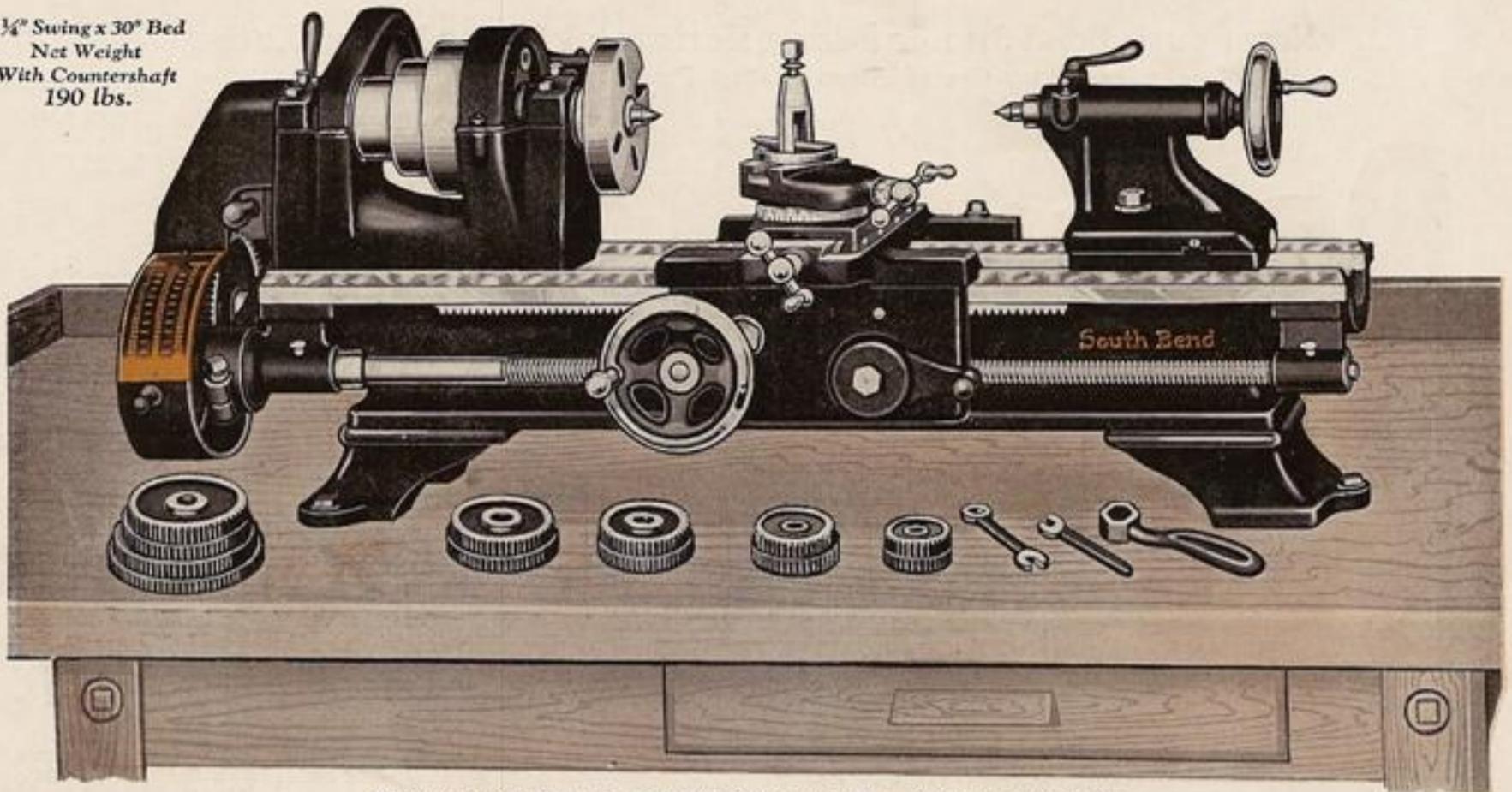


8 1/4" Swing x 30" Bed  
Net Weight  
With Countershaft  
190 lbs.



8"x30" Junior Bench Lathe With Compound Rest—Countershaft Drive

## New South Bend Junior 8-inch Bench Lathe

A Back-Geared, Screw Cutting, Precision Lathe—Countershaft Drive, \$100 and Up

The New South Bend Junior 8-inch Back-Geared, Screw Cutting Bench Lathe, as illustrated above, is a high-quality tool built with such accuracy and precision that it can be used in the modern tool room for the finest class of tool, die and gauge work. It has the same skilled workmanship, finish and up-to-date mechanical features that are found on the larger size South Bend Lathes.

This lathe is recommended for precision turning, thread cutting, boring, facing, cutting-off, drilling, polishing, etc., on all kinds of metals, such as steel, cast iron, brass, bronze, aluminum, fibre and wood in the following shops. See list of jobs on page 4.

Manufacturing Plants Auto Repair Shops Model Making Shops  
Tool and Die Shops Elec. Appliance Shops Laboratories  
Home Shops Engineering Shops Radio Service Shops  
Machine Shops Auto Electric Shops Physics Departments

Back-Geared Headstock with three-step cone provides six changes of spindle speeds—three direct for machining light work and for high speeds and three back-geared for heavy work and slow speeds.

Headstock Spindle has 3/4" hole its entire length for machining bar stock through draw-in collet chuck or universal chuck.

Saddle of carriage is strong and has a wide bridge. A locking device is provided for facing and cutting-off work. The cross feed screw has a micrometer collar graduated in thousandths of an inch.

Precision Lead Screw, 3/8" diameter, eight Acme threads per inch, for cutting accurate screw threads. See page 3.

Automatic Longitudinal Screw Feed to carriage is obtained by engaging the half-nuts on the lead screw.

A Thread Cutting Chart attached to each lathe shows the correct change gears to use to cut the following standard screw threads per inch, right or left-hand, including 1 1/2 pipe thread: 4, 5, 6, 7, 8, 9, 10, 11, 11 1/2, 12, 13, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 36 and 40. See page 3.

Fine Turning Feeds. A large turning gear is furnished with the set of change gears and permits the use of a very fine turning feed. The gears can also be used to produce a variety of coarser feeds.

THREAD	120"	SCREW
4	64	32
5	64	40
6	74	40
7	64	50
8	72	50
9	64	50
10	72	40
11	72	40
11 1/2	32	40
12	72	40
13	72	40
14	72	50
16	72	64
18	72	64
20	72	64
22	72	64
24	72	64
26	72	64
28	72	64
30	72	64
32	72	64
36	72	64
40	72	64

### FEATURES OF JUNIOR 8"

- Back-geared headstock, six spindle speeds.
- Hollow steel spindle, 3/4" hole.
- Reverse for feeds and threads.
- Plain rest or graduated compound rest.
- Tailstock set-over for taper turning.
- Carriage lock for accurate facing.
- Micrometer collar on cross feed screw.
- Micrometer collar on compound rest screw.
- Precision lead screw for cutting threads.
- Change gears for threads and feeds.
- Index plate for thread cutting.
- Automatic longitudinal screw feed to carriage.
- Wrenchless bull gear lock.
- Half-nuts for thread cutting.
- Forged steel adjustable tool post.
- Tailstock spindle lock.
- Semi-steel seasoned bed.
- All "V" ways and flat ways accurately hand scraped.

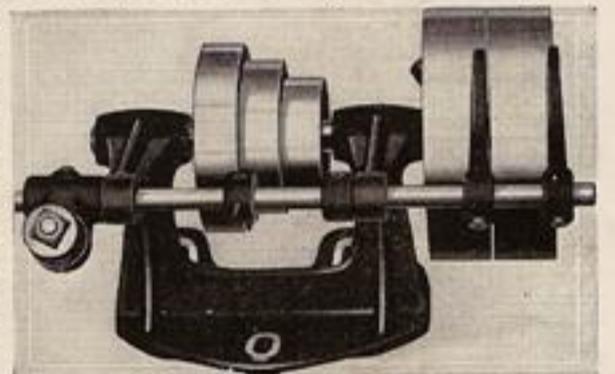
Tailstock has set-over arrangement for taper turning. The center is hardened and ground and is self-ejecting. See page 3.

Lathe Bed is 50% steel, heavily constructed and reinforced by box braces its entire length. The headstock, carriage and tailstock are accurately hand scraped to bed and insure perfect alignment.

Attachments, Chucks and Tools, which can be fitted to the Junior 8-inch Lathe, are illustrated and priced on page 4.

Lathe Equipment included in price of the New South Bend Junior 8-inch Lathe, as illustrated, consists of: Tight and loose pulley

countershaft, plain rest (or compound rest\*), face plate, tool post complete, two lathe centers and spindle sleeve, lag screws and washers, change gears for thread cutting and feeds, installation plan and book, "How to Run a Lathe." Bench for lathe is not included in equipment but is extra, for prices see page 4.



Tight and Loose Pulley Countershaft Included in Price

### SPECIFICATIONS OF JUNIOR 8"

- Swing over bed ..... 8 1/4 in.
- Swing over carriage ..... 5 1/4 in.
- Hole through spindle ..... 3/4 in.
- Thread cutting range ..... 4 to 40 per in.
- Spindle speeds ..... 43, 73, 130, 222, 380, 675 R. P. M.
- Countershaft speed ..... 290 R. P. M.
- Countershaft pulley ..... 6 7/8 in. x 1 1/2 in.
- Width of cone pulley belt ..... 1 in.
- Size of spindle nose ..... 1 3/8 in. diam., 10 threads
- Head and tailstock spindle centers ..... No. 1 Morse taper
- Collet capacity ..... 1/64 in. to 1/2 in.
- Lead screw, Acme thread ..... 3/8 in. diam., 8 threads
- Angular travel of compound rest top ..... 1 3/4 in.
- Travel of tailstock spindle ..... 1 3/4 in.
- Size of lathe tool shank ..... 5/8 in. x 3/4 in.
- Size of turning tool cutter bits ..... 5/8 in. x 3/4 in.
- Tailstock set-over ..... 3/8 in.
- Back gear ratio ..... 5.2 to 1

### Prices of New South Bend Junior 8-inch Bench Lathe Including Countershaft and Equipment

Swing Over Bed	Length of Bed	Distance Between Centers	Hole Thru Spindle	Swing Over Carriage	Power Required	Approx. Weight Crated	With Plain Rest			*With Compound Rest		
							Catalog Number	Code Word	Factory Price	Catalog Number	Code Word	Factory Price
8 1/4 in.	24 in.	6 1/2 in.	3/4 in.	5 1/4 in.	1/4 H.P.	225 lbs.	8-TPB	Pukeg	\$100.00	8-TB	Conec	\$115.00
8 1/4 in.	30 in.	12 1/2 in.	3/4 in.	5 1/4 in.	1/4 H.P.	240 lbs.	8-XPB	Pulag	105.00	8-XB	Conug	120.00
8 1/4 in.	36 in.	18 1/2 in.	3/4 in.	5 1/4 in.	1/4 H.P.	255 lbs.	8-YPB	Palmy	110.00	8-YB	Copuh	125.00
8 1/4 in.	42 in.	24 1/2 in.	3/4 in.	5 1/4 in.	1/4 H.P.	270 lbs.	8-ZPB	Pumol	115.00	8-ZB	Cosmy	130.00

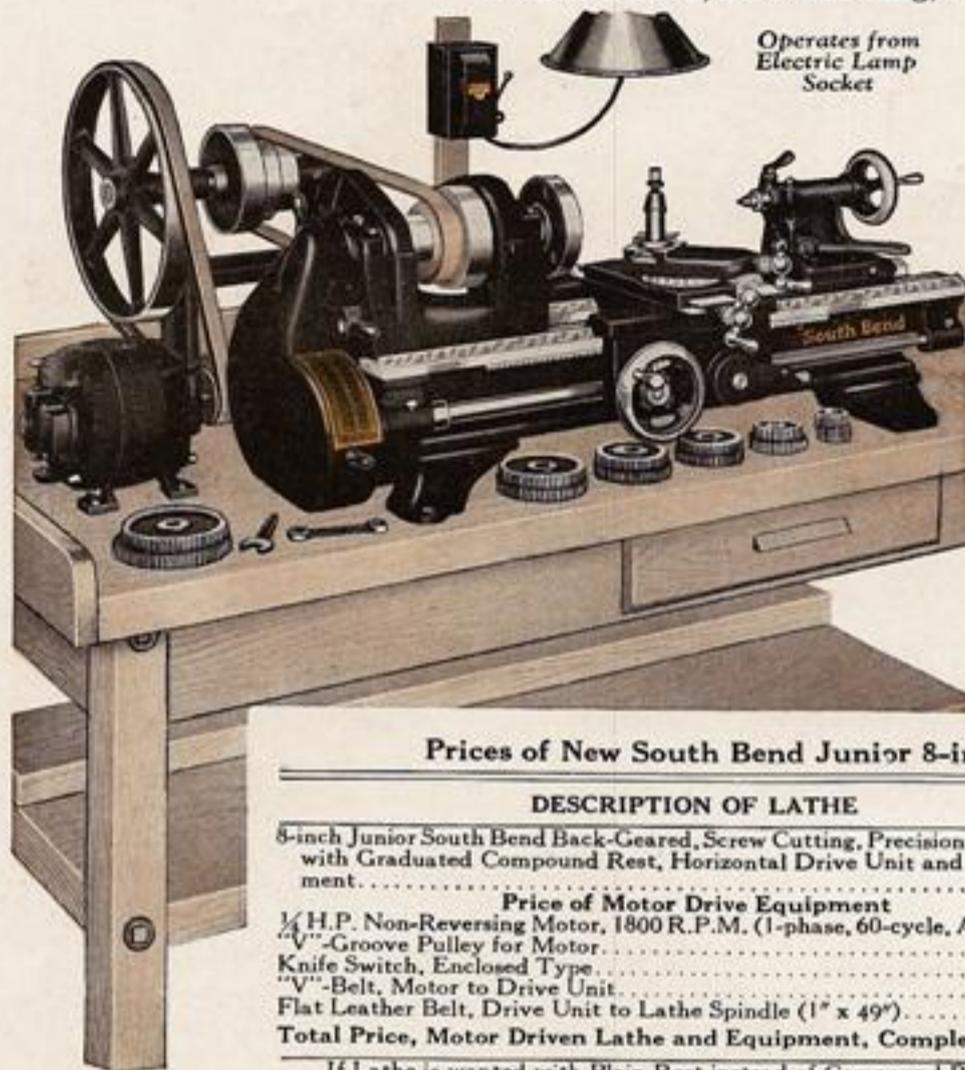
If Double Friction Countershaft is wanted instead of Tight and Loose Pulley Countershaft, add \$5.00 to above prices.

If Floor Legs are wanted instead of Bench Legs, add \$10.00 to above prices.

If the Tight and Loose Pulley Countershaft, furnished with Lathe, is not wanted deduct \$5.00 from above prices.

## New South Bend Junior 8-inch Horizontal Motor Driven Lathe

A Back-Geared, Screw Cutting, Precision Bench Lathe



The Junior 8-inch Horizontal Motor Driven Bench Lathe illustrated at left is the same as the lathe shown on the preceding page, except that it is equipped with a Horizontal Motor Drive instead of Overhead Countershaft Drive.

Features and Specifications applying to the New Junior 8-inch Horizontal Motor Driven Lathe in the various bed lengths, priced below, will be found on page 1.

Horizontal Motor Drive Unit and a 1/4 H.P. non-reversing motor, 1800 R.P.M. are mounted on the bench behind the lathe. Power is delivered from the motor to the horizontal drive unit through a "V"-belt and then by flat leather belt to the lathe cone pulley. An arrangement is provided for belt adjustments. A knife switch controls the starting and stopping of the motor.

Equipment Included in Price consists of: Horizontal drive unit, compound rest, face plate, tool post complete, two lathe centers and spindle sleeve, lag screws and washers, change gears for threads and feeds, installation plan and book, "How to Run a Lathe." Bench for lathe is not included in equipment but is extra, for prices see page 4.

This Lathe can be ordered with horizontal drive unit, and with or without motor drive equipment as listed below, thereby permitting the purchaser to use his own motor, switch, belting, etc.

THREAD	TYPE	SIZE
4	64	32
5	64	40
6	64	48
7	64	56
8	64	64
9	64	72
10	64	80
11	32	44
11 1/2	32	48
12	32	48
13	17	52
14	32	56
16	32	64
18	32	72
20	32	80
22	16	44
24	16	48
26	16	52
28	16	56
30	16	60
32	16	64
36	16	72
40	16	80

### Prices of New South Bend Junior 8-inch Horizontal Motor Driven Bench Lathe

DESCRIPTION OF LATHE	8" x 24" 408-TF Pocit	8" x 30" 408-XF Pocov	8" x 36" 408-YF Pofuz	8" x 42" 408-ZF Pogix
8-inch Junior South Bend Back-Geared, Screw Cutting, Precision Bench Lathe with Graduated Compound Rest, Horizontal Drive Unit and Lathe Equipment.....	\$115.00	\$120.00	\$125.00	\$130.00
Price of Motor Drive Equipment				
1/4 H.P. Non-Reversing Motor, 1800 R.P.M. (1-phase, 60-cycle, A.C. 110 volt).....	12.00	12.00	12.00	12.00
"V"-Groove Pulley for Motor.....	1.25	1.25	1.25	1.25
Knife Switch, Enclosed Type.....	1.50	1.50	1.50	1.50
"V"-Belt, Motor to Drive Unit.....	.75	.75	.75	.75
Flat Leather Belt, Drive Unit to Lathe Spindle (1" x 49").....	1.25	1.25	1.25	1.25
<b>Total Price, Motor Driven Lathe and Equipment, Complete.....</b>	<b>\$131.75</b>	<b>\$136.75</b>	<b>\$141.75</b>	<b>\$146.75</b>

If Lathe is wanted with Plain Rest instead of Compound Rest, deduct \$15.00 from above lathe prices.  
If Horizontal Drive Unit is not wanted, deduct \$5.00 from above lathe prices.

## New South Bend Junior 8-inch Simplex Motor Driven Lathe

A Back-Geared, Screw Cutting, Precision Bench Lathe

The Junior 8-inch Simplex Motor Driven Bench Lathe illustrated at right is the same as the lathe shown on the preceding page, except that it is equipped with Simplex Motor Drive instead of Overhead Countershaft Drive.

Features and Specifications applying to the New Junior 8-inch Simplex Motor Driven Lathe in the various bed lengths, priced below, will be found on page 1.

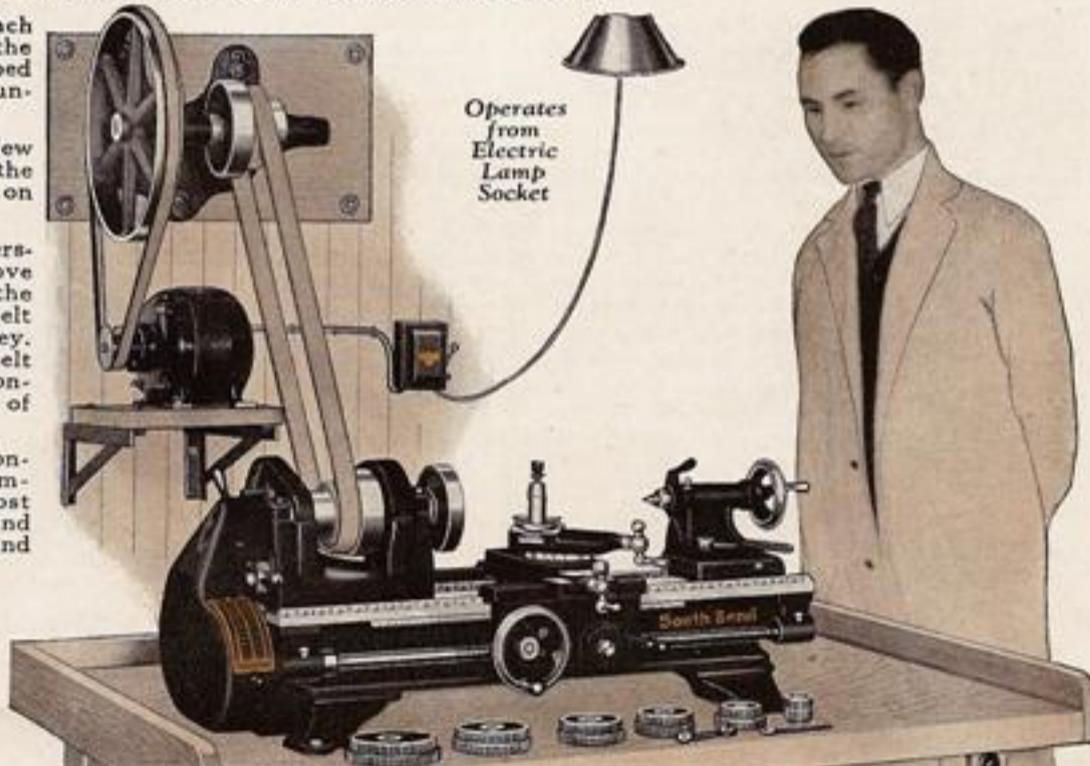
Simplex Motor Drive Unit and a 1/4 H.P. non-reversing motor, 1800 R.P.M. are mounted on the wall above and behind the lathe. Power is supplied from the motor to the simplex drive unit through a "V"-belt and then by flat leather belt to the lathe cone pulley.

An arrangement is provided for belt adjustments. A knife switch controls the starting and stopping of the motor.

Equipment Included in Price consists of: Simplex drive unit, compound rest, face plate, tool post complete, two lathe centers and spindle sleeve, lag screws and washers, change gears for threads and feeds, installation plan and book, "How to Run a Lathe." Bench for lathe is extra, for prices see page 4.

This Lathe can be ordered with simplex drive unit and with or without the motor drive equipment, as listed below.

THREAD	TYPE	SIZE
4	64	32
5	64	40
6	64	48
7	64	56
8	64	64
9	64	72
10	64	80
11	32	44
11 1/2	32	48
12	32	48
13	17	52
14	32	56
16	32	64
18	32	72
20	32	80
22	16	44
24	16	48
26	16	52
28	16	56
30	16	60
32	16	64
36	16	72
40	16	80

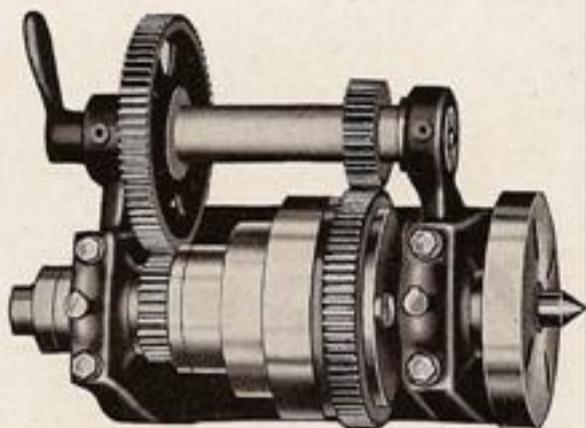


### Prices of New South Bend Junior 8-inch Simplex Motor Driven Bench Lathe

DESCRIPTION OF LATHE	8" x 24" 508-TBF Rocam	8" x 30" 508-XBF Rocen	8" x 36" 508-YBF Rocep	8" x 42" 508-ZBF Rodor
8-inch Junior South Bend Back-Geared, Screw Cutting, Precision Bench Lathe with Graduated Compound Rest, Simplex Drive Unit and Lathe Equipment.....	\$115.00	\$120.00	\$125.00	\$130.00
Price of Motor Drive Equipment				
1/4 H.P. Non-Reversing Motor, 1800 R.P.M. (1-phase, 60-cycle, A.C. 110 volt).....	12.00	12.00	12.00	12.00
"V"-Groove Pulley for Motor.....	1.25	1.25	1.25	1.25
Knife Switch, Enclosed Type.....	1.50	1.50	1.50	1.50
"V"-Belt, Motor to Drive Unit.....	.75	.75	.75	.75
Flat Leather Belt, Drive Unit to Lathe Spindle (1" x 65").....	1.25	1.25	1.25	1.25
<b>Total Price, Motor Driven Lathe and Equipment, Complete.....</b>	<b>\$131.75</b>	<b>\$136.75</b>	<b>\$141.75</b>	<b>\$146.75</b>

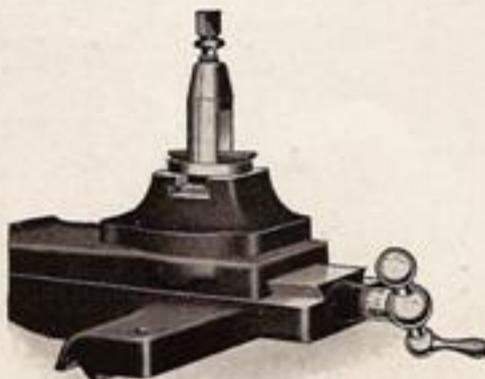
If Lathe is wanted with Plain Rest instead of Compound Rest, deduct \$15.00 from above lathe prices. If Simplex Drive Unit is not wanted, deduct \$5.00 from above lathe prices. If Floor Legs are wanted instead of Bench Legs, add \$10.00 to above lathe prices.

# Features of The New South Bend Junior 8-inch Lathe



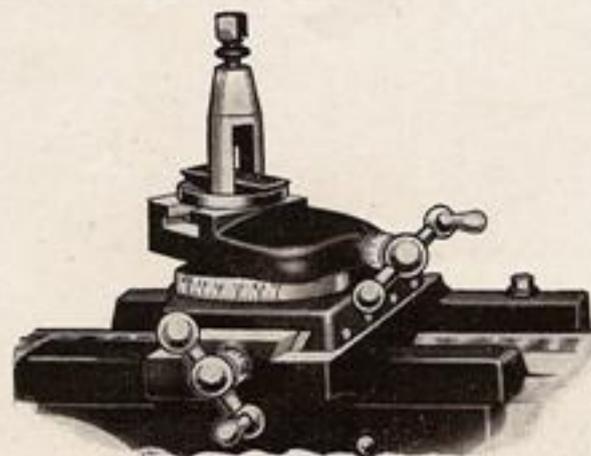
**Back-Gear Headstock**

Provides six spindle speeds, three direct and three back-gear, by means of the three-step spindle cone and back-gears, as shown in the illustration above. Bull-gear plunger is quick-acting and requires no wrench. Dust-proof oilers lubricate the spindle and back-gear quill.



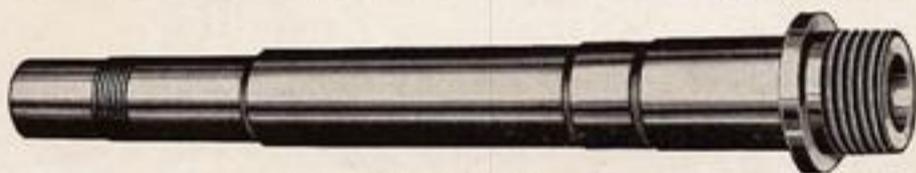
**Plain Tool Rest**

Furnished as standard equipment with the New South Bend Junior 8" Bench Lathe. If graduated compound rest is desired, instead of the plain tool rest, it can be supplied at extra cost.



**Graduated Compound Rest**

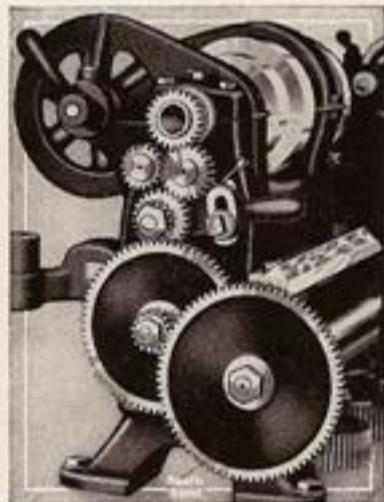
The illustration above shows the graduated compound rest, the swivel base of which is accurately graduated over an arc of 180 degrees. It has an angular travel of 1 1/4 inches. Micrometer collars graduated in thousandths of an inch are provided on both the compound rest screw and cross feed screw. Price extra for graduated compound rest instead of plain rest, \$15.00.



**Headstock Spindle**

Made of special quality spindle steel with all bearing surfaces accurately ground. Has 3/4" hole its entire length for machining rods and bars through chucks. Threads on spindle nose are cut to a precision gauge permitting the interchangeable use of chucks and face plates. Steel thrust collar is hardened and ground.

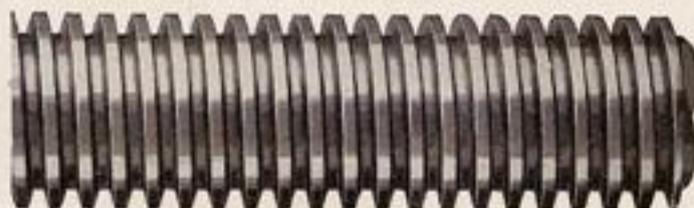
## Arrangement of Gears for Screw Thread Cutting



The end view of headstock with gear guard removed shows arrangement of change gears for cutting screw threads and for obtaining automatic feeds. Change gears are furnished with each lathe for cutting screw threads from 4 to 40 per inch, right or left-hand, including 1 1/2 pipe thread as shown by screw thread cutting chart on page 1. Various fine and coarse automatic feeds may also be obtained through these gears.

### Precision Lead Screw

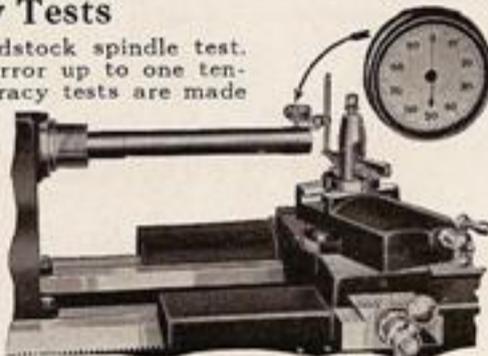
3/4" in diameter, 8 Acme threads per inch, guaranteed to meet the most exacting requirements in cutting the finest precision screw threads for taps, dies, gauges, etc. Reproduction is actual size.



## Sixty-four Major Accuracy Tests

The illustration at the right shows the headstock spindle test. The test dial indicator registers the slightest error up to one ten-thousandth of an inch. Sixty-four similar accuracy tests are made on the various parts and units of each New South Bend Junior 8-inch Lathe during the process of manufacture.

The most accurate measuring instruments, special gauges, test bars, master templates, etc., are used constantly throughout the process of construction to insure precision and interchangeability. These tests assure the highest degree of precision accuracy in the finished lathe.



## How to Run a Lathe

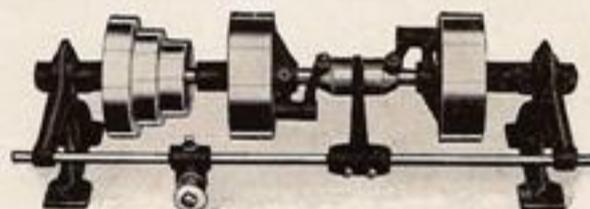
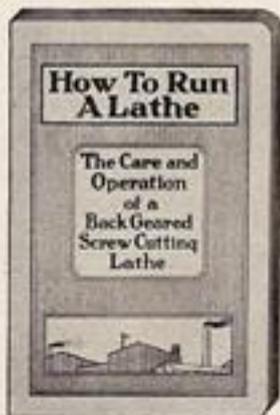
For the Apprentice in the Machine Shop

An authoritative manual covering the fundamental operations of the modern back-gear, screw cutting lathe. A valuable book for the mechanic containing complete instructions on the setting up, the care and operation of the screw cutting lathe, and more than 300 illustrations of practical lathe jobs. Size of book, 5 1/2 x 8 inches, 160 pages. Book is included with each New South Bend Junior 8-inch Lathe.

Mailed Anywhere in the World, Postpaid, Price 25 cents

### PARTIAL LIST OF CONTENTS

- How to Set Up a Lathe
- Erecting a Countershaft
- Calculating the Speed of Pulleys
- Grinding Lathe Tools
- How to Set Lathe Tools
- Cutting Screw Threads
- Straight and Taper Machining
- Drilling, Reaming and Tapping
- Reading a Micrometer Caliper
- Tables of Information
- Centering, Facing, Chucking
- General Care of Lathe



**Double Friction Countershaft**

Equipped with two friction clutch pulleys, this countershaft provides a forward and reverse drive to the lathe spindle. It may also be used as a two speed countershaft. Price extra for double friction countershaft instead of tight and loose pulley countershaft, \$5.00.

## Easy Payment Plan

You can order South Bend Lathes, chucks, tools and attachments on the Easy Payment Plan and determine the down payment and monthly payment from the following tabulation.

### Payment Plan Schedule

If Total Price of Your Order Amounts to	Add This Amount For Financing	Down Payment With Order	Payment Each Month
\$100.00 to \$110.00	\$ 7.00	\$30.00	\$ 7.00
110.01 to 120.00	7.00	32.00	7.50
120.01 to 130.00	7.50	33.00	8.50
130.01 to 140.00	8.00	34.00	9.00
140.01 to 150.00	9.00	35.00	10.00
150.01 to 175.00	10.00	36.00	11.50
175.01 to 200.00	11.50	40.00	13.00
200.01 to 225.00	13.00	45.00	15.00
225.01 to 250.00	14.50	50.00	17.00
250.01 to 275.00	16.00	55.00	18.50
275.01 to 300.00	17.50	60.00	19.50

## 15-Day Trial

We will ship a South Bend Lathe anywhere in the United States for a free fifteen-day trial in your own shop. If for any reason you are dissatisfied you may return the lathe in good condition at our expense and we will refund the amount you have paid including transportation charges.

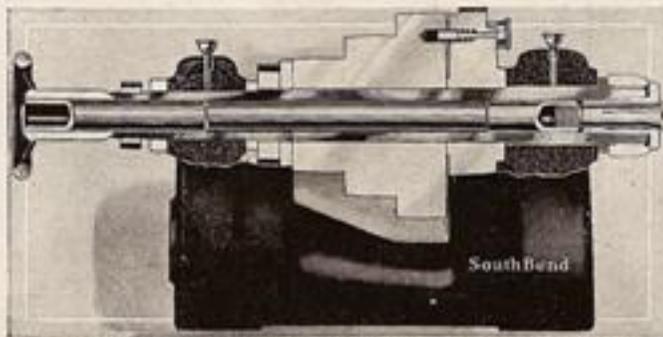
## Guarantee

WE GUARANTEE every New South Bend Junior 8-inch Lathe to be accurate and mechanically perfect; to give you entire satisfaction and the service you have a right to expect.

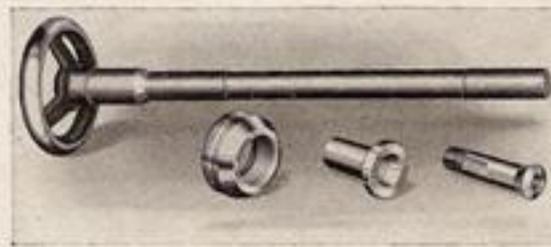
We will replace, free of charge, anywhere in the United States, any part that proves defective, either in material or workmanship, within one year from the date of purchase.

South Bend Lathe Works

# Attachments, Chucks and Tools for The New Junior 8-inch Lathe



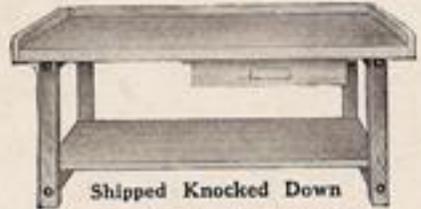
A Cross Section of Headstock Showing Draw-In Collet Chuck.



Hand Wheel Draw-in Collet Chuck Attachment  
Price of equipment as illustrated above includes one Round Split Collet any size from 1/4" to 3/2" capacity.  
Cat. No. 4308 ..... \$30.00



Round Split Collet, Sizes 1/4" up to 3/2" capacity. Cat. No. 608. Price each \$2.50.



Pine Bench for Junior 8-inch Lathes  
No. 915—(Top 28"x42"; Height 30") \$22.00  
No. 917—(Top 28"x54"; Height 30") 24.00



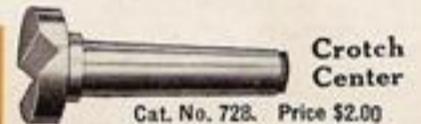
Hand Rest for Wood Turning  
No. 1070 ..... \$10.00



Spur Center  
Cat. No. 732. Price \$2.00



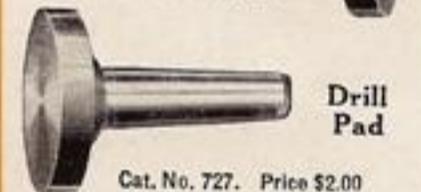
Cup Center  
Cat. No. 733. Price \$2.00



Crotch Center  
Cat. No. 728. Price \$2.00



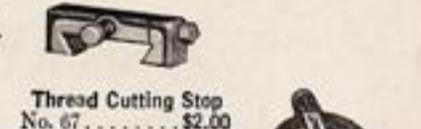
Screw Center  
Cat. No. 731. Price \$2.00



Drill Pad  
Cat. No. 727. Price \$2.00



Standard Lathe Dogs  
3/8" Cap. No. 1-M ..... \$0.50  
1/2" Cap. No. 2-M ..... .60  
3/4" Cap. No. 4-M ..... .70  
1" Cap. No. 6-M ..... .80  
1 1/4" Cap. No. 8-M ..... .90



Thread Cutting Stop  
No. 67 ..... \$2.00

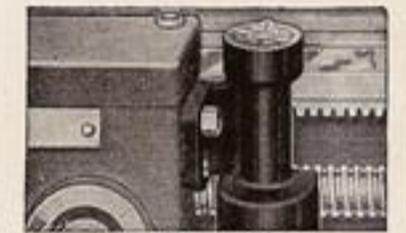


Large Face Plate for Lathe  
No. 39 ..... \$9.00

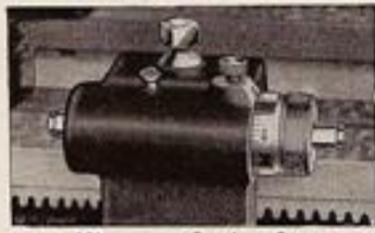


Center Rest for Lathe  
No. 124 ..... \$9.00

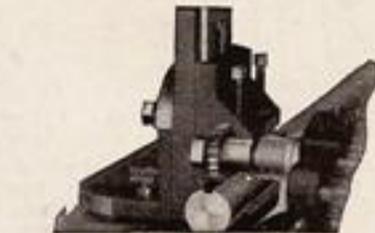
Center Drill and Countersink  
3/8" diam. No. 898-B ..... \$0.25  
1/2" diam. No. 898-C ..... .25



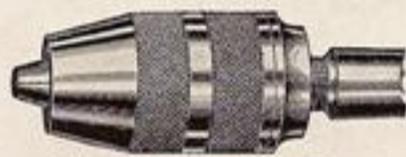
Thread Dial Indicator  
Cat. No. 808 ..... \$7.00



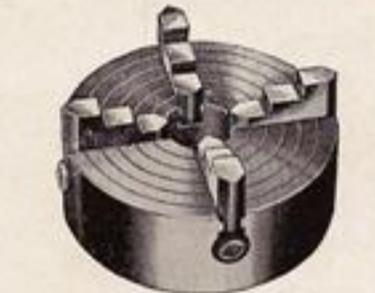
Micrometer Carriage Stop  
Cat. No. 970 ..... \$9.00



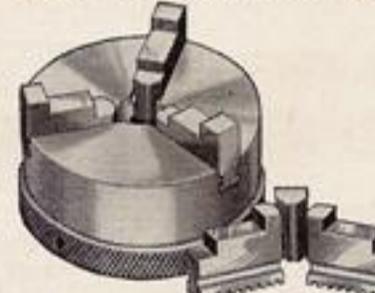
Milling and Keyway Attachment  
Cat. No. 8 ..... \$35.00



3-Jaw Drill Chuck—Keyless Type  
3/8 in. capacity. No. 223. Price with Arbor ..... \$2.35



4-Jaw Independent Chuck (Light)  
No. 658—3" Chuck (3 3/4" Cap.) ..... \$16.00  
No. 659—4" Chuck (5" Cap.) ..... 17.00  
Note: Extra for Chuck Back \$3.75.



3-Jaw Universal Lever Type Chuck  
With Outside and Inside Jaws  
No. 401—4" Chuck (4 1/4" Cap.) ..... \$14.50  
Extra for Fitting Chuck to Lathe \$2.75.



Turning Tool with One Cutter Bit  
Straight—No. 848-S ..... \$2.00  
Left Hand—No. 848-L ..... 2.00  
Right Hand—No. 848-R ..... 2.00



Cutting-Off Tool with One Cutter Blade  
Right Hand—No. 881-R ..... \$2.35  
Left Hand—No. 881-L ..... 2.35  
Straight—No. 881-S ..... 2.35



Formed Threading Tool with one Formed Cutter. No. 885 ..... \$3.75



Boring Tool Style "B" with bar, 2 cutter bits and wrenches. No. 429 ..... \$4.40

**Jobs You Can Do On the Junior 8-Inch Lathe**

Turning	Facing	Precision Tool Work
Screw Thread	Taper Turning	Facing Angles
Cutting	Taper Boring	Testing and Truing
Centering	Collet Chuck Work	Balancing Work
Cutting-Off	Chuck Work	Restoring Center
Drilling	Face Plate Work	Holes
Boring	Milling	Winding Springs
Reaming	Keyway Cutting	Pattern Making
Filing	Squaring Shafts	Wood Turning
Polishing	Recessing	Tap and Die Work
Knurling	Forming	Make Ring Plugs and
Tapping	Chamfering	Thread Gauges
Turret Work	Countersinking	Manufacturing Work
Grinding	Bar Work	Production Work

**Machines All Kinds of Metals, Wood, Hard Rubber, etc.**

Cast Iron	Wrought Iron	Aluminum
Steel Forgings	Copper	Hard Rubber
Bronze	Alloy Steels	Bakelite
Babbitt	Cast Steel	Wood
Steel	Brass	Fibre, etc.



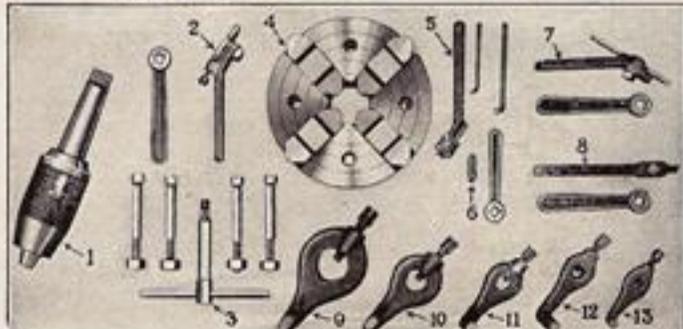
Knurling Tool with One Set of Knurls  
No. 891 ..... \$5.10



**High Speed Steel Cutter Bits**

Size Square Inches	Length Cutter Inches	Ground		Not Ground	
		Cat. No.	Price	Cat. No.	Price
3/8	1 1/4	1309	\$0.20	1420	\$0.10

## No. 8-JR Chuck and Tool Assortment for Junior 8-inch Lathes



A Practical Assortment for General Machine Work

Chucks and Tools in the most practical sizes for use on all Junior 8-inch Lathes are included in the assortment illustrated at left and listed and priced below. We recommend this assortment for general machine work. If desired the purchaser may add or substitute other tools, or any tool not wanted may be omitted.

Cat. No.	Description	Price
658	3-inch, 4-Jaw Independent Lathe Chuck	\$16.00
	Fitting Chuck to Lathe including Chuck Back	6.50
223	3/8-inch, 3-Jaw Drill Chuck, keyless type, with arbor	2.35
848-S	Turning Tool, straight shank	2.00
865	Threading Tool	3.75
429	Boring Tool, Style "B"	4.40
881-R	Cutting-Off Tool, right-hand	2.35
	1 Set (5) Malleable Lathe Dogs, 3/8", 1/2", 3/4", 1", 1 1/4"	3.50
	Price No. 8-JR Assortment, Complete	\$40.85

South Bend Lathe Works, 425 E. Madison St., South Bend, Indiana, U. S. A.