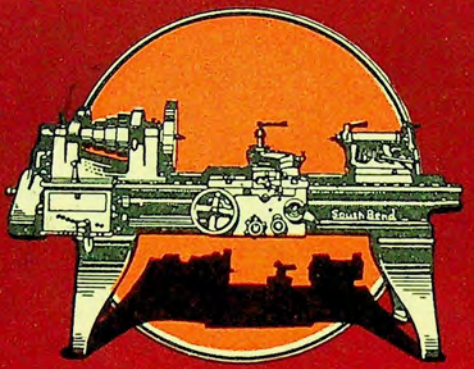
1919

South Bend LATHES



The New Model South Bend Lathe

No. 89-A Catalog

SOUTH BEND LATHE WORKS
425 East Madison Street
SOUTH BEND IND., U. S. A.

Net Prices

F. O. B. South Bend, Indiana

The prices shown in this catalog are the net prices F. O. B. cars South Bend, Ind. In setting the price on each lathe, tool and attachment shown, we have made the lowest possible price. Our policy is, One Quality, One price to all.

Guarantee

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

We will replace, free of charge, any part that proves defective, either in material or workmanship, within five years from the date of purchase.

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

SOUTH BEND LATHE WORKS

40,000 South Bend Lathes in Use

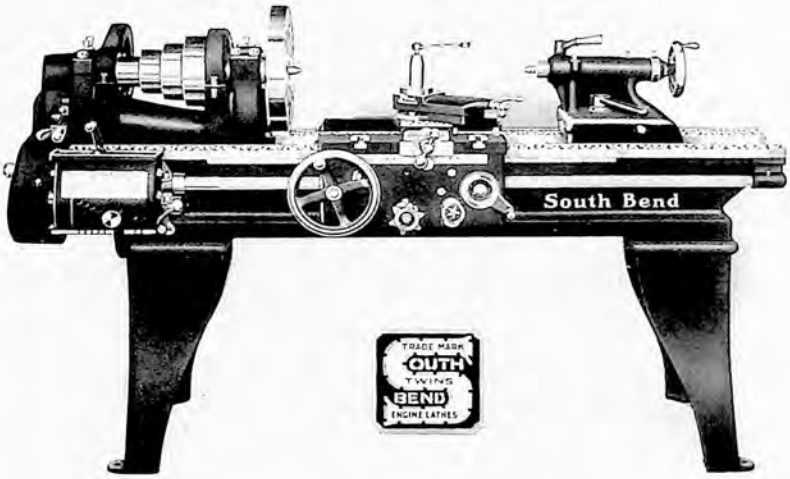
For Index see inside back cover

New Model South Bend

Back Geared Screw Cutting Lathes

for use in the

Manufacturing Plant — Machine Shop
Tool Room — Service Station
General Repair Shop — Electrical Shop
Engineering Shop — Laboratory
and Industries of all kinds.



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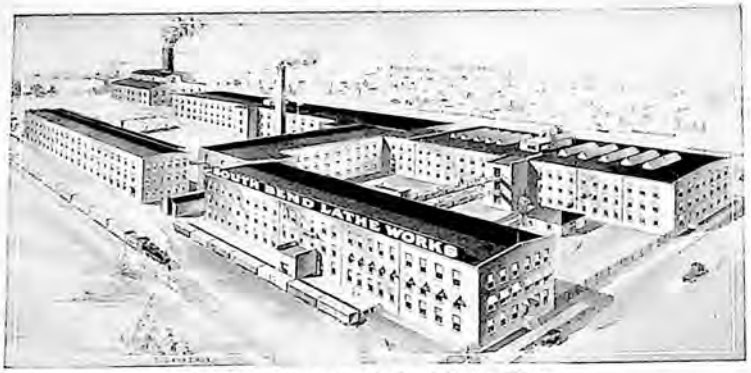
A. B. C. Fifth Edition Improved.
Bentley's, Lieber's Standard.

South Bend Lathe Works

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

Printed in U. S. A.



The Plant of the South Bend Lathe Works

History, Resources and Policy of the South Bend Lathe Works

History. The South Bend Lathe Works was established in South Bend, Indiana, in 1906 and has operated continuously for twenty-two (22) years under the same management devoting its entire time to the building of South Bend Back Geared Screw Cutting Lathes.

The Factory of the South Bend Lathe Works illustrated above represents an investment of over $1,000,000.00. The entire plant covers more than four (4) acres. In the buildings there is a total of 180,000 square feet of floor space used entirely for lathe building. Our manufacturing capacity is 4,000 lathes per annum.

The New Model South Bend Back Geared Screw Cutting Lathe was developed during the last three years at a cost exceeding $250,000.00. It is a most remarkable Lathe. Its high quality and low price has made it the most popular and widely accepted Lathe value in the United States.

Plant Facilities include the most modern machinery. More than one hundred (100) South Bend Lathes are in operation in our shop. Special machines, fixtures, jigs and tools built in our own shop for the manufacture of South Bend Lathes insure accuracy and inter-changeability. Standardization in production enables us to build in large quantities, and sell quality lathes at an exceedingly low price.

Three Hundred (300) Skilled and Trained Workmen are employed to build South Bend Lathes. These men have had an average of ten years experience building South Bend Lathes, and are capable of doing the highest class of workmanship that is so necessary in building the lathe.

Sixty-four (64) Major Accuracy Tests are made on the various parts of each New Model South Bend Lathe by precision instruments during the process of manufacture after each production operation on the various parts. Constant testing during the process of manufacture insures accuracy and precision in the finished lathe.

Our Reliability can be investigated. Inquire at any bank in the United States or overseas; they can inform you, from their records, of the standing of the South Bend Lathe Works. Dun, Bradstreets, American Manufacturers Foreign Credit Underwriters, Inc., and large business houses everywhere can give you reliable information about the South Bend Lathe Works.

Policy. The broad principles on which the business of the South Bend Lathe Works is conducted and upon which it has prospered for twenty-two (22) years is to give satisfaction and service to the users of South Bend Lathes.

Visitors are always welcome at the South Bend Lathe Works. We plan interesting trips through the factory showing you the various steps in the building of South Bend Lathes, from the rough castings to the finished lathe. You will see the various models in actual operation in our demonstration room.

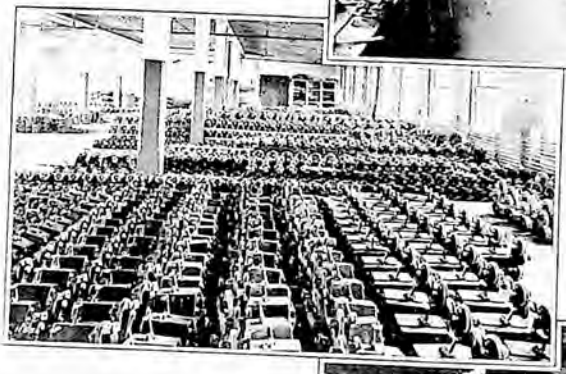
South Bend is located in the northern part of Indiana, seven (7) miles south of the Michigan State Line and 86 miles east of Chicago on the New York Central and Grand Trunk Railroads. The Lincoln Highway crosses the Dixie Highway at South Bend. Easily accessible by railroad or automobile.

A Few Shop Views of the South Bend Lathe Works

Production capacity more than 4000 lathes per year

Lathe Assembly Line

At the right—A view of the assembling line. Twenty-five lathes of one size are assembled at one time.

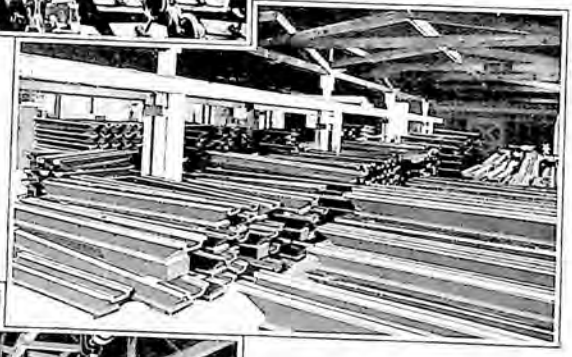


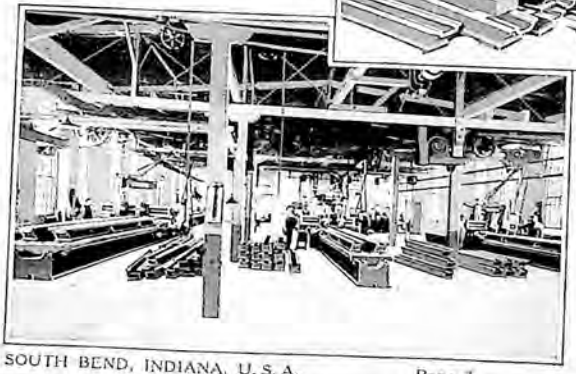
Assembled Lathe Units

At the left—Headstocks, tailstocks, carriages, gear boxes, compound rests, etc., carried in stock ready for assembly on the lathe.

Finished Lathe Beds

At the right—The Lathe beds of various sizes are carried in stock finish planed ready for assembly.





Bed Planer Room

At the left—Four Gray Planers with twenty-four-foot tables and with four heads, are used for planing lathe beds exclusively.

Manufacturing Machines Built and Used in Our Own Shop

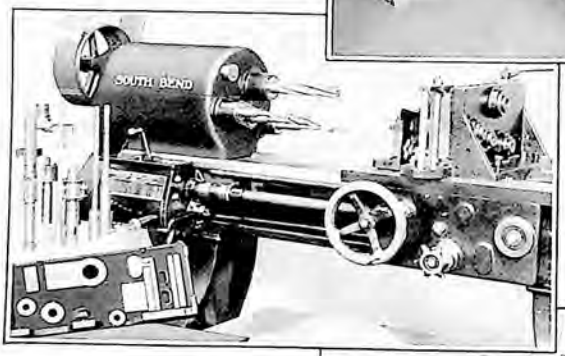
Insure the accuracy and precision of New Model South Bend Lathes

Lathes on Production Work

At the left—A group of sixteen South Bend Lathes in operation on production work.

Special Boring Machine

At the right—One of the eight special machines for boring head and tailstocks, which insures accuracy and precision.

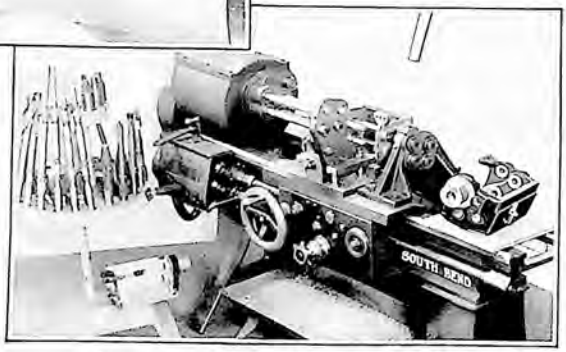


Machine for Drilling Aprons

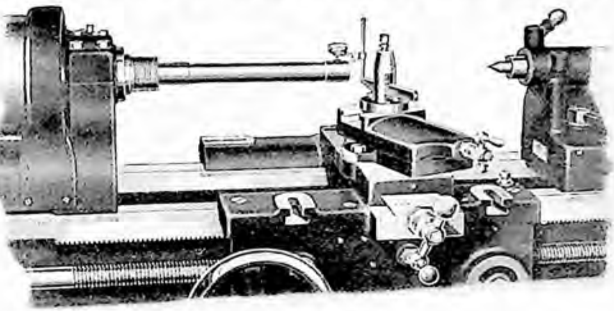
At the left—One of the eight special drilling machines for aprons insuring interchangeability of parts.

Drilling and Boring Machine

At the right—One of the eight special machines for drilling and boring gear boxes which maintain accuracy.



Mechanical Features of South Bend Lathes



Testing Headstock Spindle with Test Bar and Test Indicator

Testing Alignment of Spindle

The illustration above shows the spindle alignment test which is one of the 64 major accuracy tests which each South Bend Lathe is given. The test bar varies from 12 inches to 18 inches long, depending upon the size of the lathe. It is hardened and ground all over and fits into the taper of the spindle.

Dial Test Indicator

A dial test indicator is fastened in the Tool Post. The face of this dial is so graduated that it will record an error of one ten-thousandth of an inch. Tests of this kind enable us to build lathes that are accurate in every detail.

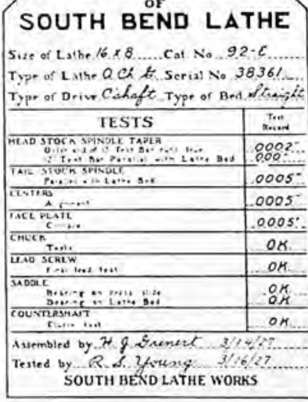
Testing the Cross-Slide

This test insures the axis of the Lathe Spindle being perpendicular and at right angles with the Cross-Slide of the Saddle.

Sixty-four Accuracy Tests

Most of the 64 accuracy tests on the South Bend Lathe are made during the process of manufacture. For example: When boring Headstock bearings, every Headstock is tested as it comes from the machine to see that it is bored accurately. Similar tests are made on the Tailstock, Carriage, Saddle and other units.

Factory Test Card



FACTORY TEST CARD
OF
SOUTH BEND LATHE

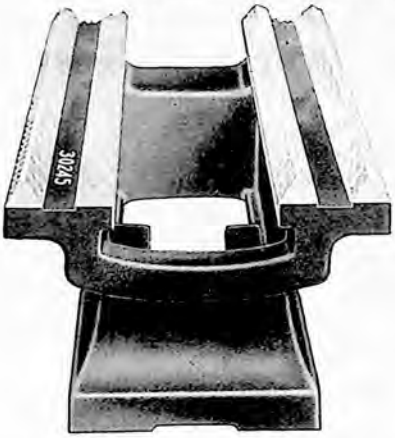
Size of Lathe 16 x 8 Cat. No. 92-C
Type of Lathe Q. Ch. G. Serial No. 38361
Type of Drive C'shaft Type of Bed Straight

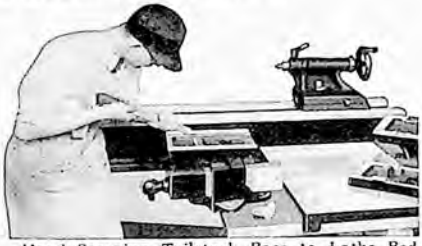
TESTS	Test Record
HEAD STOCK SPINDLE TAPER	.0002" / .000"
TAIL STOCK SPINDLE — Parallel with Lathe Bed	.0005"
CENTERS	.0005"
FACE PLATE	.0005"
CHUCK	OK
LEAD SCREW	OK
SADDLE — Bearing on Lathe Bed	OK / OK
COUNTERSHAFT	OK

Assembled by H. J. Grenert 3/14/27
Tested by R. S. Young 3/16/27
SOUTH BEND LATHE WORKS

The Factory Test Card records the principal tests made on each lathe before it leaves the factory.

Mechanical Features of South Bend Lathes





Hand Scraping Tailstock Base to Lathe Bed

Hand Scraping

The Lathe Units, for all sizes South Bend Lathes, such as bed, headstock, tailstock, saddle, apron, and compound rest, in addition to being machined, are all hand scraped where a sliding fit is necessary.

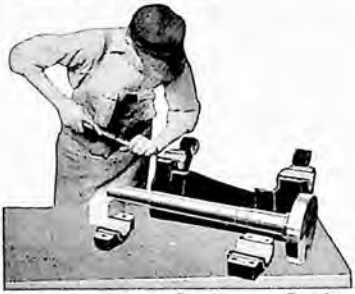
This hand scraping insures accuracy, precision, durability and long life. The New Model South Bend Lathe when given proper care should last a lifetime.

Lathe Beds

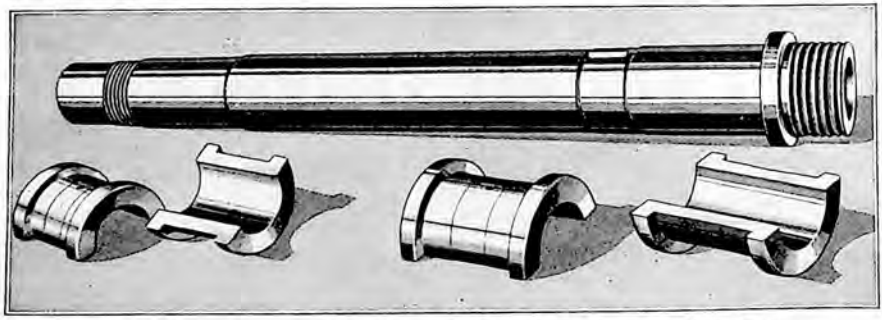
Machining, Seasoning and Scraping

The Lathe Bed is made of a hard, close-grained gray iron with 18 per cent steel mixture which resists wear. Note the heavy cross braces which are cast in at short intervals of the bed. Three "V" ways and one flat way afford large bearing surface for the carriage, headstock and tailstock.

After rough machining, the lathe beds are thoroughly seasoned, then they are finish machined and hand scraped.



Hand Scraping Bronze Bearings to Receive the Spindle



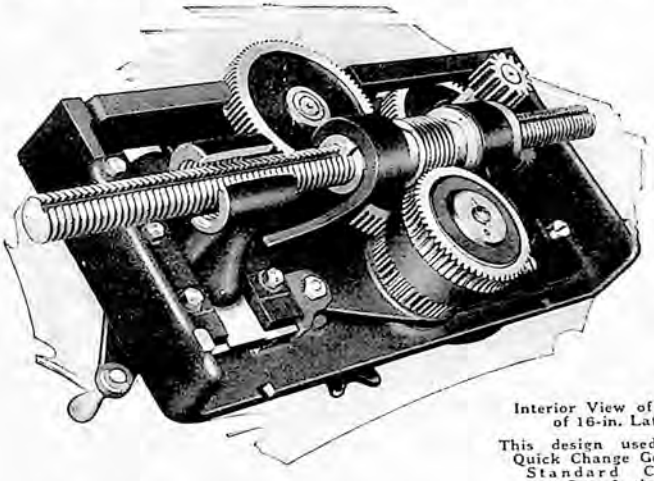
Steel Headstock Spindle and Phosphor Bronze Bearings

for all sizes and types of South Bend Lathes

The Headstock Spindle is made of high carbon steel finished ground on all diameters with a hole through its entire length.

The Phosphor Bronze Head Spindle Bearings, front and rear, are hand scraped to a perfect bearing.

Mechanical Features of South Bend Lathes



Interior View of Apron of 16-in. Lathe

This design used on all Quick Change Gear and Standard Change Gear Lathes

Apron and Lead Screw on the New Model South Bend Lathe

For Quick Change and Standard Change Gear Lathes

The New Apron

The Apron of the New Model South Bend Lathe is a marvel of power and simplicity. The above illustration of the Apron shows the double worm bracket which supports the steel worm while it is in operation. This is a valuable feature which explains the cutting power of the New Model South Bend Lathe.

Automatic Feeds

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. See illustration of interior of the Apron shown above.

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 the Automatic Feeds from being placed in action while the half nuts are 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. When one feed is engaged the others are locked.

Acme Thread Lead Screw

Section of the Lead Screw for the 16-inch New Model Lathe. It is 1⅛ inches in diameter. 6 pitch—the illustration is actual size.

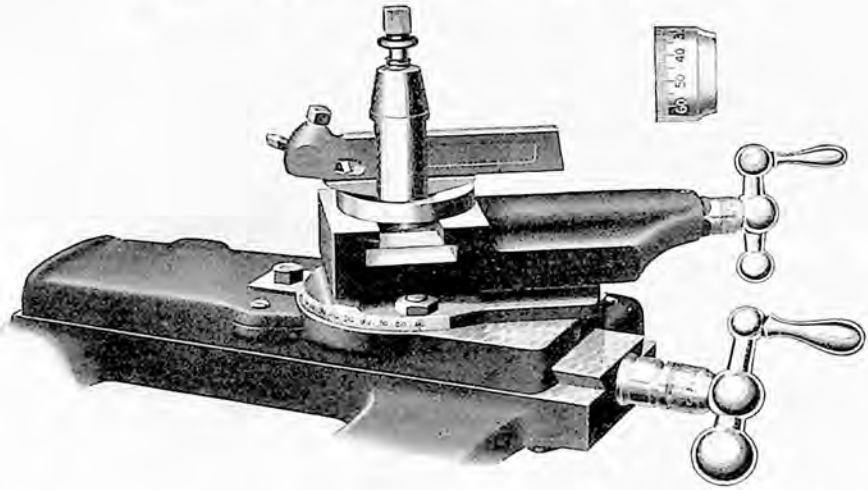
The New Lead Screws are made of steel, have coarse pitch Acme Thread and are cut with precision and accuracy on a special machine equipped with a Pratt and Whitney Master Lead Screw which insures accuracy.

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 the Automatic Longitudinal Feed. The Lead Screw of the Lathe should last a lifetime.

Mechanical Features of South Bend Lathes



Graduated Compound Rest on all New Model South Bend Lathes

The Use of the Compound Rest

The illustration above shows the Compound Rest mounted on the saddle of the lathe, to show the advantage of the two feed screws—the compound rest screw and the cross feed screw of the saddle. The Compound Rest is used in turning or boring short tapers or bevels.

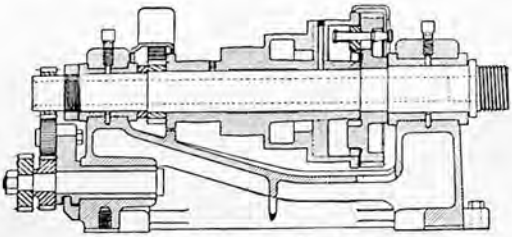
The Compound Rest Screw and the Cross Feed Screw permit the operator to do all kinds of straight or taper work because in combination these two screws permit the cutting tool to be fed in any direction.

Graduated Compound Rest

The Compound Rest base is accurately graduated in degrees over an arc of 180° reading 0 to 90° from center to each extremity of the arc. It turns on a large central stud and can be rigidly clamped in any position after setting.

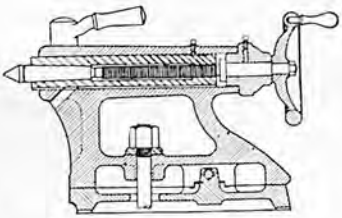
The Compound Rest Feed Screw and the Cross Feed Screw of the Saddle are both coarse Acme Thread and each has a micrometer graduated collar reading in one-thousandths of an inch for regulating the depth of the cut.

Headstock and Tailstock on New Model South Bend Lathes



Cross Section of Headstock

The illustration above is a cross section of the New Model Headstock and shows the construction of spindle bearings, cone pulley, thrust collar, latch reverse, back gears, etc.



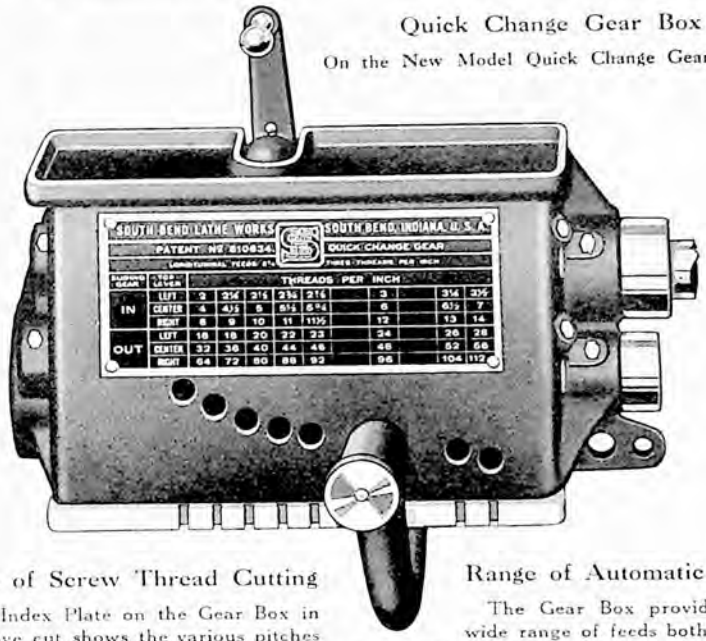
Cross Section of Tailstock

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

Mechanical Features of South Bend Lathes

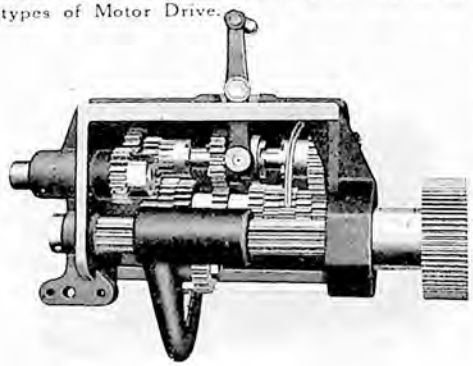
Quick Change Gear Box

On the New Model Quick Change Gear Lathes



Range of Screw Thread Cutting

The Index Plate on the Gear Box in the above cut shows the various pitches of threads that can be cut on South Bend Lathes. A range of 48 screw threads, right or left, from 2 to 112 pitch including 11½ pipe thread, can be cut without removing a gear. One of these metal Index Plates is attached to each New Model South Bend Quick Change Gear Lathe in all sizes from 9-inch to 24-inch inclusive both in Countershaft Drive and in all types of Motor Drive.



Interior View of Gear Box

Range of Automatic Feeds

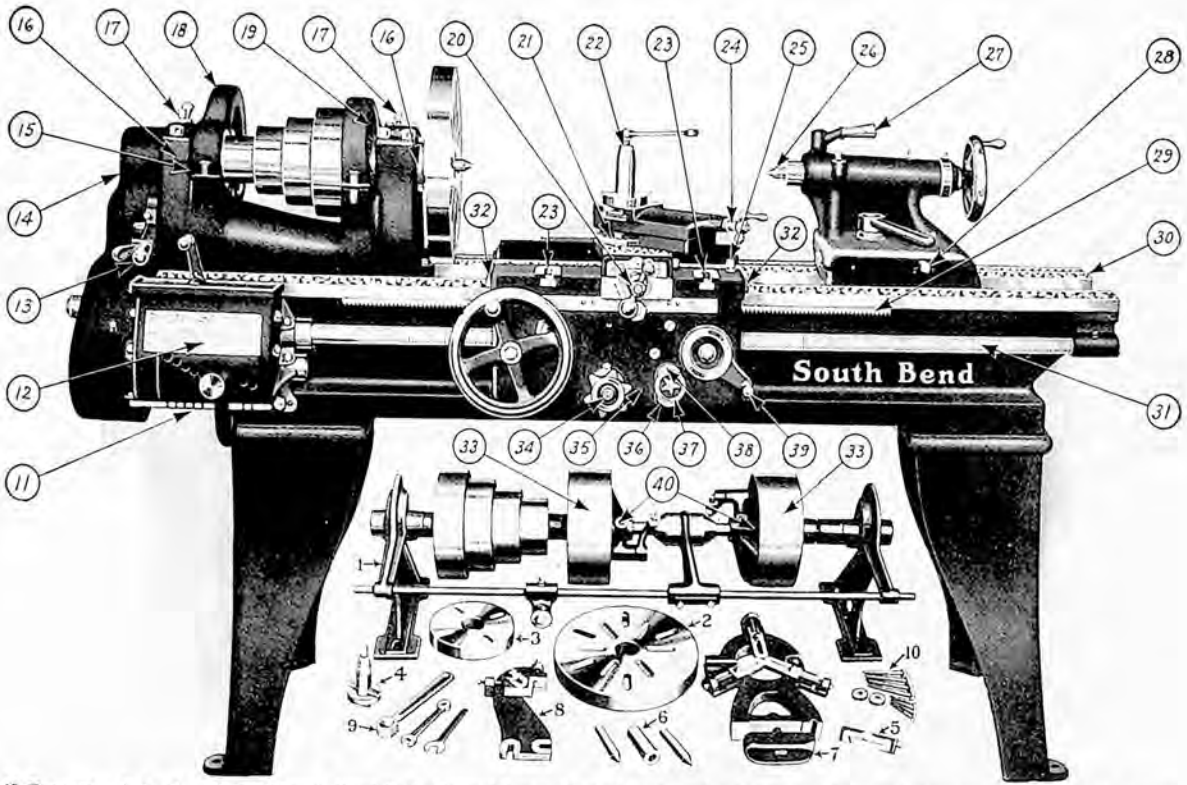
The Gear Box provides for a wide range of feeds both fine and coarse for the Automatic Longitudinal Feed and the Automatic Cross Feed. All these feeds can be adjusted without removing a gear.

Easy to Operate

The Quick Change Gear Box of the New South Bend Lathe is one of the most complete, compact and best designed on the market. It is simple, accurate, durable and easy to operate. The operation of the Quick Change Gear Box is fully explained in the book entitled "How to Run a Lathe," which is included with the equipment.

Interior View of Gear Box

A group of eight steel gears is mounted on the center shaft, any one of which can be instantly engaged with the Lead Screw. The Tumbler Lever and the small Top Lever enable the operator to obtain 24 changes. By sliding the knob at the end of the lathe the number of changes is doubled, making 48 in all.



40 Features of the New Model South Bend Back Geared Screw Cutting Lathe (Quick Change Gear and Standard Change Gear Types)

1 to 10—Equipment furnished with Lathe.
11—Quick Change Gear Box.
12—Index Plate for Threads and Feeds.
13—Quick-acting Latch Reverse.
14—Special Carbon Steel Hollow Spindle.
15—Hardened and Ground Steel Thrust Collar.
16—Large Phosphor Bronze Bearings.
17—Patent Oil Cups prevent dust.
18—Back Gears well guarded.
19—Wrenchless Bull Gear Clamp.
20—Micrometer Cross Feed Screw Collar.
21—Compound Rest graduated 180 degrees.
22—Forged Steel Adjustable Tool Post.
23—"T" Slot for clamping work on Carriage.
24—Micrometer Compound Rest Screw Collar.
25—Carriage Lock for facing.
26—Tool Steel Lathe Centers
27—Tailstock Spindle Lock.
28—Set-over Tailstock for taper turning.
29—Steel Rack, cut from the solid.
30—Semi-steel Seasoned Lathe Bed.
31—Precision Lead Screw, Acme Thread.
32—Shear Wipers and Oilers
33—Countershaft Friction Clutch Pulleys.
34—Automatic Friction Feed Clutch.
35—Safety Device for Threads and Feeds.
36—Knob Position for Automatic Longitudinal Feed.
37—Neutral Position for Thread Cutting.
38—Knob Position for Automatic Cross Feed.
39—Half Nut Lever for Thread Cutting.
40—Lubricating Cups in Clutch Pulleys.

Features of the New Model Lathe

The 210 Sizes and Types of South Bend Lathes Have These Quality Features in Both the Quick Change Gear and Standard Change Gear Types

The illustration on the left, page 10, shows the New Model South Bend Quick Change Back Geared Screw Cutting Lathe. The various features described below and shown on the opposite page are further illustrated and described on pages 5 to 9. The illustration shows a 16-inch x 6-ft. Lathe but the same features and design that are shown apply to all sizes and types of New Model Lathes.

The New Semi-Steel Lathe Bed is a heavy gray iron casting 18 per cent steel which insures wearing qualities and strength. The bed is cross ribbed by box braces cast in at short intervals its entire length. The beds are rough planed, then seasoned from four to six weeks, then finish planed and hand scraped.

The New Headstock is back geared. The four-step cone permits eight spindle speeds, four direct cone drive and four back geared drive. All gears are completely covered with guards to comply with all State Laws. A quick acting bull gear clamp permits changing from direct cone drive to back geared drive or from back geared to direct cone drive without the use of a wrench.

The Four-Step Spindle Cone is used on all New Model Lathes, 13-inch size and larger, because the smallest step of the cone is the most valuable of all steps on the cone. This small step on the cone is used on work in the industrial plant and in manufacturing more than the other three steps combined, as it permits the lathe to do a great variety of work which is so necessary in modern machine shop practice.

The New Headstock Spindle is made of a special quality high carbon spindle steel. It has a hole its entire length for machining rods and bars through lathe chuck and draw-in collet chuck. The steel thrust collar is hardened and ground.

The New Headstock Spindle Bearings are made of high quality **phosphor** bronze. They are designed for heavy duty work and are adjustable for wear. The bearings are hand scraped to a perfect fit with the spindle and the housings of the bearings. See illustrations, page 6. Patent oil cups insure an ample supply of oil to the bronze bearings.

The New Tailstock is heavy and rigid with a long bearing on the bed. It is provided with set-over for taper turning. The binding lever locks the spindle without disturbing the alignment of centers. The tail center is hardened and self-ejecting.

The New Carriage is strong with wide bridge and has "T" slots for clamping work for boring, and reaming. A locking device fastens carriage to the bed when using cross feed. Felt wipers are attached to the carriage to keep the "V" ways clean and oiled. The carriage is hand scraped to the lathe bed. The cross feed screw has Acme thread and micrometer graduated collar reading in thousandths of an inch.

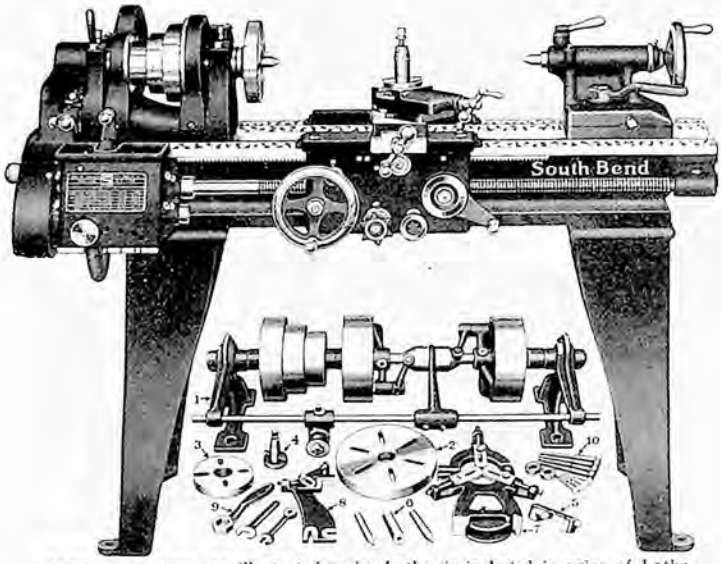
The New Apron is provided with automatic friction cross feed and automatic friction longitudinal feed. The Apron is also provided with half-nuts which are used only when cutting screw threads. The Lead Screw is splined which permits it to serve as a feed rod for operating the automatic friction feeds. The threads of the Lead Screw are used only when cutting screw threads. See page 7. An improved automatic safety interlock prevents the half-nuts and automatic feeds from being engaged at the same time.

The New Compound Rest is graduated to 180 degrees on the base and can be swivelled to any angle on the horizontal plane and operated at that angle. The compound rest has an angular travel. The compound rest screw has Acme Threads, and is fitted with a micrometer graduated collar that reads in thousandths of an inch. See page 8.

The New Lead Screw is made of special steel with Acme standard threads cut on a special machine having a Pratt and Whitney master lead screw which insures the utmost precision and accuracy. The lead screw is guaranteed to meet the most accurate requirements in the cutting of finest precision thread gauges, master taps, etc. See page 7.

The New Quick Change Gear Box provides forty-eight changes for cutting right and left hand standard screw threads from 2 to 112 per inch. It also provides for various adjustments for the automatic cross feeds and automatic longitudinal feeds. The index plate shows the arrangement of levers on the gear box for cutting threads and feeds. See page 9.

The Life of the New Model Lathe we estimate is at least twenty-five years if given the proper care and attention. We are still using in our own shop one of the first South Bend Lathes that we built twenty-two years ago. It is still in operation and is giving good satisfaction on production work and from all indications, it will continue to give good service for a number of years to come.



Regular equipment, as illustrated under Lathe, is included in price of Lathe

9-inch Quick Change Gear New Model South Bend Lathe

Back Geared, Screw Cutting Precision Lathe, Countershaft Drive

The New Model 9-inch Quick Change Back Geared Screw Cutting Precision Lathe is for the shop where light, accurate work is taken care of. It is capable of turning out work of the finest accuracy and precision.

The New Headstock is back geared, reinforced and webbed, insuring strength and rigidity. Six spindle speeds are provided, three direct and three back geared.

The Headstock Spindle is made of high carbon steel finished ground with a ¾-inch hole its entire length.

The Phosphor Bronze Bearings for Head Spindle are hand scraped to a perfect bearing, are adjustable for wear and are equipped with oilers. See page 6.

The Quick Change Gear Box provides 48 changes for cutting right or left hand screw threads from 2 to 112 per inch without removing a gear. An index plate shows the arrangement for cutting the following threads: 2, 2¼, 2½, 2¾, 2⅞, 3, 3¼, 3½, 4, 4½, 5, 5½, 5¾, 6, 6½, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44, 46, 48, 52, 56, 64, 72, 80, 88, 92, 96, 104, 112. See page 9.

LATHE FEATURES

Full quick change gear mechanism.
Back geared headstock gives 6 spindle speeds.
Automatic cross feed, automatic longitudinal feed.
Hollow spindle made of special carbon steel.
Spring latch reverse for feeds and threads.
Phosphor bronze bearings for spindle.
Graduated compound rest swivels to any angle.
Tailstock is arranged for set over for taper turning.
Graduated collar on cross feed and compound rest screws.
Precision lead screw for cutting accurate threads.

The New Tailstock has a set-over for taper turning. The binding lever locks the spindle without disturbing the alignment of centers. The center is hardened.

The New Apron has automatic cross and longitudinal feeds, and half nuts for thread cutting. An automatic safety interlock prevents the half nuts and automatic feeds from being engaged at the same time. See page 7.

The Precision Lead Screw, ¾-inch diam., 8 threads per inch Acme Standard, is cut on a special machine equipped with a master lead screw which insures accuracy. The threads of the lead screw are used for thread cutting only as the spline in the lead screw drives a worm in the apron which operates both automatic feeds. See page 7.

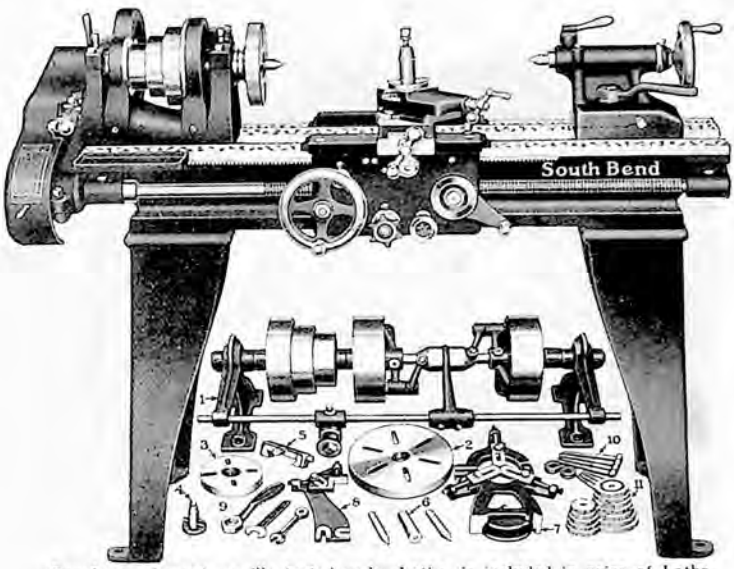
The Regular Equipment included with each 9-inch Quick Change Gear Lathe consists of Double Friction Countershaft, Large Face Plate, Small Face Plate, Tool Post Complete, Adjustable Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. See page 70.

LATHE SPECIFICATIONS

Head and Tail Spindle Centers ..... No. 2, Morse Taper
Size of Spindle Nose ..... 1½ in. diam., 8 Threads
Precision Acme Lead Screw ..... ¾ in. diam., 8 Threads
Screw Thread Cutting Range ..... 2 to 112 per inch
Width of Cone Pulley Belt ..... 1 in.
Spindle Speeds ..... 40, 75, 128, 246, 410, 700 R.P.M.
Countershaft Speed ..... 300 R.P.M.
Countershaft Friction Clutch Pulleys ..... 6⅞ in. x 2½ in.
Angular Travel of Compound Rest Top ..... 2 in.
Size of Lathe Tool Shank ..... ½ in. x ⅝ in.

Net Factory Prices 9-inch Quick Change Gear Lathe Including Overhead Countershaft and Equipment

No. of Lathe	Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Swing Over Carriage	Power Required	Weight Crated	Code Word	Price F.O.B. South Bend
82-X	9⅛ in.	2½ ft.	11 in.	¾ in.	6¾ in.	¼ H.P.	470 lbs.	Babit	**$265.00**
82-Y	9¼ in.	3 ft.	18 in.	¾ in.	6⅞ in.	¼ H.P.	490 lbs.	Becke	**270.00**
82-Z	9¼ in.	3½ ft.	23 in.	¾ in.	6⅞ in.	¼ H.P.	510 lbs.	Bikes	**275.00**
82-A	9¼ in.	4 ft.	29 in.	¾ in.	6⅞ in.	¼ H.P.	530 lbs.	Blody	**280.00**
82-R	9¼ in.	4½ ft.	36 in.	¾ in.	6⅞ in.	¼ H.P.	550 lbs.	Bosco	**285.00**



Regular equipment, as illustrated under Lathe, is included in price of Lathe

9-inch Standard Change Gear New Model South Bend Lathe

Back Geared, Screw Cutting Precision Lathe, Countershaft Drive

The New Model 9-inch Standard Change Back Geared Screw Cutting Precision Lathe is a practical tool for the shop on light accurate work. It is capable of turning out work of the finest accuracy and precision.

The New Headstock is back geared, reinforced and webbed, insuring strength and rigidity. Six spindle speeds are provided, three direct and three back geared.

The Headstock Spindle is made of high carbon steel finished ground with a ¾-inch hole its entire length.

The Phosphor Bronze Bearings for Head Spindle are hand scraped to a perfect bearing, are adjustable for wear and are equipped with oilers. See page 6.

The New Model Standard Change Gear Lathe is equipped with a set of independent change gears to cut the following screw threads per inch, right or left-hand, including 11½ pipe thread: 4, 5, 6, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 36 and 40. By compounding the gears furnished many other threads can be cut. See page 70.

The New Tail Stock has a set-over for taper turning. The binding lever locks the spindle without disturbing the alignment of centers. The center is hardened.

The New Apron has automatic cross and longitudinal feeds, and half nuts for thread cutting. An automatic safety interlock prevents the half nuts and automatic feeds from being engaged at the same time. See page 7.

The Precision Lead Screw, ¾-inch diam., 8 threads per inch Acme Standard, is cut on a special machine equipped with a master lead screw which insures accuracy. The threads of the lead screw are used for thread cutting only as the spline in the lead screw drives a worm in the apron which operates both automatic feeds. See page 7.

The Regular Equipment included with each 9-inch Standard Change Gear Lathe consists of: Double Friction Countershaft, Set of Independent Change Gears, Large and Small Face Plates, Tool Post Complete, Adjustable Thread Cutting Stop, two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. See page 70.

LATHE FEATURES

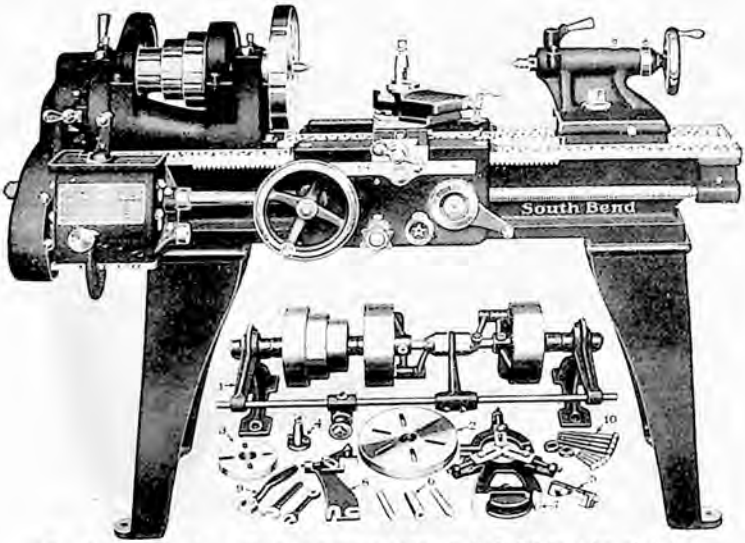
Independent change gears for threads and feeds.
Back geared headstock gives 6 spindle speeds.
Automatic cross feed, automatic longitudinal feed.
Hollow spindle, made of special carbon steel.
Spring latch reverse for feeds and threads.
Phosphor bronze bearings for spindle.
Graduated compound rest swivels to any angle.
Tailstock is arranged for set-over for taper turning.
Graduated collar on cross feed and compound rest screws.
Precision lead screw for cutting accurate threads.

LATHE SPECIFICATIONS

Head and Tail Spindle Centers..... No. 2, Morse Taper
Size of Spindle Nose.....1½ in. diam., 8 Threads
Precision Acme Lead Screw.....¾ in. diam., 8 Threads
Screw Thread Cutting Range.....4 to 40 per inch
Width of Cone Pulley Belt.....1 in.
Spindle Speeds.....40, 75, 128, 246, 410, 700 R.P.M.
Countershaft Speed.....300 R.P.M.
Countershaft Friction Clutch Pulleys.....6⅞ in. x 2½ in.
Angular Travel of Compound Rest Top.....2 in.
Size of Lathe Tool Shank.....½ in. x ½ in.

Net Factory Prices 9-inch Standard Change Gear Lathe Including Overhead Countershaft and Equipment.

No. of Lathe	Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Swing Over Carriage	Power Required	Weight Crated	Code Word	Price F.O.B. South Bend
31-X	9¼ in.	2½ ft.	11 in.	⅝ in.	6⅜ in.	¼ H.P.	460 lbs.	Brake	$230.00
31-Y	9¼ in.	3 ft.	18 in.	⅝ in.	6⅜ in.	¼ H.P.	480 lbs.	Budis	235.00
31-Z	9¼ in.	3½ ft.	23 in.	⅝ in.	6⅜ in.	¼ H.P.	500 lbs.	Bvest	240.00
31-A	9¼ in.	4 ft.	29 in.	⅝ in.	6⅜ in.	¼ H.P.	520 lbs.	Bwags	245.00
31-R	9¼ in.	4½ ft.	36 in.	⅝ in.	6⅜ in.	¼ H.P.	540 lbs.	Bzeko	250.00



Regular equipment, as illustrated under Lathe, is included in price of Lathe

11-inch Quick Change Gear New Model South Bend Lathe

Back Geared, Screw Cutting Lathe, Countershaft Drive

The New Model 11-inch Quick Change Back Geared Screw Cutting Lathe is an excellent tool for light production work in manufacturing. It has the precision and accuracy for tool room work.

The New Headstock is back geared, reinforced and webbed, insuring strength and rigidity. Six spindle speeds are provided, three direct and three back geared.

The Headstock Spindle is made of high carbon steel finished ground with a 7/8-inch hole its entire length.

The Phosphor Bronze Bearings for Head Spindle are hand scraped to a perfect bearing, are adjustable for wear and are equipped with patent oilers. See page 6.

The Quick Change Gear Box provides 48 changes for cutting right or left hand screw threads from 2 to 112 per inch without removing a gear. An index plate shows the arrangement for cutting the following threads: 2, 2¼, 2½, 2¾, 2⅞, 3, 3¼, 3½, 4, 4½, 5, 5½, 5¾, 6, 6½, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44, 46, 48, 52, 56, 64, 72, 80, 88, 92, 96, 104, 112. See page 9.

LATHE FEATURES

Full quick change gear mechanism.
Back geared headstock gives 6 spindle speeds.
Automatic cross feed, automatic longitudinal feed.
Hollow spindle made of special carbon steel.
Spring latch reverse for feeds and threads.
Phosphor bronze bearings for spindle.
Graduated compound rest swivels to any angle.
Tailstock is arranged for set-over for taper turning.
Graduated collar on cross feed and compound rest screws.
Precision lead screw for cutting accurate threads.

The New Tailstock has a set-over for taper turning. The binding lever locks the spindle without disturbing the alignment of centers. The center is hardened.

The New Apron has automatic cross and longitudinal feeds, and half nuts for thread cutting. An automatic safety interlock prevents the half nuts and automatic feeds from being engaged at the same time. See page 7.

The Precision Lead Screw, 7/8-inch diam., 8 threads per inch Acme Standard, is cut on a special machine equipped with a master lead screw which insures accuracy. The threads of the lead screw are used for thread cutting only as the spline in the lead screw drives a worm in the apron which operates both automatic feeds. See page 7.

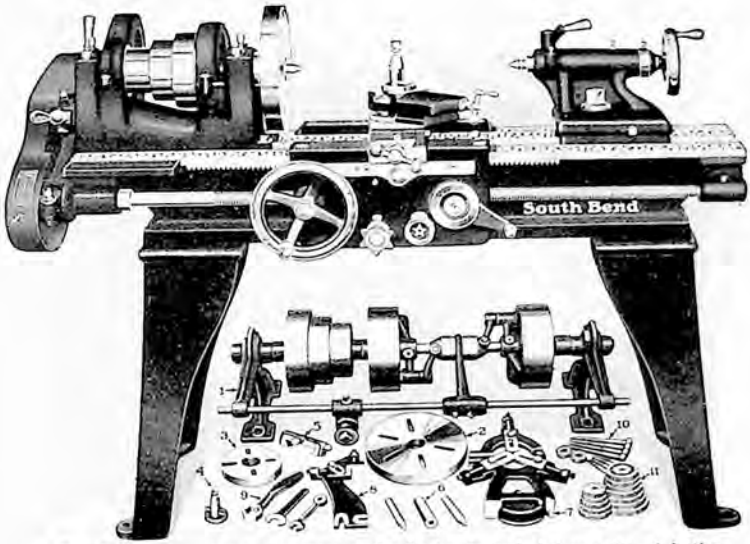
The Regular Equipment included with each 11-inch Quick Change Gear Lathe consists of: Double Friction Countershaft, Large Face Plate, Small Face Plate, Tool Post Complete, Adjustable Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. See page 70.

LATHE SPECIFICATIONS

Head and Tail Spindle Centers	No. 2, Morse Taper
Size of Spindle Nose	1⅝ in. diam., 8 Threads
Precision Acme Lead Screw	⅞ in. diam., 8 Threads
Screw Thread Cutting Range	2 to 112 per inch
Width of Cone Pulley Belt	1½ in.
Spindle Speeds	40, 60, 100, 230, 360, 595 R.P.M.
Countershaft Speed	250 R.P.M.
Countershaft Friction Clutch Pulleys	6⅞ in. x 2½ in.
Angular Travel of Compound Rest Top	2¾ in.
Size of Lathe Tool Shank	⅜ in. x ⅜ in.

Net Factory Prices 11-inch Quick Change Gear Lathe Including Overhead Countershaft and Equipment

No. of Lathe	Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Swing Over Carriage	Power Required	Weight Crated	Code Word	Price F.O.B. South Bend
84-Y	11¼ in.	3 ft.	12 in.	⅞ in.	7⅝ in.	½ H.P.	675 lbs.	Enbot	**$325.00**
84-Z	11¼ in.	3½ ft.	18 in.	⅞ in.	7⅝ in.	½ H.P.	700 lbs.	Elken	**330.00**
84-A	11¼ in.	4 ft.	24 in.	⅞ in.	7⅝ in.	½ H.P.	725 lbs.	Emulor	**335.00**
84-B	11¼ in.	5 ft.	36 in.	⅞ in.	7⅝ in.	½ H.P.	805 lbs.	Eohn	**345.00**
84-S	11¼ in.	5½ ft.	42 in.	⅞ in.	7⅝ in.	½ H.P.	845 lbs.	Epmjo	**350.00**



Regular equipment, as illustrated under Lathe, is included in price of Lathe

11-inch Standard Change Gear New Model South Bend Lathe

Back Geared, Screw Cutting Lathe, Countershaft Drive

The New Model 11-inch Standard Change Back Geared Screw Cutting Lathe is an excellent tool for light production work in manufacturing. It has the precision and accuracy for tool room work.

The New Headstock is back geared, reinforced and webbed, insuring strength and rigidity. Six spindle speeds are provided, three direct and three back geared.

The Headstock Spindle is made of high carbon steel finished ground with a ⅞-inch hole its entire length.

The Phosphor Bronze Bearings for Head Spindle are hand scraped to a perfect bearing, are adjustable for wear and are equipped with patent oilers. See page 6.

The New Model Standard Change Gear Lathe is equipped with a set of independent change gears to cut the following screw threads per inch, right or left hand, including 11½ pipe thread: 4, 5, 6, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 36 and 40. By compounding the gears furnished many other threads can be cut. See page 70.

The New Tailstock has a set-over for taper turning. The binding lever locks the spindle without disturbing the alignment of centers. The center is hardened.

The New Apron has automatic cross and longitudinal feeds, and half nuts for thread cutting. An automatic safety interlock prevents the half nuts and automatic feeds from being engaged at the same time. See page 7.

The Precision Lead Screw ⅝-inch diam., 8 threads per inch Acme Standard, is cut on a special machine equipped with a master lead screw which insures accuracy. The threads of the lead screw are used for thread cutting only as the spline in the lead screw drives a worm in the apron which operates both automatic feeds. See page 7.

The Regular Equipment included with each 11-inch Standard Change Gear Lathe consists of: Double Friction Countershaft, Set of Independent Change Gears, Large and Small Face Plates, Tool Post Complete, Adjustable Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. See page 70.

LATHE FEATURES

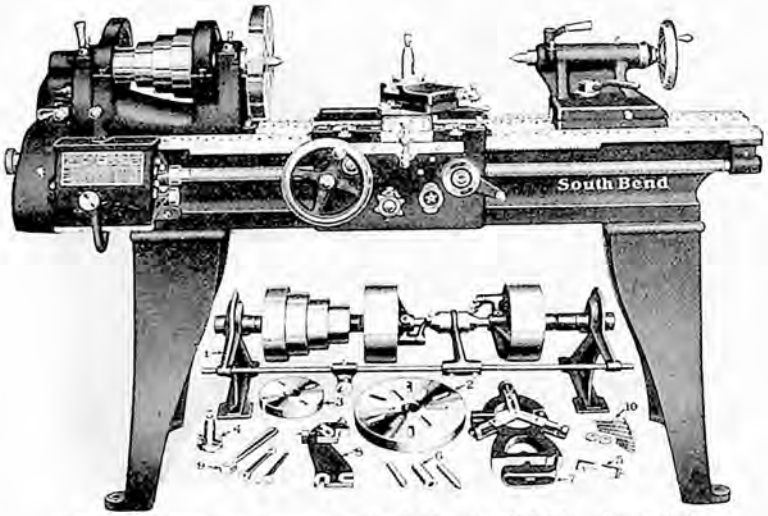
Independent change gears for threads and feeds.
Back geared headstock gives 6 spindle speeds.
Spindle cone balanced for operating at high speeds.
Automatic cross feed, automatic longitudinal feed.
Hollow spindle, made of special carbon steel.
Spring latch reverse for feeds and threads.
Phosphor bronze bearings for spindle.
Graduated compound rest swivels to any angle.
Tailstock is arranged for set-over for taper turning.
Graduated collar on cross feed and compound rest screw.
Precision lead screw for cutting accurate threads.

LATHE SPECIFICATIONS

Head and Tail Spindle Centers.....No. 2, Morse Taper
Size of Spindle Nose.....1⅝ in. diam., 8 Threads
Precision Acme Lead Screw.....⅝ in. diam., 8 Threads
Screw Thread Cutting Range.....4 to 40 per inch
Width of Cone Pulley Belt.....1½ in.
Spindle Speed.....40, 60, 100, 230, 360, 595 R.P.M.
Countershaft Speed.....290 R.P.M.
Countershaft Friction Clutch Pulleys.....6⅞ in. x 2⅞ in.
Angular Travel of Compound Rest Top.....2¾ in.
Size of Lathe Tool Shank.....⅝ in. x ⅝ in.

Net Factory Prices 11-inch Standard Change Gear Lathe Including Overhead Countershaft and Equipment

No. of Lathe	Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Swing Over Carriage	Power Required	Weight Crated	Code Word	Price F.O.B. South Bend
33-Y	11¼ in.	3 ft.	12 in.	⅞ in.	7⅝ in.	½ H.P.	660 lbs.	Eazir	$290.00
33-Z	11¼ in.	3½ ft.	18 in.	⅞ in.	7⅝ in.	½ H.P.	685 lbs.	Ebuka	295.00
33-A	11¼ in.	4 ft.	24 in.	⅞ in.	7⅝ in.	½ H.P.	710 lbs.	Eesty	300.00
33-B	11¼ in.	5 ft.	36 in.	⅞ in.	7⅝ in.	½ H.P.	790 lbs.	Efres	310.00
33-S	11¼ in.	5½ ft.	42 in.	⅞ in.	7⅝ in.	½ H.P.	830 lbs.	Efmot	315.00



Regular equipment, as illustrated under Lathe, is included in price of Lathe

13-inch Quick Change Gear New Model South Bend Lathe

Back Geared, Screw Cutting Lathe, Countershaft Drive

The New Model 13-inch Quick Change Back Geared Screw Cutting Lathe is an ideal tool for the factory on production work. It has the precision and accuracy for fine tool room work.

The New Headstock is back geared, reinforced and webbed, insuring strength and rigidity. Eight spindle speeds are provided, four direct and four back geared.

The Headstock Spindle is made of high carbon steel finished ground with a 1-inch hole its entire length.

The Phosphor Bronze Bearings for Head Spindle are hand scraped to a perfect bearing, are adjustable for wear and are equipped with oilers. See page 6.

The Quick Change Gear Box provides 48 changes for cutting right or left-hand screw threads from 2 to 112 per inch without removing a gear. An index plate shows the arrangement for cutting the following threads: 2, 2¼, 2½, 2¾, 2⅞, 3, 3¼, 3½, 4, 4½, 5, 5½, 5¾, 6, 6½, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44, 46, 48, 52, 56, 64, 72, 80, 88, 92, 96, 104, 112. See page 9.

The New Tailstock has a set-over for taper turning. The binding lever locks the spindle without disturbing the alignment of centers. The center is hardened.

The New Apron has automatic cross and longitudinal feeds, and half nuts for thread cutting. An automatic safety interlock prevents the half nuts and automatic feeds from being engaged at the same time. See page 7.

The Precision Lead Screw 1-inch diam., 6 threads per inch, Acme Standard, is cut on a special machine equipped with a master lead screw which insures accuracy. The threads of the lead screw are used for thread cutting only as the spline in the lead screw drives a worm in the apron which operates both automatic feeds. See page 7.

The Regular Equipment included with each 13-inch Quick Change Gear Lathe consists of: Double Friction Countershaft, Large Face Plate, Small Face Plate, Tool Post Complete, Adjustable Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. See page 70.

LATHE FEATURES

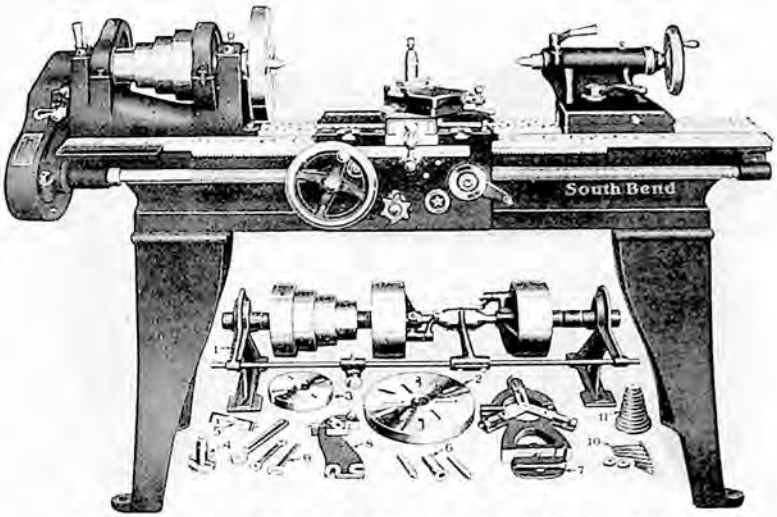
Full quick change gear mechanism.
Back Geared headstock gives 8 spindle speeds.
Automatic cross feed, automatic longitudinal feed.
Hollow spindle made of special carbon steel.
Spring latch reverse for feeds and threads.
Phosphor bronze bearings for spindle.
Graduated compound rest swivels to any angle.
Tailstock is arranged for set-over for taper turning.
Graduated collar on cross feed and compound rest screws.
Precision lead screw for cutting accurate threads.

LATHE SPECIFICATIONS

Head and Tail Spindle Centers.....No. 3 Morse Taper
Size of Spindle Nose.....1⅞ in. diam., 8 Threads
Precision Acme Lead Screw.....1 in. diam., 6 Threads
Screw Thread Cutting Range.....2 to 112 per inch
Width of Cone Pulley Belt.....1¾ in.
Spindle Speeds.....25, 40, 60, 100, 180, 275, 425, 685 R.P.M.
Countershaft Speed.....275 R.P.M.
Countershaft Friction Clutch Pulleys.....8 in. x 2¾ in.
Angular Travel of Compound Rest Top.....3½ in.
Size of Lathe Tool Shank.....½ in. x 1¼ in.

Net Factory Prices 13-inch Quick Change Gear Lathe Including Overhead Countershaft and Equipment

No. of Lathe	Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Swing Over Carriage	Power Required	Weight Crated	Code Word	Price F.O.B. South Bend
86-A	13¼ in.	4 ft.	16 in.	1 in.	9 in.	¾ H.P.	1060 lbs.	Galup	$390.00
86-B	13¼ in.	5 ft.	28 in.	1 in.	9 in.	¾ H.P.	1110 lbs.	Gebus	402.00
86-C	13¼ in.	6 ft.	40 in.	1 in.	9 in.	¾ H.P.	1160 lbs.	Gifts	414.00
86-D	13¼ in.	7 ft.	52 in.	1 in.	9 in.	¾ H.P.	1210 lbs.	Gobli	426.00
86-E	13¼ in.	8 ft.	64 in.	1 in.	9 in.	¾ H.P.	1260 lbs.	Guak	438.00



Regular equipment, as illustrated under Lathe, is included in price of Lathe

13-inch Standard Change Gear New Model South Bend Lathe

Back Geared, Screw Cutting Lathe, Countershaft Drive

The New Model 13-inch Standard Change Back Geared Screw Cutting Lathe is an ideal tool for the factory on production work. It has the precision and accuracy for fine tool room work.

The New Headstock is back geared, reinforced and webbed, insuring strength and rigidity. Eight spindle speeds are provided, four direct and four back geared.

The Headstock Spindle is made of high carbon steel finished ground with a 1-inch hole its entire length.

The Phosphor Bronze Bearings for Head Spindle are hand scraped to a perfect bearing, are adjustable for wear and are equipped with oilers. See page 6.

The New Model Standard Change Gear Lathe is equipped with a set of independent change gears to cut the following screw threads per inch, right or left hand, including 11½ pipe thread: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 36 and 40. By compounding the gears furnished many other threads can be cut. See page 70.

LATHE FEATURES

Independent change gears for threads and feeds.
Back geared headstock gives 8 spindle speeds.
Automatic cross feed, automatic longitudinal feed.
Hollow spindle, made of special carbon steel.
Spring latch reverse for feeds and threads.
Phosphor bronze bearings for spindle.
Graduated compound rest swivels to any angle.
Tailstock is arranged for set-over for taper turning.
Graduated collar on cross feed and compound rest screw.
Precision lead screw for cutting accurate threads.

The New Tailstock has a set-over for taper turning. The binding lever locks the spindle without disturbing the alignment of centers. The center is hardened.

The New Apron has automatic cross and longitudinal feeds, and half nuts for thread cutting. An automatic safety interlock prevents the half nuts and automatic feeds from being engaged at the same time. See page 7.

The Precision Lead Screw 1-inch diam., 6 threads per inch, Acme Standard, is cut on a special machine equipped with a master lead screw which insures accuracy. The threads of the lead screw are used for thread cutting only as the spline in the lead screw drives a worm in the apron which operates both automatic feeds. See page 7.

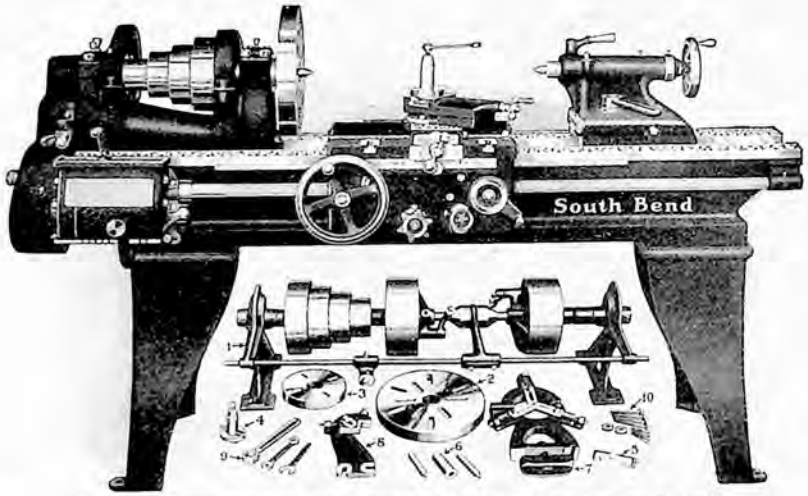
The Regular Equipment included with each 13-inch Standard Change Gear Lathe consists of: Double Friction Countershaft, Set of Independent Change Gears, Large and Small Face Plates, Tool Post Complete, Adjustable Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. See page 70.

LATHE SPECIFICATIONS

Head and Tail Spindle Centers..... No. 3, Morse Taper
Size of Spindle Nose..... 1⅞ in. diam., 8 Threads
Precision Acme Lead Screw..... 1 in. diam., 6 Threads
Screw Thread Cutting Range..... 2 to 40 per inch
Width of Cone Pulley Belt..... 1¾ in.
Spindle Speeds.. 25, 40, 60, 100, 180, 275, 425, 685 R.P.M.
Countershaft Speed..... 275 R.P.M.
Countershaft Friction Clutch Pulleys..... 8 in. x 2⅜ in.
Angular Travel of Compound Rest Top..... 3⅛ in.
Size of Lathe Tool Shank..... ½ in. x 1⅛ in.

Net Factory Prices 13-inch Standard Change Gear Lathe Including Overhead Countershaft and Equipment

No. of Lathe	Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Swing Over Carriage	Power Required	Weight Crated	Code Word	Price F.O.B. South Bend
35-A	13¼ in.	4 ft.	16 in.	1 in.	9 in.	¾ H.P.	1040 lbs.	Gaget	**$340.00**
35-B	13¼ in.	5 ft.	28 in.	1 in.	9 in.	¾ H.P.	1090 lbs.	Geldy	**352.00**
35-C	13¼ in.	6 ft.	40 in.	1 in.	9 in.	¾ H.P.	1140 lbs.	Gisot	**364.00**
35-D	13¼ in.	7 ft.	52 in.	1 in.	9 in.	¾ H.P.	1190 lbs.	Goldy	**376.00**
35-E	13¼ in.	8 ft.	64 in.	1 in.	9 in.	¾ H.P.	1240 lbs.	Guset	**388.00**



Regular equipment, as illustrated under Lathe, is included in price of Lathe

15-inch Quick Change Gear New Model South Bend Lathe

Back Geared, Screw Cutting Lathe, Countershaft Drive

The New Model 15-inch Quick Change Back Geared Screw Cutting Lathe has the power for production work in manufacturing, the precision and accuracy for fine tool work.

The New Headstock is back geared, reinforced and webbed, insuring strength and rigidity. Eight spindle speeds are provided, four direct and four back geared.

The Headstock Spindle is made of high carbon steel finished ground with a 1⅛-inch hole its entire length.

The Phosphor Bronze Bearings for Head Spindle are hand scraped to a perfect bearing, are adjustable for wear and are equipped with oilers. See page 6.

The Quick Change Gear Box provides 48 changes for cutting right or left hand screw threads from 2 to 112 per inch without removing a gear. An index plate shows the arrangement for cutting the following threads: 2, 2¼, 2½, 2¾, 2⅞, 3, 3¼, 3½, 4, 4½, 5, 5½, 5¾, 6, 6½, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44, 46, 48, 52, 56, 64, 72, 80, 88, 92, 96, 104, 112. See page 9.

LATHE FEATURES

Full quick change gear mechanism.
Back geared headstock gives 8 spindle speeds.
Automatic cross feed, automatic longitudinal feed.
Hollow spindle made of special carbon steel.
Spring latch reverse for feeds and threads.
Phosphor bronze bearings for spindle.
Graduated compound rest swivels to any angle.
Tailstock is arranged for set-over for taper turning.
Graduated collar on cross feed and compound rest screw.
Precision lead screw for cutting accurate threads.

The New Tailstock has a set-over for taper turning. The binding lever locks the spindle without disturbing the alignment of centers. The center is hardened.

The New Apron has automatic cross and longitudinal feeds, and half nuts for thread cutting. An automatic safety interlock prevents the half nuts and automatic feeds from being engaged at the same time. See page 7.

The Precision Lead Screw 1½-inch diam., 6 threads per inch Acme Standard, is cut on a special machine equipped with a master lead screw which insures accuracy. The threads of the lead screw are used for thread cutting only as the spline in the lead screw drives a worm in the apron which operates both automatic feeds. See page 7.

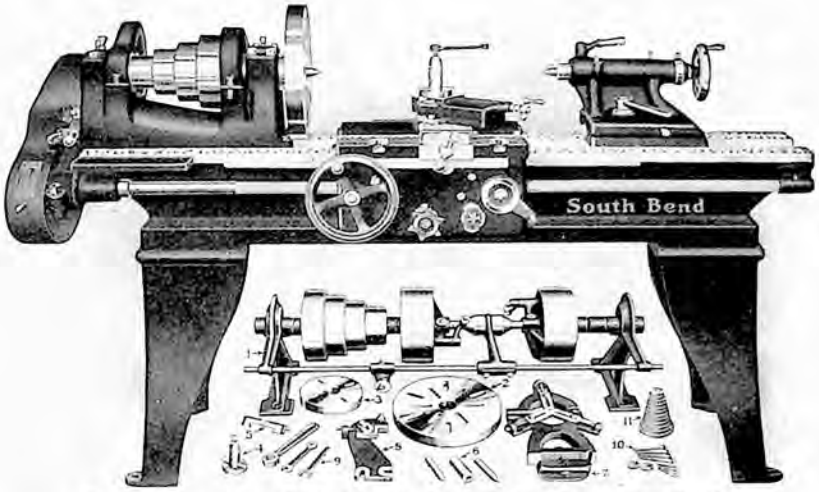
The Regular Equipment included with each 15-inch Quick Change Gear Lathe consists of: Double Friction Countershaft, Large and Small Face Plates, Tool Post Complete, Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. See page 70.

LATHE SPECIFICATIONS

Head and Tail Spindle Centers.....No. 3, Morse Taper
Size of Spindle Nose.....2¼ in. diam., 6 Threads
Precision Acme Lead Screw.....1½ in. diam., 6 Threads
Screw Thread Cutting Range.....2 to 112 per inch
Width of Cone Pulley Belt.....2 in.
Spindle Speeds.....22, 36, 58, 95, 160, 250, 395, 660 R.P.M.
Countershaft Speed.....250 R.P.M.
Countershaft Friction Clutch Pulleys.....10 in. x 3⅝ in.
Angular Travel of Compound Rest Top.....3⅜ in.
Size of Lathe Tool Shank.....½ in. x 1⅛ in.

Net Factory Prices 15-inch Quick Change Gear Lathe Including Overhead Countershaft and Equipment

No. of Lathe	Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Swing Over Carriage	Power Required	Weight Crated	Code Word	Price F.O.B. South Bend
88-B	15¼ in.	5 ft.	24½ in.	1⅛ in.	10⅝ in.	1 H.P.	1475 lbs.	Latin	$475.00
88-C	15¼ in.	6 ft.	36½ in.	1⅛ in.	10⅝ in.	1 H.P.	1550 lbs.	Lemon	490.00
88-D	15¼ in.	7 ft.	48½ in.	1⅛ in.	10⅝ in.	1 H.P.	1625 lbs.	Liqor	505.00
88-E	15¼ in.	8 ft.	60½ in.	1⅛ in.	10⅝ in.	1 H.P.	1735 lbs.	Lower	520.00
88-G	15¼ in.	10 ft.	84½ in.	1⅛ in.	10⅝ in.	1 H.P.	1900 lbs.	Lupin	550.00



Regular equipment, as illustrated under Lathe, is included in price of Lathe

15-inch Standard Change Gear New Model South Bend Lathe

Back Geared, Screw Cutting Lathe, Countershaft Drive

The New Model 15-inch Standard Change Back Geared Screw Cutting Lathe has the power for production work in manufacturing; the precision and accuracy for fine tool work, and the capacity for general machine work.

The New Headstock is back geared, reinforced and webbed, insuring strength and rigidity. Eight spindle speeds are provided, four direct and four back geared.

The Headstock Spindle is made of high carbon steel finished ground with a 1⅛-inch hole its entire length.

The Phosphor Bronze Bearings for Head Spindle are hand scraped to a perfect bearing, are adjustable for wear and are equipped with oilers. See page 6.

The New Model Standard Change Gear Lathe is equipped with a set of independent change gears to cut the following screw threads per inch, right or left-hand, including 11½ pipe thread: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 36 and 40. By compounding the gears furnished many other threads can be cut. See page 70.

LATHE FEATURES

Independent change gears for threads and feeds.
Back geared headstock gives 8 spindle speeds.
Automatic cross feed, automatic longitudinal feed.
Hollow spindle, made of special carbon steel.
Spring latch reverse for feeds and threads.
Phosphor bronze bearings for spindle.
Graduated compound rest swivels to any angle.
Tailstock is arranged for set-over for taper turning.
Graduated collar on cross feed and compound rest screw.
Precision lead screw for cutting accurate threads.

The New Tailstock has a set-over for taper turning. The binding lever locks the spindle without disturbing the alignment of centers. The center is hardened.

The New Apron has automatic cross and longitudinal feeds, and half nuts for thread cutting. An automatic safety interlock prevents the half nuts and automatic feeds from being engaged at the same time. See page 7.

The Precision Lead Screw 1⅛-inch diam., 6 threads per inch Acme Standard, is cut on a special machine equipped with a master lead screw which insures accuracy. The threads of the lead screw are used for thread cutting only as the spline in the lead screw drives a worm in the apron which operates both automatic feeds. See page 7.

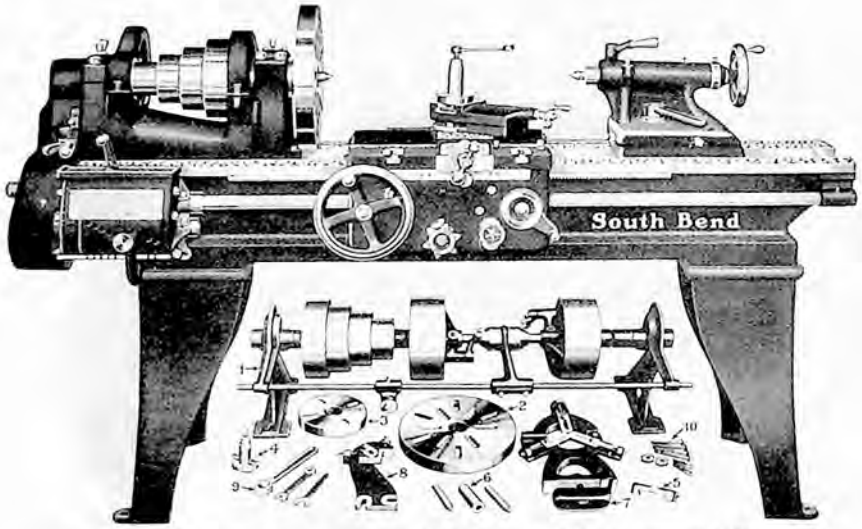
The Regular Equipment included with each 15-inch Standard Change Gear Lathe consists of: Double Friction Countershaft, Set of Independent Change Gears, Large and Small Face Plates, Tool Post Complete, Adjustable Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. See page 70.

LATHE SPECIFICATIONS

Head and Tail Spindle Centers	No. 3, Morse Taper
Size of Spindle Nose	2¼ in. diam., 6 Threads
Precision Acme Lead Screw	1⅛ in. diam., 6 Threads
Screw Thread Cutting Range	2 to 40 per inch
Width of Cone Pulley Belt	2 in.
Spindle Speeds	22, 36, 58, 95, 160, 250, 395, 660 R.P.M.
Countershaft Speed	250 R.P.M.
Countershaft Friction Clutch Pulleys	10 in. x 3⅝ in.
Angular Travel of Compound Rest Top	3⅜ in.
Size of Lathe Tool Shank	½ in. x 1⅛ in.

Net Factory Prices 15-inch Standard Change Gear Lathe Including Overhead Countershaft and Equipment

No. of Lathe	Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Swing Over Carriage	Power Required	Weight Crated	Code Word	Price F.O.B. South Bend
39-B	15¼ in.	5 ft.	24½ in.	1⅛ in.	10⅝ in.	1 H.P.	1450 lbs.	Lance	$415.00
39-C	15¼ in.	6 ft.	36½ in.	1⅛ in.	10⅝ in.	1 H.P.	1525 lbs.	Lewis	430.00
39-D	15¼ in.	7 ft.	48½ in.	1⅛ in.	10⅝ in.	1 H.P.	1690 lbs.	Liver	445.00
39-E	15¼ in.	8 ft.	60½ in.	1⅛ in.	10⅝ in.	1 H.P.	1710 lbs.	Lovit	460.00
39-G	15¼ in.	10 ft.	84½ in.	1⅛ in.	10⅝ in.	1 H.P.	1875 lbs.	Lunar	490.00



Regular equipment, as illustrated under Lathe, is included in price of Lathe

16-inch Quick Change Gear New Model South Bend Lathe

Back Geared, Screw Cutting Lathe, Countershaft Drive

The New Model 16-inch Quick Change Back Geared Screw Cutting Lathe has the power for heavy production work in manufacturing, the precision and accuracy for fine tool work and for a variety of general work.

The New Headstock is back geared, reinforced and webbed, insuring strength and rigidity. Eight spindle speeds are provided, four direct and four back geared.

The Headstock Spindle is made of high carbon steel finished ground with a 1⅝-inch hole its entire length.

The Phosphor Bronze Bearings for Head Spindle are hand scraped to a perfect bearing, are adjustable for wear and are equipped with oilers. See page 6.

The Quick Change Gear Box provides 48 changes for cutting right or left hand screw threads from 2 to 112 per inch without removing a gear. An index plate shows the arrangement for cutting the following threads: 2, 2¼, 2½, 2¾, 2⅞, 3, 3¼, 3½, 4, 4½, 5, 5½, 5¾, 6, 6½, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44, 46, 48, 52, 56, 64, 72, 80, 88, 92, 96, 104, 112. See page 9.

LATHE FEATURES

Full quick change gear mechanism.
Back geared headstock gives 8 spindle speeds.
Automatic cross feed, automatic longitudinal feed.
Hollow spindle made of special carbon steel.
Spring latch reverse for feeds and threads.
Phosphor bronze bearings for spindle.
Graduated compound rest swivels to any angle.
Tailstock is arranged for set-over for taper turning.
Graduated collar on cross feed and compound rest screws.
Precision lead screw for cutting accurate threads.

The New Tailstock has a set-over for taper turning. The binding lever locks the spindle without disturbing the alignment of centers. The center is hardened.

The New Apron has automatic cross and longitudinal feeds, and half nuts for thread cutting. An automatic safety interlock prevents the half nuts and automatic feeds from being engaged at the same time. See page 7.

The Precision Lead Screw 1⅛-inch diam., 6 threads per inch Acme Standard, is cut on a special machine equipped with a master lead screw which insures accuracy. The threads of the lead screw are used for thread cutting only as the spline in the lead screw drives a worm in the apron which operates both automatic feeds. See page 7.

The Regular Equipment included with each 16-inch Quick Change Gear Lathe consists of: Double Friction Countershaft, Large Face Plate, Small Face Plate, Tool Post Complete, Adjustable Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. See page 70.

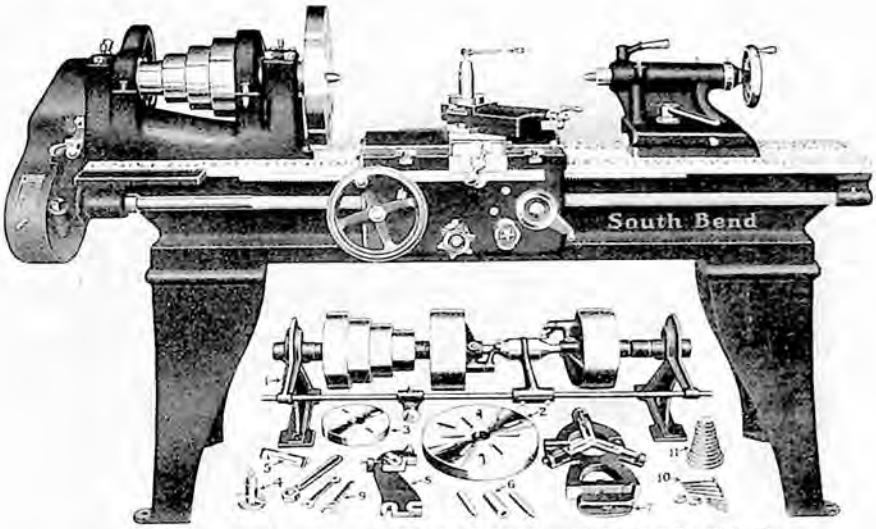
LATHE SPECIFICATIONS

Head and Tail Spindle Centers	No. 3, Morse Taper
Size of Spindle Nose	2¾ in. diam., 6 Threads
Precision Acme Lead Screw	1⅛ in. diam., 6 Threads
Screw Thread Cutting Range	2 to 112 per inch
Width of Cone Pulley Belt	2¼ In.
Spindle Speeds	20, 30, 50, 75, 140, 225, 360, 610 R.P.M.
Countershaft Speed	225 R.P.M.
Countershaft Friction Clutch Pulleys	10 in. x 3¾ in.
Angular Travel of Compound Rest Top	4 in.
Size of Lathe Tool Shank	⅝ in. x 1¾ in.

Net Factory Prices 16-inch Quick Change Gear Lathe Including Overhead Countershaft and Equipment

No. of Lathe	Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Swing Over Carriage	Power Required	Weight Crated	Code Word	Price F.O.B. South Bend
92-C	16¼ in.	6 ft.	31 in.	1⅝ in.	11½ in.	1 H.P.	1875 lbs.	Malta	$540.00
92-D	16¼ in.	7 ft.	46 in.	1⅝ in.	11½ in.	1 H.P.	1955 lbs.	Melba	555.00
92-E	16¼ in.	8 ft.	58 in.	1⅝ in.	11½ in.	1 H.P.	2035 lbs.	Mitre	570.00
92-G	16¼ in.	10 ft.	82 in.	1⅝ in.	11½ in.	1 H.P.	2195 lbs.	Movir	600.00
*92-H	16¼ in.	12 ft.	106 in.	1⅝ in.	11½ in.	1 H.P.	2355 lbs.	Moday	645.00

*Lathe with 12-foot bed is equipped with center leg which is included in the price of the lathe.



Regular equipment, as illustrated under Lathe, is included in price of Lathe

16-inch Standard Change Gear New Model South Bend Lathe

Back Geared, Screw Cutting Lathe, Countershaft Drive

The New Model 16-inch Standard Change Back Geared Screw Cutting Lathe has the power for heavy production work in manufacturing, the precision and accuracy for fine tool room work, and for a variety of general work.

The New Headstock is back geared, reinforced and webbed, insuring strength and rigidity. Eight spindle speeds are provided, four direct and four back geared.

The Headstock Spindle is made of high carbon steel finished ground with a 1⅝-inch hole its entire length.

The Phosphor Bronze Bearings for Head Spindle are hand scraped to a perfect bearing, are adjustable for wear and are equipped with oilers. See page 6.

The New Model Standard Change Gear Lathe is equipped with a set of independent change gears to cut the following screw threads per inch, right or left-hand, including 11½ pipe thread: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 36 and 40. By compounding the gears furnished many other threads can be cut. See page 70.

LATHE FEATURES

Independent change gears for threads and feeds.
Back geared headstock gives 8 spindle speeds.
Automatic cross feed, automatic longitudinal feed.
Hollow spindle, made of special carbon steel.
Spring latch reverse for feeds and threads.
Phosphor bronze bearings for spindle.
Graduated compound rest swivels to any angle.
Tailstock is arranged for set-over for taper turning.
Graduated collar on cross feed and compound rest screw.
Precision lead screw for cutting accurate threads.

The New Tailstock has a set-over for taper turning. The binding lever locks the spindle without disturbing the alignment of centers. The center is hardened.

The New Apron has automatic cross and longitudinal feeds, and half nuts for thread cutting. An automatic safety interlock prevents the half nuts and automatic feeds from being engaged at the same time. See page 7.

The Precision Lead-Screw 1½-inch diam., 6 threads per inch Acme Standard, is cut on a special machine equipped with a master lead screw which insures accuracy. The threads of the lead screw are used for thread cutting only as the spline in the lead screw drives a worm in the apron which operates both automatic feeds. See page 7.

The Regular Equipment included with each 16-inch Standard Change Gear Lathe consists of: Double Friction Countershaft, Set of Independent Change Gears, Large and Small Face Plates, Tool Post Complete, Adjustable Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. See page 70.

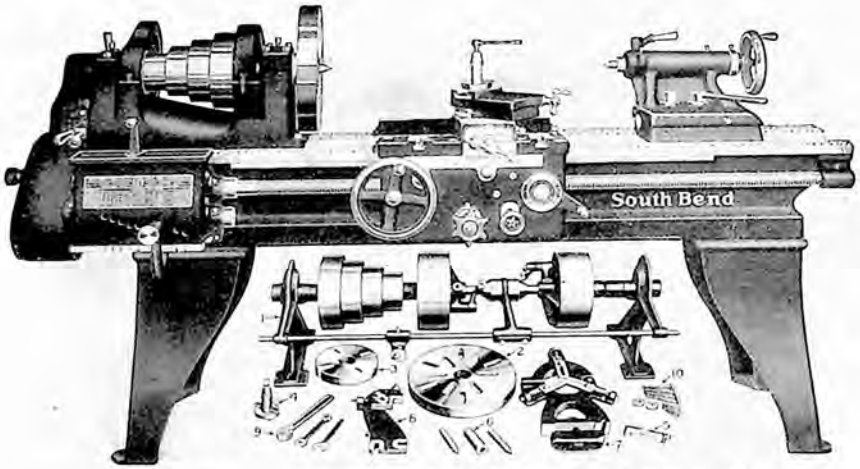
LATHE SPECIFICATIONS

Head and Tail Spindle Centers	No. 3, Morse Taper
Size of Spindle Nose	2⅜ in. diam., 6 Threads
Precision Acme Lead Screw	1½ in. diam., 6 Threads
Screw Thread Cutting Range	2 to 40 per inch
Width of Cone Pulley Belt	2¼ in.
Spindle Speeds	20, 30, 50, 75, 110, 225, 360, 610 R.P.M.
Countershaft Speed	225 R.P.M.
Countershaft Friction Clutch Pulleys	10 in. x 3⅝ in.
Angular Travel of Compound Rest Top	4 in.
Size of Lathe Tool Shank	⅝ in. x 1⅜ in.

Net Factory Prices 16-inch Standard Change Gear Lathe Including Overhead Countershaft and Equipment

No. of Lathe	Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Swing Over Carriage	Power Required	Weight Crated	Code Word	Price F.O.B. South Bend
41-C	16¼ in.	6 ft.	34 in.	1⅝ in.	11⅛ in.	1 H.P.	1840 lbs.	Mater	$480.00
41-D	16¼ in.	7 ft.	46 in.	1⅝ in.	11⅛ in.	1 H.P.	1920 lbs.	Medow	495.00
41-E	16¼ in.	8 ft.	58 in.	1⅝ in.	11⅛ in.	1 H.P.	2000 lbs.	Milky	510.00
41-G	16¼ in.	10 ft.	82 in.	1⅝ in.	11⅛ in.	1 H.P.	2160 lbs.	Money	540.00
*41-H	16¼ in.	12 ft.	106 in.	1⅝ in.	11⅛ in.	1 H.P.	2320 lbs.	Mules	585.00

*Lathe with 12-foot bed is equipped with center leg which is included in the price of the lathe.



Regular equipment, as illustrated under Lathe, is included in price of Lathe

18-inch Quick Change Gear New Model South Bend Lathe

Back Geared, Screw Cutting Lathe, Countershaft Drive

The New Model 18-inch Quick Change Back Geared Screw Cutting Lathe has the power for heavy production work, manufacturing, and precision and accuracy for fine tool room work. It is an excellent tool for all kinds of work in the machine shop.

The New Headstock is back geared, reinforced and webbed, insuring strength and rigidity. Eight spindle speeds are provided, four direct and four back geared.

The Headstock Spindle is made of high carbon steel finished ground with a 1⅞-inch hole its entire length.

The Phosphor Bronze Bearings for Head Spindle are hand scraped to a perfect bearing, are adjustable for wear and are equipped with oilers. See page 6.

The Quick Change Gear Box provides 48 changes for cutting right or left-hand screw threads from 2 to 112 per inch without removing a gear. An index plate shows the arrangement for cutting the following threads: 2, 2¼, 2½, 2¾, 2⅞, 3, 3¼, 3½, 4, 4½, 5, 5½, 5¾, 6, 6½, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44, 46, 48, 52, 56, 64, 72, 80, 88, 92, 96, 104, 112. See page 9.

LATHE FEATURES

Full quick change gear mechanism.
Back geared headstock gives 8 spindle speeds.
Automatic cross feed, automatic longitudinal feed.
Hollow spindle made of special carbon steel.
Spring latch reverse for feeds and threads.
Phosphor bronze bearings for spindle.
Graduated compound rest swivels to any angle.
Tailstock is arranged for set-over for taper turning.
Graduated collar on cross feed and compound rest screws.
Precision lead screw for cutting accurate threads.

The New Tailstock has a set-over for taper turning. The binding lever locks the spindle without disturbing the alignment of centers. The center is hardened.

The New Apron has automatic cross and longitudinal feeds, and half nuts for thread cutting. An automatic safety interlock prevents the half nuts and automatic feeds from being engaged at the same time. See page 7.

The Precision Lead Screw 1⅞-inch diam., 4 threads per inch Acme Standard, is cut on a special machine equipped with a master lead screw which insures accuracy. The threads of the lead screw are used for thread cutting only as the spline in the lead screw drives a worm in the apron which operates both automatic feeds. See page 7.

The Regular Equipment included with each 18-inch Quick Change Gear Lathe consists of: Double Friction Countershaft, Large Face Plate, Small Face Plate, Tool Post Complete, Adjustable Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. See page 70.

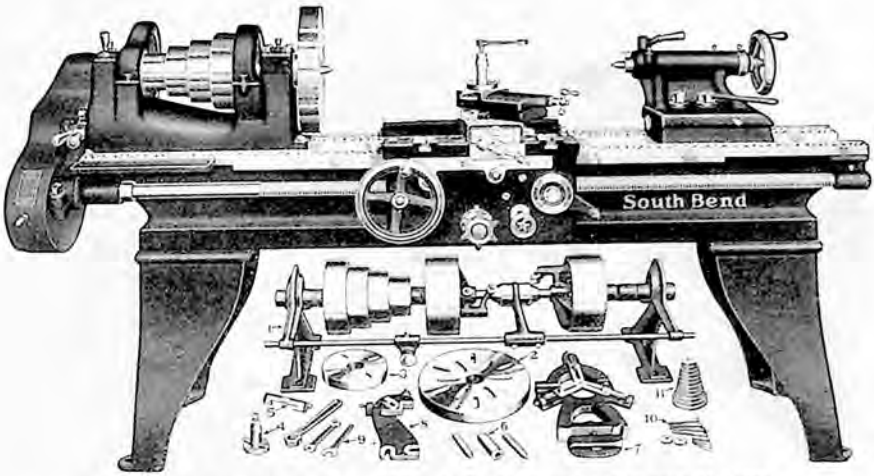
LATHE SPECIFICATIONS

Head and Tail Spindle Centers	No. 3, Morse Taper
Size of Spindle Nose	2⅝ in. diam., 6 Threads
Precision Acme Lead Screw	1⅞ in. diam., 4 Threads
Screw Thread Cutting Range	2 to 112 per inch
Width of Cone Pulley Belt	2½ in.
Spindle Speeds	18, 28, 45, 70, 135, 200, 300, 465 R.P.M.
Countershaft Speed	200 R.P.M.
Countershaft Friction Clutch Pulleys	12 in. x 4½ in.
Angular Travel of Compound Rest Top	43¾ in.
Size of Lathe Tool Shank	⅝ in. x 1⅜ in.

Net Factory Prices 18-inch Quick Change Gear Lathe Including Overhead Countershaft and Equipment

No. of Lathe	Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Swing Over Carriage	Power Required	Weight Crated	Code Word	Price F.O.B. South Bend
94-C	18¼ in.	6 ft.	29½ in.	1⅞ in.	12⅝ in.	2 H.P.	2140 lbs.	Sapho	**$650.00**
94-D	18¼ in.	7 ft.	41½ in.	1⅞ in.	12⅝ in.	2 H.P.	2510 lbs.	Setra	**675.00**
94-E	18¼ in.	8 ft.	53½ in.	1⅞ in.	12⅝ in.	2 H.P.	2618 lbs.	Silar	**700.00**
94-G	18¼ in.	10 ft.	77½ in.	1⅞ in.	12⅝ in.	2 H.P.	2810 lbs.	Socks	**750.00**
***94-H**	18¼ in.	12 ft.	101½ in.	1⅞ in.	12⅝ in.	2 H.P.	3140 lbs.	Suhwa	**815.00**
***94-K**	18¼ in.	14 ft.	125½ in.	1⅞ in.	12⅝ in.	2 H.P.	3510 lbs.	Svogi	**875.00**

*Lathes with 12-foot and 14-foot beds are equipped with center leg which is included in price of lathe.



Regular equipment, as illustrated under Lathe, is included in price of Lathe

18-inch Standard Change Gear New Model South Bend Lathe

Back Geared, Screw Cutting Lathe, Countershaft Drive

The New Model 18-inch Standard Change Back Geared Screw Cutting Lathe has the power for heavy production work, manufacturing, and precision and accuracy for fine tool room work. It is an excellent tool for all kinds of work in the machine shop.

The New Headstock is back geared, reinforced and webbed, insuring strength and rigidity. Eight spindle speeds are provided, four direct and four back geared.

The Headstock Spindle is made of high carbon steel finished ground with a 1 7/16-inch hole its entire length.

The Phosphor Bronze Bearings for Head Spindle are hand scraped to a perfect bearing, are adjustable for wear and are equipped with oilers. See page 6.

The New Model Standard Change Gear Lathe is equipped with a set of independent change gears to cut the following screw threads per inch, right or left-hand, including 11½ pipe threads: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 36 and 40. By compounding the gears furnished many other threads can be cut. See page 70.

LATHE FEATURES

Independent change gears for threads and feeds.
Back geared headstock gives 8 spindle speeds.
Automatic cross feed, automatic longitudinal feed.
Hollow spindle, made of special carbon steel.
Spring latch reverse for feeds and threads.
Phosphor bronze bearings for spindle.
Graduated compound rest swivels to any angle.
Tailstock is arranged for set-over for taper turning.
Graduated collar on cross feed and compound rest screw.
Precision lead screw for cutting accurate threads.

The New Tailstock has a set-over for taper turning. The binding lever locks the spindle without disturbing the alignment of centers. The center is hardened.

The New Apron has automatic cross and longitudinal feeds, and half nuts for thread cutting. An automatic safety interlock prevents the half nuts and automatic feeds from being engaged at the same time. See page 7.

The Precision Lead Screw 1⅝-inch diam., 4 threads per inch Acme Standard, is cut on a special machine equipped with a master lead screw which insures accuracy. The threads of the lead screw are used for thread cutting only as the spline in the lead screw drives a worm in the apron which operates both automatic feeds. See page 7.

The Regular Equipment included with each 18-inch Standard Change Gear Lathe consists of: Double Friction Countershaft, Set of Independent Change Gears, Large and Small Face Plates, Tool Post Complete, Adjustable Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. See page 70.

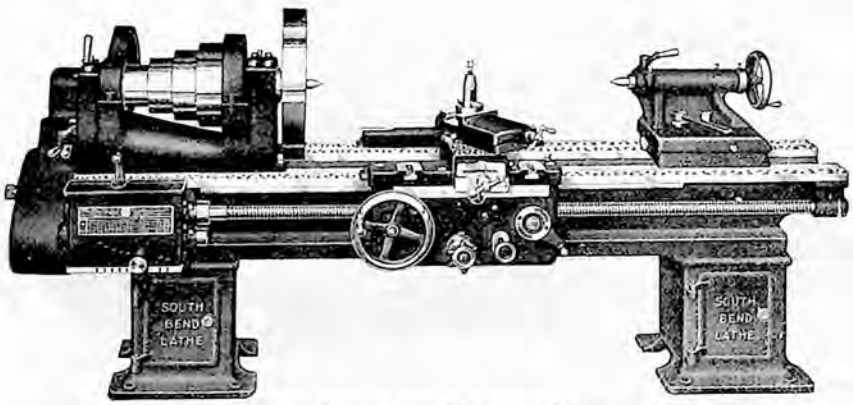
LATHE SPECIFICATIONS

Head and Tail Spindle Centers.....No. 3, Morse Taper
Size of Spindle Nose.....2⅝ in. diam., 6 Threads
Precision Acme Lead Screw.....1⅝ in. diam., 4 Threads
Screw Thread Cutting Range.....2 to 40 per inch
Width of Cone Pulley Belt.....2½ in.
Spindle Speeds.....18, 28, 45, 70, 135, 200, 300, 465 R.P.M.
Countershaft Speed.....200 R.P.M.
Countershaft Friction Clutch Pulleys.....12 in. x 4½ in.
Angular Travel of Compound Rest Top.....43¼ in.
Size of Lathe Tool Shank.....⅝ in. x 1⅜ in.

Net Factory Prices 18-inch Standard Change Gear Lathe Including Overhead Countershaft and Equipment

No. of Lathe	Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Swing Over Carriage	Power Required	Weight Crated	Code Word	Price F.O.B. South Bend
43-C	18¼ in.	6 ft.	29½ in.	1 7/16 in.	12⅝ in.	2 H.P.	2400 lbs.	Sagah	$585.00
43-D	18¼ in.	7 ft.	41½ in.	1 7/16 in.	12⅝ in.	2 H.P.	2500 lbs.	Schoo	610.00
43-E	18¼ in.	8 ft.	53½ in.	1 7/16 in.	12⅝ in.	2 H.P.	2600 lbs.	Siati	635.00
43-G	18¼ in.	10 ft.	77½ in.	1 7/16 in.	12⅝ in.	2 H.P.	2800 lbs.	Sonbu	685.00
*43-H	18¼ in.	12 ft.	101½ in.	1 7/16 in.	12⅝ in.	2 H.P.	3100 lbs.	Sumpt	750.00
*43-K	18¼ in.	14 ft.	125½ in.	1 7/16 in.	12⅝ in.	2 H.P.	3500 lbs.	Sylog	810.00

*Lathes with 12-foot and 14-foot beds are equipped with center leg which is included in price of lathe.



Regular equipment shown on page 70 is included in price of Lathe

21-inch New Model South Bend Lathe

Quick Change and Standard Change, Back Geared, Screw Cutting Lathes
Overhead Countershaft Drive

The New Model 21-inch Quick Change Back Geared Screw Cutting Lathe is illustrated above. We also build this size lathe in the Standard Change Gear type. The features and specifications are the same on both lathes. The prices of both lathes are shown below.

The New Headstock is back geared, reinforced and webbed, insuring strength and rigidity. Eight spindle speeds are provided, four direct and four back geared.

The Headstock Spindle is made of high carbon steel finished ground with a 1⅝-inch hole its entire length.

The Phosphor Bronze Bearings for Head Spindle are hand scraped to a perfect bearing, are adjustable for wear and are equipped with oilers. See page 6.

The Gear Box on the Quick Change Gear Lathes provides 48 changes for cutting screw threads, right or left, from 2 to 112 per inch. See page 9 for illustration and description.

The Independent Change Gears supplied with Standard Change Gear Lathes permit cutting standard screw threads, right or left, from 2 to 40 per inch, including 11½ pipe thread. See page 70.

LATHE FEATURES

Back geared headstock gives 8 spindle speeds.
Spindle cone balanced for operating at high speeds.
Automatic cross feed, automatic longitudinal feed.
Hollow spindle made of special carbon steel.
Spring latch reverse for feeds and threads.
Phosphor bronze bearings for spindle.
Graduated compound rest swivels to any angle.
Tailstock is arranged for set-over for taper turning.
Graduated collar on cross feed and compound rest screws.
Precision lead screw for cutting accurate threads.

The New Tailstock has a set-over for taper turning. The binding lever locks the spindle without disturbing the alignment of centers. The center is hardened.

The New Apron has automatic cross and longitudinal feeds, and half nuts for thread cutting. An automatic safety interlock prevents the half nuts and automatic feeds from being engaged at the same time. See page 7.

The Precision Lead Screw, 1⅝-inch diam., 4 threads per inch Acme Standard, is cut on a special machine equipped with a master lead screw which insures accuracy. The threads of the lead screw are used for thread cutting only as the spline in the lead screw drives a worm in the apron which operates both automatic feeds. See page 7.

The Regular Equipment included with each 21-inch Lathe consists of: Double Friction Countershaft, Large and Small Face Plates, Tool Post Complete, Adjustable Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest, Wrenches, and a set of Independent Change Gears with Standard Change Gear Lathes. See page 70.

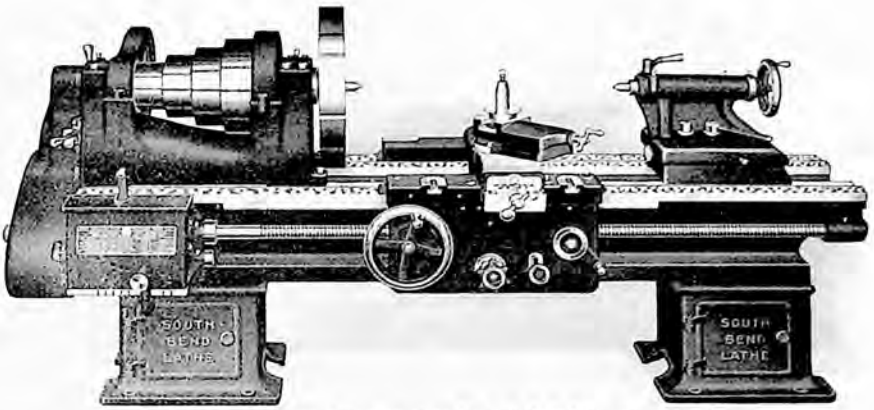
LATHE SPECIFICATIONS

Head and Tail Spindle Centers..... No. 4, Morse Taper
Size of Spindle Nose..... 3 in. diam., 5 Threads
Acme Lead Screw..... 1⅝ in. diam., 4 Threads
Tailstock Spindle Travel..... 7¼ in.
Width of Cone Pulley Belt..... 3 in.
Spindle Speeds....15, 22, 35, 55, 115, 175, 270, 430 R.P.M.
Countershaft Speed..... 175 R.P.M.
Countershaft Friction Clutch Pulleys..... 12 in. x 4½ in.
Angular Travel of Compound Rest Top..... 55° in.
Size of Lathe Tool Shank..... ¾ in. x 1⅝ in.

Net Factory Prices 21-Inch Lathe Including Overhead Countershaft and Equipment

Specifications							Quick Change Gear			Standard Change Gear		
Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Swing Over Carriage	Power Required	Weight Crated	No. of Lathe	Code Word	Price F.O.B. South Bend	No. of Lathe	Code Word	Price F.O.B. South Bend
21¼ in.	7 ft.	36 in.	1½ in.	15⅛ in.	3 H.P.	3190 lbs.	96-D	Tahoe	$ 950.00	49-D	Taint	$ 870.00
21¼ in.	8 ft.	48 in.	1½ in.	15⅛ in.	3 H.P.	3690 lbs.	96-E	Tegol	980.00	49-E	Tehil	900.00
21¼ in.	10 ft.	72 in.	1½ in.	15⅛ in.	3 H.P.	3940 lbs.	96-G	Tidal	1040.00	49-G	Tired	960.00
21¼ in.	12 ft.	96 in.	1½ in.	15⅛ in.	3 H.P.	4300 lbs.	*96-H	Topsy	1115.00	*49-H	Tongs	1035.00
21¼ in.	14 ft.	120 in.	1½ in.	15⅛ in.	3 H.P.	4520 lbs.	*96-K	Tubes	1175.00	*49-K	Tudor	1095.00

*Lathes with 12-foot and 14-foot beds are equipped with center leg which is included in price of lathe.



Regular equipment shown on page 70 is included in price of Lathe

24-inch New Model South Bend Lathe

Quick Change and Standard Change, Back Geared, Screw Cutting Lathes Overhead Countershaft Drive

The New Model 24-inch Quick Change Back Geared Screw Cutting Lathe is illustrated above. We also build this size lathe in the Standard Change Gear type. The features and specifications are the same on both lathes. The prices of both lathes are shown below.

The New Headstock is back geared, reinforced and webbed, insuring strength and rigidity. Eight spindle speeds are provided, four direct and four back geared.

The Headstock Spindle is made of high carbon steel finished ground with a 1¾-inch hole its entire length.

The Phosphor Bronze Bearings for Head Spindle are hand scraped to a perfect bearing, are adjustable for wear and are equipped with oilers. See page 6.

The Gear Box on the Quick Change Gear Lathes provides 48 changes for cutting screw threads, right or left, from 2 to 112 per inch. See page 9 for illustration and description.

The Independent Change Gears supplied with Standard Change Gear Lathes permit cutting standard screw threads, right or left, from 2 to 40 per inch, including 11½ pipe thread. See page 70.

LATHE FEATURES

Back geared headstock gives 8 spindle speeds.
Spindle cone balanced for operating at high speeds.
Automatic cross feed, automatic longitudinal feed.
Hollow spindle made of special carbon steel.
Spring latch reverse for feeds and threads.
Phosphor bronze spindle bearings.
Graduated compound rest swivels to any angle.
Tailstock is arranged for set-over for taper turning.
Graduated collar on cross feed, compound rest screws.
Precision lead screw for cutting accurate threads.

The New Tailstock has a set-over for taper turning. The binding lever locks the spindle without disturbing the alignment of centers. The center is hardened.

The New Apron has automatic cross and longitudinal feeds, and half nuts for thread cutting. An automatic safety interlock prevents the half nuts and automatic feeds from being engaged at the same time. See page 7.

The Precision Lead Screw, 1⅝-inch diam., 4 threads per inch Acme Standard, is cut on a special machine equipped with a master lead screw which insures accuracy. The threads of the lead screw are used for thread cutting only as the spline in the lead screw drives a worm in the apron which operates both automatic feeds. See page 7.

The Regular Equipment included with each 24-inch Lathe consists of: Double Friction Countershaft, Large and Small Face Plates, Tool Post Complete, Adjustable Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest, Wrenches and a set of Independent Change Gears with Standard Change Gear Lathe. See page 70.

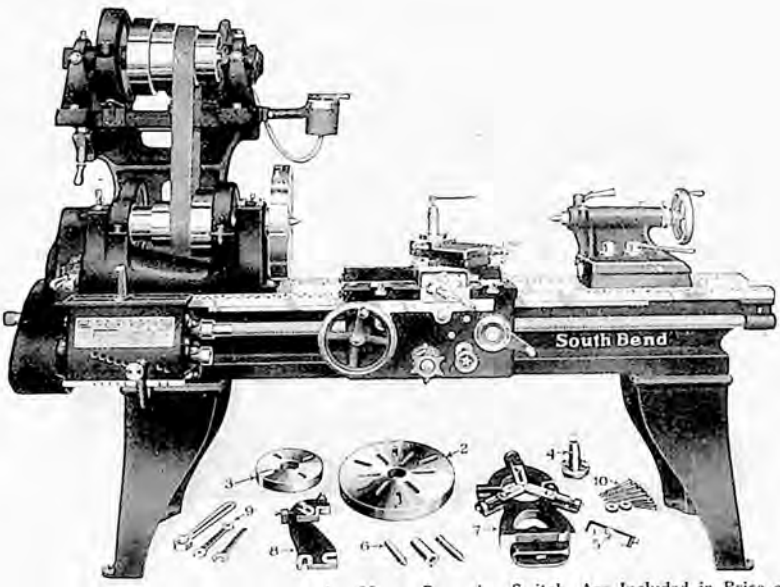
LATHE SPECIFICATIONS

Head and Tail Spindle Centers	No. 4, Morse Taper
Size of Spindle Nose	3¼ in. diam., 5 Threads
Acme Lead Screw	1⅝ in. diam., 4 Threads
Tailstock Spindle Travel	8⅝ in.
Width of Cone Pulley Belt	3½ in.
Spindle Speeds	10, 16, 25, 40, 100, 150, 225, 355 R.P.M.
Countershaft Speed	150 R.P.M.
Countershaft Friction Clutch Pulleys	14 in. x 5 in.
Angular Travel of Compound Rest Top	5¼ in.
Size of Lathe Tool Shank	¾ in. x 1⅜ in.

Net Factory Prices 24-inch Lathe Including Overhead Countershaft and Equipment

Specifications							Quick Change Gear			Standard Change Gear		
Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Swing Over Carriage	Power Required	Weight Crated	No. of Lathe	Code Word	Price F.O.B. South Bend	No. of Lathe	Code Word	Price F.O.B. South Bend
24¼ in.	8 ft.	43 in.	1¾ in.	17⅝ in.	3 H.P.	4490 lbs.	98-E	Waked	$1280.00	57-E	Walet	$1180.00
24¼ in.	10 ft.	67 in.	1¾ in.	17⅝ in.	3 H.P.	4740 lbs.	98-G	Welch	1360.00	57-G	Westa	1260.00
24¼ in.	12 ft.	91 in.	1¾ in.	17⅝ in.	3 H.P.	5140 lbs.	*98-H	Wifol	1460.00	*57-H	Wigen	1360.00
24¼ in.	14 ft.	115 in.	1¾ in.	17⅝ in.	3 H.P.	5410 lbs.	*98-K	Wobly	1540.00	*57-K	Wofed	1440.00
24¼ in.	16 ft.	139 in.	1¾ in.	17⅝ in.	3 H.P.	5690 lbs.	*98-M	Wural	1620.00	*57-M	Wuchi	1520.00

*Lathes with 12-foot, 14-foot and 16-foot beds are equipped with center leg which is included in price of lathe.



Lathe Equipment Shown Above, Reversing Motor, Reversing Switch, Are Included in Price of Silent Chain Motor Driven Lathe

New Model South Bend Silent Chain Motor Driven Lathes

The New Model South Bend Silent Chain Motor Driven Lathes are made in eight sizes from 9-inch swing to 24-inch swing, in both straight bed and gap bed types, Standard and Quick Change Gear Patterns. The design of the Silent Chain Drive is identically the same on all sizes, although the actual dimensions of the drive unit vary according to the size lathe.

Quick Change Gear Silent Chain Motor Driven Lathes

The Headstock is Back Geared, heavily reinforced and webbed, insuring strength and rigidity. Eight Spindle speeds are provided on 13-inch lathes and larger; six on 9-inch and 11-inch lathes.

The Headstock Spindle has a hole its entire length. The Spindle Bearings, which are designed for heavy duty work, are made of high quality **Phosphor Bronze, adjustable for wear,** and hand-scraped to a perfect bearing. See page 6.

The Tailstock is off-set to allow the Compound Rest to swivel parallel to the Bed, and is provided with a set-over for Taper Turning. A Binding Lever securely locks the Spindle without disturbing the alignment of centers. The Center is hardened and self-ejecting.

The Semi-Steel Bed is rigidly braced at short intervals its entire length and is thoroughly seasoned after rough planing. See page 6.

The Carriage has a liberal bearing area on the two outer "V's" of the Bed, insuring long life and a minimum amount of wear. Four felt oil pads keep the "V" ways oiled. The Bridge of the Saddle is deep and wide and "T" slots are provided for clamping work for boring.

The Apron has Automatic Cross and Longitudinal Feeds, and half nuts for thread cutting. **An Automatic Safety Interlock** prevents the half nuts and automatic feeds from being engaged at the same time. See page 7.

The Compound Rest is graduated in 180 degrees, can be clamped to operate at any angle desired and has an angular feed travel. The Compound Rest Screw has Acme threads and a **Micrometer** Graduated Collar for adjusting the depth of the cut. See page 8.

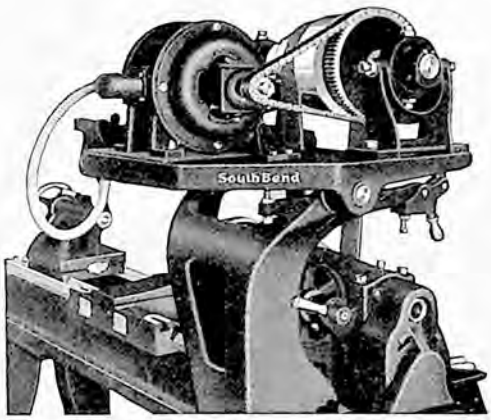
The Lead Screw has Acme threads. The threads of the Lead Screw are used for thread cutting only, as the spline in the Lead Screw drives a worm in the Apron which operates both the Automatic Feeds. See page 7.

The Gear Box on the Quick Change Gear Lathes provides 48 changes for cutting right or left-hand screw threads from 2 to 112 per inch, without removing a gear. It also provides for adjustment of the Automatic Cross Feed and Automatic Longitudinal Feed. An index Plate shows the arrangement of levers for cutting the following threads: 2, 2¼, 2½, 2¾, 2¾, 3, 3¼, 3½, 4, 4½, 5, 5½, 5¾, 6, 6½, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44, 46, 48, 52, 56, 64, 72, 80, 88, 92, 96, 104, 112. See page 9.

Standard Change Gear Silent Chain Motor Driven Lathes

The New Model South Bend Standard Change Gear Motor Driven Lathe is exactly the same as the Quick Change Gear Lathe except that it is equipped with a set of Independent Change Gears instead of the Quick Change Gear Box Mechanism.

The Standard Change Gear Equipment provides for cutting right or left-hand screw threads from 2 to 40 per inch, and a wide range of automatic cross feeds and automatic longitudinal feeds. An Index Plate attached to the lathe shows the arrangement of the change gears.



Close-up of the Silent Chain Mechanism showing how the Motor drives the Cone Shaft through the Silent Chain or link belt. The Gear Guard is removed to show details.

Reversing Switch (Drum Type)

The Reversing Switch (Drum Type) for starting, stopping and reversing the rotation of the Lathe Spindle is included in the price of all Silent Chain Motor Driven Lathes.

The New Silent Chain Motor Drive Unit

Used on All New Model Silent Chain Motor Driven Lathes

The Reversing Motor is mounted above the lathe and balanced where it is free from dirt and chips. A flexible metal conduit encases wiring from motor to switch. The linked silent chain which connects the motor with the upper cone is provided with a felt wick oiler and is entirely enclosed by an improved guard.

The Motor Table which supports the motor and driving cone is held by a heavy bracket mounted directly on the lathe bed. A small lever convenient to the operator allows the tilting motor table to tilt forward and relieve the belt tension for easy shifting. An independent adjustment is provided for taking up the stretch in belt.

The Drum Type Reversing Control Switch is the most practical switch for the efficient operation of a screw cutting lathe. This type switch has a rotary motion which is so necessary on a Motor Driven Screw Cutting Lathe because of the continual starting, stopping, and reversing of the lathe spindle. See cut at top of page.

Start, Stop and Reverse positions are provided on the switch. Moving switch handle to the left runs lathe forward, to the right reverses the motion of the lathe spindle, and in center is the neutral or stop position.

Push Button Control, using magnetic reversing switches instead of the drum type can be furnished on the New Model Silent Chain Motor Driven Lathes at extra cost. Prices of the various Motor Driven Lathes equipped with push button control and magnetic switches will be furnished on request. However, we recommend the drum type reversing switch for use on a South Bend Silent Chain Motor Driven Lathe.

Reversing Motors from ¼ H. P. to 3 H. P. with current specifications shown at bottom of page 28 are carried in stock in our factory. Special electric motors of odd current characteristics, such as 25 cycle, 30 cycle, 40 cycle, 50 cycle, A. C., and 32-volt D. C., motors are not carried in stock. We can, however, secure special motors from the motor manufacturers in Chicago, so there is only a short delay in furnishing them.

Electrical Equipment Included in the Price of the Silent Chain Motor Driven Lathes, both Quick Change Gear and Standard Change Gear, consists of 1200 R. P. M. Reversing Motor, Westinghouse, General Electric, or equal make, Reversing Switch, wiring between motor and switch, flexible metal conduit, wiring diagram, and leather belt.

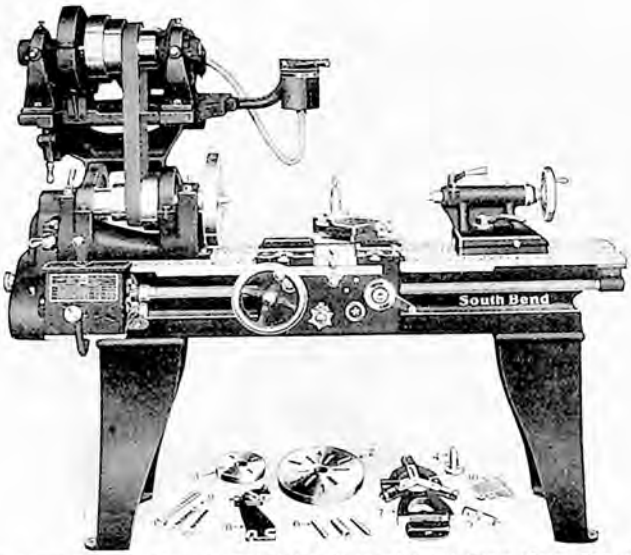
Each Motor Driven Lathe is Thoroughly Tested before shipping. We connect the motor and switch, test and inspect the wiring, then operate and inspect the lathe under its own power. The wiring is encased in a flexible metal conduit and meets the requirements of Underwriter's Specifications. It is very important that these tests be made so that when the lathe arrives it will be ready to run without the necessity of making adjustments to overcome faulty wiring, connections, or similar troubles.

Prices and Weights of all sizes of Silent Chain Motor Driven Lathes are given in the tabulation on page 29 of this Catalog.

Horsepower of Motor Required for Driving South Bend Lathes

Size of Lathe.....	9 in.	11 in.	13 in.	15 in.	16 in.	18 in.	21 in.	24 in.
Horsepower of Motor...	¼	½	¾	1	1	2	3	3
Speed of Motor, R.P.M.	1150 to 1200	1150 to 1200	1150 to 1200	1150 to 1200	1150 to 1200	1150 to 1200	1150 to 1200	1150 to 1200

Description of Silent Chain Motor Driven Lathes continued on page 28.



Lathe Equipment Shown Above is Included in Price of Silent Chain Motor Driven Lathes

The New Model Silent Chain Motor Driven Lathe

Reversing Motor and Reversing Switch (Drum Type) are included in price of Lathe

Eight Sizes—9-inch to 24-inch Swing—Standard and Quick Change Gear Lathes

The New Model South Bend Silent Chain Motor Driven Lathe is efficient and practical for use in manufacturing plant, tool room, and general machine shop. The lathe is a complete unit requiring no extra driving equipment of any kind. It occupies only the same amount of floor space as the regular belt driven lathe and is ready to operate as soon as it is connected to the electric current.

All Sizes of South Bend Quick Change Gear and Standard Change Gear Lathes illustrated and described on pages 12 to 25 inclusive and Gap Bed Lathes illustrated and described on pages 44 and 45 can be furnished in the Silent Chain Motor Drive Pattern. The same specifications and descriptions apply to the Silent Chain Motor Driven Lathes that apply to the Countershaft Driven Lathes, as the only difference between them is in the form of drive.

The Cone Pulleys and Back Gears of the lathe headstock provide a wide range of spindle speeds, eliminating the expense of special variable and adjustable speed motors, allowing standard, constant speed reversing motors to be used.

The Method of Driving the Silent Chain Motor Driven Lathe accounts for its remarkable success. This drive is the ideal electric drive for the screw cutting lathe, as it is powerful and eliminates vibration and noise. Power is delivered from the motor through the Silent Chain and then by belt to the lathe spindle. This means that the turning tool will always leave a smooth, even surface on the work.

A Reversing Motor and Reversing Switch (Drum Type) enables the operator to start, stop and reverse the spindle quickly, which is so important on a Screw Cutting Lathe. For this reason the Silent Chain Motor Driven Lathe is the choice of tool makers and experienced machinists.

Motors for all Motor Driven Lathes should be furnished by us in order to properly fit, operate and test the unit before making shipment. A complete stock of reversing motors is carried at our plant so that prompt delivery can be made on all Silent Chain Motor Driven Lathes. When customers insist on supplying their motors there will be an extra charge for fitting the motor to the lathe.

Use Code Words for Motor Specifications

When Ordering Silent Chain Motor Driven Lathes

In the tabulation below we show code words to cover the popular motor specifications. Use these code words when ordering by telegram or cablegram.

CODE WORD	CURRENT SPECIFICATIONS
Zapin	1-phase, 60 cycle, 110-volt, A. C. Motor
Zbras	1-phase, 60 cycle, 220-volt, A. C. Motor
Zingo	3-phase, 60 cycle, 110-volt, A. C. Motor
Zompe	3-phase, 60 cycle, 220-volt, A. C. Motor
Zurik	115-volt D. C. Motor
Zuwel	230-volt D. C. Motor

For example: When ordering No. 392-E, 16-inch x 8-foot Silent Chain Motor Driven Lathe equipped with 3-phase, 60 cycle, 220-volt A. C. motor, specify the code words "Mears Zompe." The code word "Mears" covers the Lathe and the code word "Zompe" covers the motor specifications. Any South Bend Motor Driven Lathe can be ordered by code by following the same procedure.

If your motor specifications differ from those that we list opposite, give us the exact voltage, phase and cycle when placing your order by telegram or cablegram.

Prices of New Model Silent Chain Motor Driven Lathes

Quick Change Gear and Standard Change Gear Lathes

When Ordering a Silent Chain Motor Driven Lathe give the following information regarding the electric current to be used, so that the proper style and type of reversing motor can be fitted to the lathe.

When giving voltage state whether 110 volt motor or 220 volt motor is wanted. **Do not specify 110-220 volt motor as we cannot furnish motors for double voltage rating.**

Always Give the Following Information:

—If Alternating Current state exact voltage, phase, cycle, and number of wires.

—If Direct Current state exact voltage only.

You Can Secure your current specifications from your electric meter or from the electric power company furnishing your current.

Code Words. When ordering motor driven lathes by telegram or cablegram use code words shown on page 28 opposite, to indicate motor specifications.

Prices listed below are net F.O.B. South Bend, crated for domestic shipment and include the Regular Lathe Equipment (illustrated under lathe on pages 26 and 28), a 1200 R.P.M. Reversing Motor, Reversing Switch, Wiring between Motor and Switch, Flexible Metal Conduit, and Leather Belt.

Swing Over Bed Inches	Length of Bed Feet	Distance Between Centers Inches	Size of Motor H. P.	Approx. Weight Crated Pounds	Quick Change Gear Motor Driven Lathes: Catalog Number of Lathe	Code Word	With 3 Phase 60 Cycle A.C. Motor	With Single Phase 60 Cycle A.C. Motor	With Direct Current Motor	Standard Change Gear Motor Driven Lathes: Catalog Number of Lathe	Code Word	With 3 Phase 60 Cycle A.C. Motor	With Single Phase 60 Cycle A.C. Motor	With Direct Current Motor
9-inch Silent Chain Motor Driven Lathes														
9¼ in.	2½ ft.	11 in.	¼ H.P.	670 lbs.	382-X	Boten	$ 366.00	$ 381.00	$ 369.00	381-X	Bread	$ 331.00	$ 346.00	$ 334.00
9¼ in.	3 ft.	18 in.	¾ H.P.	690 lbs.	382-Y	Betal	371.00	389.00	374.00	381-Y	Bugar	336.00	351.00	339.00
9¼ in.	3½ ft.	23 in.	¾ H.P.	710 lbs.	382-Z	Bimbo	376.00	391.00	379.00	381-Z	Bvint	341.00	356.00	344.00
9¼ in.	4 ft.	28 in.	¾ H.P.	730 lbs.	382-A	Binet	381.00	396.00	384.00	381-A	Bwity	346.00	361.00	349.00
9¼ in.	4½ ft.	33 in.	¾ H.P.	750 lbs.	382-B	Bolen	386.00	401.00	389.00	381-B	Bzuna	351.00	366.00	354.00
11-inch Silent Chain Motor Driven Lathes														
11¼ in.	3 ft.	12 in.	½ H.P.	870 lbs.	384-Y	Eadow	445.00	471.00	454.00	383-Y	Edam	410.00	436.00	419.00
11¼ in.	3½ ft.	18 in.	½ H.P.	895 lbs.	384-Z	Ebert	450.00	476.00	459.00	383-Z	Egnil	415.00	441.00	424.00
11¼ in.	4 ft.	24 in.	½ H.P.	920 lbs.	384-A	Ecrow	455.00	481.00	464.00	383-A	Ehans	420.00	446.00	429.00
11¼ in.	4½ ft.	30 in.	½ H.P.	1035 lbs.	384-B	Edare	465.00	491.00	474.00	383-B	Etqaw	430.00	456.00	439.00
11¼ in.	5 ft.	36 in.	½ H.P.	1060 lbs.	384-S	Edpik	470.00	496.00	479.00	383-S	Eqdix	435.00	461.00	444.00
11¼ in.	5½ ft.	42 in.	½ H.P.	1060 lbs.										
13-inch Silent Chain Motor Driven Lathes														
13¼ in.	4 ft.	16 in.	¾ H.P.	1460 lbs.	386-A	Gazed	525.00	565.00	534.00	385-A	Glubr	475.00	515.00	484.00
13¼ in.	5 ft.	28 in.	¾ H.P.	1510 lbs.	386-B	Gemic	537.00	577.00	546.00	385-B	Guest	487.00	527.00	496.00
13¼ in.	6 ft.	40 in.	¾ H.P.	1560 lbs.	386-C	Giraf	549.00	589.00	558.00	385-C	Gramp	499.00	539.00	508.00
13¼ in.	7 ft.	52 in.	¾ H.P.	1610 lbs.	386-D	Gotam	561.00	601.00	570.00	385-D	Grief	511.00	551.00	520.00
13¼ in.	8 ft.	64 in.	¾ H.P.	1685 lbs.	386-E	Gneza	573.00	613.00	582.00	385-E	Gwilt	523.00	563.00	532.00
15-inch Silent Chain Motor Driven Lathes														
15¼ in.	5 ft.	24½ in.	1 H.P.	1925 lbs.	388-B	Labor	628.00	655.00	701.00	339-B	Loane	568.00	595.00	641.00
15¼ in.	6 ft.	36½ in.	1 H.P.	2025 lbs.	388-C	Leone	643.00	670.00	716.00	339-C	Longe	583.00	610.00	656.00
15¼ in.	7 ft.	48½ in.	1 H.P.	2075 lbs.	388-D	Leper	658.00	685.00	731.00	339-D	Lotus	598.00	625.00	671.00
15¼ in.	8 ft.	60½ in.	1 H.P.	2150 lbs.	388-E	Licen	673.00	700.00	746.00	339-E	Lueia	613.00	640.00	686.00
15¼ in.	10 ft.	84½ in.	1 H.P.	2300 lbs.	388-G	Lindy	703.00	730.00	776.00	339-G	Lyric	643.00	670.00	716.00
16-inch Silent Chain Motor Driven Lathes														
16¼ in.	6 ft.	34 in.	1 H.P.	2310 lbs.	392-C	Madge	695.00	722.00	768.00	341-C	Mirac	635.00	662.00	708.00
16¼ in.	7 ft.	46 in.	1 H.P.	2390 lbs.	392-D	Magpi	710.00	737.00	783.00	341-D	Moats	650.00	677.00	723.00
16¼ in.	8 ft.	58 in.	1 H.P.	2470 lbs.	392-E	Mears	725.00	752.00	798.00	341-E	Moral	665.00	692.00	738.00
16¼ in.	10 ft.	82 in.	1 H.P.	2650 lbs.	392-G	Metro	755.00	782.00	828.00	341-G	Music	695.00	722.03	768.00
16¼ in.	12 ft.	106 in.	1 H.P.	2890 lbs.	392-H	Mires	803.00	827.00	873.00	341-H	Mybeu	740.00	767.00	813.00
18-inch Silent Chain Motor Driven Lathes														
18½ in.	6 ft.	29½ in.	2 H.P.	3040 lbs.	394-C	Sacks	858.00	907.00	948.00	343-C	Sober	793.00	842.00	883.00
18¼ in.	7 ft.	41½ in.	2 H.P.	3140 lbs.	394-D	Sarge	883.00	932.00	973.03	343-D	Sorel	818.00	867.00	938.00
18¼ in.	8 ft.	53½ in.	2 H.P.	3240 lbs.	394-E	Semin	908.00	957.00	998.00	343-E	Sauro	843.00	892.00	933.00
18¼ in.	10 ft.	77½ in.	2 H.P.	3440 lbs.	394-G	Seoul	958.00	1007.00	1048.00	343-G	Sucre	893.00	942.03	983.00
18¼ in.	12 ft.	101½ in.	2 H.P.	3740 lbs.	394-H	Simpe	1023.00	1072.00	1113.00	343-H	Sugar	958.00	1007.00	1048.00
18¼ in.	14 ft.	125½ in.	2 H.P.	4140 lbs.	394-K	Sinks	1083.00	1132.00	1173.00	343-K	Synth	1018.00	1067.00	1108.00
21-inch Silent Chain Motor Driven Lathes														
21¼ in.	7 ft.	36 in.	3 H.P.	4240 lbs.	396-D	Taels	1254.00	1320.00	1380.00	349-D	Tiber	1174.00	1240.00	1300.00
21¼ in.	8 ft.	48 in.	3 H.P.	4440 lbs.	396-E	Tanko	1284.00	1350.00	1410.00	349-E	Tiles	1204.00	1270.00	1330.00
21¼ in.	10 ft.	72 in.	3 H.P.	4690 lbs.	396-G	Tawse	1344.00	1410.00	1470.00	349-G	Torch	1264.00	1330.00	1390.00
21¼ in.	12 ft.	96 in.	3 H.P.	5050 lbs.	396-H	Telma	1419.00	1485.00	1545.00	349-H	Tough	1339.00	1405.00	1465.00
21¼ in.	14 ft.	120 in.	3 H.P.	5270 lbs.	396-K	Tense	1479.00	1545.00	1605.03	349-K	Tucan	1399.03	1465.00	1525.00
24-inch Silent Chain Motor Driven Lathes														
24¼ in.	8 ft.	43 in.	3 H.P.	5365 lbs.	398-E	Walls	1634.00	1700.00	1760.00	357-E	Winth	1534.00	1600.00	1660.00
24¼ in.	10 ft.	67 in.	3 H.P.	5615 lbs.	398-G	Wajoh	1714.00	1780.00	1840.00	357-G	Wopal	1614.00	1680.00	1740.00
24¼ in.	12 ft.	91 in.	3 H.P.	6015 lbs.	398-H	Weirs	1814.00	1880.00	1940.00	357-H	Words	1714.00	1780.00	1840.00
24¼ in.	14 ft.	115 in.	3 H.P.	6285 lbs.	398-K	Werow	1894.00	1960.00	2020.00	357-K	Wedin	1794.00	1860.00	1920.00
24¼ in.	16 ft.	139 in.	3 H.P.	6565 lbs.	398-M	Wilow	1974.00	2040.00	2100.00	357-M	Wugor	1874.00	1940.00	2000.00

Prices of Silent Chain Motor Driven Lathes equipped with 50-cycle motor are the same as prices of Lathes with 60-cycle motor. Prices of Silent Chain Motor Driven Lathes equipped with 25-cycle motor will be quoted on request. (Page 29. Cat. S9-A)

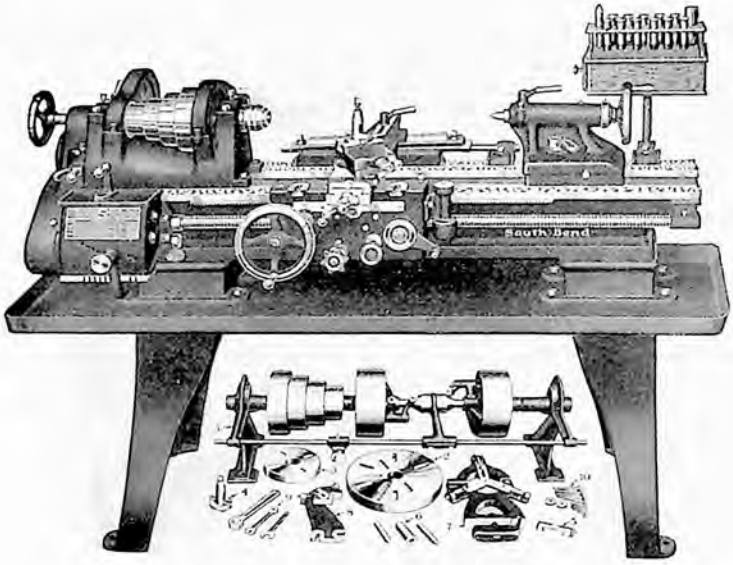
Extra for Silent Chain Motor Driven Lathes with Double Gap Bed

How to Figure Prices

The New South Bend Silent Chain Motor Driven Lathes can be supplied at extra cost with Double Gap Bed.

To figure the prices of Double Gap Bed Silent Chain Motor Driven Lathes, add the price listed in the panel to the right, to the price of the corresponding size of Straight Bed Silent Chain Motor Driven Lathe appearing above.

Catalog Numbers: Standard Change	Catalog Numbers: Quick Change	Size of Lathe	Swing Over Straight Bed	Swing Over Gap	Total Width of Gap	Width of Each Bridge	Prices Extra for Gap Bed and Bridge
3633	3681	11 in.	11¼ in.	16 in.	5 in.	2½ in.	$ 50.00
3635	3686	13 in.	13¼ in.	19 in.	7 in.	3½ in.	60.00
3639	3688	15 in.	15¼ in.	22 in.	8 in.	4 in.	70.00
3641	3692	16 in.	16¼ in.	24 in.	8¼ in.	4¼ in.	80.00
3643	3694	18 in.	18¼ in.	26 in.	10 in.	5 in.	90.00
3649	3696	21 in.	21¼ in.	30 in.	12 in.	6 in.	125.00
3657	3698	24 in.	24¼ in.	36 in.	15 in.	7½ in.	175.00



Equipment illustrated under Lathe is included in price of Lathe

South Bend Tool Room Precision Lathe (New Model)

Countershaft Drive. Made in 11-inch, 13-inch, 15-inch and 16-inch Sizes

The New Model South Bend Tool Room Precision Lathe is widely used in the tool room of many of the largest manufacturing plants in the United States because it is capable of turning out the finest tool work including precision master taps, screw gauges, special screws, dies and other tool work to meet the most exact requirements.

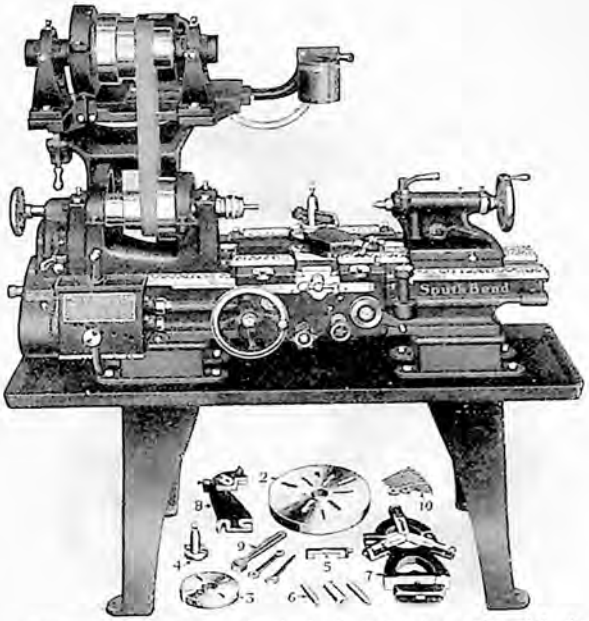
The Illustration shows the 13-inch x 5-ft Tool Room Quick Change Gear Lathe which we recommend for fine tool work. This lathe will meet the requirements of the expert mechanic on the most accurate work. The 11-inch, 15-inch and 16-inch Tool Room Lathes are similar in design, differing only in weights, dimensions and prices.

South Bend Tool Room Lathes can be furnished in 11-inch, 13-inch, 15-inch and 16-inch sizes, with or without the special attachments. We list and price each attachment individually so that the customer can select only those required for his work. Attachments are described in this catalog.

The Regular Lathe Equipment included in the price of each South Bend Tool Room Lathe consists of: Double Friction Countershaft, Large and Small Face Plates, Tool Post complete, Adjustable Thread Cutting Stop, two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest and Wrenches. Collet Chucks, Taper Attachments, Thread Dials, etc., are illustrated and described on pages 46 to 65.

Net Factory Prices of Tool Room Quick Change Gear Precision Lathes with Overhead Countershaft Drive

Size and Number of Lathe	No. 884-A—11" x 4'		No. 886-B—13" x 5'		No. 888-C—15" x 6'		No. 892-C—16" x 6'	
Tool Room Quick Change Gear Lathe (New Model) with Regular Equipment but without Special Attachments	Code Word	Price	Code Word	Price	Code Word	Price	Code Word	Price
	Emdor	$335.00	Gehos	$402.00	Lemon	$490.00	Malta	$540.00
TOOL ROOM ATTACHMENTS								
Hand Wheel Draw-in Collet Chuck with One Collet	Abode	38.00	About	44.00	Above	50.00	Adore	56.00
Extra Collets 1/64-inch up to capacity by 1/64-inch, Each	Cello	4.00	Chose	4.50	Civit	5.00	Clear	5.50
Taper Attachment	Devor	60.00	Digit	70.00	Doted	75.00	Dress	85.00
Thread Indicator	Acres	8.00	Advis	10.00	Aesop	10.00	Aflot	12.00
Oil Pan	Odium	18.00	Oberu	22.00	Okres	30.00	Okres	33.00
Micrometer Carriage Stop	Ceded	10.00	Chain	10.00	Cigar	10.00	Climb	10.00
Collet Cabinet and Bracket	Crome	12.00	Cnoke	12.00	Cnarl	12.00	Cadre	12.00
Net Factory Prices of Tool Room Lathe Complete		$485.00		$574.50		$682.00		$753.50



Equipment illustrated under Lathe is included in price of Lathe

South Bend Tool Room Precision Lathe (New Model)

Silent Chain Motor Drive. Made in 11-inch, 13-inch, 15-inch and 16-inch Sizes

The New Model South Bend Tool Room Precision Lathe is widely used in the tool room of many of the largest manufacturing plants in the United States because it is capable of turning out the finest tool work including precision master taps, screw gauges, special screws, dies and other tool work to meet the most exact requirements.

South Bend Silent Chain Motor Driven Tool Room Lathes can be furnished in the 11-inch, 13-inch, 15-inch and 16-inch sizes, with or without the special attachments. We list and price each attachment individually so that the customer can select only those required for his work. All of the attachments are illustrated and described in this catalog.

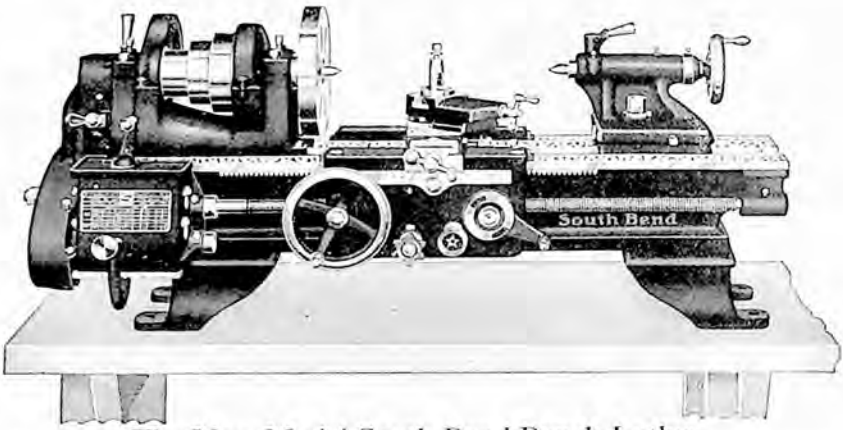
Electrical Equipment included in the price of the Silent Chain Motor Driven Tool Room Lathe consists of a three-phase, sixty-cycle, A.C., 1200 R.P.M. Reversing Motor (Westinghouse, General Electric or equal make), Reversing Switch (drum type), Wiring between Motor and Switch, Flexible Metal Conduit, Wiring Diagram and a Leather Belt.

Regular Lathe Equipment included in the price of the Silent Chain Motor Driven Tool Room Lathe consists of a Large Face Plate, Small Face Plate, Tool Post Complete, Adjustable Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest, Lag Screws and Washers, and Wrenches.

Net Factory Prices of Silent Chain Motor Driven Tool Room Quick Change Gear Lathe with 3-phase, 60-cycle, A.C. Reversing Motor, Reversing Switch and Leather Belt

Size and Number of Lathe	No. 3881-A—11" x 4'		No. 3886-B—13" x 5'		No. 3888-C—15" x 6'		No. 3892-C—16" x 6'	
	Code Word	Price	Code Word	Price	Code Word	Price	Code Word	Price
Silent Chain Motor Driven Tool Room Quick Change Gear Lathe (New Model) with Reversing Motor and Reversing Switch but without Special Attachments	Ecrow	$455.00	Gemic	$537.00	Leone	$643.00	Madge	$695.00
TOOL ROOM ATTACHMENTS								
Hand Wheel Draw-in Collet Chuck with One Collet	Abode	38.00	About	44.00	Above	50.00	Adore	56.00
Extra Collets 1/64-inch up to capacity by 1/64-inch Each	Cello	4.00	Chose	4.50	Civit	5.00	Clear	5.50
Taper Attachment	Devor	60.00	Digit	70.00	Doted	75.00	Dress	85.00
Thread Indicator	Acres	8.00	Advis	10.00	Aesop	10.00	Aflet	12.00
Oil Pan	Odium	18.00	Ohem	22.00	Okros	30.00	Okrus	33.00
Micrometer Carriage Stop	Celed	10.00	Chain	10.00	Cigar	10.00	Climb	10.00
Collet Cabinet and Bracket	Crome	12.00	Choke	12.00	Curl	12.00	Cadro	12.00
Silent Chain Motor Driven Tool Room Lathe Complete		$605.00		$709.50		$835.00		$908.50

Prices of Silent Chain Motor Driven Tool Room Lathe equipped with D.C. Motor and single-phase, A.C. Motor, on request.



The New Model South Bend Bench Lathes

9-inch and 11-inch Quick Change and Standard Change Gear Lathes—Countershaft Drive

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

Bench Lathes are used to advantage in factories for large production of small metal parts and for fine tool work. These lathes are sometimes arranged in groups.

For Specifications and description of the 9-inch and 11-inch Bench Lathes Quick Change Gear or Standard Change Gear, refer to the 9-inch or 11-inch Lathes with floor legs illustrated in the front part of catalog. The only difference is that the Bench Legs are substituted for Floor Legs.

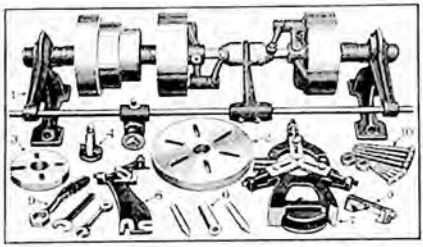
The Headstock is back geared, reinforced and webbed, insuring strength and rigidity. Six spindle speeds are provided, three direct and three back geared.

The New Apron has automatic cross and longitudinal turning feeds, and half nuts for thread cutting. An automatic safety interlock prevents the half nuts and automatic feeds from being engaged at the same time. See page 7.

The Gear Box on Quick Change Gear Lathes provides 48 changes for cutting screw threads, right or left, from 2 to 112 per inch. See page 9 for illustration and description.

The Independent Change Gears supplied with Standard Change Gear Lathes permit cutting standard screw threads, right or left, from 4 to 40 per inch, including 11½ pipe thread. See page 70.

The Hard Maple Bench is not included in the price of the Bench Lathes but can be furnished at extra cost. For prices and descriptions of Bench see page 64.



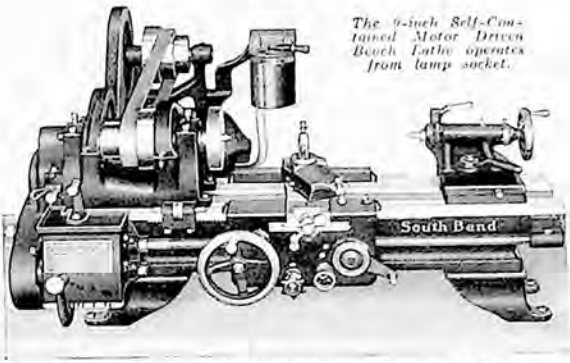
Countershaft and Equipment Included in Price

The Regular Equipment included with each Bench Lathe consists of: Double Friction Countershaft, Large and Small Face Plates, Tool Post Complete, Adjustable Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest, Wrenches and a set of Independent Change Gears with Standard Change Gear Lathe. See page 70.

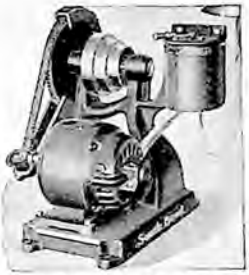
Attachments. Bench Lathes may be fitted with all the Attachments, Tools and Accessories that can be used on Floor Leg Lathes such as Draw-in Collet Chuck, Taper Attachment, Milling and Keyway Cutting Attachment, Chucks, Turning and Boring Tools, etc.

Net Factory Prices of Bench Lathes with Overhead Countershaft and Equipment

Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Power Required	Weight Crated	Quick Change Gear			Standard Change Gear		
						Cat. No.	Code Word	Price	Cat. No.	Code Word	Price
9-inch New Model South Bend Bench Lathes											
9¼ in.	2½ ft.	11 in.	¾ in.	¼ H.P.	405 lbs.	82-XB	Backe	$255.00	31-XB	Bride	$220.00
9¼ in.	3 ft.	18 in.	¾ in.	¼ H.P.	425 lbs.	82-YB	Belts	260.00	31-YB	Bulks	225.00
9¼ in.	3½ ft.	23 in.	¾ in.	¼ H.P.	445 lbs.	82-ZB	Bingo	265.00	31-ZB	Bvork	230.00
9¼ in.	4 ft.	29 in.	¾ in.	¼ H.P.	465 lbs.	82-AB	Blame	270.00	31-AB	Bweir	235.00
9¼ in.	4½ ft.	36 in.	¾ in.	¼ H.P.	490 lbs.	82-RB	Bodel	275.00	31-RB	Bzone	240.00
11-inch New Model South Bend Bench Lathes											
11¼ in.	3 ft.	12 in.	⅞ in.	½ H.P.	575 lbs.	84-YB	Ebony	$315.00	33-YB	Egast	$280.00
11¼ in.	3½ ft.	18 in.	⅞ in.	½ H.P.	600 lbs.	84-ZB	Echos	320.00	33-ZB	Ekorn	285.00
11¼ in.	4 ft.	24 in.	⅞ in.	½ H.P.	625 lbs.	84-AB	Edwin	325.00	33-AB	Elong	290.00
11¼ in.	5 ft.	36 in.	⅞ in.	½ H.P.	705 lbs.	84-BB	Effort	335.00	33-BB	Emate	300.00
11¼ in.	5½ ft.	42 in.	⅞ in.	½ H.P.	745 lbs.	84-SB	Egpsu	340.00	33-SB	Enbuf	305.00



The 9-inch Self-Contained Motor Driven Bench Lathe operates from lamp socket.



End View of Drive Unit
Part of Gear Guard Removed to Show the Chain

9-inch and 11-inch Self-Contained Motor Driven Bench Lathes

Quick Change and Standard Change, Back Geared, Screw Cutting Lathes

The Self-Contained Motor Driven Bench Lathe is practical for general work in the machine shop and for fine precision tool and instrument work. When this unit is mounted on a bench and connected to the current, it is ready for operation.

For Specifications and Descriptions of the 9-inch and 11-inch Bench Lathes, refer to page 32, as the only difference between the 9-inch and 11-inch Self-Contained Bench Lathes and the Overhead Countershaft Driven Lathes is the form of drive.

Operates from Lamp Socket. A ¼ horsepower reversing motor driven from an ordinary lamp socket gives sufficient power to operate the 9-inch Self-Contained Motor Driven Bench Lathe at maximum capacity. Operating cost averages two cents per hour.

The Reversing Switch (Drum Type) is conveniently located so that the operator can start, stop or reverse the motor from an easy working position in front of the lathe. The switch has three positions: Left for forward motion of the lathe spindle; center for stop, and right for reverse.

The Hard Maple Wooden Bench illustrated above is not included in the price of the Self-Contained Motor Driven Bench Lathes but can be furnished at extra cost. For prices and descriptions of this bench, see page 64.

When Ordering a Self-Contained Motor Driven Bench Lathe, be sure to specify the electric current. If alternating current, state exact voltage, phase, cycle and number of wires. If direct current, state exact voltage. When giving voltage of motor, state whether 110-volt motor or 220-volt motor is wanted. Do not specify 110-220-volt motor, as we cannot furnish motors for double voltage rating.

Use Code Word. When ordering a Self-Contained Motor Driven Bench Lathe, use Code Words listed below to indicate the size of Self-Contained Motor Driven Bench Lathe wanted. Use Code Words shown on page 28 to indicate motor specifications.

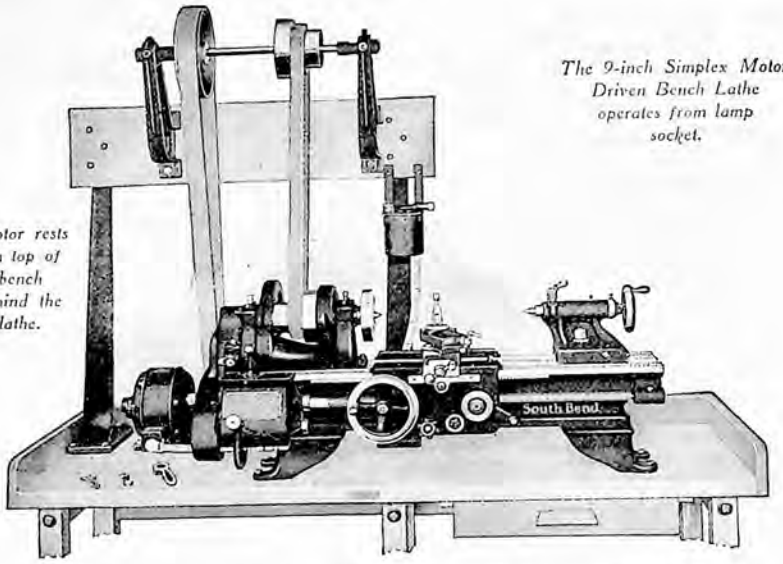
Electrical Equipment Included in the Price of each Self-Contained Motor Driven Bench Lathe consists of: Reversing Motor 1200 R.P.M., (Westinghouse, General Electric or equal make), Reversing Switch (Drum Type), Wiring between motor and switch, Flexible Metal Conduit, Wiring Diagram and a Leather Belt.

Regular Lathe Equipment Included in the Price of each Self-Contained Motor Driven Bench Lathe consists of: Large and Small Face Plates, Tool Post Complete, Adjustable Thread Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest, Wrenches, and Independent Change Gears with Standard Change Gear Lathes.

Net Factory Prices Self-Contained Motor Driven Bench Lathe—Without Bench

Prices Include Lathe Equipment, Reversing Motor, Reversing Switch and Leather Belt, But Do Not Include Bench

Swing Over Bed	Length of Bed	Size of Motor	Weight Crated Without Bench	Quick Change Gear Lathe					Standard Change Gear Lathe				
				Catalog No. of Lathe	Code Word	With 3 Phase 60 Cycle A.C. Motor	With Single Phase 60 Cycle A.C. Motor	With Direct Current Motor	Catalog No. of Lathe	Code Word	With 3 Phase 60 Cycle A.C. Motor	With Single Phase 60 Cycle A.C. Motor	With Direct Current Motor
9-inch Self-Contained Motor Driven Bench Lathe													
9¼ in.	2½ ft.	¼ H.P.	490 lbs.	782-X	Baern	$332.00	$347.00	$335.00	731-X	Braid	$297.00	$312.00	$300.00
9¼ in.	3 ft.	¼ H.P.	520 lbs.	782-Y	Bear	337.00	352.00	340.00	731-Y	Bunko	302.00	317.00	305.00
9¼ in.	3½ ft.	¼ H.P.	550 lbs.	782-Z	Bilos	342.00	357.00	345.00	731-Z	Bvall	307.00	322.00	310.00
9¼ in.	4 ft.	¼ H.P.	580 lbs.	782-A	Blota	347.00	362.00	350.00	731-A	Bwops	312.00	327.00	315.00
9¼ in.	4½ ft.	¼ H.P.	610 lbs.	782-R	Bosnl	352.00	367.00	355.00	731-R	Bzipr	317.00	332.00	320.00
11-inch Self-Contained Motor Driven Bench Lathe													
11¼ in.	3 ft.	½ H.P.	640 lbs.	781-Y	Easn	$407.00	$433.00	$417.00	731-Y	Efade	$372.00	$398.00	$382.00
11¼ in.	3½ ft.	½ H.P.	670 lbs.	781-Z	Ebros	412.00	438.00	422.00	731-Z	Egrip	377.00	403.00	387.00
11¼ in.	4 ft.	½ H.P.	700 lbs.	781-A	Eclip	417.00	443.00	427.00	731-A	Ehows	382.00	408.00	392.00
11¼ in.	5 ft.	½ H.P.	730 lbs.	781-B	Edtor	427.00	453.00	437.00	731-B	Elano	392.00	418.00	402.00
11¼ in.	5½ ft.	½ H.P.	760 lbs.	781-S	Efops	432.00	458.00	442.00	731-S	Eklop	397.00	423.00	407.00



The 9-inch Simplex Motor Driven Bench Lathe operates from lamp socket.

Motor rests on top of bench behind the lathe.

9-inch and 11-inch Simplex Motor Driven Bench Lathes

Quick Change and Standard Change, Back Geared, Screw Cutting Lathes

The Simplex Type of Motor Drive is practical for driving a screw cutting bench lathe for general machine shop work and precision tool work. A reversing motor mounted on bench drives the Simplex countershaft overhead. Starting, stopping and reversing of the direction of lathe spindle is controlled by a drum type reversing switch placed above lathe at the right in easy reach of the operator.

For Specifications and Descriptions of the 9-inch or 11-inch Bench Lathes refer to page 32, as the only difference between Simplex Motor Driven Bench Lathes and the Overhead Countershaft Driven Lathes is the form of drive.

A ¼-horsepower Reversing Motor driven from an ordinary lamp socket gives sufficient power to operate the 9-inch Simplex Motor Driven Bench Lathe at maximum capacity.

The Hard Maple Wooden Bench and Countershaft Standards are not included in the price of the Simplex Motor Driven Bench Lathes, but can be furnished at extra cost. For prices and descriptions, see page 64.

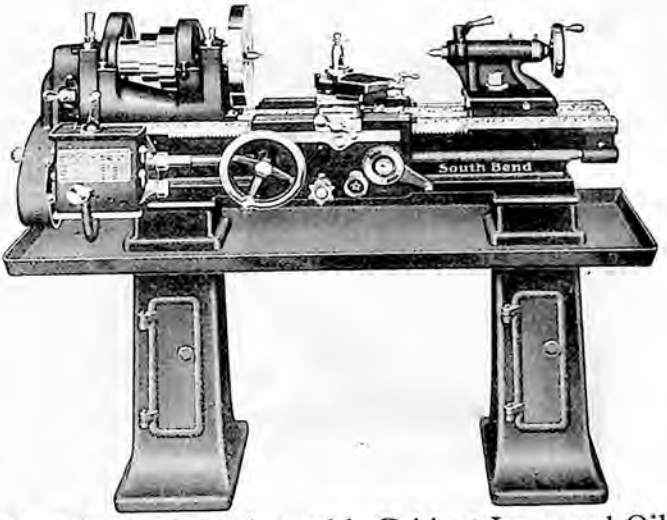
Electrical Equipment Included in the Price of each Simplex Motor Driven Lathe consists of a Reversing Motor 1200 R.P.M. (Westinghouse, General Electric or equal make), Reversing Switch (Drum Type), wiring between motor and switch, Flexible Metal Conduit, Wiring Diagram and two Leather Belts.

Regular Lathe Equipment Included in the Price of each Simplex Motor Driven Bench Lathe consists of: Simplex Countershaft, Large and Small Face Plates, Tool Post Complete, Adjustable Thread-Cutting Stop, Two Lathe Centers and Spindle Sleeve, Center Rest, Follower Rest, Wrenches; and Independent Change Gears with Standard Change Gear Lathes.

Net Factory Prices Simplex Motor Driven Bench Lathe—Without Bench or Standards

Prices Include Simplex Countershaft, Lathe Equipment, Reversing Motor and Switch, Two Belts, But Not Bench or Standards

Swing Over Bed	Length of Bed	Size of Motor	Weight Crated Without Bench	Quick Change Gear Lathe					Standard Change Gear Lathe				
				Catalog No. of Lathe	Code Word	With 3 Phase 60 Cycle A.C. Motor	With Single Phase 60 Cycle A.C. Motor	With Direct Current Motor	Catalog No. of Lathe	Code Word	With 3 Phase 60 Cycle A.C. Motor	With Single Phase 60 Cycle A.C. Motor	With Direct Current Motor
9-inch Simplex Motor Driven Bench Lathe													
9¼ in.	2½ ft.	¼ H.P.	505 lbs.	582-XB	Bailer	$318.00	$332.00	$320.00	531-XB	Brute	$283.00	$297.00	$285.00
9¼ in.	3 ft.	¼ H.P.	525 lbs.	582-YB	Beard	323.00	337.00	325.00	531-YB	Buted	288.00	302.00	290.00
9¼ in.	3½ ft.	¼ H.P.	545 lbs.	582-ZB	Bilet	328.00	342.00	330.00	531-ZB	Bvang	293.00	307.00	295.00
9¼ in.	4 ft.	¼ H.P.	565 lbs.	582-AB	Block	333.00	347.00	335.00	531-AB	Bvast	298.00	312.00	300.00
9¼ in.	4½ ft.	¼ H.P.	590 lbs.	582-RB	Bolen	338.00	352.00	340.00	531-RB	Bzard	303.00	317.00	305.00
11-inch Simplex Motor Driven Bench Lathe													
11¼ in.	3 ft.	½ H.P.	675 lbs.	584-YB	Eband	$390.00	$416.00	$400.00	533-YB	Egren	$355.00	$381.00	$365.00
11¼ in.	3½ ft.	½ H.P.	700 lbs.	584-ZB	Ecore	395.00	421.00	405.00	533-ZB	Egunk	360.00	386.00	370.00
11¼ in.	4 ft.	½ H.P.	725 lbs.	584-AB	Edsel	400.00	426.00	410.00	533-AB	Elake	365.00	391.00	375.00
11¼ in.	5 ft.	½ H.P.	805 lbs.	584-BB	Efair	410.00	436.00	420.00	533-BB	Elulo	375.00	401.00	385.00
11¼ in.	5½ ft.	½ H.P.	815 lbs.	584-SB	Eglis	415.00	441.00	425.00	533-SB	Elusp	380.00	406.00	390.00



9-inch and 11-inch Lathes with Cabinet Legs and Oil Pan

Quick Change and Standard Change Back Geared Screw Cutting Lathes

The Illustration above shows the New Model 11-inch Quick Change Gear Lathe equipped with Cabinet Legs and Oil Pan.

For Specifications and Descriptions of the 9-inch and 11-inch Quick Change Gear and Standard Change Gear Lathes with Cabinet Legs and Oil Pan, refer to the 9-inch and 11-inch lathes with Floor Legs illustrated on pages 12 to 15. The only difference is that Cabinet Legs and Oil Pan are furnished instead of the regular Floor Legs.

Equipment. The Double Friction Countershaft and Equipment is included in the price of Lathes equipped with Cabinet Legs and Oil Pan. For complete description of equipment, see page 70.

Prices of 9-inch and 11-inch Lathes with Cabinet Legs, Oil Pan, Countershaft and Equipment

Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Power Required	Weight Crated	Quick Change Gear Lathes			Standard Change Gear Lathes		
						Cat. No.	Code Word	Price	Cat. No.	Code Word	Price
9-inch New Model South Bend Lathes with Cabinet Legs and Oil Pan											
9¼ in.	2½ ft.	11 in.	⅝ in.	¼ H.P.	480 lbs.	282-X	Bitke	$299.00	231-X	Busch	$264.00
9¼ in.	3 ft.	18 in.	⅝ in.	¼ H.P.	502 lbs.	282-Y	Bado	304.00	231-Y	Brisk	269.00
9¼ in.	3½ ft.	24 in.	⅝ in.	¼ H.P.	524 lbs.	282-Z	Banet	310.00	231-Z	Benrm	275.00
9¼ in.	4 ft.	30 in.	⅝ in.	¼ H.P.	546 lbs.	282-A	Britn	316.00	231-A	Bokup	281.00
9¼ in.	5 ft.	36 in.	⅝ in.	¼ H.P.	575 lbs.	282-R	Bmage	322.00	231-R	Burox	287.00
11-inch New Model South Bend Lathes with Cabinet Legs and Oil Pan											
11¼ in.	3 ft.	12 in.	⅞ in.	½ H.P.	666 lbs.	284-Y	Emige	$363.00	233-Y	Eulma	$328.00
11¼ in.	3½ ft.	18 in.	⅞ in.	½ H.P.	695 lbs.	284-Z	Falkn	369.00	233-Z	Ekcmo	334.00
11¼ in.	4 ft.	24 in.	⅞ in.	½ H.P.	720 lbs.	284-A	Enlee	375.00	233-A	Ezont	340.00
11¼ in.	5 ft.	36 in.	⅞ in.	½ H.P.	804 lbs.	284-B	Ereli	387.00	233-B	Elope	352.00
11¼ in.	5½ ft.	42 in.	⅞ in.	½ H.P.	831 lbs.	284-S	Eratn	393.00	233-S	Elokn	358.00

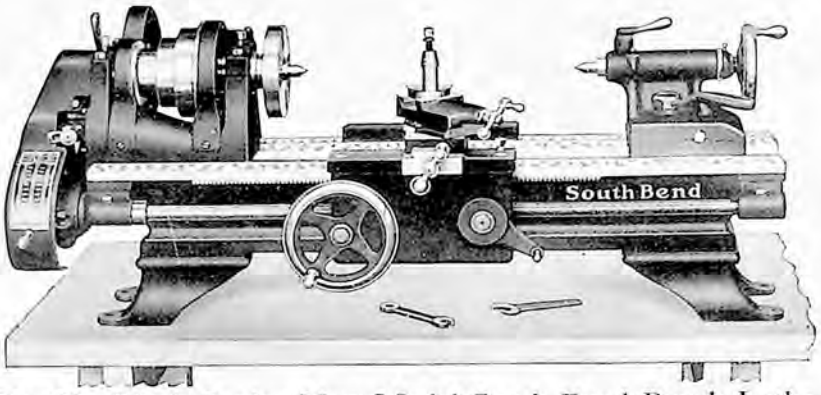
9" and 11" Silent Chain Motor Driven Lathes, Cabinet Legs and Oil Pan

Specifications and Features of 9-inch and 11-inch Silent Chain Motor Driven Lathes Are Described on Pages 26-29

Prices of Silent Chain Motor Driven Lathes with Cabinet Legs, Oil Pan and Equipment

Prices Include Reversing Motor, Reversing Switch and Leather Belt

Swing Over Bed	Length of Bed	Size of Motor	Weight Crated	Quick Change Gear Lathes					Standard Change Gear Lathes				
				Catalog No. of Lathe	Code Word	3 Phase 60 Cycle A.C. Motor	1 Phase 60 Cycle A.C. Motor	Direct Current Motor	Catalog No. of Lathe	Code Word	3 Phase 60 Cycle A.C. Motor	1 Phase 60 Cycle A.C. Motor	Direct Current Motor
9-inch Silent Chain Motor Driven Lathes with Cabinet Legs and Oil Pan													
9¼ in.	2½ ft.	¼ H.P.	745 lbs.	2382-X	Dolien	$400.00	$415.00	$403.00	2331-X	Drape	$365.00	$380.00	$368.00
9¼ in.	3 ft.	¼ H.P.	767 lbs.	2382-Y	Donle	405.00	420.00	408.00	2331-Y	Derby	370.00	385.00	373.00
9¼ in.	3½ ft.	¼ H.P.	789 lbs.	2382-Z	Destl	411.00	426.00	414.00	2331-Z	Daser	376.00	391.00	379.00
9¼ in.	4 ft.	¼ H.P.	811 lbs.	2382-A	Detra	417.00	432.00	420.00	2331-A	Drole	382.00	397.00	385.00
9¼ in.	5 ft.	¼ H.P.	833 lbs.	2382-R	Docnu	423.00	438.00	426.00	2331-R	Derit	388.00	403.00	391.00
11-inch Silent Chain Motor Driven Lathes with Cabinet Legs and Oil Pan													
11¼ in.	3 ft.	½ H.P.	961 lbs.	2384-Y	Elbow	$483.00	$509.00	$492.00	2333-Y	Ergot	$448.00	474.00	$457.00
11¼ in.	3½ ft.	½ H.P.	988 lbs.	2384-Z	Elect	489.00	515.00	498.00	2333-Z	Enact	454.00	480.00	463.00
11¼ in.	4 ft.	½ H.P.	1015 lbs.	2384-A	Elder	495.00	521.00	504.00	2333-A	Equal	460.00	486.00	469.00
11¼ in.	5 ft.	½ H.P.	1134 lbs.	2384-B	Elude	507.00	533.00	516.00	2333-B	Ether	472.00	498.00	481.00
11¼ in.	5 ft.	½ H.P.	1161 lbs.	2384-S	Estal	513.00	539.00	522.00	2333-S	Entry	478.00	504.00	487.00



No. 22—9-inch Junior New Model South Bend Bench Lathe

Back Geared Screw Cutting Precision Lathe—Countershaft Drive

The No. 22—9-inch Junior Back Geared Screw Cutting Lathe is assembled from the units of our regular No. 31—9-inch Standard Change Gear Lathe that we have been making for twenty-two years—the same Headstock, Tailstock, Bed and Carriage—all are identical on the No. 22 Lathe with those of the No. 31 Lathe. The same accuracy and precision, hand scraping and inspection that our regular Lathes receive is also given to the No. 22 Lathe.

Using the regular units of the No. 31—9-inch Standard Change Gear Lathe and by omitting the Friction Automatic Longitudinal Feed, and Automatic Cross Feed, Friction Clutch, Large Face Plate, Follower Rest, Center Rest, and Thread Cutting Stop from the equipment, that are not always necessary for the work in the small shop, makes it possible to set a price of $150.00 and up on the No. 22—9-in. Junior Lathe.

Features of the 9-inch Junior Lathe

Back Geared Headstock with 3-step Cone gives 6 changes of spindle speeds—three direct, for light work and high speed for polishing, filing, etc., and three speeds back geared for heavy work.

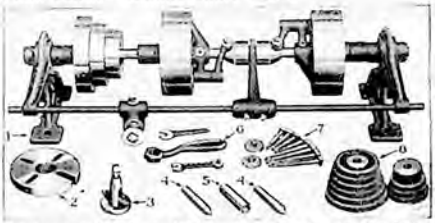
Ground Headstock Spindle is made of special carbon steel. Has ¾-inch hole its entire length for machining long bars and rods through Collet and Lathe Chucks.

Phosphor Bronze Spindle Bearings are hand scraped to perfect bearing, adjustable for wear, and have Patent Oilers.

Index Plate illustrated, is attached to each 9-inch Junior Lathe and shows the proper change gears to use to cut standard screw threads 4 to 40 per inch, right or left.

Index Plate for Thread Cutting

Compound Rest is graduated 180 degrees and can be clamped to operate at any angle required. Feed Screw has Micrometer Collar reading in thousandths of an inch.



Equipment Illustrated Above Is Included in the Price of the Lathe

The Lathe Equipment included in the price of each 9-inch New Model Junior Bench Lathe consists of: Double friction countershaft, face plate, tool post complete, two Lathe centers, spindle sleeve, wrenches, lag screws and washers and a set of change gears, as illustrated above, for thread cutting and turning feeds.

Precision Lead Screw is ⅝-inch in diameter, has 8 threads per inch, Acme Standard, cut on a machine equipped with Master Lead Screw, which insures accuracy.

Automatic Longitudinal Screw Feed. The No. 22, 9-inch Lathe is fitted with automatic longitudinal screw feed to the carriage by clamping the half nuts on the lead screw. Various cutting feeds, fine or coarse, may be obtained through the gears furnished with the lathe.

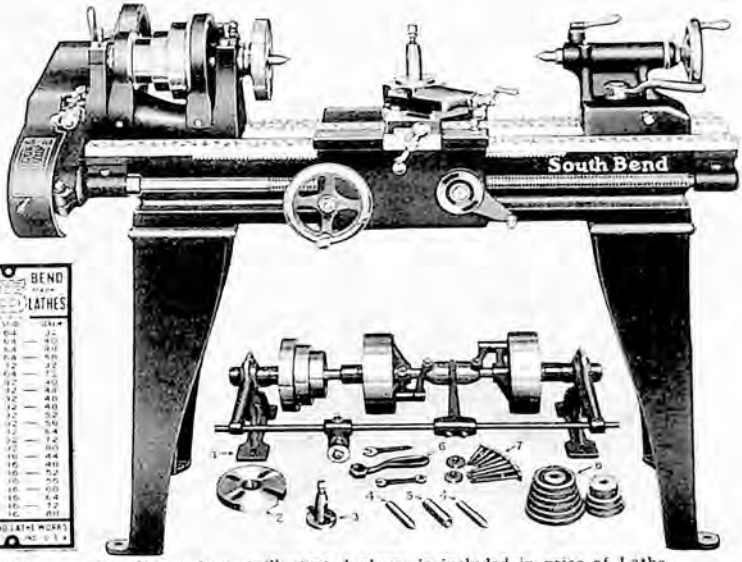
LATHE SPECIFICATIONS

Head and Tail Spindle Centers	No. 2, Morse Taper
Size of Spindle Nose	1½ in. diam., 8 Threads
Precision Acme Lead Screw	⅝ in. diam., 8 Threads
Screw Thread Cutting Range	4 to 40 per inch
Width of Cone Pulley Belt	1 in.
Spindle Speeds	40, 75, 128, 246, 410, 700, R.P.M.
Countershaft Speed	300 R.P.M.
Countershaft Friction Clutch Pulleys	6⅞ in. x 2½ in.
Angular Travel of Compound Rest Top	2 in.
Size of Lathe Tool Shank	½ in. x ½ in.

Net Factory Prices of 9-inch Junior New Model Bench Lathe, Including Countershaft and Equipment

No. of Lathe	Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Swing Over Carriage	Power Required	Weight Crated	Code Word	Price F.O.B. South Bend
22-XB	9¼ in.	2½ ft.	11 in.	¾ in.	6⅞ in.	¼ H.P.	350 lbs.	Bylow	**$150.00**
22-YB	9¼ in.	3 ft.	18 in.	¾ in.	6⅞ in.	¼ H.P.	375 lbs.	Bhorn	**155.00**
22-ZB	9¼ in.	3½ ft.	23 in.	¾ in.	6⅞ in.	¼ H.P.	400 lbs.	Bmatx	**160.00**
22-AB	9¼ in.	4 ft.	29 in.	¾ in.	6⅞ in.	¼ H.P.	425 lbs.	Blear	**165.00**
22-RB	9¼ in.	4½ ft.	36 in.	¾ in.	6⅞ in.	¼ H.P.	450 lbs.	Broil	**170.00**

Note: If Countershaft is not wanted deduct $12.00 from above prices.



Index Plate

Regular equipment illustrated above is included in price of Lathe

No. 22—9-inch Junior New Model South Bend Lathe

Back Geared, Screw Cutting Precision Lathe (Floor Legs), Countershaft Drive

The No. 22 Junior 9-inch Back Geared Screw Cutting Lathe is assembled from the units of our regular No. 31—9-inch Standard Change Gear Lathe that we have been making for twenty-two years—the same Headstock, Tailstock, Bed and Carriage—all are identical on the No. 22 Lathe with those of the No. 31 Lathe. The same accuracy and precision, hand scraping and inspection that our regular Lathes receive is also given to the No. 22 Lathe.

Features of the 9-inch Junior Lathe

Back Geared Headstock with 3-step Cone provides 6 spindle speeds—three direct, for machining light work, and 3 back geared for heavy work, including chucking etc.

Ground Headstock Spindle is made of special carbon steel and can be fitted with 6-inch Chuck. Has ⅞-inch hole its entire length for machining long bars and rods.

Phosphor Bronze Spindle Bearings for Head Spindle are hand scraped to perfect bearing, are adjustable for wear and are equipped with Patent Oilers.

Compound Rest is graduated 180 degrees and can be clamped at any angle. Feed Screw has Micrometer collar.

Precision Lead Screw is ¾-inch in diameter, has 8 threads per inch, Acme Standard, cut on a machine equipped with a Master Lead Screw, which insures accuracy.

Automatic Longitudinal Screw Feed. The No. 22—9-inch Lathe is fitted with automatic longitudinal screw feed to the carriage by clamping the half nut on the lead screw. Various cutting feeds, fine or coarse, may be obtained through the gears furnished with the lathe.

Using the Regular Units of the No. 31—9-inch Standard Change Gear Lathe and by omitting the Friction Automatic Longitudinal Feed, the Automatic Cross Feed, also the large Face Plate, Follower Rest, Center Rest, and Thread Cutting Stop from the equipment, that are not always necessary for the work in the small shop, makes it possible to set a price of $150.00 and up on the No. 22—9-inch Junior Back Geared Screw Cutting Lathe.

Cutting Screw Threads. An Index Plate is attached to each 9-inch Junior Lathe and shows the proper change gears to use to cut the following standard screw threads per inch, right or left: 4, 5, 6, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 56 and 40. (See Index Plate illustrated above.)

The Countershaft and Equipment included with each 9-inch Junior New Model Lathe consists of: Double Friction Countershaft, Face Plate, Tool Post Complete, Two Lathe Centers, Spindle Sleeve, Wrenches, Lag Screws and Washers and Change Gears for feeds and thread cutting. (Equipment is illustrated under lathe.)

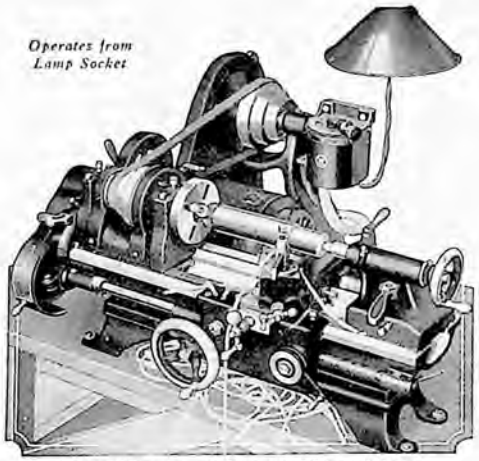
SPECIFICATIONS OF THE 9-INCH JUNIOR LATHE

Screw Thread Cutting Range	4 to 40 per inch
Precision Acme Lead Screw	¾ in. diam., 8 Threads
Head and Tail Spindle Centers	No. 2, Morse Taper
Size of Spindle Nose	1½ in. diam., 8 Threads
Size of Hole through Spindle	⅞ in.
Width of Cone Pulley Belt	1 in.
Spindle Speeds	40, 75, 128, 246, 410, 700 R.P.M.
Countershaft Speed	300 R.P.M.
Countershaft Friction Clutch Pulleys	6⅝ in. x 2¾ in.
Size of Lathe Tool Shank	½ in. x ½ in.

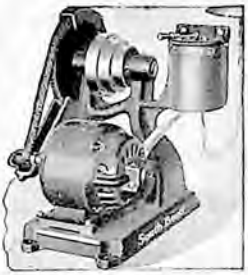
Net Factory Prices of 9-inch Junior Lathe (Floor Leg Type), Including Countershaft and Equipment

No. of Lathe	Swing Over Bed	Length of Bed	Between Centers	Hole Thru Spindle	Swing Over Carriage	Power Required	Weight Crated	Code Word	Price F.O.B. South Bend
22-X	9¼ in.	2½ ft.	11 in.	⅞ in.	6⅝ in.	¼ H.P.	415 lbs.	Byato	**$160.00**
22-Y	9¼ in.	3 ft.	18 in.	⅞ in.	6⅝ in.	¼ H.P.	465 lbs.	Bruelo	**170.00**
22-Z	9¼ in.	3½ ft.	23 in.	⅞ in.	6⅝ in.	¼ H.P.	490 lbs.	Blunt	**175.00**
22-A	9¼ in.	4 ft.	29 in.	⅞ in.	6⅝ in.	¼ H.P.	515 lbs.	Bryan	**180.00**
22-R	9¼ in.	4½ ft.	36 in.	⅞ in.	6⅝ in.	¼ H.P.	515 lbs.		**180.00**

Operates from Lamp Socket



The Self-Contained Portable Motor Driven Junior Bench Lathe



End View of Drive Unit

Gear Guard Removed Showing Chain

The above illustration shows an end view of the Self-Contained Unit Motor Drive. It is placed directly behind the lathe on the bench. The motor rests on a base and drives the countershaft cone through a silent 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.

No. 722—9-in. Jr. Self-Contained Motor Driven Bench Lathe

Back Geared, Screw Cutting Precision Lathe (New Model)

The Self-Contained Motor Driven Junior Bench Lathe is practical for general work in the machine shop and for fine precision tool and instrument work. When this unit is mounted on a bench and connected to the current, it is ready for operation.

For Specifications and Descriptions of the 9-inch Junior Bench Lathes, refer to page 36, as the only difference between the 9-inch Junior Self-Contained Motor Driven Bench Lathe and the Overhead Countershaft Driven Lathe is the form of drive.

Operates from Lamp Socket. A ½-horsepower Reversing Motor driven from an ordinary lamp socket gives sufficient power to operate the 9-inch Junior Self-Contained Motor Driven Bench Lathe at maximum capacity. Operating cost averages two cents per hour.

The Reversing Switch (Drum Type) is conveniently located so that the operator can start, stop or reverse the motor from an easy working position in front of the lathe. The switch has three positions: Left for forward motion of the lathe spindle, center for stop, and right for reverse.

The Hard Maple Wooden Bench illustrated above is not included in the price of the 9-inch Junior Self-Contained Motor Driven Bench Lathe but can be furnished at extra cost. For prices and descriptions of this bench, see page 64.

When Ordering a 9-inch Self-Contained Motor Driven Bench Lathe, be sure to specify the electric current. If alternating current, state exact voltage, phase, cycle and number of wires. If direct current, state exact voltage. When giving voltage of motor, state whether 110-volt motor or 220-volt motor is wanted. Do not specify 110-220-volt motor, as we cannot furnish motors for double voltage rating.

Use Code Word. When ordering a 9-inch Junior Self-Contained Motor Driven Bench Lathe, use Code Words listed below to indicate the size of Self-Contained Motor Driven Bench Lathe wanted. Use Code words shown on page 28 to indicate motor specifications.

Electrical Equipment included in the price of each 9-inch Junior Self-Contained Motor Driven Bench Lathe consists of a ¼ horsepower Reversing Motor 1200 R.P.M., (Westinghouse, General Electric or equal make), Reversing Switch (Drum Type), wiring between motor and switch, Flexible Metal Conduit, Wiring Diagram, and a Leather Belt.

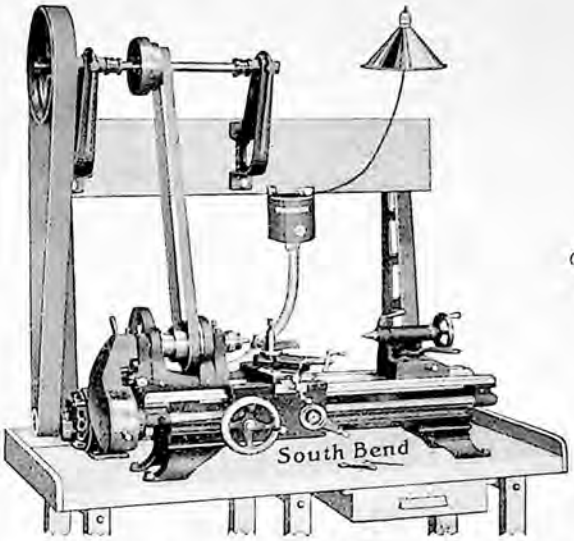
Lathe Equipment included in the price of each 9-inch Junior Self-Contained Motor Driven Bench Lathe consists of: Face Plate, Tool Post Complete, Two Lathe Centers and Spindle Sleeve, Change Gears for thread cutting, Lag Screws, Washers and Wrenches. Prices do not include maple bench, information on which will be found on page 64.

Net Factory Prices 9-inch Junior Self-Contained Motor Driven Bench Lathe—Without Bench

Prices Include Lathe Equipment, Reversing Motor, Reversing Switch and Leather Belt, But Do Not Include Bench

No. of Lathe	Swing Over Bed	Length of Bed	Between Centers	Size of Motor	Weight Crated	Code Word	With 3 Phase 60 Cycle A.C. Motor	With Single Phase 60 Cycle A.C. Motor	With Direct Current Motor
722-X	9¼ in.	2½ ft.	11 in.	¼ H.P.	410 lbs.	Barbe	**$214.00**	**$228.00**	**$221.00**
722-Y	9¼ in.	3 ft.	18 in.	¼ H.P.	470 lbs.	Bezor	**219.00**	**233.00**	**226.00**
722-Z	9¼ in.	3½ ft.	23 in.	¼ H.P.	500 lbs.	Boalt	**224.00**	**238.00**	**231.00**
722-A	9¼ in.	4 ft.	29 in.	¼ H.P.	530 lbs.	Buse	**229.00**	**243.00**	**236.00**
722-R	9¼ in.	4½ ft.	36 in.	¼ H.P.	560 lbs.	Buble	**234.00**	**248.00**	**241.00**

Motor rests on top of bench directly behind the lathe



Operates from lamp socket

No. 522—9-inch Junior Simplex Motor Driven Bench Lathe

Back Geared, Screw Cutting Precision Lathe (New Model)

The Simplex Motor Drive is a very practical method for driving a precision bench lathe used for general machine and tool work. The drive is noiseless and efficient in operation and makes a very complete and serviceable unit.

For Specifications and Descriptions of the 9-inch Junior Bench Lathes, refer to page 36, as the only difference between the 9-inch Junior Simplex Motor Driven Bench Lathe and the Overhead Countershaft Driven Lathe is the form of drive.

Operates from Lamp Socket. A ¼ horsepower reversing motor driven from an ordinary lamp socket gives sufficient power to operate the 9-inch Junior Simplex Motor Driven Bench Lathe at maximum capacity. Operating cost averages two cents per hour.

The Reversing Switch (Drum Type) is conveniently located so that the operator can start, stop or reverse the motor from an easy working position in front of the lathe. The switch has three positions: Left for forward motion of the lathe spindle; center for stop, and right for reverse.

The Hard Maple Wooden Bench and Countershaft Standards illustrated above is not included in the price of the 9-inch Junior Simplex Motor Driven Bench Lathe but can be furnished at extra cost. For prices and descriptions, see page 64.

When Ordering a 9-inch Simplex Motor Driven Bench Lathe, be sure to specify the electric current. If alternating current, state exact voltage, phase, cycle and number of wires. If direct current, state exact voltage. When giving voltage of motor, state whether 110-volt motor or 220-volt motor is wanted. Do not specify 110-220-volt motor, as we cannot furnish motors for double voltage rating.

Use Code Word. When ordering a 9-inch Junior Simplex Motor Driven Bench Lathe, use Code Words listed below to indicate the size of Simplex Motor Driven Bench Lathe wanted. Use Code Words shown on page 28 to indicate motor specifications.

Electrical Equipment included in the price of each 9-inch Junior Simplex Motor Driven Bench Lathe consists of a ¼-horsepower Reversing Motor 1200 R.P.M. (Westinghouse, General Electric or equal make), Reversing Switch (Drum Type), wiring between motor and switch, Flexible Metal Conduit, Wiring Diagram, and two Leather Belts.

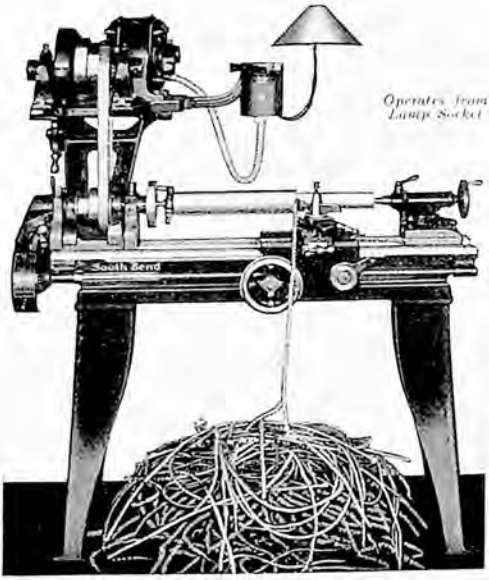
Lathe Equipment included in the price of each 9-inch Junior Simplex Motor Driven Bench Lathe consists of: Simplex Countershaft, Face Plate, Tool Post Complete, Two Lathe Centers and Spindle Sleeve, Change Gears for thread cutting, Lag Screws, Washers and Wrenches. Prices do not include maple bench or standards, information on which will be found on page 64.

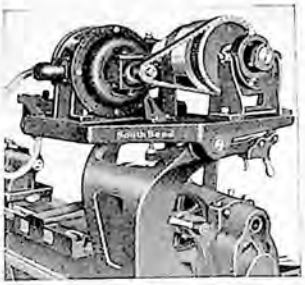
Net Factory Prices 9-inch Junior Simplex Motor Driven Bench Lathe—Without Bench or Standards

Prices Include Simplex Countershaft, Lathe Equipment, Reversing Motor and Switch, Two Belts, But Not Bench or Standards

No. of Lathe	Swing Over Bed	Length of Bed	Between Centers	Size of Motor	Weight Crated	Code Word	With 3 Phase 60 Cycle A. C. Motor	With Single Phase 60 Cycle A. C. Motor	With Direct Current Motor
522-XB	9¼ in.	2½ ft.	11 in.	¼ H.P.	460 lbs.	Baxor	$200.00	$214.00	$207.00
522-YB	9¼ in.	3 ft.	18 in.	¼ H.P.	475 lbs.	Behra	205.00	219.00	212.00
522-ZB	9¼ in.	3½ ft.	23 in.	¼ H.P.	495 lbs.	Bofla	210.00	224.00	217.00
522-AB	9¼ in.	4 ft.	29 in.	¼ H.P.	515 lbs.	Bimle	215.00	229.00	222.00
522-RB	9¼ in.	4½ ft.	36 in.	¼ H.P.	535 lbs.	Bugel	220.00	234.00	227.00

If prices wanted on Simplex Bench Lathe with wall-type counter shaft as shown above, but less reversing motor, reversing switch, wiring, flexible conduit, and leather belt, refer to prices on page 36.





End View of Silent Chain Drive
Gear Guard Removed

In the above illustration, the chain guards are removed to show a close up 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.

The Reversing Switch (Drum Type)

The Reversing Switch (drum type) is conveniently located so that the operator can start, stop, and reverse the motor from an easy working position in front of the lathe. The switch has three positions: Left, for forward motion of lathe spindle, center for stop, and right for reverse motion.

No. 322—9-in. Jr. New Model Silent Chain Motor Driven Lathe

Back Geared, Screw Cutting Precision Lathe (Floor Leg Type)

The Silent Chain Motor Drive is a practical and efficient drive for the 9-inch Junior Lathe equipped with floor legs. 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.

For Specifications and Descriptions of the 9-inch Junior Silent Chain Motor Driven Lathes, refer to page 37, as the only difference between the 9-inch Junior Silent Chain Motor Driven Lathe and the Overhead Countershaft Driven Lathe is the form of drive.

Operates from Lamp Socket. A ¼-horsepower reversing motor driven from an ordinary lamp socket gives sufficient power to operate the 9-inch Junior Silent Chain Motor Driven Lathe at maximum capacity. Operating cost averages two cents per hour.

When Ordering a 9-inch Junior Silent Chain Motor Driven Lathe, be sure to specify the electric current. If alternating current, state exact voltage, phase, cycle and number of wires. If direct current, state exact voltage. When giving voltage of motor, state whether 110-volt motor or 220-volt motor is wanted. Do not specify 110-220-volt motor, as we cannot furnish motors for double voltage rating.

Use Code Word. When ordering a 9-inch Junior Silent Chain Motor Driven Lathe use Code Words listed below to indicate the size of Silent Chain Motor Driven Lathe wanted. Use Code Words shown on page 28 to indicate motor specifications.

Electrical Equipment included in the price of each 9-inch Junior Silent Chain Motor Driven Lathe consists of a ¼ horsepower Reversing Motor 1200 R.P.M. (Westinghouse, General Electric or equal make), Reversing Switch (Drum Type), wiring between motor and switch, Flexible Metal Conduit, Wiring Diagram, and a Leather Belt.

Lathe Equipment included in the price of each 9-inch Junior Silent Chain Motor Driven Lathe consists of: Face Plate, Tool Post Complete, Two Lathe Centers and Spindle Sleeve, Change Gears for thread cutting, Lag Screws, Washers and Wrenches.

Net Factory Prices of 9-inch Junior Silent Chain Motor Driven Lathe with Floor Legs
Prices Include Lathe Equipment, Reversing Motor, Reversing Switch and Leather Belt

No. of Lathe	Swing Over Bed	Length of Bed	Between Centers	Size of Motor	Weight Crated	Code Word	With 3 Phase 60 Cycle A.C. Motor	With Single Phase 60 Cycle A.C. Motor	With Direct Current Motor
322-X	9¼ in.	2½ ft.	11 in.	¼ H.P.	630 lbs.	Bazin	**$246.00**	**$262.00**	**$258.00**
322-Y	9¼ in.	3 ft.	18 in.	¼ H.P.	650 lbs.	Beuty	**251.00**	**267.00**	**263.00**
322-Z	9¼ in.	3½ ft.	23 in.	¼ H.P.	670 lbs.	Bower	**256.00**	**272.00**	**268.00**
322-A	9¼ in.	4 ft.	29 in.	¼ H.P.	690 lbs.	Biolo	**261.00**	**277.00**	**273.00**
322-R	9¼ in.	4½ ft.	36 in.	¼ H.P.	710 lbs.	Buton	**266.00**	**282.00**	**278.00**

The 9-inch Junior South Bend Lathe in the Repair Shop

Can Be Fitted with Practical and Inexpensive Attachments

The 9-inch Junior Lathe is an excellent tool for the repair shop in the machining of small accurate work. It is a back geared screw cutting lathe that has the power, accuracy and the precision to do fine work.

Although the shop may be equipped with larger lathes, still there is a great deal of work that the operator can do on the little 9-inch lathe with far greater speed, more accuracy and in less time than on the larger lathe.

The 9-inch Junior Back Geared Screw Cutting Lathe is illustrated and described on pages 36 to 40 in the various types and drives.

We show below seven (7) illustrations of the little Junior Lathe on machining operations. There are hundreds of other operations that can be performed on this little lathe in the repair shop.

One mechanic has stated that more than five thousand (5000) operations can be performed on a back geared screw cutting lathe. We do not know how true this is but the lathe is certainly a universal tool and a 9-inch Junior will be found practical in hundreds of ways in the repair shop.

The 9-inch by 3-foot Junior Bench Lathe, Countershaft Drive, is the most popular size and type.

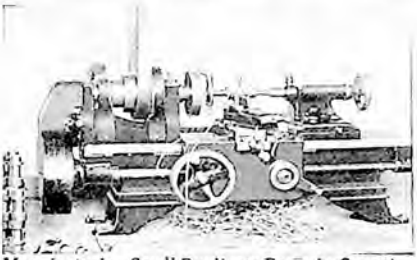
The attachments, chucks and tools illustrated in this catalog for the 9-inch Quick Change Gear and Standard Change Gear Lathe can also be fitted to the 9-inch Junior Lathes. These attachments include draw-in collet chuck, spring collets, taper attachment, thread dial, etc. The attachment can be fitted at any time in the customer's shop and need not be fitted to the lathe before shipment is made from the factory.

The Application of the 9-inch Junior Lathe on Various Jobs

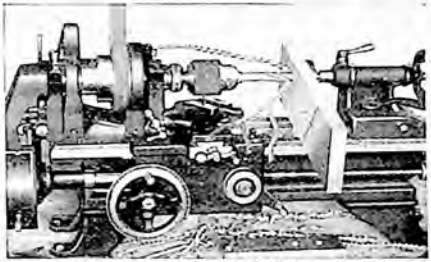
Boring a Bushing in the 9-inch Junior Lathe Chuck

Knurling a Handle in the 9-inch Junior Lathe

Turning Bronze Bushing on a Mandrel in Lathe

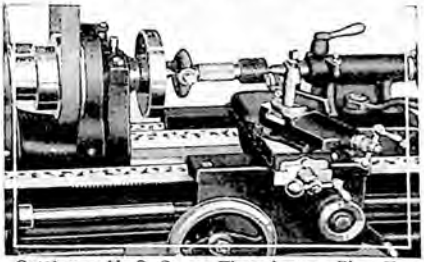


Manufacturing Small Duplicate Parts in Quantity on a No. 22—9-inch Junior South Bend Lathe



Drilling a Piece of Flat Steel Using a Drill Chuck in the Headstock and Feeding by Hand Wheel of Tailstock

Drilling and Facing a Cast Iron Gear Blank Held in a Lathe Chuck. Drill Chuck Mounted in the Tail Spindle

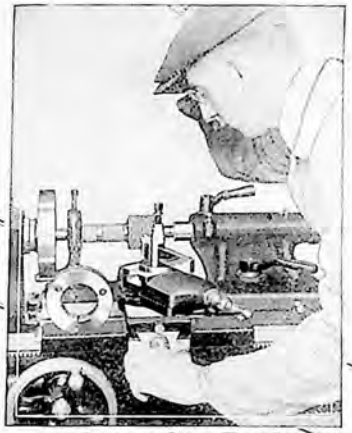


Cutting a U. S. Screw Thread on a Plug Type Master Thread Gauge in the No. 22—9-inch Junior Lathe

Screw Threads Cut on the New Model South Bend Lathe

Thread Gauge

Tap



Cutting a Screw Thread

Tap

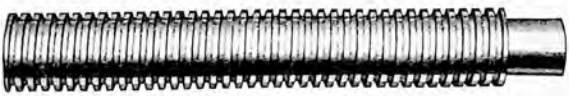
Thread Gauge

U. S. Standard Thread

Internal U. S. Standard Thread

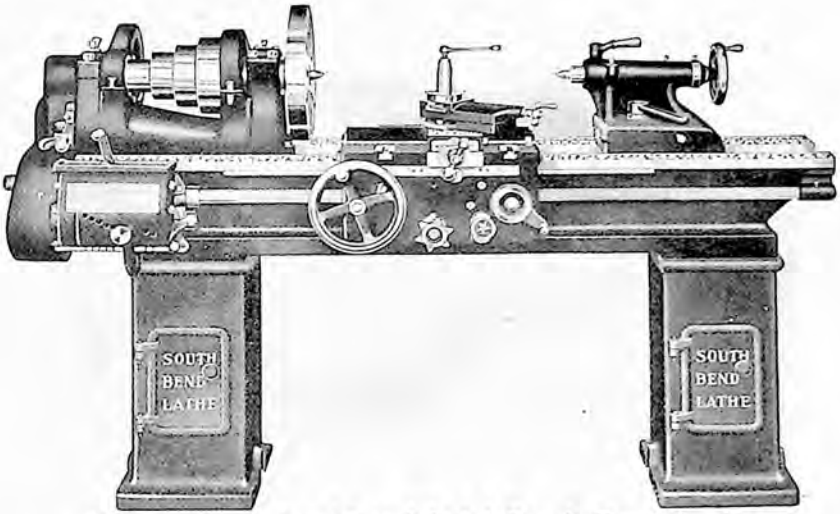
A Nut with Internal Square Thread

Right Hand Acme Double Screw Thread



Left Hand Acme Screw Thread

Right Hand Double Screw Square Thread



Cabinet Legs for New Model South Bend Lathes

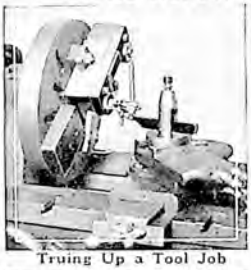
9-inch to 18-inch Quick Change and Standard Change Gear Lathes

The illustration shows a 16-in. x 6-ft. Quick Change Gear Lathe fitted with Cabinet Legs. Cabinet Legs can be supplied for all types Quick Change Gear and Standard Change Gear Lathes, Overhead Countershaft Drive and Silent Chain Motor Drive Patterns—9-inch to 18-inch lathes inclusive. On page 35, the 9-inch and 11-inch lathes with Cabinet Legs and Oil Pan are shown.

Prices of Cabinet Legs Instead of Floor Legs

SIZE LATHE	9 in.	11 in.	13 in.	15 in.	16 in.	18 in.
Price of One Cabinet Leg	$10.00	$11.00	$13.00	$15.00	$16.00	$18.00
Code Words	Pagan	Peter	Phile	Pints	Plead	Polar
Price of Two Cabinet Legs	$20.00	$22.00	$26.00	$30.00	$32.00	$36.00
Code Words	Padre	Pekoe	Phalk	Piles	Plank	Podge

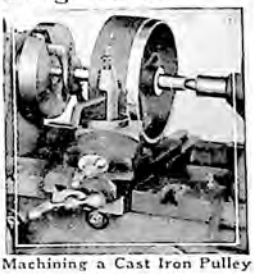
The Screw Cutting Lathes on Manufacturing Work



Truing Up a Tool Job

Many manufacturing plants who are making duplicate metal parts have found that the back geared screw cutting lathe is one of the most efficient types of production machines, because it can be equipped at slight expense with special tools for producing parts quickly, economically and accurately in large lots.

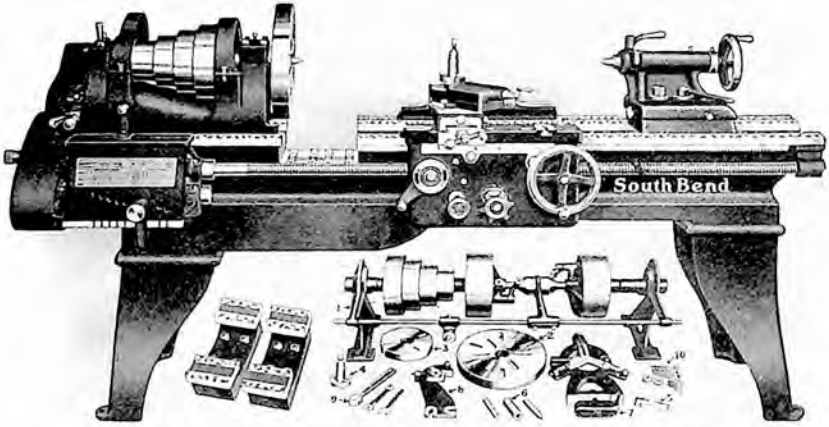
When the job is finished the lathe can be equipped with a set of tools for the making of other metal parts, thus saving expense in investment in single purpose machines that are idle part of the time, and take up space that could be used to better advantage.



Machining a Cast Iron Pulley

Machining a Tool Job Clamped on Face Plate

Four Turning Tools Machining Four Diameters



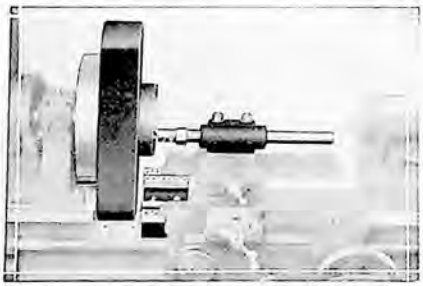
Regular equipment, as illustrated under Lathe, is included in price of Lathe

The New Model Gap Lathes with Double Bridge

Quick Change and Standard Change, Back Geared, Screw Cutting Lathes Overhead Countershaft Drive

The Illustration Shows the New Model 18-26-inch Quick Change Gear Gap Lathe with Double Bridge. On Gap Lathes the control levers of the Apron are transposed so that the Carriage can be fed by hand or power over the Gap for machining narrow work.

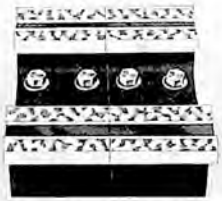
For description and specifications of any particular size of Gap Lathe refer to a corresponding size of Straight Bed Lathe, as the only difference between the two is the construction of the Bed and Apron which are changed in the Gap Lathe construction.



Permits Close Machining on Narrow Work

One Bridge Removed, the Other Remains to Support Carriage

The illustration shows the principle of the Double Bridge in providing proper tool support to the Carriage when machining narrow work. Having one section of the Double Bridge installed eliminates the over-hang of the Carriage and provides the proper tool support under pressure of the cut. The Gap Lathe is practical for the boring and bushing of large fly-wheels, pulleys, etc., as it allows work of large diameter, like the above, to swing in the Gap.



Close-Up of Double Bridge

The Double Bridge is made up of two sections exactly the same in size and of sufficient length to completely fill the Gap in the Bed. 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.

Accurately Finished and Fitted

Both Sections of the Double Bridge are very accurately finished and fitted. They are first hand scraped to each other and then to the Lathe Bed. The ways of the Bed are then machined and planed with both Bridges in place. Afterwards they are hand scraped and frosted. The Carriage is fitted to the lathe with both Bridges in place, to insure accuracy. It requires but a few moments to remove or install either one or both sections of the Double Bridge in the Lathe Bed.

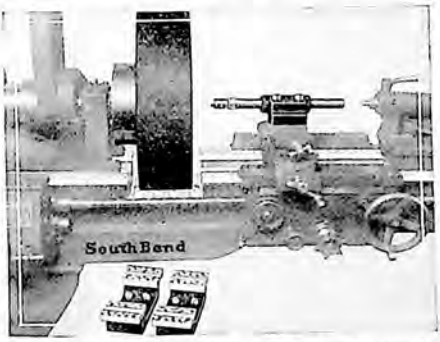
The New Model Double Gap Lathes with Double Bridge

Standard and Quick-Change, Back Geared, Screw Cutting Lathes

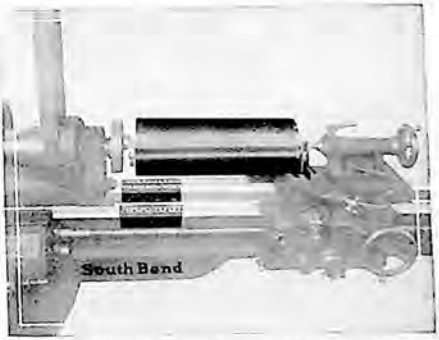
Below we show prices of the complete New Line of Gap Lathes with Double Bridge in both Standard and Quick Change Gear Types. There are seven sizes of Gap Lathes ranging from 11-inch to 24-inch swing with different Bed Lengths for each swing. The prices listed in the tabulation below are Net Factory Prices, F. O. B. South Bend, crated for domestic shipment, and include Countershaft and Regular Equipment illustrated under Gap Lathe on page 44. For prices on Electrically Driven Gap Lathes, refer to page 29 covering Silent Chain Motor Driven Lathes.

Net Factory Prices and Specifications

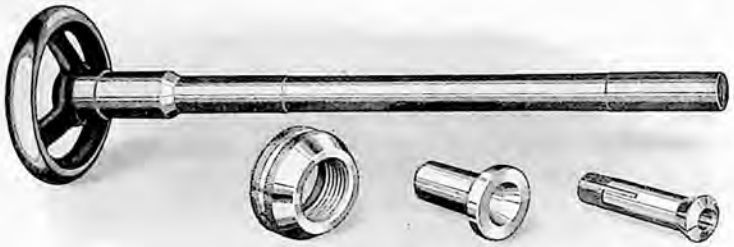
Specifications below apply to both Quick Change Gear and Standard Change Gear Lathes								Quick Change Gear Gap Lathes			Standard Change Gear Gap Lathes		
Size of Lathe	Length of Bed	Distance Between Centers	Swing Over Bed	Swing Over Gap	Total Width of Gap	Width of Each Bridge	Approx. Weight Crated	Catalog No.	Code Word	Price Quick Change Gear Lathes	Catalog No.	Code Word	Price Standard Change Gear Lathes
11-inch—16-inch Double Gap Lathes													
11 in.	2 ft.	12 in.	11¼ in.	16 in.	5 in.	2½ in.	725 lbs.	681-Y	Earls	$ 375.00	633-Y	Elixr	$ 340.00
11 in.	3½ ft.	18 in.	11¼ in.	16 in.	5 in.	2½ in.	750 lbs.	681-Z	Ehlit	380.00	633-Z	Egoes	345.00
11 in.	4 ft.	24 in.	11¼ in.	16 in.	5 in.	2½ in.	775 lbs.	681-A	Eeasy	385.00	633-A	Ehibt	350.00
11 in.	5 ft.	36 in.	11¼ in.	16 in.	5 in.	2½ in.	855 lbs.	681-B	Edlow	395.00	633-B	Elnty	360.00
11 in.	5½ ft.	42 in.	11¼ in.	16 in.	5 in.	2½ in.	880 lbs.	681-S	Emosp	400.00	633-S	Epone	365.00
13-inch—19-inch Double Gap Lathes													
13 in.	4 ft.	16 in.	13¼ in.	19 in.	7 in.	3½ in.	1160 lbs.	686-A	Gacox	450.00	635-A	Glaze	400.00
13 in.	5 ft.	28 in.	13¼ in.	19 in.	7 in.	3½ in.	1210 lbs.	686-B	Gestr	462.00	635-B	Gleta	412.00
13 in.	6 ft.	40 in.	13¼ in.	19 in.	7 in.	3½ in.	1260 lbs.	686-C	Grant	474.00	635-C	Glost	424.00
13 in.	7 ft.	52 in.	13¼ in.	19 in.	7 in.	3½ in.	1310 lbs.	686-D	Gleyn	486.00	635-D	Golfe	436.00
13 in.	8 ft.	64 in.	13¼ in.	19 in.	7 in.	3½ in.	1360 lbs.	686-E	Gildan	498.00	635-E	Gomez	448.00
15-inch—22-inch Double Gap Lathes													
15 in.	5 ft.	24½ in.	15¼ in.	22 in.	8 in.	4 in.	1600 lbs.	688-B	Laeta	545.00	639-B	Lubet	485.00
15 in.	6 ft.	36½ in.	15¼ in.	22 in.	8 in.	4 in.	1675 lbs.	688-C	Levor	560.00	639-C	Lucky	500.00
15 in.	7 ft.	48½ in.	15¼ in.	22 in.	8 in.	4 in.	1750 lbs.	688-D	Links	575.00	639-D	Ludlo	515.00
15 in.	8 ft.	60½ in.	15¼ in.	22 in.	8 in.	4 in.	1860 lbs.	688-E	Lotrs	590.00	639-E	Lufte	530.00
15 in.	10 ft.	84½ in.	15¼ in.	22 in.	8 in.	4 in.	2025 lbs.	688-G	Loren	620.00	639-G	Lynch	560.00
16-inch—24-inch Double Gap Lathes													
16 in.	6 ft.	34 in.	16¼ in.	24 in.	8¾ in.	4½ in.	2015 lbs.	692-C	Macon	620.00	611-C	Mince	560.00
16 in.	7 ft.	46 in.	16¼ in.	24 in.	8¾ in.	4½ in.	2095 lbs.	692-D	Maids	635.00	611-D	Mouse	575.00
16 in.	8 ft.	58 in.	16¼ in.	24 in.	8¾ in.	4½ in.	2175 lbs.	692-E	Medle	650.00	611-E	Month	590.00
16 in.	10 ft.	82 in.	16¼ in.	24 in.	8¾ in.	4½ in.	2335 lbs.	692-G	Melte	680.00	611-G	Mytha	620.00
16 in.	12 ft.	106 in.	16¼ in.	24 in.	8¾ in.	4½ in.	2195 lbs.	692-H	Mezio	725.00	611-H	Mykro	665.00
18-inch—26-inch Double Gap Lathes													
18 in.	6 ft.	29½ in.	18¼ in.	26 in.	10 in.	5 in.	2610 lbs.	694-C	Sabin	740.00	643-C	Seaso	675.00
18 in.	7 ft.	41½ in.	18¼ in.	26 in.	10 in.	5 in.	2710 lbs.	694-D	Salty	765.00	643-D	Sebal	700.00
18 in.	8 ft.	53½ in.	18¼ in.	26 in.	10 in.	5 in.	2810 lbs.	694-E	Sande	790.00	643-E	Sedri	725.00
18 in.	10 ft.	77½ in.	18¼ in.	26 in.	10 in.	5 in.	3010 lbs.	694-G	Saint	840.00	643-G	Sefol	775.00
18 in.	12 ft.	101½ in.	18¼ in.	26 in.	10 in.	5 in.	3210 lbs.	694-H	Savor	905.00	643-H	Segme	840.00
18 in.	14 ft.	125½ in.	18¼ in.	26 in.	10 in.	5 in.	3710 lbs.	694-K	Sawte	965.00	643-K	Sekda	900.00
21-inch—30-inch Double Gap Lathes													
21 in.	7 ft.	36 in.	21¼ in.	30 in.	12 in.	6 in.	3740 lbs.	696-D	Tabey	1075.00	649-D	Tears	995.00
21 in.	8 ft.	48 in.	21¼ in.	30 in.	12 in.	6 in.	3940 lbs.	696-E	Tacit	1105.00	649-E	Tebik	1025.00
21 in.	10 ft.	72 in.	21¼ in.	30 in.	12 in.	6 in.	4190 lbs.	696-G	Taden	1165.00	649-G	Teeor	1085.00
21 in.	12 ft.	96 in.	21¼ in.	30 in.	12 in.	6 in.	4550 lbs.	696-H	Tally	1240.00	649-H	Tedla	1160.00
21 in.	14 ft.	120 in.	21¼ in.	30 in.	12 in.	6 in.	4770 lbs.	696-K	Tagel	1300.00	649-K	Tetin	1220.00
24-inch—36-inch Double Gap Lathes													
24 in.	8 ft.	43 in.	24¼ in.	36 in.	15 in.	7½ in.	4810 lbs.	698-E	Wably	1455.00	657-E	Weave	1355.00
24 in.	10 ft.	67 in.	24¼ in.	36 in.	15 in.	7½ in.	5090 lbs.	698-G	Wacke	1535.00	657-G	Webed	1435.00
24 in.	12 ft.	91 in.	24¼ in.	36 in.	15 in.	7½ in.	5490 lbs.	698-H	Wades	1635.00	657-H	Welna	1535.00
24 in.	14 ft.	115 in.	24¼ in.	36 in.	15 in.	7½ in.	5760 lbs.	698-K	Waile	1715.00	657-K	Wefto	1615.00
24 in.	16 ft.	139 in.	24¼ in.	36 in.	15 in.	7½ in.	6040 lbs.	698-M	Wagun	1795.00	657-M	Wegor	1695.00



Double Bridge Removed from Gap for Extremely Wide Work



Double Bridge in Place Permits Using Lathe as a Straight Bed



Hand Wheel Type Draw-in Collet Chuck Attachment

For All Sizes and Types of South Bend Lathes

For Manufacturing Production Work

The Draw-in Collet Chuck is one of the most accurate types of chuck made. The split collet is hardened and ground, inside and outside, and is used for manufacturing small precision parts, such as, watches, typewriters, sewing machines, adding machines, radios, etc. The Draw-in Collet Chuck permits bars and rods being passed through the lathe spindle and held in the chuck for machining. For manufacturing small parts which require accuracy and precision the Draw-in Collet Chuck is both rapid and economical.

For Tool Room Work

The Hand Wheel Type Draw-in Collet Chuck Attachment is used extensively in the Tool Room in making small tools and parts where accuracy is essential. It is a fine precision tool and the most accurate type of chuck on the market.

Application of the Draw-in Collet Chuck

The illustration below shows a South Bend Lathe equipped with a Hand Wheel Draw-in Collet Chuck for handling fine, accurate parts. The work is held in the Collet Chuck by turning the Hand Wheel to the right and released by turning it to the left. With the Hand Wheel Draw-in Collet Chuck, it is necessary to stop the lathe spindle to grip or release the work.

Capacity of the Draw-in Collet Chuck

The hole capacity of the Draw-in Collet Chuck for any size of South Bend Lathe is limited by the size of the hole in the spindle. See tabulation below. One Collet only is included in the price of the Hand Wheel Type Draw-in Collet Chuck Attachment.

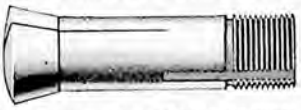
What the Price Includes

The price of the Hand Wheel Draw-in Collet Chuck Attachment includes Hand Wheel and Draw-tube, Nose Cap for protecting threads of Spindle Nose, Tapered Steel Sleeve for adapting Collet to Headstock Spindle, and one Round Split Collet of any size desired up to the maximum capacity of Lathe.

Prices Hand Wheel Draw-in Chuck Attachment with One Collet

Size of Lathe	Catalog No.	Hole in Lathe Spindle	Collet Capacity in Sixty-fourths	Code Word	Price Each
9 in.	4309	3/4 in.	1/64 in. up to 1/2 in.	Aaron	$33.00
11 in.	4311	7/8 in.	1/64 in. up to 17/32 in.	Abode	38.00
13 in.	4313	1 in.	1/64 in. up to 5/8 in.	About	44.00
15 in.	4315	1 1/4 in.	1/64 in. up to 3/4 in.	Above	50.00
16 in.	4316	1 5/8 in.	1/64 in. up to 7/8 in.	Adore	56.00
18 in.	4318	1 7/8 in.	1/64 in. up to 1 in.	Adult	63.00

Split Collets for Round Work



Split Draw-in Collet Chuck (Round)

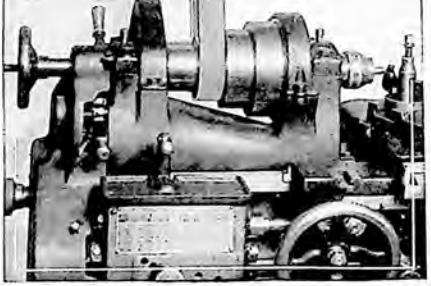
When ordering extra Collets for either the Hand Wheel or Hand Lever type of Draw-in Chuck Attachments specify size of hole in Collet and size of Lathe for which Collet is wanted.

Size of Hole in Collets

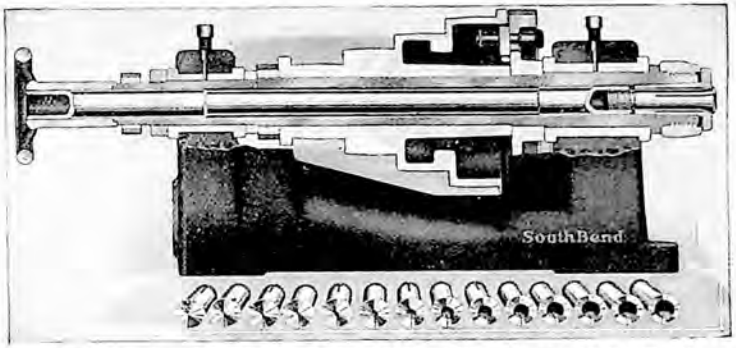
Collets from 1/64-inch hole diameter to hole capacity shown in the tabulation, by 64ths, 32nds, and 16ths are regularly carried in stock. Special hole sizes such as odd decimal, drill and wire gauge, and metric sizes can be furnished as required.

Net Factory Prices of Split Collets for Round Work

Size of Lathe	Catalog No.	Hole in Lathe Spindle	Collet Capacity in Sixty-fourths	Code Word	Price Each
9 in.	609	3/4 in.	1/64 in. up to 1/2 in.	Cabot	$3.50
11 in.	611	7/8 in.	1/64 in. up to 17/32 in.	Cello	4.00
13 in.	613	1 in.	1/64 in. up to 5/8 in.	Close	4.50
15 in.	615	1 1/4 in.	1/64 in. up to 3/4 in.	Civil	5.00
16 in.	616	1 5/8 in.	1/64 in. up to 7/8 in.	Clear	5.50
18 in.	618	1 7/8 in.	1/64 in. up to 1 in.	Comet	6.00



Machining Special Pins in the Draw-in Collet Chuck



A cross section of the Headstock showing Hand Wheel Draw-in Collet Chuck

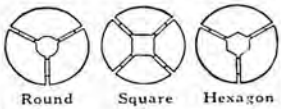
Construction of Split Collets

The illustration above shows a cross section of a split collet as used in both the Hand Wheel and Hand Lever type of Draw-in Collet Chuck Attachment.

The Collets furnished by us are standard, manufactured by Rivett or Hardinge, or equal.

All Collets are made of tool steel, hardened and tempered. They are ground both outside and inside to insure accuracy. The left end is threaded for the draw-tube and has a keyway to prevent the Collet from turning while holding work.

Type of Collets



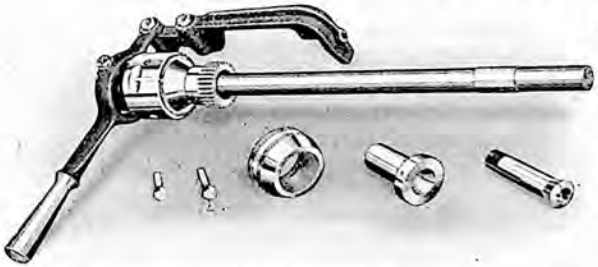
Round Square Hexagon

Round Collets only are carried in stock by us. Square and Hexagonal are made to order. Prices on request.

Step Chuck and Closer

The Hand Wheel or Hand Lever Type Draw-in Collet Chuck Attachment can be equipped with Step Chuck and Closer, which is useful for holding round discs, etc. In ordering give sizes of blanks to be machined. Prices furnished on receipt of this information.

Hand Lever Type Draw-in Collet Chuck Attachment



The Hand Lever Draw-in Collet Chuck permits releasing and feeding the bar stock without stopping the lathe, by means of an Adjustable Chuck Closer. The gripping action of the Collet can be adjusted to any desired tension on the work by regulating the Cylinder of the Adjustable Chuck Closer.

The Hand Lever Draw-in Collet Chuck Attachment is a very economical tool for use in the manufacturing of small inter-changeable parts where accuracy and precision are required.

What the Hand Lever Type Consists of

The Hand Lever Draw-in Collet Chuck consists of one Split Collet ground inside and outside, a Taper Sleeve into which the Collet fits, a Hand Lever and Draw-tube which permits opening and closing the Collet on the work while the Lathe Spindle is revolving, and a Knock-off Nut threaded to fit the Spindle Nose of the Lathe and used to remove the Taper Sleeve and Collet from the Spindle.

Net Factory Prices of Hand Lever Draw-in Collet Chuck Attachment with One Collet

Size of Lathe	Catalog No.	Hole in Lathe Spindle	Collet Capacity in Sixty-fourths	Code Words	Price Each
9 in.	5209	3/4 in.	1/4 in. up to 1/2 in.	Allen	$ 75.00
11 in.	5211	7/8 in.	1/4 in. up to 7/8 in.	Among	85.00
13 in.	5213	1 in.	1/4 in. up to 5/8 in.	Andes	105.00
15 in.	5215	1 1/8 in.	1/4 in. up to 3/4 in.	Askew	110.00
16 in.	5216	1 3/8 in.	1/4 in. up to 7/8 in.	Aster	120.00
18 in.	5218	1 5/8 in.	1/4 in. up to 1 in.	Atoll	160.00

Graduated Taper Attachment for South Bend Lathes

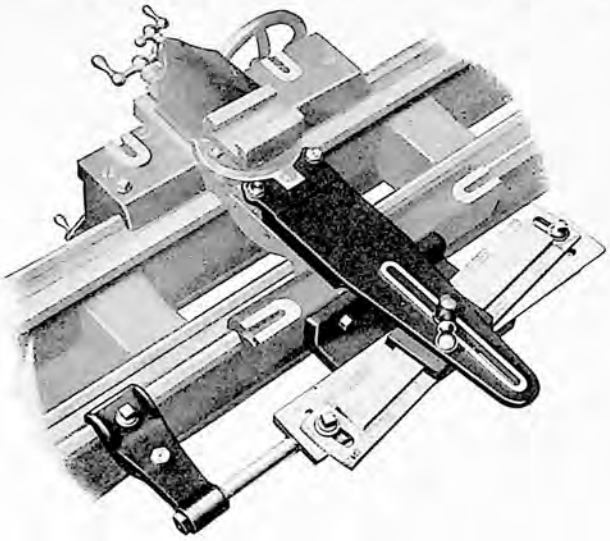


Illustration taken from the rear side of lathe, shows Taper Attachment bolted to the back of Saddle and clamped to the rear "V" way of bed.

Graduated Taper Attachment Fitted to a 16-inch South Bend Lathe

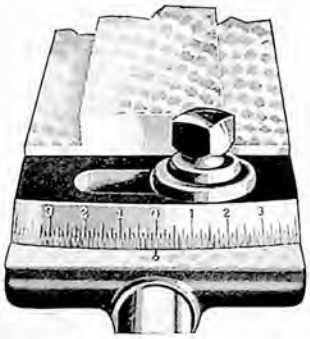
The Taper Attachment is used for tool room work, manufacturing and production work for turning and boring all classes of taper work. It is especially practical on production work where a large number of duplicate parts are to be taper machined by turning or boring. The attachment may be left on the lathe at all times when doing either taper or straight work. It requires only a couple of minutes to change the taper attachment from straight to taper machining or vice-versa. The taper attachment illustrated above on a 16-inch Lathe is the same design used on all size lathes differing only in dimension.

Taper Attachment 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. The Taper Attachment does not interfere with straight turning as it does not operate unless the clamp on the back "V" of the bed is locked.

Net Factory Prices

Size of Lathe	Catalog No.	Length of Taper at One Setting	Maximum Taper Per Foot	Maximum Taper in Degrees	Approximate Shipping Weight	Code Word	Price Taper Attachment
9 in.	209	9 in.	3 in.	14	40 lbs.	Dashe	$ 50.00
11 in.	211	9 in.	3 in.	14	50 lbs.	Devor	60.00
13 in.	213	10 in.	3 in.	14	65 lbs.	Digit	70.00
15 in.	215	10 in.	3 in.	14	80 lbs.	Doted	75.00
16 in.	216	12 in.	3 in.	14	100 lbs.	Dress	85.00
18 in.	218	12 in.	3 in.	14	120 lbs.	Dunns	90.00
21 in.	221	14 in.	3 in.	14	140 lbs.	Dwind	100.00
24 in.	224	14 in.	3 in.	14	150 lbs.	Dyght	125.00



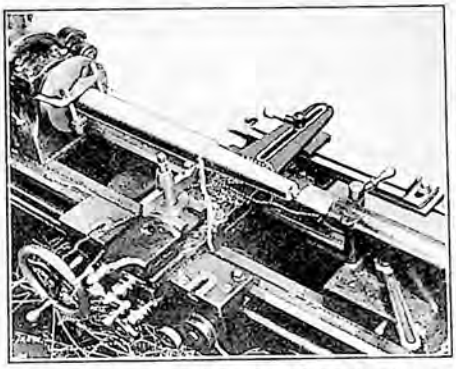
Close-up of Graduation

On the End Showing Inches per Foot

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.

It is advisable to order the Taper Attachment with the lathe, so that it can be fitted at the factory; although it may be ordered at any time and attached by the customer, as the saddle is machined to receive the Taper Attachment.

Taper Turning and Boring in the Lathe



Taper Turning Using Graduated Taper Attachment

Taper Turning in the Lathe

The illustration shows the lathe machining taper shanks on the end of special drill blanks. The graduations on the end of the swivel bar of the taper attachment are used to obtain the desired taper. The angle of the swivel bar is not changed until the entire lot is finished, thus insuring perfect interchangeability of all parts.

Same Set-up Used for Boring

The same setting of the taper attachment is used in the boring of the drill press spindles so that a perfect fit is obtained. The taper attachment is left on the lathe at all times whether straight or tapered work is to be done, as it travels with the carriage when not in use and does not in any way inconvenience the operator.

Height of Cutting Edge of the Tool

For the turning and boring of tapers, the cutting edge of the tool should be set exactly at the center of the work. That is, set the point of the cutting edge even with the point of the tailstock or headstock center of the lathe.

Taper Boring in the Lathe

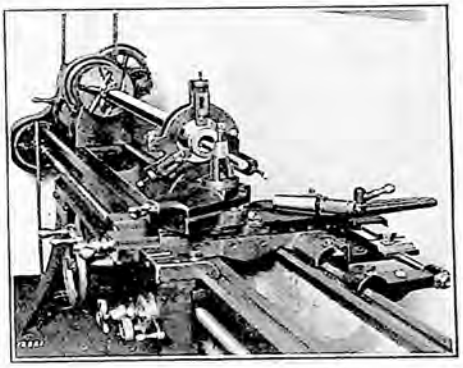
The lathe is shown boring the tapered hole in the end of a drill press spindle to receive special tapered shank drills. The spindle is held against the headstock center by rawhide thongs and the opposite end is supported in the center rest. The attachment is set the same as for taper turning and the automatic feed of the carriage is used to feed the boring tool into the hole.

Reaming Taper Holes

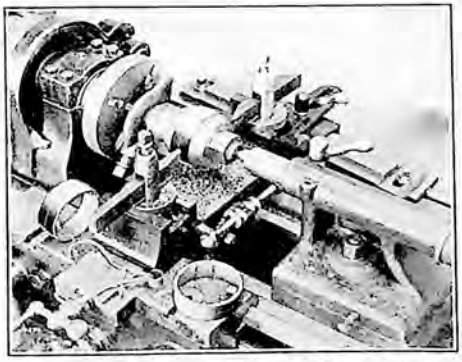
After the hole has been bored, it is good practice to stop the lathe and take a light finishing chip with a standard taper reamer, turning the reamer by hand with a tap wrench. This operation will standardize the size and taper of hole and produce a fine finish.

Testing a Taper Fit

To test a taper fit make a chalk mark along the side of the taper, place the work into the taper hole it is to fit and turn carefully by hand. If the fit is perfect, the entire length of the chalk mark will indicate a bearing. If not, it will show where adjustment is needed.



Taper Boring in the Lathe



Crowning a Pulley with Taper Attachment

Crowning a Pulley

The taper attachment is a valuable aid in crowning pulleys in quantity, as is illustrated at the left. A small cast iron pulley is held on a special arbor between centers. The work is driven by a lathe dog. Two turning tools are used, one at the front and one at the back of the double tool rest.

Two Tapers in One Operation

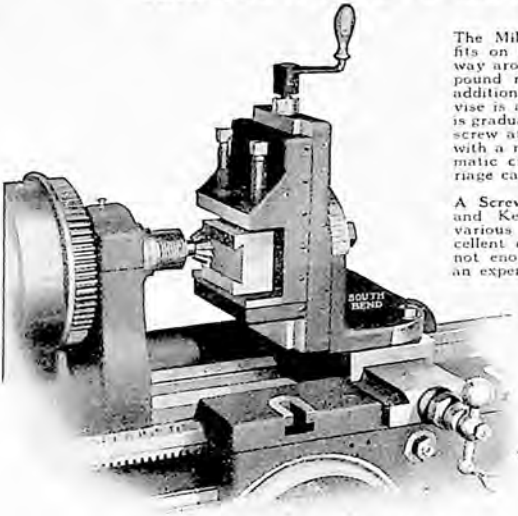
The taper attachment is set at the proper angle so that both sides of the crown can be turned in the same operation. This job also shows application of the double tool rest on the saddle of the lathe.

Quantity Production of Tapered Parts

The Taper Attachment is indispensable where tapered work is machined in quantity. It enables the operator to produce any quantity of parts with exactly the same taper and eliminates the necessity of off-setting the Tailstock. Tapers can be matched just as easily and rapidly as straight work.

Milling and Keyway Cutting Attachment for South Bend Lathes

Takes Care of a Wide Variety of Machine Work



Milling a Dovetail on a South Bend Lathe

Fits on Saddle of Lathe

The Milling and Keyway Cutting Attachment fits on the saddle of the lathe, swivels all the way around in a horizontal plane like the compound rest and is graduated 180 degrees. In addition, the upright Angle Plate to which the vise is attached swivels in a vertical plane, and is graduated 180 degrees. The vertical adjusting screw at the top of the attachment is equipped with a micrometer graduated collar. The automatic cross and longitudinal feeds of the carriage can be used as well as the hand feeds.

A Screw Cutting Lathe fitted with a Milling and Keyway Cutting Attachment and using various types of milling cutters makes an excellent equipment for the small shop that has not enough of this class of work to invest in an expensive milling machine.

The Milling Arbors and Cutters that are used with the Milling Attachment are illustrated and priced on page 51 of this catalog. If milling cutters, other than those shown, are wanted, we will be pleased to furnish illustrations, description and prices on request.

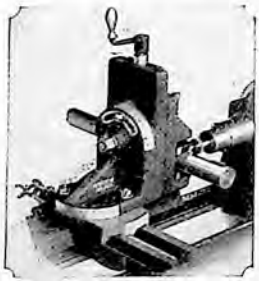
The Skilled Mechanic can use the Milling Attachment on the lathe for hundreds of different kinds of jobs, both in tool and production work.

The South Bend Milling and Keyway Cutting Attachment is valuable for the small shop because it equips the lathe for doing a great deal of work that otherwise could be done only on a shaper or milling machine. It will be appreciated by the experienced mechanic because in addition to cutting keyways a wide variety of machine work can be taken care of. A few of the various jobs that show the application of the attachment are illustrated below and on page 51.

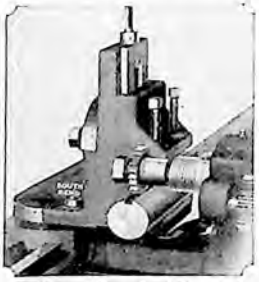
The Milling and Keyway Cutting Attachment is designed for use on South Bend Lathes, and therefore, we cannot guarantee that it can be fitted to lathes of other makes. **The Equipment** consists of milling attachment, two steel "V" blocks for holding round work, one crank handle for feed screw, one double end wrench, T-bolts and nuts for attaching to carriage. **The Milling Arbor and Cutters are not included in the price of the Milling Attachment. For prices on Arbor and Cutters see page 51.**

Net Factory Prices of Milling and Keyway Cutting Attachment

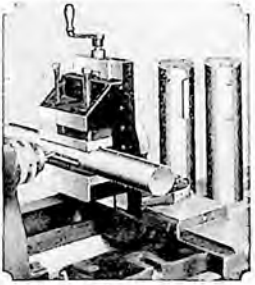
Size of Attachment	Size of Lathe	Vertical Feed	Cross Feed	Vise Will Hold	Depth of Jaws	Width of Jaws	Width of Base	Weight Each	Code Word	Price Each
No. 1	9 in.	2½ in.	3 in.	1½ in.	1 in.	3 in.	3¼ in.	25 lbs.	Vagon	$36.00
No. 2	11 in.	3 in.	4 in.	1½ in.	1 in.	3½ in.	3⅞ in.	30 lbs.	Valet	40.00
No. 3	13 in.	5 in.	8 in.	2¾ in.	1⅝ in.	5 in.	5 in.	40 lbs.	Vieto	45.00
No. 4	15 in.	6 in.	10 in.	3½ in.	1¾ in.	5½ in.	5½ in.	50 lbs.	Visit	50.00
No. 5	16 in.	7 in.	11 in.	4 in.	2 in.	6 in.	6 in.	65 lbs.	Vareo	55.00
No. 5½	18 in.	7 in.	14 in.	4 in.	2 in.	6 in.	6 in.	75 lbs.	Voxar	65.00
No. 6	21 in.	8 in.	15 in.	4½ in.	2¼ in.	7½ in.	7½ in.	80 lbs.	Varry	80.00
No. 7	24 in.	10 in.	20 in.	5 in.	2½ in.	8 in.	8 in.	100 lbs.	Vusel	90.00



Milling a Woodruff Keyway

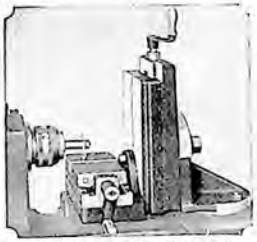


Milling a Standard Keyway



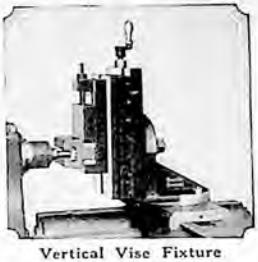
Milling a Keyway in Shaft

Practical Jobs for the Milling Attachment on the Lathe



Horizontal Vise Fixture

Squaring a Steel Shaft



Vertical Vise Fixture

Horizontal Vise Fixture

The illustration shows milling attachment fitted with a horizontal vise fixture for milling small parts in large quantities on the lathe. The fixture is not included in the price of the milling attachment but is extra.

Net Factory Prices of Horizontal Vise Fixture

Lathe Size	Cat. No.	Code Word	Net Price	Lathe Size	Cat. No.	Code Word	Net Price
9 in.	....	....	Not Made	16 in	1308	Velor	$50.00
11 in.	....	....	Not Made	18 in.	1310	Velum	55.00
13 in	1306	Vedal	$46.50	21 in.	1312	Vemex	65.00
15 in.	1307	Veget	47.50	24 in.	1314	Vepow	70.00

Vertical Vise Fixture

The illustration shows a piece of work that is being milled while being held in a vise on the milling attachment. The fixture is not included in the price of the milling attachment but is extra.

Net Factory Prices of Vertical Vise Fixture

Size Lathe	Cat. No.	Code Word	Net Price	Size Lathe	Cat. No.	Code Word	Net Price
9 in.	....	....	Not Made	16 in	1324	Valdd	$47.50
11 in.	....	....	Not Made	18 in.	1325	Vampe	52.50
13 in	1322	Vafer	$43.50	21 in.	1326	Vasea	60.00
15 in	1323	Valve	45.00	24 in.	1327	Vatux	65.00

The above prices do not include the Milling and Keyway Cutting Attachment, prices of which are shown on page 50.

Milling Cutters and Arbors for South Bend Lathes

Arbor for Side and Plain Milling Cutters

For holding cutters with standard 1-in. hole. Capacity between nut and shoulder is 1½ in. Three spacing collars and hardened nut are furnished with each arbor. The Taper Shank is ground to fit the head spindle of the lathe.

Net Factory Prices of Arbors for Milling Cutters

Size Lathe	Cat No.	Morse Taper	Code Word	Price Each	Size Lathe	Cat No.	Morse Taper	Code Word	Price Each
9 in	109	No. 3	Kacel	$9.00	16 in.	116	No. 3	Kemps	$10.00
11 in	111	Special	Khosh	9.00	18 in	118	No. 3	Kferl	10.00
13 in.	113	No. 3	Kelte	9.00	21 in	121	No. 4	Kmnt	11.00
15 in	115	No. 3	Kdosl	9.00	24 in.	124	No. 4	Khans	11.00

Page 51 Cat. 89-A

Plain Milling Cutters

Made of High Speed steel, properly hardened and ground. Will cut on face only. All cutters have 1-inch hole and standard keyway.

Net Factory Prices of Plain Milling Cutters (High Speed Steel)

Cat. No.	Width of Face	Diameter of Cutter	Diameter of Hole	Code Word	Price Each
849-A	⅝ in.	2½ in.	1 in.	Naber	$3.25
849-B	¾ in.	2½ in.	1 in.	Nbokt	3.50
849-C	⅝ in.	2½ in.	1 in.	Ncrl	3.75
849-D	⅝ in.	2½ in.	1 in.	Ndixo	4.00
849-E	⅝ in.	2½ in.	1 in.	Nedge	4.25
849-F	⅝ in.	2½ in.	1 in.	Nfoot	4.50
849-G	⅝ in.	2½ in.	1 in.	Ngord	4.80
849-H	⅝ in.	2½ in.	1 in.	Nhabx	5.40
849-I	⅝ in.	2½ in.	1 in.	Nidar	6.00
849-K	1 in.	2½ in.	1 in.	Njolte	6.50

Special Collet Chuck for Woodruff Cutters

The Collet Chuck holds Woodruff Milling Cutters with straight shank ½ inch in diameter. Taper Shank fits head spindle of lathe. Cutter is not included in price of arbor

Net Factory Prices of Collet Chuck for Woodruff Cutters

Size Lathe	Catalog No.	Code Word	Price Each	Size Lathe	Catalog No.	Code Word	Price Each
9 in.	101	Rabet	$8.00	16 in.	105	Rayma	$8.00
11 in.	102	Resta	8.00	18 in.	106	Rosty	8.00
13 in.	103	Rithd	8.00	21 in.	107	Rylds	9.00
15 in.	104	Rodny	8.00	24 in.	108	Rziaf	9.00

Side Milling Cutters

Made of High Speed steel, properly hardened and ground. Will cut on face and either side. All cutters have 1-inch hole and standard keyway.

Net Factory Prices Side Milling Cutters (High Speed Steel)

Catalog No.	Width of Face	Diameter of Cutter	Diameter of Hole	Code Word	Price Each
850-A	¼ in.	3 in.	1 in.	Oates	$ 5.40
850-B	⅜ in.	3 in.	1 in.	Oband	6.25
850-C	½ in.	3 in.	1 in.	Ocips	6.65
850-D	⅝ in.	3 in.	1 in.	Odate	7.15
850-E	¾ in.	3 in.	1 in.	Oehlt	7.65
850-F	⅞ in.	3½ in.	1 in.	Ofare	10.65
850-G	¾ in.	4 in.	1 in.	Ozest	14.40
850-H	⅞ in.	4 in.	1 in.	Ohugo	17.30
850-I	1 in.	5 in.	1 in.	Oleda	20.20

Spiral End Mills

Made of High Speed steel, hardened and ground. Morse Standard Taper Shanks. Right-Hand Mill only furnished.

Net Factory Prices of Spiral End Mills (High Speed Steel)

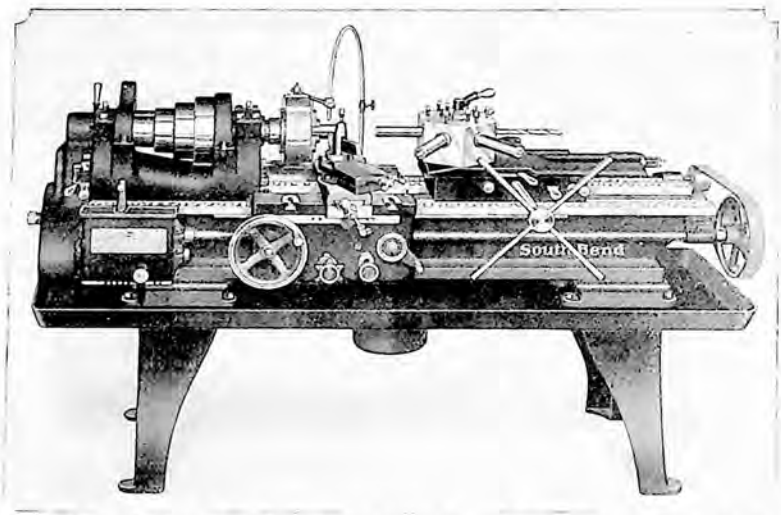
Cat. No.	Diam. of Mill	Morse Taper	Code Word	Price Each	Cat. No.	Diam. of Mill	Morse Taper	Code Word	Price Each
868-A	⅜ in.	No. 2	Fabic	$4.15	870-A	⅜ in.	No. 3	Praiz	$6.00
868-B	½ in.	No. 2	Peals	4.60	870-B	⅝ in.	No. 3	Psalm	6.20
868-D	⅝ in.	No. 2	Phil	4.60	870-C	1 in.	No. 3	Pulet	6.20
868-E	¾ in.	No. 2	Pinke	4.60	870-D	1¼ in.	No. 3	Pwhat	7.10
868-F	⅞ in.	No. 2	Plaid	5.30	870-E	1½ in.	No. 3	Pyle	8.25
868-G	1 in.	No. 2	Ponds	5.75					

Woodruff System Milling Cutters

Made of High Speed steel, properly hardened and ground. Have straight shanks ½ inch in diameter. For milling Woodruff System Keyways.

Net Factory Prices Woodruff System Milling Cutters (High Speed Steel)

Cat. No.	Diam.	Width	Code Word	Price Each	Cat. No.	Diam.	Width	Code Word	Price Each
897-A	½ in.	⅛ in.	Uabed	$1.80	897-I	1 in.	⅛ in.	Uitox	$3.60
897-B	½ in.	⅛ in.	Uboas	1.80	897-J	1 in.	⅜ in.	Ujbis	3.60
897-C	⅝ in.	⅛ in.	Ucesk	2.10	897-K	1¼ in.	⅛ in.	Ukase	4.00
897-D	¾ in.	⅛ in.	Udwin	2.50	897-L	1¼ in.	¼ in.	Ulaft	4.00
897-E	¾ in.	⅜ in.	Ueyas	2.50	897-M	1¼ in.	⅜ in.	Umine	4.00
897-F	¾ in.	⅜ in.	Ufent	2.75	897-N	1¼ in.	⅜ in.	Ungda	4.50
897-G	¾ in.	¼ in.	Ugers	2.75	897-O	1¼ in.	¼ in.	Uopre	4.50
897-H	1 in.	⅜ in.	Uhoml	3.60	897-P	1¼ in.	⅜ in.	Uplat	4.50



The New Model Lathe Equipped for Manufacturing Work

The Back Geared Screw Cutting Lathe Equipped with a Few Special Tools Makes an Efficient Machine for the Production of Small Duplicate Metal Parts

The New Model South Bend Back Geared Screw Cutting Lathe can be fitted with a variety of attachments and used to advantage for many manufacturing operations. A lathe equipped in this way serves the purpose of a Special Machine. When the job is finished the tools can be removed and the lathe used for regular lathe work.

Mechanics who have worked in some of the modern metal working plants in the United States know from experience that the screw cutting lathe as a manufacturing tool is used to great advantage in machining metal parts in large quantities. Any size South Bend Lathe from 9-inch to 18-inch size inclusive may be equipped with tools for special production work.

The back geared screw cutting lathe is a universal tool and can be equipped at a small expense with a set of tools for machining duplicate parts where accuracy and precision is required. Many modern industrial plants are taking advantage of this fact and are using screw cutting lathes. Some plants are using screw cutting lathes in groups on production work and getting excellent results.

There are many jobs where the screw cutting lathe thus equipped will show a bigger production on parts than can be obtained on a special or single purpose machine. When one job is finished the screw cutting lathe can then be equipped and set up for doing various jobs, and can be kept in operation the year round. The single purpose machine is capable of doing only one job, in some cases it is not in operation half the time, which makes it an expensive and unprofitable investment.

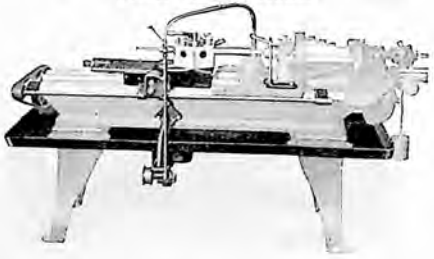
Pressed Steel Oil Pan

The illustration above shows a lathe equipped with One Piece liquid tight Oil Pan, which can be furnished with any size South Bend Lathe.

Net Factory Prices Steel Oil Pan

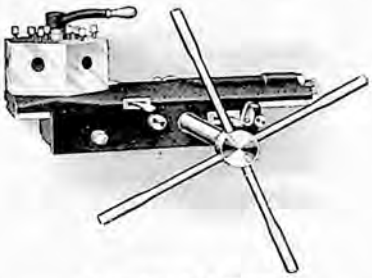
Size of Lathe	Cat. No.	LENGTH OF BED							
		5-ft. Bed	5½-ft. Beds	4-ft. Beds	4½-ft. Beds	5-ft. Beds	6-ft. Beds	7-ft. Beds	8-ft. Beds
9 in.	282	$14.00	$15.00	$16.00	$17.00	$20.00			
11 in.	284	16.00	17.00	18.00		22.00	$25.00	$28.00	$31.00
13 in.	286			20.00		26.00	30.00	34.00	38.00
15 in.	288						33.00	37.00	41.00
16 in.	292						40.00	45.00	50.00
18 in.	294								
Code Words		Oasis	Oback	Odium	Often	Obern	Okres	Olean	Omens

Oil Pump, Reservoir, and Pipe Fittings, Prices on Application



Rear View of Lathe Equipped with Oil Pan, Reservoir and Piping

Lathe Attachments for Manufacturing Work



Turnstile Bed Turret

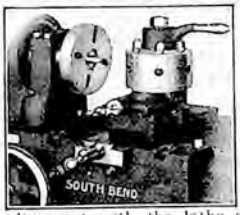
The Turnstile Bed Turret has a Turret Head which is semi-automatic, and will revolve 1/6 of a turn with each hand revolution of the Turnstile on the return stroke of the Slide. An Adjustable Stop is provided for each of the six faces of the Turret.

Prices of Turnstile Bed Turrets

Size of Lathe	Catalog No.	Size of Hole	Maximum Turret Feed	Weight Each	Code Word	*Price Each
14 in.	414	1 in.	9 in.	200 lbs.	Felow	$240.00
15 in.	415	1 in.	9 in.	225 lbs.	Fight	250.00
16 in.	416	1 in.	9 in.	225 lbs.	Flown	252.00
18 in.	418	1¼ in.	12 in.	550 lbs.	Forts	300.00
21 in.	421	2 in.	15 in.	850 lbs.	Freud	375.00
24 in.	424	2 in.	15 in.	900 lbs.	Fudge	450.00

*Fitting Turnstile Bed Turret is extra. Prices on application.

Round Tool Post Turret—Style E



The illustration shows Tool Post Turret, Style E, held in the Compound Rest of the lathe. The six Turret holes are about two inches deep and are left one-eighth inch under-size in diameter so they can be bored out to the sizes required on the lathe in order to insure perfect alignment with the lathe spindle.

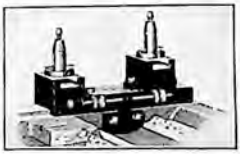
Prices of Round Tool Post Turret

Size Lathe	9 in.	11 in.	13 in.	15 in.	16 in.	18 in.	21 in.	24 in.
Cat. No.	9-E	11-E	13-E	15-E	16-E	18-E	21-E	24-E
Code Word	Zabet	Zasto	Zorvo	Zicer	Zilky	Zorbo	Zouvo	Zupko
Price Each	$65.00	$65.00	$75.00	$90.00	$90.00	$90.00	$90.00	$90.00

Fitting Round Tool Post Turret is extra. Prices on application.

Double Tool Screw Slide

The Double Tool Slide illustrated at right is controlled by the lathe cross feed screw. An adjustable stop regulates both front and back tools. Prices include front and back tool rest, adjustable stop and one tool post complete.



Prices of Double Tool Screw Slide

Size Lathe	9 in.	11 in.	13 in.	15 in.	16 in.	18in
Cat. No.	981	982	983	984	985	986
Code Word	Dakin	Deuts	Divot	Dobin	Drips	Ducts
Price Each	$30.00	$30.00	$35.00	$35.00	$40.00	$40.00

Semi-Automatic Bed Turret

Turret Revolves Automatically

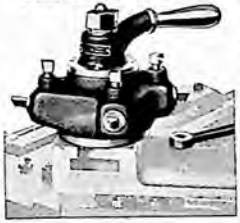
The Semi-Automatic Bed Turret is intended only for 9-inch, 11-inch and 13-inch lathes. The Turret is hexagonal in shape and is automatically indexed one-sixth of a turn by the backward movement of the Hand Lever. Adjustable Stops are provided for each of the six faces of the Turret for regulating the depth of each tool and cannot be equipped with Automatic Power Feed. The feed of the Turret Slide is controlled by the Hand Lever. The Semi-Automatic Bed Turret should be fitted to the Lathe at the factory in order to insure perfect alignment with the Lathe Spindle. Prices and brief specifications appear in the tabulation below.

Prices of Semi-Automatic Bed Turret

Size of Lathe	Cat. No.	Turret Hole	Length of Turret Base	Max. Turret Feed	Weight Each	Code Word	*Price of Turret
9 in.	1509	⅝ in.	3½ in.	1¼ in.	10 lbs.	Jaber	$195.00
11 in.	1511	⅝ in.	3½ in.	1¼ in.	60 lbs.	Jenks	205.00
13 in.	1513	⅝ in.	3½ in.	1¼ in.	75 lbs.	Jills	215.00

*Fitting Semi-Automatic Bed Turret is extra. Prices on application.

Four-Cornered Tool Post Turret—Style D



The Four-Cornered Tool Post Turret is clamped directly to the Compound Rest, and carries four cutting tools which must be turned one-quarter of a revolution.

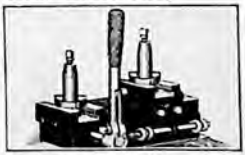
The Square Tool Post Turret is practical for rough turning, facing, etc. The tools for each successive operation are set up and then swung into place as needed. Cutter bits are not included in price.

Prices of Four Cornered Tool Post Turret

Size of Lathe	Cat. No.	Takes Bits	Weight Each	Code Word	Price Without Bits	Cutter Bits Price, Each
13 in.	1529	⅝ in. sq.	70 lbs.	Zache	$60.00	$0.55
15 in.	1531	⅝ in. sq.	70 lbs.	Zuner	60.00	.55
16 in.	1532	¾ in. sq.	90 lbs.	Zipes	85.00	.90
18 in.	1533	¾ in. sq.	90 lbs.	Zobox	85.00	.90

Double Tool Hand Lever Slide

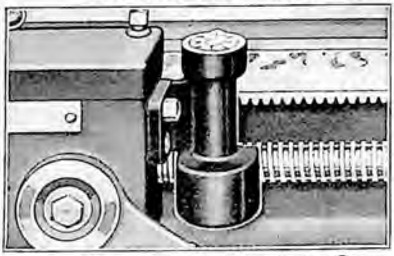
The Double Tool Slide at right is controlled by the Hand Lever. An adjustable stop regulates both front and back tools. Prices include front and back tool rest, adjustable stop and one tool post complete.



Prices of Double Tool Hand Lever Slide

Size Lathe	9 in.	11 in.	13 in.	15 in.	16 in.	18 in.
Cat. No.	999-A	999-B	999-C	999-D	999-E	999-F
Code Word	Dapic	Debit	Diced	Doles	Drain	Dufer
Price Each	$40.00	$40.00	$45.00	$45.00	$50.00	$50.00

Thread Indicator for the New South Bend Lathes



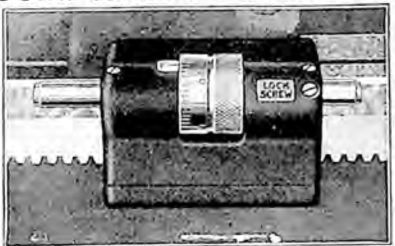
The Thread Indicator eliminates the necessity of reversing the lathe to return the Carriage to the starting point to catch the thread at the beginning of each successive cut. The Face of the Dial is numbered and graduated to show the exact time to clamp the Half Nuts on the Lead Screw for the next cut. When cutting even threads, the Half Nuts are closed at any graduation on the Dial and for odd threads at any numbered line on the Dial.

Net Factory Prices of Thread Indicator

Size of Lathe	9 in.	11 in.	13 in.	15 in.	16 in.	18 in.	21 in.	24 in.
Catalog No.	809	811	813	815	816	818	821	824
Code Word	Abaft	Acres	Adyts	Aesop	Allot	Agrol	Alota	Ajoin
Price, Each	$8.00	$8.00	$10.00	$10.00	$12.00	$12.00	$14.00	$14.00

Micrometer Carriage Stop for the New South Bend Lathes

The Micrometer Carriage Stop, shown at right is useful in manufacturing operations and in accurate facing of work. It can be used as either a permanent or adjustable stop on either side of the Carriage. Special means are provided for clamping the Micrometer Carriage Stop to the front "V" of the lathe bed. A lock screw is provided so that the Micrometer Carriage Stop spindle can be locked when necessary.

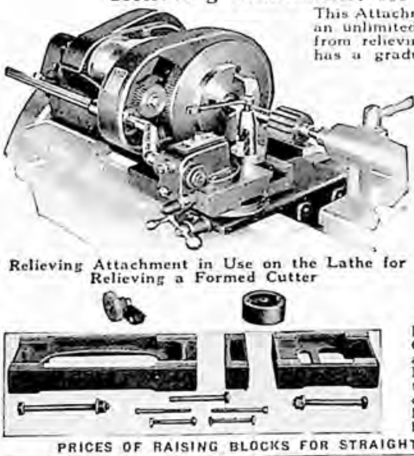


Net Factory Prices of Micrometer Carriage Stop

Size of Lathe	9 in.	11 in.	13 in.	15 in.	16 in.	18 in.	21 in.	24 in.
Catalog No.	971	972	973	974	975	976	978	979
Code Word	Calef	Cedel	Chain	Cigar	Climb	Coral	Cring	Cupal
Price, Each	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00

Micrometer Carriage Stop with multiple stops. Prices on application.

Relieving Attachment for the New South Bend Lathes



Relieving Attachment in Use on the Lathe for Relieving a Formed Cutter

This Attachment does every kind of relieving except spiral and has an unlimited range of angular work. It can be quickly changed from relieving to plain turning, thread cutting or vice versa. It has a graduated scale for amount of relief from 0 to 1/32 inch.

Work Which Can Be Relieved

The diameter of work that can be relieved on a 15-inch Lathe is 6 inches—on a 16-inch Lathe, 6 inches—on an 18-inch Lathe, 7 inches—on a 21-inch Lathe, 7 inches. The class of work that can be relieved consists of: Milling cutters, reamers, taps, hobs, etc. It is also arranged for internal relieving of threading dies, etc. No machine work or special parts are required to fit the Relieving Attachment to South Bend Lathes.

Net Factory Prices of Relieving Attachment

Size of Lathe	Cat. No.	Code Word	Price Each	Size of Lathe	Cat. No.	Code Word	Price Each
15 in.	953	David	$285.00	18 in.	955	Diver	$310.00
16 in.	954	Delta	285.00	21 in.	956	Dower	330.00

Raising Blocks for Lathes

Raising Blocks can be supplied for Straight Bed and Gap Bed Lathes in the Quick Change Gear and Standard Change Gear types to increase the swing of the lathe for power turning feeds and cutting screw threads. The table below shows the increased swing of the various lathes, when equipped with Raising Blocks. The Silent Chain Motor Driven Lathes cannot be fitted with Raising Blocks.

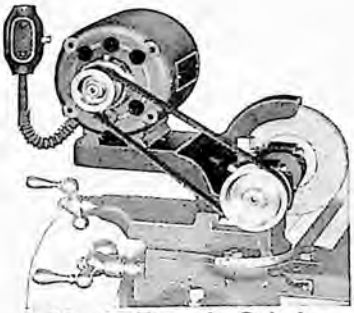
PRICES OF RAISING BLOCKS FOR STRAIGHT AND GAP BED LATHES

Straight Bed Lathes		Gap Bed Lathes		Raising Blocks for Quick Change Gear Lathes			Raising Blocks for Standard Change Gear Lathes		
Swing Over Bed	Swing Over Bed with Raising Blocks	Swing Over Gap	Swing Over Gap with Raising Blocks	Catalog No.	Code Word	*Price	Catalog No.	Code Word	*Price
9¼ in.	12 in.	.....	.....	1121	Cafer	$ 35.00	1001	Cadie	$ 30.00
11¼ in.	14 in.	16 in.	19 in.	1122	Ceare	41.00	1002	Cebro	35.00
13¼ in.	18 in.	19 in.	24 in.	1123	Charl	60.00	1003	Chink	50.00
15¼ in.	20 in.	22 in.	27 in.	1124	Cilov	72.00	1004	Citus	60.00
16¼ in.	22 in.	24 in.	30 in.	1125	Click	84.00	1005	Claro	70.00
18¼ in.	24 in.	26 in.	32 in.	1126	Coger	96.00	1006	Cobil	80.00
21¼ in.	27 in.	30 in.	36 in.	1127	Crops	120.00	1007	Crown	100.00
24¼ in.	30 in.	36 in.	42 in.	1128	Cueno	150.00	1008	Cudly	125.00

GEAR GUARDS

For Lathes with Raising Blocks		
Size of Lathe	Cat. No.	Price
9 in.	1121-A	$ 3.00
11 in.	1122-A	4.50
13 in.	1123-A	6.50
15 in.	1124-A	7.00
16 in.	1125-A	7.50
18 in.	1126-A	8.00
21 in.	1127-A	9.00
24 in.	1128-A	10.00

***Gear Guards for Lathes fitted with Raising Blocks are extra, see tabulation above.**



No. 15 Electric Grinder

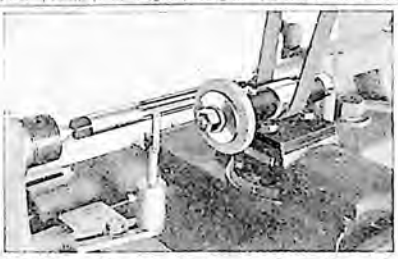
For South Bend Lathes

The No. 15 Electric Grinder is practical for grinding straight, taper or spiral reamers, milling cutters, taps, dies, valves, pistons, steel bushings, hardened shafts, etc.

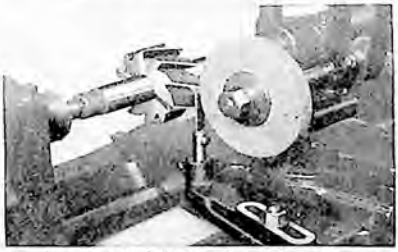
The No. 15 Electric Grinder operates from an electric light socket. No special installation of electrical service is necessary. Specify electric current when ordering—if DIRECT current give voltage, if ALTERNATING current, give voltage, phase and cycle. The prices below include the No. 15 Electric Grinder as illustrated, with one Grinding Wheel and Clamp for mounting to Compound Rest.

Net Factory Prices of No. 15 Electric Grinder

Catalog Number	Size of Lathe	Size Emery Wheel	Outside Diameter Will Grind	Size Motor	Code Word	Price Each
15-I	9 in.	4 in. x ⅝ in.	4¾ in.	¼ H.P.	Caret	$75.00
15-T	11 in.	4 in. x ⅝ in.	7½ in.	¼ H.P.	Cutts	75.00
15-K	13 in.	5 in. x ⅝ in.	9 in.	½ H.P.	Chums	90.00
15-L	15 in.	5 in. x ⅝ in.	10½ in.	½ H.P.	Clinch	90.00
15-M	16 in.	5 in. x ⅝ in.	11 in.	½ H.P.	Close	90.00
15-N	18 in.	5 in. x ⅝ in.	12½ in.	½ H.P.	Coats	90.00

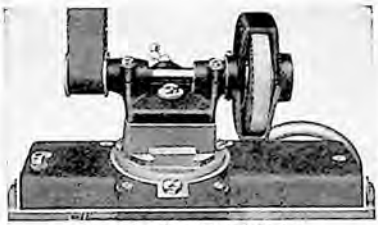


Grinding a Straight Reamer in the Lathe with a No. 10 Countershaft Drive Grinder



Grinding a Spiral Cutter in Lathe, Using the Adjustable Holding Fixture and Cutter Stop

Page 55. Cat. 39-A



No. 10 Belt Drive Grinder

No. 10 Belt Grinder

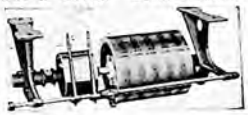
For Brake Drum Lathes

The No. 10 Belt Drive Grinder equips the lathe for doing a wide variety of work that would otherwise require a special grinding machine. It is a powerful Grinder designed for heavy duty precision grinding.

Grinder frame is heavily constructed to resist vibration and clamps directly to Compound Rest which permits swiveling to any angle for grinding bevels and tapers.

The price of the No. 10 Belt Drive Grinder includes the Grinder Frame, one Emery Wheel, Bolt and Clamp for attaching to lathe.

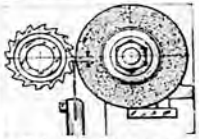
The Drum Countershaft is not included in the price of the grinder but is extra. Countershaft has Tight and Loose Pulley, Belt Shifter, Wick Oiling Bearings and Drum Pulley 12-in. diameter x 12-in. long. Longer Drum at extra cost.



Net Factory Prices

Size of Brake Drum Lathe	Size Emery Wheel	No. 10 Grinder Cat. No.	No. 10 Grinder Code Word	No. 10 Grinder Price Each	Drum Countershaft Cat. No.	Drum Countershaft Code Word	Drum Countershaft Price Each
No. 1	6 in. x ⅝ in.	10K	Yeupu	$20.00	11C	Ykolg	$35.00
No. 2	6 in. x ⅝ in.	10M	Yeuba	25.00	11E	Ymlji	35.00
No. 3	6 in. x ⅝ in.	10P	Yhred	25.00	11H	Ypimk	35.00

Grinding a Cutter in the Lathe



Grinding Clearance on a Cutter

Adjustable Holding Fixture

For Truing Grinding Wheels

The No. 19 Holding Fixture will hold the industrial diamond for truing wheels, and will also hold the cutter stop used when grinding cutters.

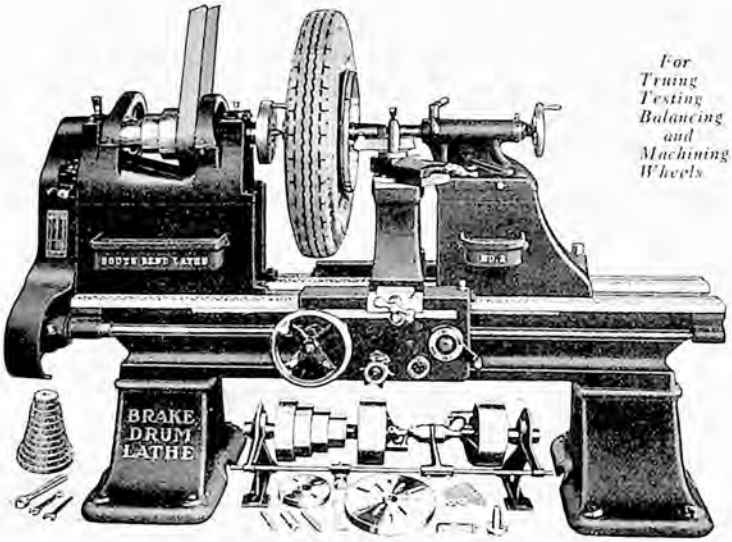
Net Factory Prices of Holding Fixture

Size of Lathe	Cat. No.	Code Word	Price Each
9 in.	19	Qtene	$ 8.00
11 in.	19H	Quarz	9.00
13 in.	19C	Quest	10.00
15 in.	19D	Quick	12.00
16 in.	19E	Quirt	13.00
18 in.	19F	Quota	15.00
21 in.	19G	Quave	17.00
24 in.	19H	Qurem	18.00

Industrial Diamond Dresser

No. 18 Industrial Diamond, Special Metal Mount ⅓ Carat. Price each.....$8.00

Code word Quaft.



For Truing Testing Balancing and Machining Wheels

Countershaft and Equipment Included in Price of Lathe

The New Model South Bend Brake Drum Lathe

A Back Geared Screw Cutting Lathe for Truing and Servicing Brake Drums

The Back Geared Screw Cutting Brake Drum Lathe illustrated above solves the brake drum problem in the service station. This lathe is practical for truing all kinds of brake drums, both front wheels and rear wheels of cars, busses and trucks, with precision, speed and accuracy using a method so simple that the average mechanic will have no difficulty in turning out a first class job in record time.

The Mandrel and Bearing Method for Mounting Wheel is based on the principle of a mandrel equipped with universal bearing adapters which fit in the hub of the wheel and conform to the bearing races. The nut on the straight mandrel forces the bearing adapters against the bearing races of the hub, and lines the hub up accurately. Mounting the wheel between centers on the mandrel is the most accurate and rigid method and permits Testing, Truing, Balancing and Machining.

FEATURES OF BRAKE DRUM LATHES

Back geared headstock gives eight spindle speeds.
Automatic cross feed and automatic longitudinal feed.
Hollow spindle, made of special carbon steel.
Graduated compound rest swivels to any angle.
Tailstock is arranged for set-over for taper turning.
Graduated collar on cross feed screw and compound rest screw.
Precision lead screw for cutting screw threads 2 to 40 per inch.
For application of Mandrels and Adapters, see page 57.

The Wheel Assembled Including Tire is mounted on a mandrel fitted with the bearing adapters. The wheel on the mandrel is then mounted between centers on the lathe. All machining done on the wheel in this position will be concentric with the axis of the hub, and the brake drum will run true because the mandrel is supported on both ends on the lathe centers.

Testing the Wheel, the Brake Drum, and the Hub. The South Bend Brake Drum Lathe enables the operator to test the wheel, the brake drum, and the hub in order to locate the real cause of any trouble. This is important because the wheel only may be out of true, or it may be the drum, or the hub, or it may be that all three units are out of true. The axle shaft may also be tested and trued in the lathe. A simple test will promptly locate the cause of the trouble.

The Lathe Equipment Included with each South Bend Brake Drum Lathe consists of: Double Friction Countershaft, Graduated Compound Rest, Large and Small Face Plates, Adjustable Driver for Wheel, Tool Post Complete, Thread Cutting Stop, Two Lathe Centers, Spindle Sleeve, Wrenches and a Set of Change Gears for Screw Thread Cutting 2 to 40 per inch and for Automatic Feeds. Mandrels and Adapters are not included in the price of lathe.

Net Factory Prices of Brake Drum Lathes Including Overhead Countershaft and Equipment

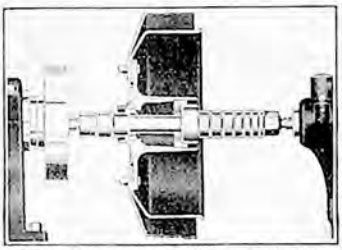
Cat. No. of Lathe	Swings Wheel, Tire Attached Clear	Length of Bed	Distance Between Centers	Hole Through Spindle	Countershaft Speed	Horse Power Required	Approx. Weight Crated	Code Word	Price F. O. B. South Bend
No. 1 South Bend Brake Drum Lathe									
No. 1-BB	32 in.	5 ft.	24 in.	1 in.	130 R.P.M.	¾ H.P.	1300 lbs.	Batel	$ 475.00
No. 1-BC	32 in.	6 ft.	36 in.	1 in.	130 R.P.M.	¾ H.P.	1350 lbs.	Biela	488.00
No. 1-BD	32 in.	7 ft.	48 in.	1 in.	130 R.P.M.	¾ H.P.	1400 lbs.	Below	501.00
No. 2 South Bend Brake Drum Lathe									
No. 2-BC	36 in.	6 ft.	27 in.	1⅝ in.	130 R.P.M.	1 H.P.	2150 lbs.	Carna	650.00
No. 2-BD	36 in.	7 ft.	39 in.	1⅝ in.	130 R.P.M.	1 H.P.	2210 lbs.	Carlo	666.00
No. 2-BE	36 in.	8 ft.	51 in.	1¾ in.	130 R.P.M.	1 H.P.	2320 lbs.	Carom	682.00
No. 2-BG	36 in.	10 ft.	75 in.	1¾ in.	130 R.P.M.	1 H.P.	2180 lbs.	Chair	714.00
No. 3 South Bend Brake Drum Lathe									
No. 3-BE	42 in.	8 ft.	38 in.	1¾ in.	130 R.P.M.	3 H.P.	4650 lbs.	Daisy	1400.00
No. 3-BG	42 in.	10 ft.	62 in.	1¾ in.	130 R.P.M.	3 H.P.	4900 lbs.	Debar	1482.00
No. 3-BH	42 in.	12 ft.	86 in.	1¾ in.	130 R.P.M.	3 H.P.	5300 lbs.	Doubt	1584.00

Write for 24-page Bulletin illustrating and describing the Brake Drum Lathe and the work it does. (Page 56, Cat. 30-A)

Mandrel and Bearing Adapter Method of Truing Brake Drums

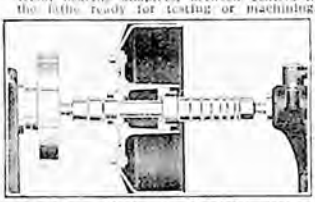
For Mounting the Wheel Between Centers in the Lathe for Testing and Machining

The South Bend Mandrels and Bearing Adapters will take care of practically all front wheels, rear wheels, single and dual wheels for testing the wheels and for machining brake drums of all types—internal expanding and external contracting, two-wheel and four-wheel brakes and band brakes—on all types and makes of wheels for automobiles, busses and trucks. The mandrel and adapter method is illustrated and described below.



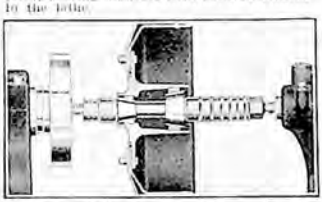
Timken Roller Races and Universal Bearing Adapters

A front wheel with Timken roller races, mounted on the mandrel fitted with universal bearing adapters, between centers in the lathe ready for testing or machining.



Ball Bearing Races and Universal Bearing Adapters

A front wheel with ball bearing races, mounted on the mandrel fitted with universal bearing adapters held between centers in the lathe.



Timken Roller Races and Taper Cone Bearing Adapters

A front wheel with Timken roller races, mounted on the mandrel fitted with taper cone bearing adapters, held between centers in the lathe.

Straight Mandrels for Front Wheels

A steel mandrel fitted with adjustable collars and nut for carrying the universal bearing adapters and the taper cone bearing adapters for mounting front wheels, and rear wheels with three-quarter and full-floating axles, between centers in the lathe for testing or machining.

Specifications and Prices of Straight Mandrels for Front Wheels

Catalog Number	Diameter of Mandrel	Length of Mandrel	For All Adapters with	Code Word	Price Each
1800	1⅛ in.	12 in.	1⅛-in. hole	Narde	$15.00
1810	1¾ in.	18 in.	1¾-in. hole	Nlaie	20.00

Universal Bearing Adapters for Front Wheels

The illustration shows a pair of universal bearing adapters made of steel, used on the steel mandrels for mounting all types and makes of front wheels, and rear wheels with three-quarter and full-floating axles. The roundest corner of the universal bearing adapter conforms to the curve in the ball race cup and also to the angle of the Timken cup and will center either type of wheel accurately on the mandrel.

Seven pairs of these adapters varying from 1⅝" diameter to 2⅞" diameter in steps of ⅛" fitted to No. 1800 mandrel will take care of the front wheels of almost all makes of cars, light busses and trucks.

Five pairs of adapters varying from 2¼" to 4¼" diameter in steps of ¼" to fit the No. 1810 mandrel will take care of the wheels of light busses and trucks.

Specifications and Prices of Universal Bearing Adapters

Catalog Number	To Fit Mandrel	Diameters Furnished	Diameter of Adapter Hole	Code Word	Price Per Pair*
1891	No. 1800	1⅝" to 2⅞" in eighths	1¼ in.	Nefas	$5.00
1811	No. 1810	2¼" to 4¼" in quarters	1¾ in.	Negel	6.00

*Specify Catalog Number and Diameter of Adapters wanted when ordering.

Taper Cone Bearing Adapters for Front Wheels

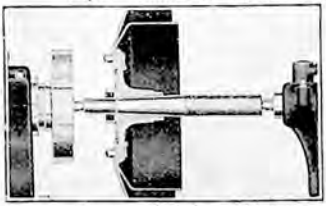
The taper cone bearing adapters shown at the left are used for front or rear wheels equipped with cones of the Timken type. The use of taper cone bearing adapters is limited because almost double the number are required to service the range of wheels that are taken care of by the universal bearing adapters. However, for the service station handling only one or two makes of cars the taper cone bearing adapters will be found very satisfactory.

Specifications and Prices of Taper Cone Bearing Adapters

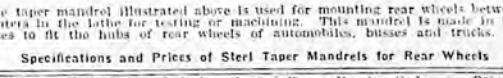
Catalog Number	To Fit Mandrel	Diameter of Adapter Hole	Code Word	Price Per Pair*
1805	No. 1800	1⅛ in.	Nehoe	$5.00
1815	No. 1810	1¾ in.	Nemon	7.00

*Taper Cone Bearing Adapters are made to order. Specify Catalog Number, Make and Number of Bearing Cup. Send Sample Cups if possible.

Taper Mandrels for Mounting Rear Wheels Between Centers in the Lathe



Set up of a rear wheel fitted with a taper mandrel, mounted between centers in the lathe for testing and machining.



The taper mandrel illustrated above is used for mounting rear wheels between centers in the lathe for testing or machining. This mandrel is made in five sizes to fit the hubs of rear wheels of automobiles, busses and trucks.

Specifications and Prices of Steel Taper Mandrels for Rear Wheels

Catalog Number	Diameter of Mandrel	Length of Mandrel	Taper Per Foot	Code Word	Price Each
1820	1" to 1⅛"	13¼ in.	⅝ in.	Numbe	$ 7.50
1821	⅞" to 1⅛"	11⅞ in.	1 in.	Norel	7.50
1822	1" to 1⅛"	13¼ in.	1 in.	Naslm	10.00
1823	1¼" to 1⅜"	15 in.	1 in.	Nough	10.00
1824	⅞" to 1⅜"	11⅞ in.	1½ in.	Nuper	7.50

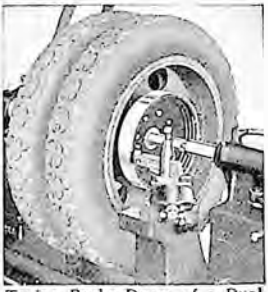
Write for 20-page Bulletin illustrating and describing the Brake Drum Lathe and the work it does.

Application of the South Bend Brake Drum Lathe

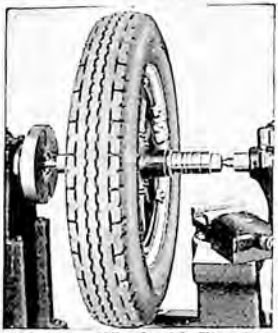
A Few Important Jobs that come up in the Service Station that can be handled on the Brake Drum Lathe. The Brake Drum Lathe is a General Purpose Machine and will take care of hundreds of other Jobs

Truing a Four-Wheel Brake Drum, Making It Concentric with Axis of Hub

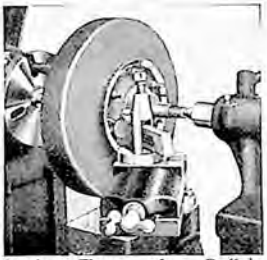
Truing Brake Drum for a Band Brake, Wheel Mounted on Mandrel



Truing Brake Drum of a Dual Wheel, Mounted on Mandrel



Balancing Wheel with Tire Attached, a Simple Operation

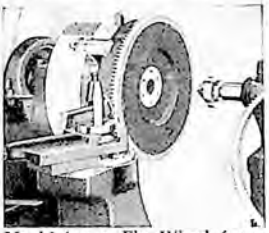


Truing Flange of a Buffalo Wheel, Mounted on Mandrel

Testing Felloe of Wheel

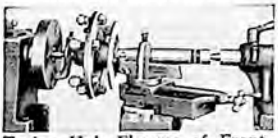
Boring a Wood Wheel for New Hub and Brake Drum

Grinding a Brake Drum on the Brake Drum Lathe



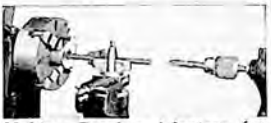
Machining a Fly Wheel for a Steel Ring Gear

Cutting Screw Threads from 2 to 40 Per Inch



Truing Hub Flanges of Front or Rear Wheels

Making a Mandrel for Mounting Front or Rear Wheel



Making Bearing Adapters for Use on Mandrel

Write for 20-page Bulletin illustrating and describing the Brake Drum Lathe and the work it does.

Accuracy of the Brake Drum Lathe

The New Model South Bend Back Geared Screw Cutting Brake Drum Lathe is unsurpassed for accuracy; it is made from the units of our regular Standard Change Gear Lathe that we have been making for twenty-two years. The headstock, tailstock, bed, carriage, lead screw, compound rest, etc., are identical with those on the Regular New Model South Bend Lathes illustrated in the front part of this catalog.

The Brake Drum Lathe is capable of making all kinds of mandrels and bearing adapters, both straight and taper, as it is fitted with a graduated compound rest and tailstock with set-over for taper turning. This lathe will cut screw threads from 2 to 40, right or left hand, including 11½ pipe thread. The lathe is fitted with automatic cross feed and automatic longitudinal feed. It will do all kinds of chucking work, turning and boring.

Mandrels and Adapters

If you wish to make your own mandrels and adapters on the lathe, we will furnish you with blue prints showing dimensions, also instruction sheets on the various size adapters for wheels of different makes of cars.

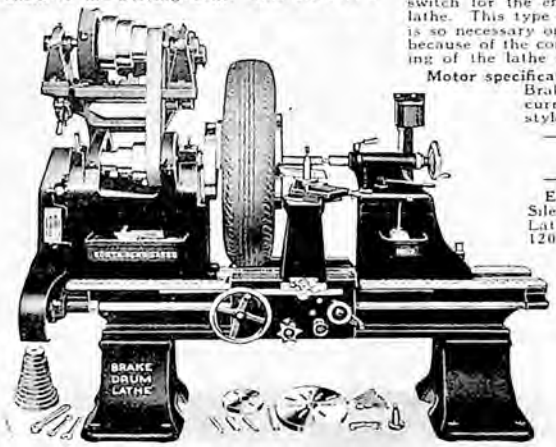
In purchasing mandrels and adapters if you are in doubt about the size most suitable for your work, specify the make and model of the car to be serviced, we can then furnish the proper mandrels and adapters for the job.

Attachments. Brake Drum Lathes can be fitted with all the attachments, tools and accessories used on the Standard Change Gear Lathe such as: chucks, grinding attachment, taper attachment, milling attachment, etc.

A 20-page bulletin, now on the press, describing Brake Drum servicing, with full details on mandrels and adapters may be had free upon request.

Silent Chain Motor Driven Brake Drum Lathe

The Silent Chain Motor Driven Brake Drum Lathe is the same as the Brake Drum Lathe shown on page 56, except that this Lathe is Motor Driven instead of Countershaft Driven. The Lathe is a complete unit requiring no extra Driving equipment of any kind, and provides eight spindle speeds. The Motor delivers power through the Silent Chain to the Driving Cone. This drive is a most practical method of driving a Screw Cutting Lathe as it is powerful and eliminates vibration and noise.



Silent Chain Motor Driven Brake Drum Lathe

The constant speed reversing motor, 1200 R.P.M., and reversing switch (drum type) enables the operator to start, stop and reverse the spindle quickly which is so important on a Screw Cutting Lathe.

The drum type reversing switch is the most practical switch for the efficient operation of a screw cutting lathe. This type of switch has a rotary motion which is so necessary on a motor driven screw cutting lathe because of the continual starting, stopping and reversing of the lathe spindle.

Motor specifications. When ordering a Motor Driven Brake Drum Lathe, specify the electric current to be used so that the proper style and type of motor can be furnished.

—**If alternating current, state exact voltage, phase, cycle and number of wires.**

—**If direct current, state voltage only.**

Electrical equipment included with each Silent Chain Motor Driven Brake Drum Lathe consists of: a Reversing Motor 1200 R.P.M. (Westinghouse, General Electric or equal make), Reversing Switch (drum type), Wiring between Motor and Switch, Flexible Metal Conduit, Wiring Diagram and Leather Belt.

Lathe equipment included with each Silent Chain Motor Driven Brake Drum Lathe consists of: Graduated Compound Rest, Large and Small Face Plates, Adjustable Driver for Wheel, Tool Post Complete, Thread Cutting Stop, Two Lathe Centers, Spindle Sleeve, Wrenches, and Change Gears for Screw Thread Cutting 2 to 40 per inch and for Automatic Feeds.

Net Factory Prices of Silent Chain Motor Driven Brake Drum Lathe

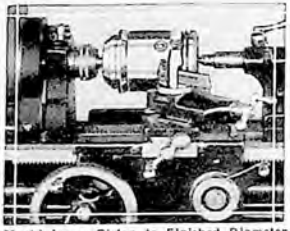
Prices Include Lathe Equipment, 1200 R.P.M. Reversing Motor, Reversing Switch and Leather Belt

Cat. No. of Lathe	Swings Wheel, Tire Attached Clear	Length of Bed	Distance Between Centers	Hole Through Spindle	Horse Power Required	Approx. Weight Crated	Code Word	With 3 Phase 60 Cycle A.C. Motor	With 1 Phase 60 Cycle A.C. Motor	With Direct Current Motor
No. 1 Silent Chain Motor Driven Brake Drum Lathe										
301-BB	32½ in.	5 ft.	24 in.	1 in.	¾ H.P.	1625 lbs.	Bailg	$ 610.00	$ 650.00	$ 619.00
301-BC	32¼ in.	6 ft.	36 in.	1 in.	¾ H.P.	1700 lbs.	Beltz	623.00	663.00	632.00
301-BD	32¼ in.	7 ft.	48 in.	1 in.	¾ H.P.	1775 lbs.	Bound	636.00	676.00	645.00
No. 2 Silent Chain Motor Driven Brake Drum Lathe										
302-BC	36¼ in.	6 ft.	27 in.	1⅝ in.	1 H.P.	2585 lbs.	Claud	805.00	832.00	878.00
302-BD	36¼ in.	7 ft.	39 in.	1⅝ in.	1 H.P.	2665 lbs.	Coast	821.00	848.00	894.00
302-BE	36¼ in.	8 ft.	51 in.	1⅝ in.	1 H.P.	2745 lbs.	Croze	837.00	864.00	910.00
302-BG	36¼ in.	10 ft.	75 in.	1⅝ in.	1 H.P.	2905 lbs.	Culex	869.00	896.00	942.00
No. 3 Silent Chain Motor Driven Brake Drum Lathe										
303-BE	42¼ in.	8 ft.	38 in.	1¾ in.	3 H.P.	5525 lbs.	Dawdy	1754.00	1820.00	1880.00
303-BG	42¼ in.	10 ft.	62 in.	1¾ in.	3 H.P.	5775 lbs.	Dicat	1836.00	1902.00	1962.00
303-BH	42¼ in.	12 ft.	86 in.	1¾ in.	3 H.P.	6175 lbs.	Drive	1938.00	2004.00	2064.00

Write for 24-page Bulletin illustrating and describing the Brake Drum Lathe and the work it does. (Page 59, Cat. 59-A)

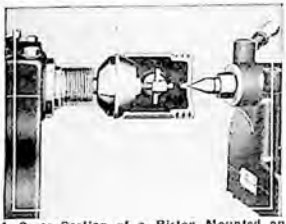
Piston Adapters for South Bend Lathes

For Finishing Semi-Machined Pistons on the Lathe

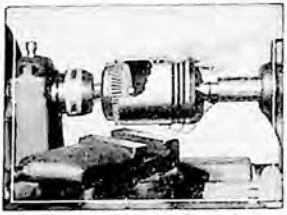


Machining a Piston to Finished Diameter in the 9-inch Lathe

The correct way to machine semi-machined pistons is to turn them to finished size in the Lathe instead of grinding, because turning is four times faster and produces just as good a job.

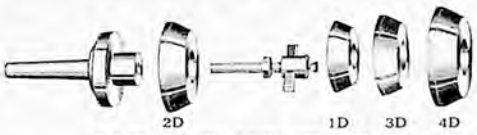


A Cross Section of a Piston Mounted on Piston Adapter Ready for Machining in the Lathe



Reaming the Skirt of a Piston in the 9-inch Lathe

Semi-machined Pistons warp out of shape while they are on the dealer's shelf and should be trued up before finish machining. The bevel on the inside edge of the Piston skirt should be reamed to a true circle so that when the Piston is mounted on the adapter it will run true.



The No. 44 Piston Adapter with Rings

The above illustration shows the No. 44 Piston Adapter Shank, Cone Rings and Driving Dog. One end of the shank is tapered to fit the headstock spindle of the lathe. The other end is machined to receive the cone rings. The driving dog screws in the threaded hole in the end of the shank and may be adjusted to fit any size piston. One ring, No. 2D, the most popular size, is furnished with the Adapter. Extra rings may be supplied as shown below.

Specifications and Prices of Piston Adapters

Size Lathe	Morse Taper of Shank	Cat. No.	Code Word	Price Complete with shank, driving dog and one cone ring No. 2D
9 in.	2	44-A	Hanov	$12.00
11 in.	2	44-B	Hotol	12.00
13 in.	3	44-C	Helaw	13.00
15 in.	3	44-D	Hilke	13.00
16 in.	3	44-E	Hesta	13.00
18 in.	3	44-F	Hiady	13.00
21 in.	4	44-G	Hizny	14.00
24 in.	4	44-H	Hilso	14.00

Specifications and Prices of Cone Rings

Cone Ring Number	Will Hold Piston Outside Diameter	Code Word	Price, Extra Cone Rings
1D	2⅝ to 3¼ in.	Hoiso	$2.50
2D	3¼ to 3⅞ in.	Hwaki	2.50
3D	3⅞ to 4½ in.	Hyena	2.50
4D	4½ to 5¼ in.	Hzaco	2.50

Piston Skirt Reamers

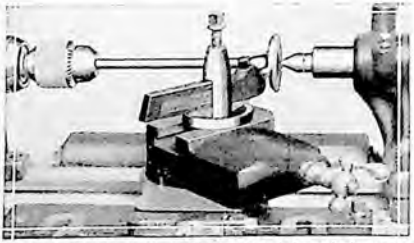
Piston Skirt Reamers

The Piston Reamers illustrated at the left are used on the No. 44 Piston Adapter Shank as the holes in the cone rings and the Reamers are the same size.

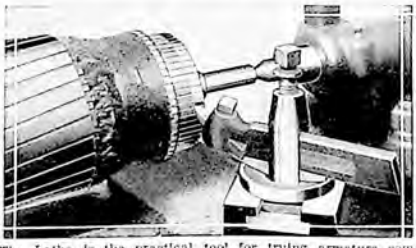
To true the Piston place the skirt on the Reamer as shown. Start the lathe, revolving the Reamer slowly, holding the Piston with the left hand. Take a light cut, feeding by the hand wheel of the tailstock with the right hand.

Specifications and Prices of Piston Skirt Reamers

Reamer Number	For Reaming Pistons Outside Diameter	Code Word	Price, Each Reamer
1R	2½ to 3¼ in.	Hacke	$ 7.50
2R	3¼ to 3⅞ in.	Helne	9.00
3R	3⅞ to 4½ in.	Hiley	11.00
4R	4⅜ to 5 in.	Holer	13.00



The Screw Cutting Lathe is the ideal tool for refacing valves by turning, because the Compound Rest of the Lathe can be set to the exact angle desired. The valve can be refaced by turning four times faster than grinding.



The Lathe is the practical tool for truing armature commutators. Machining the commutator smooth and true is a precision job and must be done on a Screw Cutting Lathe with power feed, if satisfactory results are to be obtained.

Electric Mica Undercutter

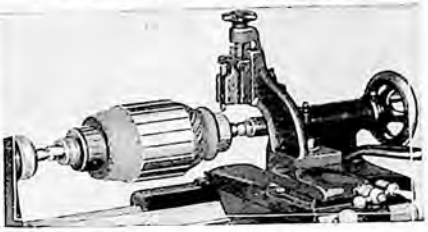
The No. 201 Electric Mica Undercutter is adjustable for various sizes of Commutators. It consists of a Motor mounted on a Sliding Bracket which fastens to Tool Rest. A set of 20 Disc Cutters, 1½-inch in diameter, 4 each (.015 inch, .020 inch, .025 inch, .030 inch, .035 inch), is supplied with each Undercutting Tool.

Price includes motor, bracket, clamp and bolt for mounting on compound rest of lathe, and one set 20 disc cutters. When ordering specify either 110-volt or 220-volt current motor.

Net Factory Prices of Electric Mica Undercutter

Size of Lathe	Electric Undercutter with One Set 20 Cutters			Extra Sets 20 Disc Cutters		
	Cat. No.	Code Word	Price Each	Cat. No.	Code Word	Price Per Set
9, 11, 13 in.	201-A	Horag	$45.00	201-C	Imork	$6.00
15, 16, 18 in.	201-B	Idoro	60.00	201-D	Insol	6.00

Shaper Mica Undercutter



The No. 202 Shaper Type Mica Undercutter is a practical tool for relieving mica insulation between segments of commutators.

Vertical adjustment of the cutting tool is made through hand wheel at the top. The cutting stroke is made by turning the hand wheel on lathe apron. The high speed steel cutting tool, mounted in the clapper box, lifts up on the back stroke.

Price includes frame, one cutter bit, clamp and bolt for mounting on compound rest of lathe.

Net Factory Prices of Shaper Type Mica Undercutter

Size of Lathe	Shaper Undercutter with One Cutter Bit			Extra Cutter Bits		
	Cat. No.	Code Word	Price Each	Cat. No.	Code Word	Price Each
9, 11, 13 in.	202-A	Sasor	$25.00	202-C	Nilos	$0.25
15, 16, 18 in.	202-B	Seogh	35.00	202-D	Nobile	.25

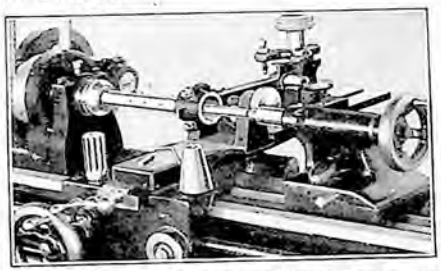
Connecting Rod Boring Attachment for All Sizes South Bend Lathes

The Connecting Rod Boring Attachment is practical for reboring all types and sizes of automobile and truck connecting rods. When machining connecting rods with this attachment, the wrist pin is clamped in the rod bearing and is held in a "V" base, while the other end of the rod to be bored is supported by adjustable set screws. This attachment does very accurate work and is extremely rapid. A set of six connecting rods can be bored and finished in about thirty minutes. Only one adjustment of the attachment is required when boring a set of connecting rods.

It is advisable to order the Boring Attachment with the lathe, so that it can be fitted at the factory, although it may be ordered at any time and attached.

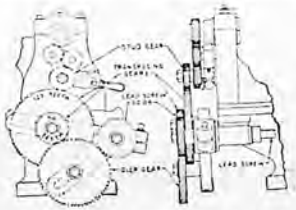
Net Factory Prices of Connecting Rod Boring Attachment

Size of Lathe	Cat. No.	Code Word	Price Each
9 in.	1229	Yeast	$ 50.00
11 in.	1230	Young	60.00
13 in.	1231	Yield	70.00
15 in.	1232	Yawno	75.00
16 in.	1233	Yolet	85.00
18 in.	1234	Yello	90.00
21 in.	1235	Yolke	100.00
24 in.	1236	Youdr	125.00



Boring a Connecting Rod on a South Bend Lathe

Price includes fixture which is attached to the saddle of the lathe; two cone adapters for centering crankshaft bearings of connecting rod, one large and one small boring tool for boring, facing and reaming crankshaft bearings. Reamer not included in the price, but is extra.



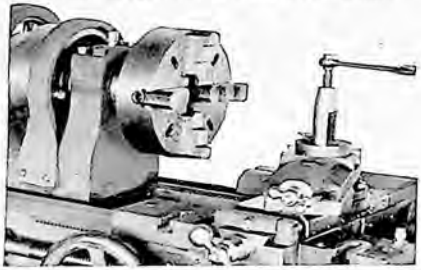
Transposing Gears for Cutting Metric Threads

On South Bend Standard and Quick Change Gear Lathes

To cut metric threads in addition to English threads on a Standard Change Gear or Quick Change Gear Lathe a set of transposing gears and a special bracket are required. Included in the set is a large gear having 127 teeth and a small gear having 50 teeth as shown in the illustration at left. The 127-tooth gear meshes with the stud gear and the 50-tooth gear connects with the idler, which in turn meshes with the lead screw gear. South Bend Standard Change Gear Lathes may be equipped with a Metric Lead Screw instead of an English Lead Screw, at extra cost, if desired. **For prices see 89 Price Sheet.**

Lathe Chucks for South Bend Lathes

Chuck Equipment for the New Lathe



The Practical Type of Chuck for the Lathe

If the lathe is to have one chuck, it should be an Independent Lathe Chuck with 4 reversible jaws, as this type will hold both round stock and of irregular shape. If two chucks are to be fitted to the lathe, then a Universal Geared Scroll Chuck should be used in addition to the Independent 4-jaw reversible type. A Universal Geared Scroll Chuck is self-centering and therefore enables the operator to handle round and hexagonal stock without losing time in truing up the work.

Information on Ordering Lathe Chucks

In ordering a chuck for the lathe, there are two important points to consider. These are (1) SIZE OF CHUCK best suited to your work and (2) FITTING CHUCK to the Lathe. These points are fully explained on page 63.

Three-Jaw Universal Geared Scroll Chucks

With Two Sets of Jaws (Iron Body)

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. This type of chuck is equipped with two sets of jaws—the No. 1 or Common Jaws for gripping work on the outside—the No. 2 or Reverse Jaws for holding work internally. Prices appearing below include wrench, two complete sets of Jaws and four cap screws for fastening chuck back to chuck.

Net Factory Prices

Cat. No.	Rated Size of Chuck	Will Hold About	Shipping Weight	Code Word	Price* Chuck
2403	3 in.	3¼ in.	3½ lbs.	Panel	$ 25.00
2404	4 in.	4¼ in.	7½ lbs.	Paras	29.00
2405	5 in.	5 in.	11 lbs.	Parot	31.00
2406	6 in.	6⅛ in.	20 lbs.	Pasto	35.00
2407	7½ in.	7½ in.	32 lbs.	Patri	41.00
2409	9 in.	9 in.	45 lbs.	Pedal	49.00
2410	10½ in.	10¾ in.	61 lbs.	Perag	55.00
2412	12 in.	12 in.	80 lbs.	Pensi	64.00
2415	15 in.	15 in.	143 lbs.	Perse	91.00
2418	18 in.	18 in.	180 lbs.	Perfu	119.00

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Independent Lathe Chucks

With Four Reversible Jaws (Iron Body)

This Chuck has four independent solid jaws with individual screw adjustment. The face of Chuck is ground true to a straight edge and is accurately graduated in inches. The jaws are reversible by running out at the edge and turning end for end. All chucks are made with hardened steel bearings for the screws. T-slots are furnished only on chucks 12 inches and larger. Prices include wrench and four cap screws for fastening chuck back to chuck.

Net Factory Prices

Cat. No.	Rated Size of Chuck	Will Hold About	Shipping Weight	Code Word	Price* Chuck
2104	4½ in.	6 in.	11 lbs.	Bawle	$23.00
2106	6 in.	7½ in.	21 lbs.	Bench	28.00
2108	8 in.	9½ in.	35 lbs.	Backe	32.00
2109	9 in.	11½ in.	42 lbs.	Baito	35.00
2110	10 in.	12½ in.	51 lbs.	Baldn	40.00
2112	12 in.	14½ in.	90 lbs.	Bglel	48.00
2114	14 in.	16½ in.	117 lbs.	Balks	52.00
2115	15 in.	18 in.	139 lbs.	Balmy	57.00
2116	16 in.	19 in.	147 lbs.	Bandu	62.00
2118	18 in.	21 in.	184 lbs.	Bankr	80.00

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Combination Geared Scroll Chucks

With Four Reversible Jaws (Iron Body)

This improved Chuck is provided with independent, adjustable jaws which may be set as required 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. In tightening by the scroll mechanism universally, it is not necessary to apply the wrench successively in different positions around the Chuck, as any single application will give the full gripping power. Prices include wrench and four cap screws for fastening chuck back to chuck.

Net Factory Prices

Cat. No.	Rated Size of Chuck	Will Hold About	Shipping Weight	Code Word	Price* Chuck
2501	4 in.	5⅝ in.	12 lbs.	Faile	$ 51.00
2506	6 in.	7⅝ in.	22 lbs.	Fawno	64.00
2507	7½ in.	9¼ in.	39 lbs.	Fearu	78.00
2509	9 in.	11¼ in.	40 lbs.	Felta	85.00
2510	10½ in.	12½ in.	65 lbs.	Fendi	93.00
2512	12 in.	14¾ in.	70 lbs.	Findr	107.00
2515	15 in.	17½ in.	101 lbs.	Fishb	137.00
2518	18 in.	21 in.	126 lbs.	Folds	182.00

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NOTE—Chuck prices do not include Semi-machined Chuck Back or fitting chuck to lathe. For fitting prices see page 63

Fitting a Lathe Chuck to the Lathe

In order to mount a lathe chuck on the lathe the chuck must be fitted with a semi-machined chuck back.

Fitting a chuck to the lathe is a difficult job for the small shop, especially if the mechanic lacks the special equipment of tools needed for the work.

In ordering your lathe we recommend that you order the chuck at the same time so that we can fit the chuck to the lathe here in our factory. We have special machinery and tools for doing this work and years of experience in fitting chucks so that they will run true.

Semi-machined Chuck Back

The illustration shows a Semi-machined Cast Iron Chuck Back which has been bored, faced and threaded to fit the spindle nose of the Lathe. Sufficient stock is left on the diameter of the flange so that it can be machined to fit the recess on the back of the chuck.

View of Rear Side of Chuck

Chuck Fitted to Lathe Complete

Net Factory Prices of Semi-machined Chuck Backs—Also Fitting Chuck Back to Chuck and Lathe

Sizes of South Bend Lathes	9 in.	11 in.	13 in.	15 in.	16 in.	18 in.	21 in.	24 in.
Prices of Semi-machined Chuck Back	$4.00	$4.25	$4.50	$4.75	$5.00	$5.50	$7.00	$8.00
Code Word for Semi-machined Chuck Back	Comat	Cavor	Cekam	Cimer	Clame	Cuban	Croxa	Chemo
Fitting Semi-machined Chuck Back to Chuck and to Lathe	$3.00	$3.25	$3.50	$3.75	$4.00	$4.50	$6.00	$7.00
Total for Semi-machined Chuck Back fitted to Chuck and to Lathe	$7.00	$7.50	$8.00	$8.50	$9.00	$10.00	$13.00	$15.00
Code Word for Semi-machined Chuck Back fitted to Chuck and to Lathe	Efago	Eodar	Ender	Eldon	Eliza	Elsie	Essen	Ethel

The Proper Sizes of Chucks for South Bend Lathes

To assist those who wish to select the proper sizes of chucks for South Bend Lathes, we list in the table below the sizes of Chucks best suited for each swing of lathe. These are the sizes we consider most practical for general work.

Table Showing Proper Sizes of the Different Types of Chucks for South Bend Lathes

Size of Lathe	9 in.	11 in.	13 in.	15 in.	16 in.	18 in.	21 in.	24 in.
4-Jaw Independent Chuck	6 in.	6 in.	8 in.	9 in.	10 in.	12 in.	14 in.	15 in.
3-Jaw Universal Chuck	4 in.	5 in.	6 in.	7½ in.	9 in.	10½ in.	12 in.	15 in.
Combination Chuck	6 in.	6 in.	7½ in.	10½ in.	10½ in.	12 in.	15 in.	18 in.
Drill Chuck, capacity	½ in.	½ in.	¾ in.	¾ in.	1 in.	1 in.	1 in.	1 in.

Drill Chucks for South Bend Lathes

Three-Jaw Drill Chuck

The geared sleeve and key enable this drill chuck to be easily operated with one hand and to assure a powerful grip. Prices include pinion key. Chuck arbor is not included in these prices.

Prices Three-Jaw Drill Chuck

Cat. No.	Capacity	Code Word	Price
1200	0 to ⅜ in.	Cleve	$ 5.00
1201	0 to ½ in.	Wauko	8.50
1202	0 to ¾ in.	Faloa	14.00
1203	⅜ to 1 in.	Frank	18.50

Hollow Spindle Drill Chuck

This is an ideal Chuck for the refacing of Valves that are not centered. The jaws grip the ground part of the valve stems for their full length at the point where the valve fits the valve guide. It is also ideal for holding small bar work.

Prices Hollow Spindle Drill Chuck

Cat No.	Capacity	Code Word	Price
1210	⅛ in.	Nalot	$6.50
1211	½ in.	Nedro	9.50
1212	⅝ in.	Nolan	9.50

Two-Jaw Drill Chuck

A strong, simple chuck for straight shank drills, taps, reamers, etc. Jaws are tempered steel and operated by a heavy screw.

Prices Two-Jaw Drill Chuck

Cat. No.	Capacity	Code Word	Price
1300	⅜ in.	Oblig	$ 8.50
1301	½ in.	Objec	10.00
1302	¾ in.	Octav	11.50
1303	1 in.	Optio	15.00

Finished Drill Chuck Arbor

The steel Drill Chuck Arbor is used for fitting the Drill Chuck to the lathe. The short taper fits into socket of Drill Chuck and the long taper fits into the taper of both the headstock spindle and the tailstock spindle of the lathe.

When ordering Drill Chuck Arbor only, state size and make of Drill Chuck, diameter and depth of arbor socket, and size of lathe on which the chuck is to be used.

Prices Finished Drill Chuck Arbors

	Solid Arbor				Hollow Arbor			
Size Lathe	Morse Taper	Cat. No.	Code Word	Price Arbor	Cat. No.	Morse Taper	Code Word	Price Arbor
9-11 in.	2	709	Abner	$1.50	1221	2	Huert	$2.50
13-15 in.	3	713	Adams	2.00	1223	3	Hilda	3.00
16-18 in.	3	716	Agate	2.00	1225	3	Hodge	3.00
21-24 in.	4	721	Along	3.50	1227	4	Hbrae	4.50

The Solid Arbor must be ordered for the Three-Jaw Drill Chuck and Two-Jaw Drill Chuck; and the Hollow Arbor for the Hollow Spindle Drill Chuck as they are not interchangeable.

60 Degree Head Spindle Lathe Center

Made of tool steel, accurately ground all over. For use in headstock spindle of the lathe. Not hardened.

Net Factory Prices

Size of Lathe	9 in.	11 in.	13 in.	15 in.	16 in.	18 in.	21 in.	24 in.
Cat. No.	725A	725B	725C	725D	725E	725F	725G	725H
Code Word	Abest	Acter	Aders	Aegan	Afire	Agoen	Ahalt	Ajost
Price	$2.00	$2.25	$2.75	$2.75	$2.75	$2.75	$3.50	$3.50

60 Degree Tail Spindle Lathe Center

Made of tool steel, hardened and ground all over. For use in tailstock spindle of the lathe.

Net Factory Prices

Size of Lathe	9 in.	11 in.	13 in.	15 in.	16 in.	18 in.	21 in.	24 in.
Cat. No.	726A	726B	726C	726D	726E	726F	726G	726H
Code Word	Caten	Celia	Cheat	Ciena	Clasp	Colin	Crave	Cubes
Price	$2.25	$2.50	$3.00	$3.00	$3.00	$3.00	$3.75	$3.75

Spur Center

Size Lathe	Cat No.	Code Word	Net Price
9 in.	732A	Heck	$3.00
11 in.	732B	Icons	3.00
13 in.	732C	Idols	4.00
15 in.	732D	Iglan	4.00
16 in.	732E	Ikeng	4.00
18 in.	732F	Ikart	4.00

Cup Center

Size Lathe	Cat No.	Code Word	Net Price
9 in.	733A	Jacks	$3.00
11 in.	733B	Jealt	3.00
13 in.	733C	Jiped	4.00
15 in.	733D	Jober	4.00
16 in.	733E	Juvin	4.00
18 in.	733F	Jvale	4.00

Screw Center

Size Lathe	Cat. No.	Code Word	Net Price
9 in.	731A	Ivabar	$3.50
11 in.	731B	Kelso	3.50
13 in.	731C	Kinty	4.00
15 in.	731D	Klink	4.00
16 in.	731E	Koden	4.00
18 in.	731F	Kring	4.00

Crotch Center

Size Lathe	Cat. No.	Code Word	Net Price
9 in.	728A	Faint	$3.00
11 in.	728B	Fever	3.00
13 in.	728C	Flats	4.00
15 in.	728D	Flota	4.00
16 in.	728E	Found	4.00
18 in.	728F	Frail	4.00

Drill Pad

Size Lathe	Cat. No.	Code Word	Net Price
9 in.	727A	Dabed	$3.00
11 in.	727B	Dears	3.00
13 in.	727C	Dingy	4.00
15 in.	727D	Dopet	4.00
16 in.	727E	Drunk	4.00
18 in.	727F	Dumbe	4.00

Hand Rest for Wood Turning

For irregular work and Pattern making. The hand rest clamps directly to the ways of the bed. Price includes hand rest complete with two "T" rests and clamp for attaching.

Net Factory Prices

Size Lathe	Cat. No.	Code Word	Price
9 in.	1071	Vaida	$10.50
11 in.	1072	Vapor	10.50
13 in.	1073	Varle	11.00
15 in.	1074	Venoa	11.50
16 in.	1075	Vetix	12.00
18 in.	1076	Vlews	13.00

Hard Maple Bench with Drawer

This bench may be used with all types of 9-inch and 11-inch bench lathes.
The bench illustrated above is made of fine quality hard maple. Benches are shipped knocked down to save freight charges. Bolts are furnished for assembling bench. If you wish to make your own bench, we will supply the blue prints of detail drawings of benches free, with the lathe.

Specifications and Prices of Benches

Length Bench Top	Width Bench Top	Thickness Bench Top	For Lathes with Bed Lengths of	Code Word	Cat No.	Price
†54 in.	32 in.	1½ in.	2½, 3, 3½	Cakes	128-X	$45.00
72 in.	32 in.	1½ in.	4, 4½, 5	Cedar	128-A	50.00
60 in.	*40 in.	1½ in.	2½, 3, 3½, 4	Check	128-H	55.00
72 in.	*40 in.	1½ in.	4½, 5	Cords	128-J	60.00
90 in.	*40 in.	1½ in.	5½	Color	128-G	80.00

*Benches with top 40 inches wide are required for 11-inch Self-Contained Motor Driven Lathes, also 5½-ft. Lathes.
†54-inch Bench does not have center leg.

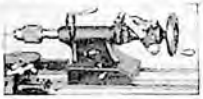
Standards for Simplex Motor Drive Bench Lathes

The Countershaft Standards illustrated are used to support the Maple Cross Board. These Standards are painted and drilled ready to mount on bench.

Cross Board
No. 20-B Cross Board only. Code Word "Churn" $1.00
No. 20-I Standards, per pair, drilled. Code Word "Cider" $12.50

Hand Lever Tailstock for 9-inch Lathes

The hand lever tailstock is constructed so that either the hand lever or hand wheel may be used.



No. 900, Code Word "Biden"
Price $35.00

Double Bracket for 9-inch Lathes

With the double bracket it is possible to cut a greater variety of finer pitch threads than can be cut with the regular bracket furnished with the 9-inch Lathes.

No. 1050, Code Word "Fames"
Price $15.00

Extra Parts for 9-inch Junior Lathes

No. 125 No. 40 No. 130 No. 67

No. 125 Center Rest, Code Word "Cliff." Price.... $10.00
No. 40 Large Face Plate, Code Word "Cryed." Price 10.00
No. 130 Follower Rest, Code Word "Culve." Price... 6.00
No. 67 Threading Stop, Code Word "Cobra. Price.. 2.50

Lathe Dogs and Tools for South Bend Lathes

Standard Lathe Dogs

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

Net Factory Prices

Capacity of Lathe Dog	MALLEABLE IRON Catalog No.	Code Word	Price Each	FORGED STEEL Catalog No.	Code Word	Price Each
⅝ in.	1-M	Xacrd	$0.50	1-F	Xnqqp	$1.00
½ in.	2-M	Xcolfc	.60	2-F	Xopra	1.10
¾ in.	4 M	Xdoef	.70	3-F	Xpqsr	1.20
1 in.	6 M	Xefog	.80	4-F	Xqtts	1.40
1¼ in.	8-M	Xfgth	.90	5-F	Xrout	1.70
1½ in.	10-M	Xghil	1.05	6-F	Xstvu	2.00
1¾ in.	11-M	Xhikq	1.15	7-F	Xtuwv	2.40
2 in.	12-M	Xilik	1.30	8-F	Xuexw	2.80
2½ in.	14-M	Xjkml	1.50	9-F	Xvwyx	3.60
3 in.	15-M	Xklnm	1.65	10-F	Xwxzy	4.60
3½ in.	16-M	Xlmon	1.85	11-F	Xayaz	6.00
4 in.	17-M	Xmnpo	2.15	12-F	Xazba	9.00

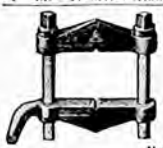
Safety Lathe Dogs

Furnished in either heavy malleable iron or special drop forged steel. Price includes hardened tool steel headless set-screw and wrench.

Net Factory Prices

Capacity of Lathe Dog	MALLEABLE IRON Catalog No.	Code Word	Price Each	FORGED STEEL Catalog No.	Code Word	Price Each
⅝ in.	1-MH	Xmol	$0.60	1-FH	Xuyax	$1.12
½ in.	2-MH	Xampm	.70	2-FH	Xuzby	1.24
¾ in.	4-MH	Xeuqn	.85	3-FH	Xoacz	1.36
1 in.	6-MH	Xelpro	1.00	4-FH	Xpoda	1.58
1¼ in.	8-MH	Xepsp	1.10	5-FH	Xqceb	1.90
1½ in.	10-MH	Xfrtq	1.25	6-FH	Xrdfe	2.24
1¾ in.	11-MH	Xgsur	1.40	7-FH	Xsegd	2.66
2 in.	12-MH	Xhtvs	1.55	8-FH	Xtfhe	3.10
2½ in.	14-MH	Xiuwt	1.85	9-FH	Xugff	3.98
3 in.	15-MH	Xjxyu	2.10	10-FH	Xvhig	5.08
3½ in.	16-MH	Xkwyv	2.25	11-FH	Xwikh	6.60
4 in.	17-MH	Xlyzw	2.60	12-FH	Xajil	9.74

Clamp Lathe Dogs



Made of heavy drop forged steel, carefully machined and hardened. Very practical for holding rectangular work. Each dog is boxed separately.

Net Factory Prices

Catalog No.	Capacity Between Screws	Extra Screws Code Word	Extra Screws Price Each	Clamp Dog Code Word	Clamp Dog Price Each
160	1¾ in.	Xotlo	$0.20	Xsxpi	$3.00
161	2¼ in.	Xpumf	.30	Xtyqi	4.00
162	2¾ in.	Xqvng	.40	Xuzrk	5.00
163	3½ in.	Xrwoh	.60	Xvasl	7.00

Morse Taper Reducing Sleeve

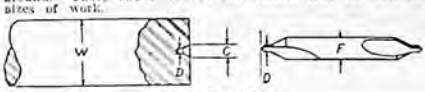
Made of steel and machined to Morse Standard Taper Gauges. Used in fitting small tapers to large sockets.

Net Factory Prices

Cat. No.	Size Morse Taper	Taper of Bore	Outside Taper	Code Word	Price Each
118-A	No. 1 to 2	No. 1 Morse	No. 2 Morse	Corse	$0.90
118-B	No. 1 to 3	No. 1 Morse	No. 3 Morse	Cesor	1.20
118-C	No. 1 to 4	No. 1 Morse	No. 4 Morse	Cakun	1.50
118-D	No. 2 to 3	No. 2 Morse	No. 3 Morse	Clank	1.20
118-E	No. 2 to 4	No. 2 Morse	No. 4 Morse	Corap	1.50
118-F	No. 3 to 4	No. 3 Morse	No. 4 Morse	Carke	1.50

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

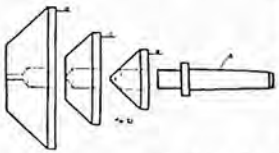
Cat. No.	Diam. of Work "W"	Diam. of Countersink "C"	Diam. of Drill "D"	Body of Drill "F"	Code Word Each	Price Each	Code Word per Doz.	Price per Doz.
1-C	⅜" to ⅝"	¼ in.	⅛ in.	⅜ in.	Xmqth	$0.25	Xqtfa	$2.25
2-C	⅝" to 1"	⅜ in.	⅛ in.	½ in.	Xnrje	.30	Xrqth	2.75
3-C	1"to 2"	½ in.	¼ in.	⅝ in.	Xoslcl	.30	Xsrhc	2.75
4-C	2"to 4"	⅝ in.	⅜ in.	¾ in.	Xpsez	.40	Xtsld	3.50

Center Gauge, No. 650

For testing the angle of 60 degree lathe centers. Also used in setting threading tools for cutting 60 degree "V" or U. S. Standard screw threads.

No. 650. Center gauge for testing 60 degree Lathe Centers. Net Factory price, each.....$0.50
Code word Xutje.

Pipe Centers for Lathes



For machining pipe in the lathe. Taper Shank "A" fits either head spindle or tail spindle of lathe. The conical discs "B," "C" and "D" revolve on Taper Shank "A." Prices of discs larger than those listed furnished on request.

Net Factory Prices

ITEM	Catalog No.	Code Word	Price Each
Taper Shank "A" for 11" lathes	910-B	Xwbtm	$ 3.00
Taper Shank "A" for 13", 15" lathes	910-C	Xacun	4.00
Taper Shank "A" for 16", 18" lathes	910-E	Xydro	4.50
Taper Shank "A" for 21", 24" lathes	910-H	Xzewp	6.00
Disc "B" takes from ½" to 2" pipe	911-B	Xafxq	6.00
Disc "C" takes from 3" to 5" pipe	912-C	Xegvr	9.00
Disc "D" takes from 5" to 8" pipe	913-D	Xdhzs	15.00

Collet Cabinet

The collet cabinet offers a convenient means of holding the spring collets, lathe centers, spindle sleeves, etc. A drawer is provided for wrenches, tools, micrometers, etc. The cabinet is made of oak, natural wood varnish finish. Fastens to special metal bracket on bed of lathe. Prices listed below on the Collet Cabinet do not include collets.

Net Factory Prices

Size	9 in.	11 in.	13 in.	15 in.	16 in.	18 in.
Cat. No.	1081	1082	1083	1084	1085	1086
Code Word	Caged	Crome	Choke	Cnarl	Cadro	Catch
Price	$12.00	$12.00	$12.00	$12.00	$12.00	$12.00

Patent Tool Holders for South Bend Lathes

Straight Shank Turning Tool

Drop Forged Steel

Price Includes Wrench and one high speed Steel Cutting Bit.

Net Factory Prices

Size of Lathe, Inches	Catalog No.	Size of Shank, Inches	Size of Cutter, Inches	Code Word	Price Each
9	849-S	3/8 x 1/2	1/4 x 1/4	Azamn	$2.40
11	851-S	3/8 x 7/8	1/4 x 1/4	Aybam	2.55
13, 15	852-S	1/2 x 1 1/8	5/8 x 5/8	Azcol	3.00
16, 18	853-S	5/8 x 1 3/8	5/8 x 5/8	Awdpk	3.60
21, 24	854-S	3/4 x 1 5/8	5/8 x 5/8	Avenj	4.85

Left-Hand Off-Set Turning Tool

Drop Forged Steel

Price includes Wrench and one high speed Steel Cutting Bit.

Net Factory Prices

Size of Lathe, Inches	Catalog No.	Size of Shank, Inches	Size of Cutter, Inches	Code Word	Price Each
9	819-L	3/8 x 1/2	1/4 x 1/4	Aufrl	$2.40
11	851-L	3/8 x 7/8	1/4 x 1/4	Atgsh	2.55
13, 15	852-L	1/2 x 1 1/8	5/8 x 5/8	Ashtg	3.00
16, 18	853-L	5/8 x 1 3/8	5/8 x 5/8	Arluf	3.60
21, 24	854-L	3/4 x 1 5/8	5/8 x 5/8	Aqfw	4.85

Right-Hand Off-Set Turning Tool

Drop Forged Steel

Price Includes Wrench and one high speed Steel Cutting Bit.

Net Factory Prices

Size of Lathe, Inches	Catalog No.	Size of Shank, Inches	Size of Cutter, Inches	Code Word	Price Each
9	819-R	3/8 x 1/2	1/4 x 1/4	Apkwd	$2.40
11	851-R	3/8 x 7/8	1/4 x 1/4	Aoixc	2.55
13, 15	852-R	1/2 x 1 1/8	5/8 x 5/8	Aomsb	3.00
16, 18	853-R	5/8 x 1 3/8	5/8 x 5/8	Amniza	3.60
21, 24	854-R	3/4 x 1 5/8	5/8 x 5/8	Aloaz	4.85

Formed Threading Tool

Drop Forged Steel

Requires grinding on top only to sharpen. Price Includes one Formed Cutter, V. U. S. S., or Whitworth Standard. U. S. Standard furnished unless otherwise ordered.

Net Factory Prices

Size of Lathe, Inches	Size Holder, Inches	Extra Cutters			Tool Complete		
		Catalog No.	Code Word	Price Each	Catalog No.	Code Word	Price Each
9	5/8 x 5/8	860	Akpby	$2.40	865	Afrgt	$3.75
11	5/8 x 7/8	861	Aqex	2.40	866	Aeshs	3.75
13, 15	1/2 x 1 1/8	862	Alrdw	2.85	867	Adttr	4.50
16, 18	5/8 x 1 3/8	863	Ahqev	3.75	868	Acuiq	5.75
21, 24	3/4 x 1 5/8	864	Agrfu	4.75	869	Abvkp	7.50

Spring Threading Tool

Drop Forged Steel

Price Includes Holder with Headless Cam, Lock Nut, finished high speed Steel Cutter and Hardened Wrench.

Net Factory Prices

Size of Lathe, Inches	Size Holder, Inches	Extra Cutters			Tool Complete		
		Catalog No.	Code Word	Price Each	Catalog No.	Code Word	Price Each
11	5/8 x 7/8	870	Aycdk	$ .40	873	Acfju	$3.75
13, 15	1/2 x 1 1/8	871	Azdld	.50	874	Adgko	4.50
16, 18	5/8 x 1 3/8	872	Abelm	.65	875	Aelhq	5.75

High Speed Steel Cutter Bits for Turning Tools

Ground to Shape

A	B	C	D	E	F
Left Hand Turning Tool	Round Nose Turning Tool	Right Hand Turning Tool	Left Hand Side Tool	Threading Tool	Right Hand Side Tool
"Adhlp"	"Aelmq"	"Afloc"	"Agkos"	"Ahlpt"	"Almqu"

Code words above indicate shape of the cutting edge.

Code words in table below indicate size of the cutter bit—use both code words when ordering.

The illustrations above show the cutting edge 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. In using ground cutter bits it would be well for the operator to dress the cutting edge down with an oil stone. This increases the life of the cutting edge of the tool.

Net Factory Prices

Cat. No.	Size, Square Inches	Length Cutter, Inches	Approx. Wt. per Dozen, Pounds	Single Bits		Set of Six Bits	
				Code Word	Price Each	Code Word	Price Each
1301	1/4	2	1/2	Athen	$ .25	Asund	$1.50
1311	1/4	2 1/4	3/4	Ahosw	.30	Aptxb	1.80
1313	5/8	2 1/2	1 1/4	Alptx	.45	Aqave	2.70
1316	3/8	3	1 3/4	Ampuj	.65	Arvzt	3.90
1321	1/2	3 1/2	2 3/4	Amvz	1.00	Aswae	6.00

High Speed Steel Cutter Bits

Not Ground to Shape

The above illustration shows the hardened high speed steel cutter bit before the cutting edge is ground to shape. The operator can grind the cutter bits to shape to suit his work. These cutter bits are supplied in the various dimensions to fit the different size of tool holders for various size lathes. These high speed steel cutter bits are of the finest quality high speed steel and will give excellent service.

Net Factory Prices

Catalog No.	Size, Square Inches	Length Cutter, Inches	Wt. per Dozen, Pounds	Code Word	Price Each
1419	1/4	2	3/4	Atroc	$ .15
1421	1/4	2 1/4	3/4	Aupyx	.20
1422	5/8	2 1/2	1 1/4	Avrdh	.35
1423	5/8	3	1 3/4	Awael	.55
1424	7/8	3 1/2	2 3/4	Axbfj	.90

Spring Cutting-Off Tool

Drop Forged Steel

Price Includes Wrench and one High Speed Steel Cutter Blade. Left-Hand Cutting-off Tools can be furnished at same prices.

Net Factory Prices

Size of Lathe, Inches	Size of Shank, Inches	Size of Cutter, Inches	Extra Cutter Blades			Tool Complete		
			Cat. No.	Code Word	Price Each	Cat. No	Code Word	Price Each
9-11	3/8 x 7/8	3/32 x 5/8	877-S	Acarl	$ .60	811	Cadex	$4.00
13-15	1/2 x 1 1/8	1/8 x 3/4	878-S	Adeh	.80	812	Canol	4.75
16-18	5/8 x 1 3/8	1/8 x 7/8	879-S	Aerop	1.15	813	Candl	5.90
21-24	3/4 x 1 5/8	1/8 x 1	880-S	Afatl	2.00	844	Casle	8.00

Patent Tool Holders for South Bend Lathes

Right-Hand Cutting-Off Tool

Drop Forged Steel

Price Includes Wrench and one High Speed Steel Cutter Blade.

Net Factory Prices

Size of Lathe, Inches	Size of Shank, Inches	Size of Cutter, Inches	Extra Cutter Blades			Tool Complete		
			Cat. No.	Code Word	Price Each	Cat. No.	Code Word	Price Each
9	⅝x ¾	⅝x ½	876-R	Cabag	$ .55	881-R	Cheld	$2.60
11	⅝x ⅞	⅝x ⅝	877-R	Cbent	.60	822-R	Cnom	2.75
13, 15	⅞x1¼	⅞x ¾	878-R	Cdary	.80	883-R	Clain	3.25
16, 18	⅞x1¾	⅞x ⅞	879-R	Cogin	1.15	884-R	Cmolt	4.00
21, 24	¾x1⅝	⅝x1	880-R	Cfond	2.00	885-R	Cnase	5.50

Left-Hand Cutting-Off Tool

Drop Forged Steel

Price includes Wrench and one High Speed Steel Cutter Blade.

Net Factory Prices

Size of Lathe, Inches	Size of Shank, Inches	Size of Cutter, Inches	Extra Cutter Blades			Tool Complete		
			Cat. No.	Code Word	Price Each	Cat. No.	Code Word	Price Each
9	⅝x ¾	⅝x ½	876-L	Alent	$ .55	881-L	Amary	$2.60
11	⅝x ⅞	⅝x ⅝	877-L	Alern	.60	882-L	Aonim	2.75
13, 15	⅞x1¼	⅞x ¾	878-L	Arote	.80	883-L	Alrok	3.25
16, 18	⅞x1¾	⅞x ⅞	879-L	Amoix	1.15	884-L	Alcio	4.00
21, 24	¾x1⅝	⅝x1	880-L	Anoge	2.00	885-L	Arena	5.50

Straight Cutting-Off Tool

Drop Forged Steel

Price Includes Wrench and one High Speed Steel Cutter Blade.

Net Factory Prices

Size of Lathe, Inches	Size of Shank, Inches	Size of Cutter, Inches	Extra Cutter Blades			Tool Complete		
			Cat. No.	Code Word	Price Each	Cat. No.	Code Word	Price Each
9	⅝x ¾	⅝x ½	876-S	Abaer	$ .55	881-S	Agone	$2.60
11	⅝x ⅞	⅝x ⅝	877-S	Acord	.60	882-S	Ahern	2.75
13, 15	⅞x1¼	⅞x ¾	878-S	Adelt	.80	883-S	Ajame	3.25
16, 18	⅞x1¾	⅞x ⅞	879-S	Acrop	1.15	884-S	Akilt	4.00
21, 24	¾x1⅝	⅝x1	880-S	Afail	2.00	885-S	Alips	5.50

Knurling Tool

Drop Forged Steel

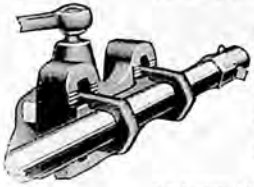
Price includes Holder and one set of Knurls. Knurls can be furnished coarse, medium and fine, in either Straight Line or Diamond pattern. Medium Diamond Knurls will be furnished unless otherwise specified.

Net Factory Prices

Size of Lathe, Inches	Size of Shank, Inches	Dimensions of Knurls In.			Extra Knurls			Tool Complete		
		Dia.	Face	Hole	Cat. No.	Code Word	Price Pair	Cat. No.	Code Word	Price Each
9	⅝x ¾	⅝	⅛	⅜	886	Daces	$ .90	891	Dgelt	$5.10
11	⅝x ⅞	⅝	⅛	⅜	887	Dbort	.90	892	Dhapo	5.50
13, 15	⅞x1¼	¾	¼	½	888	Deram	1.00	893	Dilge	6.00
16, 18	⅞x1¾	¾	¼	½	889	Demon	1.00	894	Djuma	7.25
21, 24	¾x1⅝	¾	¼	½	890	Dlint	1.00	895	Dkesp	7.25

Style "A" Boring Tool

For Heavy Duty



Fits regular tool post by removing tool post ring and wedge only.

Cutter bit is adjustable and may be set either straight or at a 45-degree angle.

Price includes Holder, Boring Bar, Wrench and one High Speed Steel Cutter Bit.

Net Factory Prices

Size of Lathe, Inches	Size of Shank, Inches	Size of Bar, Inches	Size Cutter, Inches	Extra Cutter Bits			Tool Complete		
				Cat. No.	Code Word	Price Each	Cat. No.	Code Word	Price Each
13, 15	⅞x1¼	⅞x1¼	⅝	451	Fafed	$ .35	426	Faber	$ 6.50
16, 18	¾x2	1¼x1⅝	¾	452	Felar	.55	427	Feast	8.50
21, 24	¾x2¼	1¼x1⅝	⅞	453	Ficto	.90	428	Fized	10.25

Style "B" Boring Tool

For Medium Work

Made of Drop Forged Steel. Cutting tool can be set either straight or at a 45-degree angle. Price includes Holder, Bar, one End Cap, two Cutters, and two Wrenches.

Net Factory Prices

Size of Lathe, Inches	Size of Holder, Inches	Size of Square Cutter, Inches	Standard Bar Size, Inches	Extra Cutter Bits			Tool Complete		
				Cat. No.	Code Word	Price Each	Cat. No.	Code Word	Price Each
9	⅝x ¾	⅜	½	454	Hadle	$ .15	429	Habor	$4.40
11	⅝x ⅞	⅜	⅝	455	Hboya	.15	430	Hbact	4.40
13, 15	⅞x1¼	½	¾	456	Hcmo	.20	431	Hcoll	5.25
16, 18	⅞x1⅝	½	⅞	457	Hdazt	.35	432	Hdeol	6.80
21, 24	¾x1⅝	⅝	1⅛	458	Hezik	.55	433	Herth	9.80

Style "C" Boring Tool

For Small Work

Made of Drop Forged Steel. Holder is reversible and can be used for right or left-hand work.

Price includes Holder, Wrench, two Boring Bars and one High Speed Cutter Bit.

Net Factory Prices

Size of Lathe, Inches	Size of Shank, Inches	Diameter of Bars Furnished Inches	Size of Square Cutter, Inches	Extra Cutter Bits			Tool Complete		
				Cat. No.	Code Word	Price Each	Cat. No.	Code Word	Price Each
11	⅝x ¾	⅛ and ¼	¼	459	Ibolk	$ .20	434	Ibexc	$3.75
13, 15	⅞x1	⅛ and ⅜	⅜	460	Icrem	.35	435	Icole	4.75
16, 18	⅞x1¼	⅛ and ½	½	461	Idrat	.55	436	Idavy	6.10
21, 24	¾x1½	⅛ and ⅝	⅝	462	Ierlo	.90	437	Ielca	7.75

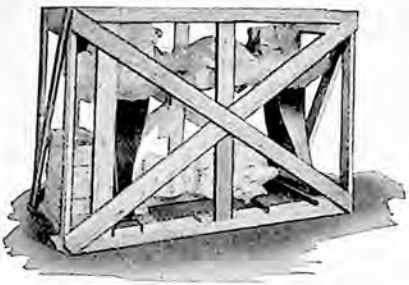
1. Left-Hand Side Tool
2. Right-Hand Side Tool
3. Right-Hand Bent Tool
4. Right-Hand Diamond Point
5. Left-Hand Diamond Point
6. Round Nose Tool
7. Cutting-Off Tool
8. Threading Tool
9. Bent Threading Tool
10. Roughing Tool
11. Boring Tool
12. Inside Threading Tool

Hand Forged Lathe Tools—Carbon and High Speed Steel

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, Inches	Size of Shank, Inches	Carbon Steel				High Speed Steel			
		Cat. No.	Price Each	Set of 12		Cat. No.	Price Each	Set of 12	
				Code Word	Price			Code Word	Price
9	⅝x ⅝	438-C	$ .60	Jaclo	$ 7.00	438-HS	$ 2.00	Jgher	$ 20.00
11	⅝x ¾	439-C	.70	Jbaux	8.00	439-HS	2.80	Jhrix	32.00
13	⅞x1	440-C	1.20	Jcain	14.00	440-HS	4.20	Jipur	50.00
15	⅞x1	441-C	1.60	Jdolw	19.00	442-HS	5.85	Jkoep	70.00
16, 18	⅞x1⅛	441-C	2.00	Jerov	22.00	441-HS	7.20	Jlesp	85.00
21, 24	¾x1½	442-C	3.00	Jilat	35.00	442-HS	14.40	Jmixd	170.00



A Lathe Crated for Rail Shipment

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.

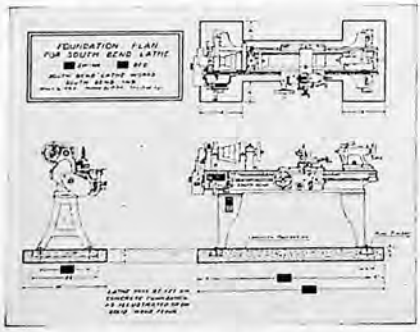
The small parts are packed in a strong box which is nailed to the skids. The lathe is then skidded and crated so it will ride without damage.

Safe Arrival of Lathe Guaranteed

We have shipped more than 40,000 South Bend Lathes during the past 22 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.

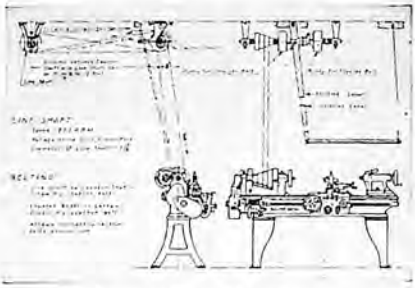
The Life of a New Model Lathe

The life of a New Model South Bend Lathe is at least twenty-five years if given the proper care and attention. We are using in our own shop one of the first South Bend Lathes that we built twenty-two years ago. It is still in operation and is giving good satisfaction on production work.



Foundation Plan Blue Prints

The illustration shows the foundation plan of a 16-inch Lathe with overhead countershaft drive. Foundation plan blue prints 12x18 inches can be supplied for any size South Bend Lathe. These blue prints show the distance between bolt holes of floor legs where they are fastened to the floor. It also shows the location of bolts for the legs of lathes when laying a concrete floor in a new shop.



Installation Plan Blue Prints

The drawing above is a reduction of a blue print 12x18 inches which we furnish with the equipment of each lathe showing how to install and erect the lathe, the size and speed of pulleys and line shaft. It also contains instructions for leveling and setting up the lathe.

"How to Run a Lathe"

"How to Run a Lathe" is an authoritative manual covering the fundamental operations of the modern screw cutting lathe. It is a very valuable book for the mechanic as it contains complete instructions on the setting up, the care and operation of the screw cutting lathe.

This 144-page book contains over 300 practical illustrations. A copy of this book is included with each South Bend Lathe.

Price each, postpaid $0.25
Coin or Stamps of Any Country Accepted

PARTIAL LIST OF CONTENTS

The Grinding of Lathe Tools
The Setting of Lathe Tools
Cutting Threads, Right Hand
Cutting Threads, Left Hand
Cutting Threads, Acme and Square
Cutting Speeds for Metals
Cutting Feeds for Metals
The Turning of Tapers
The Boring of Tapers
Operating the Automatic Feeds
The Care of Lathe Centers
Reading a Micrometer Caliper
Table of Decimal Equivalents
Table of Metric Measure
Method of Leveling a Lathe
Calculating the Size of Pulleys
Calculating the Speed of Pulleys
300 Other Shop Kinks

Auto Mechanic's Service Book No. 66

For the Auto Machinist and Apprentice

Service Book No. 66 describes the modern methods of machining all parts of the automobile motor in the Auto Service Station, Garage and Electrical Shop. This book contains more than 120 halftones and drawings illustrating and describing the practical methods of machining the following jobs:

Finishing Pistons
Truing Commutators
Testing Armatures
Refacing Valves
Testing Valves
Making Bushings
Machining Fly Wheels
Testing Axles and Drive Shafts
Testing Crankshafts
Reboring Cylinders
Regrinding Cylinders
Boring Connecting Rods
Truing Brake Drums
Grinding Reamers
Cutting Screw Threads
Making Radio Parts
Hundreds of other Jobs

This Service Book is recommended by the automobile manufacturers for use in their Service Stations throughout the world to guide the auto mechanic in servicing the motor with accuracy, precision, speed and at the lowest cost, which after all is the real meaning of "service."

Price each, postpaid. $0.25

South Bend Lathes Boxed Securely for Export Shipment

South Bend Lathes have been manufactured for more than twenty-two (22) years. We have been exporting Lathes for twenty (20) years. More than 40,000 South Bend Lathes are in use in 78 different countries throughout the world.

South Bend Lathe Boxed for Ocean Shipment

Boxing for Ocean Shipment

When boxing a Lathe for export shipment, the Lathe is dismantled and all removable parts are oiled, greased, wrapped and packed in one strong case, see illustration above. All parts are blocked and fastened solidly in the case to prevent moving while in transit. The box is lined on the inside with waterproof paper, and bound with steel tape outside.

Export Prices on South Bend Lathes F.O.B. Cars South Bend, Indiana, Boxed for Ocean Shipment

Export prices on South Bend Lathes, Attachments, Chucks, Tools, etc., are f.o.b. South Bend, Indiana, as shown in the No. 89-E Export Price Sheet which is attached to the inside front cover of this catalog. The railroad freight rate from South Bend to New York City, the U. S. port from which most export shipments are made, is $1.17 per hundred pounds. By multiplying this freight rate by the weights shown in the Price Sheet gives the railroad freight charges from South Bend to New York City. Add this freight to the prices shown in the No. 89-E Export Price Sheet to arrive at prices f.o.b. New York, boxed for ocean shipment.

Specifications of Shipping Cases for South Bend Lathes Boxed for Ocean Shipment

Weights and dimensions of shipping cases (English and Metric Systems) for South Bend Lathes boxed for ocean shipment are shown in the No. 89-E Export Price Sheet, which permits figuring the cubical contents of the various South Bend Lathes when boxed for ocean shipment.

Prompt Shipment on South Bend Lathes

Shipment on South Bend Lathes can be made within five days after receipt of order. We carry the various lathes in stock assembled and ready for shipment. Most orders on South Bend Lathes are placed on board vessel at New York within two weeks after order is received.

Boxing for Mule-Back Transportation

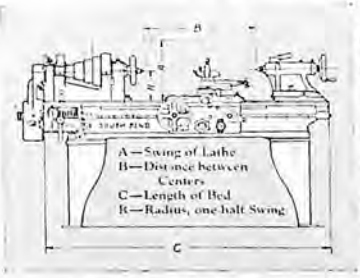
South Bend Lathes of any size can be boxed in several small cases suitable for mule back transportation at a nominal additional cost. The lathe bed must be boxed in one case as it is cast in one piece.

Size of Lathe

The size of a Screw Cutting Lathe is determined by the Swing over the Bed and the Length of the bed (see illustration).

A—represents the Swing Over Bed.
R—the Radius, or one-half of the Swing.
C—represents the Length of the Bed.
B—represents the Distance between Centers when the end of the tail-stock is flush with the end of the Bed.

European tool manufacturers determine the size of a lathe by its radius or center distance: for example, an 8-inch center lathe is a lathe having a radius of 8 inches. What the European terms an 8-inch center lathe, United States manufacturers term a 16-inch swing lathe.



How to Determine the Size of Lathe

Tornos South Bend Encajonados Para Exportación

Los tornos South Bend han sido fabricados por más de veinte y dos (22) años. Los hemos exportado por veinte (20) años. Hoy día hay en uso más de 40,000 tornos South Bend en 78 paises del mundo.

Encajonados Para Transporte Maritimo

Cuando un Torno se encajona para envio por mar, se desarma y las partes removibles se aceitan, engrasan, envuelven y empacan en una caja sólida, vease ilustración arriba. Se aseguran solidamente en la caja de modo que no se muevan durante el viaje. La caja tiene forro impermeable adentro, y afuera se refuerza con cinchos de acero.

Precios de Exportación de Los Tornos South Bend F.O.B. South Bend, Indiana, Encajonados Para Transporte Por Mar

Los precios de exportación de Tornos South Bend, accesorios, etc., son f.o.b. South Bend, Indiana, según se ven en la Hoja de Precios de Exportación No. 89-E la que está adherida a la cubierta del catalogo. El flete por tierra de South Bend a Nueva York, el puerto de los Estados Unidos de donde la mayor parte de embarques son hechos, es $1.17 por cada cien libras. Multiplicando este valor por el peso dado en la Hoja de Precios, el costo de flete de South Bend a Nueva York se adquiere. Añada este precio al indicado en la Hoja No. 89-E para obtener precios de equipos f.o.b. en Nueva York, Embalados para exportación.

Datos de Cajas de Embarque Para Tornos Embalados Para Exportación

Pesos y medidas de cajas de embarque (Sistemas Métrico e Inglés) para Tornos South Bend Embalados para Exportación, son indicados en la citada Hoja No. 89-E, lo que permite calcular espacio cúbico de los Tornos South Bend encajonados para transporte por mar.

Embarque Immediato de Tornos South Bend

El embarque de los Tornos puede ser hecho cinco dias después del recibo del pedido. Tenemos surtido de todos los tornos armados y listos para envio. En la mayoria de los pedidos los Tornos South Bend son puestos a bordo del barco en Nueva York dos semanas después del recibo del pedido.

Encajonado Para Transporte a Lomo de Mula

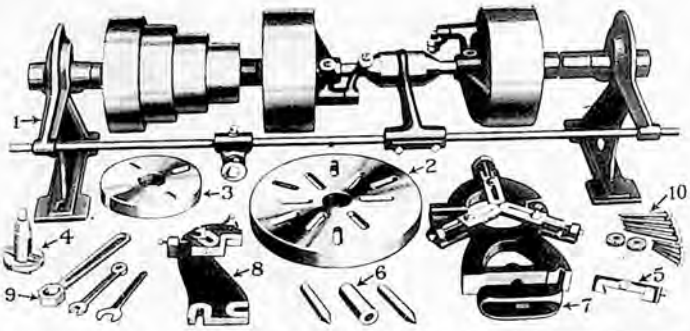
Tornos South Bend de cualquier tamaño pueden encajonarse en cajas pequeñas para transporte a lomo de mula, por costo adicional. La bancada del torno por ser una sola pieza se embarca en caja separada.

Tamaño del Torno

El tamaño de un torno de abrir roscas, se determina por el volteo sobre el banco y por el largo de este. (Véase ilustración.)

A—representa el volteo sobre el banco.
R—el radio o una mitad del volteo.
C—representa el largo del banco.
B—representa la distancia entre los centros cuando la contrapunta queda embutida en el banco.

Los fabricantes Europeos determinan el tamaño de un torno por su radio o distancia del centro; por ejemplo un torno de ocho pulgadas de centro es aquel que tiene un radio de ocho pulgadas, llamándosele a este en los Estados Unidos un torno de 16 pulgadas de volteo.



Countershaft and Regular Equipment for Quick Change Gear Lathes

The illustration above shows the countershaft and equipment that is included in the price of the New Model South Bend Quick Change Gear Lathes. Each part is numbered in the illustration and described in the paragraphs that follow:

1. **The Improved Double Friction Countershaft** provides a forward and reversing speed for the lathe spindle. Refer to complete description appearing below.
2. **The Large Face Plate** is threaded and fitted to the spindle nose of the lathe.
3. **The Small Face Plate** is threaded and fitted to the spindle nose of the lathe.
4. **Tool Post, Ring, Wedge and Wrench** are drop forged steel, case-hardened. The tool post set-screw is tool steel tempered.
5. **Adjustable Thread Cutting Stop** is used for regulating depth of chip in thread cutting.
6. **Two Tool Steel Lathe Centers;** the soft center and Taper sleeve are for the Headstock Spindle—the hardened center, marked with a groove, is for the Tailstock Spindle.
7. **Center Rest** supports long, slender work while being turned. It is also used when drilling, boring, reaming, threading, etc.
8. **Follower Rest** travels with the cutting tool, and supports long, slender work, while being machined.
9. **Wrenches** for adjusting Tailstock, setting Compound Rest and tightening Tool Post.
10. **Lag Screws,** for hanging countershaft and setting lathe to floor.

Countershaft and Regular Equipment for Standard Change Gear Lathes

The Standard Change Gear Lathes take the same type of countershaft and regular equipment illustrated above for Quick Change Gear Lathes and in addition a set of Independent Change Gears for thread cutting and turning feeds. These change gears are illustrated below.

Independent Change Gears

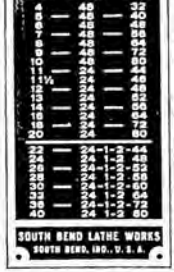
Gears for Thread Cutting and Turning Feeds

Independent Change Gears are used on Standard Change Gear Lathes for cutting Screw Threads right and left hand and to provide the Automatic Cross and Longitudinal Feeds for turning, boring, etc., as shown on the Index Plate attached to each lathe. These Independent Change Gears are included in the regular equipment and price of all Standard Change Gear Lathes.

Index Plate for Screw Threads

A metal Index Plate is attached to each South Bend Standard Change Gear Lathe which enables the operator to select the proper gears for cutting different pitches of Screw Threads. On Standard Change Gear Lathes all standard screw threads from 2 to 40 per inch, right or left, including 11½ pipe thread, can be cut.

Threads other than the ones enumerated can be cut by compounding the gears furnished with the lathe. A swinging gear guard on the lathe permits easy access to these gears.



The New Double Friction Countershaft

This Countershaft can also be used as a Two Speed Countershaft

The New Double Friction Countershaft is used for driving the lathe from the line shaft. The two Drive Pulleys are equipped with Quick Acting Friction Clutches which expand against the rim. One of these Pulleys is used for straight drive and the other for reversing the lathe through a cross belt or for another forward speed. Pressure Grease Cups lubricate the hub of the Clutch Pulleys. The Countershaft bearings have Felt Wick Oilers. Occasionally faster cutting speeds are required for machining Brass, Bronze, Aluminum, etc. We develop this greater speed through the Countershaft by arranging it for two speeds. This is done by attaching a large pulley on the line shaft and belting it direct with one of the Friction Pulleys usually used for reversing the lathe. This gives the second or high speed on the Countershaft which doubles the number of spindle speeds of the lathe.

The Small Lathe as a Manufacturing Tool

In the Manufacture of Small Duplicate Parts on a Production Basis

The efficiency of the small 9-inch and 11-inch Back Geared Screw Cutting Lathes illustrated and described on pages 12 to 15 and 32 to 34, is greatly under-estimated by the inexperienced mechanic in the working of small metal parts in the manufacturing plant and the machine shop.

The latest shop practice is to do small work on a small lathe tooled up to take care of the job, because production is far more rapid, accuracy is more easily maintained, the operator makes fewer mistakes and is encouraged by his increased efficiency.

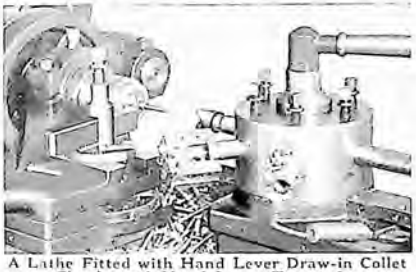
Fit the work to the lathe—do the small work on the small lathe and you will be surprised at the results.

Production engineers in large manufacturing plants making products such as, sewing machines, typewriters, electrical parts, etc., are using small lathes in the manufacture of small metal parts that require the greatest accuracy because they must be interchangeable. These engineers know from experience that a small screw cutting lathe equipped with special tools is often more economical in production than special machines which can be used for one class of work only.

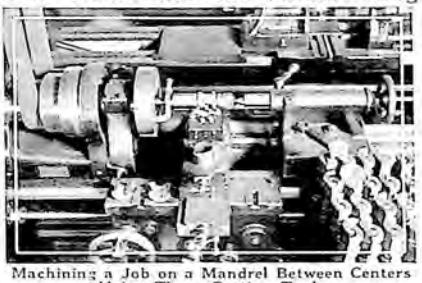
Many of our large factories have a battery of small back geared screw cutting lathes especially equipped with tools for production of special parts as they find that this type of equipment is far less expensive and more productive on some work than single purpose machines.

The small lathe insures accuracy, increases production, reduces overhead, lowers the cost of manufacturing and reduces the selling price. The small lathe can be equipped with many attachments for production work, including draw-in collet chucks with spring collets, turret attachments, taper attachment, thread dial and others shown in the catalog. These attachments need not be fitted to the lathe before shipment from the factory but can be fitted at any time in customers' shop.

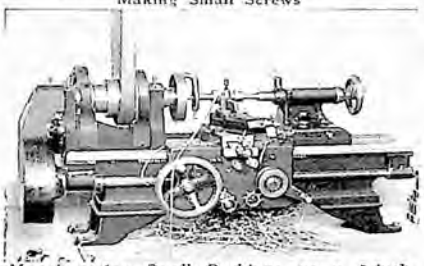
A Few Examples of the Application of the Small Lathe in Manufacturing



A Lathe Fitted with Hand Lever Draw-in Collet Chuck, and Hand Lever Turret for Making Small Screws



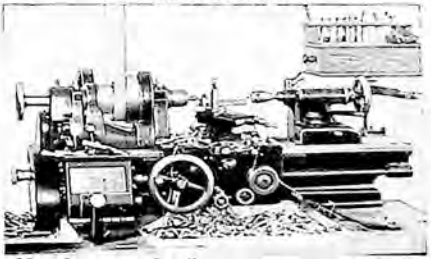
Machining a Job on a Mandrel Between Centers Using Three Cutting Tools



Manufacturing Small Bushings on a 9-inch Bench Lathe

11-inch Lathe with Three Hand Lever-Type Attachments, Draw-in Chuck, Tailstock and Cross Slide

A Group of Small Bench Lathes in a Modern Shop



Manufacturing Small Screws on Bench Lathe Equipped with Draw-in Chuck

Practical Chuck and Tool Assortments

Showing Prices of Assortment for Each Size New Model South Bend Lathe

Practical Chuck and Tool Assortment. Each Chuck and Tool Assortment listed here has the correct sizes of Chucks and proper Tools for all sizes of New Model South Bend Lathes in all its various types and drives. We recommend these Assortments as the most practical for general shop use. Any Assortment as described and priced may be ordered complete, or if preferred, you may order the desired items separately.

When ordering a complete Assortment give only the Catalog Number or Code Word of the Assortment wanted. When ordering items separately, give Catalog Number or Code Word of each item.

If a 3-Jaw Universal Lathe Chuck is wanted instead of a 4-Jaw Independent Lathe Chuck as listed in the Chuck and Tool Assortments below, affix a letter "A" to the Chuck and Tool Assortment number; for example, No. 122-A. Refer to page 62 and add the difference in price between the 4-Jaw Independent Lathe Chuck and the 3-Jaw Universal Lathe Chuck in the size you choose.

Practical Chuck and Tool Assortment illustrated above and described at left is itemized below and applies to all sizes of South Bend Lathes, differing only in dimensions for each size lathe.

1. 3-Jaw Drill Chuck with Arbor Attached
2. Pinion Key for Drill Chuck
3. Formed Threading Tool and Wrench
4. Wrench and Cap Screws for Lathe Chuck
5. 4-Jaw Independent Lathe Chuck
6. Style "B" Patent Boring Tool and Wrenches
7. High Speed Steel Cutter Bits
8. Right Hand Patent Cutting-Off Tool and Wrench
9. Straight Shank Patent Turning Tool and Wrench

10, 11, 12, 13, 14. Are Malleable Lathe Dogs, ½-inch, ¾-inch, 1-inch, 1¼-inch and 1½-inch capacity.

No. 122 Chuck and Tool Assortment for 9-inch Junior Lathes

1 No. 2106	6-inch, 4-Jaw Independent Lathe Chuck Fitting Chuck to Lathe including Chuck Back	$28.00 7.00
1 No. 1201	3-Jaw Drill Chuck, ½-inch capacity	8.50
1 No. 709	Drill Chuck Arbor, fitted to Chuck	1.50
1 No. 849-S	Patent Turning Tool, straight shank	2.40
1 No. 865	Patent Threading Tool	3.75
1 No. 429	Patent Boring Tool, Style B	4.40
1 No. 881-R	Patent Cutting Off Tool (Right Hand)	2.60
1 Set (5)	Malleable Lathe Dogs, ½", ¾", 1", 1¼", 1½"	4.05
Net Factory Price (Code Word Balor)		$62.20

No. 109 Chuck and Tool Assortment for 9-inch Lathes

1 No. 2106	6-inch, 4-Jaw Independent Lathe Chuck Fitting Chuck to Lathe including Chuck Back	$28.00 7.00
1 No. 1201	3-Jaw Drill Chuck, ½-inch capacity	8.50
1 No. 709	Drill Chuck Arbor, fitted to Chuck	1.50
1 No. 849-S	Patent Turning Tool, straight shank	2.40
1 No. 865	Patent Threading Tool	3.75
1 No. 429	Patent Boring Tool, Style B	4.40
1 No. 881-R	Patent Cutting Off Tool (Right Hand)	2.60
1 Set (5)	Malleable Lathe Dogs, ½", ¾", 1", 1¼", 1½"	4.05
Net Factory Price (Code Word Celot)		$62.20

No. 111 Chuck and Tool Assortment for 11-inch Lathes

1 No. 2106	6-inch, 4-Jaw Independent Lathe Chuck Fitting Chuck to Lathe including Chuck Back	$28.00 7.50
1 No. 1201	3-Jaw Drill Chuck, ½-inch capacity	8.50
1 No. 709	Drill Chuck Arbor, fitted to Chuck	1.50
1 No. 851-S	Patent Turning Tool, straight shank	2.55
1 No. 866	Patent Threading Tool	3.75
1 No. 430	Patent Boring Tool, Style B	4.40
1 No. 822-R	Patent Cutting Off Tool (Right Hand)	2.75
1 Set (5)	Malleable Lathe Dogs, ½", ¾", 1", 1¼", 1½"	4.05
Net Factory Price (Code Word Denob)		$63.00

No. 113 Chuck and Tool Assortment for 13-inch Lathes

1 No. 2108	8-inch, 4-Jaw Independent Lathe Chuck Fitting Chuck to Lathe including Chuck Back	$32.00 8.00
1 No. 1201	3-Jaw Drill Chuck, ½-inch capacity	8.50
1 No. 713	Drill Chuck Arbor, fitted to Chuck	2.00
1 No. 852-S	Patent Turning Tool, straight shank	3.00
1 No. 867	Patent Threading Tool	4.50
1 No. 431	Patent Boring Tool, Style B	5.25
1 No. 883-R	Patent Cutting Off Tool (Right Hand)	3.25
1 Set (5)	Malleable Lathe Dogs, ½", ¾", 1", 1½", 2"	4.45
Net Factory Price (Code Word Enbal)		$70.95

No. 115 Chuck and Tool Assortment for 15-inch Lathes

1 No. 2109	9-inch, 4-Jaw Independent Lathe Chuck Fitting Chuck to Lathe including Chuck Back	$35.00 8.50
1 No. 1203	2-Jaw Drill Chuck, 1-inch capacity	15.00
1 No. 713	Drill Chuck Arbor, fitted to Chuck	2.00
1 No. 852-S	Patent Turning Tool, straight shank	3.00
1 No. 867	Patent Threading Tool	4.50
1 No. 431	Patent Boring Tool, Style B	5.25
1 No. 883-R	Patent Cutting Off Tool (Right Hand)	3.25
1 Set (5)	Malleable Lathe Dogs, ½", ¾", 1", 1½", 2"	4.45
Net Factory Price (Code Word Gorch)		$80.95

No. 116 Chuck and Tool Assortment for 16-inch Lathes

1 No. 2110	10-inch, 4-Jaw Independent Lathe Chuck Fitting Chuck to Lathe including Chuck Back	$40.00 9.00
1 No. 1203	2-Jaw Drill Chuck, 1-inch capacity	15.00
1 No. 716	Drill Chuck Arbor, fitted to Chuck	2.00
1 No. 853-S	Patent Turning Tool, straight shank	3.60
1 No. 868	Patent Threading Tool	5.75
1 No. 432	Patent Boring Tool, Style B	6.90
1 No. 884-R	Patent Cutting Off Tool (Right Hand)	4.00
1 Set (5)	Malleable Lathe Dogs, ½", ¾", 1", 1½", 2"	4.45
Net Factory Price (Code Word Margo)		$90.70

No. 118 Chuck and Tool Assortment for 18-inch Lathes

1 No. 2112	12-inch, 4-Jaw Independent Lathe Chuck Fitting Chuck to Lathe including Chuck Back	$48.00 10.00
1 No. 1303	2-Jaw Drill Chuck, 1-inch capacity	15.00
1 No. 716	Drill Chuck Arbor, fitted to Chuck	2.00
1 No. 853-S	Patent Turning Tool, straight shank	3.60
1 No. 868	Patent Threading Tool	5.75
1 No. 432	Patent Boring Tool, Style B	6.90
1 No. 884-R	Patent Cutting Off Tool (Right Hand)	4.00
1 Set (5)	Malleable Lathe Dogs, ¾", 1½", 2", 2½", 3"	6.20
Net Factory Price (Code Word Somer)		$101.45

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A Partial List of U.S.A. Industries Using South Bend Lathes

Manufacturing Plants

Chicago Flexible Shaft Co.
Nicholson File Co.
Kohler Co. of Kohler, Wis.
Federal Bearings Co.
Kirsch Mfg. Co.
Defiance Automatic Screw Co.
Link Belt Co.
Yale & Towne Mfg. Co.
Corbin Cabinet Lock Co.
Weaver Manufacturing Co.
Precision Speedometer Co.
Victor Adding Machine Co.
Carborundum Co.
Kelvinator Corp.
Auto Strop Safety Razor Co.
Clipper Tool Co.
Houdi Engineering Corp.
Endicott-Johnson Corp.
The Hoover Sweeper Co.
Doehler Die Casting Co.
Cincinnati Ball Crank Co.
Lester Piano Co.
Black & Decker Mfg. Co.
Piston Ring Co.
Monroe Auto Equipment Co.
Wel-Ever Piston Ring Co.
Sam'l J. Shimer & Sons
American Locker Co.
Reading Knob Works
Armstrong Cork Co.
Bendix Brake Co.
Rich Steel Products Co.
McQuay-Norris Mfg. Co.
Brown, Lipe & Chapin Co.
National Standards Co.
Cleveland Piston & Mfg. Co.
Peter Kirsch and Son
National Paper Can Co.
Gemco Mfg. Co.
Budd Wheel Co.
Kelsey Co.
International Harvester Co.
Square D Company
Victor X-ray Corp.
Oliver Chilled Plow Co.
Columbus Conveyor Co.
Alamo Engine Co.
Adrian Wire Fence Co.
A. W. Cash Valve Mfg. Co.
Clark Equipment Co.
American Nickel Co.
American Paper Goods Co.
Peerless Weighing Machine Co.
Conn Band Instrument Co.
Parker Fountain Pen Co.
Buescher Band Instrument Co.

Tool Manufacturers

United Shoe Machinery Corp.
Champion Shoe Machinery Co.
Elco Tool Corporation
Gustafson-Scott Mfg. Co.
Hanchett-Swage Works
Cleveland Planer Co.
Woodworkers' Tool Co.
Ajax Tool & Die Co.
Gairing Tool Co.
Engineering Tool Corp.
Watts Bros. Tool Works

Steel Mills

Bethlehem Steel Corp.
Inland Steel Co.
U. S. Steel Corp.
Youngstown Sheet & Tube Co.
Federated Metal Corp.
Walter Bates Steel Corp.
Carnegie Steel Co.

Textile Mills

Amoskeag Textile Mills
Chenango Silk Co.
Southern Mills Corp.
Patchogue-Plymouth Mills
Century Ribbon Mills
Fidelity Knitting Mills
Pelham Mills
Southern Worsted Mills
Lockmere Mills

Radio Mfgrs.

Radio Corp. of America
A. H. Grebe and Co.
The Sparks-Withington Co.
Fansteel Products Co.

Electric Parts Mfgrs.

Westinghouse Lamp Company
Nilco Lamp Works, Inc.
Fibroc Insulation Co.
Blizzard Manufacturing Co.
Gray Bar Electric Co.

Railroad Shops

New York Central R. R.
A. T. & S. F. R. R.
Michigan Central R. R.
Pennsylvania R. R.
Union Pacific R. R.
Louisville & Nashville R. R.
Canadian Pacific R. R.
Illinois Central R. R.
Northern Pacific R. R.
Southern Pacific R. R.

Automobile Manufacturers

Studebaker Corporation
Ford Motor Co.
Chevrolet Motor Co.
Packard Motor Car Co.
Lincoln Motor Co.
Chrysler Motor Corp.
Buick Motor Co.
Olds Motor Works
Pierce Arrow Motor Car Co.

U. S. Government

U. S. Naval Vessels
U. S. Navy Air Service
U. S. Engineers
U. S. Signal Corps
U. S. Marine Corps
U. S. Veterans Bureau
West Point Military Academy
Smithsonian Institution
U. S. Aviation Corps
U. S. Dept. of Interior
U. S. Coast Guard
U. S. Geodetic Survey

Electric Motor Mfgrs.

Western Electric Co.
Westinghouse Electric Mfg. Co.
General Electric Co.
Wagner Electric Mfg. Co.
Baldor Electric Co.
Allis-Chalmers Mfg. Co.

Truck Fleet Stations

American Railway Express Co.
Springfield Fire Department
The People's Motor Bus Co.
Twin City Rapid Transit Co.
Tompkins Bus Co.
Detroit Motor Bus Co.

Shipbuilding Companies

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

Engineering Schools

Massachusetts Institute of Technology
Purdue University
Carnegie Institute Technology
University of Michigan
Ohio State University
Yale University
University of Illinois
McGill University, Montreal
University of Minnesota

A Partial List of Overseas Users of South Bend Lathes

Guayaquil & Quito Ry., Guayaquil, Ecuador
Barbados Foundry Co., Barbados, Br. West Indies
Peking-Suiyan Railway, Peking, China
Govt. of Antioquia, Medellin, Colombia
Guatemala Plantations, Ltd., Rio Bravo, Guat.
Rangoon Eng. Works, Rangoon, India
Booker Bros.-McConnell, Georgetown, Br. Gui.
Kho Han Suan, Soekaradja, Java
Mazital Copper Co., Saltillo, Mexico
Enrique Halphen y Cia., David, Panama
Central Aguirre Sugar Co., Jobos, Porto Rico
Dept. of Public Works, Santo Domingo, Dom. Rep.
LaGuayra and Caracas Ry. Co., Caracas, Venezuela
Anglo-Chilean Nitrate Co., Tocopilla, Chile
Consolidated Oil Co., Velasco, Mexico
American R. R. of Porto Rico, San Juan, P. R.
Firestone Plantations Co., Liberia, W. Africa
Government of Mysore, Bangalore, India
Visayan Electrical Supply Co., Cebu, P. I.
Rafael Alvarez L. é Hijos, Santa Ana, El Salvador
Alfredo Araujo, Pernambuco, Brazil
Empresa Electrica del Ecuador, Guayaquil, Ecuador
Parrish and Company, Barranquilla, Colombia
General Sugar Co., Havana, Cuba
Sala y Cia., Montevideo, Uruguay
Enrique Laroza & Co., Lima, Peru
Soc. Comercial d' Haiti, St. Marc, Haiti
Puebla Tramway Light & Power Co., Puebla, Mexico