A Few Users of South Bend Lathes

Ford Motor Co	Detroit, Mich.	Pennsylvania Railroad	Pittsburgh, Pa.
Victor Talking Machine Co	Camden, N. J.	Thomas A. Edison	Orange, N. J.
Union Pacific Railroad	Omaha, Neb.	Remington Arms U. M. C. Co.	Hoboken, N. J.
Westinghouse Elec. Mfg. Co.	Several Places	New York Ship Building Co.	Several Places
General Motors	Several Places	National Lamp Works	Cleveland, Ohio
Singer Sewing Machine Co.	Several Places	International Harvester Co.	Several Places
Packard Motor Car Co	Several Places	American Can Co	New York, N. Y.
Mass. Institute of Technology	Boston, Mass.	General Electric Co	Several Places
Air Reduction Co	Several Places	Studebaker Corp.	Several Places
United States Government	Several Places	Standard Oil Co	Several Places
Haynes Motor Car Co	Kokomo, Ind.	Bethlehem Ship Building Corp.	Several Places
National Biscuit Co	Chicago, Ill.	Newport News Ship Bldg. Corp.	Newport News
Libby, McNeill & Libby	Chicago, Ill.	Lincoln Motor Co	Detroit, Mich.
Union Metallic Cart. Co.	Weehawken, N. J.	E. I. du Pont de Nemours Co.	Several Places
Allis-Chalmers Mfg. Co.	Milwaukee, Wis.	Edison Lamp Works	Harrison, N. J.
U. S. Military Academy	West Point, N. Y.	New Haven Railroad	Several Places
Federal Board of Education	Several Places	U. S. Navy	Several Battleships

Most of the Leading Technical Schools in the United States.
South Bend Lathes are in service in manufacturing plants, machine shops, and repair shops in 64 countries throughout the world.

SOUTH BEND LATHES

Junior Catalog No. 79

Jan. 15, 1923

South Bend Lathe Works

480 East Madison St.
SOUTH BEND, IND.
U. S. A.

New York Office and Warehouse
166 Centre Street New York, N. Y.

PRICES

The prices shown in this booklet are our lowest selling prices on South Bend Lathes, Jan. 15, 1923.

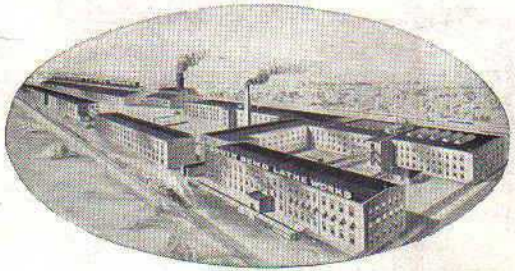
PRODUCTION

The productive capacity of the South Bend Lathe Works is about 500 lathes per month, 6000 lathes a year.

This large production reduces the cost and insures accuracy; that is the reason we are able to offer such an accurate, substantial, well built lathe at such attractive prices.

South Bend Lathes can be purchased thru your Machinery and Supply dealer.

HAMMOND PRESS, W. B. CONKEY COMPANY, CHICAGO



Factory of South Bend Lathe Works
(Established 1906)

Devoted Exclusively to the Manufacturing of South Bend Lathes

Manufacturer's Guarantee

Each South Bend Lathe is guaranteed to be accurate, mechanically perfect, and to give you entire satisfaction and the service you have a right to expect because you pay for reliable lathe value.

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

SOUTH BEND LATHE WORKS

General Offices and Works

480 East Madison St. South Bend, Ind., U. S. A.

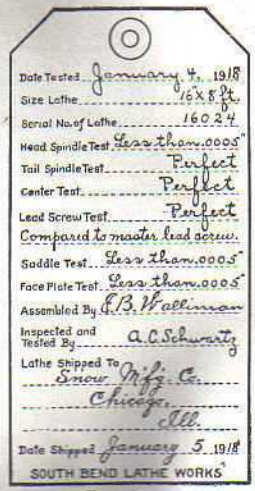
New York Office and Warehouse

166 Centre St. New York, N. Y., U. S. A.

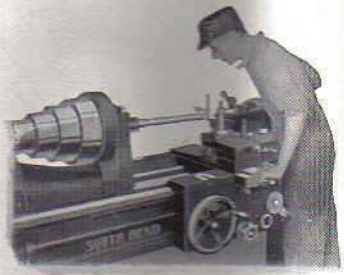
ACCURACY

Every South Bend Lathe is operated under belt and tested before leaving the factory. Two tags are attached to the lathe, upon which the various tests are recorded, and when the lathe is shipped one of these tags is filed at the factory office for future reference. The other tag accompanies the lathe. The illustration on the right shows one of the tags. All tests are made with accurate instruments designed for that purpose.

See our Guarantee Page 1.


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

Test Tag


Testing Alignment of Spindle

30,000 SOUTH BEND LATHES IN INDUSTRY

In use in:

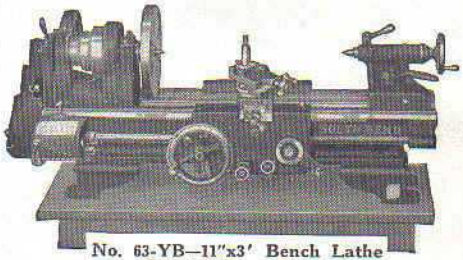
General Manufacturing
Machine Shops
Tool Rooms
Government Shops

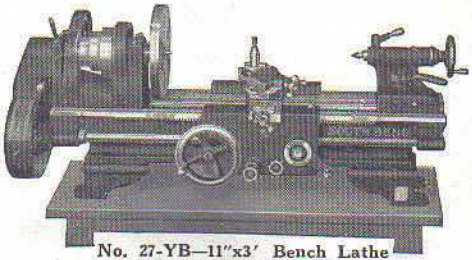
and wherever the finest precision screw gauges, precision taps and special screws are to be made to meet the most accurate requirements.

BENCH LATHES

Quick Change Gear and Standard Change Gear

We can supply 9" and 11" Quick Change Gear or Standard Change Gear Lathes, fitted with Bench Legs instead of Long Legs.


No. 63-YB—11"x3' Bench Lathe
Quick Change Gear


No. 27-YB—11"x3' Bench Lathe
Standard Change Gear

Regular equipment as shown under cut of Long Leg Lathes is included in the prices of Bench Lathes

F. O. B. cars South Bend, Ind.—Skidded and Crated

Size of Lathe	Length of Bed	Distance Between Centers	Approx. Weight Crated	Hole Thru Spindle	Price Quick-Change Gear Lathe	Price Standard Change Gear Lathe
9 in.	2½ ft.	12 in.	375	⅝ in.	$203.00	$162.00
9 in.	3 ft.	18 in.	400	¾ in.	206.00	166.00
9 in.	4 ft.	30 in.	450	¾ in.	214.00	174.00
11 in.	3 ft.	14 in.	525	⅞ in.	255.00	210.00
11 in.	4 ft.	26 in.	600	⅞ in.	263.00	218.00
11 in.	5 ft.	38 in.	650	⅞ in.	275.00	230.00
13 in.	4 ft.	18 in.	950	1 in.	332.00	282.00
13 in.	5 ft.	30 in.	1000	1 in.	344.00	294.00
13 in.	6 ft.	42 in.	1050	1 in.	356.00	306.00

Quick Change Gear Lathes

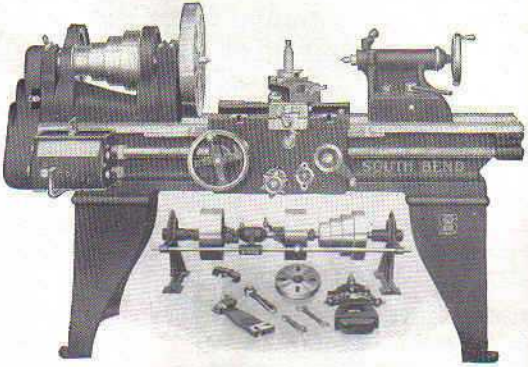
F. O. B. Cars South Bend, Ind.—Skidded and Crated

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Hole Through Spindle	Approx. Weight Crated	Price Quick Change Gear Lathe
No. 61—9-inch South Bend Quick Change Gear Lathe						
61-X	9¼ in.	2½ ft.	12 in.	¾ in.	440	$212.00
61-Y	9¼ in.	3 ft.	18 in.	¾ in.	460	216.00
61-A	9¼ in.	4 ft.	30 in.	¾ in.	500	224.00
No. 63—11-inch South Bend Quick Change Gear Lathe						
63-Y	11¼ in.	3 ft.	14 in.	⅞ in.	575	265.00
63-A	11¼ in.	4 ft.	26 in.	⅞ in.	625	273.00
63-B	11¼ in.	5 ft.	38 in.	⅞ in.	675	285.00
No. 65—13-inch South Bend Quick Change Gear Lathe						
65-A	13¼ in.	4 ft.	18 in.	1 in.	1000	342.00
65-B	13¼ in.	5 ft.	30 in.	1 in.	1050	354.00
65-C	13¼ in.	6 ft.	42 in.	1 in.	1100	366.00
65-D	13¼ in.	7 ft.	54 in.	1 in.	1150	378.00
65-E	13¼ in.	8 ft.	66 in.	1 in.	1200	394.00
No. 67—15-inch South Bend Quick Change Gear Lathe						
67-B	15¼ in.	5 ft.	27 in.	1⅛ in.	1400	415.00
67-C	15¼ in.	6 ft.	39 in.	1⅛ in.	1475	431.00
67-D	15¼ in.	7 ft.	51 in.	1⅛ in.	1550	447.00
67-E	15¼ in.	8 ft.	63 in.	1⅛ in.	1625	463.00
67-G	15¼ in.	10 ft.	87 in.	1⅛ in.	1775	499.00
No. 69—16-inch South Bend Quick Change Gear Lathe						
69-C	16¼ in.	6 ft.	36 in.	1⅛ in.	1700	480.00
69-D	16¼ in.	7 ft.	48 in.	1⅛ in.	1780	496.00
69-E	16¼ in.	8 ft.	60 in.	1⅛ in.	1860	512.00
69-G	16¼ in.	10 ft.	84 in.	1⅛ in.	2020	544.00
69-H	16¼ in.	12 ft.	108 in.	1⅛ in.	2280	592.00
No. 71—18-inch South Bend Quick Change Gear Lathe						
71-C	18¼ in.	6 ft.	31 in.	1⅜ in.	2300	613.00
71-D	18¼ in.	7 ft.	43 in.	1⅜ in.	2400	633.00
71-E	18¼ in.	8 ft.	55 in.	1⅜ in.	2500	653.00
71-G	18¼ in.	10 ft.	79 in.	1⅜ in.	2700	721.00
71-H	18¼ in.	12 ft.	103 in.	1⅜ in.	3000	781.00
No. 73—21-inch South Bend Quick Change Gear Lathe						
73-D	21¼ in.	7 ft.	39 in.	1½ in.	3400	853.00
73-E	21¼ in.	8 ft.	51 in.	1½ in.	3600	879.00
73-G	21¼ in.	10 ft.	75 in.	1½ in.	3850	932.00
73-H	21¼ in.	12 ft.	99 in.	1½ in.	4210	1016.00
73-K	21¼ in.	14 ft.	123 in.	1½ in.	4430	1082.00
No. 75—24-inch South Bend Quick Change Gear Lathe						
75-E	24¼ in.	8 ft	46 in.	1¾ in.	4400	1129.00
75-G	24¼ in.	10 ft.	70 in.	1¾ in.	4650	1190.00
75-H	24¼ in.	12 ft.	94 in.	1¾ in.	5050	1287.00
75-K	24¼ in.	14 ft.	118 in.	1¾ in.	5320	1353.00
75-M	24¼ in.	16 ft.	142 in.	1¾ in.	5600	1423.00

Standard Change Gear Lathes

F. O. B. Cars South Bend, Ind.—Skidded and Crated

No. of Lathe	Swing Over Bed	Length of Bed	Distance Between Centers	Hole Through Spindle	Approx. Weight Crated	Price Standard Change Gear Lathe
No. 25—9-inch South Bend Standard Change Gear Lathe						
25-X	9¼ in.	2½ ft.	12 in.	¾ in.	440	$172.00
25-Y	9¼ in.	3 ft.	18 in.	¾ in.	460	176.00
25-A	9¼ in.	4 ft.	30 in.	¾ in.	500	184.00
No. 27—11-inch South Bend Standard Change Gear Lathe						
27-Y	11¼ in.	3 ft.	14 in.	⅞ in.	575	220.00
27-A	11¼ in.	4 ft.	26 in.	⅞ in.	625	228.00
27-B	11¼ in.	5 ft.	38 in.	⅞ in.	675	240.00
No. 34—13-inch South Bend Standard Change Gear Lathe						
34-A	13¼ in.	4 ft.	18 in.	1 in.	1000	292.00
34-B	13¼ in.	5 ft.	30 in.	1 in.	1050	304.00
34-C	13¼ in.	6 ft.	42 in.	1 in.	1100	316.00
34-D	13¼ in.	7 ft.	54 in.	1 in.	1150	328.00
34-E	13¼ in.	8 ft.	66 in.	1 in.	1200	344.00
No. 37—15 inch South Bend Standard Change Gear Lathe						
37-B	15¼ in.	5 ft.	27 in.	1⅛ in.	1400	360.00
37-C	15¼ in.	6 ft.	39 in.	1⅛ in.	1475	376.00
37-D	15¼ in.	7 ft.	51 in.	1⅛ in.	1550	392.00
37-E	15¼ in.	8 ft.	63 in.	1⅛ in.	1625	408.00
37-G	15¼ in.	10 ft.	87 in.	1⅛ in.	1775	444.00
No. 40—16-inch South Bend Standard Change Gear Lathe						
40-C	16¼ in.	6 ft.	36 in.	1⅛ in.	1700	420.00
40-D	16¼ in.	7 ft.	48 in.	1⅛ in.	1780	436.00
40-E	16¼ in.	8 ft.	60 in.	1⅛ in.	1860	452.00
40-G	16¼ in.	10 ft.	84 in.	1⅛ in.	2020	484.00
40-H	16¼ in.	12 ft.	108 in.	1⅛ in.	2280	532.00
No. 45—18-inch South Bend Standard Change Gear Lathe						
45-C	18¼ in.	6 ft.	31 in.	1⅜ in.	2300	548.00
45-D	18¼ in.	7 ft.	43 in.	1⅜ in.	2400	568.00
45-E	18¼ in.	8 ft.	55 in.	1⅜ in.	2500	588.00
45-G	18¼ in.	10 ft.	79 in.	1⅜ in.	2700	656.00
45-H	18¼ in.	12 ft.	103 in.	1⅜ in.	3000	716.00
No. 47—21-inch South Bend Standard Change Gear Lathe						
47-D	21¼ in.	7 ft.	39 in.	1½ in.	3400	770.00
47-E	21¼ in.	8 ft.	51 in.	1½ in.	3600	796.00
47-G	21¼ in.	10 ft.	75 in.	1½ in.	3850	849.00
47-H	21¼ in.	12 ft.	99 in.	1½ in.	4210	933.00
47-K	21¼ in.	14 ft.	123 in.	1½ in.	4430	999.00
No. 54—24-inch South Bend Standard Change Gear Lathe						
54-E	24¼ in.	8 ft.	46 in.	1¾ in.	4400	1030.00
54-G	24¼ in.	10 ft.	70 in.	1¾ in.	4650	1091.00
54-H	24¼ in.	12 ft.	94 in.	1¾ in.	5050	1188.00
54-K	24¼ in.	14 ft.	118 in.	1¾ in.	5320	1254.00
54-M	24¼ in.	16 ft.	142 in.	1¾ in.	5600	1324.00



Description of South Bend Quick Change Gear Lathes

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, which with back gears gives eight changes of spindle speeds. Spindle is of special carbon steel, accurately ground and has a hole its entire length. Centers conform to 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.

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

Carriage is strong with wide deep bridge; 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. Carriage has "T" slots for clamping work for milling and boring, with the exception of the 9" and 11".

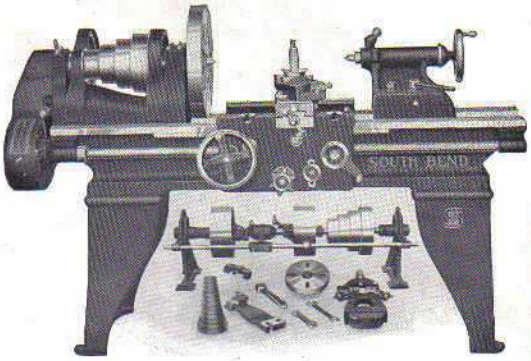
Thread-Cutting and Turning Feeds. All sizes of Quick Change Gear Lathes will cut standard threads, right or left, from 2 to 112 per inch without changing a gear. (See page 10.) Turning feeds, fine or coarse, can also be obtained without changing a gear.

Equipment, as shown in cut on page 6, is included in the price and consists of quick change gear box, large and small face plates, compound rest, two steel centers, center rest, follower rest, adjustable stop for screw-cutting, gear-guards, semi-machined chuck-back, necessary wrenches and double-friction countershaft.

EXTRAS: Any size Quick Change Gear Lathe may be supplied at extra cost with:

Milling and Keyway Cutting Attachment,
Draw-In Chuck Attachment,
Electric Drive Attachment,
Grinding Attachments,
Taper Attachment,
Thread Dial.

For Prices of Quick Change Gear Lathe, see Page 4.



Description of South Bend Standard Change Gear Lathes

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, which with back gears gives eight changes of spindle speeds. Spindle is of special carbon steel, accurately ground and has a hole its entire length. Centers conform to 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.

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

Carriage is strong with wide deep bridge; 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. Carriage has "T" slots for clamping work for milling and boring, with the exception of the 9" and 11".

Thread-Cutting and Turning Feeds. All sizes Standard Change Gear Lathes are indexed to cut standard threads from 4 to 40, right or left, including 11½ pipe thread. Compound feed gears are included.

Equipment, as shown in cut on page 8, 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.

EXTRAS: Any size Standard Change Gear Lathe may be supplied at extra cost with:

Milling and Keyway Cutting Attachment,
Draw-In Chuck Attachment,
Electric Drive Attachment,
Grinding Attachments,
Taper Attachment,
Thread Dial,
Raising Blocks.

For Prices of Standard Change Gear Lathe, see Page 5.

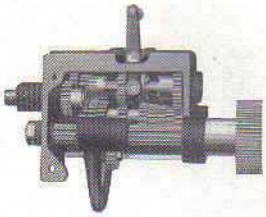
SOUTH BEND LATHE WORKS						SOUTH BEND, INDIANA, U. S. A.				
PATENT No 810634						JANUARY 23, 1906				
LONGITUDINAL FEEDS 2½						TIMES THREADS PER INCH				
BEGINNING LEVER	TOP LEVER	THREADS PER INCH								
IN	LEFT	2	2¼	2½	2¾	2⅞		3	3¼	3½
	CENTER	4	4½	5	5½	5¾		6	6½	7
	RIGHT	8	9	10	11	11½		12	13	14
OUT	LEFT	16	18	20	22	23		24	26	28
	CENTER	32	36	40	44	46		48	52	56
	RIGHT	64	72	80	88	92		96	104	112

INDEX PLATE FOR SOUTH BEND QUICK CHANGE GEAR LATHES

A metal thread cutting chart similar to the cut shown here is attached to all sizes of South Bend Quick Change Gear Lathes.

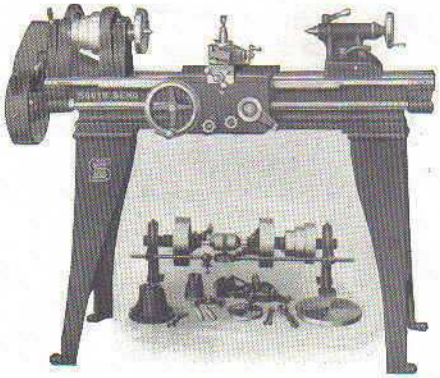
48 threads of different pitch, right or left, can be cut with this Quick Change Gear Box without changing a gear, as follows, 2, 2¼, 2½, 2¾, 2⅞, 3, 3¼, 3½, 4, 4½, 5, 5½, 5¾, 6, 6½, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44, 46, 48, 52, 56, 64, 72, 80, 88, 92, 96,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

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



Interior View of Gear Box

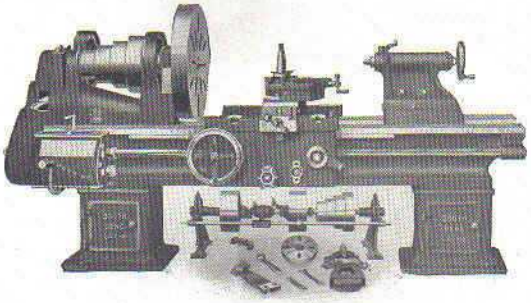
The South Bend Quick Change Gear Box (Flather patent) is a simple, accurate and reliable Quick Change Gear mechanism that has been used for years on some of the most modern type tool room lathes in this country. It covers a wide range of thread cutting and turning feeds. The gears are made of steel forgings with wide face and coarse pitch and are protected in this box from grit and dirt.



The 9" and 11" South Bend Lathes are equipped with 3-step cone, all other sizes have 4-step cone. The follower rest is not included in the 9" and 11" Lathe equipment.

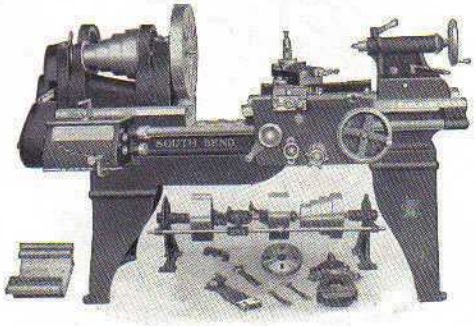
Width of Cone Belt on South Bend Lathes
Both Standard and Quick Change

Size of Lathe	Width of Belt	Size of Lathe	Width of Belt
9-in.	1- in.	16-in.	2- in.
11-in.	1¼-in.	18-in.	2½-in.
13-in.	1½-in.	21-in.	3- in.
15-in.	1¾-in.	24-in.	3½-in.



The 21" and 24" South Bend Lathes are furnished with Cabinet legs, as illustrated above.

SOUTH BEND LATHE WITH GAP BED AND BRIDGE



Sizes: We build any size Standard Change Gear and Quick Change Gear South Bend Lathe, except the 9-inch, with gap bed and bridge when desired. 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 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.

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

Size of Lathe	Swing Over Straight Bed	Swing Over Gap	Width of Gap	Price Extra for Gap and Bridge
11-in.	11¼-in.	15-in.	5 -in.	$25.00
13-in.	13¼-in.	19-in.	7 -in.	30.00
15-in.	15¼-in.	22-in.	8 -in.	36.00
16-in.	16-¼in.	24-in.	8⅜-in.	40.00
18-in.	18¼-in.	26-in.	10 -in.	50.00
21-in.	21¼-in.	30-in.	12 -in.	100.00
24-in.	24¼-in.	36-in.	15 -in.	150.00

9″ MOTOR DRIVEN LATHE

Reversing Switch

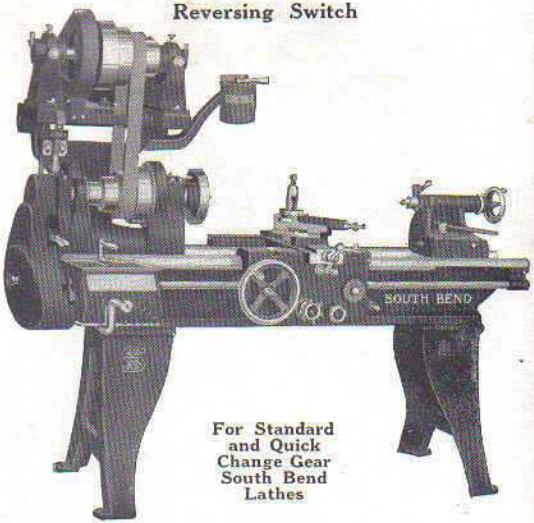
The above illustration shows a 9″x3′ Standard Change Gear South Bend Lathe equipped with Silent Chain Motor Drive attachment and operated by a ¼ Horse Power, A. C. Motor from a lamp socket, reducing a 1½″ steel shaft to ¾″ diameter at one chip.

Price of lathe and Motor Drive Attachment with A. C. Motor as equipped above, $292.00 F. O. B. Cars, South Bend, Indiana.

This price does not include the pan shown underneath the lathe.

SILENT CHAIN MOTOR-DRIVEN LATHE

Reversing Switch



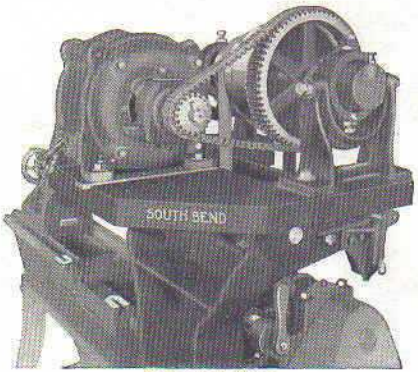
For Standard and Quick Change Gear South Bend Lathes

The Silent Chain Motor Drive is noiseless and efficient. The countershaft cone does away with variable speed motors, allowing use of the regular standard motor (1150 or 1200 R. P. M.). Price of attachment does not include lathe or motor.

The 9" Motor Driven Lathe can be operated by a ¼ H. P. Motor from the ordinary lamp socket with no danger of blowing out fuse.

Size of Lathe	Horsepower of Motor	Countershaft R. P. M.	Price of Attachment including Reversing Switch
9 in.	¼ H. P.	290	$ 75.00
11 in.	½ H. P.	275	85.00
13 in.	1 H. P.	275	100.00
15 in.	1 H. P.	250	120.00
16 in.	1 H. P.	225	140.00
18 in.	2 H. P.	200	175.00
21 in.	3 H. P.	175	225.00
24 in.	3 H. P.	150	275.00

When direct current motor is used on 13" lathes and larger, add $40.00 to above prices for Automatic Starter.

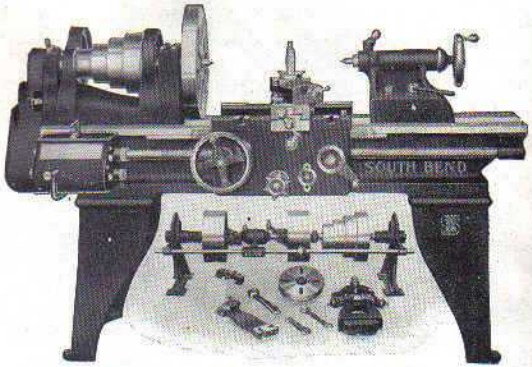


Enlarged View

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

APPROXIMATE MOTOR PRICES

Alternating current, single phase, 60 cycle, 110-220 volts, 1200 R. P. M.	
¼ Horse Power	$ 41.00
½ Horse Power	74.00
1 Horse Power	95.00
2 Horse Power	125.00
3 Horse Power	165.00
Alternating current, three phase, 60 cycle, 110-220 volts, 1200 R. P. M.	
½ Horse Power	$ 48.00
1 Horse Power	54.00
2 Horse Power	68.00
3 Horse Power	80.00
Direct Current Motors 115-230 Volts, 1200 R. P. M.	
¼ Horse Power	$ 26.00
½ Horse Power	54.00
1 Horse Power	72.00
2 Horse Power	113.00
3 Horse Power	153.00



No. 4-Q Practical Machine Shop Equipment

No. 69-E—16"x8' Quick Change Gear Lathe

Shop Equipment No. 4-Q has been found practical in the general machine and repair shop. The chucks and tools specified below are the most practical sizes for the lathe for general use.

QUOTATION

One No. 69-E South Bend Lathe, 16-inch swing, 8-foot bed, takes between centers 60 inches, complete with Quick Change Gear Box, graduated compound rest, automatic cross-feed, automatic longitudinal-feed, large and small face plates, two steel centers, center rest, follower rest, gear-guards, adjustable stop for screw-cutting, necessary wrenches, semi-machined chuck-back and double-friction countershaft.

Price: F. O. B. cars South Bend, Indiana	$512.00
1 10" 4-Jaw Independent Lathe Chuck	30.00
Fitting Independent Chuck to Lathe	5.50
1 Standard Drill Chuck 1" capacity	10.00
Fitting Drill Chuck to Lathe including Arbor	3.00
1 Set (9) Lathe Dogs ½" to 3" inclusive	8.50
1 No. 2-S Patent Turning Tool	2.70
1 No. 32-R Cutting-Off Tool	3.00
1 No. 10 Boring Tool	5.10
Shop Equipment No. 4-Q, Total F. O. B. South Bend	**$579.80**

If Standard Change Gear Lathe is desired in the No. 4-Q Equipment deduct $60.00 from the above total.

No. 1-Q Practical Machine Shop Equipment

1 No. 63-A Quick Change Gear Lathe, 11-inch, 4-foot bed

Price: F. O. B. cars South Bend, Indiana	$273.00
1 6" 4-Jaw Independent Lathe Chuck	22.00
Fitting Independent Chuck to Lathe	4.25
1 Standard Drill Chuck, ½" capacity	7.00
Fitting Drill Chuck to Lathe including Arbor	2.50
1 Set (6A) Lathe Dogs ¼" to 1½" inclusive	3.50
1 No. 0-S Patent Turning Tool	1.90
1 No. 30-R Cutting-Off Tool	2.00
1 No. 8 Boring Tool	3.25
Shop Equipment No. 1-Q, Total F. O. B. South Bend	**$319.40**

No. 2-Q Practical Machine Shop Equipment

1 No. 65-B Quick Change Gear Lathe, 13-inch, 5-foot bed

Price: F. O. B. cars South Bend, Indiana	$354.00
1 7½" 4-Jaw Independent Lathe Chuck	25.00
Fitting Independent Chuck to Lathe	4.50
1 Standard Drill Chuck, ½" capacity	7.00
Fitting Drill Chuck to Lathe, including Arbor	2.75
1 Set (6A) Lathe Dogs ¼" to 1½" inclusive	3.50
1 No. 1-S Patent Turning Tool	2.15
1 No. 31-R Cutting-Off Tool	2.40
1 No. 9 Boring Tool	3.85
Shop Equipment No. 2-Q, Total F. O. B. South Bend	**$405.15**

No. 3-Q Practical Machine Shop Equipment

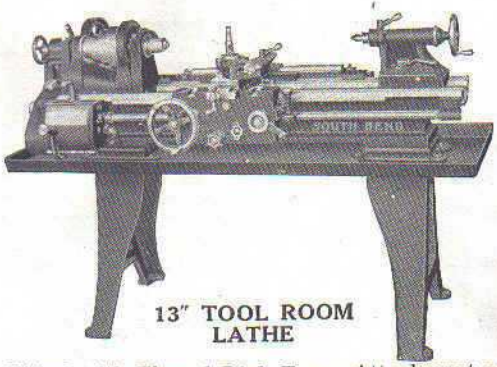
1 No. 67-C Quick Change Gear Lathe, 15-inch, 6-foot bed

Price: F. O. B. cars South Bend, Indiana	$431.00
1 9" 4-Jaw Independent Lathe Chuck	28.00
Fitting Independent Chuck to Lathe	5.00
1 Standard Drill Chuck, ¾" capacity	8.00
Fitting Drill Chuck to Lathe, including Arbor	3.00
1 Set (7) Lathe Dogs ½" to 2" inclusive	5.50
1 No. 1-S Patent Turning Tool	2.15
1 No. 31-R Cutting-Off Tool	2.40
1 No. 9 Boring Tool	3.85
Shop Equipment No. 3-Q, Total F. O. B. South Bend	**$488.90**

No. 5-Q Practical Machine Shop Equipment

1 No. 71-G Quick Change Gear Lathe, 18-inch, 10-foot bed

Price: F. O. B. cars South Bend, Indiana	$721.00
1 12" 4-Jaw Independent Lathe Chuck	35.00
Fitting Independent Chuck to Lathe	6.00
1 Set (9) Lathe Dogs ½" to 3" inclusive	8.50
1 No. 2-S Patent Turning Tool	2.70
1 No. 32-R Cutting-Off Tool	3.00
1 No. 10 Boring Tool	5.10
Shop Equipment No. 5-Q, Total F. O. B. South Bend	**$781.30**



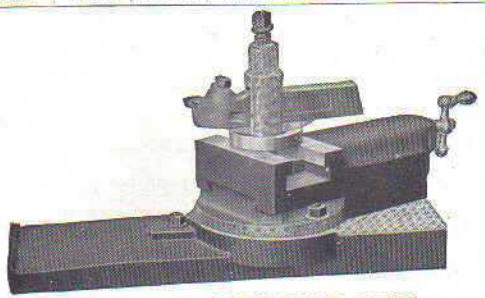
13" TOOL ROOM LATHE

Fitted with Thread Dial, Taper Attachment and Draw in Chuck Attachment.

Any South Bend Lathe can be fitted with Thread Dial, Taper Attachment or Draw in Chuck Attachment.

Price of Oil Pans Fitted to Lathes is extra as follows:

Size of Lathe	3 ft	4 ft.	5 ft.	6 ft.	7 ft.	8 ft.
9-in.	$14.00	$16.00				
11-in.	16.00	18.00	$20.00			
13-in.	.....	20.00	22.00	$25.00	$28.00	$31.00
15-in.	.....	.....	26.00	30.00	34.00	38.00
16-in.	.....	.....	.....	33.00	37.00	41.00

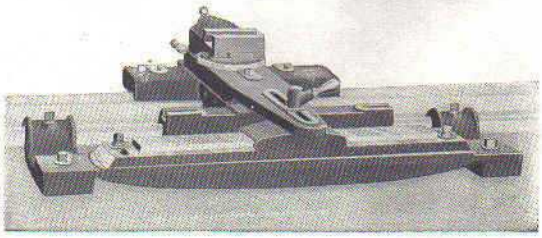


IMPROVED COMPOUND REST

Furnished on all 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.

GRADUATED TAPER ATTACHMENT

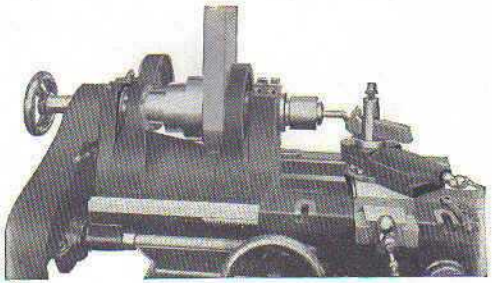


Graduated in degrees at one end and in fractions of an inch on the other.

Price of Taper Attachment

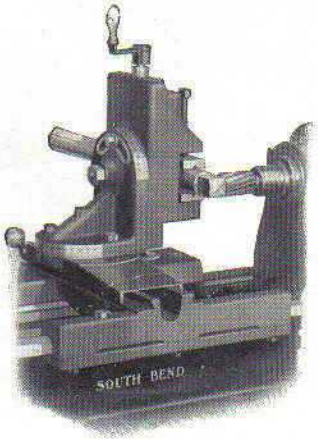
Size of Lathe	Price of Attachment	Size of Lathe	Price of Attachment
9-inch	$50.00	16-inch	$ 75.00
11-inch	60.00	18-inch	80.00
13-inch	65.00	21-inch	100.00
15-inch	70.00	24-inch	115.00

DRAW-IN CHUCK ATTACHMENT



Size of Lathe	Price of Attachment with One Collet	Size of Lathe	Price of Attachment with One Collet
9-inch	$30.00	16-inch	$50.00
11-inch	37.00	18-inch	55.00
13-inch	40.00	21-inch	70.00
15-inch	45.00	24-inch	80.00

MILLING AND KEY-WAY CUTTING ATTACHMENTS FOR SOUTH BEND LATHES

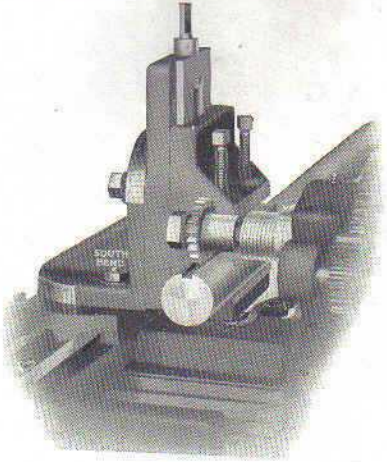


South Bend Milling and Key-Way Cutting Attachment in Operation on the Lathe

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

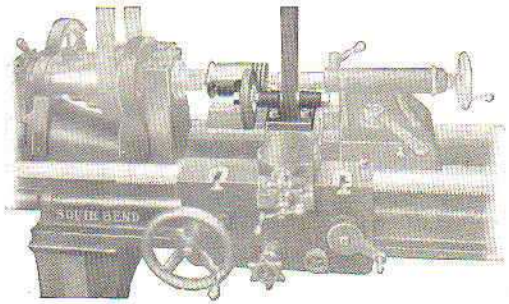
Size of Attachment	No. 1	No. 2	No. 3	No. 4	No. 5	No. 5½	No. 6	No. 7
Size of Lathe.	9 "	11 "	13 "	15 "	16 "	18 "	21 "	24 "
Vertical Feed.	2½ "	3 "	5 "	6 "	7 "	7 "	8 "	10 "
Cross Feed...	3 "	4 "	8 "	11 "	11 "	14 "	15 "	20 "
Vise will hold	1½ "	1½"	2¾"	3½"	4 "	4 "	4½"	5 "
Depth of Jaws	1 "	1 "	1⅝"	1⅝"	2 "	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, lbs...	25	30	40	50	65	75	80	100
Price	**$36**	**$40**	**$45**	**$50**	**$55**	**$65**	**$80**	**$90**
Code	Vag	Vale	Victo	Visit	Volt	Vox	Vurry	Vusel

MILLING ATTACHMENT ON THE LATHE



Milling a Key-Way on the Lathe

Milling a Key-Way (Woodruff System)



PISTON GRINDING ATTACHMENT FOR THE LATHE

For Grinding Semi-Machined or Oversize Pistons on the Lathe

Adjustable Cone Adapter for holding Pistons from 3" to 5" in diameter

The illustration shows a piston being ground on a South Bend Lathe. The piston is placed on a cone center which fits into the spindle of the lathe. This cone center has three adjustable jaws which will hold pistons from 3" to 5" in diameter. The other end of the piston is held by the tail center of the lathe. This grinder is operated from a drum on an extra countershaft and may be used on any size South Bend Lathe.

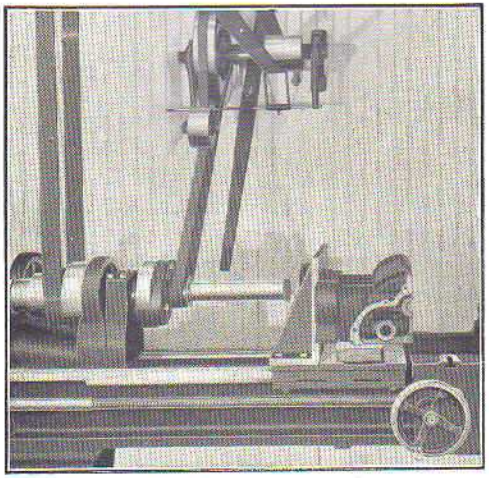
A semi-machined or an oversize piston may be ground in this manner accurately and quickly in a very short time on an Engine Lathe.

After the pistons are ground, the attachment may be removed in a moment and the lathe used for regular machine or tool work.

Grinding Attachment complete with one Emery Wheel $25.00

Adjustable Cone Adapter for all pistons from 3" to 5" in diameter, extra..... 15.00

Drum Countershaft, extra..... 25.00



Cylinder Re-Grinding Attachment

A Practical Attachment Fitted to the Bed of a South Bend Lathe that Will Re-Grind Cylinders of Many Makes of Engines.

The Grinder Spindle Head is fastened to a face plate which screws on the Lathe spindle. The cross slide to which the grinder spindle is attached is regulated by a micrometer adjustment, which allows grinding to one-half of a thousandth part of an inch. The rotating sleeve which carries the grinding wheel revolves at a speed of 4,000 R.P.M. while the lathe spindle revolves at a speed between 20 and 25 R.P.M.

This construction allows the grinding wheel to turn on its own axis at a speed of 4,000 R.P.M. while it is also traveling around in a complete circle inside the cylinder.

This attachment does not require the cylinders to be rotated and all cylinders whether fours, sixes, or eights can be ground with equal ease.

Prices of Cylinder Re-Grinding Attachment

Size of Lathe	16"	18"	21"	24"
Price of attachment complete consisting of Acme Grinder Spindle Head, Angle Plate, Centering Plug, Base and Countershaft with Idler. F. O. B. Cars, South Bend.	$275.00	$285.00	$295.00	$315.00

FORGED STEEL LATHE TOOLS

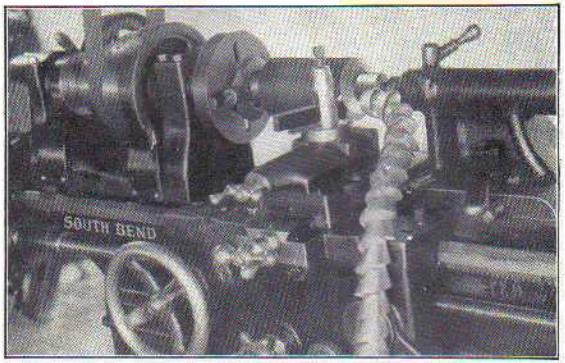
We are in a position to furnish lathe tools, made of a good quality carbon tool steel, carefully forged, hardened and tempered.

This set of twelve lathe tools is selected as the most practical for all-around lathe work.

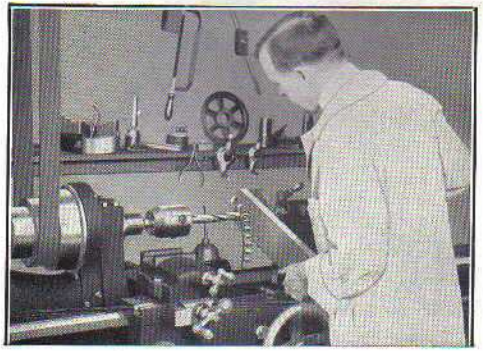
1 2 3 4 5 6 7 8 9 10 11 12

1. Left-hand Side Tool
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

	Price each	Set of 12
For 9" Lathes	$0.75	$ 8.00
For 11" Lathes	.85	9.00
For 13" Lathes	1.25	12.00
For 15" Lathes	1.75	17.00
For 16" Lathes	1.75	17.00
For 18" Lathes	1.75	17.00
For 21" Lathes	3.25	33.00
For 24" Lathes	3.25	33.00

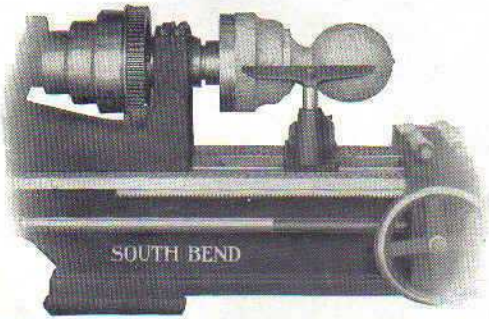


The Lathe Taking a Heavy Chip on a Steel Shaft

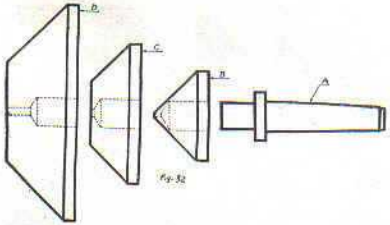


Using the Lathe as a Drill Press

Drilling and Facing Bronze Bushings



Pattern Making and Wood Turning on South Bend Lathes

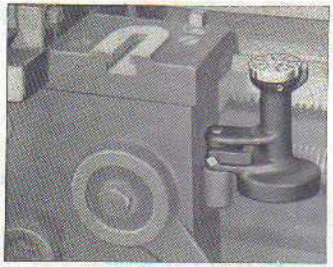


PIPE CENTERS FOR LATHE

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."

	Size of Lathe	Price
Taper Shank "A"	13"	—$ 4.00
Taper Shank "A"	15"-16"-18"	— 4.50
Taper Shank "A"	21"-24"	— 6.00
Disc "B" takes from ½" to 3" Pipe		6.00
Disc "C" takes from 3" to 5" Pipe		9.00
Disc "D" takes from 5" to 8" Pipe		15.00

THREAD DIAL FOR THE LATHE



The illustration 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.

Size of Lathe	9"	11"	13"	15"	16"
Price of Dial	$ 8.00			$10.00	$11.00

Size of Lathe	18"	21"	24"
Price of Dial	12.00	13.00	14.00

LATHE DOGS

These lathe dogs are heavy malleable iron with hardened tool steel set-screw.

Size		Price each
No. 1	¾"	$0.40
No. 2	1"	.50
No. 3	1¼"	.60
No. 4	1½"	.70
No. 5	1¾"	.80
No. 6	2"	.95
		$3.95
No. 7	2¼"	$1.10
No. 8	2½"	1.30
No. 9	2¾"	1.45
No. 10	3"	1.60
No. 11	3½"	1.80
No. 12	4"	2.10
		$9.25

Set of 6A—$3.50
Set of 6B—$8.50
Set of 12—6A and 6 B....$11.00

CENTERS, DRILL PADS AND ARBORS

Hard 60-degree Lathe Center for tail stock is marked with ring groove to distinguish from soft Lathe Center in head spindle.

Size of Lathe	9-11"	13"	15-16-18"	21-24"
Drill Pad	$3.00	$4.00	$4.00	
Crotch Center	3.00	4.00	4.00	
60-degree Lathe Center	3.00	4.00	4.00	$4.50
Drill Chuck Arbor finished	2.50	2.75	3.00	3.50
Milling Arbor for Lathe	8.00	9.00	9.00	10.00

PATENT TURNING TOOLS

Size of Lathe	No. L. Hand	No. R. Hand	No. Straight	Size of Shank	Size of Cutter	Price Each
9"	00-L	00-R	00-S	5/16 x 3/4 x 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

PATENT CUTTING-OFF TOOLS

Size of Lathe	Right Hand Off-Set	Size of Shank	Size of Blades	Price Each
9"	No. 29-R	5/16 x 3/4"	5/64 x 1/2"	$1.90
11"	No. 30-R	3/8 x 7/8"	3/32 x 5/8"	2.00
13", 15"	No. 31-R	1/2 x 1 1/8"	1/8 x 3/4"	2.40
16", 18"	No. 32-R	5/8 x 1 3/8"	1/8 x 7/8"	3.00
21", 24"	No. 33-R	3/4 x 1 5/8"	3/16 x 1"	4.00

PATENT BORING TOOLS

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

SPECIAL EQUIPMENT FOR FITTING LATHE CHUCKS

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.

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	7 1/2"	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

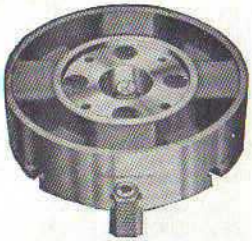
"STANDARD" DRILL CHUCK

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

Fitting Drill Chucks to Lathe, See Bottom of page 27

CHUCK FITTED TO LATHE AT FACTORY



View of Back of Lathe Chuck

When ordering 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.

SEMI-MACHINED CHUCK PLATE

No. 301

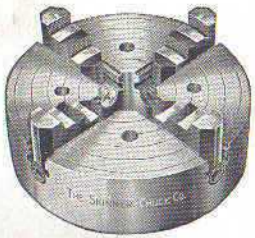
Fig. 301 shows a cast iron semi-machined chuck plate; semi-machined because it has been bored, faced, and threaded to fit the spindle nose of various sizes of South Bend Lathes.

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

Prices Semi-Machined Chuck Plates and Fitting Chucks

Size of Lathe	Price for fitting lathe chuck, using the semi-machined chuck plate included free in lathe equipment	Price for fitting extra chuck including chuck plate	Price of extra semi-machined chuck plates fitted to spindle nose
9"	$4.00	$ 7.00	$3.00
11"	4.25	7.50	3.25
13"	4.50	8.00	3.50
15"	5.00	9.00	4.00
16"	5.50	10.00	4.50
18"	6.00	11.00	5.00
21"	6.50	12.50	6.00
24"	7.00	14.00	7.00

INDEPENDENT LATHE CHUCK



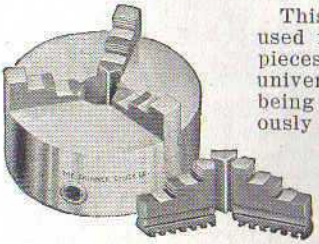
With Four Independent Reversible Jaws

This Chuck has four solid jaws with half nut, reversible by running out of Chuck at the periphery, and turning end for end. T slots are furnished only on chucks 12 inches and larger.

Rated Size of Chuck, inches	No.	Will Hold About, inches	Price
4½"	299	6 "	$20.00
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	19 "	46.00
18 "	308	21 "	54.00

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
7½	204	32.00
9	205	38.00
10½	206	44.00
12	207	52.00
15	208	70.00

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The accuracy of South Bend Lathes cannot be surpassed. When tested their limit of error is less than one one-thousandth of an inch (0.001 in.).

POWER

South Bend Lathes have great cutting power. The 11-inch lathe will reduce a steel shaft from $1\frac{5}{8}$ inch in diameter to $\frac{3}{4}$ inch in one chip. The 16-inch lathe will reduce a steel shaft from 4 inch to $2\frac{1}{8}$ inch in one chip.

DURABILITY

Given the proper care, a South Bend Lathe will last a lifetime. Many of our lathes that have been in constant use for ten to fifteen years are as accurate as the day they left the factory. More than thirty thousand South Bend Lathes are now giving satisfactory service.

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