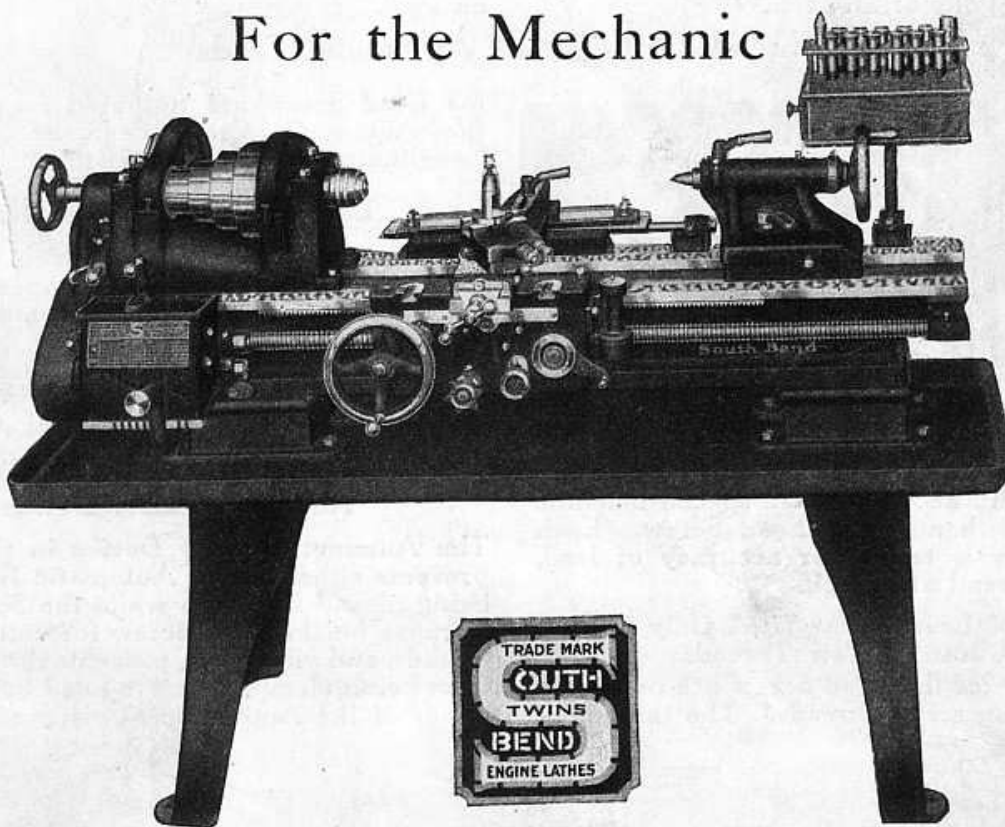


HAND BOOK

NO 44-A Showing 150 Shop Kinks

For the Mechanic



1927-'28

South Bend Lathe Works

444 Madison St., South Bend, Indiana, U.S.A.

New York City Sales Room, 183 Centre St.

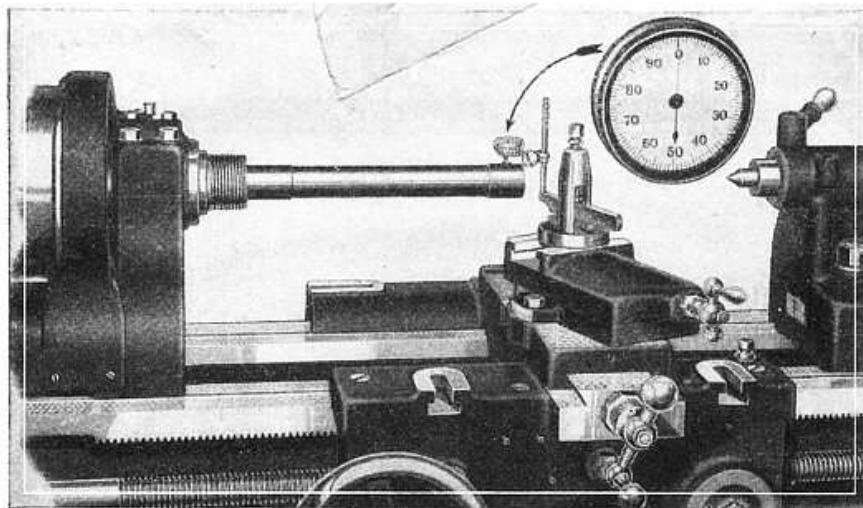


Fig. 1. Testing Headstock Spindle with Test Bar and Test Indicator

Sixty Four Accuracy Tests with Precision Instruments on the New Model South Bend Lathes

Testing Alignment of Spindle

The illustration above shows the Spindle Test, one of the 64 accuracy tests, to which each South Bend Lathe is subjected. The Test Bar fits into the taper of the Spindle, the Test Dial registers the slightest inaccuracy to one-half thousandth of an inch.

Accuracy Tests During Manufacture

Accuracy tests are made in all steps of manufacture including assembly and final test of Lathe. If any part does not come up to the required test it is laid aside as the finished unit must be within one-half thousandth of an inch.

Thread Cutting and Automatic Feeds

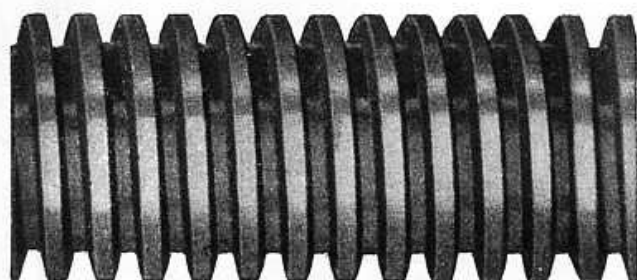


Fig. 2. Acme Thread Precision Lead Screw

The New Lead Screws are made of steel, have coarse pitch Acme Thread and are cut with precision and accuracy on a special machine equipped with a Master Lead Screw. Each Lead Screw is tested for accuracy of lead, form of thread and pitch.

Threads of Lead Screw Used Only When Cutting Screw Threads

The threads of the Lead Screw are used only when cutting screw threads. The threads of

the Lead Screw are not used for operating the Automatic Cross Feed or Automatic Longitudinal Feed of the Lathe.

Lead Screw as a Feed Rod

The Lead Screw is splined which permits it to serve as a feed rod for operating the Automatic Cross Feed and Automatic Longitudinal Feed of the Lathe.

The Splined Lead Screw makes a positive drive feed rod as it is geared direct to the spindle and permits a variety of Automatic Feed changes.

Automatic Safety Device

The Automatic Safety Device in the Apron prevents either of the Automatic Feeds from being placed in action while the Split Nut is clamped on the Lead Screw for cutting screw threads, and vice versa, prevents the Half Nuts from being clamped on the Lead Screw while either of the Automatic Feeds are in action.

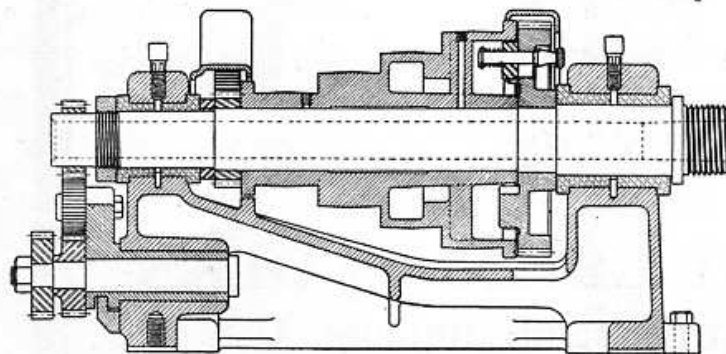


Fig. 3. Cross Section of Headstock

The illustration above shows a cross section of the New Model South Bend Lathe Headstock as furnished on all sizes. It also illustrates the precision construction of its various units.

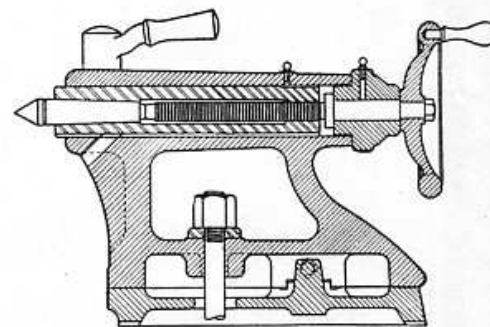


Fig. 4. Cross Section of Tailstock

The above illustration shows a cross section of the Tailstock. The Tailstock top can be set over for taper turning.

Typical Screw Threads Cut on New Model South Bend Lathes



Fig. 130.
Thread Gauge



Fig. 138.
Tap

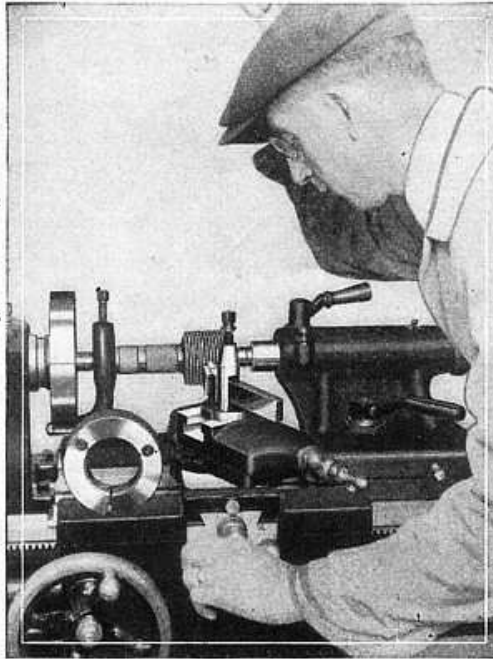


Fig. 134. Cutting a Screw Thread



Fig. 137.
Tap



Fig. 139.
Thread Gauge

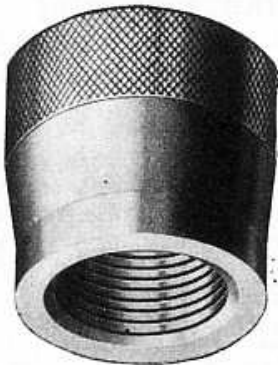
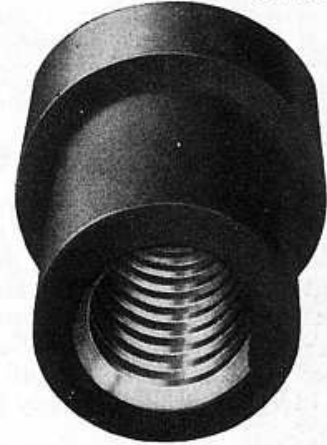


Fig. 140.
Internal U. S. Standard Thread

Variety of Screw Threads
The illustrations on this page show a few of the different types of screw threads which may be cut on New Model South Bend Lathes. They represent typical screw cutting jobs which come up in the modern machine shop. These and a wide variety of other screw threads may be cut on all New Model South Bend Lathes.



No. 132.
Internal Square Thread



Fig. 135. Right Hand Acme Double Screw Thread



Fig. 131. U. S. Standard Thread

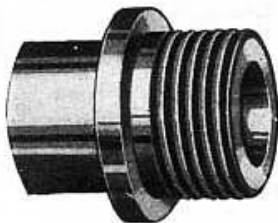


Fig. 129.
U. S. Standard Thread

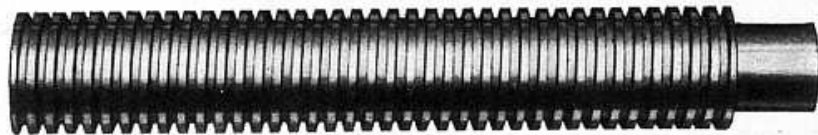
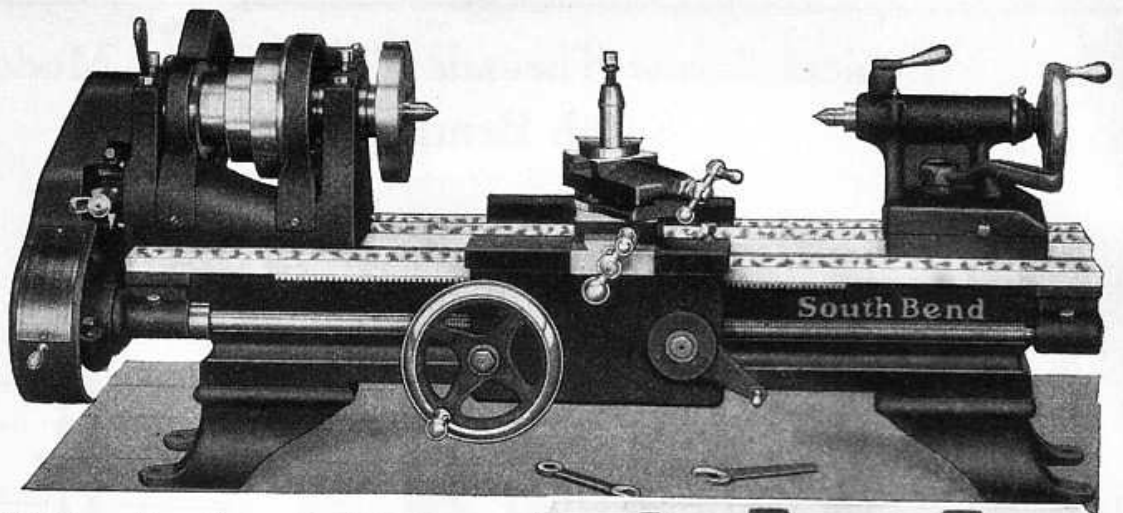


Fig. 136. Left Hand Acme Screw Thread



Fig. 133. Right Hand Double Screw Square Thread

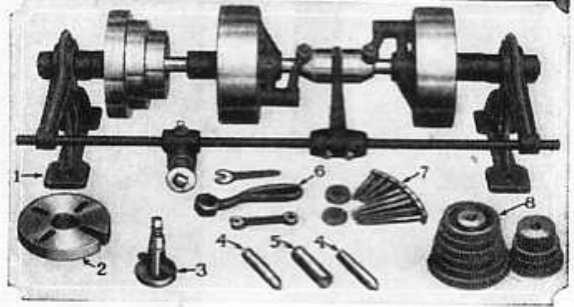
New Model



No. 22-XC—Junior \$ **170**
~~\$150.~~
**9 1/4 in. x 2 1/2 ft. Back Geared
 Screw Cutting Bench Lathe**

Specifications

Swing Over Bed.....9 1/4 in.
 Size of Centers.....No. 2 Morse Taper
 Size of Spindle Nose.....1 1/2-in. diam., 8 threads
 Size of Hole through Spindle.....3/4 in.
 Width of Cone Pulley Belt.....1 in.
 Recommended Size of Chuck.....6 in.
 Net Wt., Lathe and Countershaft.....350 lbs.



Above Equipment Included in Price of Lathe

A 9-in. Screw Cutting Production Lathe for Manufacturing

The rugged construction, precision accuracy and ease of operation make the No. 22 New Model Junior Lathe the ideal machine for quantity production on small work. It is Back Geared to provide power and a wide range of spindle speeds. Screw threads, right or left hand, from 4 to 40 per inch, including 1 1/2 pipe thread may be cut.

The 9-inch No. 22 New Model Junior Lathe is our regular 9-inch Standard Change Gear Lathe with the automatic worm drive feeds omitted. Power Feed is obtained by engaging the half nuts on the lead screw. This lathe is practical for: *threading, turning, boring, facing, chucking, drilling, tapping, reaming, filing, polishing, etc.*

Specifications

Swing Over Bed.....9 1/4 in.
 Swing Over Carriage.....6 3/8 in.
 Size of Centers.....No. 2 Morse Taper
 Large Spindle Bearing.....1 3/8 in. x 1 7/8 in.
 Small Spindle Bearing.....1 1/8 in. x 1 5/8 in.
 Size of Spindle Nose.....1 1/2 in. diam., 8 threads
 Size of Hole through Spindle.....3/4 in.
 Maximum Collet Capacity.....1/2 in.
 Width of Cone Pulley Belt.....1 in.
 Back Gear Ratio.....5.4 to 1
 Acme Thread Lead Screw... 3/4 in. diam., 8 threads
 Tool Holder... 1 1/4 x 1 3/8 in., Cutter Bit... 1/4 x 1/4 in.
 Power Required.....1/4 H. P.

Features

Back Geared Headstock, Six Spindle Speeds
 Headstock Spindle Hollow, Ground all over
 Spindle Bearings Phosphor Bronze, Adjustable
 Quick Acting Spring Latch Reverse
 Carriage Lock for Accurate Facing
 Self Ejecting Hardened Tailstock Center
 Set-over Tailstock for Turning Tapers
 Graduated Compound Rest for Turning Angles
 Micrometer Collar on Cross Feed Screw
 Micrometer Collar on Compound Rest Screw
 Change Gears for Thread Cutting
 Power Feed Carriage
 Operates from ordinary Lamp Socket

High Standard of Accuracy Maintained

The high standard of accuracy responsible for the remarkable success and popularity of the regular line of South Bend Lathes is rigidly maintained in building the No. 22 New Model Junior Lathe. The workmanship and material used are the finest that can be obtained. This Lathe carries the same broad guarantee for precision and accuracy as any Lathe in our entire line.

Types of Drives

In addition to the Countershaft Drive there are three types of Motor Drives for the No. 22 New Model Junior Lathe. Illustrated and described on page 7 of this handbook.

Attachments

18 practical Attachments for the No. 22 New Model Junior Lathe illustrated and priced on pages 24 and 25.

Net Factory Prices of 9-inch New Model Junior Bench Lathe

Swing Over Bed	Length of Bed	Between Centers	Weight Crated	With Plain Rest			With Compound Rest		
				Cat. No.	Code Word	Price	Cat. No.	Code Word	Price
9 1/4 in.	2 1/2 ft.	11 in.	350 lbs.	22-XP	Balch	\$160.00	22-XC	Bylow	\$170.00
9 1/2 in.	3 ft.	18 in.	375 lbs.	22-YP	Bedlo	165.00	22-YC	Bhorn	175.00
9 3/4 in.	3 1/2 ft.	23 in.	400 lbs.	22-ZP	Botny	170.00	22-ZC	Bmatx	180.00
9 1/4 in.	4 ft.	29 in.	425 lbs.	22-AP	Bilge	175.00	22-AC	Blear	185.00
9 1/2 in.	4 1/2 ft.	36 in.	450 lbs.	22-RP	Butch	180.00	22-RC	Broil	190.00

Prices Reduced \$20 on all 9-inch Junior Lathes.
 Refer to Attached Colored Insert for New Prices.

\$20.00 Price Reduction

On All 9" Junior New Model South Bend Lathes

Effective October 1, 1927

Prices Reduced \$20.00

Prices have been reduced \$20.00 on each size and type New Model South Bend Junior Back Geared Screw Cutting Lathe, effective October 1st.

Saving Passed on to Customers

Large volume and improved manufacturing methods have enabled us to make savings in manufacturing the 9-inch Junior Lathe, so that this \$20.00 price reduction is possible. We are passing on this saving to our customers in accordance with our usual policy of giving the biggest lathe value and the greatest service at the lowest price.

New Features on Lathe

In addition to reducing the price \$20.00, we have added several new features and improvements. The 9-inch Junior Lathe represents even greater value than we have heretofore offered. It is a quality tool, capable of handling the finest and most accurate precision work.

Maintaining Quality

We will continue to add improvements and features on the 9-inch Junior Lathes. We will give our customers the highest quality and service at all times at the lowest cost to them.

New Reduced Net Factory Prices on 9-inch Junior Lathes

Listed below are the New Reduced Net Factory prices on 9-inch Junior South Bend Lathes now in effect. These prices replace the prices shown in this No. 44-A Hand Book.

Page 4 of No. 44-A Booklet

9-inch Junior Back Geared Screw Cutting Bench Lathes

Reduced Prices Shown Below Replace Prices Shown at the Bottom of Page 4

New Reduced Net Factory Prices of 9-inch New Model Junior Bench Lathes

Swing Over Bed	Length of Bed	Between Centers	Weight Crated	With Plain Rest	With Compound Rest		
					Cat. No.	Code Word	Price
9¼ in.	2½ ft.	11 in.	350 lbs.	Not Made	22-XC	Bylow	\$150.00
9¼ in.	3 ft.	18 in.	375 lbs.	Not Made	22-YC	Bhorn	155.00
9¼ in.	3½ ft.	23 in.	400 lbs.	Not Made	22-ZC	Bmatx	160.00
9¼ in.	4 ft.	29 in.	425 lbs.	Not Made	22-AC	Blear	165.00
9¼ in.	4½ ft.	36 in.	450 lbs.	Not Made	22-RC	Broil	170.00

Page 6 of No. 44-A Booklet

9-inch Junior Back Geared Screw Cutting Lathes (Floor Leg Type)

Reduced Prices Shown Below Replace Prices Shown at the Bottom of Page 6

New Reduced Net Factory Prices of 9-inch New Model Junior Lathes (Floor Leg Type)

Swing Over Bed	Length of Bed	Between Centers	Weight Crated	With Plain Rest	With Compound Rest		
					Cat. No.	Code Word	Price
9¼ in.	2½ ft.	11 in.	415 lbs.	Not Made	22-XF	Byato	\$160.00
9¼ in.	3 ft.	18 in.	440 lbs.	Not Made	22-YF	Bhunt	165.00
9¼ in.	3½ ft.	23 in.	465 lbs.	Not Made	22-ZF	Bmelo	170.00
9¼ in.	4 ft.	29 in.	490 lbs.	Not Made	22-AF	Blunt	175.00
9¼ in.	4½ ft.	36 in.	515 lbs.	Not Made	22-RF	Bryan	180.00

Practical Jobs for the 9-inch No. 22 New Model Junior Lathe

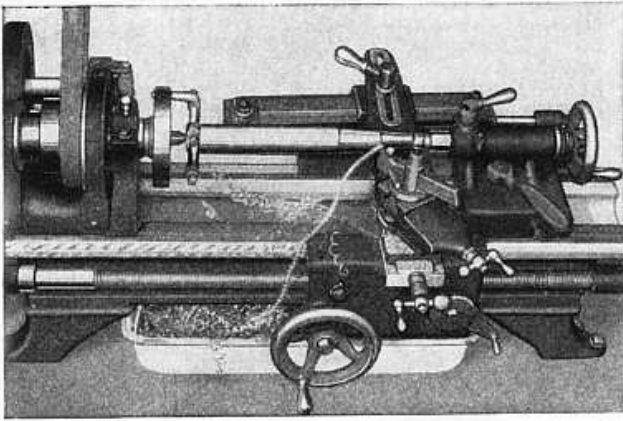


Fig. 15. Turning a Taper on the No. 22, 9-inch Junior Lathe Equipped with Taper Attachment

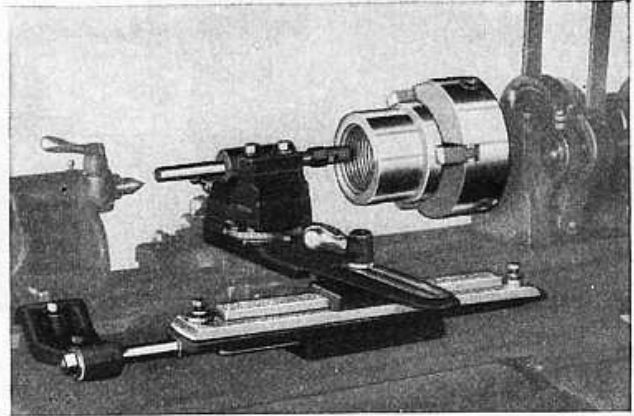


Fig. 16. Cutting an Internal Tapered Thread on 9-inch Lathe, Using Taper Attachment

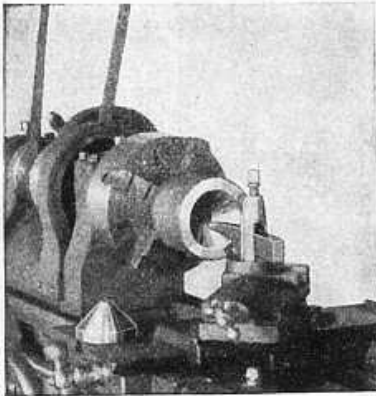


Fig. 17. Boring a Conical Die on the 9-inch Junior Lathe

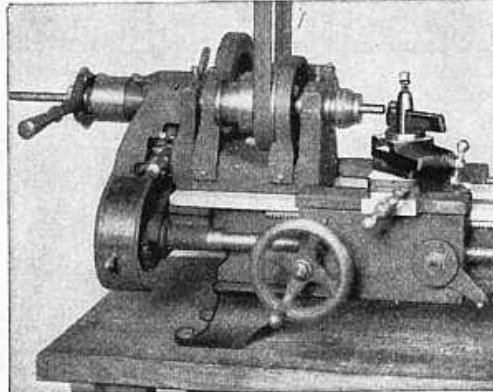


Fig. 18. 9-inch Junior Lathe with Hand Lever Draw-in Chuck

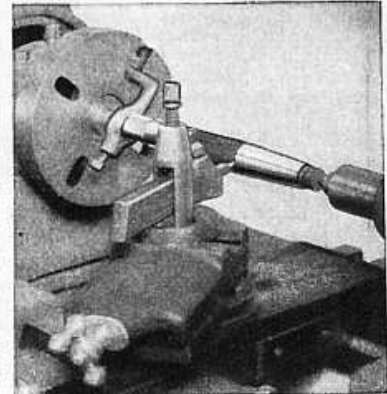


Fig. 19. 9-inch Junior Lathe Turning Taper

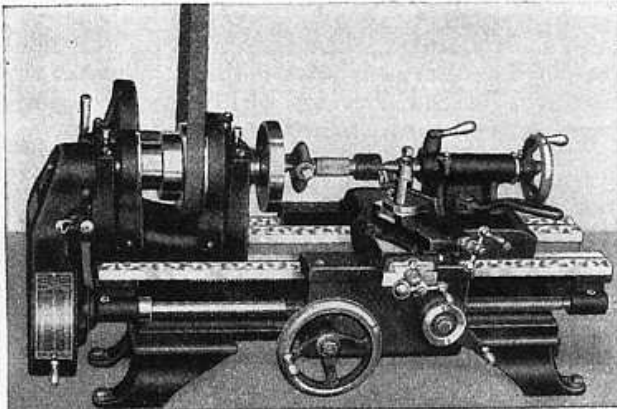


Fig. 20. Threading a Master Thread Gauge on the 9-inch South Bend Junior Lathe

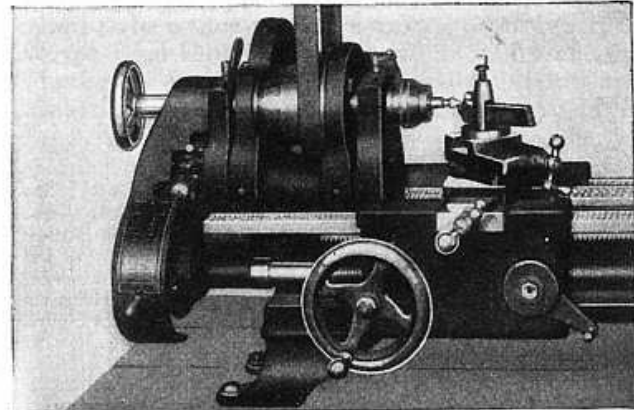


Fig. 21. The 9-inch Junior Lathe Equipped with Hand Wheel Draw-in Chuck Attachment

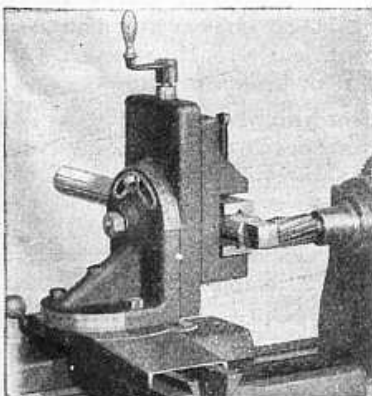


Fig. 22. Squaring the End of a Shaft on a 9-inch Lathe

Booklet No. 22-K
describing the
9-inch New Model
Junior Lathe
will be sent
on request
FREE — POSTPAID

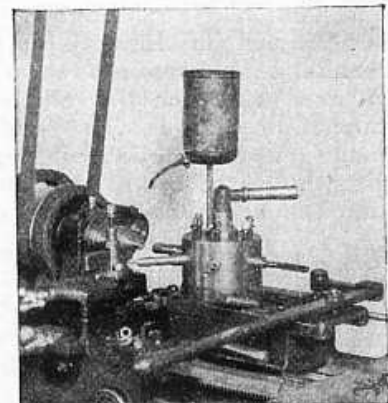
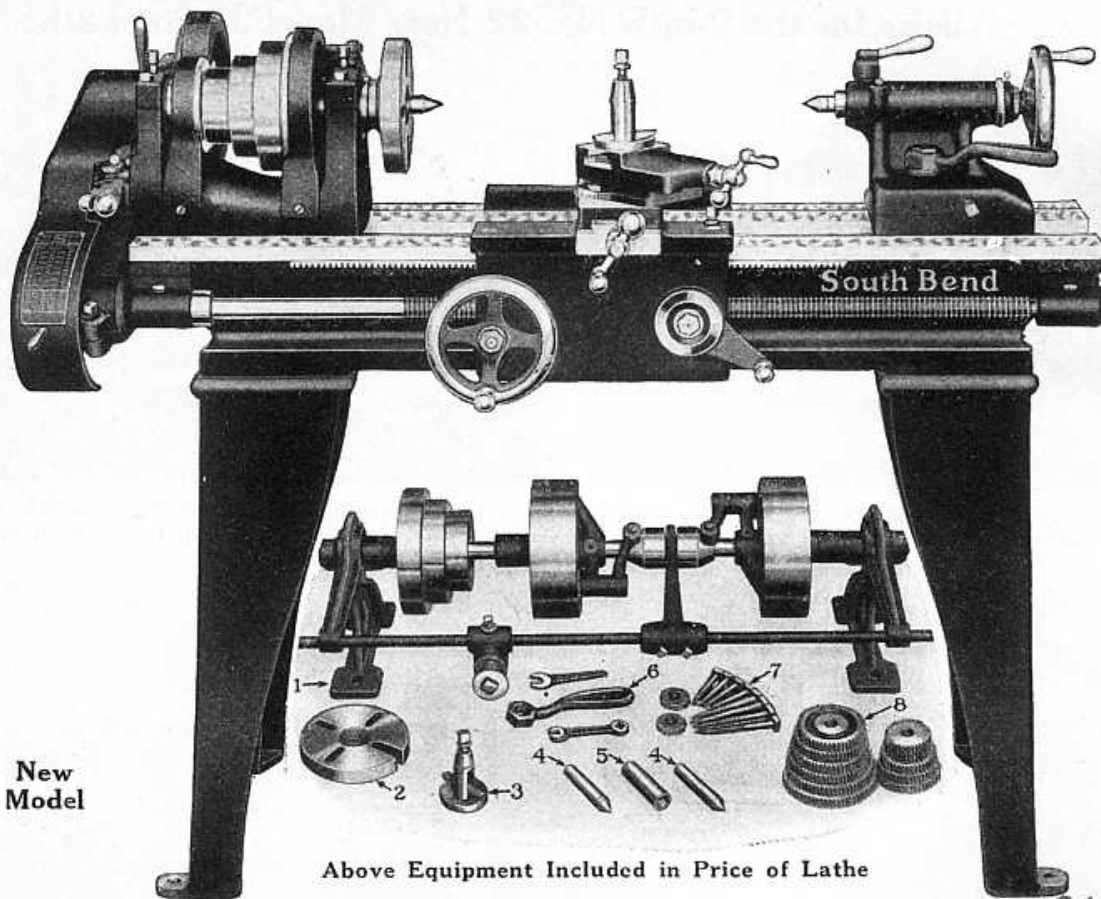


Fig. 24. 9-inch Lathe Equipped with Hand Lever Bed Turret



No. 22—9" x 3' New Model Junior Lathe (Floor Leg Type) - \$165.00

The 9-inch No. 22 New Model Junior Lathe with Floor Legs is practical for general work in the machine shop, and for fine precision tool and instrument work. It is Back Geared to provide power and a wide range of spindle speeds and has change gears and lead screw for cutting threads from 4 to 40 per inch, right or left hand including 1 1/2 pipe thread.

The No. 22 New Model Junior Lathe is built of the same parts, has the same headstock, tailstock and bed as our regular 9-inch Lathe which we have been manufacturing for more than twenty-one years. Power feed is obtained by clamping the half nuts on the lead screw. This Lathe is practical for: *threading, turning, boring, facing, chucking, drilling, tapping, reaming, filing, polishing, etc.*

Specifications

- Swing Over Bed.....9 1/4 in.
- Swing Over Carriage.....6 3/8 in.
- Size of Centers.....No. 2 Morse Taper
- Large Spindle Bearing.....1 3/8 in. x 1 7/8 in.
- Small Spindle Bearing.....1 1/8 in. x 1 5/8 in.
- Size of Spindle Nose.....1 1/2 in. diam., 8 threads
- Size of Hole through Spindle.....3/4 in.
- Maximum Collet Capacity.....1/2 in.
- Width of Cone Pulley Belt.....1 in.
- Back Gear Ratio.....5.4 to 1
- Acme Thread Lead Screw...3/4 in. diam., 8 threads
- Tool Holder...1 1/2 x 1 3/8 in., Cutter Bit...1/4 x 1/4 in.
- Power Required.....1/4 H. P.

Features

- Back Geared Headstock, Six Spindle Speeds
- Headstock Spindle Hollow, Ground all over
- Spindle Bearings Phosphor Bronze, Adjustable
- Quick Acting Spring Latch Reverse
- Carriage Lock for Accurate Facing
- Self Ejecting Hardened Tailstock Center
- Set-over Tailstock for Turning Tapers
- Graduated Compound Rest for Turning Angles
- Micrometer Collar on Cross Feed Screw
- Micrometer Collar on Compound Rest Screw
- Change Gears for Thread Cutting
- Power Feed Carriage
- Operates from ordinary Lamp Socket

New Standards of Performance

The No. 22 New Model Junior Lathe has no superior in its class. This Lathe sets a new standard for modern shop performance; a marked advance in efficiency, speed and durability. It is the result of twenty-one years' experience in building Lathes and carries the same broad guarantee for precision and accuracy as any Lathe in our entire line.

Types of Drives

In addition to the Countershaft Drive there are three types of Motor Drives for the No. 22 New Model Junior Lathe. Illustrated and described on page 7 of this handbook.

Attachments

18 practical Attachments for the No. 22 New Model Junior Lathe illustrated and priced on pages 24 and 25.

Net Factory Prices of 9-inch New Model Junior Lathe (Floor Leg Type)

Swing Over Bed	Length of Bed	Between Centers	Weight Crated	With Plain Rest			With Compound Rest		
				Cat. No.	Code Word	Price	Cat. No.	Code Word	Price
9 1/4 in.	2 1/2 ft.	11 in.	415 lbs.	22-XN	Baffo	\$170.00	22-XF	Byato	\$180.00
9 1/4 in.	3 ft.	18 in.	440 lbs.	22-YN	Begar	175.00	22-YF	Bhunt	185.00
9 1/4 in.	3 1/2 ft.	23 in.	465 lbs.	22-ZN	Bobar	180.00	22-ZF	Bmelo	190.00
9 1/4 in.	4 ft.	29 in.	490 lbs.	22-AN	Binct	185.00	22-AF	Blunt	195.00
9 1/4 in.	4 1/2 ft.	36 in.	515 lbs.	22-RN	Bufcz	190.00	22-RF	Bryan	200.00

Refer to Attached Colored Lists for New Prices.

Self-Contained Motor Drive Bench Lathe Unit

For the 9-inch Junior, 9-inch and 11-inch Regular Bench Lathes*

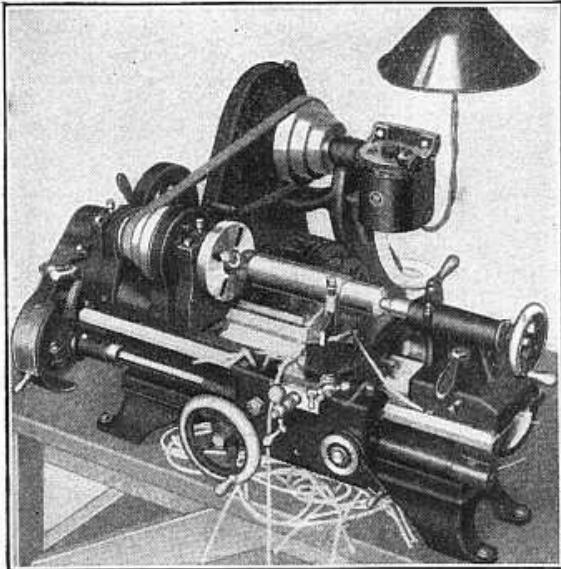


Fig. 84. Front View of Self-Contained Motor Drive Bench Lathe Unit

The Self-Contained Motor Drive Unit is a practical and efficient type of drive for the 9-inch and 11-inch Bench Lathes, all types. When this unit is mounted on a bench and connected to the current it is ready for operation. It will operate a 9-inch Lathe from an ordinary lamp socket.

Motor Drive Unit

The illustration at the right shows an end view of the Self-Contained Motor Drive Unit with part of gear guard removed to show the Silent Chain. It is placed directly behind the Lathe on the Bench in such a position that the cone pulleys will line up and the belts will track. The Motor rests on a base and drives the countershaft cone through a chain and sprocket which gives a noiseless, efficient drive for a screw cutting Lathe. The Spindle Cone of the Lathe is driven by a leather belt.



Fig. 85. End View of Self-Contained Motor Drive Unit

Silent Chain Motor Drive for the 9-inch Junior Lathe* (Floor Leg Type)

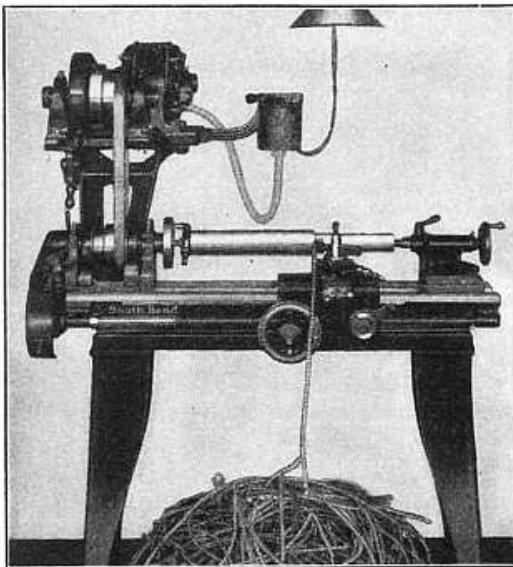


Fig. 86. 9-inch Junior Lathe Equipped with Silent Chain Motor Drive

The illustration at the left shows the 9-inch Junior Lathe, Floor Leg Type, equipped with Silent Chain Motor Drive. The Silent Chain Drive which connects the Motor with the upper cone, is as positive as though it were direct geared. A small lever allows the table on which the Motor sets to tilt and relieve the belt tension for easy shifting of the belt. An independent adjustment is provided for taking up the stretch of the belt.

Operates from Lamp Socket

A $\frac{1}{4}$ H.P. Reversing Motor driven from an ordinary lamp socket gives sufficient power to operate the 9-inch Junior Lathe at maximum capacity.

End View of Silent Chain Drive

In the illustration at the right the chain guards are removed to show a closeup of the Silent Chain Drive connecting the Motor to the upper cone shaft. This improved drive is efficient and practical and will run for years with no attention other than occasional oiling.

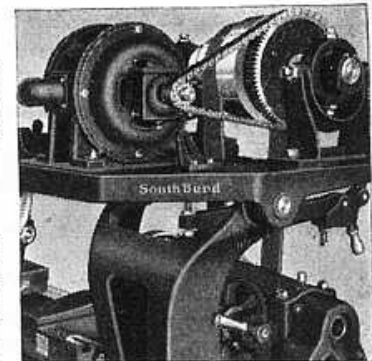


Fig. 87. End View of Silent Chain Motor Drive

Simplex Motor Drive for the 9-inch and 11-inch Bench Lathes (Any Type)*

The illustration at the right shows the 9-inch No. 22 Junior Bench Lathe equipped with Simplex Motor Drive. This drive consists of a special countershaft supported above the bench by two cast iron standards and cross board. The Motor rests on top of bench directly behind Lathe. Power is delivered from Motor to Countershaft by a belt. Another belt connects the Countershaft with the Cone Pulley of Lathe. This drive is noiseless and efficient in operation and makes a very complete and serviceable unit for the shop not equipped with overhead lineshaft.

Operates from Lamp Socket

A $\frac{1}{4}$ H.P. Reversing Motor Driven from an ordinary lamp socket gives sufficient power to operate the No. 22 Junior Lathe at maximum capacity.

*Complete Description of Motor Drives

Complete description and prices of South Bend Motor Drives are available upon request. Our Booklet No. 22-K illustrates and describes in detail the three types of drives (shown on this page) for the 9-inch Junior Lathe. We have Free Interesting Booklets on each size Lathe giving detailed information on the Lathes, Drives, Attachments, etc. See page 27.

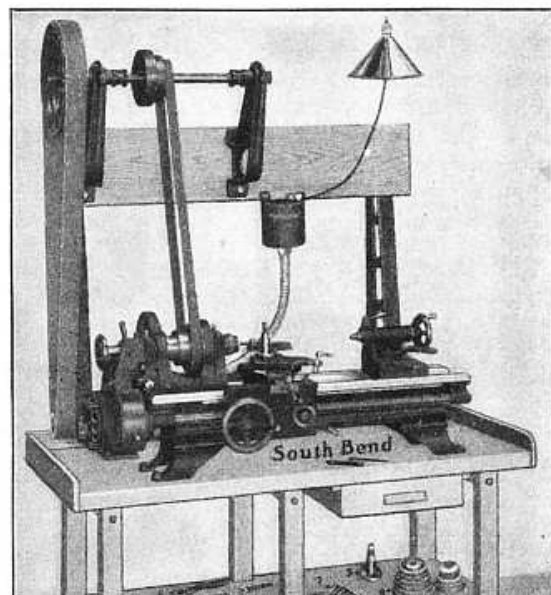
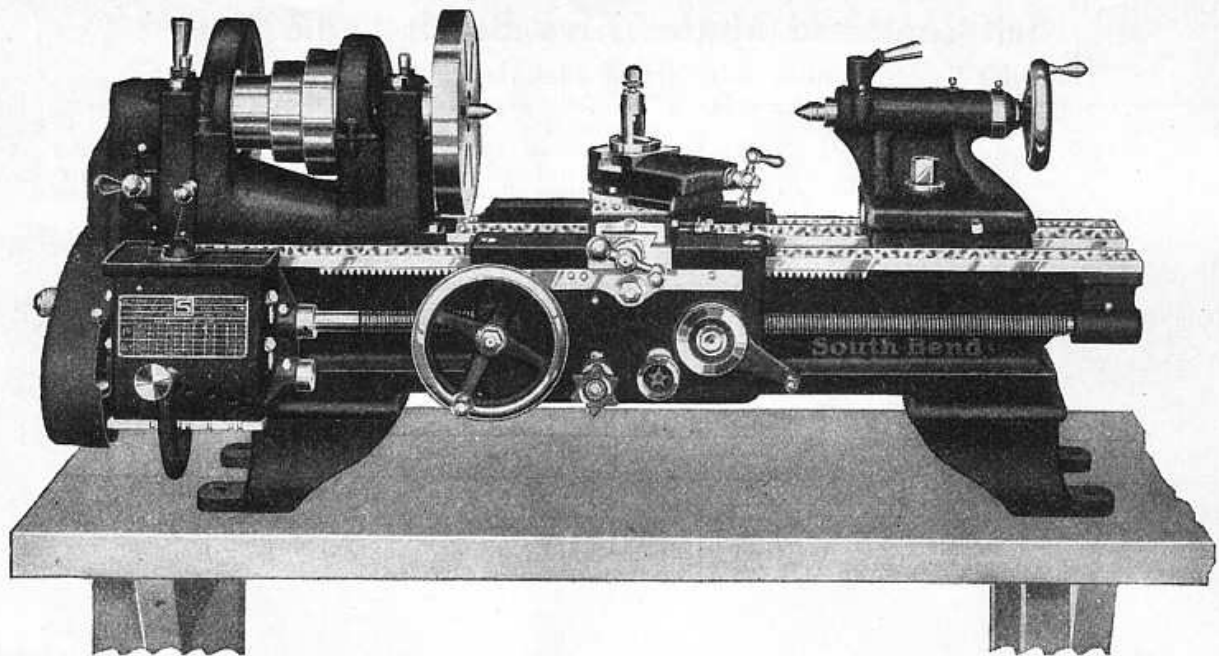


Fig. 88. Jr. Lathe with Simplex Motor Drive



The New Model South Bend Bench Lathes

Built in 9-inch and 11-inch Swing—Standard and Quick Change Gear Types

The illustration above shows the New Model 11-inch Quick Change Gear Bench Lathe operated by overhead Countershaft Drive.

Specifications and Descriptions

For Specifications and Description of the 9-inch and 11-inch Bench Lathes refer to the 9-inch and 11-inch Lathes with Floor Legs illustrated in this booklet. The only difference is that Bench Legs are substituted for Floor Legs.

For Production

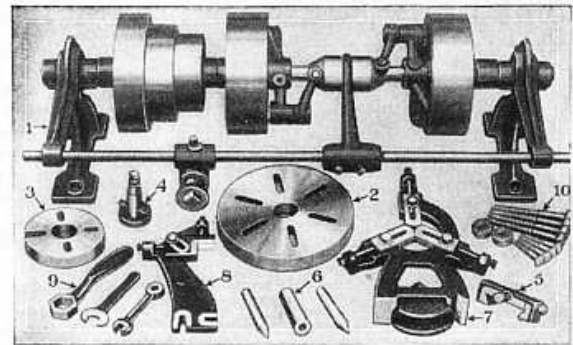
Bench Lathes are widely used in factories for quantity production of small metal parts and for fine tool work. One man can easily operate two or more lathes on production work.

Types of Drives

Bench Lathes may be driven by three types of drives: Overhead Countershaft Drive (shown above), Simplex Motor Drive and Self-Contained Unit Motor Drive (page 7).

Attachments

These Lathes may be fitted with all the Attachments, Tools and Accessories which can be used on Floor Leg Lathes such as Draw-in Collet Chuck, Taper Attachment, Milling and Keyway Cutting Attachment, Chucks, Turning and Boring Tools, etc. See pages 24 and 25.



Countershaft and Equipment Illustrated Above Included in Price of Lathe

Equipment Included in Price of Lathe

Regular Equipment Included in price of Countershaft Driven Bench Lathes consists of: Double Friction Reversing Countershaft, Large and Small Face Plates, Tool Post Complete, Thread Cutting Stop, two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. Note: A set of Change Gears is furnished with Standard Change Gear Lathes.

Hard Maple Bench

The Hard Maple Bench is not included in the price of the Bench Lathes but is furnished at extra cost. Prices and description of bench given on page 31.

Prices and Specifications of Bench Lathes Including Countershaft and Equipment

Swing Over Bed	Length of Bed	Between Centers	Power Required	Weight Crated	Standard Change Gear		Quick Change Gear			
					Cat. No. | Code Word	Price	Cat. No. | Code Word	Price	Price	
9-inch New Model South Bend Bench Lathes										
9 1/4	2 1/2 ft.	11 in.	1/4 H.P.	405 lbs.	31-XB	Bride	\$220.00	82-XB	Backe	\$255.00
9 1/4	3 ft.	18 in.	1/4 H.P.	425 lbs.	31-YB	Bulks	225.00	82-YB	Belts	260.00
9 1/4	3 1/2 ft.	23 in.	1/4 H.P.	445 lbs.	31-ZB	Bvork	230.00	82-ZB	Bingo	265.00
9 1/4	4 ft.	29 in.	1/4 H.P.	465 lbs.	31-AB	Bweir	235.00	82-AB	Blame	270.00
9 1/4	4 1/2 ft.	36 in.	1/4 H.P.	490 lbs.	31-RB	Bzone	240.00	82-RB	Bodel	275.00
11-inch New Model South Bend Bench Lathes										
11 1/4	3 ft.	12 in.	1/2 H.P.	575 lbs.	33-YB	Egast	\$280.00	84-YB	Ebony	\$315.00
11 1/4	3 1/2 ft.	18 in.	1/2 H.P.	600 lbs.	33-ZB	Ejorn	285.00	84-ZB	Echos	320.00
11 1/4	4 ft.	24 in.	1/2 H.P.	625 lbs.	33-AB	Elong	290.00	84-AB	Edwin	325.00
11 1/4	5 ft.	36 in.	1/2 H.P.	705 lbs.	33-BB	Emate	300.00	84-BB	Efort	335.00

Practical Jobs for New Model South Bend Bench Lathes

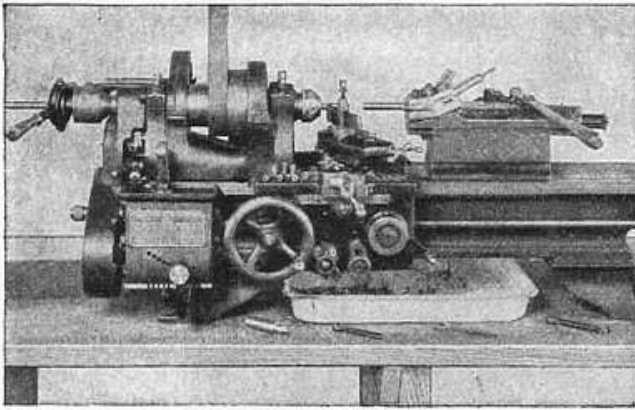


Fig. 37. 11-inch Bench Lathe Equipped with Quick Acting Draw-in Chuck, Hand Lever Feed Turret

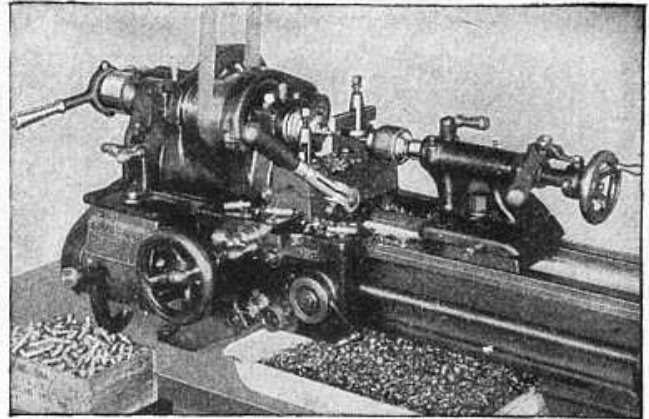


Fig. 43. Bench Lathe on Production Work with Lever Type Draw-in Chuck, Tailstock and Cross Slide

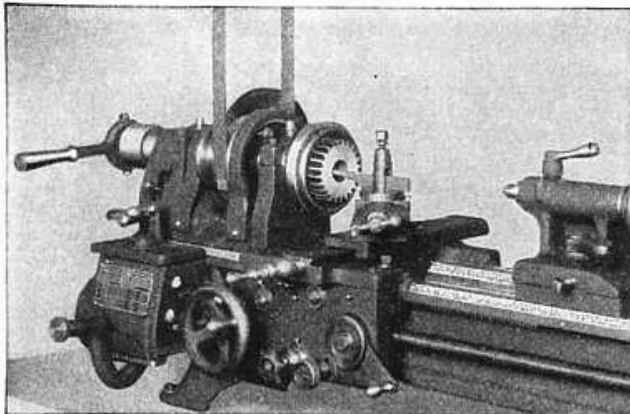


Fig. 26. Boring a Pinion held in Step Chuck Fitted to the 9-inch Quick Change Gear Bench Lathe

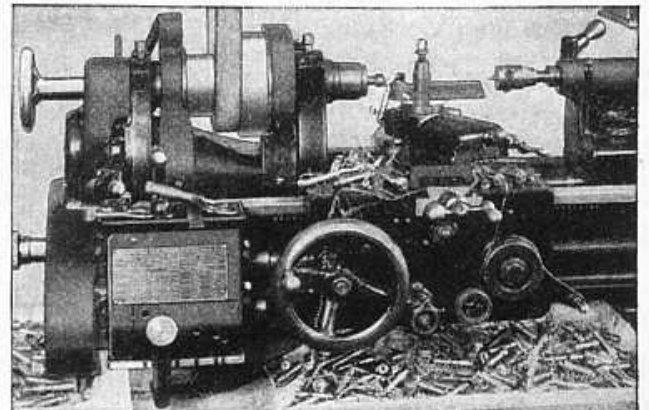


Fig. 27. Manufacturing Small Screws on 9-inch Bench Lathe Equipped with Draw-in Chuck

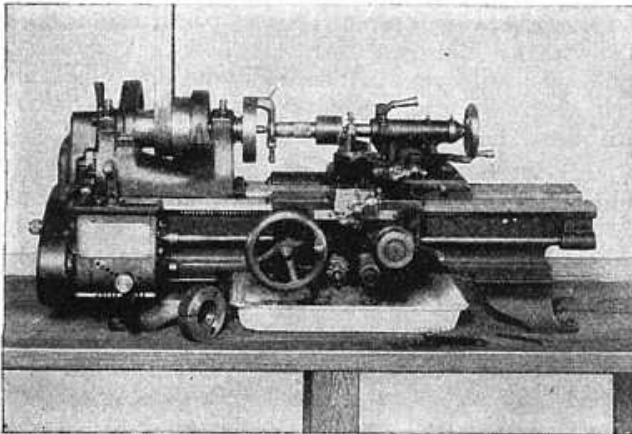


Fig. 80. Making a Master Tap in an 11-inch Quick Change Gear Bench Lathe

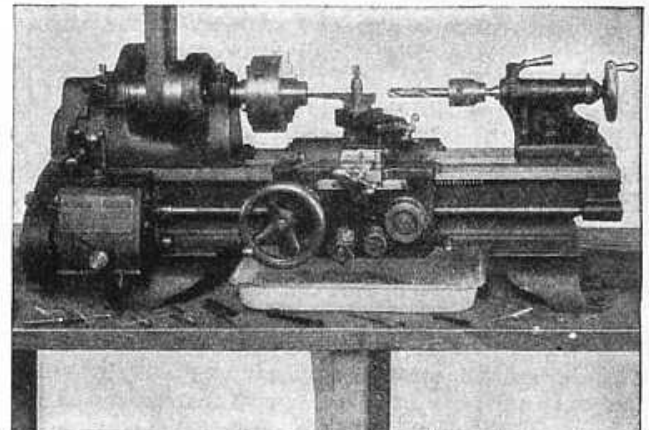


Fig. 38. Making a Brass Bushing in a South Bend Bench Lathe

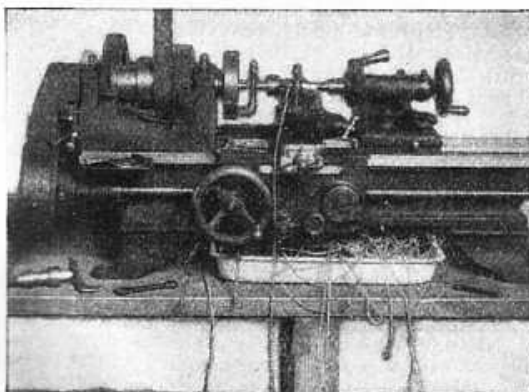


Fig. 81. 11-inch Standard Change Gear Lathe Manufacturing Small Parts

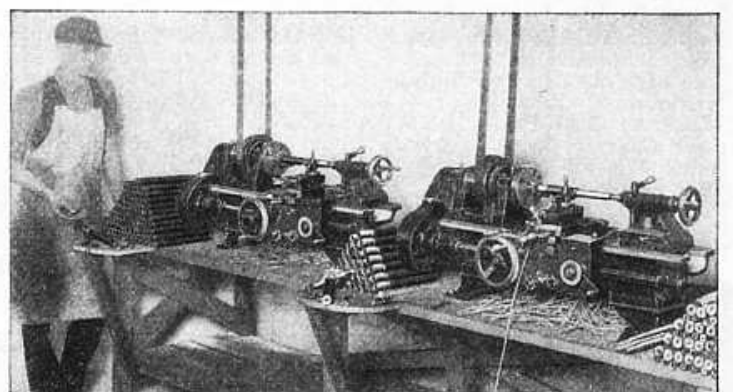
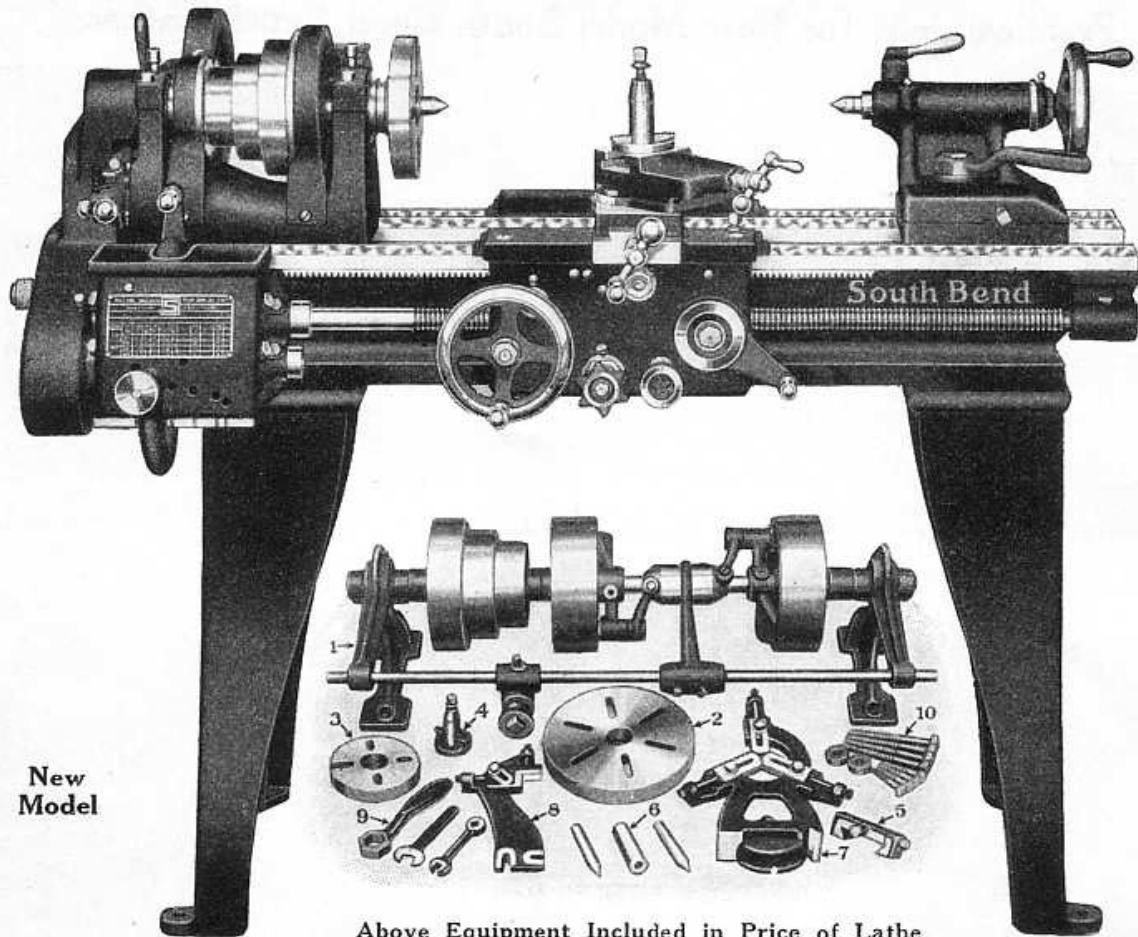


Fig. 82. Two 9-inch Bench Lathes on Production Work Operated by One Man



New Model

Above Equipment Included in Price of Lathe

No. 82-Y—9-in. x 3-ft. Quick Change Gear Lathe - \$270.00

For Light Manufacturing

This New Model Back Geared Screw Cutting Lathe is the same design as our larger and higher priced lathes. It is a practical lathe for light manufacturing and precision tool work where a high degree of accuracy is essential. This Lathe may be had in the Silent Chain Motor Drive Pattern illustrated on page 20.

Quick Change Gear Box

The Quick Change Gear Box provides for cutting right or left hand screw threads from 2 to 112 per inch, including 11½ pipe thread, without removing a gear. It also provides for a wide range of fine and coarse automatic turning feeds. The Index Plate on Gear Box shows arrangement of Levers for cutting Threads, and for Automatic Feeds.

Specifications

Swing Over Bed.....9¼ in.
 Swing Over Carriage.....6¾ in.
 Size of Centers.....No. 2 Morse Taper
 Large Spindle Bearing.....1⅜ in. x 1⅞ in.
 Small Spindle Bearing.....1⅞ in. x 1⅞ in.
 Size of Spindle Nose.....1½ in. diam., 8 threads
 Size of Hole through Spindle.....¾ in.
 Maximum Collet Capacity.....½ in.
 Width of Cone Pulley Belt.....1 in.
 Back Gear Ratio.....5.4 to 1
 Acme Thread Lead Screw...¾ in. diam., 8 threads
 Tool Holder.....½ x ⅜ in., Cutter Bit...¼ x ¼ in.
 Power Required.....¼ H. P.

Net Factory Prices of 9-inch New Model Standard and Quick Change Gear Lathes

Swing Over Bed	Length of Bed	Between Centers	Weight Crated	Standard Change Gear			Quick Change Gear		
				Cat. No.	Code Word	Price	Cat. No.	Code Word	Price
9¼ in.	2½ ft.	11 in.	470 lbs.	31-X	Brake	\$230.00	82-X	Babit	\$265.00
9¼ in.	3 ft.	18 in.	490 lbs.	31-Y	Budis	235.00	82-Y	Becke	270.00
9¼ in.	3½ ft.	23 in.	510 lbs.	31-Z	Bvest	240.00	82-Z	Bikes	275.00
9¼ in.	4 ft.	29 in.	530 lbs.	31-A	Bwags	245.00	82-A	Blody	280.00
9¼ in.	4½ ft.	36 in.	550 lbs.	31-R	Bzeko	250.00	82-R	Bosco	285.00

Equipment Included in Price of Lathe

Regular Equipment Included in Price of Lathe consists of: Double Friction Reversing Countershaft, Large and Small Face Plates, Tool Post Complete, Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. NOTE: A set of Change Gears is furnished with Standard Change Gear Lathes.

Made in Standard Change Gear Type

The New Model 9-inch Lathe is also made in the Standard Change Gear Type which is the same as the Quick Change Gear Type except that it does not have the Quick Change Gear Box. Change Gears are furnished for cutting right or left hand threads from 4 to 40 per inch, including 11½ pipe thread.

Features

18 Practical Attachments. See Pages 24 and 25
 Back Geared Headstock. Six Spindle Speeds
 Headstock Spindle Hollow, Ground all over
 Spindle Bearings Phosphor Bronze, Adjustable
 Automatic Longitudinal and Cross Feeds
 Automatic Safety Device in Apron
 Quick Acting Spring Latch Reverse
 Carriage Lock for Accurate Facing
 Self Ejecting Hardened Tailstock Center
 Set-over Tailstock for Turning Tapers
 Graduated Compound Rest for Turning Angles
 Micrometer Collar on Cross Feed Screw
 Micrometer Collar on Compound Rest Screw

Practical Jobs for the 9-inch No. 82 New Model South Bend Lathe

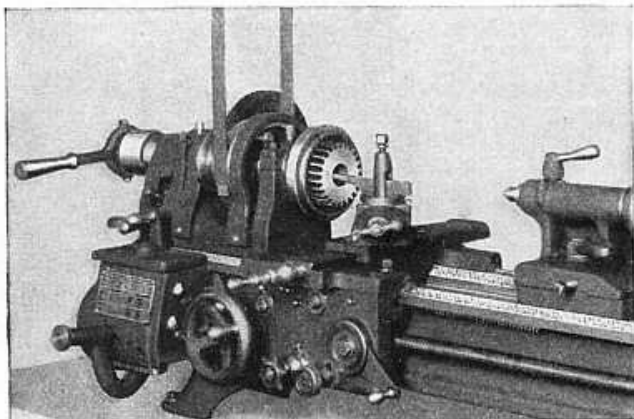


Fig. 26. Boring a Pinion Held in Step Chuck Fitted to the 9-inch Quick Change Gear Lathe

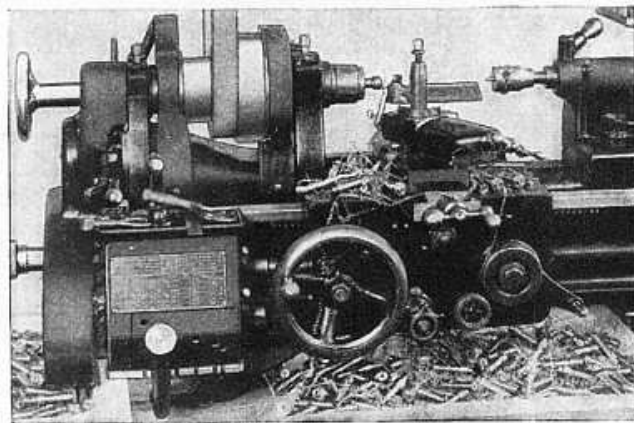


Fig. 27. Manufacturing Small Screws on the 9-inch Lathe Equipped with Draw-in Chuck

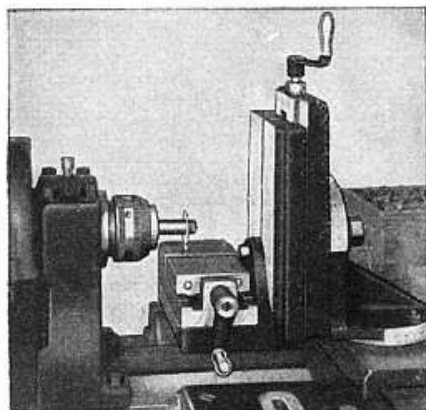


Fig. 45. A 9-inch Lathe Equipped with Milling Attachment

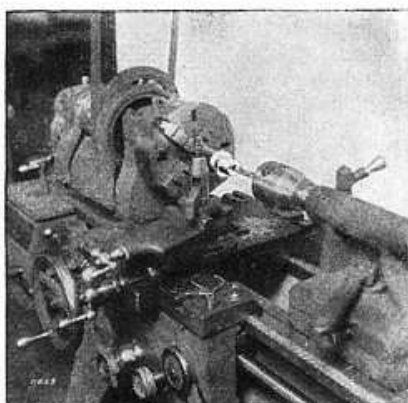


Fig. 29. Making a Bushing in the Chuck of a 9-inch Lathe

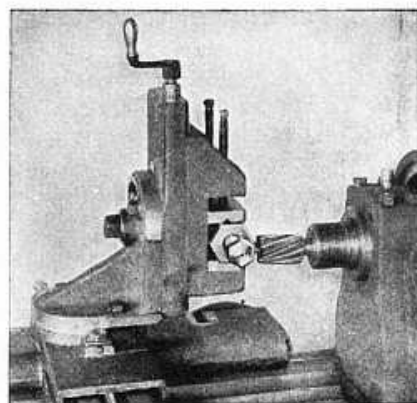


Fig. 30. Milling a Hexagon Head Bolt on the 9-inch Lathe

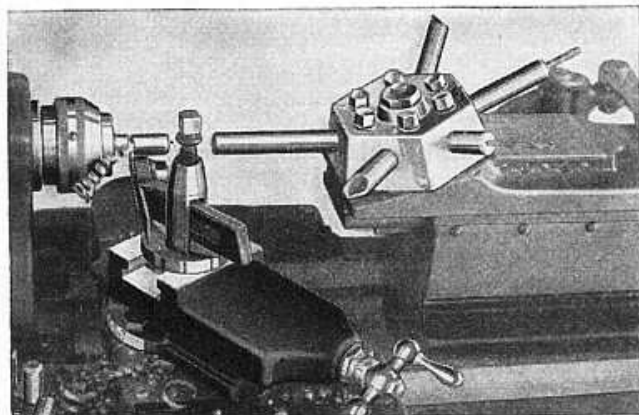


Fig. 31. Manufacturing Small Parts Using Turret and Draw-in Chuck Fitted to 9-inch Lathe

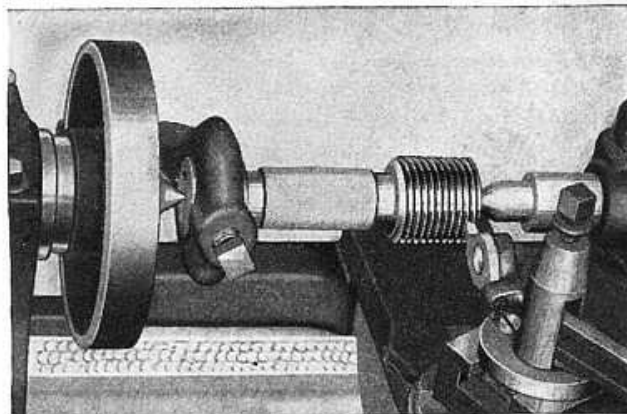


Fig. 32. Threading a Master Thread Gauge on the 9-inch Quick Change Gear Lathe

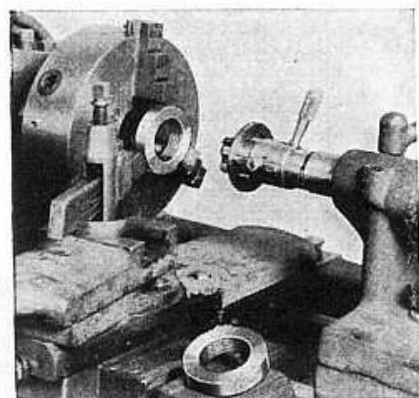


Fig. 33. A 9-inch Lathe with Collapsible Tap for Threading

Booklet No. 9
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9-inch New Model
Lathe in Standard
and Quick Change
Gear Types
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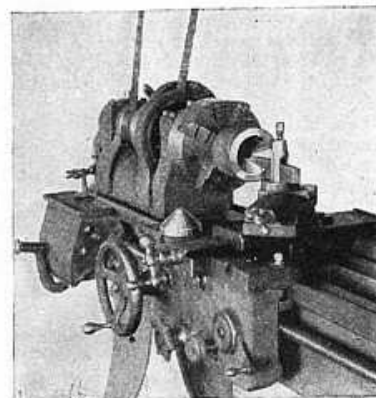
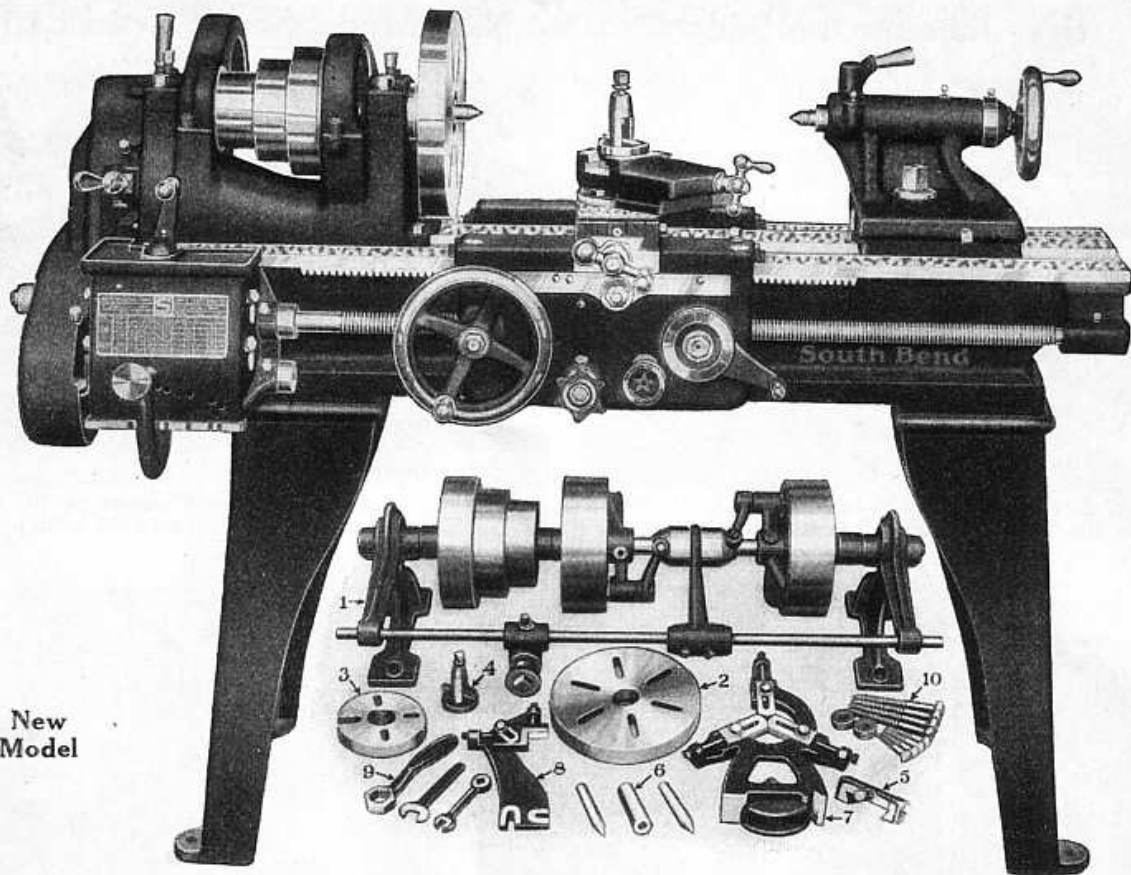


Fig. 35. Machining a Conical Punch and Die on Lathe



Above Equipment Included in Price of Lathe

No. 84-A—11-in. x 4-ft. Quick Change Gear Lathe - \$335.00

Precision Tool

This New Model Back Geared Screw Cutting Lathe is a sturdy manufacturing tool, heavily constructed throughout. It has power for producing duplicate parts in quantity and precision accuracy for the finest tool work. This Lathe may be had in the Silent Chain Motor Drive Pattern illustrated on page 20.

Quick Change Gear Box

The Quick Change Gear Box provides for cutting right or left hand screw threads from 2 to 112 per inch, including 1 1/2 pipe thread, without removing a gear. It also provides a wide range of fine and coarse automatic turning feeds. The Index Plate on Gear Box shows arrangement of Levers for cutting Threads, and for Automatic Feeds.

Specifications

Swing Over Bed.....11 1/4 in.
 Swing Over Carriage.....7 5/8 in.
 Size of Centers.....No. 2 Morse Taper
 Size of Spindle Nose.....1 5/8 in. diam., 8 threads
 Size of Hole through Spindle.....7/8 in.
 Maximum Collet Capacity.....1 1/8 in.
 Thread Cutting Range.....2 to 112 per in.
 Width of Cone Pulley Belt.....1 1/2 in.
 Back Gear Ratio.....6 to 1
 Angular Travel of Compound Rest Top.....2 3/4 in.
 Acme Thread Lead Screw. Diam., 7/8 in., 8 threads
 Tool Holder. 3/8 x 7/8 in., Cutter Bit. 1/4 x 1/4 in.
 Power Required.....1/2 H. P.

Equipment Included in Price of Lathe

Regular Equipment Included in Price of Lathe consists of: Double Friction Reversing Countershaft, Large and Small Face Plates, Tool Post Complete, Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. NOTE: A set of Change Gears is furnished with Standard Change Gear Lathes.

Made in Standard Change Gear Type

The New Model 11-inch Lathe is also made in the Standard Change Gear Type which is the same as the Quick Change Gear Type except that it does not have the Quick Change Gear Box. Change Gears are furnished for cutting right or left hand threads from 4 to 40 per inch, including 1 1/2 pipe thread.

Features

18 Practical Attachments. See Pages 24 and 25
 Back Geared Headstock, Six Spindle Speeds
 Headstock Spindle Hollow, Ground all over
 Spindle Bearings Phosphor Bronze, Adjustable
 Automatic Longitudinal and Cross Feeds
 Automatic Safety Device in Apron
 Quick Acting Spring Latch Reverse
 Carriage Lock for Accurate Facing
 Self Ejecting Hardened Tailstock Center
 Set-over Tailstock for Turning Tapers
 Graduated Compound Rest for Turning Angles
 Micrometer Collar on Cross Feed Screw
 Micrometer Collar on Compound Rest Screw

Net Factory Prices of 11-inch New Model Standard and Quick Change Gear Lathes

Swing Over Bed	Length of Bed	Between Centers	Weight Crated	Standard Change Gear			Quick Change Gear		
				Cat. No.	Code Word	Price	Cat. No.	Code Word	Price
11 1/4 in.	3 ft.	12 in.	675 lbs.	33-Y	Eazir	\$290.00	84-Y	Eabot	\$325.00
11 1/4 in.	3 1/2 ft.	18 in.	700 lbs.	33-Z	Ebuka	295.00	84-Z	Elken	330.00
11 1/4 in.	4 ft.	24 in.	725 lbs.	33-A	Ecsty	300.00	84-A	Emdor	335.00
11 1/4 in.	5 ft.	36 in.	805 lbs.	33-B	Edres	310.00	84-B	Eolin	345.00

Practical Jobs for the 11-inch No. 84 New Model South Bend Lathe

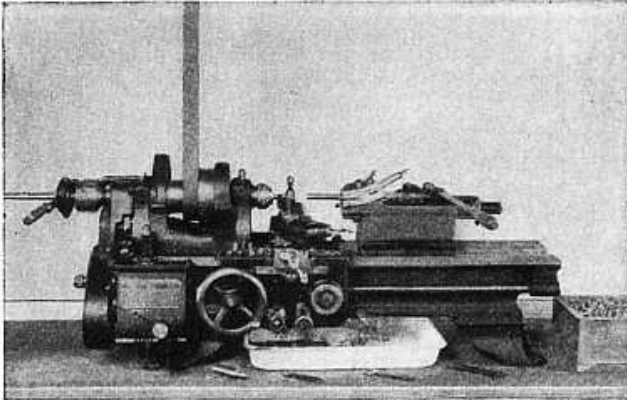


Fig. 37. An 11-inch Lathe Equipped with Quick Acting Draw-in Chuck and Lever Feed Turret

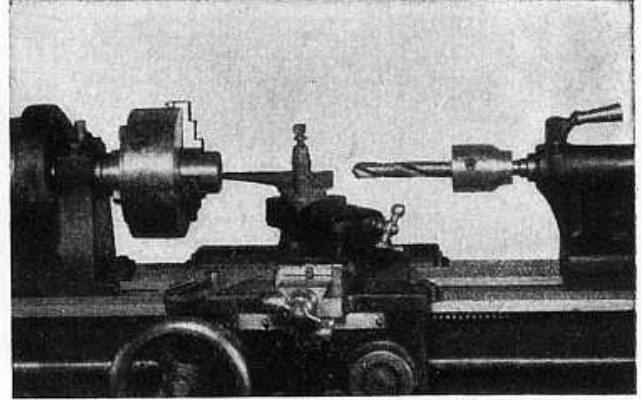


Fig. 38. Drilling and Boring Steel Gear Blanks in the Chuck of an 11-inch Quick Change Gear Lathe

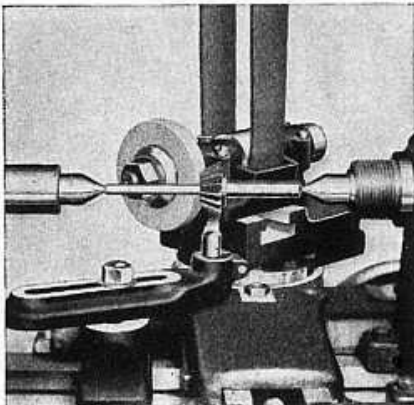


Fig. 39. Sharpening an Angular Cutter on the 11-inch Lathe

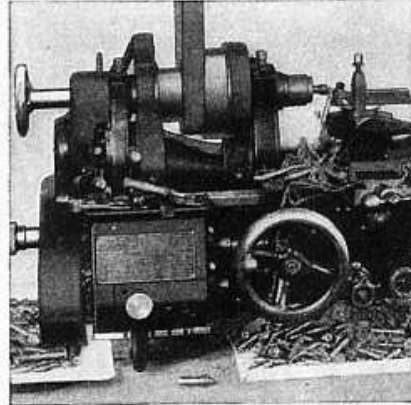


Fig. 40. An 11-inch Lathe with Hand Wheel Draw-in Chuck

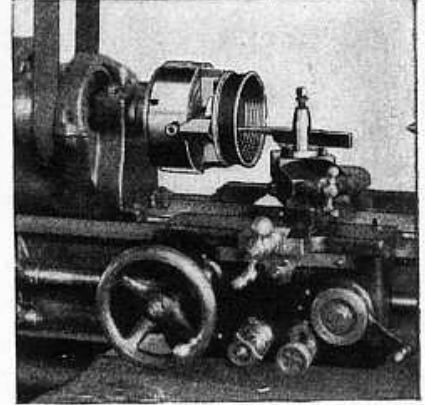


Fig. 41. Cutting an Internal Thread on the 11-inch Lathe

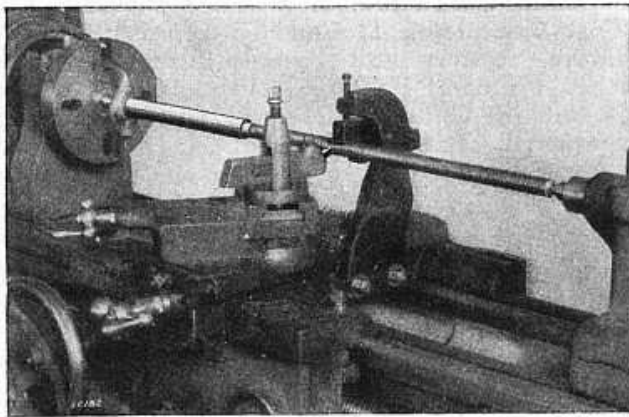


Fig. 42. An 11-inch Lathe Turning a Long Shaft of Small Diameter Supported by a Follower Rest

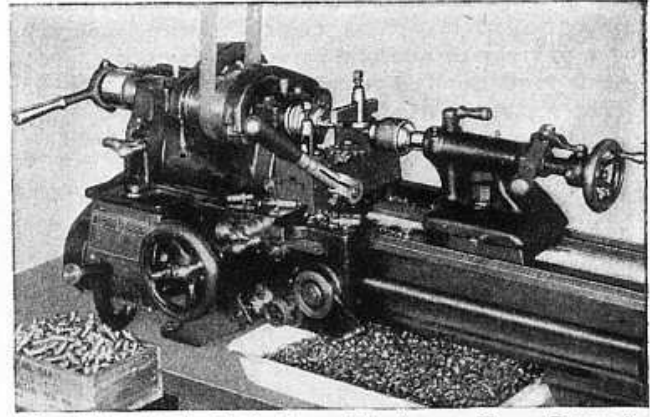


Fig. 43. 11-inch Lathe with Lever Type Draw-in Chuck, Tail Stock and Cross Slide

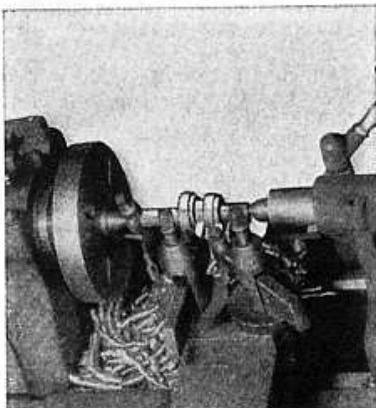


Fig. 44. Two Tool Posts in Use on 11-inch Lathe

Booklet No. 11
describing the
11-inch New Model
Lathe in Standard
and Quick Change
Gear Types
will be sent
on request
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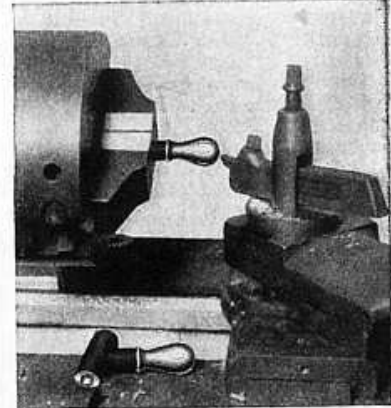
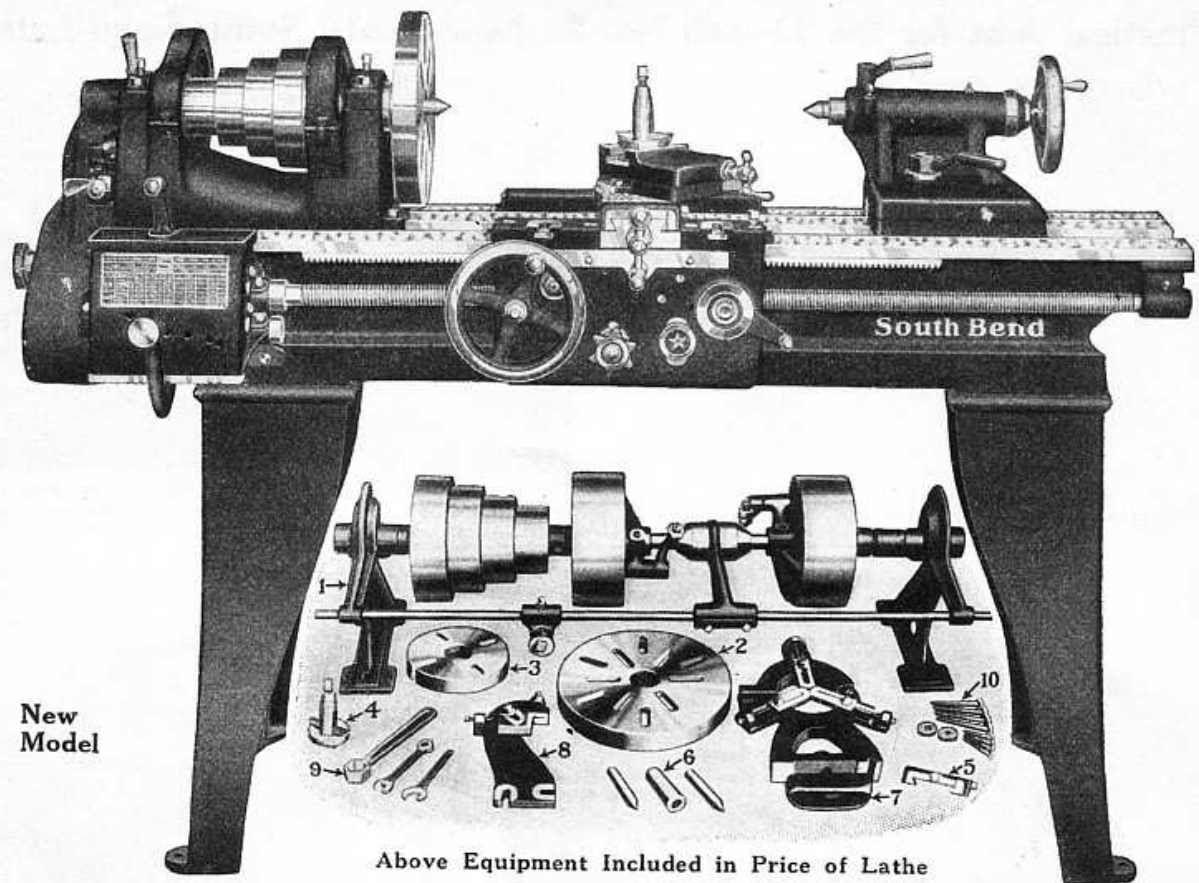


Fig. 46. Turning Irregular Work in Two-Jaw Chuck



New Model

Above Equipment Included in Price of Lathe

No. 86-B—13-in. x 5-ft. Quick Change Gear Lathe - \$402.00

For Accurate Machine Work

The New Model 13-inch Back Geared Screw Cutting Lathe is an ideal tool for the factory on production work. It has the precision and accuracy for fine tool work and the capacity for a variety of accurate machine work. This Lathe may be had in the Silent Chain Motor Drive Pattern illustrated on page 20.

Quick Change Gear Box

The Quick Change Gear Box provides 48 changes for cutting screw threads, right or left, from 2 to 112 per inch, including 11½ pipe thread.

The Carriage is equipped with Automatic Longitudinal Feed, Automatic Cross Feed and Graduated Compound Rest.

Specifications

Swing Over Bed 13¼ in.
 Swing Over Carriage 9 in.
 Size of Centers No. 3 Morse Taper
 Size of Spindle Nose 1⅞ in. diam., 8 threads
 Size of Hole through Spindle 1 in.
 Maximum Collet Capacity 5/8 in.
 Thread Cutting Range 2 to 112 per inch
 Width of Cone Pulley Belt 1¾ in.
 Spindle Speeds 25-685 R.P.M.
 Back Gear Ratio 7 to 1
 Angular Travel of Compound Rest Top 3⅛ in.
 Acme Thread Lead Screw 1 in. diam., 6 threads
 Tool Holder ½ x 1⅞ in., Cutter Bit ⅝ x ⅞ in.
 Power Required ¾ H.P.

Equipment Included in Price of Lathe

Regular Equipment Included in Price of Lathe consists of: Double Friction Reversing Countershaft, Large and Small Face Plates, Tool Post Complete, Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. NOTE: A set of Change Gears is furnished with Standard Change Gear Lathes.

Made in Standard Change Gear Type

This New Model Lathe is also made in the Standard Change Gear Type which is the same as the Quick Change Gear Type except that it does not have the Quick Change Gear Box. Change Gears are furnished for cutting right or left hand threads from 4 to 40 per inch including 11½ pipe thread.

Features

18 Practical Attachments. See Pages 24 and 25
 Back Geared Headstock, Eight Spindle Speeds
 Headstock Spindle Hollow, Ground all over
 Spindle Bearings Phosphor Bronze, Adjustable
 Automatic Longitudinal and Cross Feeds
 Automatic Safety Device in Apron
 Cone Pulley Balanced for High Speeds
 Quick Acting Spring Latch Reverse
 Carriage Lock for Accurate Facing
 Self Ejecting Hardened Tailstock Center
 Set-over Tailstock for Turning Tapers
 Graduated Compound Rest for Turning Angles
 Micrometer Collar on Cross Feed Screw
 Micrometer Collar on Compound Rest Screw

Net Factory Prices of 13-inch New Model Standard and Quick Change Gear Lathes

Swing Over Bed	Length of Bed	Between Centers	Weight Crated	Standard Change Gear			Quick Change Gear		
				Cat. No.	Code Word	Price	Cat. No.	Code Word	Price
13¼ in.	4 ft.	16 in.	1060 lbs.	35-A	Gaget	\$340.00	86-A	Galup	\$390.00
13¼ in.	5 ft.	28 in.	1110 lbs.	35-B	Geldy	352.00	86-B	Gehoc	402.00
13¼ in.	6 ft.	40 in.	1160 lbs.	35-C	Gisot	364.00	86-C	Gifts	414.00
13¼ in.	7 ft.	52 in.	1210 lbs.	35-D	Goldy	376.00	86-D	Gobli	426.00
13¼ in.	8 ft.	64 in.	1260 lbs.	35-E	Guset	388.00	86-E	Guaik	438.00

Practical Jobs for the 13-inch No. 86 New Model South Bend Lathe

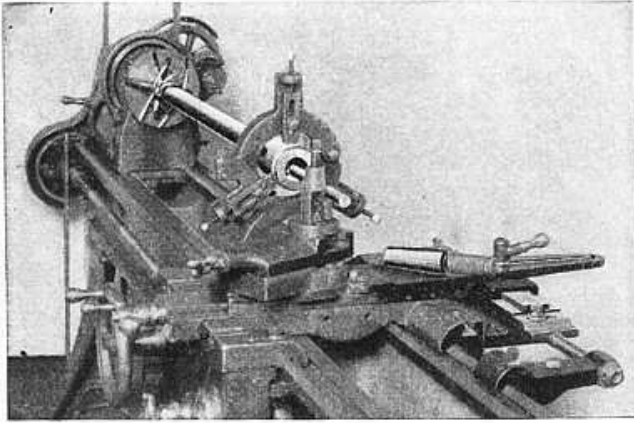


Fig. 48. Lathe Equipped with Center Rest and Taper Attachment for Boring Tapers

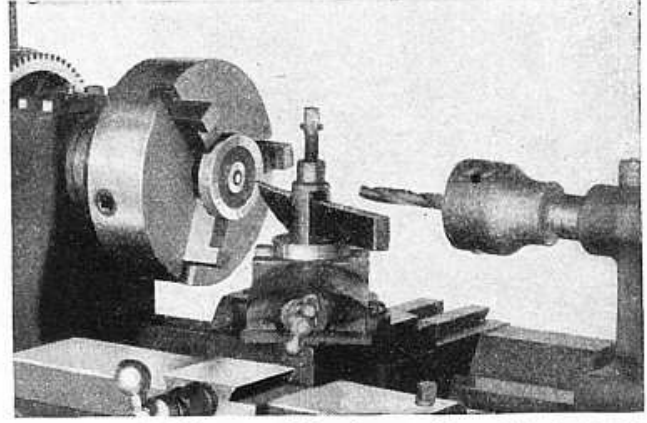


Fig. 49. Drilling and Facing a Gear Blank Held in a Three Jaw Chuck

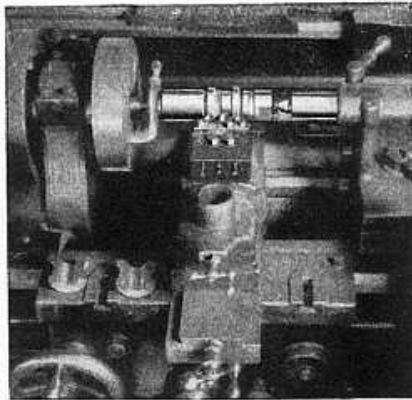


Fig. 50. Lathe Equipped with Triple Tool Block

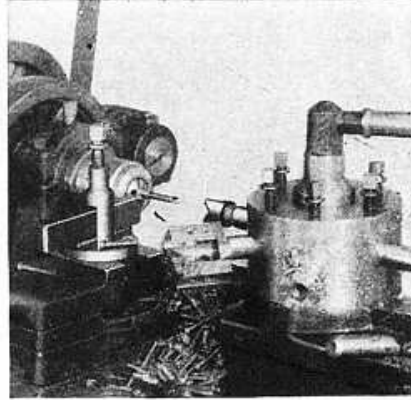


Fig. 51. Application of Turret on Lathe

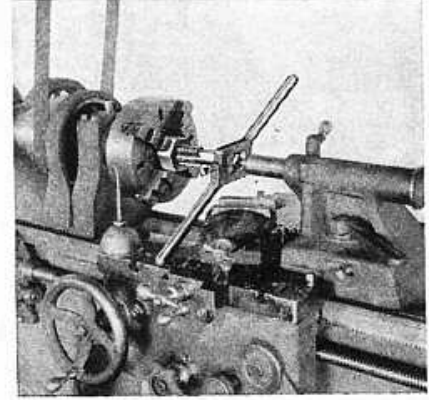


Fig. 52. Tapping a Large Nut on a South Bend Lathe

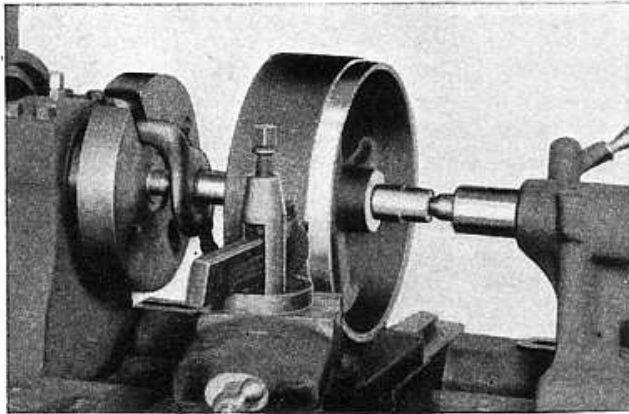


Fig. 53. Turning a Crowned Pulley on an Arbor Between Lathe Centers

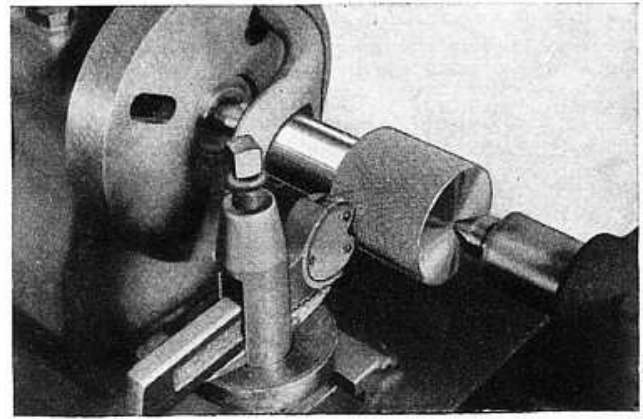


Fig. 54. Knurling a Large Handle Held Between Centers on a South Bend Lathe

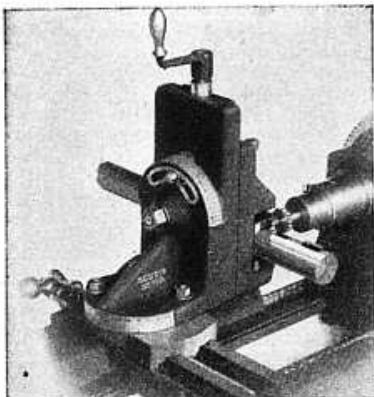


Fig. 10. Milling Woodruff Keyseat on a 13-inch Lathe

Booklet No. 13
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13-inch New Model
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and Quick Change
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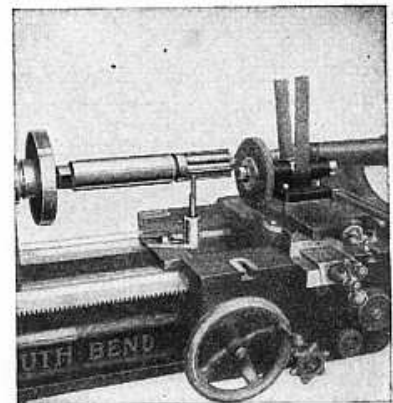
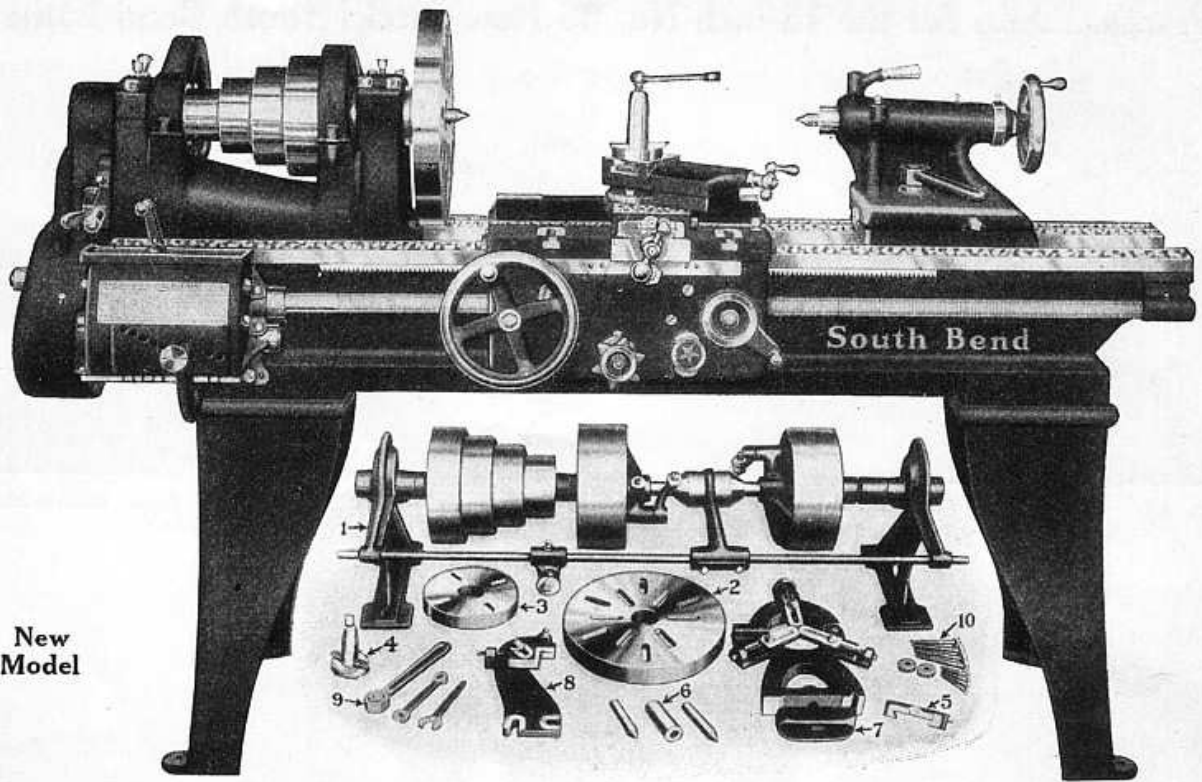


Fig. 57. Sharpening a Reamer on Lathe



New Model

Above Equipment Included in Price of Lathe

No. 92-C—16-in. x 6-ft. Quick Change Gear Lathe - \$540.00

A Remarkable Lathe

The New Model 16-inch Back Geared Screw Cutting Lathe is a remarkable tool having the power for heavy production work in manufacturing, precision accuracy for fine tool room work and the capacity for a wide variety of machine work. This Lathe may be had in the Silent Chain Motor Drive Pattern illustrated and described on page 20.

Quick Change Gear Box

The Quick Change Gear Box provides for cutting right or left hand screw threads from 2 to 112 per inch, including 1 1/2 pipe thread, without removing a gear. It also provides for a wide range of fine and coarse automatic turning feeds. The Index Plate on Gear Box shows arrangement of Levers for cutting Threads, and for Automatic Feeds.

Specifications

Swing Over Bed.....	16 1/4 in.
Swing Over Carriage.....	11 1/8 in.
Size of Centers.....	No. 3 Morse Taper
Size of Spindle Nose.....	2 3/8 in. diam., 6 threads
Size of Hole through Spindle.....	1 3/8 in.
Maximum Collet Capacity.....	7/8 in.
Thread Cutting Range.....	2 to 112 per inch
Width of Cone Pulley Belt.....	2 1/4 in.
Spindle Speeds.....	20-610 R.P.M.
Back Gear Ratio.....	8 to 1
Angular Travel of Compound Rest Top.....	.4 in.
Acme Thread Lead Screw.....	1 1/8 in. diam., 6 threads
Tool Holder.....	5/8 x 1 3/8 in., Cutter Bit.. 3/8 x 3/8 in.
Power Required.....	1 H. P.

Equipment Included in Price of Lathe

Regular Equipment Included in Price of Lathe consists of: Double Friction Reversing Countershaft, Large and Small Face Plates, Tool Post Complete, Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. NOTE: A set of Change Gears is furnished with Standard Change Gear Lathes.

Made in Standard Change Gear Type

The new Model 16-inch Lathe is also made in the Standard Change Gear Type which is the same as the Quick Change Gear Type except that it does not have the Quick Change Gear Box. Change Gears are furnished for cutting right or left hand threads from 4 to 40 per inch, including 1 1/2 pipe thread.

Features

18 Practical Attachments. See Pages 24 and 25
 Back Geared Headstock, Eight Spindle Speeds
 Headstock Spindle Hollow, Ground all over
 Spindle Bearings Phosphor Bronze, Adjustable
 Automatic Longitudinal and Cross Feeds
 Automatic Safety Device in Apron
 Cone Pulley Balanced for High Speeds
 Quick Acting Spring Latch Reverse
 Carriage Lock for Accurate Facing
 Self Ejecting Hardened Tailstock Center
 Set-over Tailstock for Turning Tapers
 Graduated Compound Rest for Turning Angles
 Micrometer Collar on Cross Feed Screw
 Micrometer Collar on Compound Rest Screw

Net Factory Prices of 16-inch New Model Standard and Quick Change Gear Lathes

Swing Over Bed	Length of Bed	Between Centers	Weight Crated	Standard Change Gear			Quick Change Gear		
				Cat. No.	Code Word	Price	Cat. No.	Code Word	Price
16 1/4 in.	6 ft.	34 in.	1875 lbs.	41-C	Mater	\$480.00	92-C	Malta	\$540.00
16 1/4 in.	7 ft.	46 in.	1955 lbs.	41-D	Medow	495.00	92-D	Melbo	555.00
16 1/4 in.	8 ft.	58 in.	2035 lbs.	41-E	Milky	510.00	92-E	Mitre	570.00
16 1/4 in.	10 ft.	82 in.	2195 lbs.	41-G	Money	540.00	92-G	Movir	600.00
16 1/4 in.	12 ft.	106 in.	2355 lbs.	*41-H	Mules	585.00	*92-H	Muday	645.00

*Lathe with 12 ft. bed is equipped with center leg which is included in price of Lathe.

Practical Jobs for the 16-inch No. 92 New Model South Bend Lathe

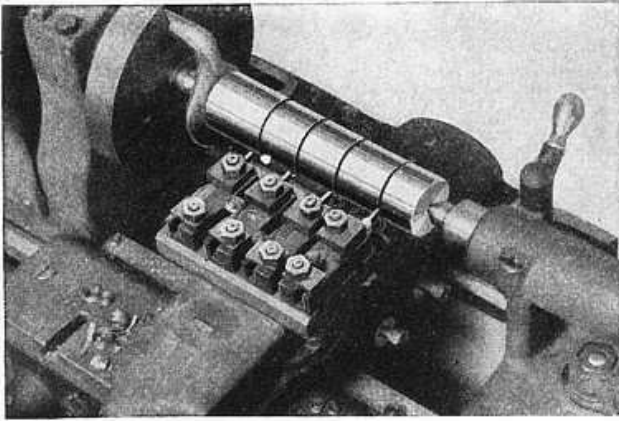


Fig. 59. Multiple Tool Block on 16-inch Lathe Locating Shoulders and Recessing

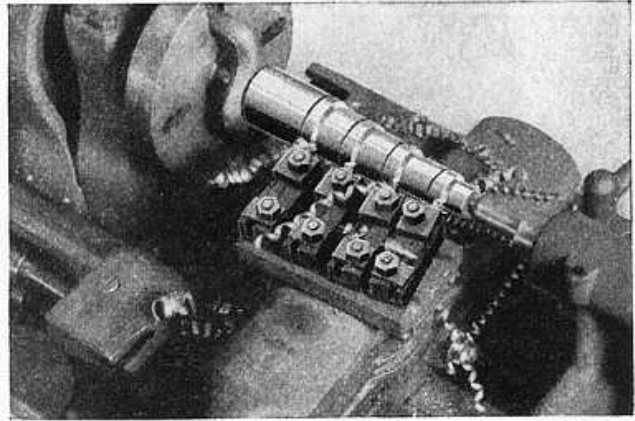


Fig. 60. Multiple Tool Block on 16-inch New Model Lathe Turning 4 Different Diameters

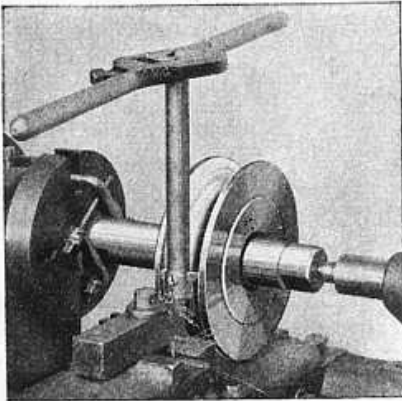


Fig. 61. Making a Pipe Bending Roll on a 16-inch Lathe

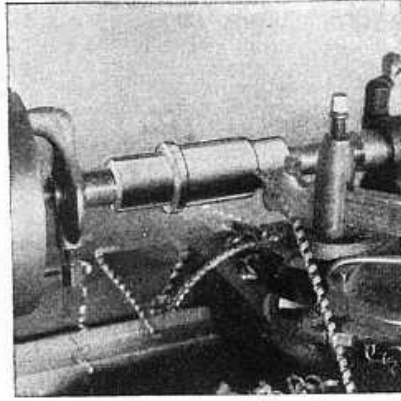


Fig. 62. Manufacturing Steel Sleeves on a 16-inch Lathe

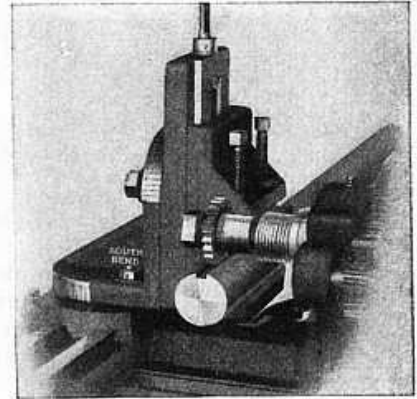


Fig. 63. Milling a Keyseat in a Shaft on a 16-inch Lathe

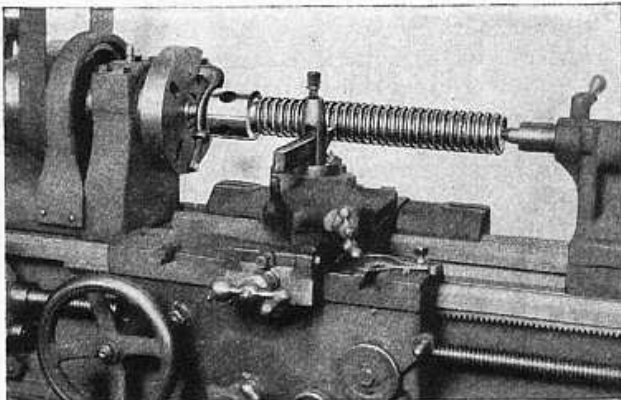


Fig. 64. Cutting a Square Thread on a 16-inch New Model South Bend Screw Cutting Lathe

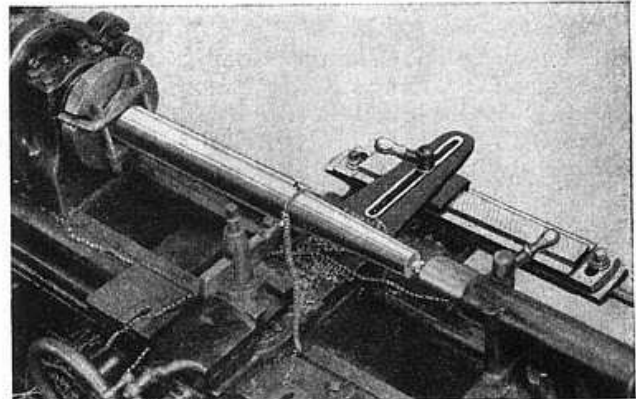


Fig. 65. A 16-inch Lathe Equipped with Taper Attachment for Manufacturing Tapered Shafts

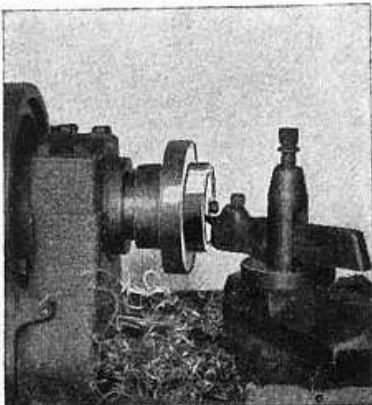


Fig. 66. Manufacturing Gear Blanks on 16-inch Lathe

Booklet No. 16
describing the
16-inch New Model
Lathe in Standard
and Quick Change
Gear Types
will be sent
on request
FREE — POSTPAID

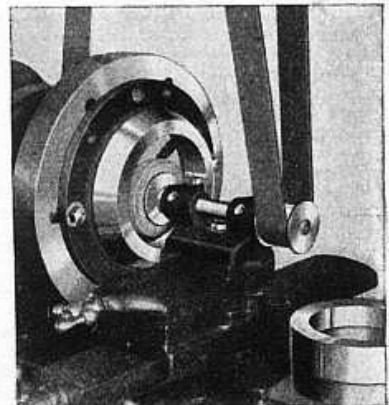
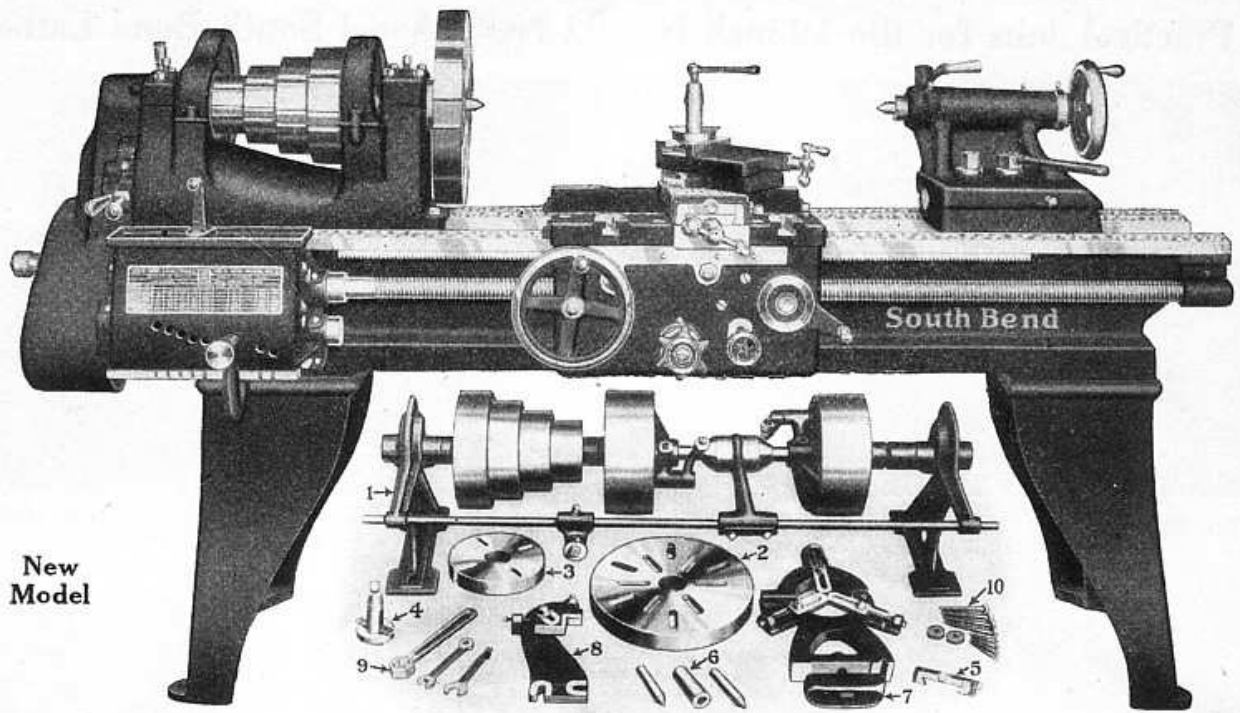


Fig. 68. Grinding a Large Die on a 16-inch Lathe



Above Equipment Included in Price of Lathe

No. 94-E—18-in. x 8-ft. Quick Change Gear Lathe - \$700.00

For Heavy Production

The New Model 18-inch Back Geared Screw Cutting Lathe has the power for heavy production manufacturing and precision and accuracy for fine tool room work. It is an excellent tool for all kinds of work in the machine shop. This Lathe may be had in the Silent Chain Motor Drive Pattern illustrated on page 20.

Quick Change Gear Box

The Quick Change Gear Box provides for cutting right or left hand screw threads from 2 to 112 per inch, including 1 1/2 pipe thread, without removing a gear. It also provides a wide range of fine and coarse automatic turning feeds. The Index Plate on Gear Box shows arrangement of Levers for cutting Threads, and for Automatic Feeds.

Specifications

Swing Over Bed.....18 1/4 in.
 Swing Over Carriage.....12 5/8 in.
 Size of Centers.....No. 3 Morse Taper
 Size of Spindle Nose.....2 5/8 in. diam., 6 threads
 Size of Hole through Spindle.....1 1/8 in.
 Maximum Collet Capacity.....1 in.
 Thread Cutting Range.....2 to 112 per inch
 Width of Cone Pulley Belt.....2 1/2 in.
 Spindle Speeds.....18-465 R.P.M.
 Back Gear Ratio.....7 to 1
 Angular Travel of Compound Rest Top.....4 3/4 in.
 Acme Thread Lead Screw.....1 3/8 in. diam., 4 threads
 Tool Holder.....5/8 x 1 3/8 in., Cutter Bit...3/8 x 3/8 in.
 Power Required.....2 H. P.

Equipment Included in Price of Lathe

Regular Equipment Included in Price of Lathe consists of: Double Friction Reversing Countershaft, Large and Small Face Plates, Tool Post Complete, Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. NOTE: A set of Change Gears is furnished with Standard Change Gear Lathes.

Made in Standard Change Gear Type

The New Model 18-inch Lathe is also made in the Standard Change Gear Type which is the same as the Quick Change Gear Type except that it does not have the Quick Change Gear Box. Change Gears are furnished for cutting right or left hand threads from 4 to 40 per inch, including 1 1/2 pipe thread.

Features

18 Practical Attachments. See Pages 24 and 25
 Back Geared Headstock, Eight Spindle Speeds
 Headstock Spindle Hollow, Ground all over
 Spindle Bearings Phosphor Bronze, Adjustable
 Automatic Longitudinal and Cross Feeds
 Automatic Safety Device in Apron
 Cone Pulley Balanced for High Speeds
 Quick Acting Spring Latch Reverse
 Carriage Lock for Accurate Facing
 Self Ejecting Hardened Tailstock Center
 Set-over Tailstock for Turning Tapers
 Graduated Compound Rest for Turning Angles
 Micrometer Collar on Cross Feed Screw
 Micrometer Collar on Compound Rest Screw

Net Factory Prices of 18-inch New Model Standard and Quick Change Gear Lathes

Swing Over Bed	Length of Bed	Between Centers	Weight Crated	Standard Change Gear			Quick Change Gear		
				Cat. No.	Code Word	Price	Cat. No.	Code Word	Price
18 1/4 in.	6 ft.	29 1/2 in.	2440 lbs.	43-C	Sagah	\$585.00	94-C	Sapho	\$650.00
18 1/4 in.	7 ft.	41 1/2 in.	2540 lbs.	43-D	Sehoe	610.00	94-D	Setra	675.00
18 1/4 in.	8 ft.	53 1/2 in.	2640 lbs.	43-E	Siati	635.00	94-E	Sibar	700.00
18 1/4 in.	10 ft.	77 1/2 in.	2840 lbs.	43-G	Sombu	685.00	94-G	Socks	750.00
18 1/4 in.	12 ft.	101 1/2 in.	3140 lbs.	*43-H	Sumpt	750.00	*94-H	Subwa	815.00
18 1/4 in.	14 ft.	125 1/2 in.	3540 lbs.	*43-K	Sylog	810.00	*94-K	Syogi	875.00

*Lathes with 12 ft. and 14 ft. beds are equipped with center leg which is included in price of Lathe.

Practical Jobs for the 18-inch No. 94 New Model South Bend Lathe

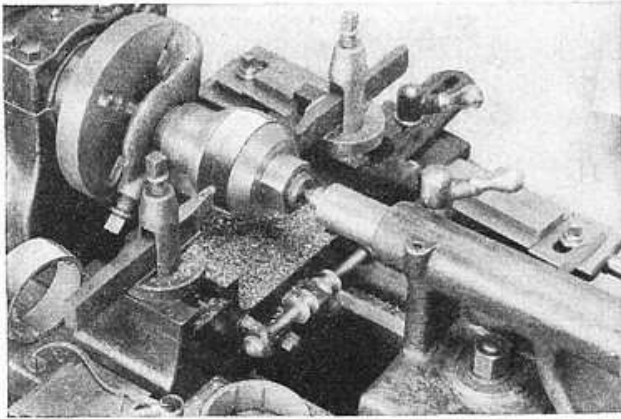


Fig. 70. Crowning Pulleys with Taper Attachment on 18-inch Lathe

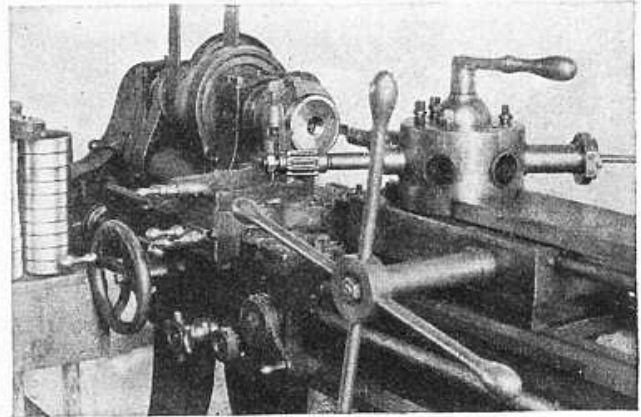


Fig. 71. Manufacturing Steel Gear Blanks on an 18-inch Lathe

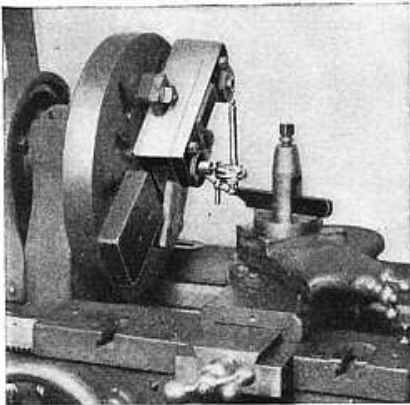


Fig. 72. Boring a Jig Plate on an 18-inch Tool Room Lathe

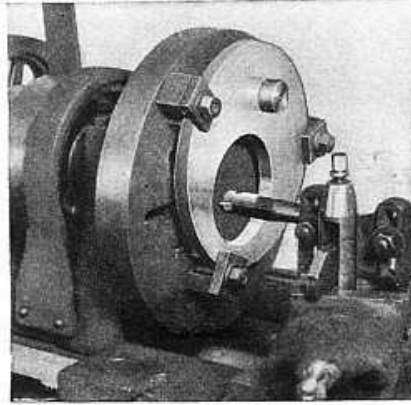


Fig. 73. Boring an Eccentric on an 18-inch Lathe

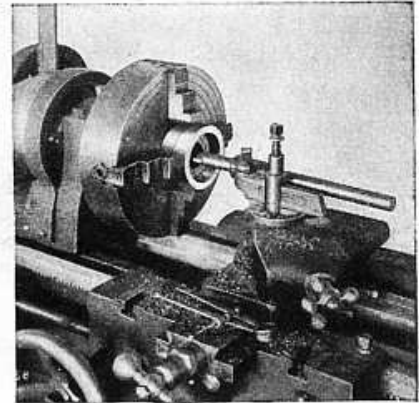


Fig. 74. Manufacturing Worm Wheels on an 18-inch Lathe

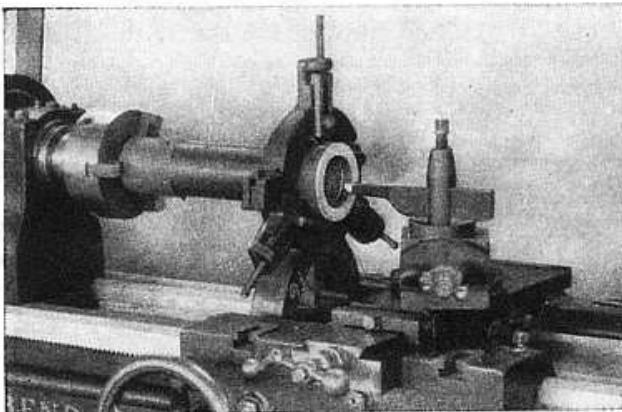


Fig. 75. Cutting Internal Threads on an 18-inch Lathe

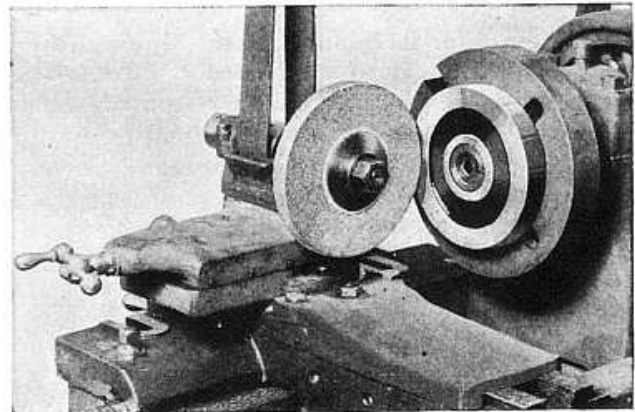


Fig. 76. Grinding a Slitting Cutter on an 18-inch Lathe

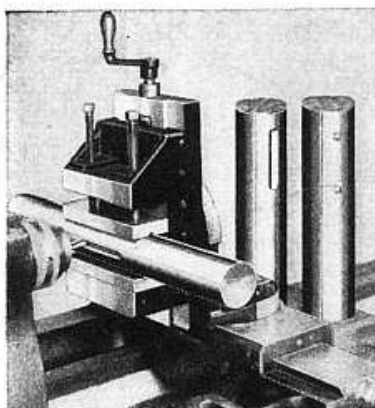


Fig. 77. Milling a Keyseat on an 18-inch Lathe

Booklet No. 18
describing the
18-inch New Model
Lathe in Standard
and Quick Change
Gear Types
will be sent
on request
FREE — POSTPAID

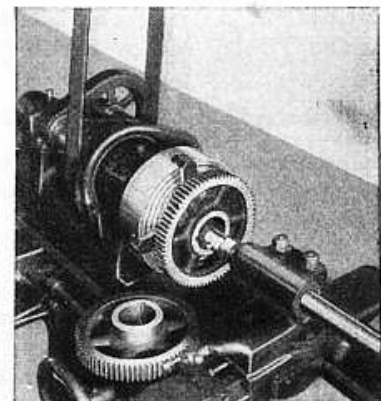
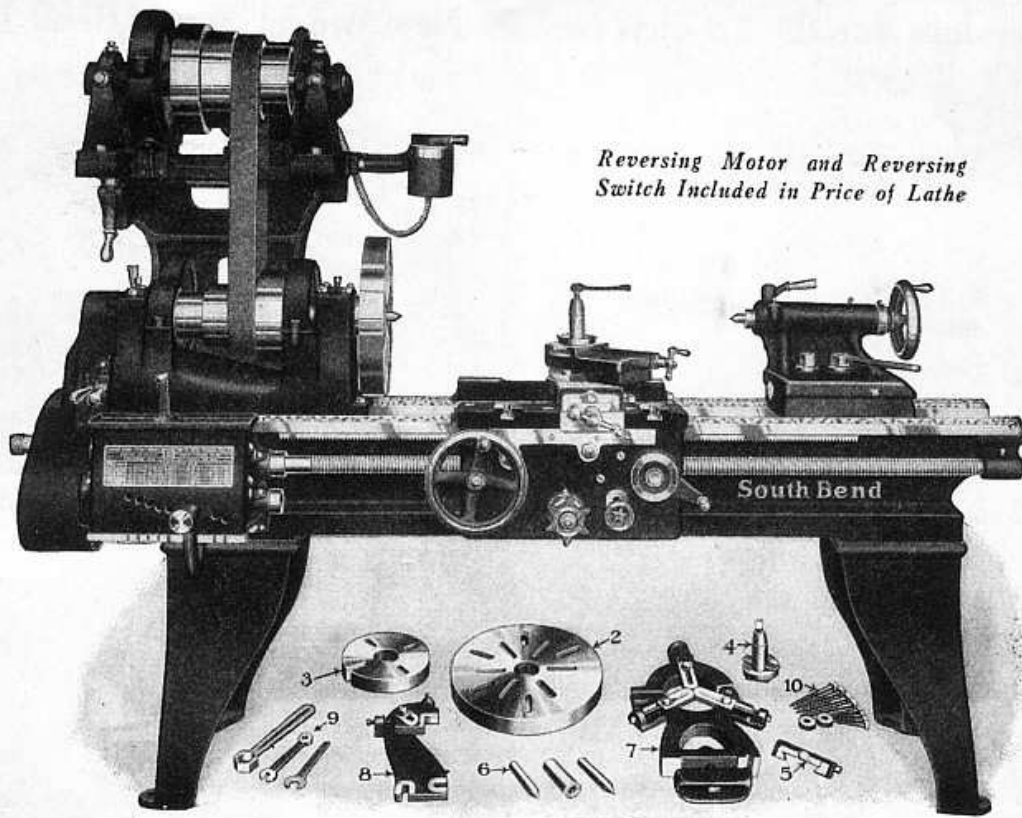


Fig. 79. Cutting a Keyway in a Gear on an 18-inch Lathe



Reversing Motor and Reversing Switch Included in Price of Lathe

Above Equipment Included in Price of Lathe

The New Model South Bend Silent Chain Motor Driven Lathe

Any Size or Type of South Bend Lathe — 9-inch to 24-inch Swing may be had in the Silent Chain Motor Drive Pattern

A Practical Motor Drive

The New Model Silent Chain Motor Drive Lathe is practical and efficient. This Lathe is desirable in the shop where limited space is available because it is a complete unit requiring no installation equipment of any kind. It occupies the same amount of floor space as the regular belt driven Lathe.

Method of Drive

A reversible type, constant speed Motor is mounted above the Lathe and is connected by a Silent Chain to the Drive Cone. This Cone is, in turn, belted to the Spindle Cone of the Lathe. This combination of chain and belt provides a powerful vibrationless drive which results in a smooth cutting action of the Lathe Tool. Motor revolves 1200 R.P.M.

Reversing Control Switch (Drum Type)

A reversing Switch (drum type) controls the entire Unit and enables the operator, from an easy working position in front of the Lathe, to instantly start, stop and reverse the Lathe Spindle. This Type of Lathe also has the advantage of changing the Spindle Speeds by means of Cone Pulleys and at the same time the Silent Chain gives a positive drive to the Spindle.

Importance of Motor Position

Position of the Motor is popular with all users because it is mounted above the Lathe out of the way of falling chips and dirt. In this way there is nothing to interfere with the efficient operation of the Motor.

Shifting of Belt

A small lever allows the table which supports the Motor to tilt and relieve the belt tension for easy shifting. An Independent Adjustment is provided for taking up the stretch of the belt.

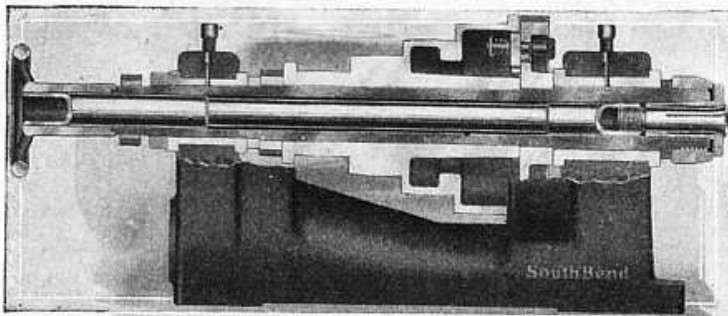
Electrical Equipment Included in Price

Electrical Equipment included in the price of the Quick Change Gear and Standard Change Gear Silent Chain Motor Drive Lathes consists of a Reversing Motor, 1200 R.P.M. Westinghouse, General Electric or equal make, Reversing Switch, Wiring between Motor and Switch, Flexible Metal Conduit, Wiring Diagram and a Leather Belt.

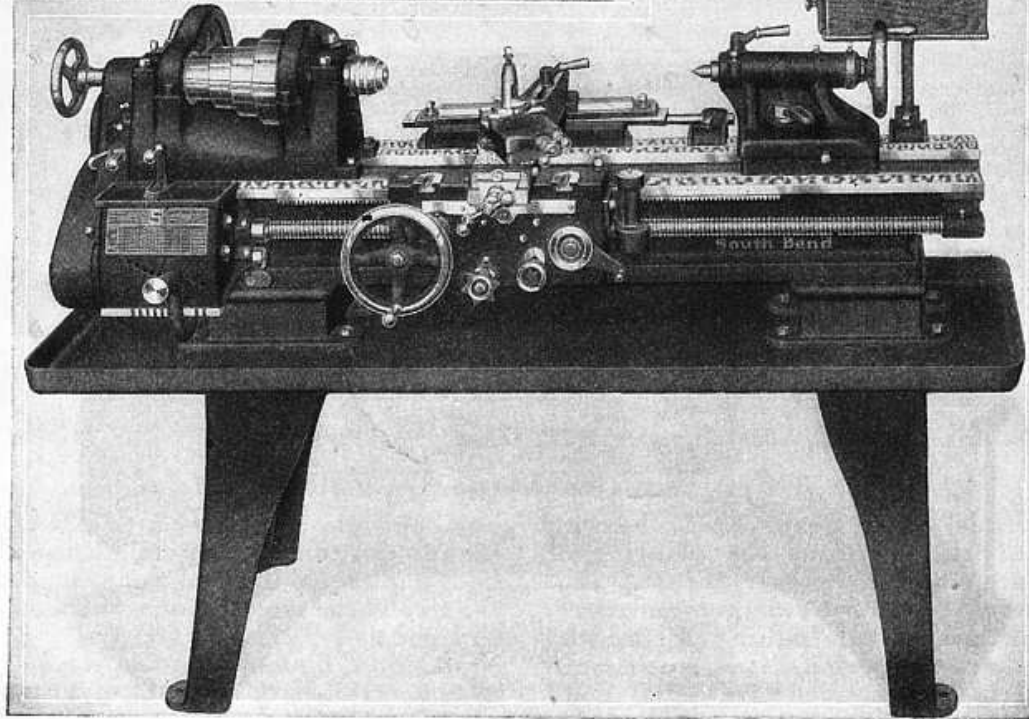
Lathe Equipment Included in Price

The Lathe Equipment included in the price of all size New Model Silent Chain Motor Driven Lathes consists of: large and small face plate, tool post complete, thread cutting stop, two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest, and Wrenches. Note: A set of Change Gears is furnished with Standard Change Gear Lathe.

Write for complete information on all sizes Silent Chain Motor Driven Lathes. For prices see page 28



Draw-in Collet Chuck Attachment for New Model South Bend Lathes



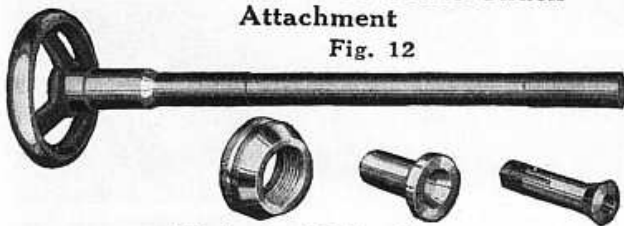
The New Model South Bend Precision Tool Room Lathe

Draw-in Collet Chuck Fitted to the New Model South Bend Lathe

The Draw-in Chuck Attachment is made for each size South Bend Lathe. It is quickly applied and finds wide use in manufacturing and tool room work. It is the most accurate type of chuck made; centers and holds small and delicate work quickly and accurately.

Hand Wheel Draw-in Collet Chuck Attachment

Fig. 12



Made in Eight Sizes

Made in eight sizes to conform to the eight different sizes of South Bend Lathes.

What the Price Includes

The price includes Draw-in Chuck complete, with one Collet. State size of Collet wanted.

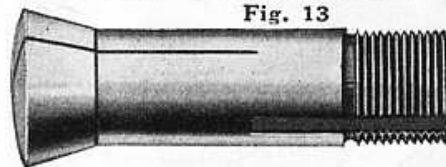
Net Factory Prices of Hand Wheel Draw-in Chuck Attachments

Size of Lathe	Cat. No.	Hole in Lathe Spindle	Collet Cap. in Sixty-fourths	Price Each
*9 in.	4309	3/4 in.	1/8 in. to 1/2 in.	\$33.00
11 in.	4311	7/8 in.	1/8 in. to 9/16 in.	38.00
13 in.	4313	1 in.	1/8 in. to 5/8 in.	44.00
15 in.	4315	1 1/8 in.	1/8 in. to 3/4 in.	50.00
16 in.	4316	1 3/8 in.	1/8 in. to 7/8 in.	56.00
18 in.	4318	1 7/8 in.	1/8 in. to 1 in.	63.00

*Cat. No. 609 1/2—Special Collet for 9-in. Lathe with Blanks \$3.75

Standard Collets for Round Work

Fig. 13



Can be used in either Hand Wheel or Hand Lever Type of Draw-in Chuck Attachment.

All Collets are made of tool steel, hardened and tempered. They are ground inside and outside to insure accuracy. Collets can be had in any of the following sizes, ranging from 1/16 in. to and including 1 in.

1/16	3/16	1/8	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1
1/8	3/8	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2	1 3/4
3/8	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2	1 3/4	2
1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2	1 3/4	2	2 1/4
5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2
3/4	7/8	1	1 1/8	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4
7/8	1	1 1/8	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3
1	1 1/8	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/4

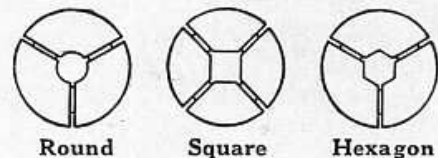
Net Factory Prices of Round Collets

Size of Lathe	Cat. No.	Spindle Hole	Collet Capacity	Price Each
*9 in.	609	3/4 in.	1/8 in. to 1/2 in.	\$3.50
11 in.	611	7/8 in.	1/8 in. to 9/16 in.	4.00
13 in.	613	1 in.	1/8 in. to 5/8 in.	4.50
15 in.	615	1 1/8 in.	1/8 in. to 3/4 in.	5.00
16 in.	616	1 3/8 in.	1/8 in. to 7/8 in.	5.50
18 in.	618	1 7/8 in.	1/8 in. to 1 in.	6.00

Three Types of Split Collets

Fig. 14

We can furnish three different styles of Collets as illustrated. Prices of square and hexagon Collets on application.

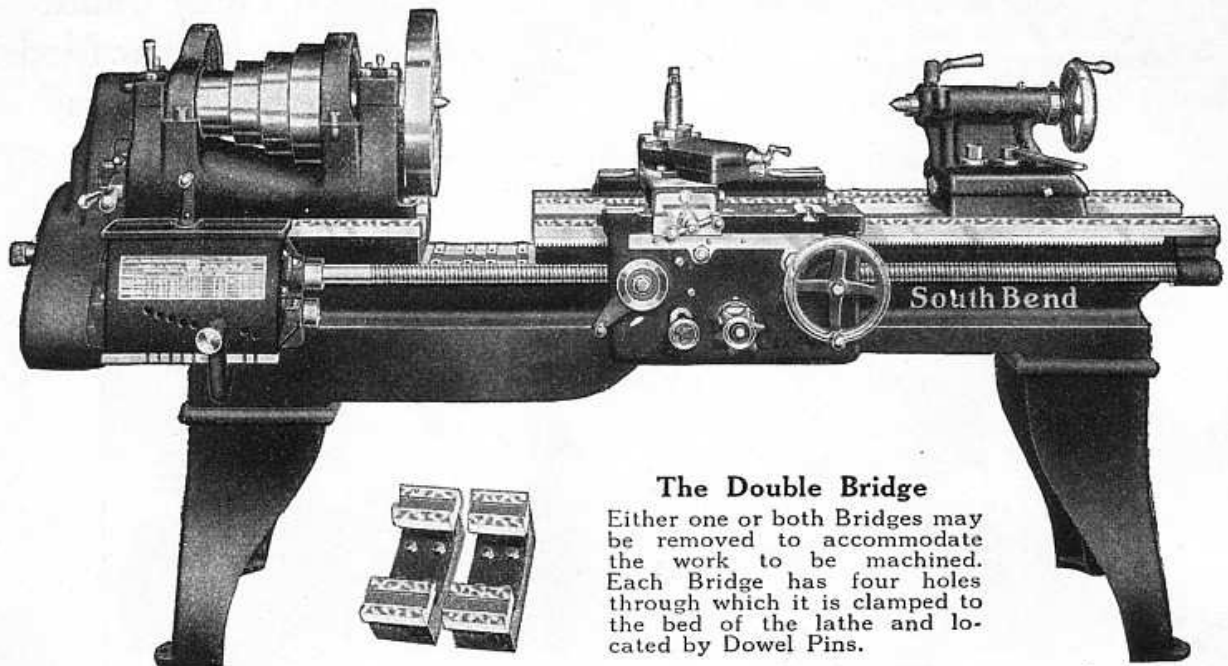


Round

Square

Hexagon

New Model South Bend Gap Lathe with Double Bridge



The Double Bridge

Either one or both Bridges may be removed to accommodate the work to be machined. Each Bridge has four holes through which it is clamped to the bed of the lathe and located by Dowel Pins.

No. 692-C—Gap Lathe, 16-inch to 24-inch Capacity - \$620.00

For Work of Large Diameters

The New Model South Bend Gap Lathe with the Double Bridge permits the swinging of work of large diameters over the gap that would otherwise require a larger and more expensive Straight Bed Lathe. Where the nature of the work permits, it is much more economical to buy a small size South Bend Gap Lathe than a large Straight Bed Lathe.

For description of any particular size of Gap Lathe refer to a corresponding size of Straight Bed Lathe, as the only difference between the two is the construction of the Bed, Apron and Saddle. Attachments: Pages 24 and 25. New Model South Bend Gap Lathes are furnished in Silent Chain Motor Drive Pattern, see page 20.

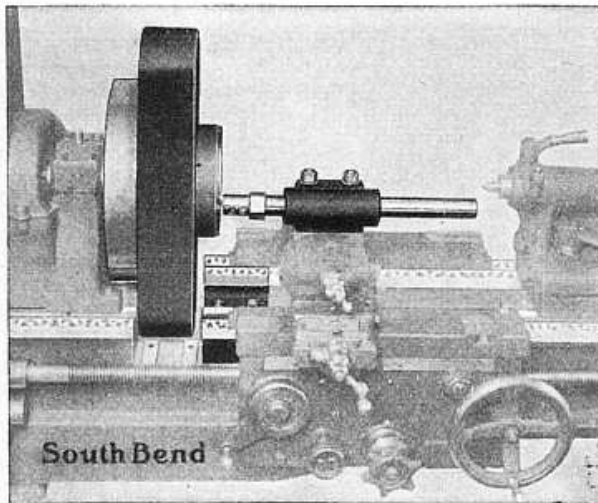


Fig. 92. One Bridge Removed, the Other Remains to Support Carriage

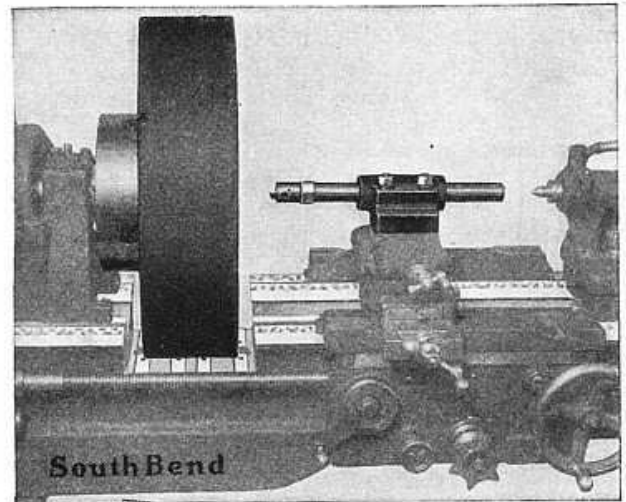


Fig. 93. Both Sections of Bridge Removed for Wide Work

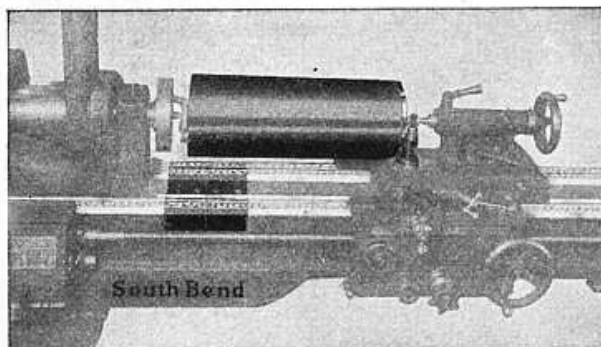
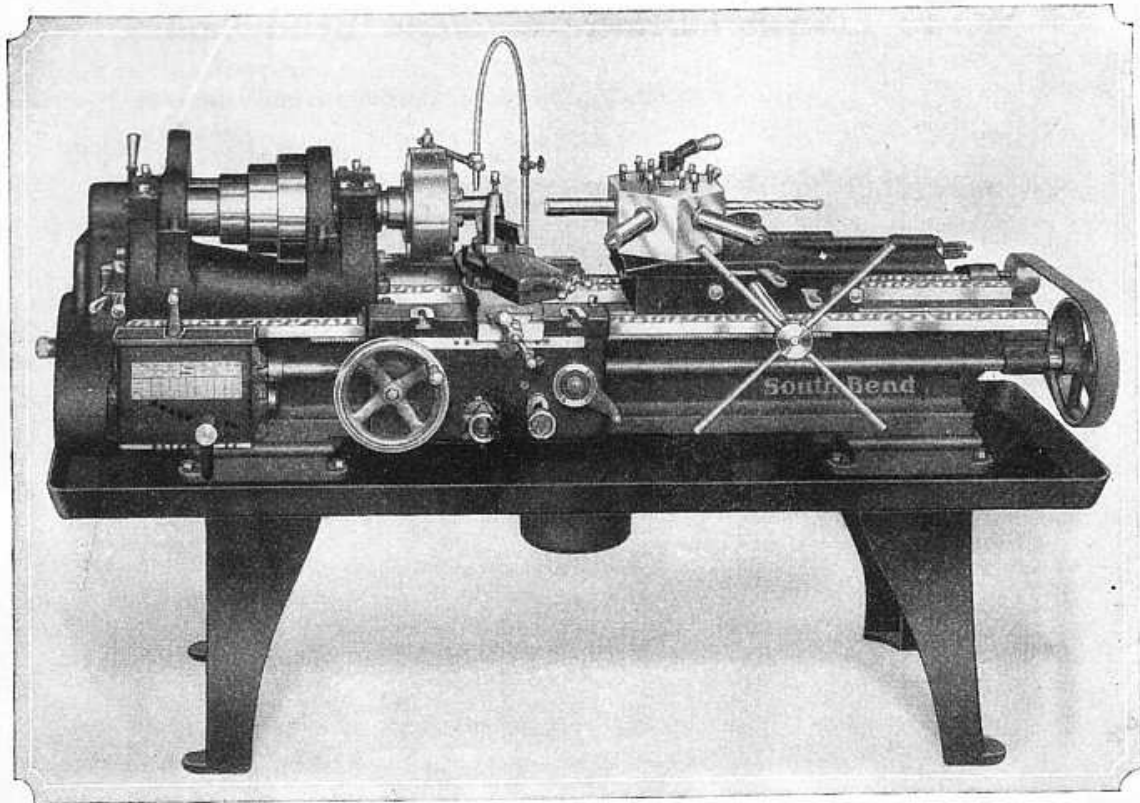


Fig. 91. Both Sections of Bridge in Place for Ordinary Work

To determine price of lathe with Gap Bed add to price of lathe the price of Gap Bed and Double Bridge shown in tabulation below.

Net Factory Price of Gap Bed with Double Bridge
F. O. B. South Bend, Ind.

Size of Lathe	Swing Over Straight Bed	Swing Over Gap	Width of Gap	Stand-	Quick	Price Extra for Gap Bed and Bridge
				ard	Change	
				Catalog Nos.		
11 in.	11¼ in.	16 in.	5 in.	633	684	\$ 50.00
13 in.	13¼ in.	19 in.	7 in.	635	686	60.00
15 in.	15¼ in.	22 in.	8 in.	639	688	70.00
16 in.	16¼ in.	24 in.	8¼ in.	641	692	80.00
18 in.	18¼ in.	26 in.	10 in.	643	694	90.00
21 in.	21¼ in.	30 in.	12 in.	649	696	125.00
24 in.	24¼ in.	36 in.	15 in.	657	698	175.00



A New Model South Bend Lathe Equipped for Chucking and Turret Work

The illustration above shows a 16-inch New Model South Bend Screw Cutting Lathe tooled for Chucking and Turret work. Any size or type New Model South Bend Lathe may be fitted with a variety of attachments and used to advantage for manufacturing operations.

A lathe equipped in this way serves the purpose of a Special Machine. When the job is finished, the attachments can be removed and the lathe used for general machine work. We will gladly recommend the size lathe and attachments most suitable for the work you wish to do. Write for details and prices.

Turnstile Bed Turrets

The illustration at the right shows the Turnstile Bed Turret. This type of Turret can be furnished for all sizes of New Model South Bend Lathes. The Turret Head is semi-automatic, and will revolve $1/6$ of a turn with each hand revolution of the Turnstile on the return stroke of the Slide. An Adjustable Stop is provided for each of the six faces of the Turret for regulating the depth of cut of each tool.

Draw-in Collet Chuck

The Hand Lever Draw-in Collet Chuck can be substituted for the 3-jaw Universal Chuck and used to advantage for making small brass, bronze and steel parts on South Bend Lathes equipped with Hand Lever Bed Turret.

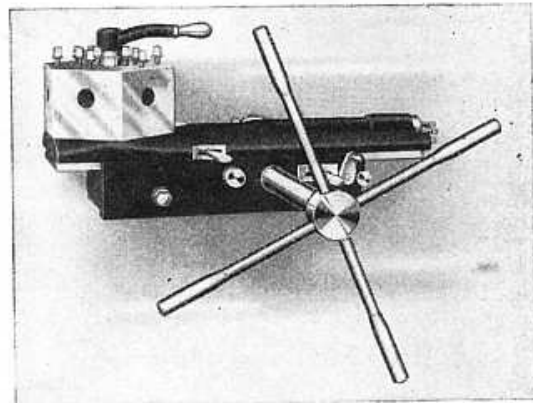


Fig. 115. Turnstile Bed Turret
(Prices on Application)

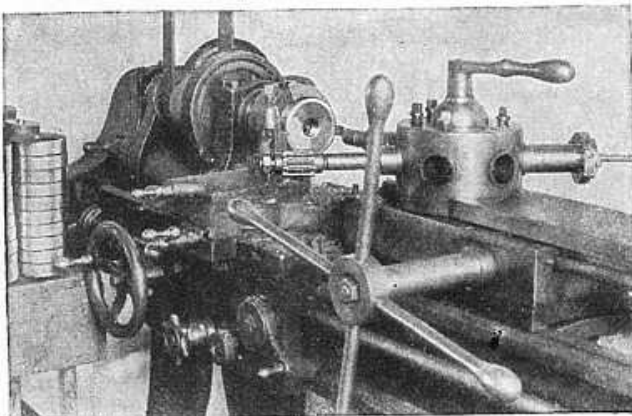


Fig. 71. Lathe with 3-Jaw Chuck, and Turnstile Bed Turret, Manufacturing Gear Blanks

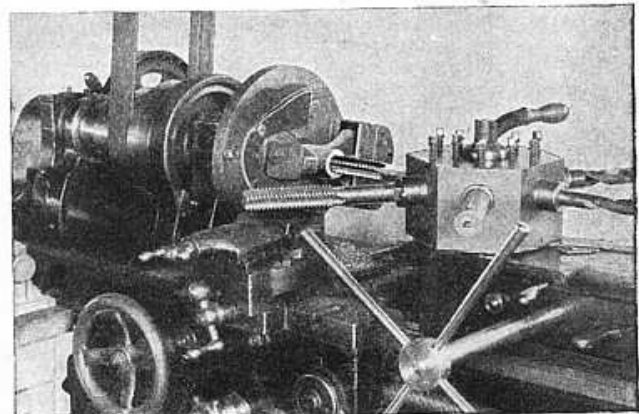


Fig. 83. Lathe Equipped with Turnstile Bed Turret for Production Manufacturing

No. 15 Electric Grinder for South Bend Lathes

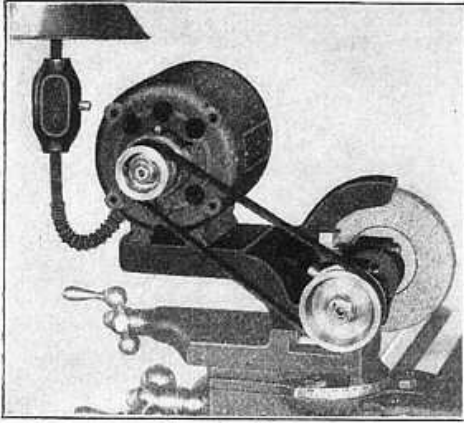


Fig. 122. No. 15 Electric Grinder Mounted on Compound Rest of the Lathe

The No. 15 Electric Grinder can be used (or supplied) on any size of South Bend Lathe from 9-inch to 24-inch swing.

Practical for a Wide Variety of Work

This Electric Grinder is practical for grinding straight, taper or spiral reamers, milling cutters, taps, dies, valves, pistons, steel bushings, and hardened shafts, etc. If considerable stock is to be removed, use the turning tool of the Lathe to reduce the work to within a few thousandths of the finished size. Two or three cuts with the No. 15 Grinder will then produce a smooth accurate surface.

Operates from Electric Light Socket

The No. 15 Electric Grinder operates from electric light socket. No special installation of electrical service necessary.

Prices and Complete Information on Request.

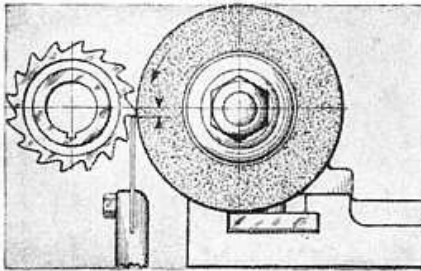


Fig. 33. Grinding Clearance on a Milling Cutter

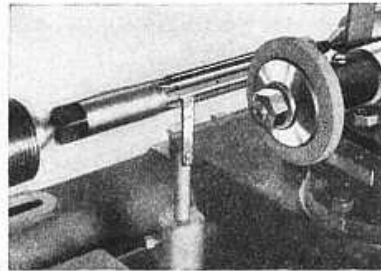


Fig. 34. Grinding a Straight Reamer in Lathe

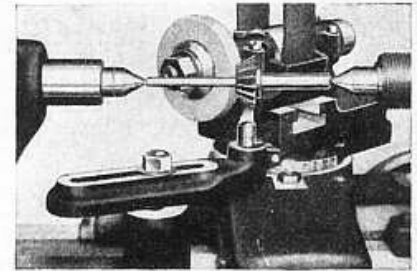


Fig. 35. Sharpening a Valve Seat Reamer in the Lathe

Graduated Taper Attachment for South Bend Lathes

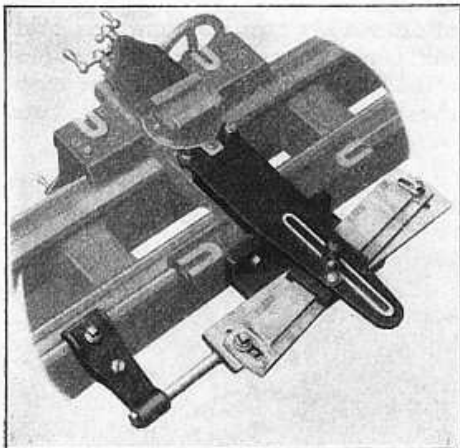


Fig. 117. Taper Attachment Fitted to Lathe

The Taper Attachment is used for turning and boring all classes of tapered work, such as automobile axles, drive shafts, hubs, pipe threads, clutch drums, etc.

Can Be Operated Entire Length of Bed

The Taper Attachment is bolted to the Lathe carriage and can be set for taper turning or boring at any position along the entire length of the lathe bed.

Graduated Swivel Bar

The Swivel Bar, which controls the Taper, is graduated one end in inches per foot of taper and the other end in degrees. The attachment can be set for any taper up to 3 inches per foot.

Prices and Complete Information on Request.

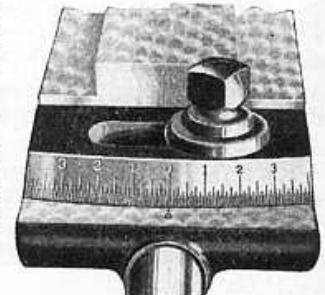


Fig. 36. Close-up of Graduation

Milling and Keyway Cutting Attachment for South Bend Lathes

The South Bend Milling and Keyway Cutting Attachment equips the lathe for doing a great deal of work that otherwise could be done only on a shaper or milling machine.

In addition to cutting keyways a wide variety of machine work can be taken care of.

Fits on Saddle of Lathe

This Attachment fits on the saddle of the lathe, swivels all the way around in a horizontal plane, and is graduated 180 degrees. The upright Angle Plate to which Vise is attached swivels in a vertical plane, and is graduated 180 degrees.

Write for Complete Information and Prices.

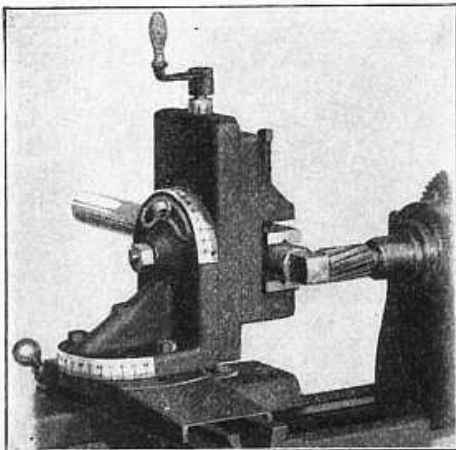


Fig. 110. Squaring a Steel Shaft

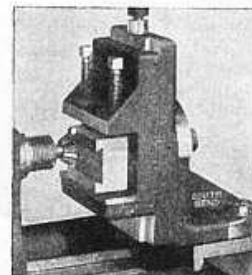


Fig. 89. Milling a Dovetail

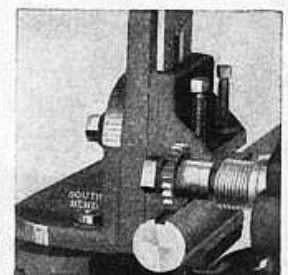


Fig. 90. Milling a Standard Keyway

Practical Attachments for South Bend Lathes

Any of the Attachments shown below and on Page 24 may be ordered with your Lathe or can be ordered later and attached in your shop. Complete detailed information on all Attachments for South Bend Lathes is given in our New General Catalog No. 88, write for free copy.

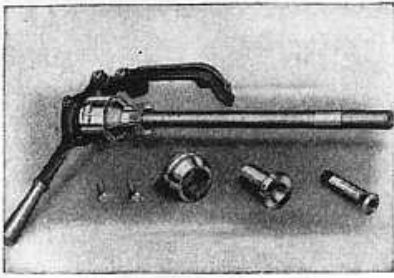


Fig. 118. Hand Lever Draw-in Chuck

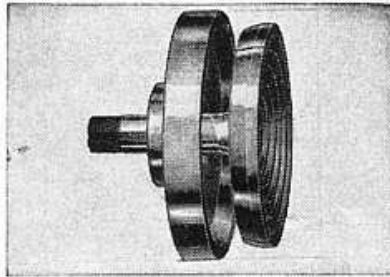


Fig. 108. Step Chuck and Closer

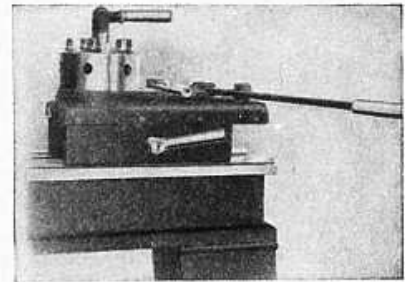


Fig. 116. Hand Feed Bed Turret

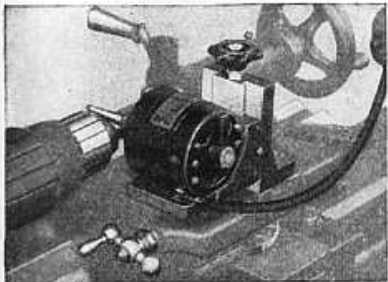


Fig. 120. Electric Mica Under-cutter

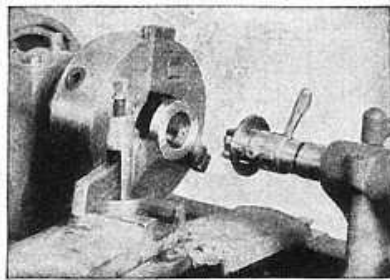


Fig. 121. Collapsible Tap

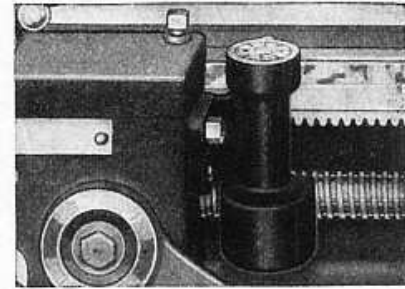


Fig. 111. Dial Thread Indicator

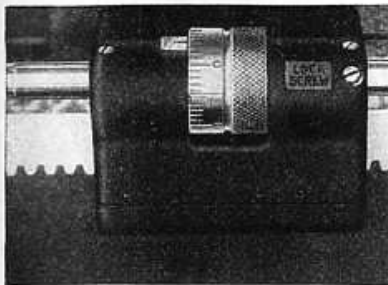


Fig. 113. Micrometer Carriage Stop

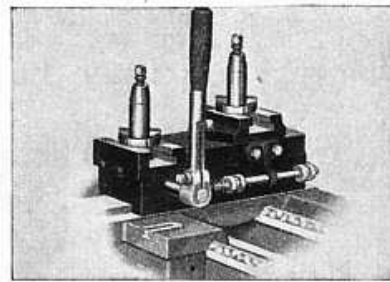


Fig. 123. Hand Lever Double Tool Rest on Cross Slide

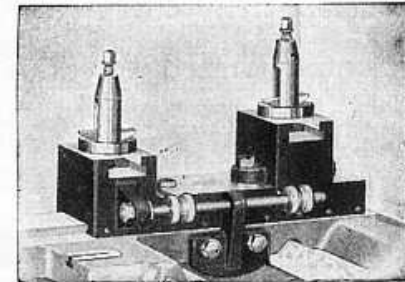


Fig. 125. Double Tool Rest on Cross Slide

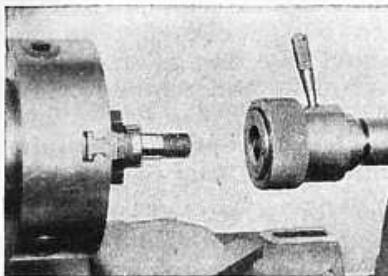


Fig. 119. Self Opening Die Head

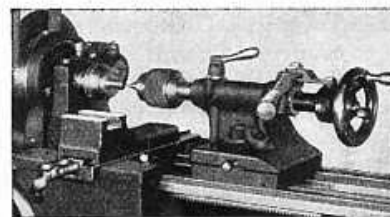


Fig. 130. Hand Lever Tail Stock

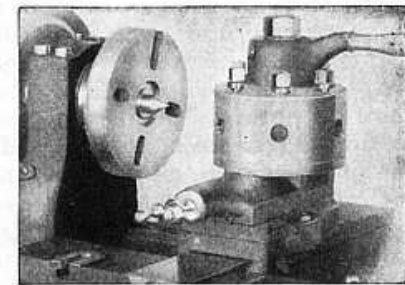


Fig. 117. Round Tool Post Turret

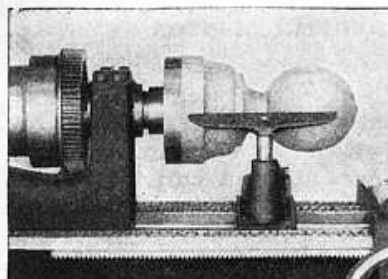


Fig. 126. Hand Rest for Wood Turning

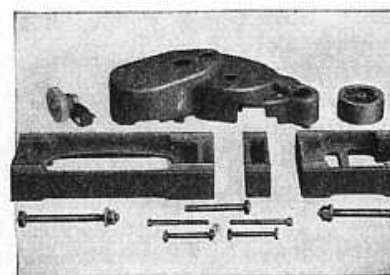


Fig. 109. Raising Blocks for Q.C.G. Lathe

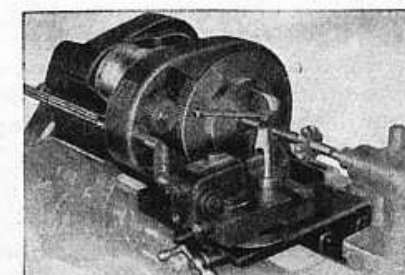
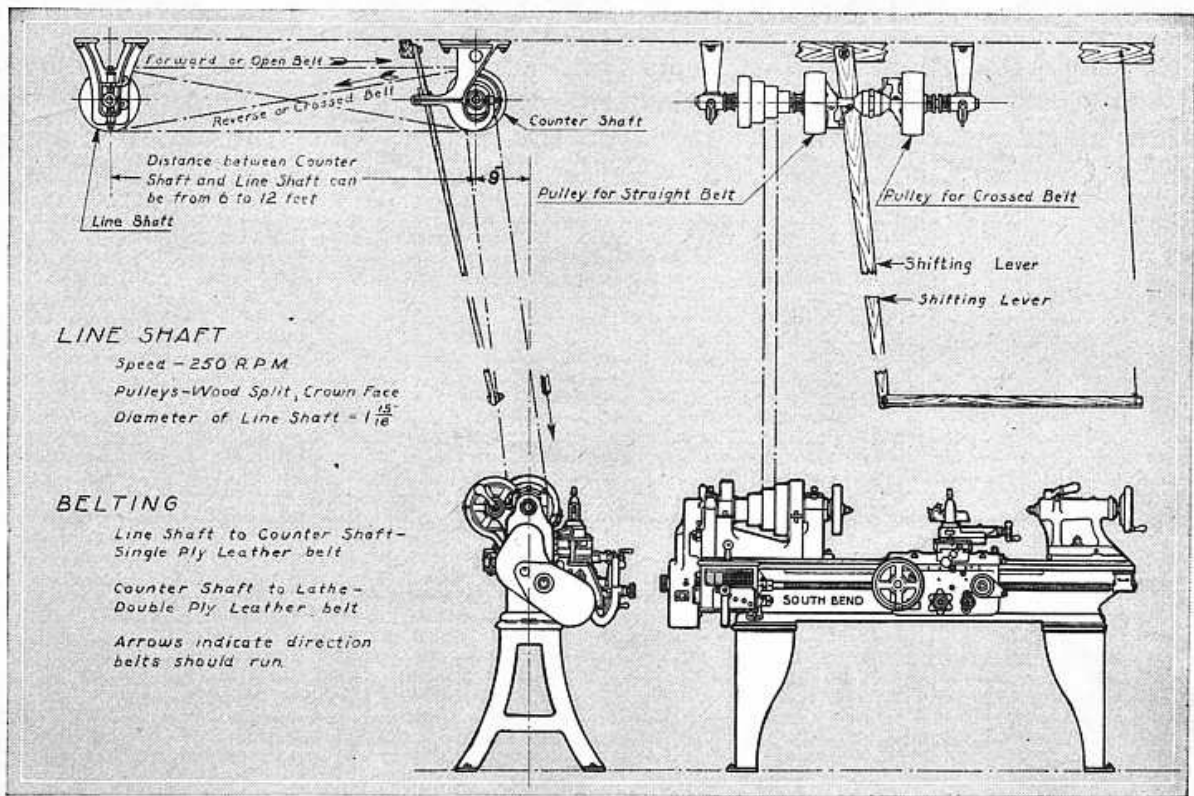


Fig. 127. Relieving Attachment



Front and Side View of Lathe with Overhead Countershaft Drive

The Overhead Countershaft Drive is the most popular type of drive used in industry. The Countershaft is driven from the line shaft.

The advantage is that a number of other machines can also be driven from the same line shaft.

Lathe Crated for Rail Shipment

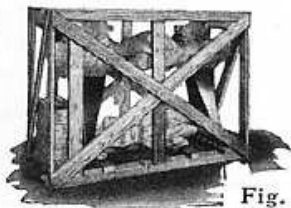


Fig. 105

The illustration above shows a New South Bend 16-inch Lathe skidded and crated for domestic shipment, that is, by rail to any point in the United States, Canada and Northern Mexico. In preparing lathes for shipment all polished parts are greased to prevent rusting, each unit is wrapped securely with heavy paper so as to prevent dust or dirt accumulating in the mechanism. The small parts are packed in a strong box which is nailed to the skids. The lathe is then skidded and crated so it will ride without damage.

Safe Arrival of Lathe Guaranteed

We have shipped more than 37,000 South Bend Lathes during the past 21 years, and, owing to the practical method of packing and crating, we can guarantee the safe arrival of your lathe, and protect you against any loss or damage while in transit.

Pass This Booklet On

When you receive this Handbook, if you are not interested, please pass it on to someone who is interested in mechanics as we feel sure he will appreciate it.

Lathe Boxed for Ocean Shipment

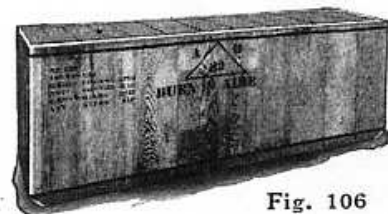


Fig. 106

From twenty years' experience in boxing for ocean shipment, we know how important it is for the lathe to be packed and boxed properly to withstand the rough handling that it receives in transit and when loaded and unloaded from ocean steamers. Our method of packing is secure and insures safe delivery of the South Bend Lathe to you.

Foundation Plans for Erecting Lathes

Foundation Plans, Blue Prints and Instructions for the erection and installation of the Lathe will be found packed with each South Bend Lathe.

Easy Payment Terms

South Bend Easy Payment Terms apply to all South Bend Lathes, Attachments, Chucks, Tools and Accessories. You can buy any size South Bend Lathe with or without Attachments under this plan, or you can buy only Attachments, Chucks or Tools without the Lathe paying for them under our convenient Easy Payment Plan. Write for our Easy Payment Plan Booklet No. 28 which gives complete information. Use Coupon on page 27.

Write for Free Catalog and Booklets—Use Coupon Below



New General Catalog No. 88

New General Catalog No. 88 contains complete and up-to-date information on the entire line of South Bend New Model Screw Cutting Engine Lathes of all types and drives, also attachments and tools for all sizes lathes.

This Catalog also gives prices on the entire line. It is a valuable reference book. Mailed upon request, postpaid, no charge. Give street address to insure safe delivery.

Booklets on Each Size Lathe—Photographs and Shop Kinks



We have booklets on each size Lathe devoted exclusively to the illustration and description of that particular Lathe in various types and drives showing prices on Lathe, Attachments, Chucks, Tools, etc.

Check off in the coupon below the size Lathe you are interested in, and by return mail we will send you postpaid, free, a full description of this Lathe, tools and accessories.

Our Easy Payment Plan



Our easy payment plan enables you to put a South Bend Lathe in your shop by making a small down payment of 25% of the total amount of your order. Balance to be paid in ten equal monthly payments. This plan has been in operation for several years and has proven extremely satisfactory to thousands of shop owners.

We will gladly send you our New Free Booklet No. 28 which fully explains the South Bend Easy Payment Plan. Use coupon below.

"How to Run a Lathe"—25c



"How to Run a Lathe" is a treatise covering the fundamental operations of the modern screw cutting Lathe. It is a very valuable book for the mechanic as it contains hundreds of shop kinks, rules and suggestions. This 144-page book contains over three hundred practical illustrations. A complimentary copy of this book is included with the equipment of each South Bend Lathe.

Price each, postpaid.....25c
Coin or stamps of any country accepted.

FREE CATALOG AND BOOKLET COUPON

SOUTH BEND LATHE WORKS
444 E. Madison Street
SOUTH BEND, INDIANA

Date..... 192.....

Gentlemen:—I am interested in a New Model South Bend Lathe. Please send me, without obligation, the booklet I have checked below.

Check Booklet or Booklets Wanted

- | | |
|---|--|
| <input type="checkbox"/> New General Catalog No. 88 | <input type="checkbox"/> No. 16 Booklet on 16-inch Lathe |
| <input type="checkbox"/> No. 22-K Booklet on 9-inch Jr. Lathe | <input type="checkbox"/> No. 18 Booklet on 18-inch Lathe |
| <input type="checkbox"/> No. 9 Booklet on 9-inch Lathe | <input type="checkbox"/> Easy Payment Booklet No. 28 |
| <input type="checkbox"/> No. 11 Booklet on 11-inch Lathe | <input type="checkbox"/> "How to Run a Lathe"—25c |
| <input type="checkbox"/> No. 13 Booklet on 13-inch Lathe | |

Each Booklet contains over 150 Photographs and Shop Kinks.

Name

Street No.

City..... State.....

210 Sizes and Types of New Model Quick Change Gear and Standard Change Gear Lathes

Net Factory Prices F.O.B. Cars, South Bend, Indiana; Crated for Domestic Shipment

Overhead Countershaft Drive Lathes										Silent Chain Motor Drive Lathes					Gap Bed Lathes Countershaft Drive	
Swing Over Bed	Length of Bed	Distance Between Centers	Size of Hole in Spindle	Horse Power Required	Quick Change Gear		Standard Change Gear		Quick Change Gear			Standard Change Gear			Quick Change Gear Price each	Standard Change Gear Price each
					Cat. No.	Price Each	Cat. No.	Price Each	With 3 Phase 60 Cycle A.C. Motor, Price	With Single Phase 60 Cycle A.C. Motor, Price	With Direct Current Motor, Price	Cat. No.	Price	With 3 Phase 60 Cycle A.C. Motor, Price		
9-inch New Model South Bend Screw Cutting Lathes																
9 1/4 in.	2 1/2 ft.	11 in.	3/8 in.	1/2 H.P.	32-X	\$ 230.00	32-X	\$ 366.00	32-X	\$ 369.00	32-X	\$ 331.00	32-X	\$ 346.00	32-X	\$ 334.00
9 1/4 in.	3 ft.	18 in.	3/8 in.	3/4 H.P.	32-Y	235.00	32-Y	371.00	32-Y	374.00	32-Y	336.00	32-Y	351.00	32-Y	339.00
9 1/4 in.	3 1/2 ft.	23 in.	3/8 in.	1 H.P.	32-Z	240.00	32-Z	376.00	32-Z	379.00	32-Z	341.00	32-Z	356.00	32-Z	344.00
9 1/4 in.	4 ft.	29 in.	3/8 in.	1 1/2 H.P.	32-A	245.00	32-A	381.00	32-A	384.00	32-A	346.00	32-A	361.00	32-A	349.00
9 1/4 in.	4 1/2 ft.	36 in.	3/8 in.	2 H.P.	32-R	250.00	32-R	386.00	32-R	389.00	32-R	351.00	32-R	366.00	32-R	354.00
11-inch New Model South Bend Screw Cutting Lathes																
11 1/2 in.	3 ft.	12 in.	3/8 in.	1/2 H.P.	34-Y	325.00	34-Y	445.00	34-Y	471.00	34-Y	410.00	34-Y	436.00	34-Y	419.00
11 1/2 in.	3 1/2 ft.	18 in.	3/8 in.	3/4 H.P.	34-Z	330.00	34-Z	450.00	34-Z	476.00	34-Z	415.00	34-Z	441.00	34-Z	424.00
11 1/2 in.	4 ft.	24 in.	3/8 in.	1 H.P.	34-A	335.00	34-A	455.00	34-A	481.00	34-A	420.00	34-A	446.00	34-A	429.00
11 1/2 in.	5 ft.	30 in.	3/8 in.	1 1/2 H.P.	34-B	345.00	34-B	465.00	34-B	491.00	34-B	430.00	34-B	456.00	34-B	439.00
13-inch New Model South Bend Screw Cutting Lathes																
13 1/4 in.	4 ft.	16 in.	1 in.	3/4 H.P.	36-A	390.00	36-A	525.00	36-A	590.00	36-A	475.00	36-A	540.00	36-A	484.00
13 1/4 in.	5 ft.	28 in.	1 in.	1 H.P.	36-B	402.00	36-B	537.00	36-B	602.00	36-B	487.00	36-B	552.00	36-B	496.00
13 1/4 in.	6 ft.	40 in.	1 in.	1 1/2 H.P.	36-C	414.00	36-C	549.00	36-C	614.00	36-C	499.00	36-C	564.00	36-C	508.00
13 1/4 in.	7 ft.	52 in.	1 in.	2 H.P.	36-D	426.00	36-D	561.00	36-D	626.00	36-D	511.00	36-D	576.00	36-D	520.00
13 1/4 in.	8 ft.	64 in.	1 in.	3 H.P.	36-E	438.00	36-E	573.00	36-E	638.00	36-E	523.00	36-E	588.00	36-E	532.00
15-inch New Model South Bend Screw Cutting Lathes																
15 1/4 in.	5 ft.	21 1/2 in.	1 1/8 in.	1 H.P.	38-B	475.00	38-B	628.00	38-B	707.00	38-B	568.00	38-B	641.00	38-B	647.00
15 1/4 in.	6 ft.	30 1/2 in.	1 1/8 in.	1 1/2 H.P.	38-C	490.00	38-C	643.00	38-C	722.00	38-C	583.00	38-C	656.00	38-C	662.00
15 1/4 in.	7 ft.	48 1/2 in.	1 1/8 in.	2 H.P.	38-D	505.00	38-D	658.00	38-D	737.00	38-D	598.00	38-D	671.00	38-D	677.00
15 1/4 in.	8 ft.	60 1/2 in.	1 1/8 in.	3 H.P.	38-E	520.00	38-E	673.00	38-E	752.00	38-E	613.00	38-E	686.00	38-E	692.00
15 1/4 in.	10 ft.	84 1/2 in.	1 1/8 in.	4 H.P.	38-G	550.00	38-G	703.00	38-G	782.00	38-G	643.00	38-G	716.00	38-G	722.00
16-inch New Model South Bend Screw Cutting Lathes																
16 1/4 in.	6 ft.	34 in.	1 3/8 in.	1 H.P.	39-C	540.00	39-C	695.00	39-C	774.00	39-C	635.00	39-C	708.00	39-C	714.00
16 1/4 in.	7 ft.	46 in.	1 3/8 in.	1 1/2 H.P.	39-D	555.00	39-D	710.00	39-D	789.00	39-D	650.00	39-D	723.00	39-D	729.00
16 1/4 in.	8 ft.	58 in.	1 3/8 in.	2 H.P.	39-E	570.00	39-E	725.00	39-E	804.00	39-E	665.00	39-E	738.00	39-E	744.00
16 1/4 in.	10 ft.	82 in.	1 3/8 in.	3 H.P.	39-G	600.00	39-G	755.00	39-G	828.00	39-G	695.00	39-G	768.00	39-G	774.00
16 1/4 in.	12 ft.	106 in.	1 3/8 in.	4 H.P.	39-H	645.00	39-H	800.00	39-H	873.00	39-H	740.00	39-H	813.00	39-H	819.00
18-inch New Model South Bend Screw Cutting Lathes																
18 1/4 in.	6 ft.	29 1/2 in.	1 1/2 in.	2 H.P.	39-C	650.00	39-C	858.00	39-C	972.00	39-C	793.00	39-C	907.00	39-C	905.00
18 1/4 in.	7 ft.	41 1/2 in.	1 1/2 in.	3 H.P.	39-D	675.00	39-D	883.00	39-D	997.00	39-D	818.00	39-D	932.00	39-D	930.00
18 1/4 in.	8 ft.	53 1/2 in.	1 1/2 in.	4 H.P.	39-E	700.00	39-E	908.00	39-E	1022.00	39-E	843.00	39-E	957.00	39-E	955.00
18 1/4 in.	10 ft.	77 1/2 in.	1 1/2 in.	6 H.P.	39-G	750.00	39-G	958.00	39-G	1072.00	39-G	893.00	39-G	1007.00	39-G	1005.00
18 1/4 in.	12 ft.	101 1/2 in.	1 1/2 in.	8 H.P.	39-H	815.00	39-H	1023.00	39-H	1137.00	39-H	958.00	39-H	1072.00	39-H	1070.00
18 1/4 in.	14 ft.	125 1/2 in.	1 1/2 in.	10 H.P.	39-K	875.00	39-K	1083.00	39-K	1197.00	39-K	1018.00	39-K	1132.00	39-K	1130.00
21-inch New Model South Bend Screw Cutting Lathes																
21 1/4 in.	7 ft.	38 in.	1 1/2 in.	3 H.P.	39-D	950.00	39-D	1254.00	39-D	1388.00	39-D	1174.00	39-D	1308.00	39-D	1333.00
21 1/4 in.	8 ft.	50 in.	1 1/2 in.	4 H.P.	39-E	980.00	39-E	1284.00	39-E	1418.00	39-E	1204.00	39-E	1338.00	39-E	1363.00
21 1/4 in.	10 ft.	72 in.	1 1/2 in.	6 H.P.	39-G	1040.00	39-G	1344.00	39-G	1478.00	39-G	1264.00	39-G	1398.00	39-G	1423.00
21 1/4 in.	12 ft.	96 in.	1 1/2 in.	8 H.P.	39-H	1115.00	39-H	1419.00	39-H	1553.00	39-H	1309.00	39-H	1473.00	39-H	1498.00
21 1/4 in.	14 ft.	120 in.	1 1/2 in.	10 H.P.	39-K	1175.00	39-K	1479.00	39-K	1613.00	39-K	1399.00	39-K	1533.00	39-K	1558.00
24-inch New Model South Bend Screw Cutting Lathes																
24 1/4 in.	8 ft.	43 in.	1 3/8 in.	3 H.P.	39-E	1280.00	39-E	1634.00	39-E	1767.00	39-E	1534.00	39-E	1667.00	39-E	1693.00
24 1/4 in.	10 ft.	67 in.	1 3/8 in.	4 H.P.	39-G	1360.00	39-G	1714.00	39-G	1847.00	39-G	1614.00	39-G	1747.00	39-G	1773.00
24 1/4 in.	12 ft.	91 in.	1 3/8 in.	6 H.P.	39-H	1460.00	39-H	1814.00	39-H	1947.00	39-H	1714.00	39-H	1847.00	39-H	1873.00
24 1/4 in.	14 ft.	115 in.	1 3/8 in.	8 H.P.	39-K	1540.00	39-K	1894.00	39-K	2027.00	39-K	1794.00	39-K	1927.00	39-K	1953.00
24 1/4 in.	16 ft.	139 in.	1 3/8 in.	10 H.P.	39-M	1620.00	39-M	1974.00	39-M	2107.00	39-M	1874.00	39-M	2007.00	39-M	2033.00

Patent Drop Forged Steel Tool Holders



Straight Shank Turning Tool



Formed Threading Tool



Style "B" Boring Tool



Right Hand Turning Tool



Straight Cutting-off Tool



Style "A" Boring Tool



Left Hand Turning Tool



Right Hand Cutting-off Tool

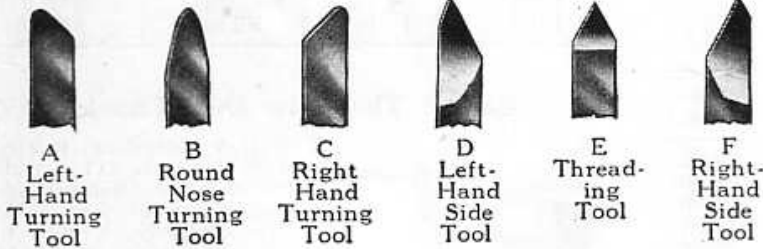


Knurling Tool

Net Factory Prices of Patent Lathe Tools

Name of Tool	9-in. Lathes		11-in. Lathes		13-15-in. Lathes		16-18-in. Lathes		21-24-in. Lathes	
	Catalog No.	Price Each	Catalog No.	Price Each	Catalog No.	Price Each	Catalog No.	Price Each	Catalog No.	Price Each
Turning Tools:										
Straight Shank	849-S	\$2.40	851-S	\$2.55	852-S	\$3.00	853-S	\$3.60	854-S	\$ 4.85
Right Hand	849-R	2.40	851-R	2.55	852-R	3.00	853-R	3.60	854-R	4.85
Left Hand	849-L	2.40	851-L	2.55	852-L	3.00	853-L	3.60	854-L	4.85
Threading Tool										
Formed	865	3.75	866	3.75	867	4.50	868	5.75	869	7.50
Cutting-off Tools:										
Straight	881-S	2.60	882-S	2.75	883-S	3.25	884-S	4.00	885-S	5.50
Right Hand	881-R	2.60	882-R	2.75	883-R	3.25	884-R	4.00	885-R	5.50
Boring Tools:										
Style "B"	429	4.40	430	4.40	431	5.25	432	6.90	433	9.80
Style "A"	....	....	....	....	426	6.50	427	8.50	428	10.25
Knurling Tool	891	5.10	892	5.50	893	6.00	894	7.25	895	7.25

High Speed Steel Cutter Bits



A Left-Hand Turning Tool
 B Round Nose Turning Tool
 C Right-Hand Turning Tool
 D Left-Hand Side Tool
 E Threading Tool
 F Right-Hand Side Tool

The illustrations show the cutting edges of six high speed steel, hardened cutter bits, ground to shape, ready for use. This set of ground cutter bits covers the range of general lathe work; however, if other shapes of cutting edges are wanted, the user may grind these bits as desired to suit the work that he has in hand.

High Speed Steel Cutter Bits Ground to Shape—Ready for Use



When ordering, give tool shape letter and catalog number.

Net Factory Prices

Catalog No.	Size Square	Length Cutter	Approximate Weight, Doz.	Price Each
1309	$\frac{3}{16}$ in.	1 $\frac{1}{2}$ in.	$\frac{1}{4}$ lb.	\$0.25
1311	$\frac{1}{4}$ in.	2 $\frac{1}{4}$ in.	$\frac{3}{4}$ lb.	.30
1313	$\frac{5}{16}$ in.	2 $\frac{1}{2}$ in.	1 $\frac{1}{4}$ lbs.	.45
1316	$\frac{3}{8}$ in.	3 in.	1 $\frac{3}{4}$ lbs.	.65
1321	$\frac{1}{2}$ in.	3 $\frac{1}{2}$ in.	2 $\frac{3}{4}$ lbs.	1.00

High Speed Steel Cutter Bit Lengths Hardened Only—Not Ground

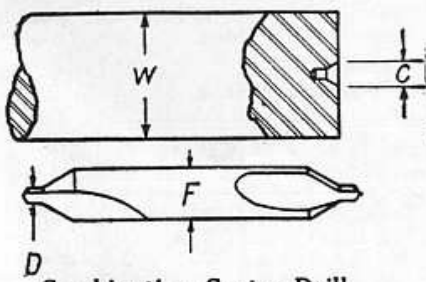


Require grinding only to make them ready for use.

Net Factory Prices

Catalog No.	Size Square	Length Cutter	Weight Per Dozen	Price Each
1509	$\frac{3}{16}$ in.	1 $\frac{1}{2}$ in.	$\frac{1}{4}$ lb.	\$0.15
1511	$\frac{1}{4}$ in.	2 $\frac{1}{4}$ in.	$\frac{3}{4}$ lb.	.20
1513	$\frac{5}{16}$ in.	2 $\frac{1}{2}$ in.	1 $\frac{1}{4}$ lbs.	.35
1516	$\frac{3}{8}$ in.	3 in.	1 $\frac{3}{4}$ lbs.	.55
1521	$\frac{1}{2}$ in.	3 $\frac{1}{2}$ in.	2 $\frac{3}{4}$ lbs.	.90

Combination Center Drill and Countersink



For drilling center hole and countersinking 60 degree angle for lathe center. Made of carbon tool steel, hardened and ground. Table shows correct size center drill for various sizes of work.

Net Factory Prices

Catalog No.	Diameter of Work "W"	Diameter of Countersink "C"	Diameter of Drill "D"	Body of Drill "F"	Price Each	Price Per Doz.
1-C	$\frac{3}{16}$ " to $\frac{1}{8}$ "	$\frac{1}{8}$ in.	$\frac{1}{16}$ in.	$\frac{13}{16}$ in.	\$0.25	\$2.25
2-C	$\frac{3}{8}$ " to 1 "	$\frac{3}{8}$ in.	$\frac{3}{16}$ in.	$\frac{5}{8}$ in.	.30	2.75
3-C	$1\frac{1}{4}$ " to 2 "	$\frac{1}{4}$ in.	$\frac{7}{8}$ in.	$\frac{11}{16}$ in.	.30	2.75
4-C	$2\frac{1}{4}$ " to 4 "	$\frac{5}{16}$ in.	$\frac{3}{8}$ in.	$\frac{1}{2}$ in.	.40	3.50

Combination Center Drill and Countersink

Chuck Equipment for South Bend Lathes

Fitting Chucks to Lathes



We recommend that all Lathe Chucks be fitted to Lathe at the factory. We have facilities for finishing the Chuck Back and turning same to fit the recess of the Chuck. When Chuck is finished it will run true and be a perfect fit to the spindle nose of the Lathe.

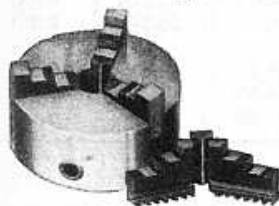
Net Factory Prices

Size Lathe	9"	11"	13"	15"	16"	18"	21"	24"
Semi-Mach. Chuck Back	\$4.00	\$4.25	\$4.50	\$4.75	\$5.00	\$5.50	\$7.00	\$8.00
Fitting Chuck Back to Chuck	3.00	3.25	3.50	3.75	4.00	4.50	6.00	7.00

Size of Chuck Recommended for Various Sizes of Lathes

Size of Lathe	Indpt. Chuck	Univ'l Chuck	Comb. Chuck	Size of Lathe	Indpt. Chuck	Univ'l Chuck	Comb. Chuck
9 in.	6 in.	4 in.	6 in.	16 in.	10 in.	9 in.	10½ in.
11 in.	6 in.	5 in.	6 in.	18 in.	12 in.	10½ in.	12 in.
13 in.	8 in.	6 in.	7½ in.	21 in.	14 in.	12 in.	15 in.
15 in.	9 in.	7½ in.	10½ in.	24 in.	15 in.	15 in.	18 in.

Three-jaw Geared Scroll Chuck



The 3-jaw Universal Geared Scroll Chuck is intended for holding round and hexagonal work. It is strictly a Universal Chuck, the jaws being moved simultaneously by the scroll threaded plate. Equipped with two sets of jaws.

Net Factory Prices

Catalog Number	Rated Size of Chuck	Will Hold About	Shipping Weight	Price Chuck
2403	3 in.	3½ in.	3½ lbs.	\$ 22.00
2404	4 in.	4¼ in.	7½ lbs.	25.00
2405	5 in.	5 in.	11 lbs.	27.00
2406	6 in.	6½ in.	20 lbs.	31.00
2407	7½ in.	7½ in.	32 lbs.	36.00
2409	9 in.	9 in.	45 lbs.	43.00
2410	10½ in.	10¾ in.	64 lbs.	48.00
2412	12 in.	12 in.	80 lbs.	57.00
2415	15 in.	15 in.	143 lbs.	81.00
2418	18 in.	18 in.	180 lbs.	105.00

Combination Geared Scroll Chucks

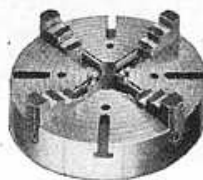


This Chuck has independent, adjustable jaws which may be set for chucking round or irregular work, either in a concentric or in an eccentric position, and the Geared Scroll Jaw operating mechanism may be used to grip the work.

Net Factory Prices

Catalog Number	Rated Size of Chuck	Will Hold About	Shipping Weight	Price Chuck
2504	4 in.	5⅝ in.	12 lbs.	\$ 45.00
2506	6 in.	7⅞ in.	22 lbs.	57.00
2507	7½ in.	9¼ in.	39 lbs.	69.00
2509	9 in.	11¼ in.	40 lbs.	75.00
2510	10½ in.	12½ in.	65 lbs.	82.00
2512	12 in.	14¾ in.	70 lbs.	94.00
2515	15 in.	17½ in.	101 lbs.	120.00
2518	18 in.	21 in.	126 lbs.	160.00

Four-jaw Independent Chucks



Chuck has four jaws with individual screw adjustment. The face of Chuck is ground true and is accurately graduated in inches. The jaws are reversible by running out at the edge and turning end for end.

Net Factory Prices

Catalog Number	Rated Size of Chuck	Will Hold About	Shipping Weight	Price Chuck
2104	4½ in.	6 in.	11 lbs.	\$ 21.00
2106	6 in.	7½ in.	21 lbs.	24.00
2108	8 in.	9½ in.	35 lbs.	28.00
2109	9 in.	11½ in.	42 lbs.	30.00
2110	10 in.	12½ in.	51 lbs.	36.00
2112	12 in.	14½ in.	90 lbs.	42.00
2114	14 in.	16½ in.	117 lbs.	46.00
2115	15 in.	18 in.	139 lbs.	51.00
2116	16 in.	19 in.	147 lbs.	54.00
2118	18 in.	21 in.	184 lbs.	70.00

Two-jaw Drill Chuck



A strong, simple chuck for round, straight shank drills, taps, reamers, etc. The hole in the hub fits taper arbor for use in head or tail spindle of lathe. Price includes wrench.

Net Factory Prices

Catalog Number	Capacity	Weight	Price
1300	⅜ in.	1⅜ lbs.	\$ 8.50
1301	½ in.	2½ lbs.	10.00
1302	¾ in.	5 lbs.	11.50
1303	1 in.	9½ lbs.	15.00

Geared Three-jaw Drill Chuck



This is a convenient, serviceable drill chuck. The geared sleeve and key facilitate easy operation of the jaws. The hub is bored to fit arbor for use in head or tail spindle of lathe. Price includes pinion key.

Net Factory Prices

Catalog Number	Capacity	Weight	Price
1200	0 to ⅜ in.	1 lb.	\$ 5.00
1201	0 to ½ in.	1¼ lbs.	8.00
1202	⅝ to ¾ in.	4¼ lbs.	14.00
1203	¾ to 1 in.	5⅞ lbs.	18.00

Finished Drill Chuck Arbor



Made of steel, accurately machined. Short taper fits drill chuck and long taper is for use in head or tail spindle of lathe. Must be ordered with chuck.

Net Factory Prices

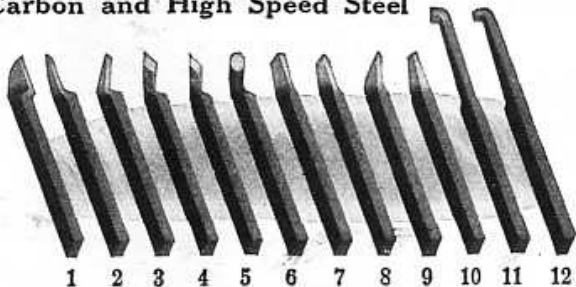
Size Lathe	Catalog Number	Weight Each	Price Arbor	Size Lathe	Catalog Number	Weight Each	Price Arbor
9 in.	709	¾ lb.	\$2.50	16 in.	716	1 lb.	\$3.00
11 in.	711	¾ lb.	2.50	18 in.	718	1 lb.	3.00
13 in.	713	1 lb.	3.00	21 in.	721	2 lbs.	4.50
15 in.	715	1 lb.	3.00	24 in.	724	2 lbs.	4.50

Tools and Accessories for South Bend Lathes

Net Factory Prices of Centers and Drill Pads

Size of Lathe	Head Stock Center		Tail Stock Center		Drill Pad		Crotch Center		Screw Center		Spur Center		Cup Center	
	Cat. No.	Price Each	Cat. No.	Price Each	Cat. No.	Price Each	Cat. No.	Price Each	Cat. No.	Price Each	Cat. No.	Price Each	Cat. No.	Price Each
9 in.	725-A	\$2.00	726-A	\$2.25	727-A	\$3.00	728-A	\$3.00	731-A	\$3.50	732-A	\$3.00	733-A	\$3.00
11 in.	725-B	2.25	726-B	2.50	727-B	3.00	728-B	3.00	731-B	3.50	732-B	3.00	733-B	3.00
13 in.	725-C	2.75	726-C	3.00	727-C	4.00	728-C	4.00	731-C	4.00	732-C	4.00	733-C	4.00
15 in.	725-D	2.75	726-D	3.00	727-D	4.00	728-D	4.00	731-D	4.00	732-D	4.00	733-D	4.00
16 in.	725-E	2.75	726-E	3.00	727-E	4.00	728-E	4.00	731-E	4.00	732-E	4.00	733-E	4.00
18 in.	725-F	2.75	726-F	3.00	727-F	4.00	728-F	4.00	731-F	4.00	732-F	4.00	733-F	4.00
21 in.	725-G	3.50	726-G	3.75	727-G	5.00	728-G	5.00	731-G	5.00	732-G	5.00	733-G	5.00
24 in.	725-H	3.50	726-H	3.75	727-H	5.00	728-H	5.00	731-H	5.00	732-H	5.00	733-H	5.00

Hand Forged Lathe Tools Carbon and High Speed Steel



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

Properly forged to shape, tempered and ground. Ready for use. If ordering less than one complete set, be sure to state both the tool number and set number.

Net Factory Prices

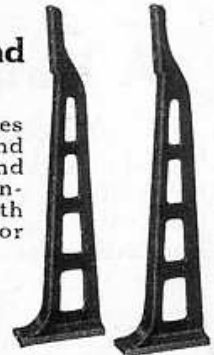
Size of Lathe	Size of Shank	Carbon Steel		High Speed Steel	
		Cat. No.	Price	Cat. No.	Price
9	5/8 x 5/8	438-C	\$0.60 \$7.00	438-HS	\$ 2.00 \$20.00
11	3/4 x 3/4	439-C	.70 8.00	439-HS	2.80 32.00
13	1/2 x 1	440-C	1.20 14.00	440-HS	4.20 50.00
15	5/8 x 1	443-C	1.60 19.00	443-HS	5.85 70.00
16, 18	5/8 x 1 1/8	441-C	2.00 23.00	441-HS	7.20 85.00
21, 24	3/4 x 1 1/2	442-C	3.00 35.00	442-HS	14.40 170.00

Hard Maple Benches and Countershaft Standards

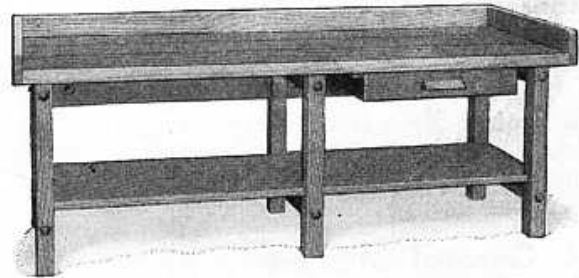
Fine Quality Hard Maple Benches designed for all types of 9-inch and 11-inch Bench Lathes. Mortise and tenon construction throughout, finished in natural wood color with two coats of shellac, one drawer for tools.



Cross Board only \$ 1.00
Standards per pair, drilled. 12.50



Countershaft Standards



Hard Maple Bench with Drawer

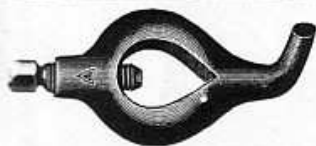
Maple Benches shown above may be used with any type of drive including the countershaft drive and the bench motor drives shown on page 7.

Specifications and Prices of Benches

Catalog No.	For Lathes with Bed Lengths of	Length Bench Top	Width Bench Top	Thickness Bench Top	Price
128-X	2 1/2' - 3' - 3 1/2'	54"	28 1/2"	1 1/2"	\$35.50
128-A	4' - 4 1/2' - 5'	72"	28 1/2"	1 1/2"	36.50

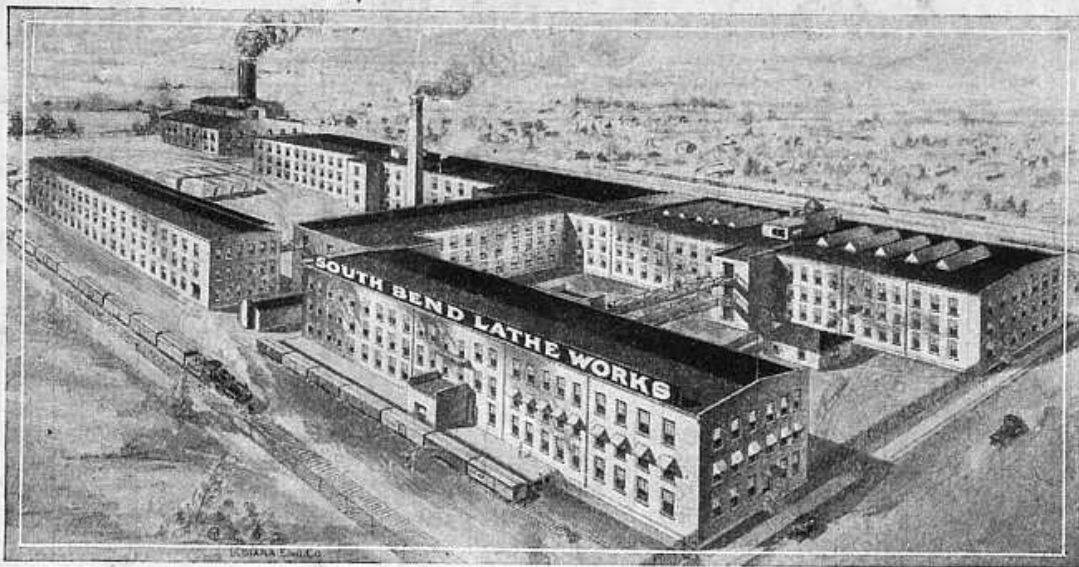
South Bend Standard Lathe Dogs

Net Factory Prices



Furnished in either heavy malleable iron or special drop forged steel. Properly designed for strength and service. Price includes hardened tool steel set-screw.

Capacity of Lathe Dog	MALLEABLE IRON			FORGED STEEL		
	Catalog No.	Weight Each	Price Each	Catalog No.	Weight Each	Price Each
3/8 in.	1-M	1/4 lb.	\$.50	1-F	1/4 lb.	\$1.00
1/2 in.	2-M	1/2 lb.	.60	2-F	3/8 lb.	1.10
3/4 in.	4-M	5/8 lb.	.70	3-F	1/2 lb.	1.20
1 in.	6-M	1 1/8 lbs.	.80	4-F	3/4 lb.	1.40
1 1/4 in.	8-M	1 3/8 lbs.	.90	5-F	1 1/2 lbs.	1.70
1 1/2 in.	10-M	1 7/8 lbs.	1.05	6-F	2 lbs.	2.00
1 3/4 in.	11-M	2 1/2 lbs.	1.15	7-F	2 3/4 lbs.	2.40
2 in.	12-M	3 lbs.	1.30	8-F	3 1/2 lbs.	2.80
2 1/2 in.	14-M	3 3/4 lbs.	1.50	9-F	5 1/4 lbs.	3.60
3 in.	15-M	4 lbs.	1.65	10-F	6 3/4 lbs.	4.60
3 1/2 in.	16-M	5 1/4 lbs.	1.85	11-F	9 lbs.	6.00
4 in.	17-M	7 lbs.	2.15	12-F	12 lbs.	9.00



The Home of the South Bend Lathe

A Partial List of Industries Using South Bend Lathes

Automobile Manufacturers

Studebaker Corporation
 Ford Motor Co.
 Chevrolet Co.
 Packard Motor Car Co.

Railroad Shops

New York Central R.R.
 Atchison, Topeka & Santa Fe R.R.
 Michigan Central R.R.
 Pennsylvania R.R.
 Union Pacific R.R.

Tool Manufacturers

Champion Shoe Machinery Co.
 Elco Tool Corporation
 Gustafson-Scott Mfg. Co.
 Henchett-Swage Works

General Manufacturing Plants

Chicago Flexible Shaft Co.
 Federal Bearings Co.
 Kirsch Mfg. Co.
 Defiance Automatic Screw Co.

Steel Mills

Bethlehem Steel Co.
 Inland Steel Co.
 Youngstown Sheet & Tube Co.

Airplanes

Mohme Aero Engineering Co., New Brunswick, N. J.
 Naval Air Station, Lakehurst, N. J.

Paper Mills

Whiting Paper Co.
 L. L. Brown Paper Co.
 Malone Paper Co.
 Little Falls Paper Co.

Ship Building Companies

Newport News Shipbuilding & Dry Dock
 Federal Shipbuilding & Dry Dock Co.
 Bethlehem Shipbuilding Co.
 New York Shipbuilding Co.

Motor and Electrical Parts Mfgs.

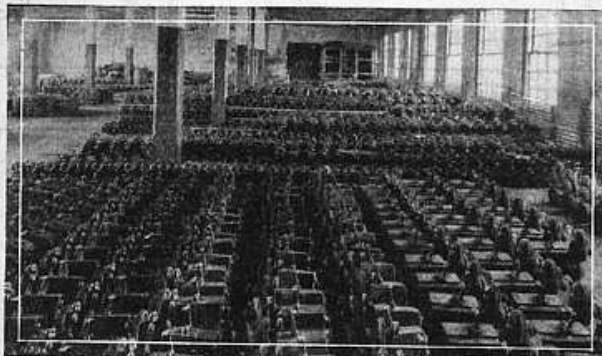
Westinghouse Electric Mfg. Co.
 General Electric Co.
 Baldor Electric Co.

Auto Accessory Mfgs.

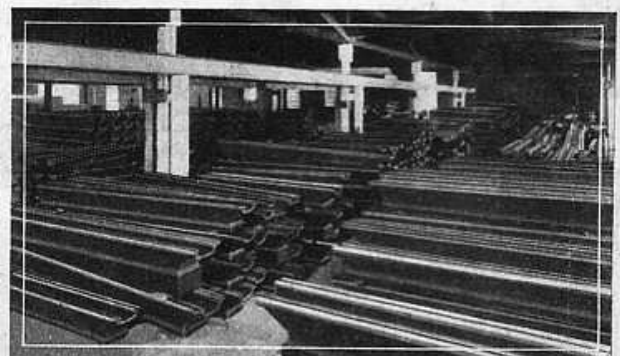
McQuay Norris Mfg. Co.
 Brown, Lipe & Chapin Co.
 Auto Specialties Mfg. Co.
 Cleveland Piston & Mfg. Co.

SOUTH BEND LATHE WORKS

444 E. Madison St. South Bend, Indiana



Section of Stock Room Showing Over 1000 Finished Lathe Units on the Floor



More Than 1000 Finished Lathe Beds in Stock. This Assures Proper Seasoning