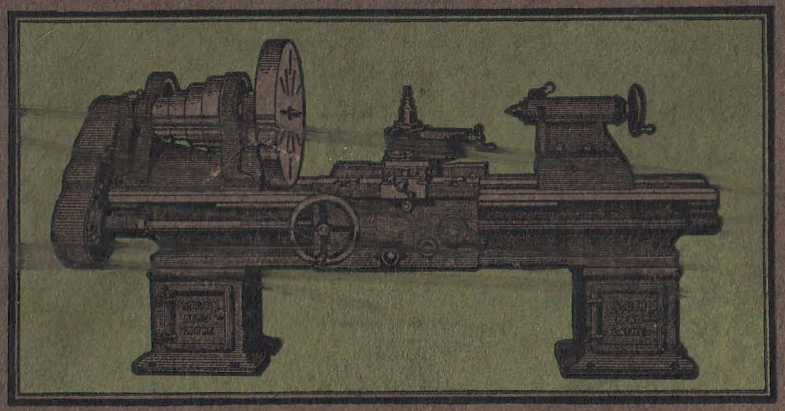
SOUTH BEND LATHES

TRADE MARK
SOUTH BEND
TWINS
ENGINE LATHES



Catalog No.
67
1921

Established 1906

SOUTH BEND LATHE WORKS

SOUTH BEND · INDIANA · U.S.A.

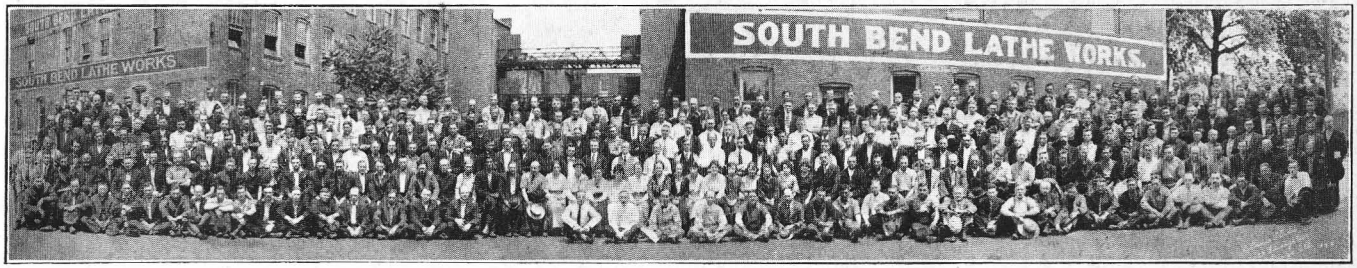
Reduced Prices

We reduced prices on the entire line of South Bend Lathes. The reduced prices took effect December 22, 1920.

The first South Bend Lathe was built over fifteen years ago.

Our entire plant is devoted exclusively to the manufacturing of

SOUTH BEND LATHES



CATALOG No. 67—Published Feb. 1, 1921

Illustrating and Describing

SOUTH BEND LATHES

ESTABLISHED IN 1906

Cable Address "Twins" South Bend

Manufactured only by the

SOUTH BEND LATHE WORKS

(Incorporated)

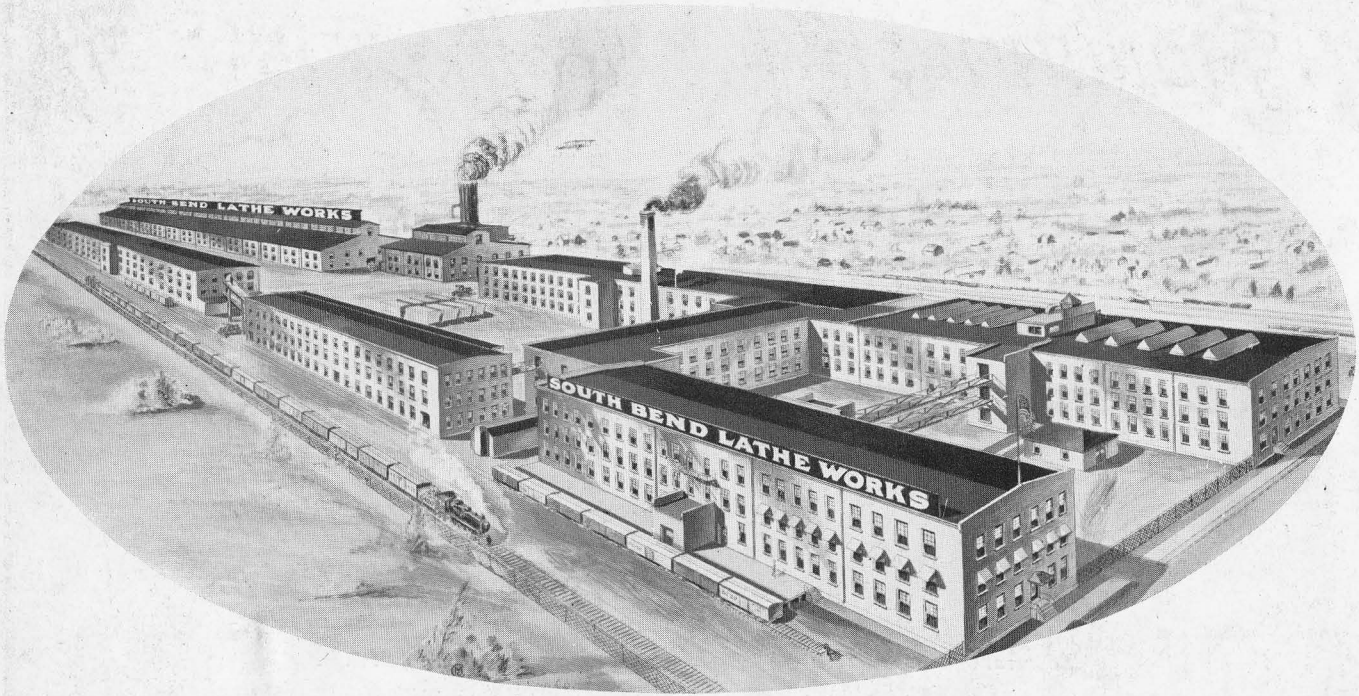
General Offices and Works: 425 E. Madison St., South Bend, Ind., U. S. A.

Catalogues also printed in Spanish and Portuguese languages

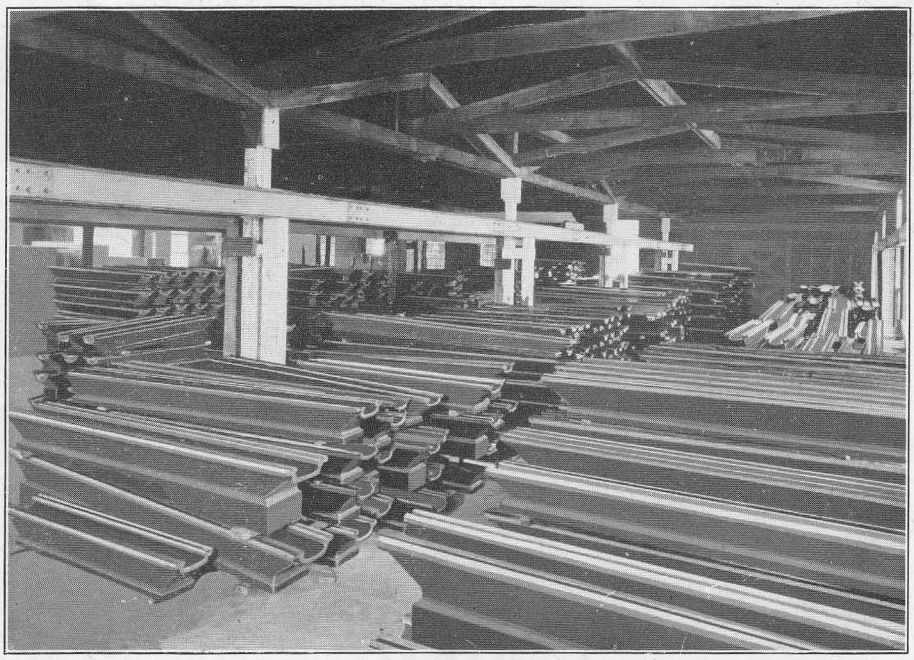
NEW YORK SALESROOM,
2½ Murray St.
New York, N. Y.

BOSTON SALESROOM,
207 Congress St.
Boston, Mass.

PHILADELPHIA SALESROOM
33 N. Seventh St.
Philadelphia, Pa.



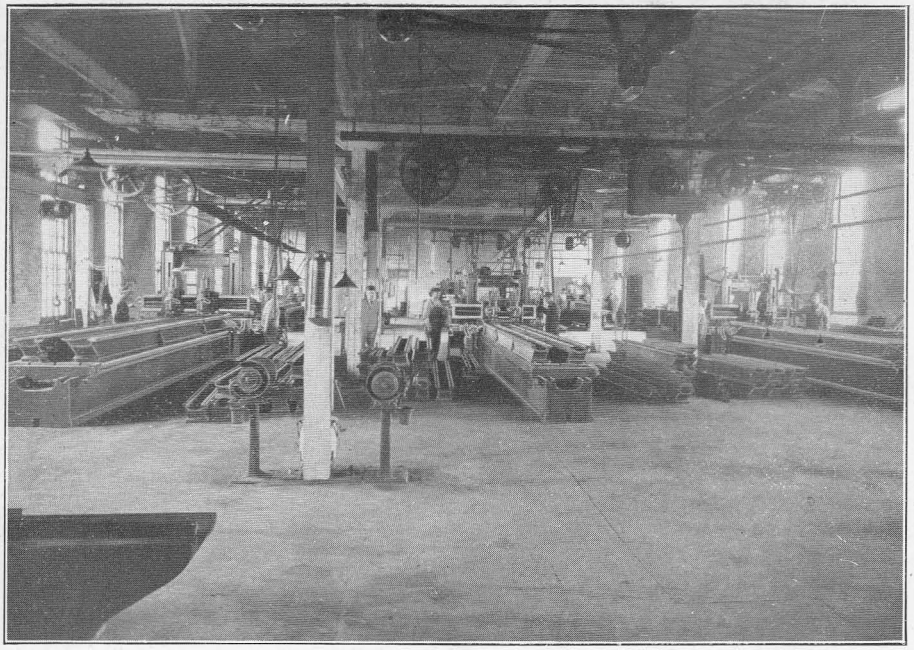
HOME OF THE SOUTH BEND LATHE WORKS, SOUTH BEND, IND.
27,000 South Bend Lathes in Use Throughout the World
Established 1906



MORE THAN 1,000 FINISHED LATHE BEDS IN STOCK

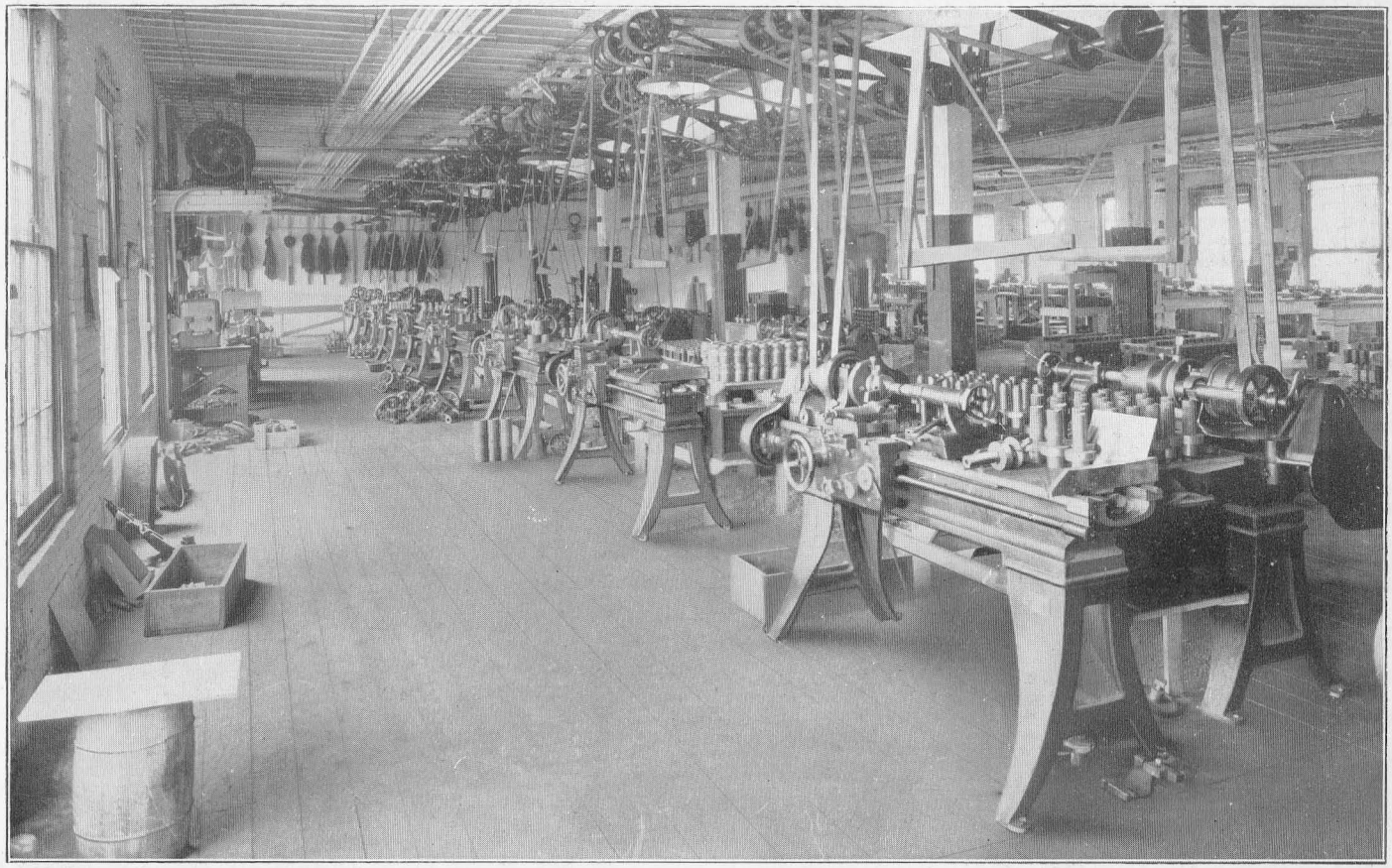
We carry a large stock of Lathe Beds, Heads, Tail-Stocks, Carriages and other units so delivery on standard lathes is only a matter of assembling

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



ONE END OF OUR PLANER DEPARTMENT
Four 24-foot Spiral Gear Planers in the Foreground. Each Planer has Four Heads, Two on Uprights and Two on Rails

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

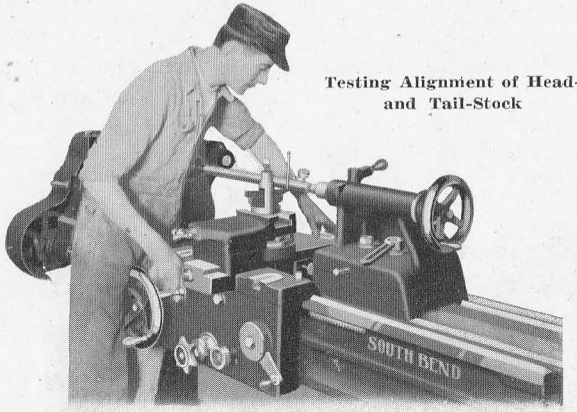


18 South Bend Lathes in a Manufacturing Plant

ACCURACY

Testing Cross Slide of Saddle

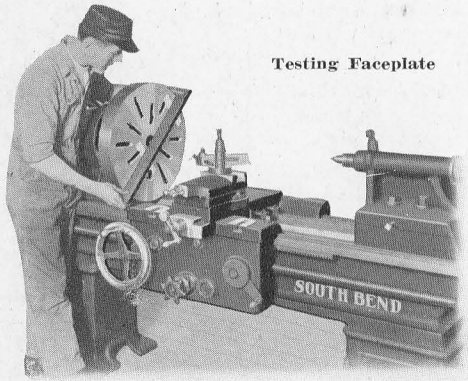
Testing Alignment of Head- and Tail-Stock



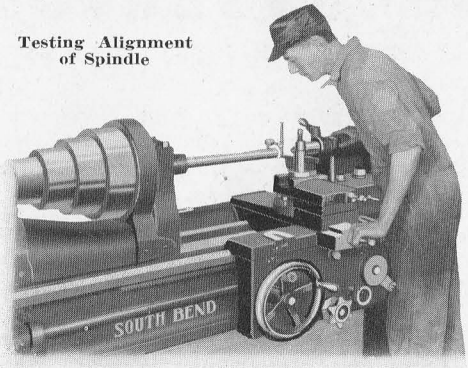
QUALITY MARK

REG. U. S. PATENT OFFICE

Testing Faceplate



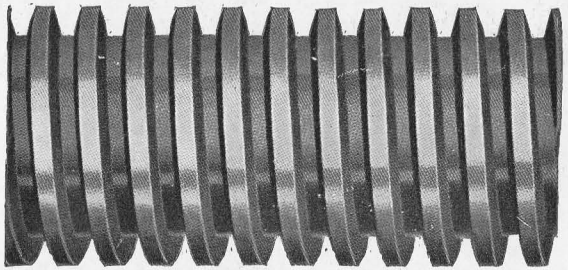
Testing Alignment of Spindle



All tests are made with accurate instruments designed for that purpose

SECTION OF LEAD SCREW

The cut below shows a section of the Lead Screw that is used on the 18-inch South Bend Lathe. Our lead screws and racks are purchased from manufacturers that furnish lead screws and racks to makers of standard engine lathes.



Steel Lead Screw of 18-inch Lathe (Actual Size)

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.

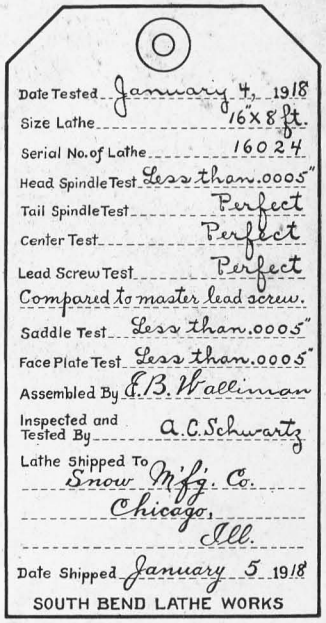
The Lead Screw on South Bend Lathes is of steel. The thread is Acme Standard. Each Lead Screw is splined and acts as a feed rod for driving the worm which operates both the automatic cross-feed and the automatic longitudinal-feed; therefore the thread of the Lead Screw should last a lifetime, as it is used only when cutting threads on the lathe.

ACCURACY

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 right shows one of the tags.

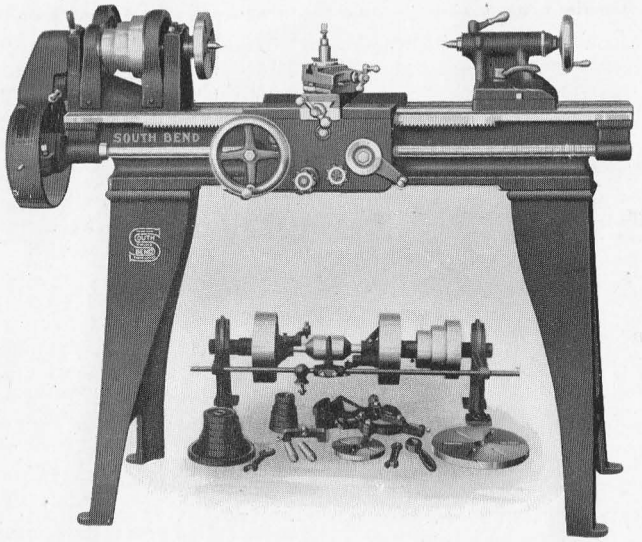
OUR GUARANTEE

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.



Test Tag

Over 27,000 satisfied users of South Bend Lathes.



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

No. 25—9-Inch South Bend Screw-Cutting Engine Lathe

When ordering Bench Lathe specify "Bench", otherwise Long Legs will be sent **(See page 29)**

No. 25—9-INCH SOUTH BEND SCREW-CUTTING ENGINE LATHE

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

The 9" Lathe is recommended for Amateur and Experimental 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 three steps for 1-inch belt. Spindle is of special spindle steel, accurately ground, has 19/32-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 36.)

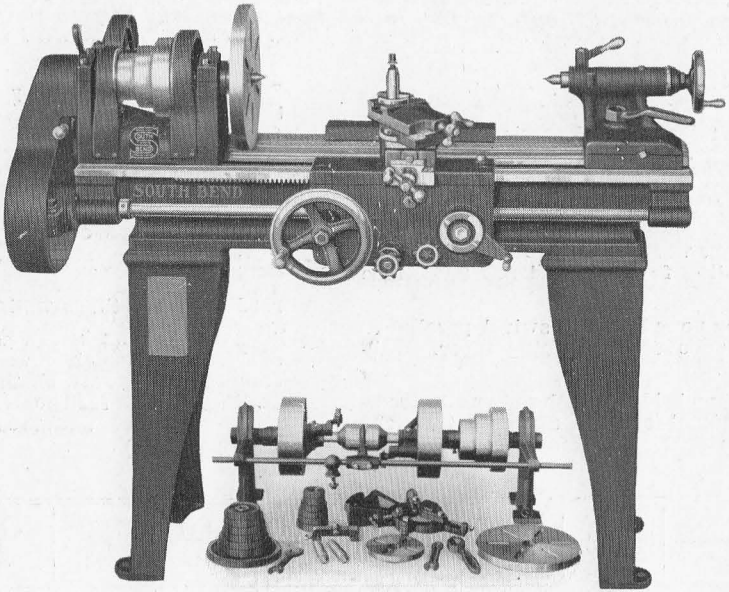
Thread-Cutting. Lathe is indexed to cut standard threads from 4 to 40, right or left, including 11½ pipe-thread, and by compounding the gears furnished many other threads can be cut. (See page 36.)

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 35.)

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. (See page 34.)

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 Nose	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.	6⅜ in.	19/32 in.	1¼ in.	No. 2	1 in.	⅜ x ⅞"	290 R.P.M.	440	500
25Y	9¼ in.	3 ft.	18 in.	6⅜ in.	19/32 in.	1¼ in.	No. 2	1 in.	⅜ x ⅞"	290 R.P.M.	460	530
25A	9¼ in.	4 ft.	30 in.	6⅜ in.	19/32 in.	1¼ in.	No. 2	1 in.	⅜ x ⅞"	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, Semi-Quick Change Gear Attachment, Electric Drive Attachment, Grinding Attachment, Taper Attachment, Oil Pan and Follower Rest.



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

No. 27—11-inch South Bend Screw-Cutting Engine Lathe

When ordering Bench Lathe specify "Bench", otherwise Long Legs will be sent **(See page 29)**

No. 27—11-INCH SOUTH BEND SCREW-CUTTING ENGINE LATHE

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 ¾-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 36.)

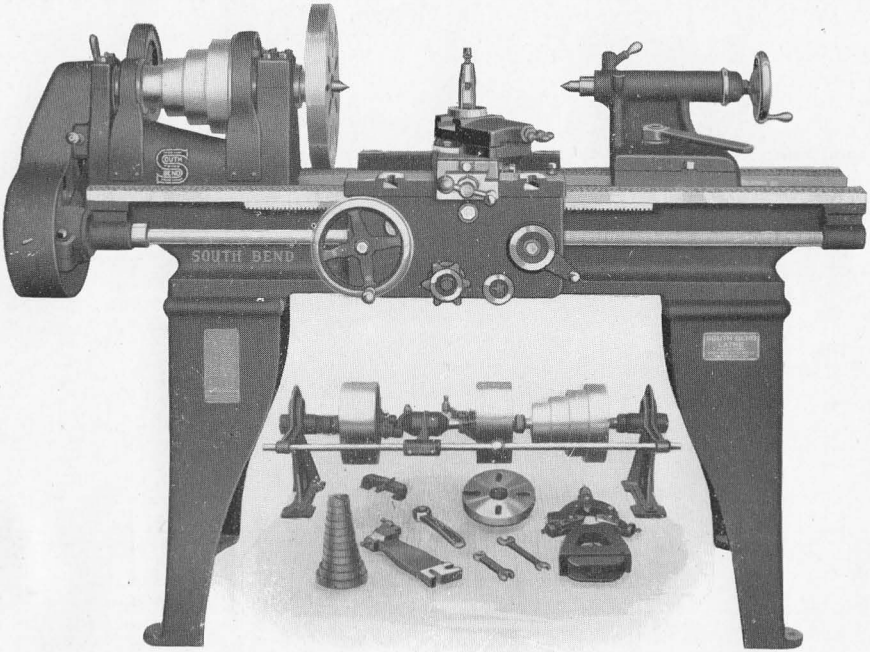
Thread-Cutting. Lathe is indexed to cut standard threads from 4 to 40, right or left, including 11½ pipe-thread, and by compounding the gears furnished many other threads can be cut. (See page 36.)

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 35.)

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. (See page 34.)

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 Long Legs	Weight Boxed for Export
27Y	11¼ in.	3 ft.	14 in.	7⅝ in.	¾ in.	1½ in.	No. 2	1¼ in.	⅜ x ⅞"	275 R.P.M.	575	765
27A	11¼ in.	4 ft.	26 in.	7⅝ in.	¾ in.	1½ in.	No. 2	1¼ in.	⅜ x ⅞"	275 R.P.M.	625	835
27B	11¼ in.	5 ft.	38 in.	7⅝ in.	¾ in.	1½ in.	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, Semi-Quick Change Gear Attachment, Electric Drive Atachment, Grinding Attachment, Taper Attachment, Oil Pan, Follower Rest and Raising Blocks so lathe will turn and bore 14-inch swing.



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

No. 34—13-Inch South Bend Screw-Cutting Engine Lathe

No 34—13-INCH SOUTH BEND SCREW CUTTING ENGINE LATHE

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 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 ¾-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 36.)

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 36.)

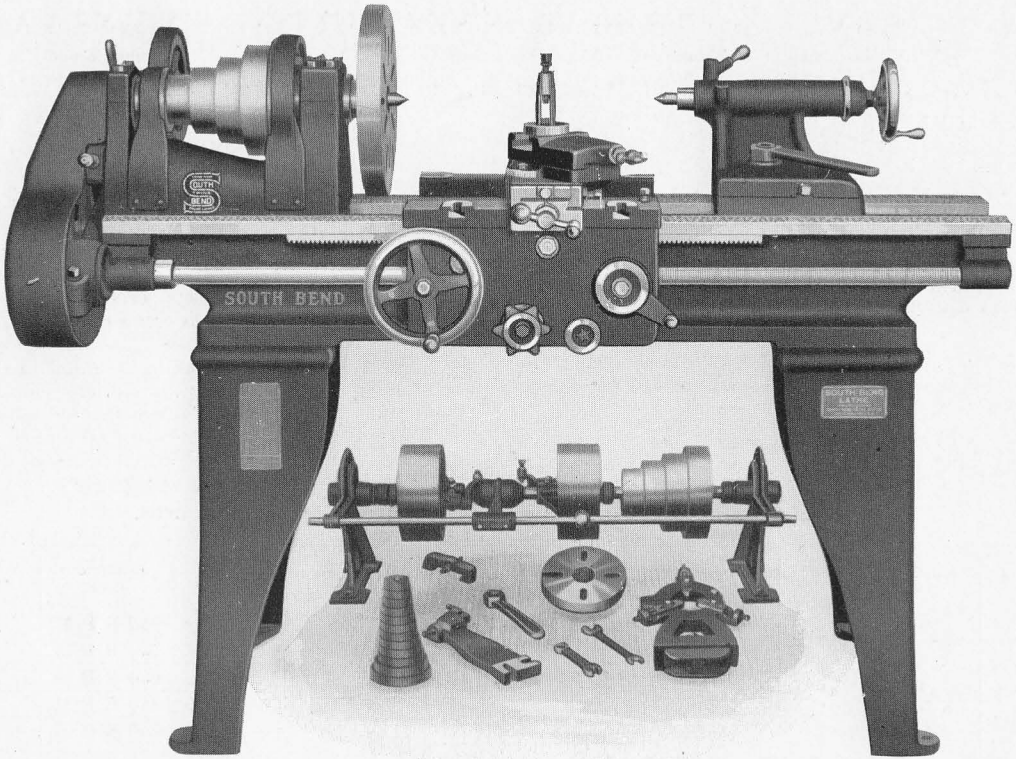
Graduation. The compound rest is **graduated in 180 degrees.** (See page 35.) The cross-feed screw has micrometer graduted collar reading in **one-thousandths** of an inch.

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. (See page 34.)

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
34-A	13¼ in.	4 ft.	18 in.	9 in.	¾ in.	1¾ in.	No. 3	½ x 1⅛ in.	275 R. P.M.	1000	1230
34-B	13¼ in.	5 ft.	30 in.	9 in.	¾ in.	1¾ in.	No. 3	½ x 1⅛ in.	275 R.P.M.	1050	1300
34-C	13¼ in.	6 ft.	42 in.	9 in.	¾ in.	1¾ in.	No. 3	½ x 1⅛ in.	275 R.P.M.	1100	1360
34-D	13¼ in.	7 ft.	54 in.	9 in.	¾ in.	1¾ in.	No. 3	½ x 1⅛ in.	275 R.P.M.	1150	1430
34-E	13¼ in.	8 ft.	66 in.	9 in.	¾ in.	1¾ in.	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, Semi-Quick Change Gear Attachment, Electric Drive Attachment, Grinding Attachment, Taper Attachment, Oil Pan 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

No. 37—15-INCH SOUTH BEND SCREW-CUTTING ENGINE LATHE

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 1¾-inch belt. Spindle is of special carbon steel accurately ground; has 1⅛-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 36.)

Thread-Cutting. The lathe is indexed to cut standard threads from 4 to 40, right or left, including 11½ pipe-thread. (See page 36.)

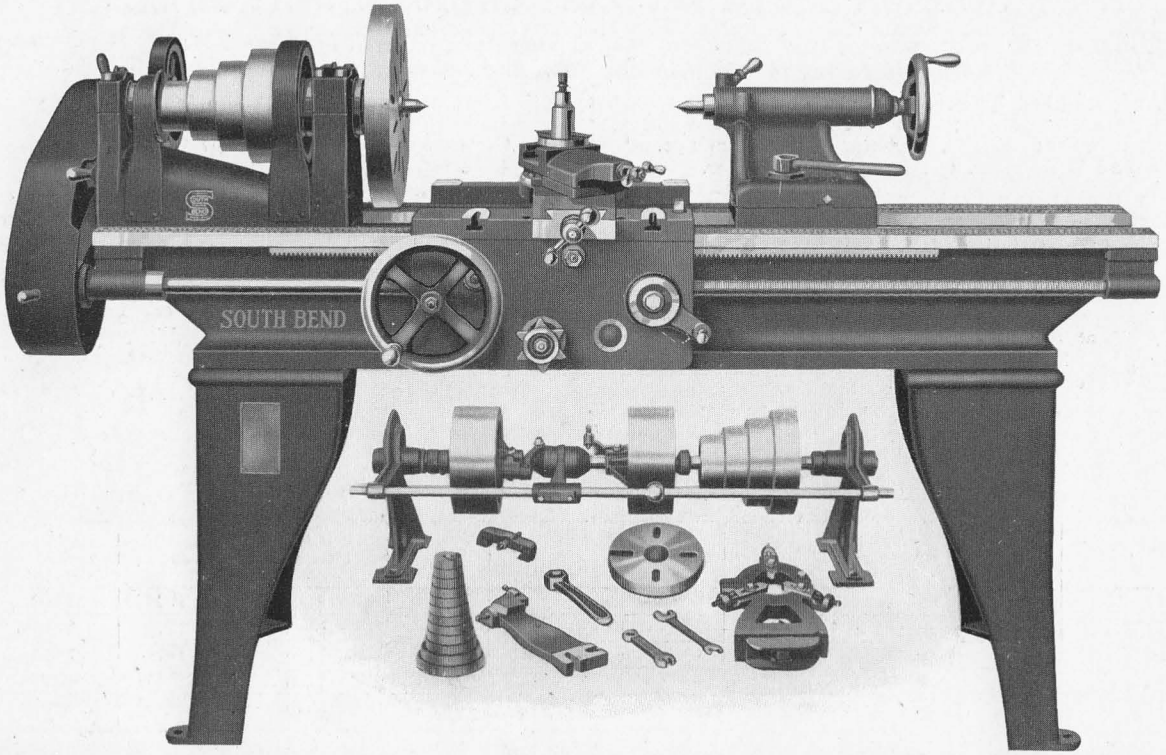
Graduation. The compound rest is **graduated in 180 degrees.** (See page 35.) The cross-feed screw has micrometer graduated collar reading in **one-thousandths** of an inch.

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. (See page 34.)

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
37-B	15¼ in.	5 ft.	27 in.	10⅝ in.	1⅛ in.	2¼ in.	No. 3	9/16 x 1¼ in.	250 R.P.M.	1400	1650
37-C	15¼ in.	6 ft.	39 in.	10⅝ in.	1⅛ in.	2¼ in.	No. 3	9/16 x 1¼ in.	250 R.P.M.	1475	1735
37-D	15¼ in.	7 ft.	51 in.	10⅝ in.	1⅛ in.	2¼ in.	No. 3	9/16 x 1¼ in.	250 R.P.M.	1550	1830
37-E	15¼ in.	8 ft.	63 in.	10⅝ in.	1⅛ in.	2¼ in.	No. 3	9/16 x 1¼ in.	250 R.P.M.	1625	1925
37-G	15¼ in.	10 ft.	87 in.	10⅝ in.	1⅛ in.	2¼ in.	No. 3	9/16 x 1¼ 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, Semi-Quick Change Gear Attachment, Electric Drive Attachment, Grinding Attachment, Taper Attachment, Oil Pan 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

No. 40—16-INCH SOUTH BEND SCREW CUTTING ENGINE LATHE

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 $1\frac{5}{16}$-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 36.)

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 36.)

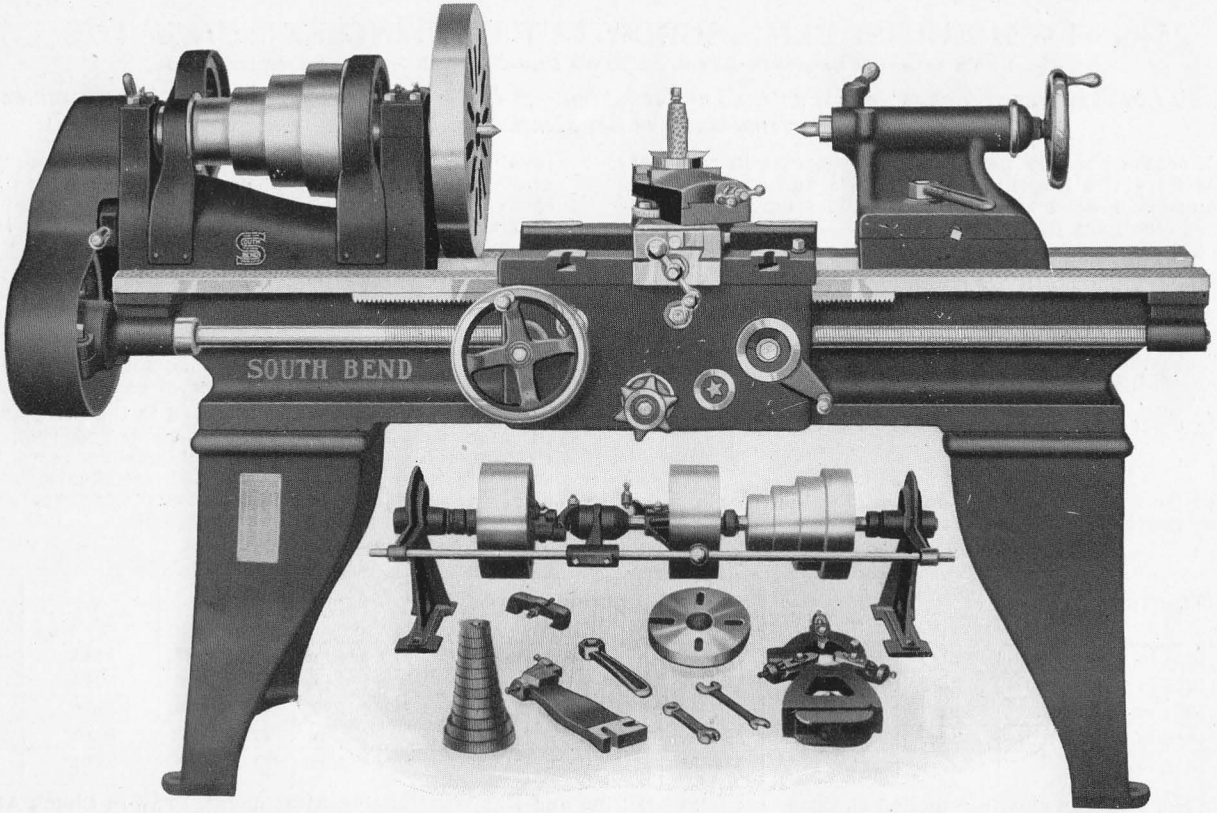
Graduation. The compound rest is **graduated in 180 degrees.** (See page 35.) The cross-feed screw has a graduated micrometer collar reading in **one-thousandths** of an inch.

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. (See page 34.)

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
40-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	$\frac{5}{8}$ x $1\frac{3}{8}$ in.	225 R.P.M.	1700	1970
40-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	$\frac{5}{8}$ x $1\frac{3}{8}$ in.	225 R.P.M.	1780	2070
40-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	$\frac{5}{8}$ x $1\frac{3}{8}$ in.	225 R.P.M.	1860	2180
40-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	$\frac{5}{8}$ x $1\frac{3}{8}$ in.	225 R.P.M.	2020	2390
40-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	$\frac{5}{8}$ 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, Semi-Quick Change Gear Attachment, 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, Improved Pattern (Heavy Duty)

No. 45—18-INCH SOUTH BEND SCREW-CUTTING ENGINE LATHE (Improved Pattern Heavy Duty)

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

The No. 45 Lathe is designed to give service with high-speed steel. It 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 36.)

Thread-Cutting. The lathe is indexed to cut standard threads from 2 to 40, right or left, including 11½ pipe-thread. (See page 36.)

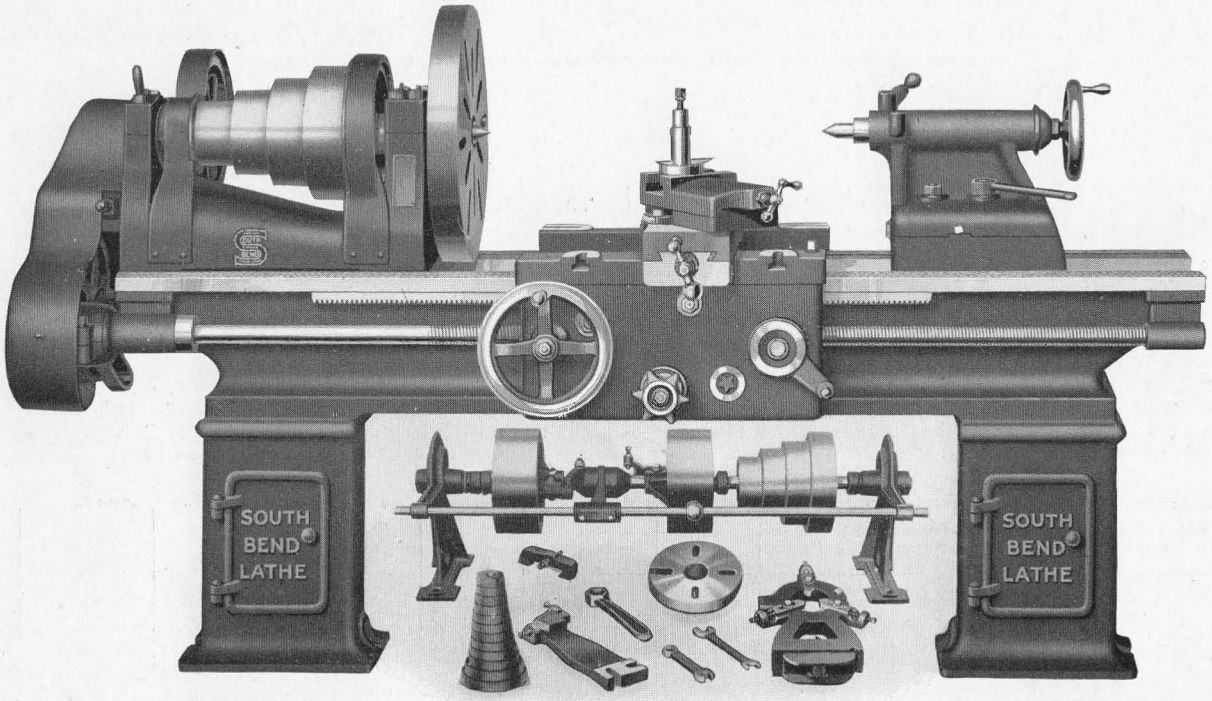
Graduation. The compound rest is **graduated in 180 degrees.** (See page 35.) The cross-feed screw has a graduated micrometer collar reading in **one-thousandths** of an inch.

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. (See page 34.)

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
45-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
45-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
45-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
45-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
45-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. 45 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Semi-Quick Change Gear Attachment, 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 (Heavy Duty)

No. 47—21-INCH SOUTH BEND SCREW-CUTTING ENGINE LATHE (Heavy Duty)

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. It is a heavy tool, well-built, and will stand up under unusual service

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 36.)

Thread-Cutting. The lathe is indexed to cut standard threads from 2 to 40, right or left, including 11½ pipe-thread. (See page 36.)

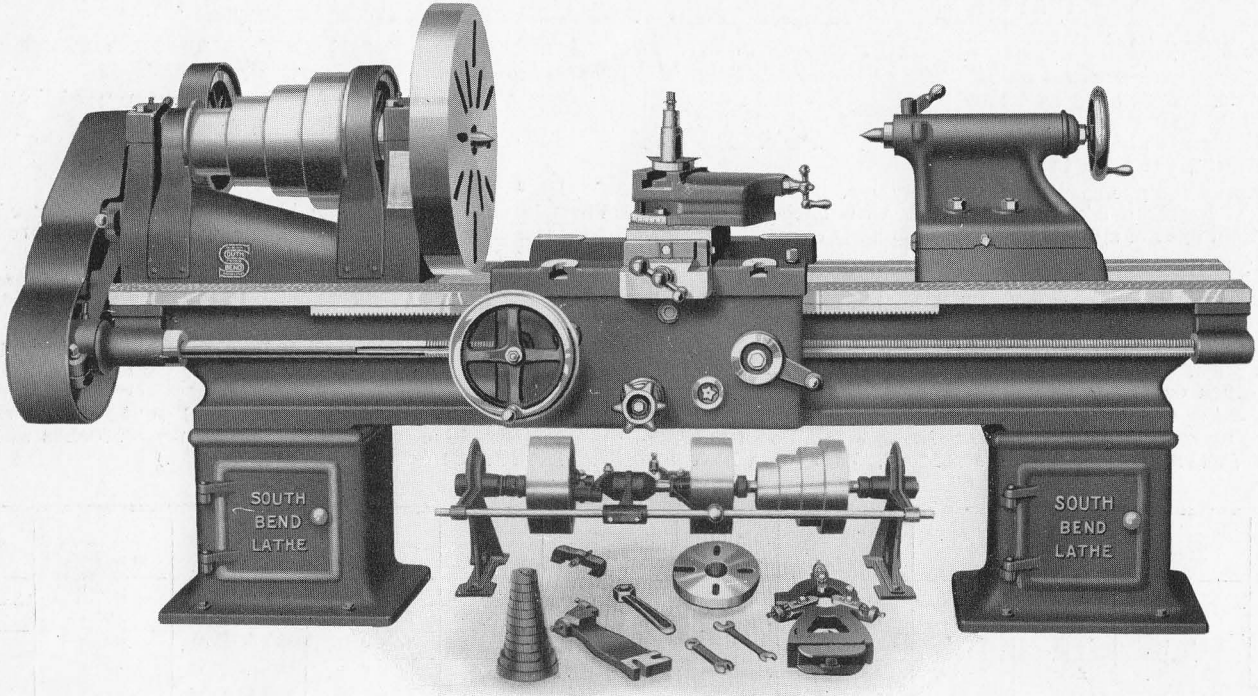
Graduation. The compound rest is **graduated in 180 degrees.** (See page 35.) The cross-feed screw has a graduated micrometer collar reading in **one-thousandths** of an inch.

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. (See page 34.)

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
47-D	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	4050
47-E	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
47-G	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
47-H	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
47-K	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, Semi-Quick Change Gear Attachment, 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 (Heavy Duty)

No. 54—24-INCH SOUTH BEND SCREW-CUTTING ENGINE LATHE (Heavy Duty)

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

No. 54 is a 24-inch Lathe, and the largest size we build. It is a heavy, powerful tool, 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 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 36.)

Thread-Cutting. The lathe is indexed to cut standard threads from 2 to 40, right or left, including 11½ pipe-thread. (See page 36.)

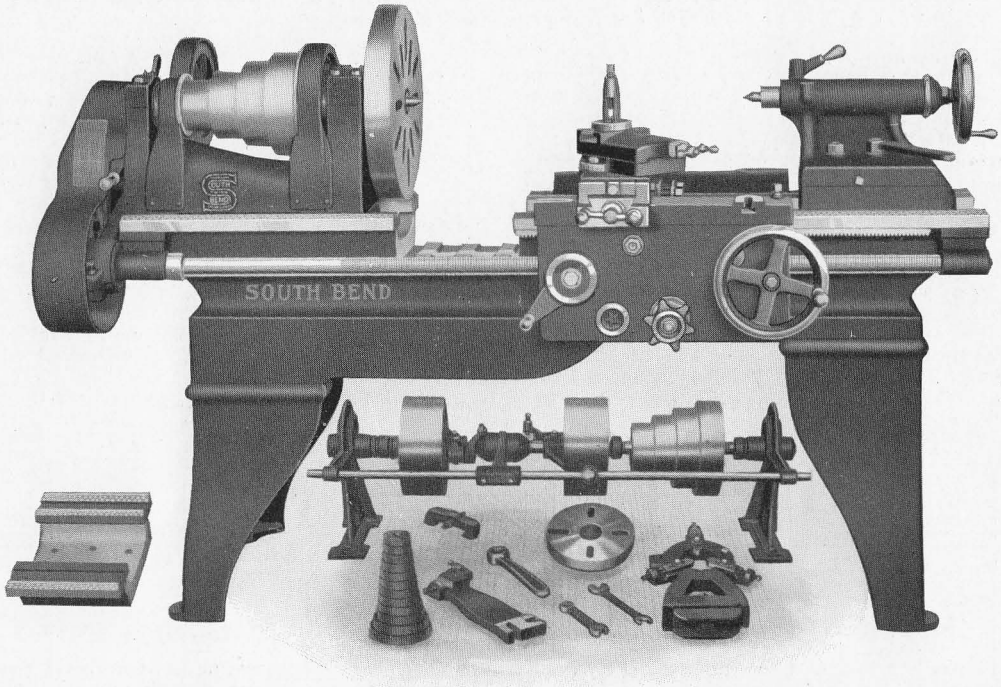
Graduation. The compound rest is **graduated in 180 degrees.** (See page 35.) The cross-feed screw has a graduated micrometer collar reading in **one-thousandths of an inch.**

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. (See page 34.)

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
54-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
54-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
54-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
54-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
54-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. 54 Lathe may be supplied at extra cost with—Milling and Key-Way Cutting Attachment, Draw-in Chuck Attachment, Semi-Quick Change Gear Attachment, 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.



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

South Bend Gap Lathes, 11″, 13″, 15″, 16″ and 18″ Lathes

SOUTH BEND LATHE WITH GAP BED AND BRIDGE

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

The practical Lathe for all-around work in the Machine and Repair Shop, adapted to handling work of both large and small diameter

Sizes: We build any size South Bend Lathe, except the No. 25, 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 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.

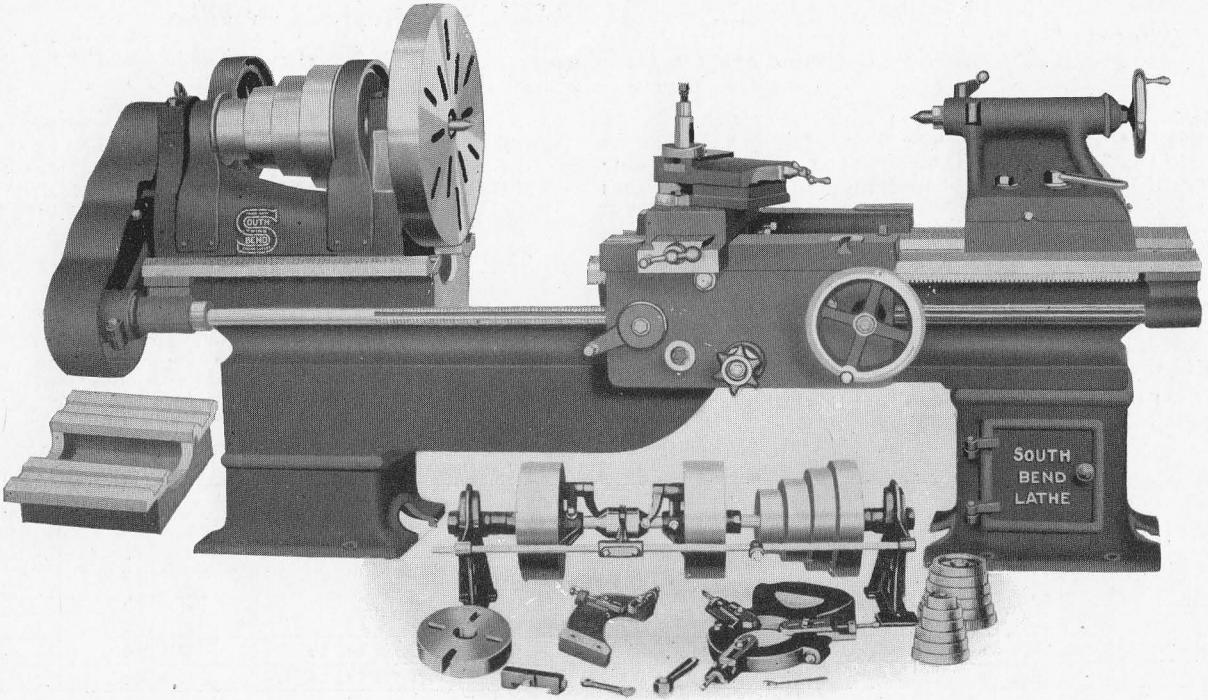
Bridge is used to close up the gap so that the lathe may be used as a straight bed for ordinary work. When work of large diameter is to be machined, bridge may be removed from bed in a few minutes, as it is accurately machined, scraped and fitted to gap, located by means of two steel dowel pins and held 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 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. (See page 34.)

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

No. of Gap Lathe	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	11¼ in.	15 in.	5 in.	3, 4, 5,	50 lbs.	$ 25.00
134	13¼ in.	19 in.	7 in.	4, 5, 6, 7, 8	100 lbs.	30.00
137	15¼ in.	22 in.	8 in.	5, 6, 7, 8, 10	125 lbs.	36.00
140	16¼ in.	24 in.	8⅜ in.	6, 7, 8, 10, 12	140 lbs.	40.00
145	18¼ in.	26 in.	10 in.	6, 7, 8, 10, 12	170 lbs.	50.00

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



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

South Bend Gap Lathes, 21″ and 24″

SOUTH BEND LATHE WITH GAP BED AND BRIDGE

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

The practical Lathe for all-around work in the Machine and Repair Shop, adapted to handling work of both large and small diameter

Sizes: We build any size South Bend Lathe, except the No. 25, 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 24-36-inch No. 154 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.

21- and 24-inch gap lathes only are supplied with cabinet legs.

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.

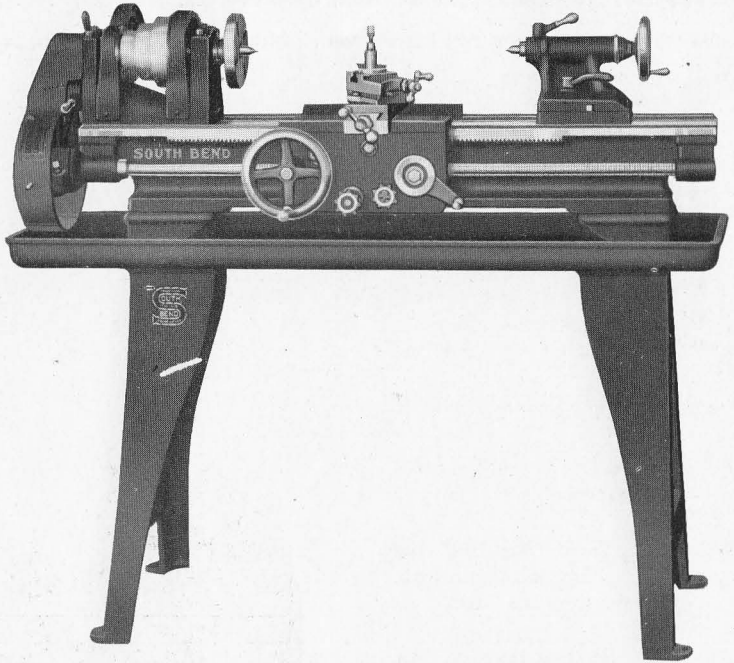
Equipment, as shown in cut, is included in the price of lathe and consists of large and small face plates, graduated compound rest, two steel centers, center rest, follower rest, change-gears, adjustable stop for screw-cutting, a set of feed-gears, gear-guards, semi-machined chuck-back, necessary wrenches, double-friction countershaft and bridge. (See page 34.)

11-, 13-, 15-, 16- and 18-inch Gap Lathes are fitted with long legs. (See page 24.)

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

No. of Gap Lathe	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
147	21¼ in.	30 in.	12 in.	7, 8, 10, 12, 14	250 lbs.	$100.00
154	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, Semi-Quick Change Gear Attachment, Electric Drive Attachment, Grinding Attachment, Raising Blocks, and Taper Attachment. When ordering Lathe with gap bed, add figure (1) to the number of straight-bed lathe or the the word "Gap" to the code word.



No. 227—11-Inch South Bend Tool-Room Lathe

No. 227—11-INCH TOOL-ROOM LATHE EQUIPPED WITH OIL PAN

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

The illustration on the opposite page shows our No. 227, 11-inch Tool-Room Lathe, with oil-pan equipment. This is our regular No. 27, 11-inch lathe. When oil pan is added to the equipment of any South Bend Lathe, we place the figure (2) before the number of the lathe, as shown in tabulation below.

The South Bend Tool-Room Lathe, equipped with oil pan, is very practical in the tool room and for light manufacturing where oil or a cutting compound is used in various manufacturing operations.

We can equip 9-, 11-, 13- and 15-inch lathes, up to and including beds 6 feet in length, with oil pan, as per tabulation shown herewith:

No. of Lathe	Size of Lathe	Oil Pans Fitted to Lathes as Follows:
225	9-inch Tool-Room Lathe	9″ x 3′ ..... 9″ x 4′
227	11-inch Tool-Room Lathe	11″ x 3′ ..... 11″ x 4′ ..... 11″ x 5′
234	13-inch Tool-Room Lathe	13″ x 4′ ..... 13″ x 5′ ..... 13″ x 6′
237	15-inch Tool-Room Lathe	15″ x 5′ ..... 15″ x 6′

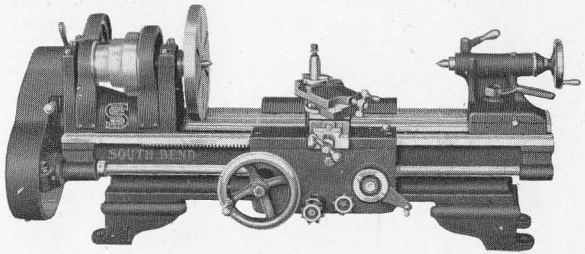
BENCH LATHES

We can supply any of the standard lathes listed above, fitted with bench legs instead of oil pan and long legs.

The Bench Lathes can be used in groups of two, four and six to increase the manufacturing production on small duplicate work. On some jobs, one operator can take care of six lathes.

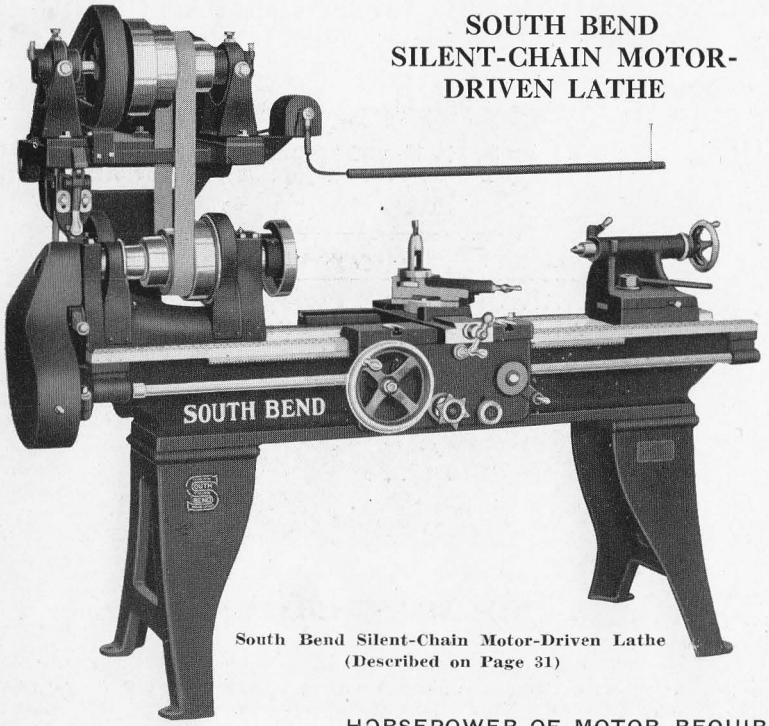
When the lathe is wanted with bench legs, instead of long legs, deduct from the list price as follows:

Size of Lathe	9″	11″	13″	15″
Deduct from list	$10.00	$10.00	$10.00	$10.00



No. 27—11″ x 3′ Bench Lathe

SOUTH BEND SILENT-CHAIN MOTOR-DRIVEN LATHE



South Bend Silent-Chain Motor-Driven Lathe
(Described on Page 31)

The illustration shows a South Bend Lathe equipped with our Silent 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.

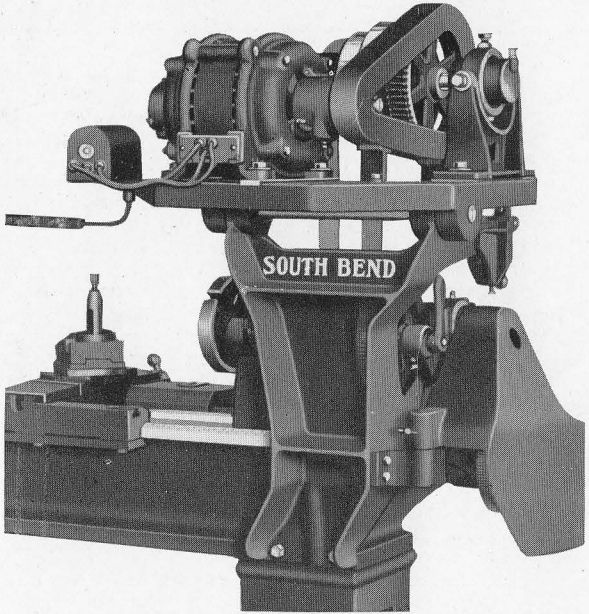
On account of the design, a General Electric or Westinghouse Motor, alternating or direct current, having a speed of 1150 to 1200 R. P. M., is recommended. It is necessary that the motor be fitted to the electric drive attachment in our shop. We carry the motors in stock charging only the market price.

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 Motor-Driven Lathe.

HORSEPOWER OF MOTOR REQUIRED FOR DRIVING SOUTH BEND LATHES

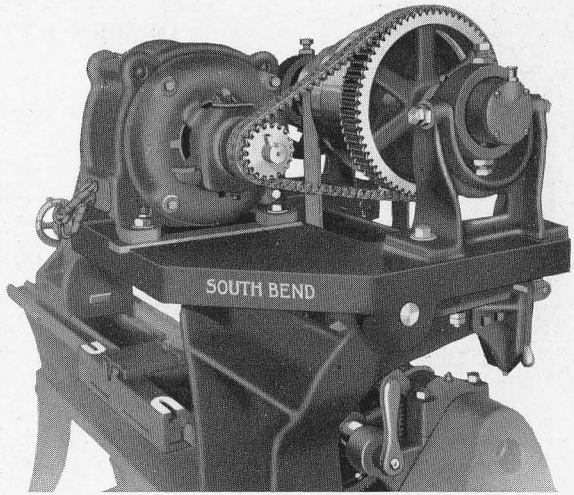
Size of Lathe	9″	11″	13″	15″	16″	18″	21″	24″
Horsepower of Motor	½	½	1	1	1	2	3	3
Countershaft, R. P. M.	290	275	275	250	225	200	175	150
Speed of Motor, R. P. M.	1150 to 1200	1150 to 1200	1150 to 1200	1150 to 1200	1150 to 1200	1150 to 1200	1150 to 1200	1150 to 1200



SILENT-CHAIN MOTOR-DRIVE ATTACHMENT

Rear View

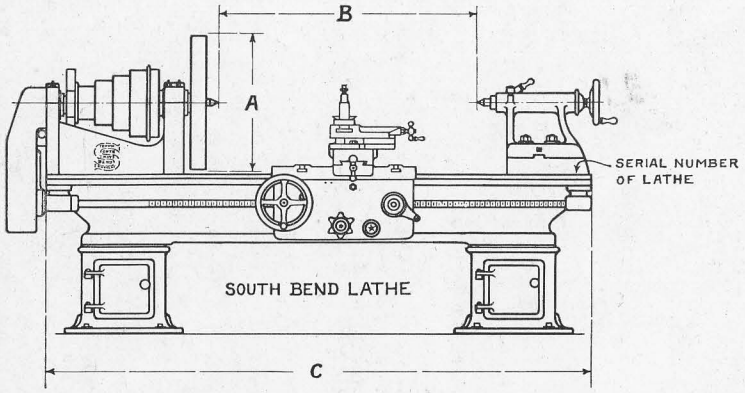
The above illustration shows a rear view of the silent-chain motor-drive attachment fitted to a 15-inch South Bend Lathe. (Illustrated and described on pages 30 and 31.) Note that the attachment does not extend below the bottom of the bed; it is simply fitted to one of our standard stock lathes. We make this attachment in various sizes to fit all South Bend Lathes.

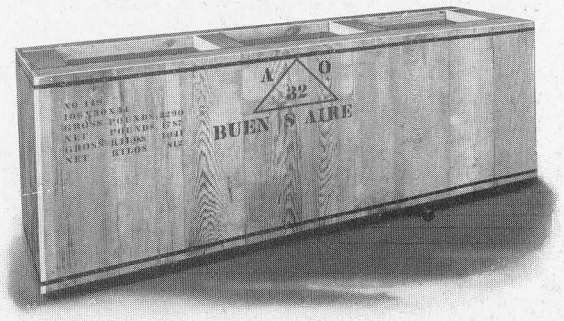


THE SILENT-CHAIN DRIVE

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 roller bearings are immersed in oil.





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

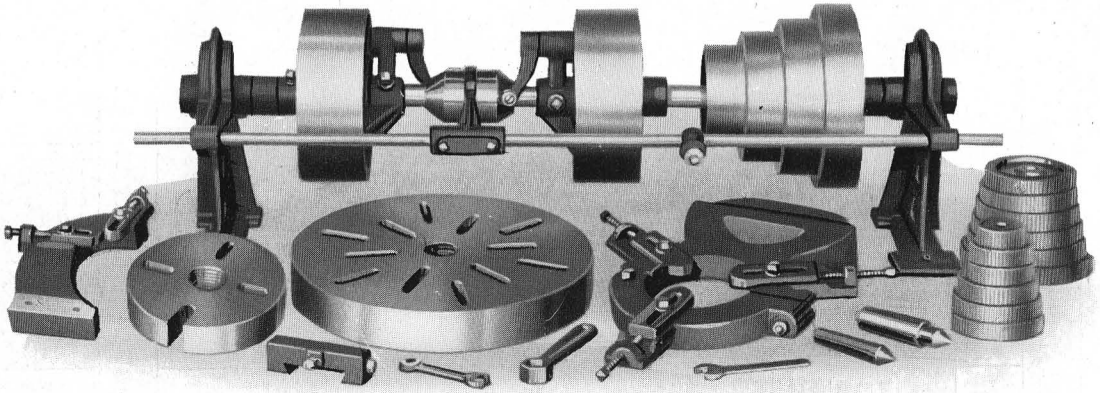
In preparing a lathe for export, the parts are knocked down as much as possible and all machined parts greased and oiled. Each lathe is carefully packed complete in one case and bound on the outside by steel bands.

On page 33 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 LATHES BOXED FOR EXPORT, BOTH STRAIGHT- AND GAP-BED LATHES

No. of Lathe	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
No. 25—9-INCH SOUTH BEND LATHE							
25-X	9¼ in.	2½ ft.	41x26x25	500			Dally
25-Y	9¼ in.	3 ft.	48x26x25	530			Dare
25-A	9¼ in.	4 ft.	58x26x25	570			Dell
No. 27—11-INCH SOUTH BEND LATHE							
27-Y	11¼ in.	3 ft.	59x29x26	765	59x31x26	800	Fare
27-A	11¼ in.	4 ft.	71x29x26	835	71x31x26	870	Fend
27-B	11¼ in.	5 ft.	71x29x26	905	71x31x26	940	Foam
No. 34—13-INCH SOUTH BEND LATHE							
34-A	13¼ in.	4 ft.	71x29x28	1230	71x31x28	1330	Hail
34-B	13¼ in.	5 ft.	71x29x28	1300	71x31x28	1400	Heald
34-C	13¼ in.	6 ft.	82x29x28	1360	82x31x28	1460	Hire
34-D	13¼ in.	7 ft.	94x29x28	1430	94x31x28	1530	Home
34-E	13¼ in.	8 ft.	107x29x28	1500	107x31x28	1600	Husk
No. 37—15-INCH SOUTH BEND LATHE							
37-B	15¼ in.	5 ft.	70x30x30	1650	70x31x30	1775	Ideal
37-C	15¼ in.	6 ft.	82x30x30	1735	82x31x30	1860	Image
37-D	15¼ in.	7 ft.	94x30x30	1830	94x31x30	1955	Index
37-E	15¼ in.	8 ft.	106x30x30	1925	106x31x30	2050	Iris
37-G	15¼ in.	10 ft.	129x30x30	2125	129x31x30	2250	Issue
No. 40—16-INCH SOUTH BEND LATHE							
40-C	16¼ in.	6 ft.	82x30x31	1970	82x30x34	2110	Jamb
40-D	16¼ in.	7 ft.	94x30x31	2070	94x30x34	2210	Jelly
40-E	16¼ in.	8 ft.	106x30x31	2180	106x30x34	2320	Jinks
40-G	16¼ in.	10 ft.	129x30x31	2390	129x30x34	2530	Joist
40-H	16¼ in.	12 ft.	152x30x31	2750	152x30x34	2890	Jute
No. 45—18-INCH SOUTH BEND LATHE							
45-C	18¼ in.	6 ft.	82x30x31	2600	82x30x37	2770	Kafir
45-D	18¼ in.	7 ft.	94x30x31	2730	94x30x37	2900	Khond
45-E	18¼ in.	8 ft.	106x30x31	2860	106x30x37	3030	Knack
45-G	18¼ in.	10 ft.	129x30x31	3210	129x30x37	3380	Kohl
45-H	18¼ in.	12 ft.	152x30x31	3520	152x30x37	3690	Kurd
No. 47—21-INCH SOUTH BEND LATHE							
47-D	21¼ in.	7 ft.	94x40x37	4050	94x42x40	4300	Paint
47-E	21¼ in.	8 ft.	106x40x37	4350	106x42x40	4600	Pear
47-G	21¼ in.	10 ft.	130x40x37	4725	130x42x40	4975	Photo
47-H	21¼ in.	12 ft.	154x40x37	5200	154x42x40	5450	Pike
47-K	21¼ in.	14 ft.	178x40x37	5500	178x42x40	5750	Plate
No. 54—24-INCH SOUTH BEND LATHE							
54-E	24¼ in.	8 ft.	106x40x40	5200	106x46x40	5550	Race
54-G	24¼ in.	10 ft.	130x40x40	5600	130x46x40	5950	Rend
54-H	24¼ in.	12 ft.	154x40x40	6100	155x46x40	6450	Rise
54-K	24¼ in.	14 ft.	178x40x40	6500	178x46x40	6850	Roat
54-M	24¼ in.	16 ft.	203x40x40	6900	203x46x40	7250	Ring



EQUIPMENT OF DETACHED PARTS ILLUSTRATED ABOVE IS INCLUDED IN PRICE OF SOUTH BEND LATHES

Friction Pulleys and Countershaft Boxes Have Wick-Oiling Device

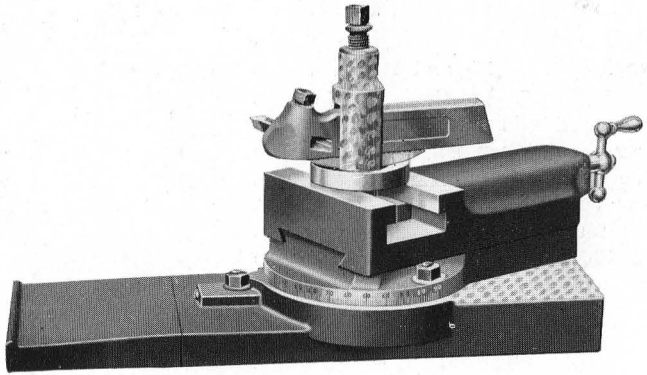
Equipment—In illustration above we show countershaft, large face plate, small face plate, center rest, follower rest, change-gears, adjustable thread gauge, tool post, ring and wedge, centers, a semi-machined chuck-plate, and necessary wrenches, all of which are included in the regular equipment covered by the prices quoted on South Bend Lathes.

The cut shows our improved double-friction, rim-grip countershaft, simple in design, easy in adjustment, powerful in grip, nothing to get out of order. It is one of the most efficient countershafts on the market.

Follower Rest is not included in the equipment of 9-inch and 11-inch lathes, but is furnished for $8.00 extra.

Dimensions of Pulleys and Speed of Countershaft

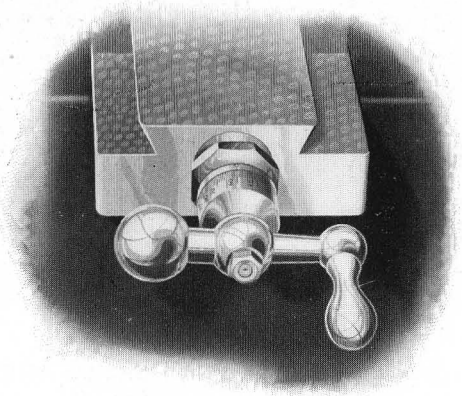
Size of Lathe	Sizes of Friction Pulleys	Speed of Countershaft
9 in.	6½ x 1¾ in.	290 R. P. M.
11 in.	7 x 2 in.	275 R. P. M.
13 in.	8 x 2½ in.	275 R. P. M.
15 in.	9 x 3 in.	250 R. P. M.
16 in.	10 x 3½ in.	225 R. P. M.
18 in.	12 x 4 in.	200 R. P. M.
21 in.	12 x 4½ in.	175 R. P. M.
24 in.	14 x 5 in.	150 R. P. M.



IMPROVED COMPOUND REST

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

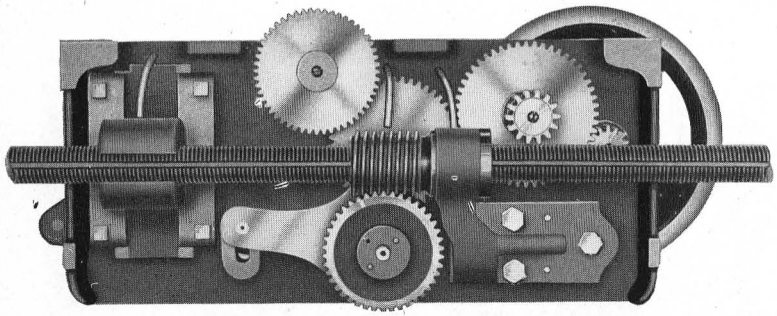
The improved compound rest is graduated in degrees ranging from 0 to 180 degrees, so that any angle desired may be obtained. The compound rest base is scraped in and fitted to the saddle with a gib that is adjusted by set-screws. The swivel is fastened to the base by two "T" bolts which hold it securely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



FEED MECHANISM OF AUTOMATIC APRON

Illustration shows the inside view of the automatic apron of all sizes of South Bend 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 a splined lead screw on the 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.**

Another improved feature in this apron is that the automatic cross-feed and the automatic longitudinal-feed can be operated only one at a time, so that it is impossible for one feed to drop in while the other feed is in operation. The importance of this feature will be appreciated by the mechanic.

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. One of these metal charts is attached to each lathe. Many threads other than 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

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.

Thread-Cutting Chart

FEED-GEARS

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

LEAD SCREW

The lead screws on South Bend Lathes are guaranteed to be accurate. The finest precision-screw gauges, master-taps, special screws, etc., can be cut on a South Bend Lathe to meet the most accurate requirements. We do not make our own lead screws but purchase them from large and well-known manufacturers who have special machinery for the manufacture of lead screws exclusively, and who supply lathe manufacturers with standard guaranteed lead screws. (See page 7.)

LATHES FITTED WITH METRIC THREAD LEAD SCREW

South Bend Lathes may be fitted with metric lead screw in lieu of the English lead screw, if lathes are wanted for countries where metric threads are to be cut exclusively. A metric lead screw must be fitted to the lathe here in the factory.

We herewith show a metric thread index plate that is attached to the 18", 21" and 24" South Bend Lathes that are fitted with a metric lead screw. The chart shows an arrangement of gears for cutting standard metric threads from .5-millimeter pitch to 8-millimeter pitch. Many threads other than shown may be cut on the lathe by compounding gears.

When a lathe is ordered with metric lead screw in lieu of English lead screw we make a slight extra charge. (See price list.)

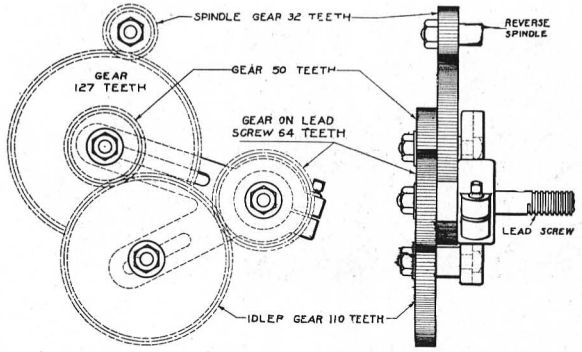
SOUTH BEND — LATHE —

M/M THREAD METRIC LATHE

THREAD	SPINDLE		SCREW
.50	20	1-2	120
.75	30	1-2	120
1.00	30	1-2	90
1.25	30	1-2	72
1.50	30		120
2.00	30		90
2.50	30		72
3.00	30		60
3.50	42		72
4.00	42		63
4.50	45		60
5.00	45		54
5.50	55		60
6.00	55		55
6.50	52		48
7.00	42		36
7.50	45		36
8.00	48		36

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

Metric Thread Chart



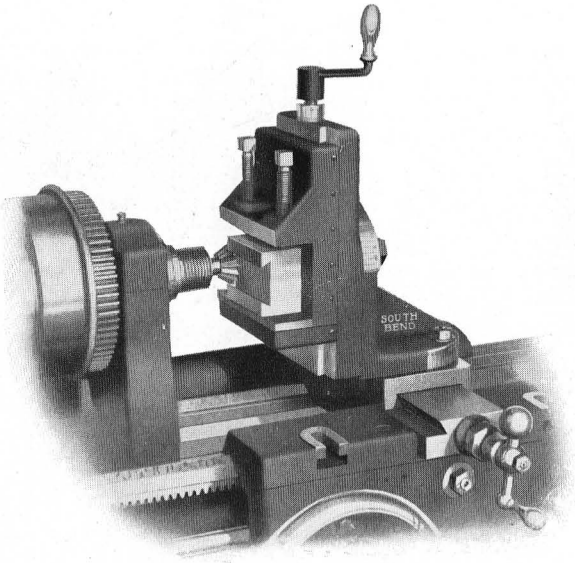
TRANSPOSING GEARS FOR METRIC THREADS

Cutting Metric Threads on an English Lead Screw

To cut Metric Threads on a South Bend Lathe equipped with Standard English lead screw, use the compound idler or connecting gears 50 and 127, the No. 127 gear to mesh with spindle stud. Use an idler to connect the 50-tooth gear with Gear on Lead Screw.

The above drawing shows the arrangement of gearing to cut 16 threads per centimeter on a No. 34 South Bend Lathe.

When Metric Threads are to be cut on an English lead screw, Index Chart of lathe may be used in selecting gears for the different English pitches. Read the chart as so many threads per centimeter, instead of so many threads per inch. Transposing gears are not included in the equipment, but are extra. (See price sheet.)



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.

SOUTH BEND MILLING AND KEY-WAY CUTTING ATTACHMENT FOR 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 graduted 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 Lathes, but it can also be fitted, by a mechanic, to lathes of other makes, that are equipped with a compound rest.

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 40.)

	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 "
Vise 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	$40.00	$45.00	$50.00	$55.00	$60.00	$70.00	$85.00	$100
Code	Vag	Vale	Victo	Visit	Volt	Vox	Vurry	Vusel

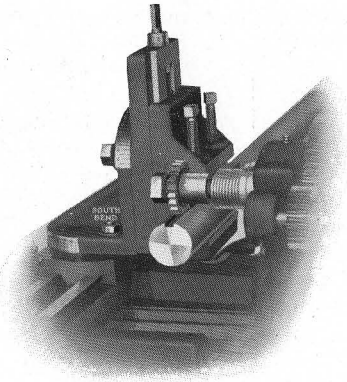


Fig. B.—Milling a Key-Way on the Lathe

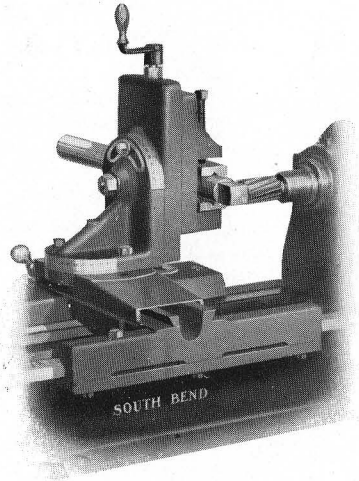


Fig. C.—Squaring a Steel Shaft on Lathe

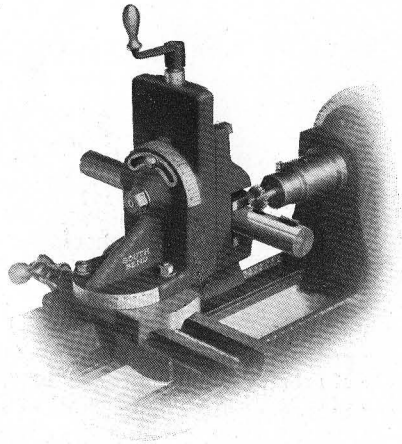


Fig. D.—Milling a Key-Way (Woodruff System)

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 ⅜-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 40.

Illustration Fig. C shows a No. 4 Attachment fitted to a lathe squaring a 1½-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.

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 illustrated on page 40.

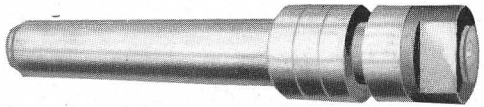


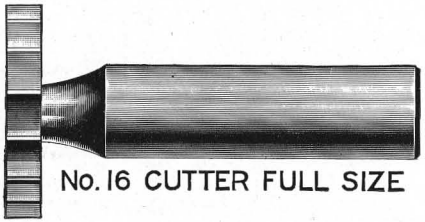
Fig. G

MILLING ARBOR FOR LATHE

The cut shows arbor used in the lathe for holding cutters. (See cut Fig. B, page 39.) These arbors are made 1 inch in diameter, capacity between shoulder and nut 1⅜ 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", 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

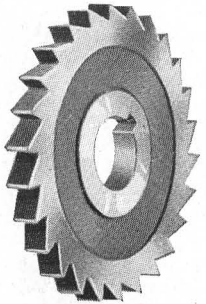


WOODRUFF SYSTEM MILLING CUTTER

The above illustration shows a Key-Seat Cutter for Woodruff system of keying. 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.

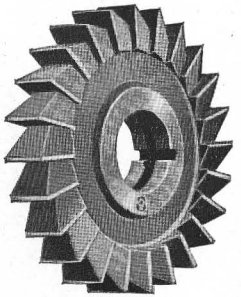
MILLING CUTTERS

Face Milling Cutters

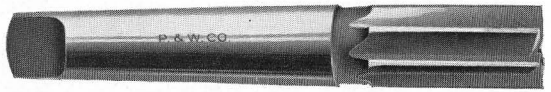


Width of Face Inches	Diam. of Hole Inches	Diameter Inches
3/16	1	2½
1/4	1	2½
5/16	1	2½
3/8	1	2½
7/16	1	2½
1/2	1	2½
5/8	1	2½
3/4	1	2½
7/8	1	2½
1	1	2½

Side Milling Cutters



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

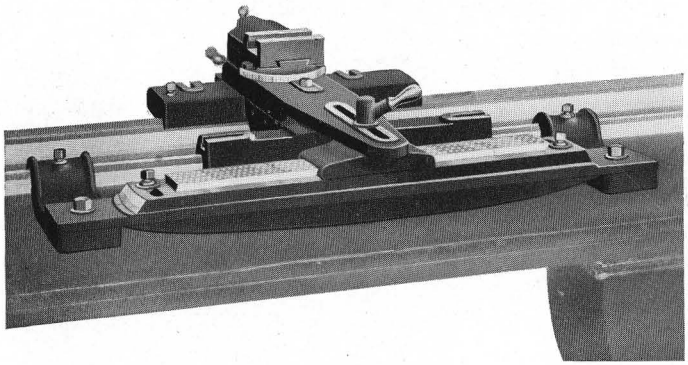


END MILL FOR LATHE SPINDLE MORSE TAPER

The end mill shown above fits into the head-spindle of lathe, as shown in Fig. "C", page 39. These end mills can be supplied with a cutting edge 7/16" to 1" inclusive in diameter, having a No. 2 Morse taper shank; ¾" to 1½" inclusive in diameter, having a No. 3 Morse taper shank; 1¼" to 1½" inclusive in diameter with a No. 4 Morse taper shank.

Prices on application.

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.

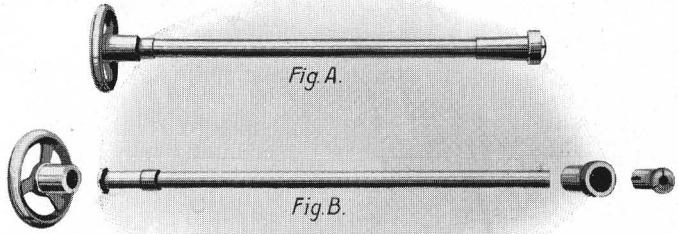


GRADUATED TAPER ATTACHMENT

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 Att'chm't	$50.00	$60.00	$65.00	$70.00	$75.00	$80.00	$100	$115

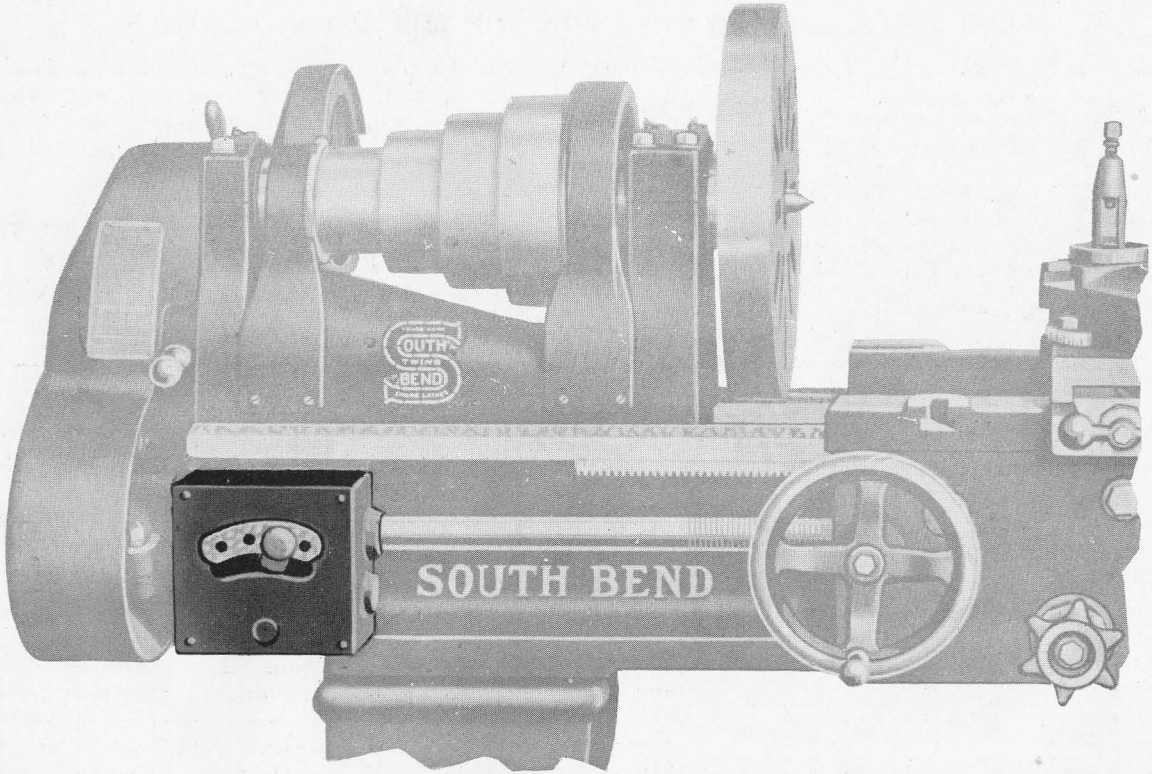


DRAW-IN CHUCK ATTACHMENT

In the illustration above, Fig. A shows an assembled draw-in chuck atachment 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 ½-inch split collet capacity on the 11- and 13-inch lathes, 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 11- and 13-inch lathes using the regular equipment.

Size of Lathe	9″	11-13″	15″	16-18″	21″	24″
Capacity of Collet up to	1/16″-3/8″	1/16″-1/2″	1/16″-5/8″	1/16″-3/4″	1/16″-7/8″	1/16″-1″
Price of Attachment including one Collet	$25.00	$35.00	$40.00	$45.00	$60.00	$70.00
Price extra per Collet	On Application					



Semi-Quick Change Gear Box on an 18-Inch South Bend Lathe

SEMI-QUICK CHANGE GEAR BOX FOR SOUTH BEND LATHES

The new Semi-Quick Change Gear Box for South Bend Lathes is illustrated on the opposite page, fitted to an 18-inch Lathe. This new gear-box may be fitted to any size South Bend Lathe. It varies in size for the different size Lathes.

The Semi-Quick Change Gear Box is usually used when numerous changes of feed or pitches for thread-cutting are required. We make it as an attachment so the customer can order the lathe with or without gear box, as desired.

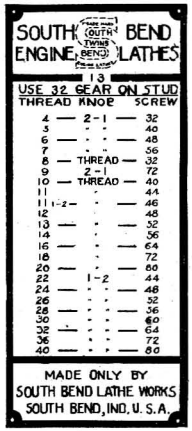
If the Semi-Quick Change Gear Box is wanted it should be specified when ordering a lathe and it must be fitted and attached before the lathe leaves our factory.

In ordering a South Bend Lathe, equipped with Semi-Quick Change Gear Box specify Figure 3 before the number of the lathe, as shown in tabulation below:

Semi-Quick Change Gear Box

No. of Lathe	Swing Over Bed	Length of Beds in Feet	Price Extra for Semi-Quick Change Gear Box
325	9¼ in.	2½, 3, 4,	$35.00
327	11¼ in.	3, 4, 5	37.00
334	13¼ in.	4, 5, 6, 7, 8	40.00
337	15¼ in.	5, 6, 7, 8, 10	45.00
340	16¼ in.	6, 7, 8, 10, 12	50.00
345	18¼ in.	6, 7, 8, 10, 12	55.00
347	21¼ in.	7, 8, 10, 12, 14	60.00
354	24¼ in.	8, 10, 12, 14, 16	70.00

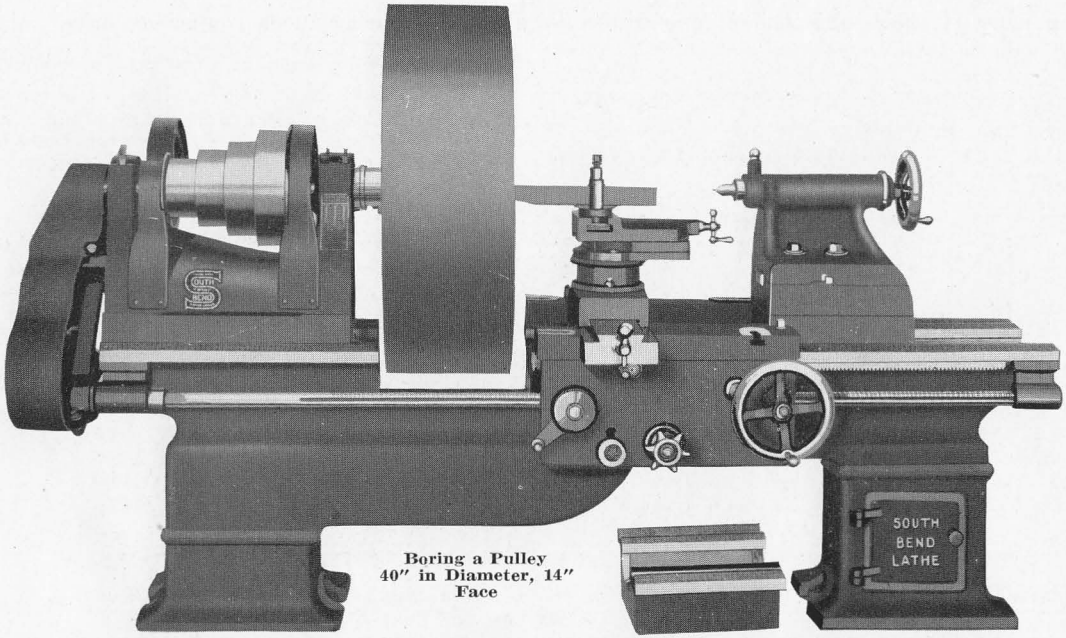
The gear-box develops a ratio of changes both for automatic longitudinal-feed, automatic cross-feed and thread-cutting as follows: 1 to 2, even or spindle speed, and 2 to 1, also neutral. By neutral is meant a position where the lead-screw is not in gear with the lathe-spindle.



By means of the above gearing ratios in the Semi-Quick Change Gear Box, it is possible to make all gear changes for cutting the various number of screw threads by changing the gear on the lead-screw only.

The accompanying chart shows the arrangement of gears for cutting all standard threads, from 4 to 40, including 11½ pipe-thread, on a 16-inch Semi-Quick Change Gear Box South Bend Lathe. The 18-, 21- and 24-inch lathes are geared to cut from two to forty threads per inch.

Equipment, as shown in cut of standard lathe is included in the price and consists of large and small face plates, graduated compound rest, two steel centers, center rest, follower rest (not included on 9- and 11-inch lathes), adjustable stop for screw-cutting, a set of feed-gears, a semi-machined chuck-back, gear-guards, necessary wrenches and double-friction countershaft.



Boring a Pulley
40" in Diameter, 14"
Face

24-Inch Gap-Bed Lathe Equipped with Raising Blocks

For Prices and Dimensions of Raising Blocks Fitted to Gap-Bed Lathes, See Page 45

RAISING BLOCKS FOR SOUTH BEND LATHES

BOTH STRAIGHT AND GAP BED

Illustration on page 44 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.

PRICES AND DIMENSIONS OF RAISING BLOCKS FITTED TO STRAIGHT-BED LATHES

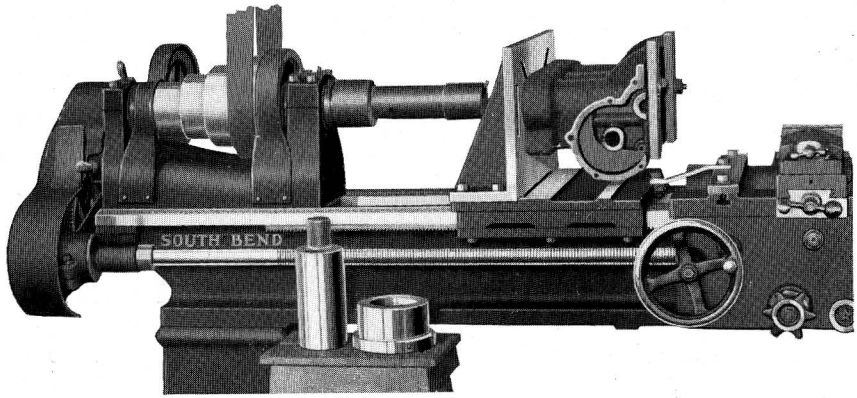
			Price Raising Blocks	Extra for Guard Bracket, Gear Bracket and Gear for Thread-Cutting at Increased Swing
No. 27	11-inch Lathe swings over bed 11 inches.	Blocks to swing 14 inches	$25.00	$ 8.00
No. 34	13-inch Lathe swings over bed 13 inches.	Blocks to swing 18 inches	30.00	10.00
No. 37	15-inch Lathe swings over bed 15 inches.	Blocks to swing 20 inches	35.00	12.00
No. 40	16-inch Lathe swings over bed 16 inches.	Blocks to swing 22 inches	40.00	12.00
No. 45	18-inch Lathe swings over bed 18 inches.	Blocks to swing 24 inches	45.00	15.00
No. 47	21-inch Lathe swings over bed 21 inches.	Blocks to swing 27 inches	55.00	18.00
No. 54	24-inch Lathe swings over bed 24 inches.	Blocks to swing 30 inches	70.00	23.00

PRICES AND DIMENSIONS OF RAISING BLOCKS FITTED TO GAP LATHES

No. 127	11-inch Lathe swings over gap 16 inches.	Blocks to swing over gap 19 inches	$25.00	$ 8.00
No. 134	13-inch Lathe swings over gap 19 inches.	Blocks to swing over gap 24 inches	30.00	10.00
No. 137	15-inch Lathe swings over gap 22 inches.	Blocks to swing over gap 27 inches	35.00	12.00
No. 140	16-inch Lathe swings over gap 24 inches.	Blocks to swing over gap 30 inches	40.00	12.00
No. 145	18-inch Lathe swings over gap 26 inches.	Blocks to swing over gap 32 inches	45.00	15.00
No. 147	21-inch Lathe swings over gap 30 inches.	Blocks to swing over gap 36 inches	55.00	18.00
No. 154	24-inch Lathe swings over gap 36 inches.	Blocks to swing over gap 42 inches	70.00	23.00

SOUTH BEND IMPROVED CYLINDER BORING ATTACHMENT FOR LATHES

(Re-Boring a Ford Cylinder Block)



A practical boring attachment fitted to the bed of a lathe, that will re-bore cylinders of many makes of automobile engines.

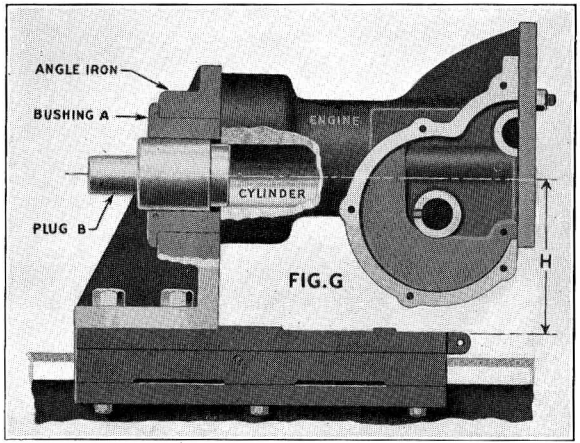
RE-BORING CYLINDERS OF AN AUTOMOBILE ENGINE IN THE LATHE

The illustration shows a practical attachment for the lathe, for the re-boring of automobile engine cylinders. This attachment is fitted directly to the bed of the lathe, is gibbed to the ways, both front and back, and is scraped for a sliding fit. It is connected by a link with the carriage, so that its movements are controlled by the automatic feed of the apron. The vertical surface of the angle-plate is machined and surfaced, so that it is perpendicular to the axis of the spindle.

The boring bar screws on to the nose of the spindle and is provided with a cutting tool that can be adjusted to a thousandth of an inch if desired.

We have fitted this attachment to the bed of the lathe because this gives greater capacity, and when once fitted to the lathe no further adjustment is needed. To use the attachment one can fit it without removing any parts from the lathe.

SOUTH BEND IMPROVED BORING ATTACHMENT FOR LATHE



(Centering a Cylinder on the Jig)

Drawing showing a cylinder of a Ford automobile engine arranged for boring in the lathe.

Size of Lathe.....	16"	18"	21"	24"
Capacity of H (see drawing)...	5¾"	6⅞"	8⅜"	9⅞"
Price of Boring Attachment....	$110.00	$130.00	$150.00	$180.00
Weight of Boring Attachment	250 lbs.	300 lbs.	400 lbs.	500 lbs.

RE-BORING A CYLINDER OF AN AUTOMOBILE ENGINE

The drawing shows a cylinder of a Ford automobile engine arranged for boring in the lathe. It is well known among mechanics that when an engine cylinder is scored or worn, and requires enlarging, that in order to get a true hole you must bore, and the practical machine to do this boring is the lathe.

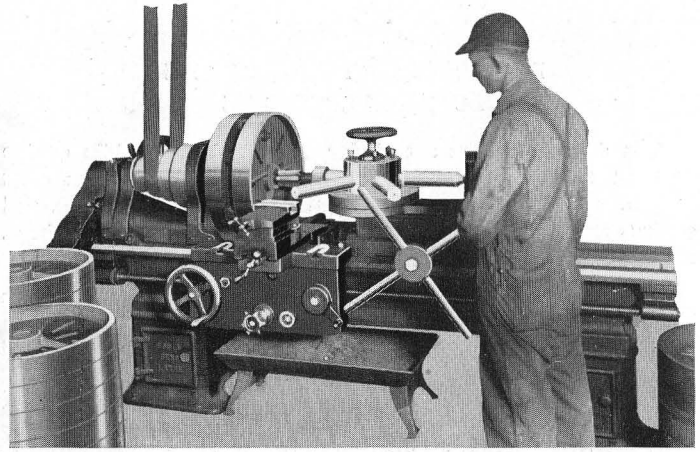
The drawing shows the method of centering the cylinder on the jig. The angle iron is machined to receive bushing A, which is machined inside and out. The cast iron plug B is machined to fit the inside of bushing A. One end of this plug is machined so as to enter the end of the cylinder to be bored about ½ inch. This should be a snug fit. Place the cylinder to be bored on this plug B, as shown in drawing. Then clamp the engine to the angle iron.

This method of re-boring engine cylinders applies to all makes of engines that come within the capacity of the jig.

The equipment of jig for the cylinder-boring attachment is included in the price and consists of: Angle-iron, bushing A, plug B, boring-bar and cutter, also parts for fastening attachment to lathe carriage.

This attachment is designed for South Bend Lathes only. We cannot fit it to lathes of other make.

We also furnish castings in the rough for this attachment. Any user of a South Bend Lathe can machine the castings to fit his lathe.



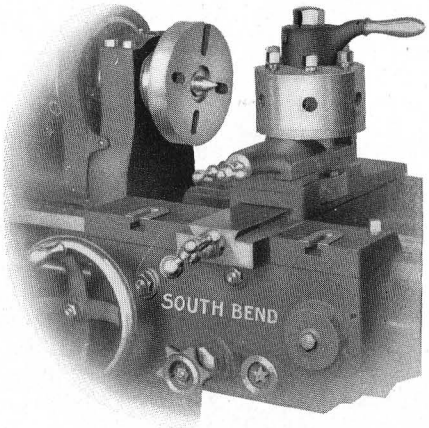
TURNSTYLE TURRET ON THE BED

The illustration shows a semi-automatic turnstyle turret on bed. Turret has six holes for tools. The turret base rests on the inside V and flat way of lathe bed which guide the head- and tail-stocks. The turret slide may be used in conjunction with the lathe carriage if required.

Turret should be fitted to lathe at factory.

Turnstyle Turret on Bed—Prices on application.

South Bend Lathes are built in a large quantity, the parts are machined in jigs and fixtures built especially for that purpose. These jigs insure accuracy and interchangeability of parts.



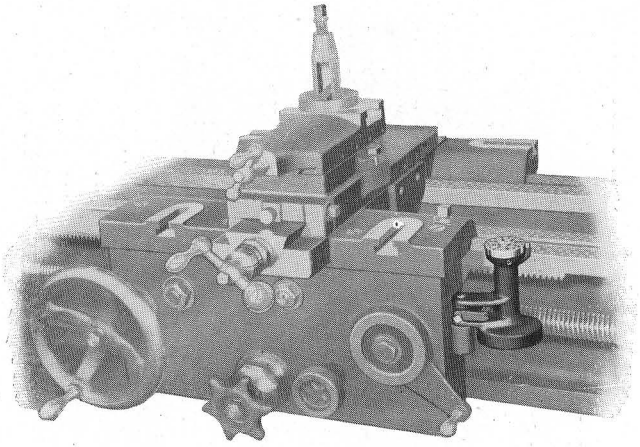
TOOL-POST TURRETS

Immediate Delivery on 15-, 16- and 18-inch Sizes

Above illustration shows the F-P-M Turret designed for inside work, such as drilling, boring, reaming, etc. Quickly attached directly to compound rest same as ordinary tool-post. Indexing plunger actuated automatically with loosening and tightening of clamping handle. Furnished with six holes unless otherwise ordered. In ordering give size, number, exact vertical distance from top of compound rest to lathe centers, and width of T slots at both top and bottom. Cannot be furnished for lathes whose center height is less than $1\frac{7}{16}$ inch.

PRICE LIST—STYLE E

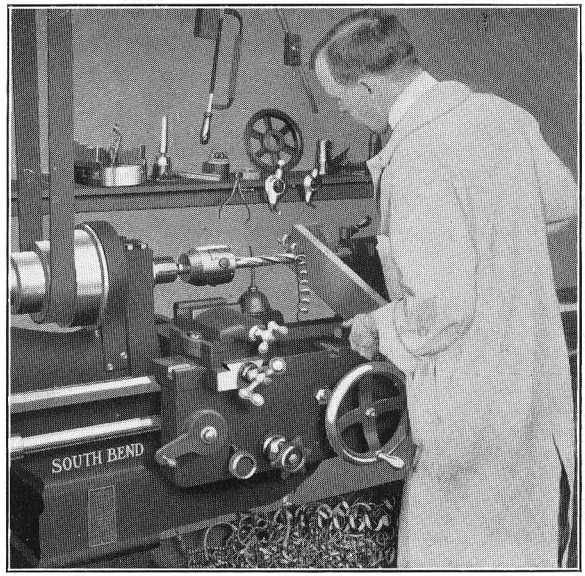
Size No.	Dia. of Turret	Dia. of Holes	Price Each with Wrench
E-6	$6\frac{1}{2}$″	1 inch to $1\frac{1}{4}$	Prices on Application



THREAD DIAL FOR THE 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.

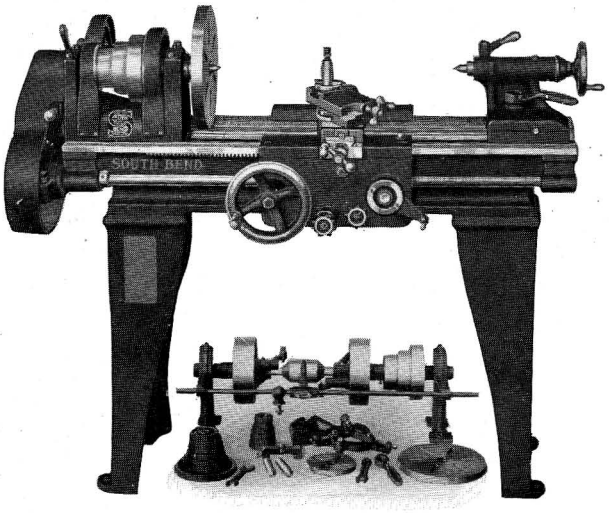
In cutting a thread on a lathe not equipped with a thread dial, the operator may unclamp the split nut and reverse the carriage quickly by hand, providing that the thread he is cutting is a multiple of the thread of the lead screw on the lathe. If it is not a multiple then the carriage must be reversed 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 64.)



USING THE LATHE AS A DRILL PRESS

The illustration shows a 1-inch drill boring through a piece of steel 1 inch thick on a 16-inch South Bend Lathe, the feed being operated by the handwheel of tail-stock. The back gears are in mesh, the power delivered at the point of the drill is equal to that of a 24-inch back-gear drill press.

Practically any drilling job that can be done on the drill press may also be done on the lathe, ranging in size of hole from ⅛-inch to 2 inches in diameter.



NO. 1 PRACTICAL MACHINE SHOP EQUIPMENT

NO. 27—11" X 4' SOUTH BEND LATHE

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

Shop Equipment No. 1, is a very desirable outfit in light manufacturing, in the Tool Room, the Electrical Shop and Battery Service Station, or in any shop where fine accurate work is required. We recommend our 11" and 13" lathes for your precision work as they will do the finest and most accurate work desired by expert mechanics. The chucks and tools specified below are the most practical sizes for the lathe for general use. They may be varied for special work but for general all-around work we recommend the sizes as listed.

1—No. 27-A—South Bend Lathe, 11-inch swing, 4-foot bed, takes between centers 26 inches, complete with graduated compound rest, automatic cross-feed, automatic longitudinal-feed, large and small face plates, two steel centers, center rest, change-gears, gear-guards, adjustable stop for screw-cutting, necessary wrenches, semi-machined chuck-back and double-friction countershaft; all as shown and described on pages 10 and 11.

1—6" 4-Jaw Independent Lathe Chuck (see page 63).....

Fitting Chuck to Lathe including S. M. Chuck-Back.....

1—Standard Drill Chuck, ½" capacity (see page 62).....

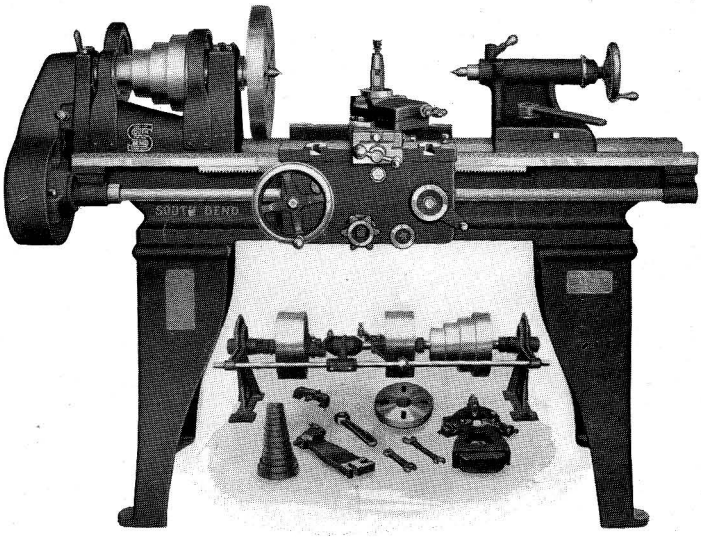
Fitting Chuck to Lathe including Arbor.....

1—Set (6A) Lathe Dogs ¼" to 1½" inclusive (see page 60).....

1—No. 0-L Patent Turning Tool (see page 59).....

For detailed Description of No. 27 Lathe see pages 10 and 11.

Shop Equipment No. 1, price on application.



NO. 2 PRACTICAL MACHINE SHOP EQUIPMENT

NO. 34—13" X 5' SOUTH BEND LATHE

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

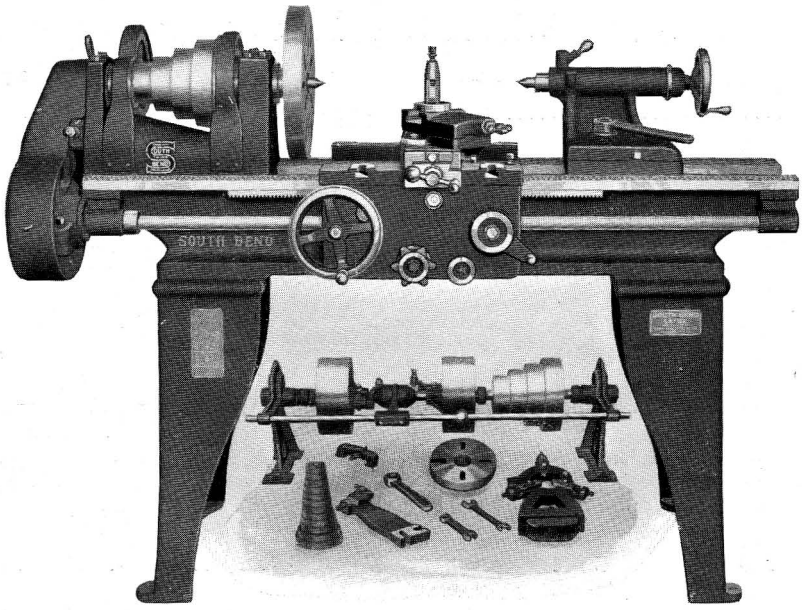
Shop Equipment No. 2 is an excellent equipment for the machine and repair shop, where fine accurate work is required. The 13-inch lathe is a sturdy tool and will take care of a great variety of work. The chucks and tools specified below are the most practical sizes for the lathe for general use. They may be varied for special work but for general all-around work we recommend the sizes as listed.

1—No. 34-B—South Bend Lathe, 13-inch swing, 5-foot bed, takes between centers 30 inches, complete with graduated compound rest, automatic cross-feed, automatic longitudinal-feed, large and small face plates, two steel centers, center rest, follower rest, change-gears, gear-guards, adjustable stop for screw-cutting, semi-machined chuck-back, necessary wrenches and double-friction countershaft; all as shown and described on pages 12 and 13.

1—7½" 4-jaw Independent Lathe Chuck (see page 63).....
Fitting chuck to lathe, including S. M. Chuck-Back.....
1—Standard Drill Chuck, ½" capacity (see page 62).....
Fitting Chuck to Lathe including Arbor.....
1—Set (6A) Lathes Dogs ¼" to 1½" inclusive (see page 60).....
1—No. 1-L Patent Turning Tool (see page 59).....

For detailed description of No. 34 Lathe, see pages 12 and 13.

Shop Equipment No. 2, price on application.



NO. 3 PRACTICAL MACHINE SHOP EQUIPMENT

NO. 37—15″ X 6′ SOUTH BEND LATHE

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

Shop Equipment No. 3, is an excellent equipment for the medium size machine and repair shop as the No. 37 lathe is surpassed by none for manufacturing and general repair work. The No. 37 lathe is intermediate in size, weight, and price between the 13″ and 16″ lathes. The chucks and equipment selected are the most practical size for general shop use and we can say without boasting, that the No. 3 Shop Equipment cannot be equalled in value for the automobile repair shop or general repair shop.

1—No. 37-C—South Bend Lathe, 15-inch swing, 6-foot bed, takes between centers 39 inches, complete with graduated compound rest, automatic cross-feed, automatic longitudinal-feed, large and small face plates, two steel centers, center rest, follower rest, change-gear, gear-guards, adjustable stop for screw-cutting, semi-machined chuck-back, necessary wrenches and double-friction countershaft; all as shown and described on pages 14 and 15.

1—9″ 4-jaw Independent Lathe Chuck (see page 63).....

Fitting chuck to lathe, including S. M. Chuck-Back.....

1—Standard Drill Chuck ¾″ capacity (See page 62).....

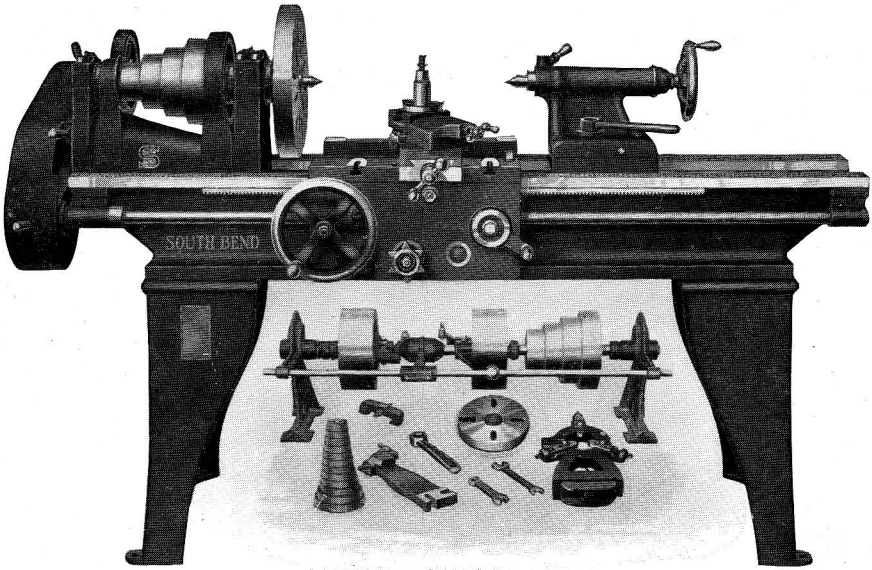
Fitting Chuck to lathe including Arbor .....

1—Set (8) Lathe Dogs ½″ to 2″ inclusive (see page 60).....

1—No. 1-L Patent Turning Tool (see page 59).....

For detailed description of No. 37 Lathe see pages 14 and 15.

Shop Equipment No. 3, price on application.



NO. 4 PRACTICAL MACHINE SHOP EQUIPMENT

NO. 40—16" X 8' SOUTH BEND LATHE

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

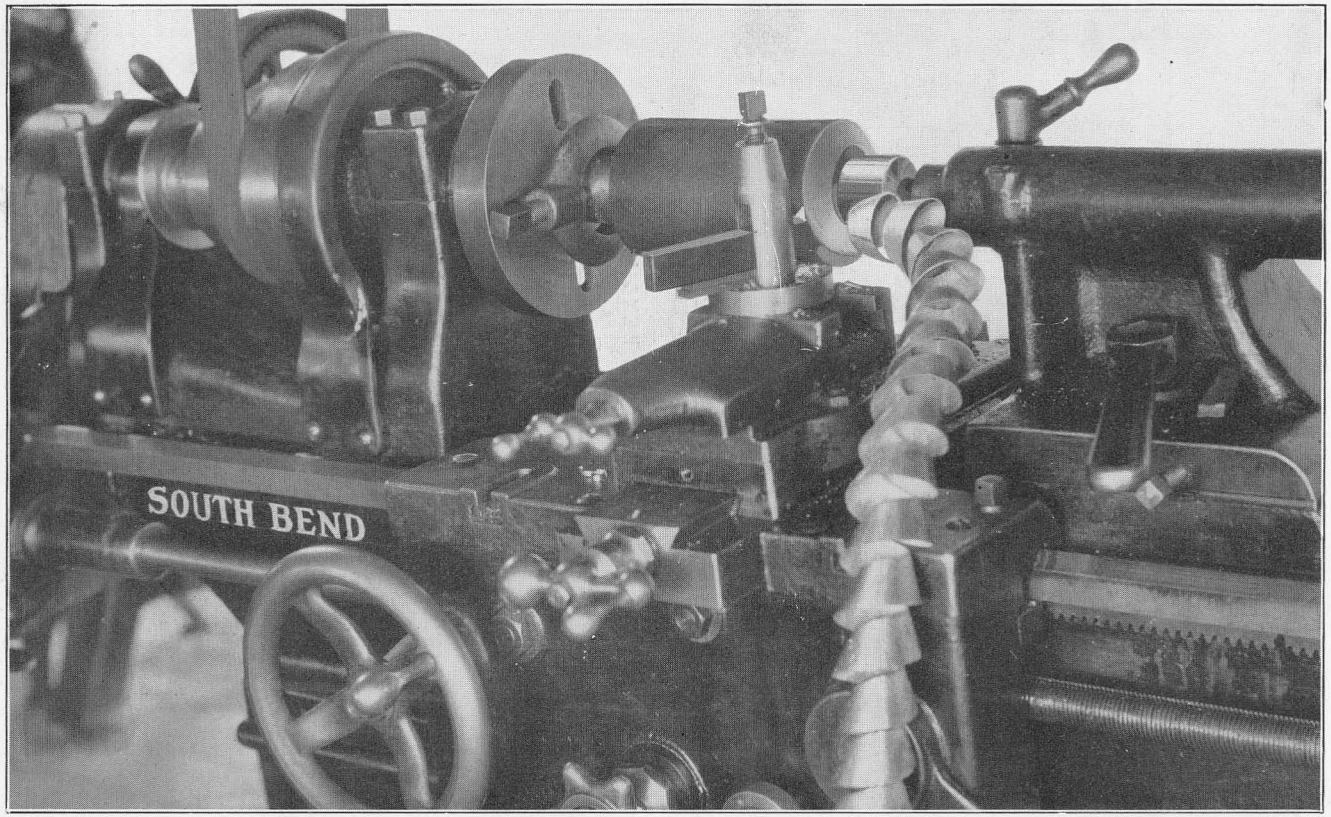
Shop Equipment No. 4, has been found practical in manufacturing in the general machine and repair shop, where work is varied and heavy, requiring a lathe of considerable stiffness and strength for the use of high-speed steel. The No. 40 Lathe is a heavy, reliable tool, capable of taking a powerful cut with high-speed steel. We recommend it for manufacturing, for the machine shop and general all-around work. The chucks and tools specified below are the most practical sizes for the lathe for general use. They may be varied for special work but for general all-around work we recommend the sizes listed.

1—No. 40-E—South Bend Lathe, 16-inch swing, 8-foot bed, takes between centers 60 inches, complete with graduated compound rest, automatic cross-feed, automatic longitudinal-feed, large and small face plates, two steel centers, center rest, change-gears, gear-guards, adjustable stop for screw-cutting, necessary wrenches, semi-machined chuck-back and double-friction countershaft; all as shown and described on pages 16 and 17.

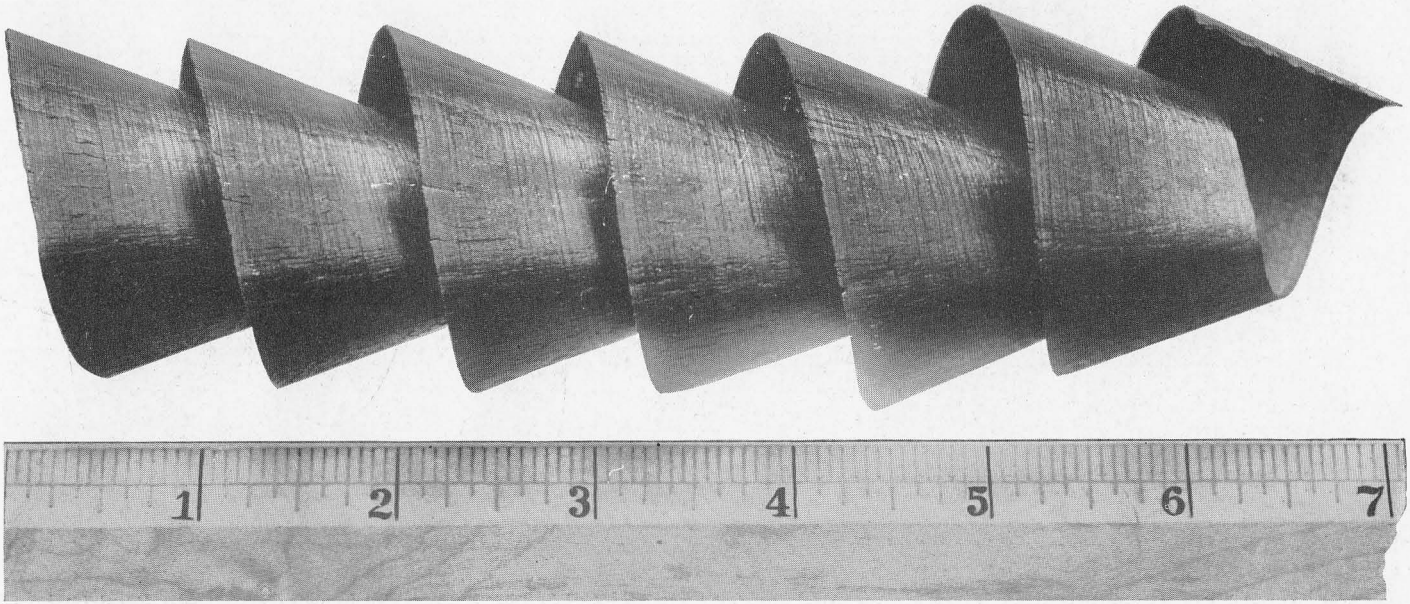
1—10" 4-Jaw Independent Lathe Chuck (see page 63).....
Fitting Chuck to Lathe including S. M. Chuck-Back .....
1—Standard Drill Chuck, 1" capacity (see page 62).....
Fitting Chuck to Lathe including Arbor.....
1—Set (12) Lathe Dogs ¼" to 4" inclusvie (see page 26).....
1—No. 2-L Patent Turning Tool (see page 59).....

For detailed description of No. 40 Lathe see pages 16 and 17.

Shop Equipment No. 4, price on application.

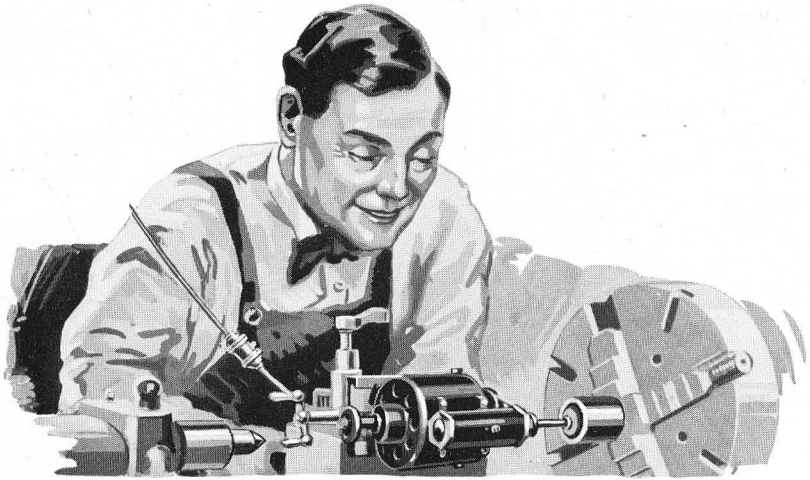


Reducing a Steel Shaft from 4-inch to 2⅛-inch in One Chip on a 16-inch No. 40 South Bend Lathe



Actual Size of a Steel Chip Produced by a No. 40—16-Inch South Bend Lathe

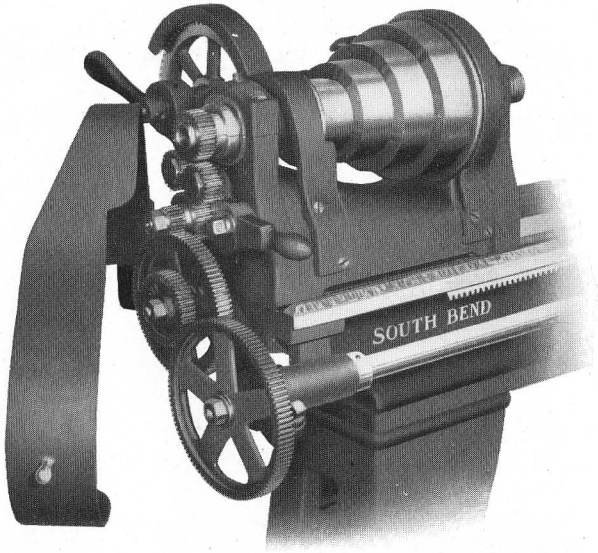
The above illustration gives a closer view or the actual size of the steel chip taken on the lathe illustrated on the opposite page of this book. This shows a chip about 1/64 of an inch thick, produced while reducing a steel shaft 4 inches in diameter to 2⅛ inches in one chip on a No. 40—16-inch South Bend Lathe. This chip demonstrates the power of the South Bend Lathe.



ELECTRIC TOOL-POST GRINDERS

Tool-Post Grinders have no equal for tool and die work. The high speeds at which they run (10,000 and 30,000 R. P. M.), give the wheels the correct cutting speeds, operated by an ordinary electric lamp socket.

The armatures are dynamically balanced, eliminating vibration and chatter marks on work. Equipped with S. K. F. ball bearings. An extension arm, with 10-inch reach, can be furnished to handle deep internal work.



HINGED GUARD PARTLY OPEN

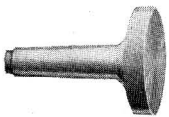
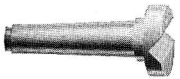
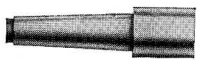
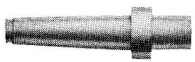
The above cut shows the head of the South Bend Lathe with end-gear guard partly open.

The fixed guards cover the back-gears. The hinge guard covers the reverse and change-gears on the end of the lathe. These guards are made of cast-iron and when closed completely cover all gears.

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.

Hard 60-degree Lathe Center is marked with ring groove to distinguish from soft 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
	Semi-Machined Drill Chuck Arbor fitted to lathe spindle	$2.00	$2.00	$2.25	$2.50	$2.50	$3.00
	Drill Chuck Arbor finished	$2.50	$2.50	$2.75	$3.00	$3.00	$3.50

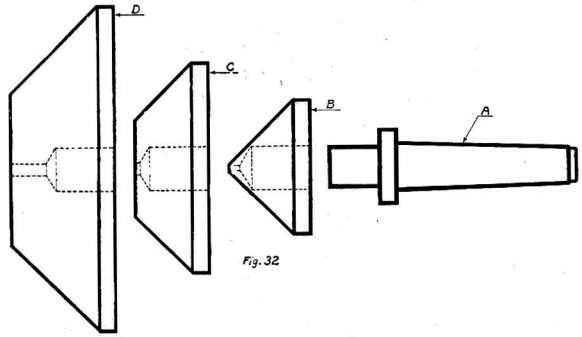


Fig. 32

PIPE CENTERS FOR 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 disc "B" fits loosely and revolves 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.

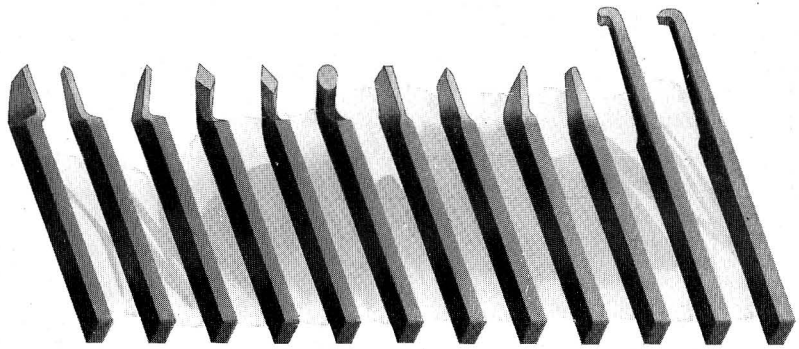
Taper Shank "A" Price..... 13″ —$2.50
Taper Shank "A" Price.....15″-16″-18″— 3.00
Taper Shank "A" Price..... 21″-24″— 4.00
Disc "B" takes from ½″ to 3″ Pipe. Price..... 6.00
Disc "C" takes from 3″ to 5″ Pipe. Price..... 7.00
Disc "D" takes from 5″ to 8″ Pipe. Price.....10.00

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.

FORGED STEEL LATHE TOOLS

An equipment of lathe tools is necessary for a lathe. Owing to long experience, we are in a position to furnish lathe tools, made of a good quality carbon tool steel, carefully forged, hardened and tempered. All are made in suitable sizes to fit South Bend Lathes.

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

							Code
For 9" Lathes	Size of steel, $\frac{5}{16}$" x $\frac{5}{8}$"	Length 4¾"	Price each	$ .75	Set of 12	$ 8.00	Terry
For 11" Lathes	Size of steel, $\frac{3}{8}$" x ¾"	Length 5 "	Price each	.85	Set of 12	9.00	Town
For 13" Lathes	Size of steel, ½" x 1 "	Length 7 "	Price each	1.25	Set of 12	12.00	Torne
For 15" Lathes	Size of steel, $\frac{5}{8}$" x 1¼"	Length 9 "	Price each	1.75	Set of 12	17.00	Torse
For 16" Lathes	Size of steel, $\frac{5}{8}$" x 1¼"	Length 9 "	Price each	1.75	Set of 12	17.00	Tory
For 18" Lathes	Size of steel, $\frac{5}{8}$" x 1¼"	Length 9 "	Price each	1.75	Set of 12	17.00	Toll
For 21" Lathes	Size of steel, ¾" x 1½"	Length 12 "	Price each	3.25	Set of 12	33.00	Toast
For 24" Lathes	Size of steel, ¾" x 1½"	Length 12 "	Price each	3.25	Set of 12	33.00	Turly

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.

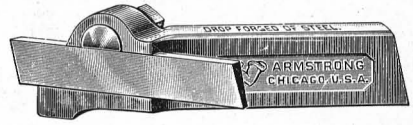
TURNING TOOLS

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

CUTTING-OFF TOOLS

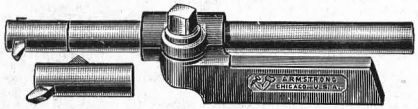
Price List—Complete with Drop-Forged Wrench and one High-Speed Cutter.

Size of Lathe	Right-Hand Off-Set	Size of Shank	Size of Blades	Price Complete
9″	No. 29-R	5/16 x 3/4″	5/64 x 1/2″	$1.90
11″	No. 30-R	3/8 x 7/8″	3/32 x 5/8″	1.90
13″. 15″	No. 31-R	1/2 x 1 1/8″	1/8 x 3/4″	2.15
16″, 18″	No. 32-R	5/8 x 1 3/8″	1/8 x 7/8″	2.75
21″, 24″	No. 33-R	3/4 x 1 5/8″	3/16 x 1″	3.60

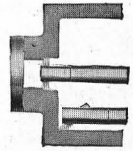


BORING TOOLS

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.	Size of Shank	Size of Bar	Size of Cutter	Price Complete
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



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.

Size	Price Each	Size	Price Each
No. 1 ¼".....	$ .50	No. 7 1¾".....	$1.20
No. 2 ½".....	.60	No. 8 2 ".....	1.30
No. 3 ¾".....	.70	No. 9 2½".....	1.55
No. 4 1 ".....	.80	No. 10 3 ".....	1.60
No. 5 1¼".....	.90	No. 11 3½".....	1.80
No. 6 1½".....	1.05	No. 12 4 ".....	2.10
	$4.55		$9.55

Set of 6A, $4.00

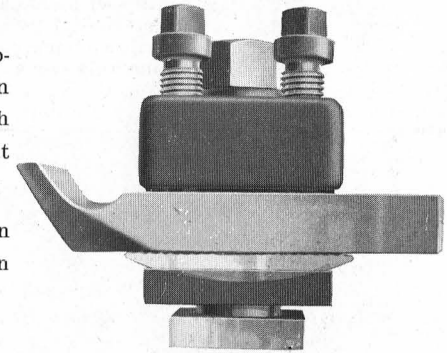
Set of 6B, $9.00

Set of 12—6A and 6B.....$12.00

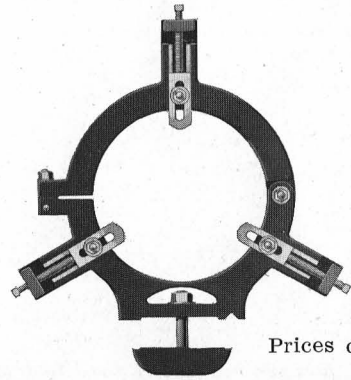
EUROPEAN TOOL-POST

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

Prices of European Tool-Posts furnished upon application.



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 3¾"	3¾" to 8¾"
15" Lathe	0 to 4¾"	4¾" to 10½"
16" Lathe	0 to 4¾"	4¾" to 10¾"
18" Lathe	0 to 5¾"	5¾" to 12½"
21" Lathe	0 to 6¾"	6¾" to 15 "
24" Lathe	0 to 8¾"	8¾" to 17 "

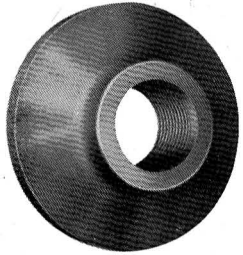
Prices on Extra Large Steady Rests upon application

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" (page 64), where this subject is explained in detail.

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

Price of Semi-Machined Chuck-Plate and Fitting Chuck to Lathe

The price of the semi-machined chuck-plate, and the fitting of 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

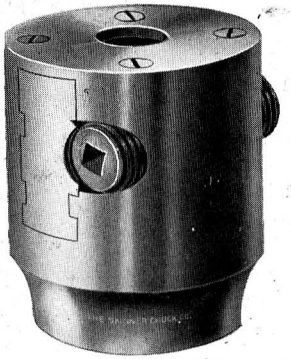
SIZE OF CHUCKS FOR A LATHE

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

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

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

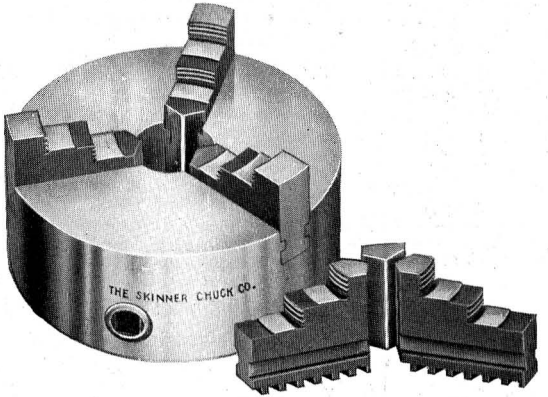


"STANDARD" DRILL CHUCK

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.

No.	Capacity Inches	Diameter Inches	Price Each
41	0 to 1/4	1 3/8	$ 6.00
42	0 to 3/8	1 11/16	6.50
43	0 to 1/2	2 3/16	7.00
44	0 to 3/4	2 7/8	8.00
45	0 to 1	3 7/16	10.00

For Fitting Drill Chucks to Lathe, See Bottom of Page 57



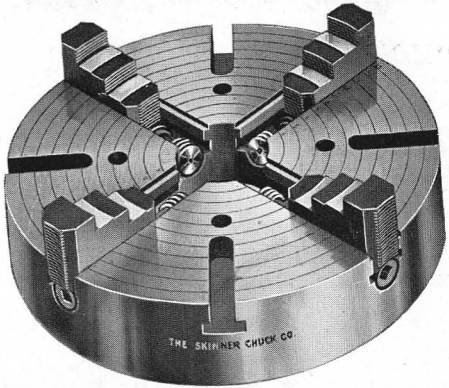
UNIVERSAL GEARED SCROLL CHUCK

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

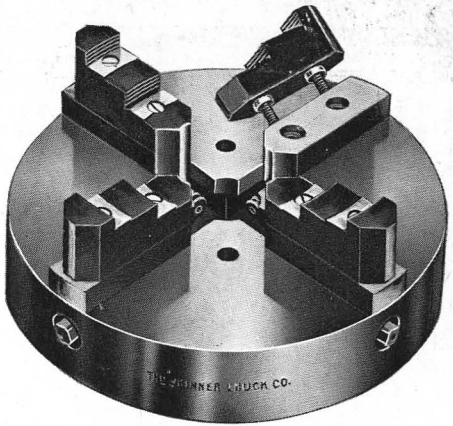
With Four Independent Reversible Jaws

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	7½"	22.00
7½"	302	8¾"	25.00
8 "	302½	9½"	26.00
9 "	303	11½"	28.00
10 "	304	12½"	30.00
12 "	305	14½"	35.00
14 "	306	16½"	40.00
15 "	307	18 "	43.00
16 "	307½	18 "	46.00
18 "	308	21 "	54.00

For Fitting Chuck to Lathe, See Page 61



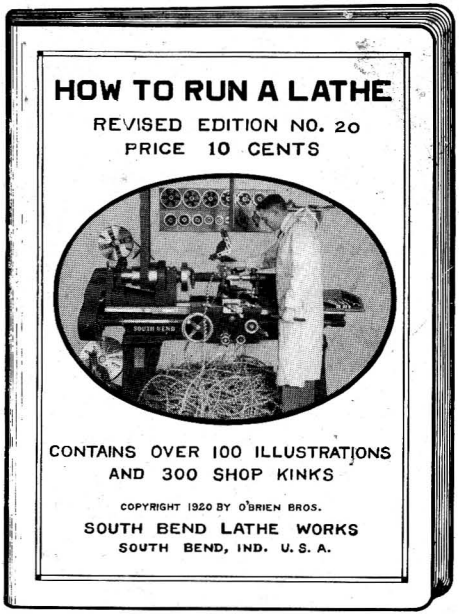
COMBINATION CHUCK, GEARED SCREW

With Patent Reversible Jaws

Rated Size, Inches	No.	Will Hold Approximately Inches	Price, 4 Jaws
4"	420	4 1/16"	$36.00
5"	421	5¾"	39.00
6"	422	7¼"	42.00
8"	423	8⅝"	50.00
9"	424	9½"	54.00
12"	425	12⅞"	66.00
15"	426	16⅝"	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



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.

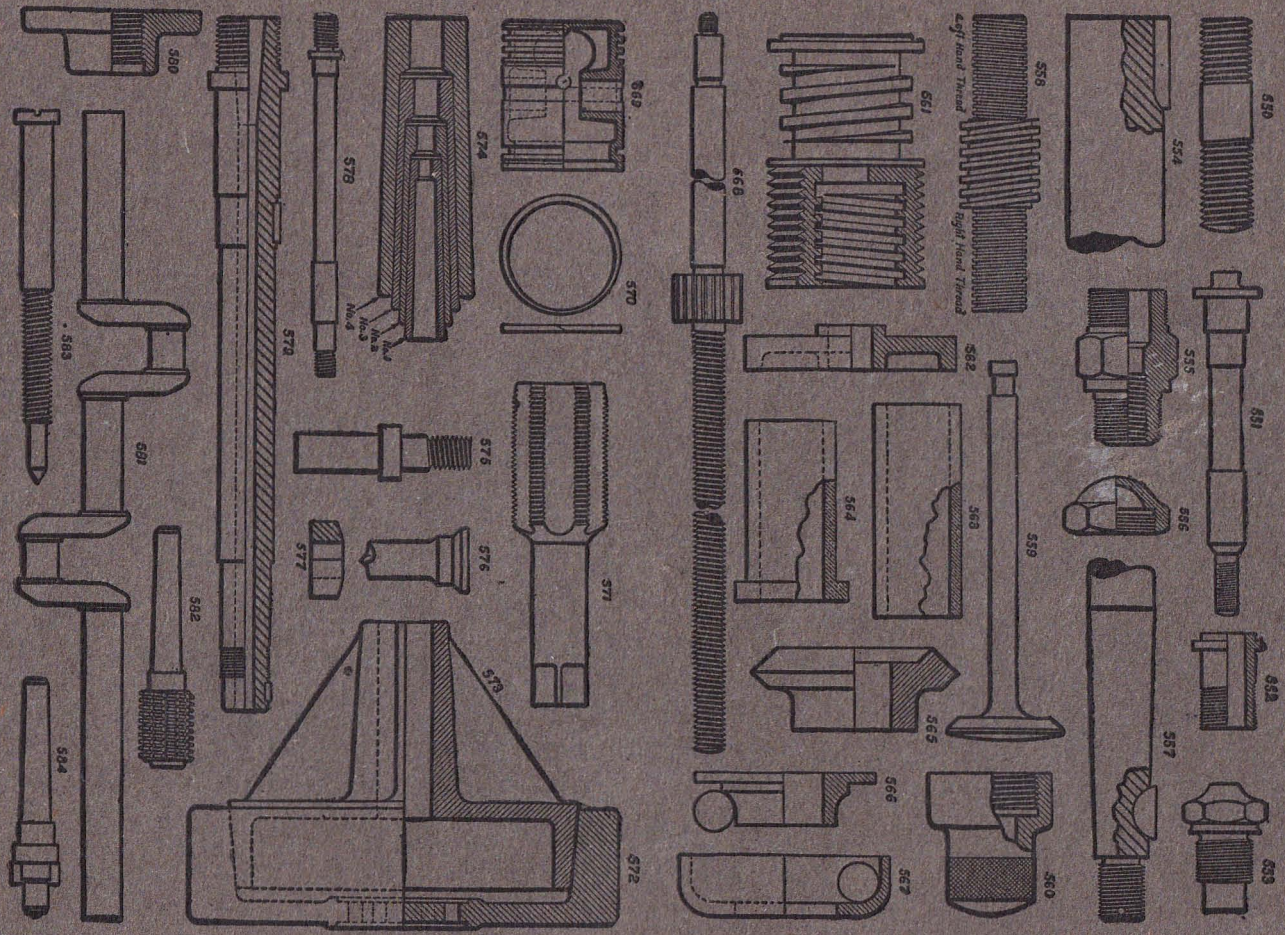
"HOW TO RUN A LATHE"

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 reseat 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, etc.
Case hardening, and 100 other subjects.
"How to Run a Lathe" also printed in Spanish and Portuguest languages.

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.



A Few of the Many Pieces that can be Produced on a South Bend Lathe

A FEW USERS OF SOUTH BEND LATHES

PENNSYLVANIA RAILROAD CO., Several Plants
HENRY DISSTON & SONS, Inc., Tacony, Pa.
DOMINION CARTRIDGE CO., Stayner ville, Que.
UNION BRIDGE & CONSTRUCTION CO., Morgan City, La.
MARLIN ARMS CORP., New Haven, Conn.
JOHN A. ROEBLINGS SONS CO., Trenton, N. J.
VICTOR TALKING MACHINE CO., Camden, N. J.
COLTS PATENT FIRE ARMS MFG. CO., Hartford, Conn.
INGERSOLL RAND CO., Athens, Pa.
BURROUGHS ADDING MACHINE CO., Detroit, Mich.
MEAD CYCLE CO., Chicago, Ill.
DETROIT SHIPBUILDING CO., Detroit, Mich.
EASTMAN KODAK CO., Rochester, N. Y.
LIGGETT & MYERS TOBACCO CO., Several Plants
NEW YORK SHIPBUILDING CO., Several Plants
UNITED STATES NAVY, Several Battleships and Destroyers
E. I. du PONT de NEMOURS & CO., Several Plants

UNION PACIFIC RAILROAD, Omaha, Neb.
CUDAHY PACKING CO., South Chicago, Ill.
NATIONAL LAMP WORKS, Cleveland, Ohio
PETERS CARTRIDGE CO., Kings Mills, Ohio
WESTINGHOUSE ELEC. & MFG. CO., Pittsburgh, Pa.
INTERNATIONAL HARVESTER CO., Detroit, Mich.
THOMAS A. EDISON, Orange, N. J.
NEW HAVEN RAILROAD, Several Places
UNION METALLIC CARTRIDGE CO., Weehawken, N. J.
GENERAL ELECTRIC CO., Several Plants
CHESAPEAKE & OHIO RAILROAD, Hinton, W. Va.
ALLIS CHALMERS MFG. CO. Milwaukee, Wis.
CHICAGO FLEXIBLE SHAFT CO., Chicago, Ill.
WM. CRAMP & SONS SHIP & ENGINE BLDG. CO. Philadelphia, Pa.
CAMBRIA STEEL CO. Johnstown, Pa.
DIAMOND MATCH CO. Oswego, N. Y.
REMINGTON ARMS U. M. C. CO., Hoboken, N. J.

UNITED STATES GOVERNMENT, Several Plants
FORD MOTOR CO., Detroit, Mich.
J. G. BRILL CAR CO., Philadelphia, Pa.
SINGER SEWING MACHINE CO. Several Plants
EDISON LAMP WORKS, Harrison, N. J.
STANDARD OIL CO., Several Plants
PACKARD MOTOR CAR CO., Several Plants
ROLPH MILLS & CO. San Francisco, Cal.
AMERICAN CAN CO., New York, N. Y.
WAGNER ELECTRIC & MFG. CO., St. Louis, Mo.
HAYNES AUTOMOBILE CO., Kokomo, Ind.
NATIONAL CARBON CO., Cleveland, Ohio
AMERICAN SHEET & TIN PLATE CO., Gary, Ind.
TIMKEN ROLLER BEARING CO., Canton, Ohio
WESTINGHOUSE CHURCH KERR & CO. Sheffield, Ala.
WILLYS MORROW CO., Elmira, N. Y.
STANDARD TYPEWRITER CO., New York, N. Y.

There are 27,000 SOUTH BEND LATHES in use in machine shops throughout the world.