center leg.



No. 63YB—11" x 3' "SOUTH BEND" BENCH LATHE  
Quick Change Gear Equipment

## "SOUTH BEND" SCREW CUTTING BENCH LATHE QUICK CHANGE GEAR EQUIPMENT

We can supply the 9", 11" and 13" Quick Change Gear Lathes, fitted with bench legs instead of long legs.

The description and dimensions of Quick Change Gear Bench Lathes are the same as those of the Lathes with long legs as given on pages 23 to 27 inclusive.

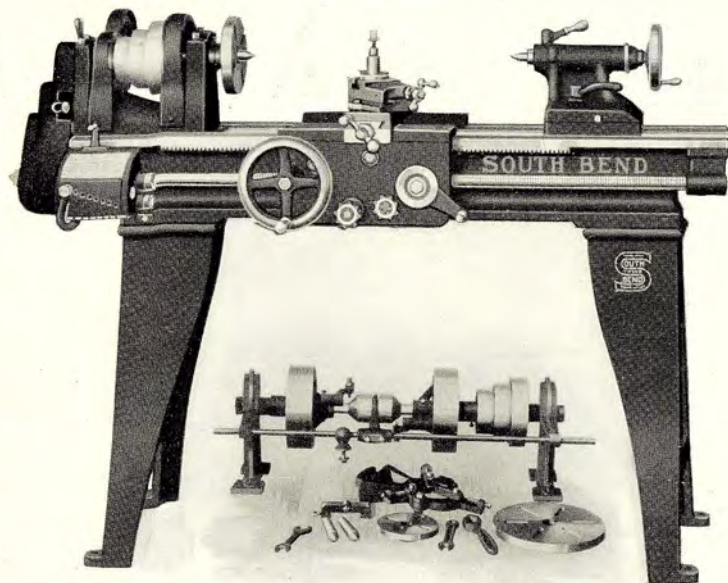
Regular equipment as shown under cut of long leg Lathes is included in the price of Bench Lathes.

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Width of Belt	Opening Tool Post Inches	Counter-Shaft Speed	Approx. Weight on Skids Crated	Weight Boxed for Export
<b>9" QUICK CHANGE GEAR BENCH LATHE</b>												
61XB	9¼ in.	2½ ft.	12 in.	6¾ in.	¾ in.	1½ x 8 th.	No. 2	1 in.	¾ x 7/8"	290 R.P.M.	375	450
61YB	9¼ in.	3 ft.	18 in.	6¾ in.	¾ in.	1½ x 8 th.	No. 2	1 in.	¾ x 7/8"	290 R.P.M.	400	480
61AB	9¼ in.	4 ft.	30 in.	6¾ in.	¾ in.	1½ x 8 th.	No. 2	1 in.	¾ x 7/8"	290 R.P.M.	450	520
<b>11" QUICK CHANGE GEAR BENCH LATHE</b>												
63YB	11¼ in.	3 ft.	14 in.	7¾ in.	7/8 in.	1½ x 8 th.	No. 2	1¼ in.	¾ x 7/8"	275 R.P.M.	525	705
63AB	11¼ in.	4 ft.	26 in.	7¾ in.	7/8 in.	1½ x 8 th.	No. 2	1¼ in.	¾ x 7/8"	275 R.P.M.	600	775
63BB	11¼ in.	5 ft.	38 in.	7¾ in.	7/8 in.	1½ x 8 th.	No. 2	1¼ in.	¾ x 7/8"	275 R.P.M.	650	845
<b>13" QUICK CHANGE GEAR BENCH LATHE</b>												
65AB	13¼ in.	4 ft.	18 in.	9 in.	1 in.	1½ x 8 th.	No. 3	1½ in.	½ x 1 1/8"	275 R.P.M.	950	1115
65BB	13¼ in.	5 ft.	30 in.	9 in.	1 in.	1½ x 8 th.	No. 3	1½ in.	½ x 1 1/8"	275 R.P.M.	1000	1185
65CB	13¼ in.	6 ft.	42 in.	9 in.	1 in.	1½ x 8 th.	No. 3	1½ in.	½ x 1 1/8"	275 R.P.M.	1050	1245

Extras: Quick Change Gear Bench Lathes can be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Electric Drive Attachment, Grinding Attachment, Taper Attachment and Thread Dial.



## No. 61—9-INCH "SOUTH BEND" SCREW CUTTING ENGINE LATHE QUICK CHANGE GEAR EQUIPMENT



Automatic Longitudinal Feed, Automatic Cross Feed, Graduated Compound Rest, and Quick Change Gear Box

*The 9-inch Lathe is recommended for small, accurate work*

Head Stock is equipped with improved reverse. Spindle-cone has three steps for 1-inch belt. Spindle is of special spindle steel, accurately ground, has a  $\frac{3}{4}$ -in. hole its entire length. Centers are No. 2 Morse taper. Bearings are the best phosphor bronze with ample oiling facilities and are adjustable for wear.

Tail Stock is off-set to allow compound rest to swivel parallel to bed and is provided with set-over for turning taper. Tail stock center is self-ejecting.

Thread Cutting and Turning Feeds. Threads from 2 to 112 per inch can be cut, and all Turning Feeds, fine or coarse, can be obtained in this Complete Gear Box without changing a gear. (See page 45.)

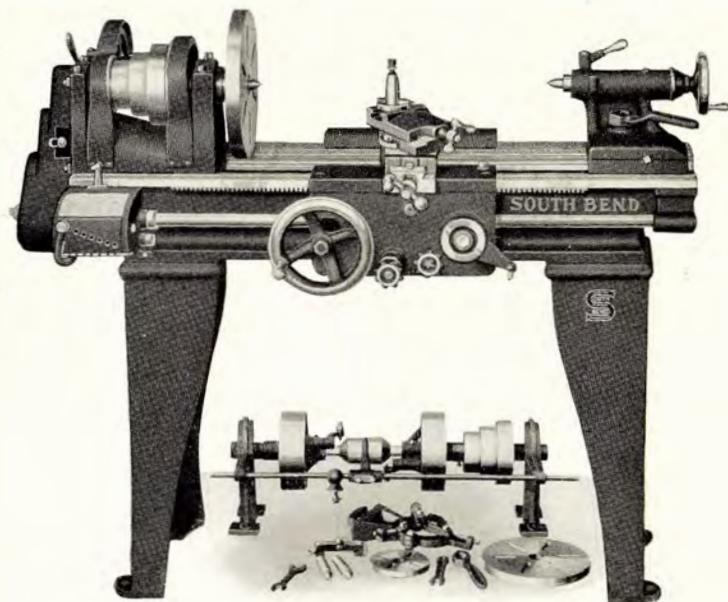
Graduation. The compound rest is graduated in 180 degrees. The cross-feed screw has a micrometer graduated collar reading in one-thousandths of an inch. (See page 48.)

Equipment, as shown in cut, is included in the price and consists of Quick Change Gear Box, large and small face plates, compound rest, two steel centers, center rest, adjustable stop for screw-cutting, gear guards, semi-machined chuck back, necessary wrenches and double friction countershaft.

Regular Equipment, as illustrated under lathe, is included in price

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Opening Tool Post Inches	Countershaft Speed	Approx. Weight on Skids, Crated	Weight Boxed for Export
61X	9 $\frac{1}{4}$ in.	2 $\frac{1}{2}$ ft.	12 in.	6 $\frac{3}{8}$ in.	$\frac{3}{4}$ in.	1 $\frac{1}{2}$ x 8 th.	No. 2	$\frac{3}{8}$ x $\frac{7}{8}$ in.	290 R.P.M.	440	500
61Y	9 $\frac{1}{4}$ in.	3 ft.	18 in.	6 $\frac{3}{8}$ in.	$\frac{3}{4}$ in.	1 $\frac{1}{2}$ x 8 th.	No. 2	$\frac{3}{8}$ x $\frac{7}{8}$ in.	290 R.P.M.	460	530
61A	9 $\frac{1}{4}$ in.	4 ft.	30 in.	6 $\frac{3}{8}$ in.	$\frac{3}{4}$ in.	1 $\frac{1}{2}$ x 8 th.	No. 2	$\frac{3}{8}$ x $\frac{7}{8}$ in.	290 R.P.M.	500	570

**Extras:** The No. 61 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Grinding Attachment, Taper Attachment, Oil Pan, Follower Rest and Thread Dial.



Regular Equipment, as illustrated under lathe, is included in price  
No. 63—11-inch "SOUTH BEND" SCREW CUTTING ENGINE LATHE  
Quick Change Gear Equipment

## No. 63—11-INCH "SOUTH BEND" SCREW CUTTING ENGINE LATHE

### QUICK CHANGE GEAR EQUIPMENT

Automatic Longitudinal Feed, Automatic Cross Feed, Graduated Compound Rest, and Quick Change Gear Box

*The 11" Lathe is practical in light manufacturing, in the tool room, the electrical shop, and battery service station, or in any shop where fine, accurate work is required.*

**Bed** is rigid, cross ribbed by heavy box braces cast in at short intervals its entire length; has three V's and one flat way for front bearing of head stock, tail stock and carriage. The rack attached is of steel, cut from the solid bar.

**Head Stock** is equipped with improved reverse. Spindle cone has three steps for 1¼-inch belt. Spindle is of special spindle steel accurately ground, has ⅞-inch hole its entire length. Centers are No. 2 Morse taper. Bearings are the best phosphor bronze with ample oiling facilities, and are adjustable for wear.

**Tail Stock** is off-set to allow compound rest to swivel parallel to bed and is provided with set-over for turning taper. Tail stock center is self-ejecting.

**Carriage** is strong, with wide, deep bridge. Both automatic cross feed and automatic longitudinal feed are operated from the front of apron and but one feed at a time can be

engaged. Both feeds are driven by a splined screw and worm so that the thread of the lead screw is used for thread cutting only. (See page 44.)

**Thread Cutting and Turning Feeds.** Threads from 2 to 112 per inch can be cut, and all Turning Feeds, fine or coarse, can be obtained in this Complete Gear Box without changing a gear. (See page 45.)

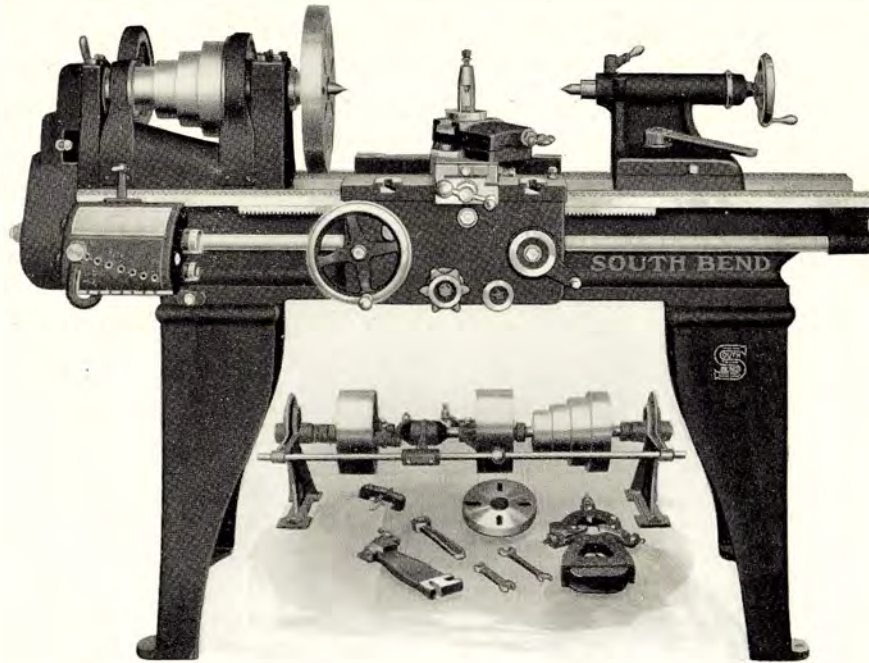
**Graduation.** The compound rest is graduated in 180 degrees. The cross-feed screw has micrometer graduated collar reading in one-thousandths of an inch. (See page 48.)

**Equipment,** as shown in cut, is included in the price and consists of Quick Change Gear Box, large and small face plates, compound rest, two steel centers, center rest, adjustable stop for screw cutting, gear guards, semi-machined chuck back, necessary wrenches and double friction countershaft.

Regular equipment, as illustrated under lathe, is included in price

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Opening Tool Post Inches	Countershaft Speed	Approx. Weight on Skids, Crated	Weight Boxed for Export
63Y	11¼ in.	3 ft.	14 in.	7⅝ in.	⅞ in.	1⅝ x 8 th.	No. 2	⅜ x ⅞ in.	275 R.P.M.	575	765
63A	11¼ in.	4 ft.	26 in.	7⅝ in.	⅞ in.	1⅝ x 8 th.	No. 2	⅜ x ⅞ in.	275 R.P.M.	625	835
63B	11¼ in.	5 ft.	38 in.	7⅝ in.	⅞ in.	1⅝ x 8 th.	No. 2	⅜ x ⅞ in.	275 R.P.M.	675	905

**Extras:** The No. 63 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Electric Drive Attachment, Grinding Attachment, Taper Attachment, Thread Dial, Oil Pan, and Follower Rest.



Regular Equipment, as illustrated under lathe, is included in price  
No. 65—13-inch "SOUTH BEND" SCREW CUTTING ENGINE LATHE  
Quick Change Gear Equipment

## No. 65—13-INCH "SOUTH BEND" SCREW CUTTING ENGINE LATHE QUICK CHANGE GEAR EQUIPMENT

Automatic Longitudinal Feed, Automatic Cross Feed, Graduated Compound Rest, and Quick Change Gear Box

*The No. 65 Lathe is an excellent tool for the machine shop, for light work.*

**Bed** is rigid, cross ribbed by heavy box braces cast in at short intervals its entire length; has three V's and one flat way for front bearing of head stock, tail stock and carriage. The rack attached is of steel, cut from the solid bar.

**Head Stock** is equipped with improved reverse. Spindle cone has four steps for 1½-inch belt. Spindle is of special spindle steel accurately ground, has 1-inch hole its entire length. Centers are No. 3 Morse taper. Bearings are the best phosphor bronze with ample oiling facilities, and are adjustable for wear.

**Tail Stock** is off-set to allow compound rest to swivel parallel to bed and is provided with set-over for turning taper. Tail stock center is self-ejecting.

**Carriage** is strong, with wide, deep bridge; has T slots for clamping work for milling and boring. Both automatic cross feed and automatic longitudinal feed are operated from the

front of apron and but one feed at a time can be engaged. Both feeds are driven by a splined screw and worm so that the thread of the lead screw is used for thread cutting only. (See page 44.)

**Thread Cutting and Turning Feeds.** Threads from 2 to 112 per inch can be cut, and all Turning Feeds, fine or coarse, can be obtained in this Complete Gear Box without changing a gear. (See page 45.)

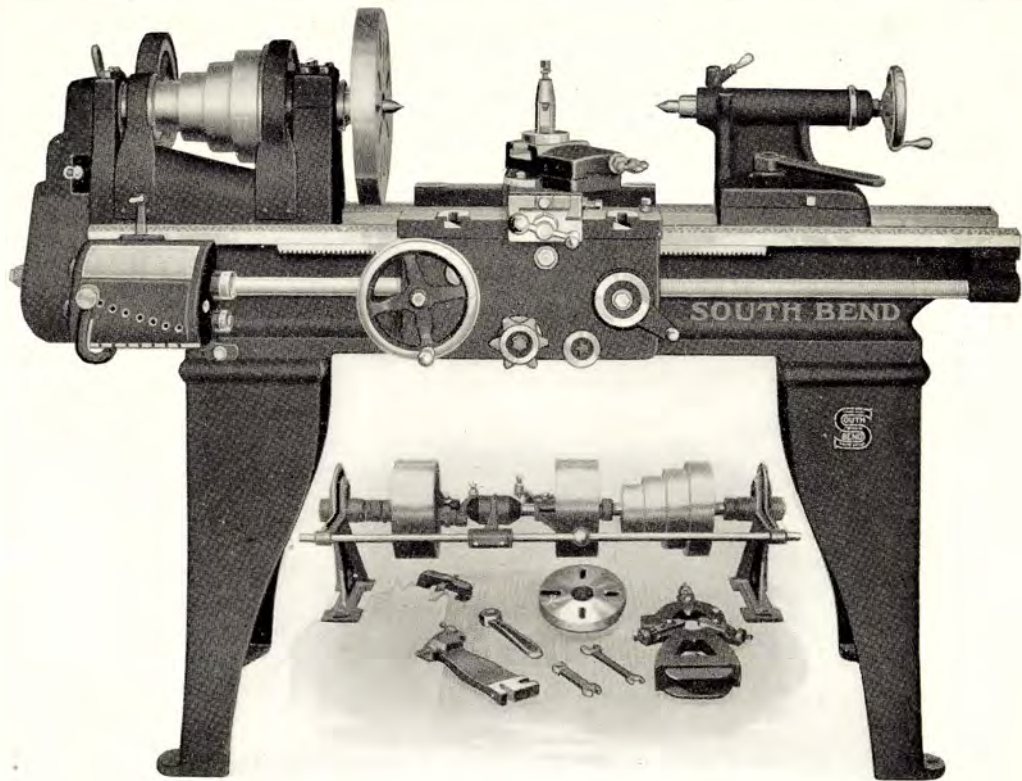
**Graduation.** The compound rest is graduated in 180 degrees. The cross-feed screw has micrometer graduated collar reading in one-thousandths of an inch. (See page 48.)

**Equipment,** as shown in cut is included in the price and consists of Quick Change Gear Box, large and small face plates, compound rest, two steel centers, center rest, follower rest, adjustable stop for screw cutting, gear guards, semi-machined chuck back, necessary wrenches and double friction countershaft.

Regular equipment, as illustrated under lathe, is included in price

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Opening Tool Post Inches	Counter-shaft Speed	Approx. Weight on Skids, Crated	Weight Boxed for Export
65-A	13¼ in.	4 ft.	18 in.	9 in.	1 in.	1⅞ x 8 th	No. 3	½ x 1⅞ in.	275 R.P.M.	1000	1230
65-B	13¼ in.	5 ft.	30 in.	9 in.	1 in.	1⅞ x 8 th	No. 3	½ x 1⅞ in.	275 R.P.M.	1050	1300
65-C	13¼ in.	6 ft.	42 in.	9 in.	1 in.	1⅞ x 8 th	No. 3	½ x 1⅞ in.	275 R.P.M.	1100	1360
65-D	13¼ in.	7 ft.	54 in.	9 in.	1 in.	1⅞ x 8 th	No. 3	½ x 1⅞ in.	275 R.P.M.	1150	1430
65-E	13¼ in.	8 ft.	66 in.	9 in.	1 in.	1⅞ x 8 th	No. 3	½ x 1⅞ in.	275 R.P.M.	1200	1500

**Extras.** The No. 65 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Electric Drive Attachment, Grinding Attachment, Taper Attachment, Thread Dial, and Oil Pan.



Regular Equipment, as illustrated under lathe, is included in price  
No. 67—15-inch "SOUTH BEND" SCREW CUTTING ENGINE LATHE  
Quick Change Gear Equipment

## No. 67—15-INCH "SOUTH BEND" SCREW CUTTING ENGINE LATHE QUICK CHANGE GEAR EQUIPMENT

Automatic Longitudinal Feed, Automatic Cross Feed, Graduated Compound Rest, and Quick Change Gear Box

*No. 67 Lathe is surpassed by none for manufacturing and for the machine and general repair shop.*

**Bed** is rigid, cross ribbed by heavy box braces cast in at short intervals its entire length; has three V's and one flat way for guiding the head stock, tail stock, and carriage. The rack attached is of steel, cut from the solid bar.

**Head Stock** is equipped with improved reverse. Spindle cone has four steps for 1¾-inch belt. Spindle is of special carbon steel accurately ground; has 1½-inch hole its entire length. Centers are No. 3 Morse taper. Bearings are of heavy phosphor bronze with ample oiling facilities and are adjustable for wear.

**Tail Stock** is off-set to allow compound rest to swivel parallel to the bed and is provided with set-over for turning taper. Tail stock center is self-ejecting.

**Carriage** is strong, with wide, deep bridge; has T slots for clamping work for milling and boring. Both automatic cross feed and automatic longitudinal feed are operated from the

front of apron and but one feed at a time can be engaged. Both feeds are driven by a splined screw and worm so that the thread of the lead screw is used for thread cutting only. (See page 44.)

**Thread Cutting and Turning Feeds.** Threads from 2 to 112 per inch can be cut, and all Turning Feeds, fine or coarse, can be obtained in this Complete Gear Box without changing a gear. (See page 45.)

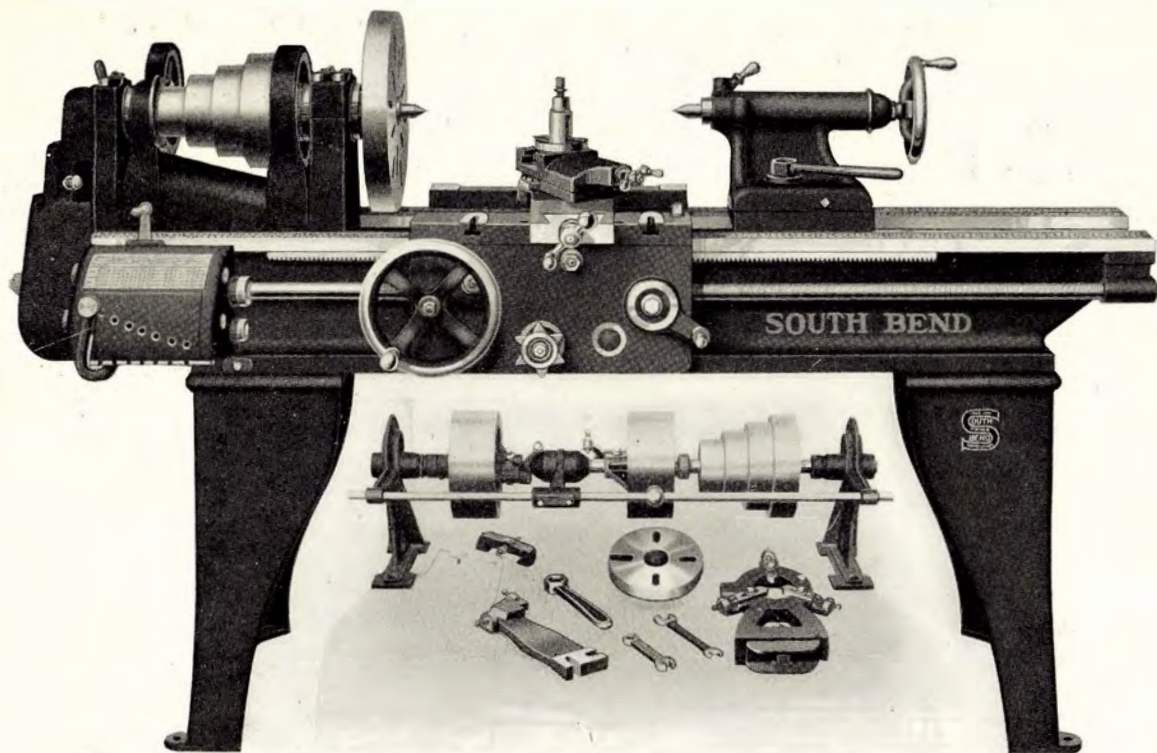
**Graduation.** The compound rest is graduated in 180 degrees. The cross-feed screw has micrometer graduated collar reading in one-thousandths of an inch. (See page 48.)

**Equipment,** as shown in cut, is included in the price and consists of Quick Change Gear Box, large and small face plates, compound rest, two steel centers, center rest, follower rest, adjustable stop for screw cutting, gear guards, semi-machined chuck back, necessary wrenches and double friction countershaft.

Regular equipment, as illustrated under lathe, is included in price

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Opening Tool Post Inches	Counter-shaft Speed	Approx. Weight on Skids, Crated	Weight Boxed for Export
67-B	15¼ in.	5 ft.	27 in.	10 <sup>5</sup> / <sub>8</sub> in.	1½ in.	2¼ x 8 th	No. 3	9/16 x 1¼ in.	250 R.P.M.	1400	1650
67-C	15¼ in.	6 ft.	39 in.	10 <sup>5</sup> / <sub>8</sub> in.	1½ in.	2¼ x 8 th	No. 3	9/16 x 1¼ in.	250 R.P.M.	1475	1735
67-D	15¼ in.	7 ft.	51 in.	10 <sup>5</sup> / <sub>8</sub> in.	1½ in.	2¼ x 8 th	No. 3	9/16 x 1¼ in.	250 R.P.M.	1550	1830
67-E	15¼ in.	8 ft.	63 in.	10 <sup>5</sup> / <sub>8</sub> in.	1½ in.	2¼ x 8 th	No. 3	9/16 x 1¼ in.	250 R.P.M.	1625	1925
67-G	15¼ in.	10 ft.	87 in.	10 <sup>5</sup> / <sub>8</sub> in.	1½ in.	2¼ x 8 th	No. 3	9/16 x 1¼ in.	250 R.P.M.	1775	2125

**Extras.** The No. 67 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Electric Drive Attachment, Grinding Attachment, Taper Attachment, Thread Dial, and Oil Pan.



Regular Equipment, as illustrated under lathe, is included in price  
No. 69—16-inch "SOUTH BEND" SCREW CUTTING ENGINE LATHE  
Quick Change Gear Equipment



## No. 69—16-INCH "SOUTH BEND" SCREW CUTTING ENGINE LATHE QUICK CHANGE GEAR EQUIPMENT

Automatic Longitudinal Feed, Automatic Cross Feed, Graduated Compound Rest, and Quick Change Gear Box

*The No. 69 Lathe is a reliable tool. We recommend it for manufacturing  
for the machine shop and general all-around work.*

**Bed** is rigid, cross ribbed by heavy box braces cast in at short intervals its entire length; has three V's and one flat way for guiding the head stock, tail stock, and carriage. The rack is of steel, cut from the solid bar.

**Head Stock** is equipped with improved reverse. Spindle cone has four steps for 2-inch belt, which, with back gears, gives eight changes of spindle speeds. Spindle is of special carbon steel accurately ground; has  $1\frac{1}{8}$ -inch hole its entire length. Centers are No. 3 Morse taper. Bearings are of heavy phosphor bronze with ample oiling facilities and are adjustable for wear.

**Tail Stock** is off-set to allow compound rest to swivel parallel to the bed and is provided with set-over for turning taper. Tail stock center is self-ejecting.

**Carriage** is strong, with wide, deep bridge; has T slots for clamping work for milling and boring. Has automatic cross feed and automatic longitudinal feed, both of which are

operated from front of apron and but one feed at a time can be engaged. Both feeds are driven by a splined screw and worm so that the thread of the lead screw is used for thread cutting only. (See page 44.)

**Thread Cutting and Turning Feeds.** Threads from 2 to 112 per inch can be cut, and all Turning Feeds, fine or coarse, can be obtained in this Complete Gear Box without changing a gear. (See page 45.)

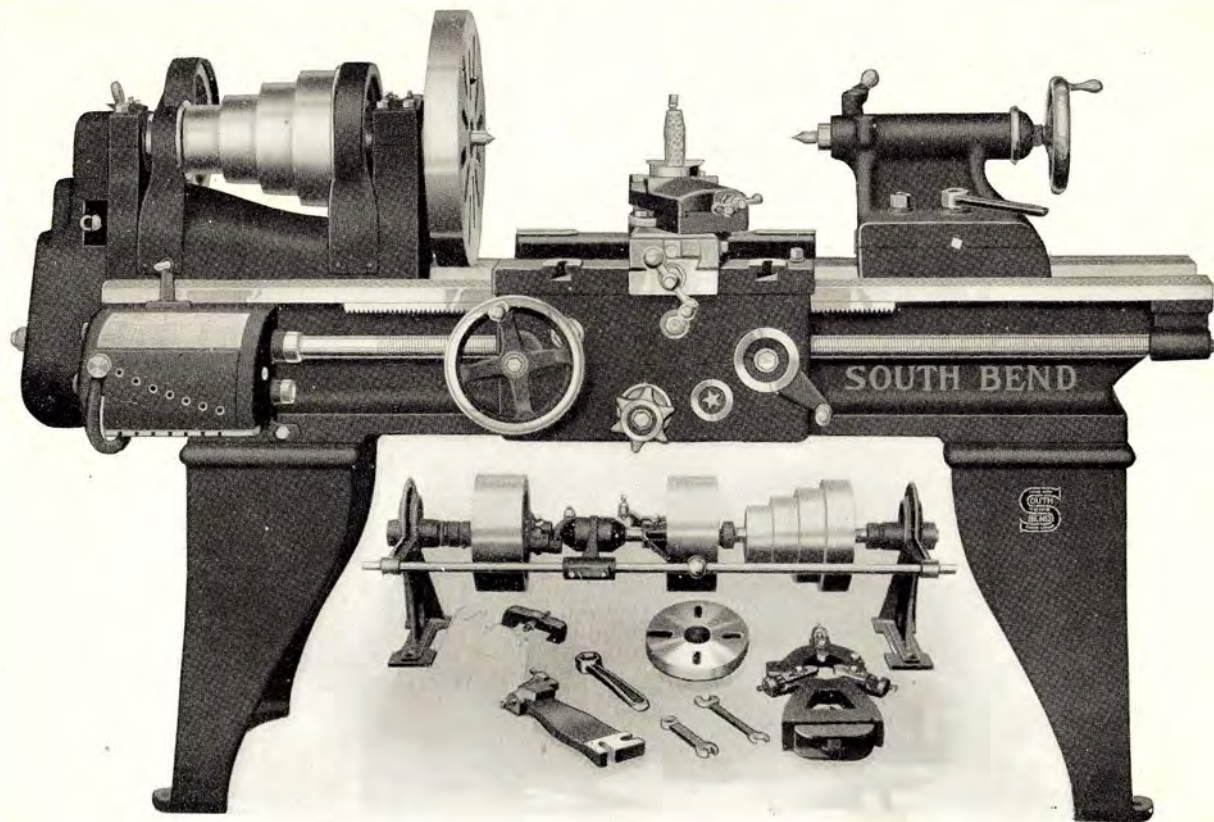
**Graduation.** The compound rest is graduated in 180 degrees. The cross-feed screw has a micrometer graduated collar reading in one-thousandths of an inch. (See page 48.)

**Equipment,** as shown in cut, is included in the price and consists of Quick Change Gear Box, large and small face plates, compound rest, two steel centers, center rest, follower rest, adjustable stop for screw cutting, gear guards, semi-machined chuck back, necessary wrenches and double friction countershaft.

Regular equipment, as illustrated under lathe, is included in price

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Opening Tool Post Inches	Counter-shaft Speed	Approx. Weight on Skids, Crated	Weight Boxed for Export
69-C	16 $\frac{1}{4}$ in.	6 ft.	36 in.	11 $\frac{1}{8}$ in.	1 $\frac{5}{16}$ in.	2 $\frac{3}{8}$ x 8 th.	No. 3	5 $\frac{1}{8}$ x 1 $\frac{3}{8}$ in.	225 R.P.M.	1700	1970
69-D	16 $\frac{1}{4}$ in.	7 ft.	48 in.	11 $\frac{1}{8}$ in.	1 $\frac{5}{16}$ in.	2 $\frac{3}{8}$ x 8 th.	No. 3	5 $\frac{1}{8}$ x 1 $\frac{3}{8}$ in.	225 R.P.M.	1780	2070
69-E	16 $\frac{1}{4}$ in.	8 ft.	60 in.	11 $\frac{1}{8}$ in.	1 $\frac{5}{16}$ in.	2 $\frac{3}{8}$ x 8 th.	No. 3	5 $\frac{1}{8}$ x 1 $\frac{3}{8}$ in.	225 R.P.M.	1860	2180
69-G	16 $\frac{1}{4}$ in.	10 ft.	84 in.	11 $\frac{1}{8}$ in.	1 $\frac{5}{16}$ in.	2 $\frac{3}{8}$ x 8 th.	No. 3	5 $\frac{1}{8}$ x 1 $\frac{3}{8}$ in.	225 R.P.M.	2020	2390
69-H	16 $\frac{1}{4}$ in.	12 ft.	108 in.	11 $\frac{1}{8}$ in.	1 $\frac{5}{16}$ in.	2 $\frac{3}{8}$ x 8 th.	No. 3	5 $\frac{1}{8}$ x 1 $\frac{3}{8}$ in.	225 R.P.M.	2280	2750

**Extras.** The No. 69 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Electric Drive Attachment, Grinding Attachment, Taper Attachment, and Thread Dial. Lathe with 12-foot bed equipped with center leg.



Regular Equipment, as illustrated under lathe, is included in price  
No. 71—18-inch "SOUTH BEND" SCREW CUTTING ENGINE LATHE  
Quick Change Gear Equipment

## No. 71—18-INCH "SOUTH BEND" SCREW CUTTING ENGINE LATHE QUICK CHANGE GEAR EQUIPMENT

Automatic Longitudinal Feed, Automatic Cross Feed, Graduated Compound Rest, and Quick Change Gear Box

*The No. 71 Lathe has the strength for manufacturing and general all-around work in the machine shop.*

**Bed** is rigid, cross ribbed by heavy box braces cast in at short intervals its entire length; has three V's and one flat way for guiding the head stock, tail stock, and carriage. The rack is of steel, cut from the solid bar.

**Head Stock** is equipped with improved reverse. Spindle cone has four steps for a 2½-inch belt, which, with back gears, gives eight changes of spindle speeds. Spindle is of special carbon steel, accurately ground; has a 1⅜-inch hole its entire length. Centers conform to No. 3 Morse taper. Bearings are of heavy phosphor bronze, with ample oiling facilities, and are adjustable for wear.

**Tail Stock** is off-set to allow compound rest to swivel parallel to the bed and is provided with set-over for turning taper. Tail stock center is self-ejecting.

**Carriage** is strong, with wide, deep bridge; has T slots for clamping work for milling and boring. Has automatic cross feed and automatic longitudinal feed, both of which are

operated from front of apron and so arranged that only one feed can be engaged at a time. Both feeds are driven by a splined screw and worm so that the thread of the lead screw is used for thread cutting only. (See page 44.)

**Thread Cutting and Turning Feeds.** Threads from 2 to 112 per inch can be cut, and all Turning Feeds, fine or coarse, can be obtained in this Complete Gear Box without changing a gear. (See page 45.)

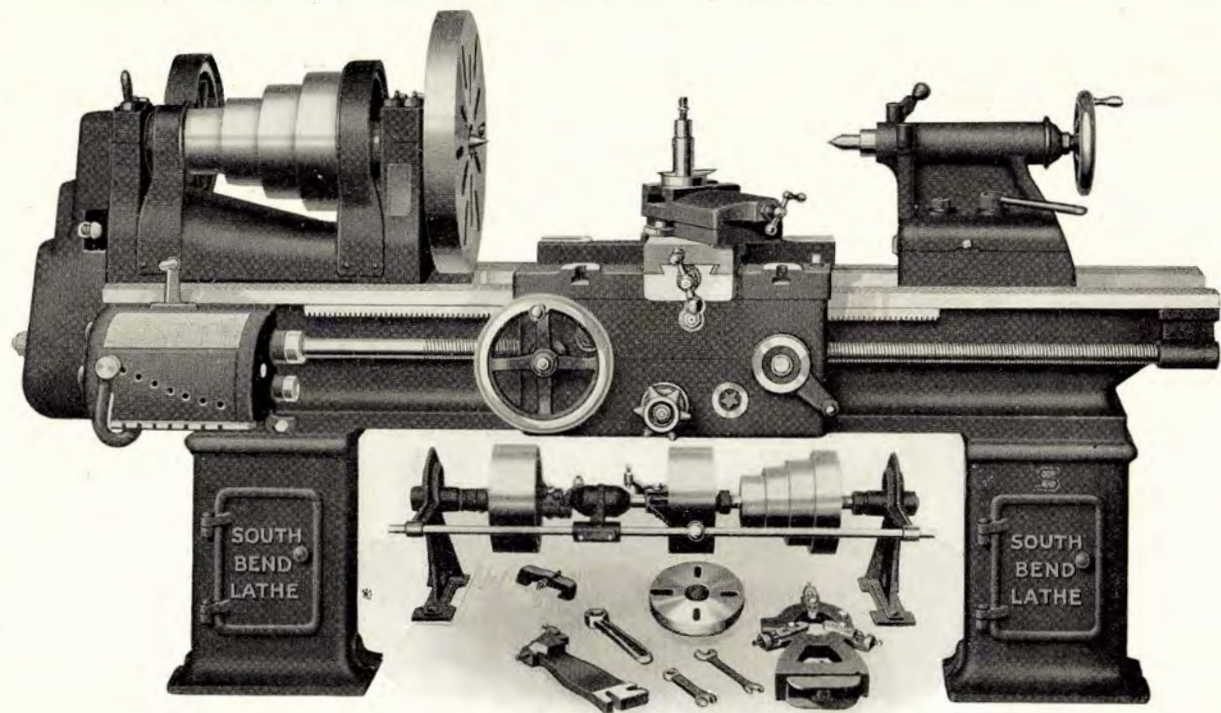
**Graduation.** The compound rest is graduated in 180 degrees. The cross-feed screw has a micrometer graduated collar reading in one-thousandths of an inch. (See page 48.)

**Equipment,** as shown in cut, is included in the price and consists of Quick Change Gear Box, large and small face plates, compound rest, two steel centers, center rest, follower rest, adjustable stop for screw cutting, gear guards, semi-machined chuck back, necessary wrenches and double friction countershaft.

Regular equipment, as illustrated under lathe, is included in price

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Opening Tool Post Inches	Counter-shaft Speed	Approx. Weight on Skids, Crated	Weight Boxed for Export
71-C	18¼ in.	6 ft.	31 in.	12⅝ in.	1⅜ in.	2⅝ x 6 th.	No. 3	⅝ x 1⅜ in.	200 R.P.M.	2300	2600
71-D	18¼ in.	7 ft.	43 in.	12⅝ in.	1⅜ in.	2⅝ x 6 th.	No. 3	⅝ x 1⅜ in.	200 R.P.M.	2400	2730
71-E	18¼ in.	8 ft.	55 in.	12⅝ in.	1⅜ in.	2⅝ x 6 th.	No. 3	⅝ x 1⅜ in.	200 R.P.M.	2500	2860
71-G	18¼ in.	10 ft.	79 in.	12⅝ in.	1⅜ in.	2⅝ x 6 th.	No. 3	⅝ x 1⅜ in.	200 R.P.M.	2700	3210
71-H	18¼ in.	12 ft.	103 in.	12⅝ in.	1⅜ in.	2⅝ x 6 th.	No. 3	⅝ x 1⅜ in.	200 R.P.M.	3000	3520

**Extras.** The No. 71 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Electric Drive Attachment, Grinding Attachment, Taper Attachment, and Thread Dial. Lathe with 12-foot bed equipped with center leg.



Regular Equipment, as illustrated under lathe, is included in price  
No. 73—21-inch "SOUTH BEND" SCREW CUTTING ENGINE LATHE  
Quick Change Gear Equipment

## No. 73—21-INCH "SOUTH BEND" SCREW CUTTING ENGINE LATHE QUICK CHANGE GEAR EQUIPMENT

Automatic Longitudinal Feed, Automatic Cross Feed, Graduated Compound Rest, and Quick Change Gear Box

*No. 73 Lathe makes an excellent all-around lathe for manufacturing, also for general machine and repair shop.*

**Bed** is rigid, cross ribbed by heavy box braces, cast in at short intervals its entire length; has three V's and one flat way for guiding the head stock, tail stock, and carriage. The rack is of steel, cut from the solid bar.

**Head Stock** is equipped with improved reverse. Spindle cone has four steps for a 3-inch belt, which, with back gears, gives eight changes of spindle speeds. Spindle is of special carbon steel, accurately ground; has a 1½-inch hole its entire length. Centers conform to No. 4 Morse taper. Bearings are of heavy phosphor bronze, with ample oiling facilities, and are adjustable for wear.

**Tail Stock** is off-set to allow compound rest to swivel parallel to the bed and is provided with set-over for turning taper. Tail stock center is self-ejecting.

**Carriage** is strong, with wide, deep bridge; has T slots for clamping work for milling and boring. Has automatic cross feed and automatic longitudinal feed, both of which are

operated from front of apron and so arranged that only one feed can be engaged at a time. Both feeds are driven by a splined screw and worm so that the thread of the lead screw is used for thread cutting only. (See page 44.)

**Thread Cutting and Turning Feeds.** Threads from 2 to 112 per inch can be cut, and all Turning Feeds, fine or coarse, can be obtained in this Complete Gear Box without changing a gear. (See page 45.)

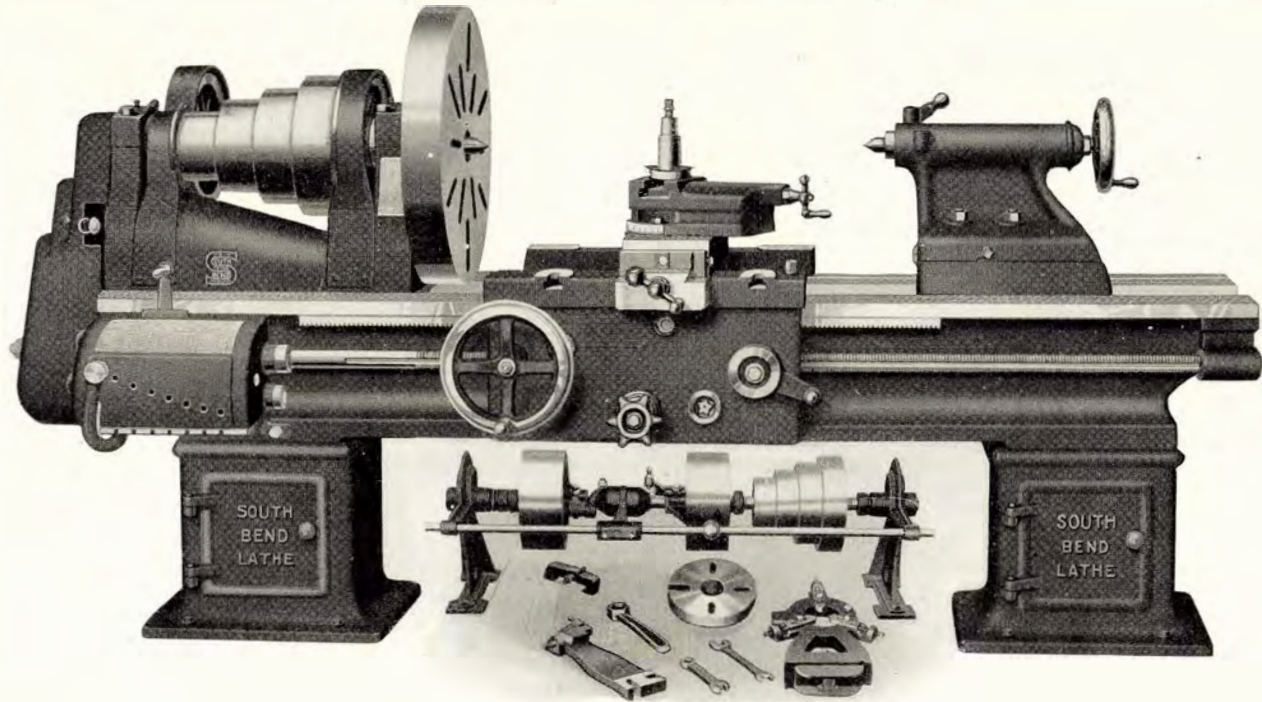
**Graduation.** The compound rest is graduated in 180 degrees. The cross-feed screw has micrometer graduated collar reading in one-thousandths of an inch. (See page 48.)

**Equipment,** as shown in cut, is included in the price and consists of Quick Change Gear Box, large and small face plates, compound rest, two steel centers, center rest, follower rest, adjustable stop for screw cutting, gear guards, semi-machined chuck back, necessary wrenches and double friction countershaft.

Regular equipment, as illustrated under lathe, is included in price

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Opening Tool Post Inches	Counter-shaft Speed	Approx. Weight on Skids, Crated	Weight Boxed for Export
73-D	21¼ in.	7 ft.	39 in.	15½ in.	1½ in.	3 x 5 th.	No. 4	⅞ x 2 in.	175 R.P.M.	3400	4050
73-E	21¼ in.	8 ft.	51 in.	15½ in.	1½ in.	3 x 5 th.	No. 4	⅞ x 2 in.	175 R.P.M.	3600	4350
73-G	21¼ in.	10 ft.	75 in.	15½ in.	1½ in.	3 x 5 th.	No. 4	⅞ x 2 in.	175 R.P.M.	3850	4725
73-H	21¼ in.	12 ft.	99 in.	15½ in.	1½ in.	3 x 5 th.	No. 4	⅞ x 2 in.	175 R.P.M.	4210	5200
73-K	21¼ in.	14 ft.	123 in.	15½ in.	1½ in.	3 x 5 th.	No. 4	⅞ x 2 in.	175 R.P.M.	4430	5500

**Extras.** The No. 73 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Electric Drive Attachment, Grinding Attachment, Taper Attachment, and Thread Dial. Lathes with 12- and 14-foot beds equipped with center leg.



Regular Equipment, as illustrated under lathe, is included in price  
No. 75—24-inch "SOUTH BEND" SCREW CUTTING ENGINE LATHE  
Quick Change Gear Equipment

## No. 75—24-INCH "SOUTH BEND" SCREW CUTTING ENGINE LATHE QUICK CHANGE GEAR EQUIPMENT

Automatic Longitudinal Feed, Automatic Cross Feed, Graduated Compound Rest, and Quick Change Gear Box

*No. 75 Lathe is the largest size we build. Designed to give service for general all-around work.  
We recommend it for manufacturing and for the general machine shop*

**Bed** is rigid, cross ribbed by heavy box braces cast in at short intervals its entire length; has three V's and one flat way for guiding the head stock, tail stock, and carriage. The rack is of steel, cut from the solid bar.

**Head Stock** is equipped with improved reverse. Spindle cone has four steps for a 3½-inch belt, which, with back gears, gives eight changes of spindle speeds. Spindle is of special carbon steel, accurately ground; has a 1¾-inch hole its entire length. Centers conform to No. 4 Morse taper. Bearings are of heavy phosphor bronze, with ample oiling facilities, and are adjustable for wear.

**Tail Stock** is off-set to allow compound rest to swivel parallel to the bed and is provided with set-over for turning taper. Tail stock center is self-ejecting.

**Carriage** is strong with wide, deep bridge; has T slots for clamping work for milling and boring. Has automatic cross feed and automatic longitudinal feed, both of which are op-

erated from front of apron and so arranged that only one feed can be engaged at a time. Both feeds are driven by a splined screw and worm so that the thread of the lead screw is used for thread cutting only. (See page 44.)

**Thread Cutting and Turning Feeds.** Threads from 2 to 112 per inch can be cut, and all Turning Feeds, fine or coarse, can be obtained in this Complete Gear Box without changing a gear. (See page 45.)

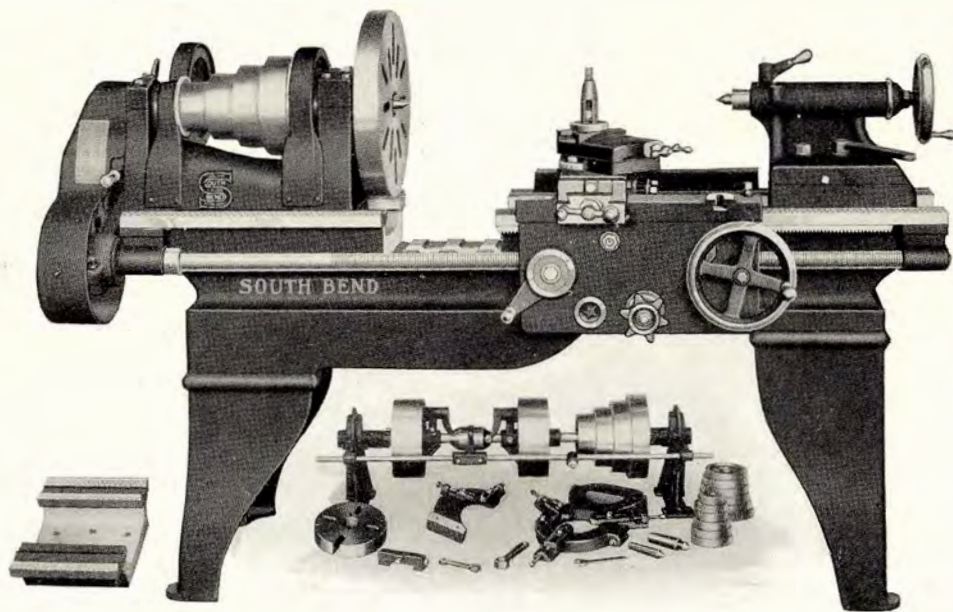
**Graduation.** The compound rest is graduated in 180 degrees. The cross-feed screw has a micrometer graduated collar reading in one-thousandths of an inch. (See page 48.)

**Equipment,** as shown in cut, is included in the price and consists of Quick Change Gear Box, large and small face plates, compound rest, two steel centers, center rest, follower rest, adjustable stop for screw cutting, gear guards, semi-machined chuck back, necessary wrenches and double friction countershaft.

Regular equipment, as illustrated under lathe, is included in price

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Swing Over Carriage	Hole Through Spindle	Diameter of Spindle Nose	Taper in Spindle Morse	Opening Tool Post Inches	Counter-shaft Speed	Approx. Weight on Skids, Crated	Weight Boxed for Export
75-E	24¼ in.	8 ft.	46 in.	17⅜ in.	1¾ in.	3¼ x 5 th.	No. 4	⅞ x 2 in.	150 R.P.M.	4400	5200
75-G	24¼ in.	10 ft.	70 in.	17⅜ in.	1¾ in.	3¼ x 5 th.	No. 4	⅞ x 2 in.	150 R.P.M.	4650	5600
75-H	24¼ in.	12 ft.	94 in.	17⅜ in.	1¾ in.	3¼ x 5 th.	No. 4	⅞ x 2 in.	150 R.P.M.	5050	6100
75-K	24¼ in.	14 ft.	118 in.	17⅜ in.	1¾ in.	3¼ x 5 th.	No. 4	⅞ x 2 in.	150 R.P.M.	5320	6500
75-M	24¼ in.	16 ft.	142 in.	17⅜ in.	1¾ in.	3¼ x 5 th.	No. 4	⅞ x 2 in.	150 R.P.M.	5600	6900

**Extras.** The No. 75 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Electric Drive Attachment, Grinding Attachment, Taper Attachment, and Thread Dial. Lathes with 12-, 14- and 16-foot beds equipped with center leg.



Regular Equipment, as illustrated under lathe, is included in price  
"SOUTH BEND" LATHE WITH GAP BED AND BRIDGE



## “SOUTH BEND” LATHE WITH GAP BED AND BRIDGE

FOR BOTH STANDARD CHANGE GEAR AND QUICK CHANGE GEAR

All Gap Lathes are Furnished Equipped with Graduated Compound Rest and Bridge

*The practical Lathe for all-around work, adapted to handling jobs of both large and small diameter*

**Sizes:** We build any size “South Bend” Standard or Quick Change Gear Lathe, except the Nos. 25 and 61 with gap bed when desired. For description and dimensions of gap-bed lathes see that of straight-bed lathes, as the only difference between straight-bed lathes and gap-bed lathes is the bridge, and gap construction of bed, which requires more strength.

**Illustration** shows our 16-24-inch No. 140 Standard Change Gear Lathe fitted with compound rest, gap bed and bridge. The bridge, it will be seen, has been removed from the bed and rests on the floor at the left end of lathe. The illustration shows carriage mechanism transposed. This allows the carriage to pass over the entire width of the gap without letting down.

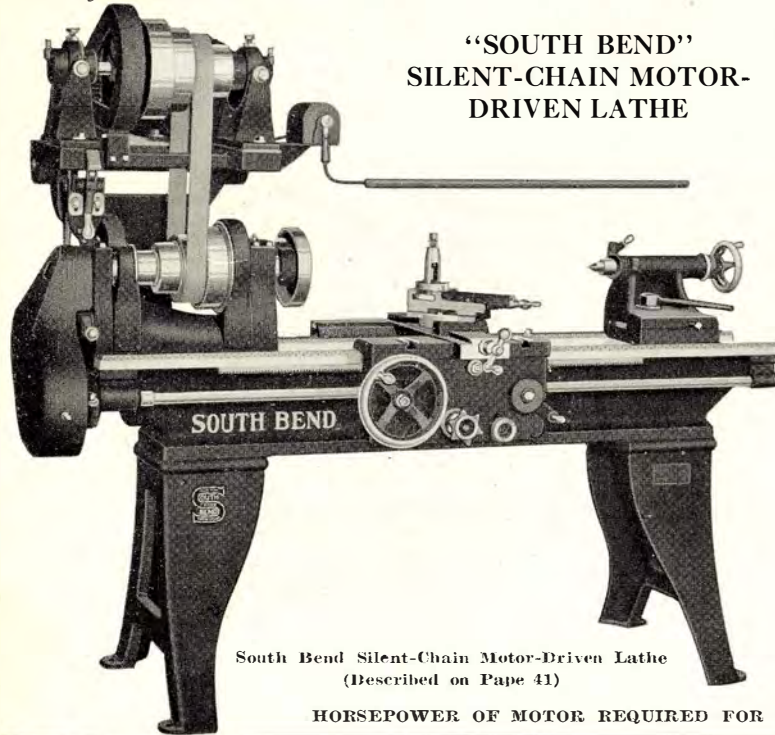
**Bridge** is used to close up the gap so that the lathe may be used as a straight bed for ordinary work. When work of large diameter is to be machined, bridge may be removed from bed in a few minutes, as it is accurately machined, scraped and fitted to gap, located by means of two steel dowel pins and held in position by four substantial bolts. Bridge must be fitted in lathe at factory.

**Equipment**, as shown in cut, is included in the price of lathe and consists of large and small face plates, graduated compound rest, two steel centers, center rest, follower rest (not included on No. 127 and 163 Lathe), change gears, adjustable stop for screw-cutting, a set of feed gears, gear guards, semi-machined chuck back, necessary wrenches, double friction countershaft and bridge.

Price of gap and bridge is extra over price of straight-bed lathe

No. of Gap Lathe Standard Change Gears	No. of Gap Lathe Quick Change Gears	Swing Over Straight Bed	Swing Over Gap	Width of Gap	Length of Beds in Feet	Extra Weight of Gap Beds	Price Extra for Gap and Bridge
127	163	11¼ in.	15 in.	5 in.	3, 4, 5	50 lbs.	\$ 25.00
134	165	13¼ in.	19 in.	7 in.	4, 5, 6, 7, 8	100 lbs.	30.00
137	167	15¼ in.	22 in.	8 in.	5, 6, 7, 8, 10	125 lbs.	36.00
140	169	16¼ in.	24 in.	8 <sup>3</sup> / <sub>8</sub> in.	6, 7, 8, 10, 12	140 lbs.	40.00
145	171	18¼ in.	26 in.	10 in.	6, 7, 8, 10, 12	170 lbs.	50.00
147	173	21¼ in.	30 in.	12 in.	7, 8, 10, 12, 14	250 lbs.	100.00
154	175	24¼ in.	36 in.	15 in.	8, 10, 12, 14, 16	350 lbs.	150.00

**Extras:** The Gap-Bed Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Electric Drive Attachment, Grinding Attachment, Raising Blocks, Taper Attachment and Thread Dial. When ordering Lathe with gap-bed, add figure (1) to the number of straight-bed lathe or the word “Gap” to the code word.



**“SOUTH BEND”  
SILENT-CHAIN MOTOR-  
DRIVEN LATHE**

South Bend Silent-Chain Motor-Driven Lathe  
(Described on Page 41)

The illustration shows a “South Bend” Lathe equipped with our Silent Chain Motor-Drive Attachment.

The tilting table carrying motor is adjustable, operated by a small lever, to allow the belt to be shifted while the lathe is in operation. The small bracket carrying the lever admits of an independent adjustment for the tightening of belt.

To rotate the spindle forward, throw the switch to the left; to stop, throw to the neutral point, and to reverse, throw to the right. This gives the operator complete control of the lathe as he can start, stop and reverse the spindle instantaneously.

The price of the attachment does not include either motor or lathe, but is extra. There is no credit for countershaft when motor drive is supplied.

The reversible switch does away with expensive reversing motors, and the countershaft cone does away with variable speed motors, allowing use of the regular standard motor.

On account of the design, a General Electric or Westinghouse Motor, alternating or direct current, having a speed of 1150 to 1200 R. P. M., is recommended. **It is necessary that the motor be fitted to the electric drive attachment in our shop.** Wiring diagram and full instructions accompany each motor.

In placing an order for a silent-chain motor-driven lathe, please give the following specifications:

Current, whether alternating or direct.

If alternating, state voltage, phase and cycle.

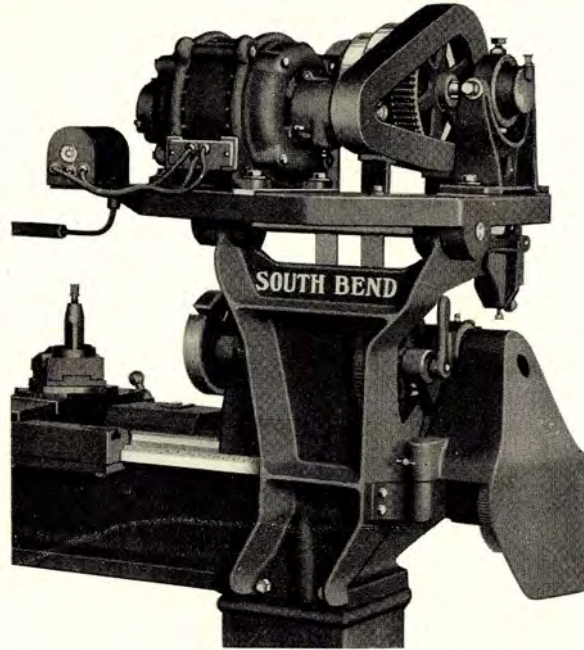
If direct, state voltage.

When direct current motor is to be used on 13” lathes and larger an automatic Starting Box is necessary.

**HORSEPOWER OF MOTOR REQUIRED FOR DRIVING “SOUTH BEND” LATHES**

Size of Lathe. . . . .	9”	11”	13”	15”	16”	18”	21”	24”
Horsepower of Motor. . . . .	$\frac{1}{2}$	$\frac{1}{2}$	1	1	1	2	3	3
Countershaft, R.P.M. . . . .	290	275	275	250	225	200	175	150
Speed of Motor, R.P.M. . . . .	1150 to 1200	1150 to 1200	1150 to 1200	1150 to 1200	1150 to 1200	1150 to 1200	1150 to 1200	1150 to 1200

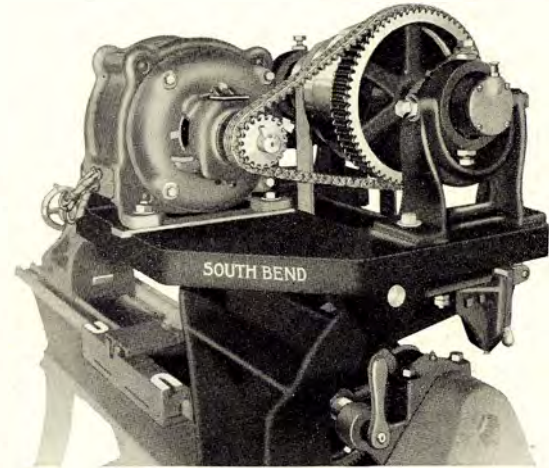
Raising Blocks cannot be used with Motor-Driven Lathe.



## SILENT-CHAIN MOTOR-DRIVE ATTACHMENT

Rear View

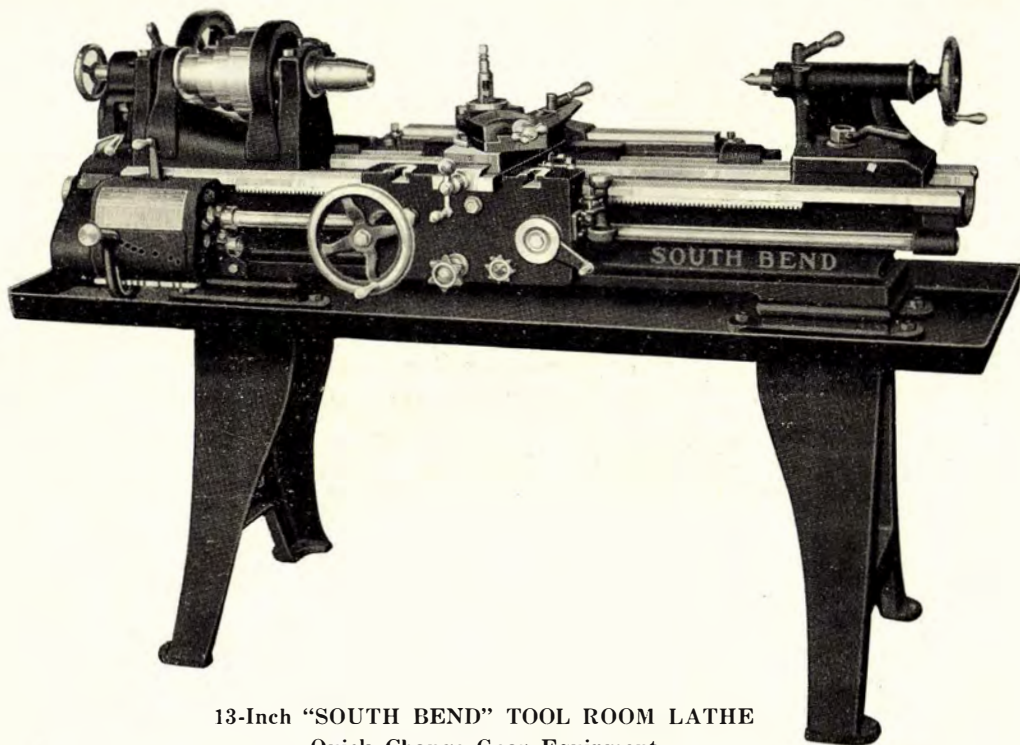
The above illustration shows a rear view of the silent-chain motor-drive attachment fitted to a 15-inch "South Bend" Lathe. (Illustrated and described on page 40.) Note that the attachment does not extend below the bottom of the bed; it is simply fitted to one of our standard stock lathes. We make this attachment in various sizes to fit all South Bend Lathes.



## THE SILENT-CHAIN DRIVE

Enlarged View

The illustration above shows a section of the silent-chain drive with the gear-guard removed so that the chain and gears may be seen. This silent-chain drive is noiseless and efficient. Silent chains have been used for driving machinery for the last twenty-five years. The cut also shows the construction of the self-aligned countershaft boxes in which the bearings are immersed in oil.

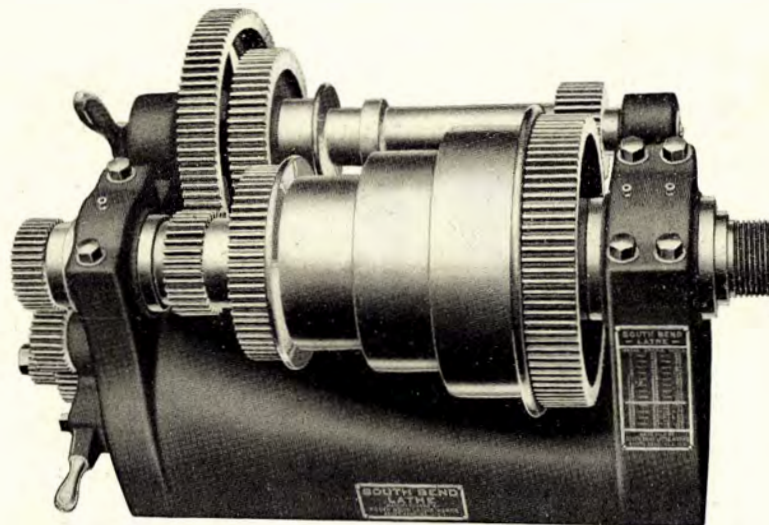


**13-Inch "SOUTH BEND" TOOL ROOM LATHE  
Quick Change Gear Equipment**

**Fitted with Taper Attachment, Draw-in Chuck Attachment, Oil Pan, and Thread Dial**

Any size "South Bend" Lathe can be fitted with Taper Attachment, Draw-in Chuck Attachment, and Thread Dial.

The 9", 11", 13" and 15" lathes can be fitted with Oil Pans.



### DOUBLE BACK GEAR HEAD STOCK

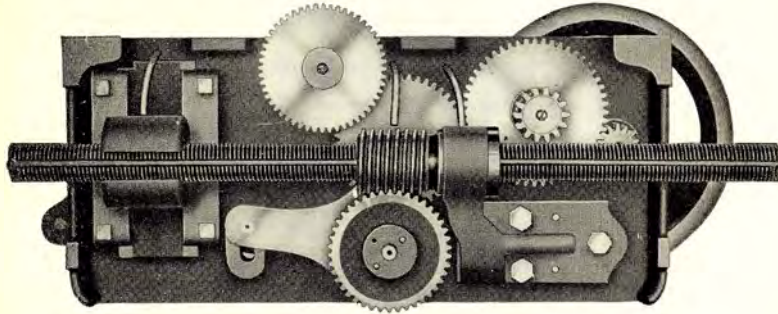
The illustration shows a head of a 16" lathe equipped with double back gear. The gear guards have been removed. We can equip any size "South Bend" Lathe either Standard or Quick Change Gear except 9", 11" and 13" with double back gear, if desired. The double back geared head is equipped with a 3-step cone; the width of each step is exactly the same as that of our regular 4-step cone lathes. One of the steps is omitted to allow the arrangement of the double back gear.

We carry the double back geared heads in stock, so that

when a lathe is ordered with double back gear we are able to ship promptly.

The extra price of the double back gear is shown in the tabulation herewith:

Size of Lathe	Extra for Double Back Gear
15" .....	\$ 65.00
16" .....	75.00
18" .....	85.00
21" .....	100.00
24" .....	125.00



### FEED MECHANISM OF AUTOMATIC APRON

Illustration shows the inside view of the automatic apron of all sizes of "South Bend" Standard or Quick Change Gear Lathes. Note that the lead screw is splined for driving the worm which operates both the automatic cross-feed and the automatic longitudinal-feed. This arrangement allows the thread of the lead screw to be used for thread cutting only. In thread cutting we use only the split half-nuts. For this reason the splined lead screw on a South Bend Lathe should last a lifetime, as the thread of the screw is not used to drive either the automatic longitudinal-feed or the automatic cross-feed, but is used only when cutting threads.

### LEAD SCREW

We guarantee the Lead Screws on South Bend Lathes to be accurate in every detail, so that the finest precision screw gauges, precision taps and special screws, etc., can be made on a South Bend Lathe to meet the most accurate requirements.

### THREAD-CUTTING CHART

The chart shows the arrangement of gears for cutting all standard threads, from 4 to 40, including 11½ pipe-thread, on 15- and 16-inch "South Bend" Lathes with Standard Change Gears. One of these metal charts is attached to each lathe. Many threads other than those shown may be cut on the lathe by compounding gears. The 9-, 11- and 13-inch lathes are geared to cut from four to forty threads per inch. The 18-, 21-, and 24-inch lathes are geared to cut from two to forty threads per inch.

SOUTH BEND ENGINE LATHES			
QUICK CHANGE GEAR			
15-16			
THREAD	SPINDLE	SCREW	
4	48	—	24
5	48	—	30
6	48	—	36
7	48	—	42
8	48	—	48
9	48	—	54
10	48	—	60
11	24	—	33
11 1/2	48	—	69
12	24	—	36
13	24	—	39
14	24	—	42
16	24	—	48
18	24	—	54
20	24	—	60
22	24	1-2	33
24	24	1-2	36
26	24	1-2	39
28	24	1-2	42
30	24	1-2	45
32	24	1-2	48
36	24	1-2	54
40	24	1-2	60

MADE ONLY BY  
SOUTH BEND LATHE WORKS  
SOUTH BEND, IND. U.S.A.

### FEED-GEARS

Compound feed-gears are included in the equipment without extra cost. These gears are not shown in chart.

For the Junior High Schools we can furnish at a slight additional cost, a Safety Device, fitted to the apron of any "South Bend" Lathe, which prevents the operator from engaging the automatic feeds while thread cutting and vice versa.

Thread-Cutting Chart

### TRANSPOSING GEARS AND METRIC LEAD SCREW

Any "South Bend" Lathe can be supplied at a slight additional cost, with Transposing Gears for cutting Metric Threads on an English Lead Screw, or with a Metric Lead Screw in lieu of English Lead Screw.

Metric Lead Screws must be fitted to the lathe here at the factory.

## QUICK CHANGE GEAR MECHANISM FOR "SOUTH BEND" LATHES

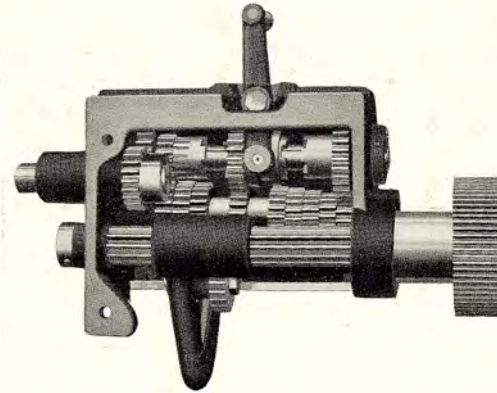
SLIDING GEAR		TOP LEVER	THREADS PER INCH									
IN	LEFT	2	2¼	2½	2¾	2⅞	3		3¼	3½		
	CENTER	4	4½	5	5½	5¾	6		6½	7		
	RIGHT	8	9	10	11	11½	12		13	14		
OUT	LEFT	16	18	20	22	23	24		26	28		
	CENTER	32	36	40	44	46	48		52	56		
	RIGHT	64	72	80	88	92	96		104	112		

Index Plate for Quick Change Gear Lathes

A metal index plate similar to the cut shown here is attached to each "South Bend" Quick Change Gear Lathe.

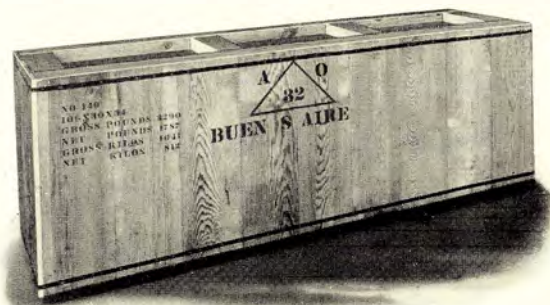
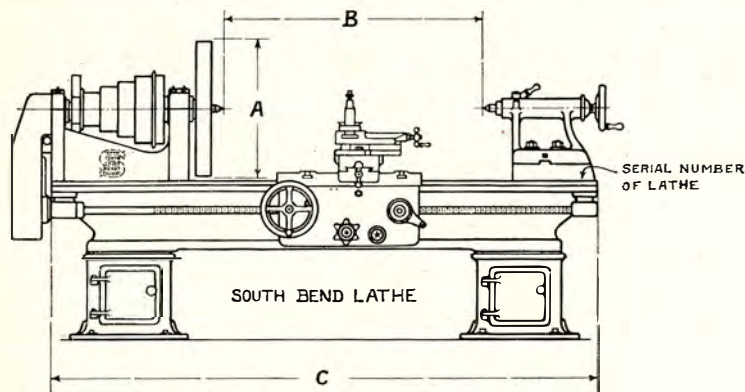
48 threads of different pitch can be cut with this Quick Change Gear Box without changing a gear, as follows, 2, 2¼, 2½, 2¾, 2⅞, 3, 3¼, 3½, 4, 4½, 5, 5½, 5¾, 6, 6½, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44, 46, 48, 52, 56, 64, 72, 80, 88, 92, 96, 104 and 112 per inch.

If threads other than the ones enumerated above are to be cut, the addition of one gear will allow another series of 48 threads to be cut. All Turning Feeds can be obtained instantly without changing a gear.



Interior View of Gear Box

The Quick Change Gear mechanism on "South Bend" Lathes is the simplest and strongest made, (the famous Flather Patent.) The cone of eight steel gears is mounted upon a shaft, any one of which can be instantly engaged by simply moving the lever in front of the box. On another shaft located above the cone of gears is a double clutch gear controlled by the small lever on top of the box. The moving of this lever to three different positions increases the number of changes obtained by the lower lever to twenty-four, which number is doubled, making forty-eight in all, by moving the sliding gear at the end of the lathe.



"South Bend" Lathe Boxed for Export

### SIZE OF A LATHE

The size of an Engine Lathe is determined by the SWING OVER BED and LENGTH OF BED.

- A—SWING OVER BED
- B—DISTANCE BETWEEN CENTERS
- C—LENGTH OF BED

The Europeans determine the size of a lathe by its radius or center distance, for example: An 8-inch center lathe is a lathe having a radius of 8 inches. What the European calls an 8-inch center lathe, we call a 16-inch swing lathe.

### BOXING FOR EXPORT

In preparing a "South Bend" lathe for export, the parts are knocked down as much as possible and all machined parts greased and oiled. Each lathe is carefully packed complete in one case which is bound on the outside by steel bands.

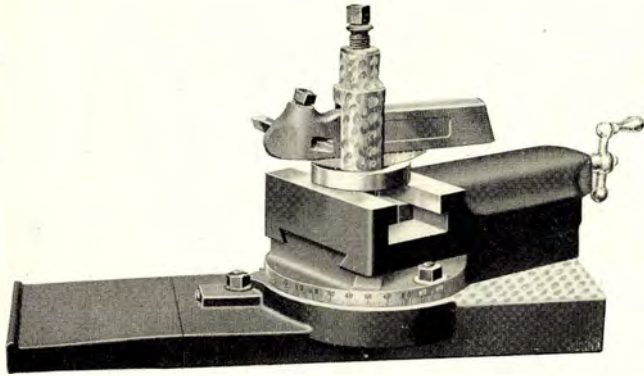
On page 47 will be found the dimensions of cases and weights boxed for Export on both straight- and gap-bed lathes.

Catalogs also printed in Spanish, and Portuguese languages



**DIMENSIONS OF CASES IN INCHES AND GROSS WEIGHT OF "SOUTH BEND" STANDARD  
OR QUICK CHANGE GEAR LATHES BOXED FOR EXPORT, BOTH STRAIGHT-  
AND GAP-BED LATHES**

Swing Over Bed	Length of Bed	Dimensions of Cases Straight Beds	Weight Boxed for Export Straight Beds	Dimensions of Cases Gap Beds	Weight Boxed for Export Gap Beds	Code Word Standard Change Gear	Code Word Quick Change Gear
<b>Nos. 25 and 61—9-INCH "SOUTH BEND" LATHE</b>							
9¼ in.	2½ ft.	41 x 26 x 25	500	.....	.....	Dally	Damp
9¼ in.	3 ft.	48 x 26 x 25	530	.....	.....	Dare	Dirt
9¼ in.	4 ft.	58 x 26 x 25	570	.....	.....	Dell	Dust
<b>Nos. 27 and 63—11 INCH "SOUTH BEND" LATHE</b>							
11¼ in.	3 ft.	59 x 29 x 26	765	59 x 31 x 26	800	Fare	Fact
11¼ in.	4 ft.	71 x 29 x 26	835	71 x 31 x 26	870	Fend	Film
11¼ in.	5 ft.	71 x 29 x 26	905	71 x 31 x 26	940	Foam	Flax
<b>Nos. 34 and 65—13-INCH "SOUTH BEND" LATHE</b>							
13¼ in.	4 ft.	71 x 29 x 28	1230	71 x 31 x 28	1330	Hail	Halt
13¼ in.	5 ft.	71 x 29 x 28	1300	71 x 31 x 28	1400	Heald	Helm
13¼ in.	6 ft.	82 x 29 x 28	1360	82 x 31 x 28	1460	Hire	Hoop
13¼ in.	7 ft.	94 x 29 x 28	1430	94 x 31 x 28	1530	Home	Hump
13¼ in.	8 ft.	107 x 29 x 28	1500	107 x 31 x 28	1600	Husk	Hymn
<b>Nos. 37 and 67—15-INCH "SOUTH BEND" LATHE</b>							
15¼ in.	5 ft.	70 x 30 x 30	1650	70 x 31 x 30	1775	Ideal	Idle
15¼ in.	6 ft.	82 x 30 x 30	1735	82 x 31 x 30	1860	Image	Inca
15¼ in.	7 ft.	94 x 30 x 30	1830	94 x 31 x 30	1955	Index	Iron
15¼ in.	8 ft.	106 x 30 x 30	1925	106 x 31 x 30	2050	Iris	Isle
15¼ in.	10 ft.	129 x 30 x 30	2125	129 x 31 x 30	2250	Issue	Itch
<b>Nos. 40 and 69—16-INCH "SOUTH BEND" LATHE</b>							
16¼ in.	6 ft.	82 x 30 x 31	1970	82 x 30 x 34	2110	Jamb	Jade
16¼ in.	7 ft.	94 x 30 x 31	2070	94 x 30 x 34	2210	Jelly	Jerk
16¼ in.	8 ft.	106 x 30 x 31	2180	106 x 30 x 34	2320	Jinks	Jibe
16¼ in.	10 ft.	129 x 30 x 31	2390	129 x 30 x 34	2530	Joist	Join
16¼ in.	12 ft.	152 x 30 x 31	2750	152 x 30 x 34	2890	Jute	Jump
<b>Nos. 45 and 71—18-INCH "SOUTH BEND" LATHE</b>							
18¼ in.	6 ft.	82 x 30 x 31	2600	82 x 30 x 37	2770	Kafir	Katy
18¼ in.	7 ft.	94 x 30 x 31	2730	94 x 30 x 37	2900	Khond	Keel
18¼ in.	8 ft.	106 x 30 x 31	2860	106 x 30 x 37	3030	Knaeck	Kilt
18¼ in.	10 ft.	129 x 30 x 31	3210	129 x 30 x 37	3380	Kohl	Knot
18¼ in.	12 ft.	152 x 30 x 31	3520	152 x 30 x 37	3690	Kurd	Kris
<b>Nos. 47 and 73—21-INCH "SOUTH BEND" LATHE</b>							
21¼ in.	7 ft.	94 x 40 x 37	4050	94 x 42 x 40	4300	Paint	Pate
21¼ in.	8 ft.	106 x 40 x 37	4350	106 x 42 x 40	4600	Pear	Pelt
21¼ in.	10 ft.	130 x 40 x 37	4725	130 x 42 x 40	4975	Photo	Plot
21¼ in.	12 ft.	154 x 40 x 37	5200	154 x 42 x 40	5450	Pike	Port
21¼ in.	14 ft.	178 x 40 x 37	5500	178 x 42 x 40	5750	Plate	Puff
<b>Nos. 54 and 75—24-INCH "SOUTH BEND" LATHE</b>							
24¼ in.	8 ft.	106 x 40 x 40	5200	106 x 46 x 40	5550	Race	Rail
24¼ in.	10 ft.	130 x 40 x 40	5600	130 x 46 x 40	5950	Rend	Rein
24¼ in.	12 ft.	154 x 40 x 40	6100	155 x 46 x 40	6450	Rise	Rich
24¼ in.	14 ft.	178 x 40 x 40	6500	178 x 46 x 40	6850	Roat	Rock
24¼ in.	16 ft.	203 x 40 x 40	6900	203 x 46 x 40	7250	Ring	Rude



### IMPROVED COMPOUND REST

The compound rest illustrated above is of an improved pattern. It is now being furnished on all size South Bend Lathes.

The improved compound rest is graduated in degrees ranging from 0 to 180 degrees, so that any angle desired may be obtained. The compound rest base is scraped in and fitted to the saddle with a gib that is adjusted by set-screws. The swivel is fastened to the base by two "T" bolts which hold it securely at any angle desired.



### MICROMETER GRADUATED COLLAR

The illustration above shows our micrometer graduated collar, one of which is attached to the cross-feed screw on all size South Bend Lathes. This collar is graduated to read in one thousandths of an inch, and is adjustable so that the operator may start at zero if it is desired.

The micrometer graduations on the cross-feed screw are practical, as they enable the operator to do fine, accurate work, such as thread cutting, finished turning, gauge making, etc.

## PRACTICAL MACHINE SHOP EQUIPMENTS

The following 4 Machine Shop Equipments have been found to be the most practical for the general machine and repair shop. The chucks and tools specified are the most practical sizes for the various size lathes for general use.

### No. 1 Practical Machine Shop Equipment

Showing the chucks and tools most practical for the 11" Lathe

#### No. 27-A or 63-A "South Bend" Lathe, 11-inch swing, 4-foot bed, as shown and described in this catalog

- 1 11" x 4" "South Bend" Lathe
- 1 6" 4-Jaw Independent Lathe Chuck (see page 63)
- Fitting Independent Chuck to Lathe
- 1 Standard Drill Chuck, ½" capacity (see page 62)
- Fitting Drill Chuck to Lathe including Arbor
- 1 Set (6A) Lathe Dogs ¼" to 1½" inclusive (see page 59)
- 1 No. 0S Patent Turning Tool (see page 60)
- 1 No. 30-R Cutting-Off Tool (see page 60)
- 1 No. 8 Boring Tool (see page 60)

### No. 2 Practical Machine Shop Equipment

Showing the chucks and tools most practical for the 13" Lathe

#### No. 34-B or 65-B "South Bend" Lathe, 13-inch swing, 5-foot bed, as shown and described in this catalog

- 1 13" x 5" "South Bend" Lathe
- 1 7½" 4-Jaw Independent Lathe Chuck (see page 63)
- Fitting Independent Chuck to Lathe
- 1 Standard Drill Chuck, ½" capacity (see page 62)
- Fitting Drill Chuck to Lathe, including Arbor
- 1 Set (6A) Lathe Dogs ¼" to 1½" inclusive (see page 59)
- 1 No. 1-S Patent Turning Tool (see page 60)
- 1 No. 31-R Cutting-Off Tool (see page 60)
- 1 No. 9 Boring Tool (see page 60)

### No. 3 Practical Machine Shop Equipment

Showing the chucks and tools most practical for the 15" Lathe

#### No. 37-C or 67-C "South Bend" Lathe, 15-inch swing, 6-foot bed, as shown and described in this catalog

- 1 15" x 6" "South Bend" Lathe
- 1 9" 4-Jaw Independent Lathe Chuck (see page 63)
- Fitting Independent Chuck to Lathe
- 1 Standard Drill Chuck ¾" capacity (see page 62)
- Fitting Drill Chuck to Lathe including Arbor
- 1 Set (7) Lathe Dogs ½" to 2" inclusive (see page 59)
- 1 No. 1-S Patent Turning Tool (see page 60)
- 1 No. 31-R Cutting-Off Tool (see page 60)
- 1 No. 9 Boring Tool (see page 60)

### No. 4 Practical Machine Shop Equipment

Showing the chucks and tools most practical for the 16" Lathe

#### No. 40-E or 69-E "South Bend" Lathe, 15-inch swing, 8-foot bed, as shown and described in this catalog

- 1 16" x 8" "South Bend" Lathe
- 1 10" 4-Jaw Independent Lathe Chuck (see page 63)
- Fitting Independent Chuck to Lathe
- 1 Standard Drill Chuck 1" capacity (see page 62)
- Fitting Drill Chuck to Lathe including Arbor
- 1 Set (9) Lathe Dogs ½" to 3" inclusive (see page 59)
- 1 No. 2-S Patent Turning Tool (see page 60)
- 1 No. 32-R Cutting-Off Tool (see page 60)
- 1 No. 10 Boring Tool (see page 60)

## MILLING AND KEY-WAY CUTTING ATTACHMENT FOR SOUTH BEND LATHES

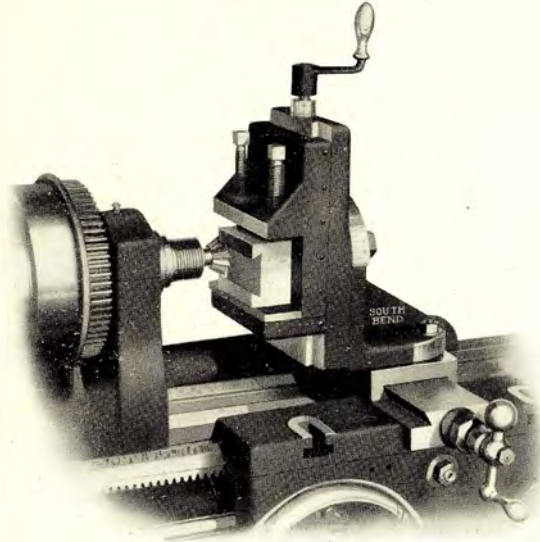
The illustration shows our improved Milling and Key-Way Cutting Attachment fitted to the carriage of a 15-inch South Bend Lathe. The four illustrations shown are of the No. 4 attachment, same size on four different jobs.

The depth of the cut is controlled by the feed of the carriage, the length by the cross-feed screw, and the graduated screw at the top takes care of the vertical motion. The attachment swivels all the way around like the compound rest, and is graduated in degrees. In addition it swivels on the upright angle plate 180 degrees, and is graduated. There is a graduated collar on the vertical screw reading in one-thousandths of an inch.

This attachment is designed for "South Bend" Standard or Quick Change Gear Lathes.

The regular equipment consists of Milling Attachment, two steel V blocks, one crank-handle, one double-end wrench, and two bolts and nuts for attaching.

Arbors or cutters are not included in the price of the attachment, but are extra. (See page 52.)



"South Bend" Milling and Key-Way Cutting Attachment No. 4

Fitted to a No. 37—15" "South Bend" Lathe. This attachment is practical in the shop because it equips the lathe for doing a great deal of work that otherwise could be done only on the shaper or milling machine.

	No. 1	No. 2	No. 3	No. 4	No. 5	No. 5½	No. 6	No. 7
Size of Lathe...	9 "	11 "	13 "	15 "	16 "	18 "	21 "	24 "
Vertical Feed...	2½"	3 "	5 "	6 "	7 "	7 "	8 "	10 "
Cross Feed...	3 "	4 "	8 "	11 "	11 "	14 "	15 "	20 "
Visc will hold...	1½"	1½"	2¾"	3½"	4 "	4 "	4½"	5 "
Depth of Jaws...	1 "	1 "	1⅝"	1¾"	2 "	2 "	2¼"	2½"
Width of Base...	3¼"	3⅞"	5 "	5½"	6 "	6½"	7½"	8 "
Width of Jaws...	3 "	3½"	5 "	5½"	6 "	6 "	7½"	8 "
Weight.....	25 lbs.	30 lbs.	40 lbs.	50 lbs.	65 lbs.	75 lbs.	80 lbs.	100 lbs.
Price.....	\$36.00	\$40.00	\$45.00	\$50.00	\$55.00	\$65.00	\$80.00	\$90.00
Code.....	Vag	Vale	Victo	Visit	Volt	Vox	Vurry	Vusel

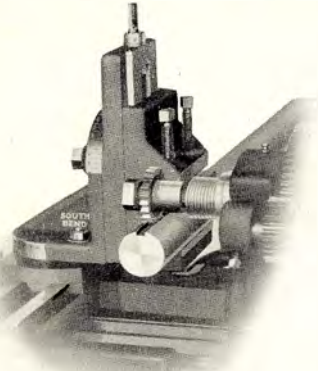


Fig. B.—Milling a Key-Way on the Lathe

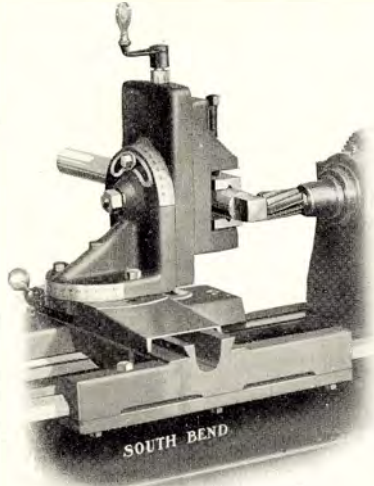


Fig. C.—Squaring a Steel Shaft on Lathe

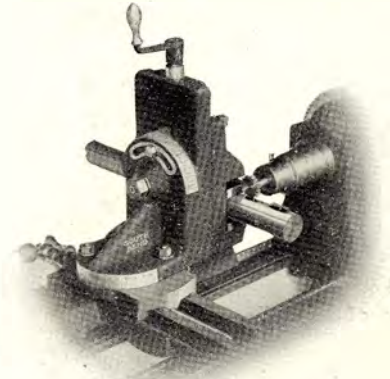


Fig. D.—Milling a Key-Way (Woodruff System)

## “SOUTH BEND” MILLING AND KEY-WAY CUTTING ATTACHMENT FOR LATHES

### No. 4 Attachment on a No. 37 15-Inch South Bend Lathe

Illustration Fig. B is taken from the back of lathe showing a  $\frac{3}{8}$ -inch key-way being milled in a 2-inch shaft. When shafts are tapered where the key-way is to be milled, simply swivel the vertical to the desired angle.

The Arbor and Cutter shown above are further illustrated and described on page 52.

Illustration Fig. C shows a No. 4 Attachment fitted to a lathe squaring a  $1\frac{1}{2}$ -inch steel shaft. A spiral end-mill is fitted into the taper of the spindle. The shaft is fed horizontally across the face of the end mill to the desired depth. Then, by using the vertical feed, you can get a clean, sharp corner.

An end-mill cutting in the above manner does not need near as much power as if it were cutting on the face, and it makes a much cleaner job. (See illustration, page 52.)

### On a No. 37—15-Inch South Bend Lathe

Illustration Fig. D shows the Milling Attachment holding a shaft which is being key-seated for the Woodruff system of keying. The cutter is held in a special B Drilling Chuck, which screws on the nose of lathe spindle.

The Woodruff Key-way Cutter is described on page 52.

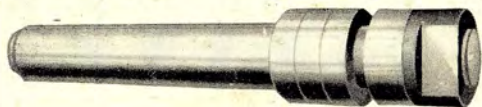


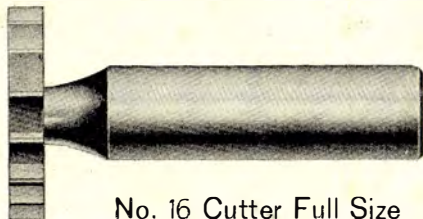
Fig. G

### MILLING ARBOR FOR THE "SOUTH BEND" LATHE

The cut shows arbor used in the lathe for holding cutters. (See cut Fig. B, page 51.) These arbors are made 1 inch in diameter, capacity between shoulder and nut 1 3/8-inch. The 1-inch arbor is the most practical, as most cutters have a 1-inch hole.

In ordering specify both the diameter of arbor and the taper of shank. The price of the arbor is not included in the price of milling attachment, but is extra as shown.

- Price of arbor, No. 2 taper for 9" lathe.....\$ 7.00
- Price of arbor, No. 2 taper for 11" lathe..... 8.00
- Price of arbor, No. 3 taper for 13", 15", 16", 18" lathes.. 9.00
- Price of arbor, No. 4 taper for 21"and 24" lathes..... 10.00



No. 16 Cutter Full Size

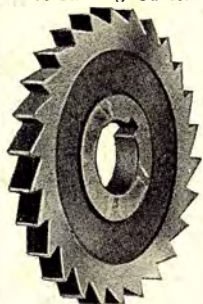
### WOODRUFF SYSTEM MILLING CUTTER

The above illustration shows a Key-Seat Cutter for Woodruff system of keying. (See figure D, Page 51.) In ordering a key-seat cutter of this kind, give the diameter and the width of face of the cutter. Prices of any size cutter on application.

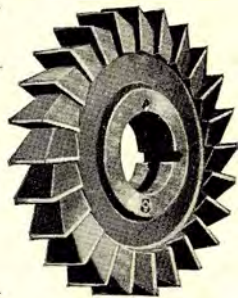
## MILLING CUTTERS

Face Milling Cutters

Side Milling Cutters

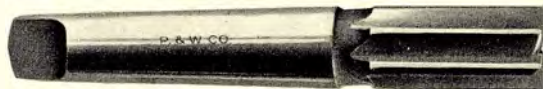


Width of Face Inches	Diam. of Hole Inches	Diameter Inches
3/16	1	2 1/2
1/4	1	2 1/2
5/16	1	2 1/2
3/8	1	2 1/2
7/16	1	2 1/2
1/2	1	2 1/2
5/8	1	2 1/2
3/4	1	2 1/2
7/8	1	2 1/2
1	1	2 1/2



The milling cutters illustrated above are used with Milling and Key-Way Cutting Attachment on a variety of jobs.

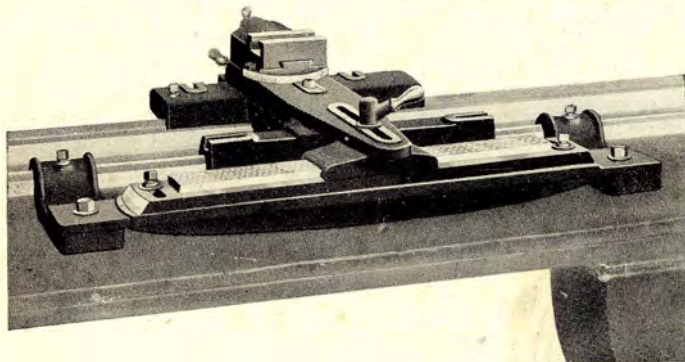
These cutters are not included in the price of milling and key-way cutting attachment, but are extra. Prices on other standard cutters on application.



### END MILL FOR LATHE SPINDLE MORSE TAPER

The end mill shown above fits into the head-spindle of lathe, as shown in Fig. "C", page 51. These end mills can be supplied with a cutting edge 1/8" to 1" inclusive in diameter, having a No. 2 Morse taper shank; 3/4" to 1 1/2" inclusive in diameter, having a No. 3 Morse taper shank; 1 1/4" to 1 1/2" inclusive in diameter with a No. 4 Morse taper shank.

Prices on application.

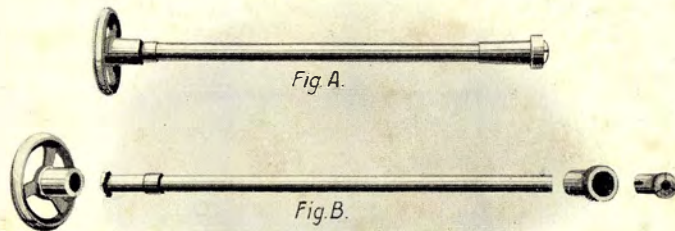


### GRADUATED TAPER ATTACHMENT

Fitted to a 15-inch South Bend Lathe

The illustration shows our improved Taper Attachment fitted to a 15-inch South Bend Lathe. The attachment is fitted to the lathe bed proper, attached by two clamps to the rear V of the bed. This arrangement admits of the adjustment of the taper attachment along the entire length of the lathe. The upper half of the attachment swivels on the base and is graduated. To change over from straight turning to taper turning, loosen the cross-feed nut and tighten the handle on the taper attachment slide. Taper Attachment should be ordered with lathe so that it can be fitted at the factory.

Size of Lathe. . . . .	9"	11"	13"	15"	16"	18"	21"	24"
Price of Attachment . .	\$50	\$60	\$65	\$70	\$75	\$80	\$100	\$115



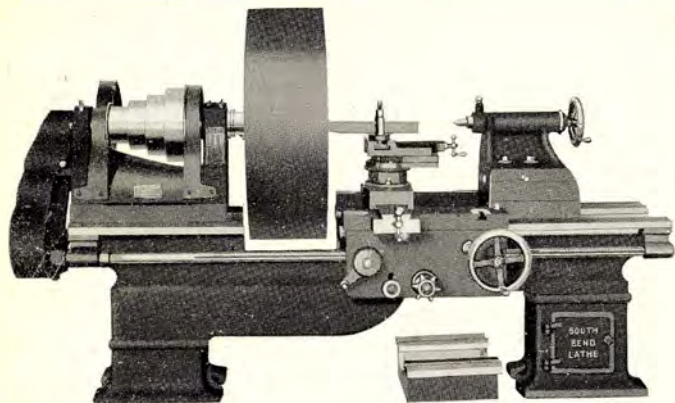
### DRAW-IN CHUCK ATTACHMENT

In the illustration above, Fig. A shows an assembled draw-in chuck attachment that may be used on all sizes South Bend Lathes. Fig B shows the attachment unassembled, consisting of a draw-in tube, a hand-wheel, a taper-sleeve for collet and one split collet. A threaded hood is also supplied which acts as a spindle-guard and a knock-off nut for removing taper-sleeve.

In order to get 1/2-inch split collet capacity on the 9-inch lathe, we attach a nipple to the spindle nose and fit the split collet to this nipple instead of to the taper-sleeve, as illustrated above, as we can get only 13/32-inch collet capacity on the 9-inch lathe using the regular equipment.

Size of Lathe. . . . .	9"	11"	13"	15"	16"	18"	21"	24"
Capacity of Collet from 1/16" up to . . . . .	1/2"	1/16"	1/16"	3/4"	3/4"	3/4"	7/8"	1 1/8"
Price of Attachment including one Collet. . . . .	\$25	\$32	\$35	\$38	\$40	\$45	\$60	\$70
Price of extra Collets. . . . .	ON APPLICATION							

## RAISING BLOCKS FOR "SOUTH BEND" LATHES, EITHER STRAIGHT OR GAP BEDS



Raising Blocks on Gap Bed Lathe

Illustration shows the general appearance of South Bend Lathes with Raising Blocks attached, which increases the swing of the lathe for turning and boring, etc., but not for thread cutting at the increased swing. Raising blocks may be ordered and shipped with the lathe, or they may be ordered and attached any time thereafter, as they are machined in jigs and are interchangeable.

The Raising Block equipment, either on gap-bed lathes or straight bed lathes, includes blocks for head-stock, tail-stock, tool rest, center rest and the necessary screws and nuts for attaching blocks to the lathe.

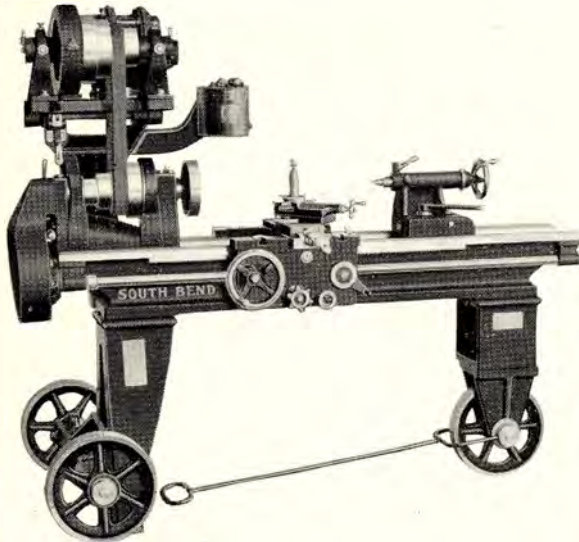
We furnish at extra cost, gear bracket and extra gear so that threads may be cut at the increased swing, and an end-gear guard so that all change-gears may be covered at the increased swing.

### RAISING BLOCKS NOT SUPPLIED WITH QUICK CHANGE GEAR LATHES

STRAIGHT BED LATHES				GAP BED LATHES				Extra for Guard Bracket Gear Bracket and Gear for Thread-Cutting at Increased Swing
Number of Lathe	Swing Over Bed	Swing Over Bed with Raising Blocks	Price Raising Blocks	Number of Lathe	Swing Over Gap	Swing Over Gap with Raising Blocks	Price Raising Blocks	
27	11 in.	14 in.	\$25.00	127	16 in.	19 in.	\$25.00	\$ 8.00
34	13 in.	18 in.	30.00	134	19 in.	24 in.	30.00	10.00
37	15 in.	20 in.	35.00	137	22 in.	27 in.	35.00	12.00
40	16 in.	22 in.	40.00	140	24 in.	30 in.	40.00	12.00
45	18 in.	24 in.	45.00	145	26 in.	32 in.	45.00	15.00
47	21 in.	27 in.	55.00	147	30 in.	36 in.	55.00	18.00
54	24 in.	30 in.	70.00	154	36 in.	42 in.	70.00	23.00



## “SOUTH BEND” PORTABLE SILENT CHAIN MOTOR-DRIVEN LATHE



“South Bend” Portable Motor Driven Lathe

The Portable Lathe can be supplied in either the 15” or 16” sizes. The Lathes and Motor Drive attachment are fully described on pages 12 to 15, 28 to 31 and 40 to 41.

Wiring diagram and full instructions accompany each motor.

The illustration shows a 15” Portable South Bend Lathe equipped with our Silent Chain Motor Drive attachment.

This equipment is used in Power Plants, Elevators, Battleships, Arsenals, and in repairing Locomotives in Railway shops. When lathe is taken to the work, an eccentric shaft carrying the two wheels under head-stock end can be turned by a lever, and locked, raising the wheels 1” and allowing the lathe to rest firmly on its own legs.

The tilting table carrying motor is adjustable, operated by a small lever, to allow the belt to be shifted while the lathe is in operation. The small bracket carrying the lever admits of an independent adjustment for the tightening of belt.

The reversible switch does away with expensive reversing motors, and the countershaft cone does away with variable speed motors, allowing use of the regular standard motor.

On account of the design, a General Electric or Westinghouse Motor, alternating or direct current, having a speed of 1150 to 1200 R. P. M., is recommended.

In placing an order for a silent-chain motor-driven lathe, please give the following specifications:

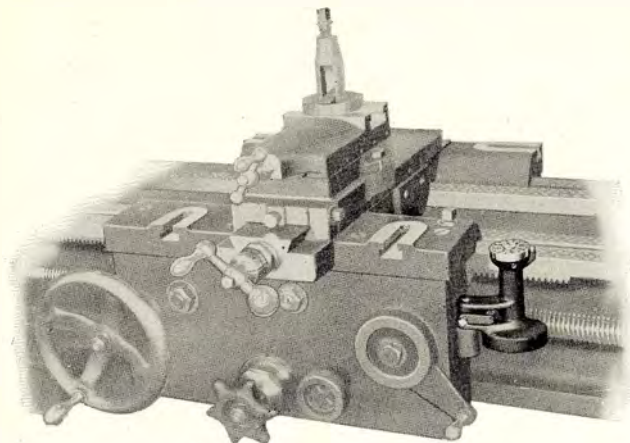
Current, whether alternating or direct.  
If alternating, state voltage, phase and cycle.  
If direct, state voltage.

Raising blocks cannot be used with Portable Motor-Driven Lathe.

Price of Portable attachment for 15” and 16” Lathes.....\$100.00

Price is for Portable Attachment only, and does not include Lathe, Motor Drive Attachment or Motor.

## THREAD DIAL FOR "SOUTH BEND" STANDARD OR QUICK CHANGE GEAR LATHE



The illustration above shows a thread dial fitted to the "South Bend" Lathe for the purpose of enabling the operator to cut threads on the lathe without reversing the carriage automatically.

In cutting a thread on a lathe not equipped with a thread dial, the operator may unclamp the split nut and reverse the carriage quickly by hand, providing that the thread he is cutting is a multiple of the thread of the lead screw on the lathe. If it is not a multiple then the carriage must be reversed automatically by power which is slower than by hand. If the lathe is equipped with a thread dial the split nut may be released, the carriage reversed by hand and the thread dial will aid the operator, showing just where the tool should enter the thread on the next chip. This is further explained in booklet entitled, "How to Run a Lathe." (See page 65.)

## TOOL-POST TURRETS

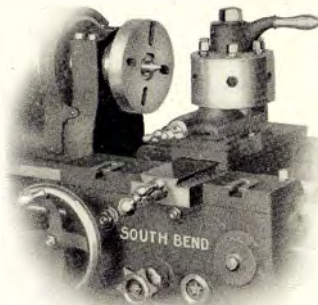
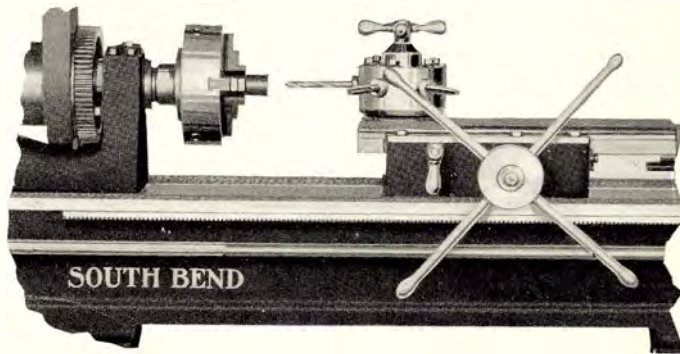


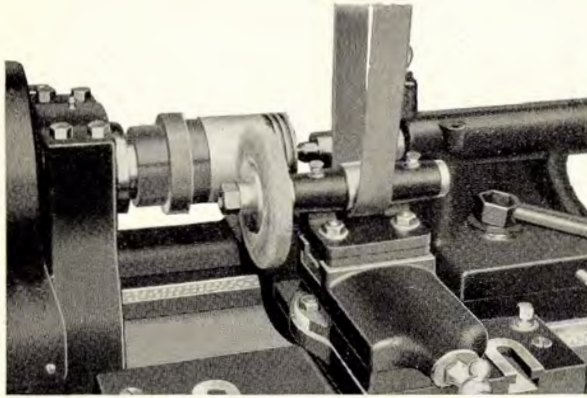
Illustration shows the style E-6 Turret. Quickly attached directly to Compound Rest same as ordinary tool post. Furnished with 6 holes, unless otherwise ordered. Diameter of holes 1" to 1 1/4"; Diameter of Turret 6 1/2".

Prices on application.

## TURNSTYLE TURRET ON THE BED



Turret should be fitted to lathe at factory.  
Turnstyle Turret on Bed—Prices on application.



## PISTON GRINDING ATTACHMENT FOR "SOUTH BEND" LATHES

The above illustration shows a piston being ground on a "South Bend" Lathe. The Grinder is bolted onto the Compound Rest and is operated from a drum pulley on an extra countershaft above the lathe. This makes a strong durable Grinder for oversize pistons and other external grinding. We can furnish this attachment fitted to all sizes of "South Bend" Lathes.

### Specifications of Piston Grinder.

Emery Wheel 6" Dia.,  $\frac{3}{4}$ " Face,  $\frac{5}{8}$ " Hole.

Diameter of Spindle Bearings  $\frac{3}{4}$ ".

Spindle Speed 3200 R.P.M.

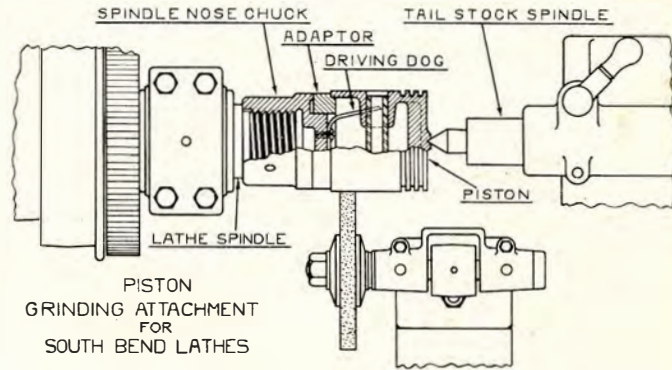
Surface Speed of Emery Wheel 5000 ft. per Min.

Countershaft Speed 500 R.P.M.

Size of Drum on Countershaft, 12" Dia., 10" Long.

Width of Drum Belt  $1\frac{1}{2}$ ".

Width of Countershaft Drive Belt  $2\frac{1}{2}$ ".



Detailed Drawing Showing Method of Holding and Driving Piston

The above drawing shows the method for holding and driving a Piston on a "South Bend" Lathe. The Piston is held in place by a ring or adapter, which is machined to fit the inside finish of the Piston. This adapter is also machined to fit the Spindle Nose Chuck on which there is a driving dog to drive the Piston. We can furnish rough castings of extra adapters at a small additional cost.





Price of Grinding Attachment complete with one emery wheel and one adapter, \$25.00.

Price of Drum Countershaft, Extra, \$25.00.

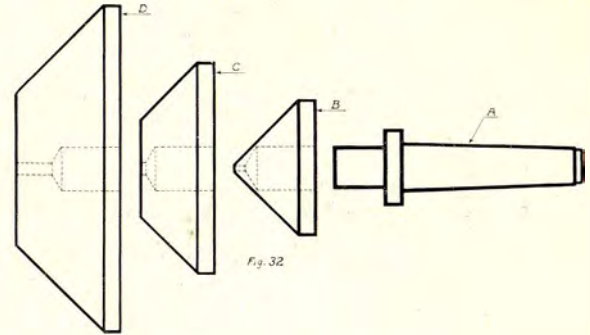
**CENTERS, DRILL PADS AND ARBORS**

A number of accessories which are very useful for various classes of lathe works. These parts are machined and fitted to both head and tail-spindles of the various size lathes. They are finished complete and ready for use.

Hardened 60-degree tail stock Lathe Center is marked with ring groove to distinguish from soft head stock Center.

	Size of Lathe...	9"	11"	13"	15"	16"-18"	21"-24"
	Drill Pad.....	\$2.50	\$2.50	\$2.75	\$3.00	\$3.00	
	Crotch Center...	\$2.50	\$2.50	\$2.75	\$3.00	\$3.00	
	60-degree Lathe Center.....	\$2.00	\$2.00	\$2.25	\$2.50	\$2.50	\$3.50
	Drill Chuck Arbor..... finished	\$2.50	\$2.50	\$2.75	\$3.00	\$3.00	\$3.50
	Semi-Machined Drill Chuck Arbor....	\$2.00	\$2.00	\$2.25	\$2.50	\$2.50	\$3.00

Any drill-chuck fitted with finished arbor, for head-spindle of the lathe, will also fit the tail-spindle, because the tapers are the same size.

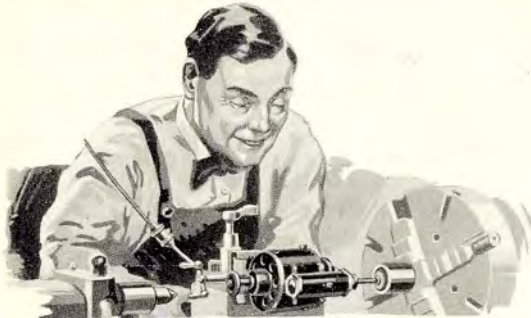


**PIPE CENTERS FOR "SOUTH BEND" LATHE**

The above drawing shows a practical pipe center for the engine lathe. The taper shank "A" fits into the head-spindle and tail-stock spindle. The conical disks "B", "C" and "D" fit loosely and revolve on taper shank "A".

If a pipe is to be machined or threaded in the lathe, hold one end of the pipe in the chuck, and the other end on the pipe center in the tail-stock.

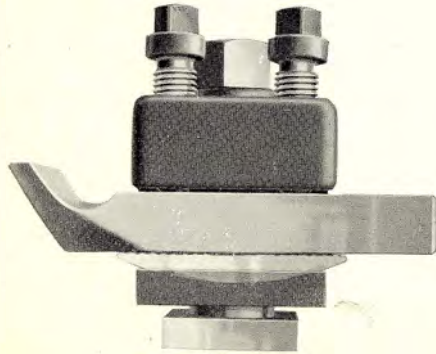
- Taper Shank "A" Price..... 13" —\$2.50
- Taper Shank "A" Price.....15"-16"-18"— 3.00
- Taper Shank "A" Price..... 21"-24"— 4.00
- Disc "B" takes from 1/2" to 3" Pipe. Price.... 6.00
- Disc "C" takes from 3" to 5" Pipe. Price..... 7.00
- Disc "D" takes from 5" to 8" Pipe. Price.....10.00



**ELECTRIC TOOL-POST GRINDERS**

Price on Application

Electric Tool-Post Grinders are very practical attachments for use in the machine or repair shop, as they are operated from ordinary electric lamp socket. They can be used on the lathe for both internal and external grinding.

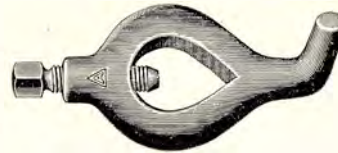


**EUROPEAN TOOL-POST**

We can furnish European Tool-Posts as shown here for any size "South Bend" Standard or Quick Change Lathe at a slight additional cost.

Prices on European Tool-Posts furnished upon application.

**LATHE DOGS**



These lathe dogs are heavy malleable iron with hardened tool steel set-screw. We can furnish forged steel dogs at higher prices if desired.

No.	Size	Price Each	No.	Size	Price Each
No. 1	1/4"	\$.40	No. 7	1 3/4"	1.10
No. 2	1/2"	.50	No. 8	2 "	1.20
No. 3	3/4"	.60	No. 9	2 1/2"	1.45
No. 4	1 "	.70	No. 10	3 "	1.60
No. 5	1 1/4"	.80	No. 11	3 1/2"	1.80
No. 6	1 1/2"	.95	No. 12	4 "	2.00

\$3.95

\$9.15

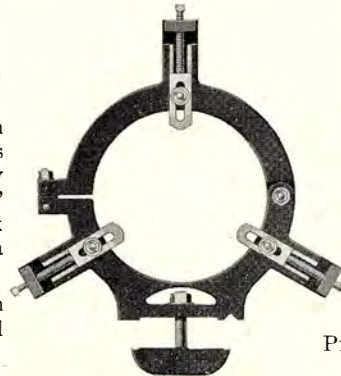
Set of 6A, \$3.50

Set of 6B, \$8.50

Set of 12—6A and 6B.....\$11.00

**EXTRA LARGE STEADY RESTS**

We can furnish Extra Large Steady Rests when desired.

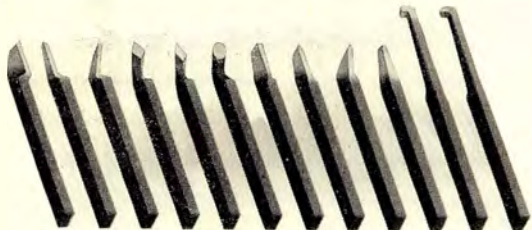


	Cap. of Reg. Steady Rests	Cap. of Spec. Extra Large Steady Rests
13" Lathe	0 to 3 3/4"	3 3/4" to 8 3/4"
15" Lathe	0 to 4 3/4"	4 3/4" to 10 1/2"
16" Lathe	0 to 4 3/4"	4 3/4" to 10 3/4"
18" Lathe	0 to 5 3/4"	5 3/4" to 12 1/2"
21" Lathe	0 to 6 3/4"	6 3/4" to 15 "
24" Lathe	0 to 8 3/4"	8 3/4" to 17 "

Prices on Extra Large Steady Rests upon application

## FORGED STEEL LATHE TOOLS

An equipment of Lathe Tools is necessary for a lathe. We can furnish lathe tools made of a good quality carbon steel, carefully forged, hardened and tempered. This set of twelve lathe tools is selected as the most practical for all-around lathe work.



1 2 3 4 5 6 7 8 9 10 11 12

- |                             |                           |
|-----------------------------|---------------------------|
| 1. Left-hand Side Tool      | 7. Cutting-Off Tool       |
| 2. Right-hand Side Tool     | 8. Threading Tool         |
| 3. Right-hand Bent Tool     | 9. Bent Threading Tool    |
| 4. Right-hand Diamond Point | 10. Roughing Tool         |
| 5. Left-hand Diamond Point  | 11. Boring Tool           |
| 6. Round Nose Tool          | 12. Inside Threading Tool |

	Price		Price
For 9" Lathes.....	\$ .75	Set of 12....	\$ 8.00
For 11" Lathes.....	.85	Set of 12....	9.00
For 13" Lathes.....	1.25	Set of 12....	12.00
For 15" Lathes.....	1.75	Set of 12....	17.00
For 16" Lathes.....	1.75	Set of 12....	17.00
For 18" Lathes.....	1.75	Set of 12....	17.00
For 21" Lathes.....	3.25	Set of 12....	33.00
For 24" Lathes.....	3.25	Set of 12....	33.00

## PATENT LATHE TOOLS

Each tool is carefully packed in a cardboard box, and price includes one Drop-Forged Wrench and one High-Speed-Steel Cutter, ground to shape.

### TURNING TOOLS

Size of Lathe	No. L. Hand	No. R. Hand	No. Straight	Size of Shank	Size of Cutter	Price Each
9"	00-L	00-R	00-S	5/16 x 3/4 x 1 1/2"	3/16" sq.	\$1.80
11"	0-L	0-R	0-S	3/8 x 7/8 x 5"	1/4" sq.	1.90
13", 15"	1-L	1-R	1-S	1/2 x 1 1/8 x 6"	5/16" sq.	2.15
16", 18"	2-L	2-R	2-S	5/8 x 1 3/8 x 7"	3/8" sq.	2.70
21", 24"	3-L	3-R	3-S	3/4 x 1 5/8 x 8"	7/16" sq.	3.60

### CUTTING-OFF TOOLS

Size of Lathe	Right-Hand Off-Set	Size of Shank	Size of Blades	Price Each
9"	No. 29-R	5/16 x 3/4"	5/16" x 1 1/2"	\$1.90
11"	No. 30-R	3/8 x 7/8"	3/8" x 5/8"	2.00
13", 15"	No. 31-R	1/2 x 1 1/8"	1/2" x 3/4"	2.40
16", 18"	No. 32-R	5/8 x 1 3/8"	5/8" x 7/8"	3.00
21", 24"	No. 33-R	3/4 x 1 5/8"	3/16" x 1"	4.00

### BORING TOOLS

Each set is carefully packed in a cardboard box. It consists of Holder and Bar, with straight and 45-degree End Caps, two High-Speed Cutters (ground for boring) and a Double-End Wrench.

Size of Lathe	No. of Tool	Size of Shank	Size of Bar	Size of Cutter	Price Each
9"	00-B	5/16 x 3/4"	1/2" dia.	3/16" sq.	\$3.25
11"	8	3/8 x 7/8"	9/16" dia.	3/16" sq.	3.25
13", 15"	9	1/2 x 1 1/8"	3/4" dia.	1/4" sq.	3.85
16", 18"	10	5/8 x 1 3/8"	15/16" dia.	3/8" sq.	5.10
21", 24"	11	3/4 x 1 5/8"	1 1/8" dia.	3/8" sq.	7.25



TURNING TOOL



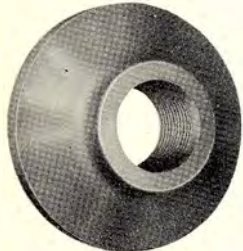
CUTTING-OFF TOOL

### CHUCK FITTED TO LATHE AT FACTORY

When ordering a lathe with chuck included, the chuck should be fitted to the lathe before it leaves the factory, because it is a difficult job for one to fit a chuck accurately, especially without the proper tools for doing this work.

We have a special equipment for threading chuck-plates and fitting chucks to lathes, charging only the actual cost of the labor and material. We do this as an accommodation to the customer, so that the chuck will fit the lathe accurately and run true.

### SEMI-MACHINED CHUCK-PLATE



No. 301

Fig. 301 shows a cast-iron semi-machined chuck-plate; semi-machined because it has been bored, faced, and threaded to fit the spindle nose of various sizes of "South Bend" Lathes.

For fitting lathe chuck to lathe spindle, see book, "How to Run a Lathe", where this subject is explained in detail. (See inside back cover.)

### SIZE OF CHUCKS FOR A LATHE

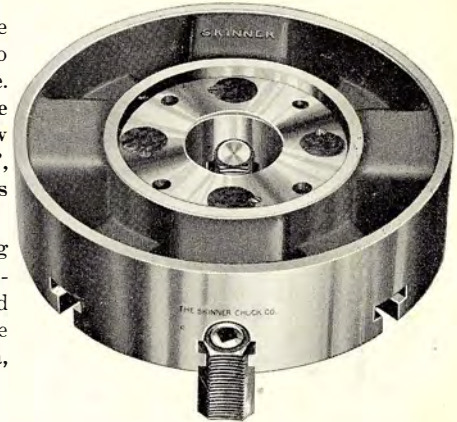
Size of Lathe Chuck most practical for "South Bend" Lathes, viz:

9-inch Lathe.....	3" to 5 "	chuck inclusive
11-inch Lathe.....	4" to 7½"	chuck inclusive
13-inch Lathe.....	5" to 9 "	chuck inclusive
15-inch Lathe.....	6" to 10 "	chuck inclusive
16-inch Lathe.....	6" to 12 "	chuck inclusive
18-inch Lathe.....	8" to 14 "	chuck inclusive
21-inch Lathe.....	10" to 15 "	chuck inclusive
24-inch Lathe.....	12" to 18 "	chuck inclusive

One semi-machined chuck-plate furnished free with equipment of each lathe

The recess on the back of the chuck is to receive the chuck-plate. For fitting chuck-plate to chuck, see book "How to run a Lathe", where this subject is fully explained.

The price of fitting chuck to lathe complete, is not included in the price of the lathe or chuck, but is extra, as shown herewith.



No. 302  
View of Back of Lathe Chuck

### PRICE OF SEMI-MACHINED CHUCK-PLATE AND FITTING CHUCK TO LATHE

Size of Lathe . . . . .	9"	11"	13"	15"	16"	18"	21"	24"
Price Semi-Machined Chuck-Plate . . . . .	\$2.00	\$2.25	\$2.50	\$2.75	\$3.00	\$3.50	\$4.00	\$5.00
Price Fitting Chucks to Lathes, including S.M. Chuck-Plate	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00

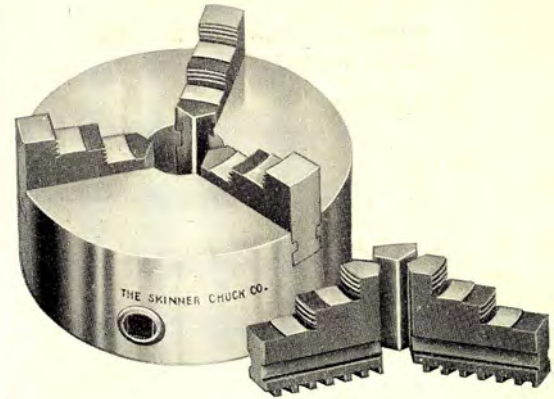


**“STANDARD” DRILL CHUCK**

It is very powerful and guaranteed to hold true and not injure the shanks of the drills. It holds round and square work. The jaws and screws are made from cast steel carefully tempered. The hole in the hub is made to fit taper arbor, which will fit both head and tail spindle of lathe. Price includes wrench.

	Capacity Inches	Diameter Inches	Price Each
41.....	0 to 1/4	.13/16	\$ 6.00
42.....	0 to 3/8	.111/16	6.50
43.....	0 to 1/2	.211/16	7.00
44.....	0 to 3/4	.27/8	8.00
45.....	0 to 1	.37/16	10.00

For Fitting Drill Chucks to Lathe. See Bottom of Page 58



**UNIVERSAL GEARED SCROLL CHUCK**

With Two Sets of Jaws

This style chuck is used for holding round pieces. It is strictly a universal chuck, the jaws being moved simultaneously by the scroll-threaded plate. Price includes wrench.

Normal Size Inches	No.	3-Jaw Price 2 Sets Jaws
3 .....	199 .....	\$20.00
4 .....	200 .....	22.00
5 .....	201 .....	24.00
6 .....	203 .....	28.00
7 1/2 .....	204 .....	32.00
9 .....	205 .....	38.00
10 1/2 .....	206 .....	44.00
12 .....	207 .....	52.00
15 .....	208 .....	70.00

For Fitting Chuck to Lathe. See Page 61





### INDEPENDENT LATHE CHUCK

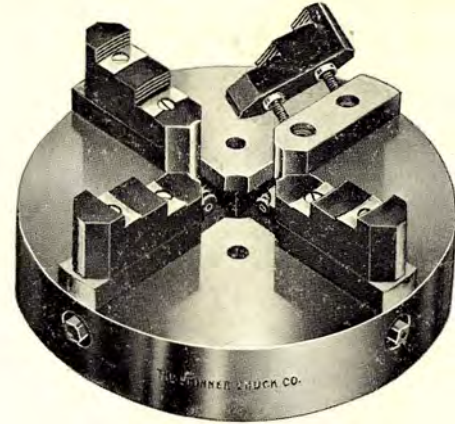
With Four Independent Reversible Jaws

This Chuck has four solid jaws with half nut, reversible by running out of chuck at the periphery, and turning end for end. The jaws are hardened, have raised and ground steps. The face of Chuck is ground true to straight edge and is accurately graduated in inches. T slots are furnished only on chucks 12 inches and larger.

They are all made with hardened steel bearing for the screws. Price includes wrench.

Rated Size of Chuck, Inches	No.	Will Hold About, Inches	Price
5 "	300	7 "	\$21.00
6 "	301	7 1/2 "	22.00
7 1/2 "	302	8 3/4 "	25.00
8 "	302 1/2	9 1/2 "	26.00
9 "	303	11 1/2 "	28.00
10 "	304	12 1/2 "	30.00
12 "	305	14 1/2 "	35.00
14 "	306	16 1/2 "	40.00
15 "	307	18 "	43.00
16 "	307 1/2	18 "	46.00
18 "	308	21 "	54.00

For Fitting Chuck to Lathe, See Page 61



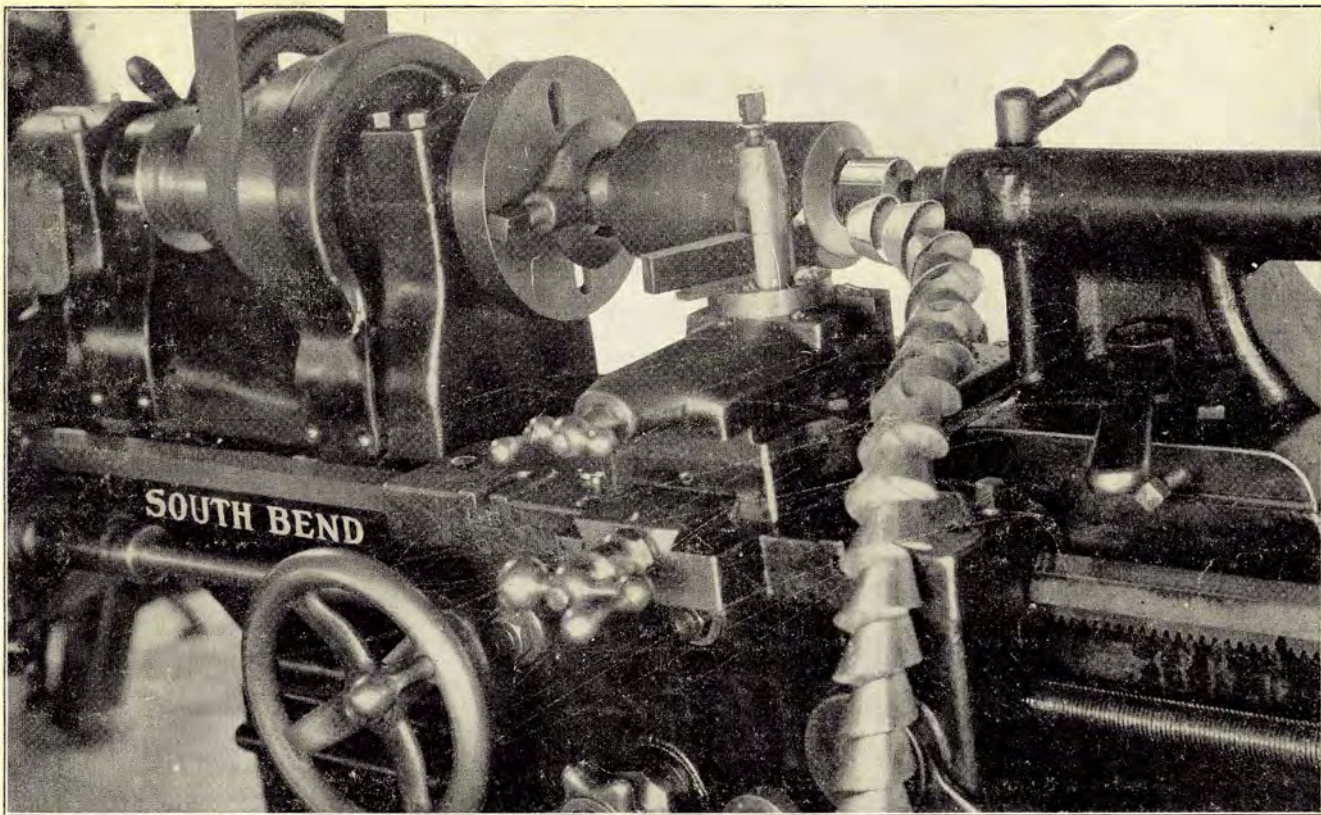
### COMBINATION CHUCK, GEARED SCREW

With Patent Reversible Jaws

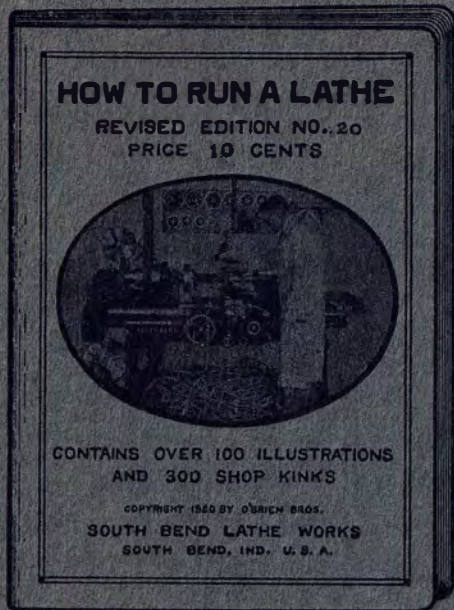
Rated Size, Inches	No.	Will Hold Approximately, Inches	Price, 4 Jaws
4".....	420.....	4 1/8"	\$36.00
5".....	421.....	5 3/4"	39.00
6".....	422.....	7 1/4"	42.00
8".....	423.....	8 5/8"	50.00
9".....	424.....	9 1/2"	54.00
12".....	425.....	12 7/8"	66.00
15".....	426.....	16 3/8"	82.00

A Combination Chuck is a combination of a Universal and an Independent Chuck. The jaws work universally to and from the center, but by shifting a stud on the back of chuck, throwing gears out of mesh, the jaws work independently. Price includes wrench.

For Fitting Chuck to Lathe, See Page 61



The above illustration of a No. 40—16" South Bend Lathe was taken while the lathe was in actual operation, and shows a steel shaft 4 inches in diameter, being reduced to  $2\frac{1}{4}$  inches in One Chip. This demonstrates strength and power. All sizes of South Bend Lathes are equally powerful in proportion to their relative sizes.



A book included with each lathe equipment

A copy of this valuable little 80-page book will be sent, postpaid, to any address on receipt of 10c. Coin or stamps of any country accepted.

## "HOW TO RUN A LATHE"

### A Partial List of Contents

Layout for small machine shop.  
Speed and diameter of lineshaft.  
Horsepower required to drive a lathe.  
Rules for figuring size of pulleys.  
How to find the pitch of a screw.  
Milling and key-seating in the lathe.  
How to case-harden a piece of mild steel.  
How to harden and temper a lathe tool.  
Rule for gearing any lathe for thread-cutting.  
How to fit a lathe chuck to a lathe.  
Cutting speeds for different metals.  
How to make a boring bar for the lathe.  
Cutting a key-way in the lathe.  
Application and use of lathe tools.  
Boring in the lathe.  
Turning taper in the lathe.  
How to reseal a valve in the lathe.  
Grinding in the lathe.  
The book also contains a number of complete drawings and instruction sheets on various jobs that the repair shop is likely to meet with, viz.:  
Making and fitting of piston rings.  
Making of ball race and cone.  
Hardening, tempering and annealing steel.  
Case hardening, and 100 other subjects.

### HOW TO RUN A LATHE

This booklet is used as a text-book for apprentices in the large industrial plants and for students taking machine-shop work in Vocational and Industrial Schools.

"How to Run a Lathe" also printed in Spanish and Portuguese languages.

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