

# SOUTH BEND

# 10" *Precision* LATHES

1" COLLET CAPACITY

1<sup>3</sup>/<sub>8</sub>" THROUGH SPINDLE

10<sup>1</sup>/<sub>8</sub>" SWING OVER BED WAYS

5<sup>3</sup>/<sub>4</sub>" OVER SADDLE CROSS SLIDE

14<sup>3</sup>/<sub>4</sub>" TO 32<sup>3</sup>/<sub>4</sub>" BETWEEN CENTERS

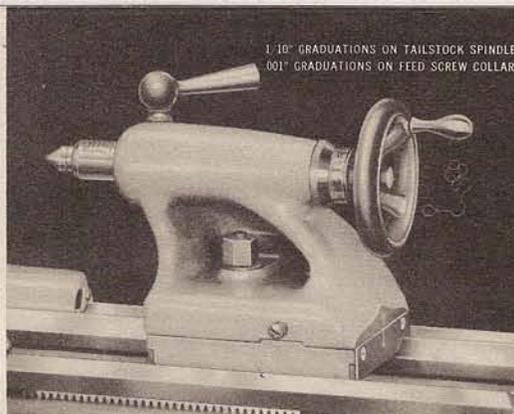


SOUTH BEND LATHE WORKS

BUILDING BETTER TOOLS SINCE 1906

425 E. MADISON STREET, SOUTH BEND 22, INDIANA, U. S. A.





## SPEED

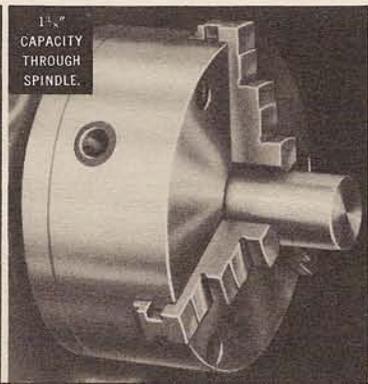
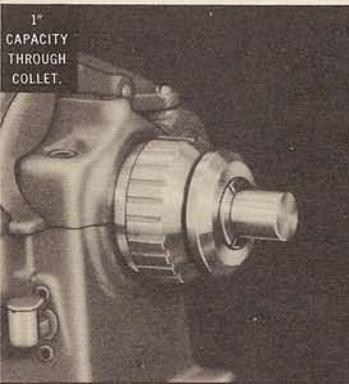
Modern in design and built with extreme care, South Bend 10" swing lathes are fast, accurate, and versatile. They have the high spindle speeds and rigidity required for efficient machining with carbide tipped or diamond tipped tools, and plenty of power for heavy roughing cuts. Speeds range from 55 to 1340 r.p.m., approximately. The lathe can be operated at top speed indefinitely as the superfinished and heat-treated steel spindle runs in improved bronze sleeve bearings with capillary circulating oiling system which practically eliminates wear. Since these bearings were introduced six years ago, not one has been replaced because of wear. (A few bearings damaged accidentally have been replaced.)

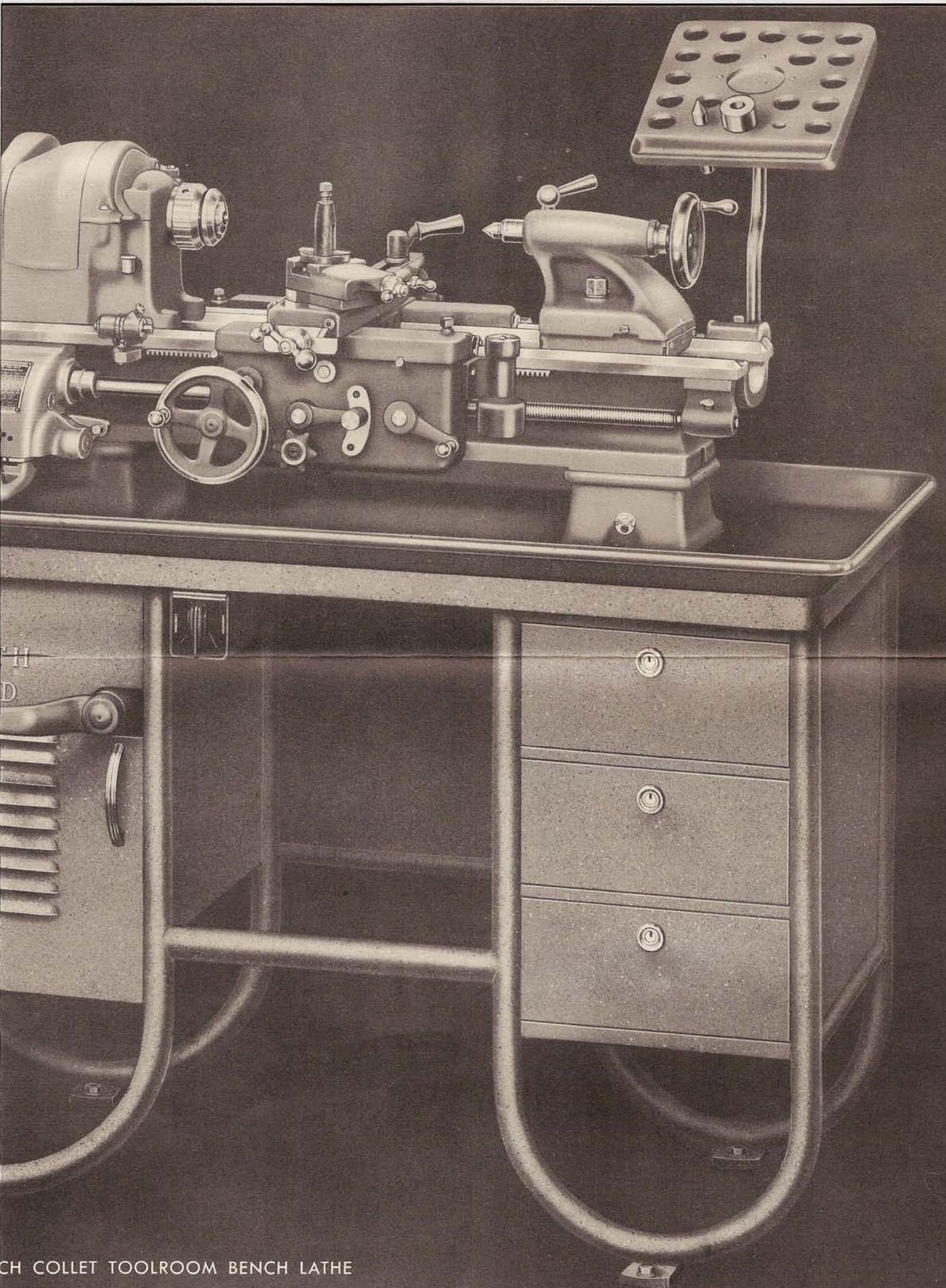
## ACCURACY

South Bend 10" Lathes are unsurpassed for producing a fine finish. They are capable of finish turning and boring with such precision that subsequent grinding, honing, or lapping operations can often be eliminated. Direct belt drive to the spindle and large sleeve bearings carrying the radial load eliminate chatter marks due to vibration set up by gear teeth or by ball or roller bearings. Each lathe must pass a series of rigid inspection tests before it is approved for shipment.

## CONVENIENCE

Large, easy reading graduations and conveniently placed controls simplify the operation of the lathe, save time and reduce operator fatigue. New double tumbler quick change gear box makes threads and feeds instantly available. Moving a single lever on the gear box changes from a coarse feed for roughing cut to a fine feed for finishing cut. The reversing control switch for motor is mounted in easy reach of operator for starting, stopping, or reversing the lathe spindle instantly.





COLLET TOOLROOM BENCH LATHE

# 10-inch Swing South Bend Lathes

## BRIEF SPECIFICATIONS

Swing over bed and saddle wings.....	10 $\frac{1}{8}$ "
Between centers with 3 $\frac{1}{2}$ foot bed.....	20 $\frac{3}{4}$ "
Centers, Morse taper.....	No. 2
Collet capacity, maximum.....	1"
Compound rest top, angular hand feed.....	2"
Cross slide travel.....	5 $\frac{7}{8}$ "
Feeds, cross (48).....	.0006" to .0309"
Feeds, longitudinal (48).....	.0015" to .0836"
Headstock spindle front bearing, diameter.....	2 $\frac{1}{4}$ "
Headstock spindle hole.....	1 $\frac{3}{8}$ "
Headstock spindle nose threads.....	2 $\frac{1}{4}$ "-8
Lead screw, 29° Acme Thread.....	$\frac{3}{4}$ " Dia. 8 threads
Motor, size required.....	$\frac{3}{4}$ h.p.
Spindle speeds, 12.....	approximately 55 to 1340 r.p.m.
Tailstock spindle travel.....	2 $\frac{1}{8}$ "
Tailstock top set-over for taper turning.....	1 $\frac{1}{16}$ "
Thread cutting range—48 pitches, R.H. or L.H.....	4 to 224 per inch
Tool holder takes cutter bit.....	$\frac{1}{4}$ " sq.
Tool post takes tool holder shank.....	$\frac{3}{8}$ " x $\frac{13}{16}$ "

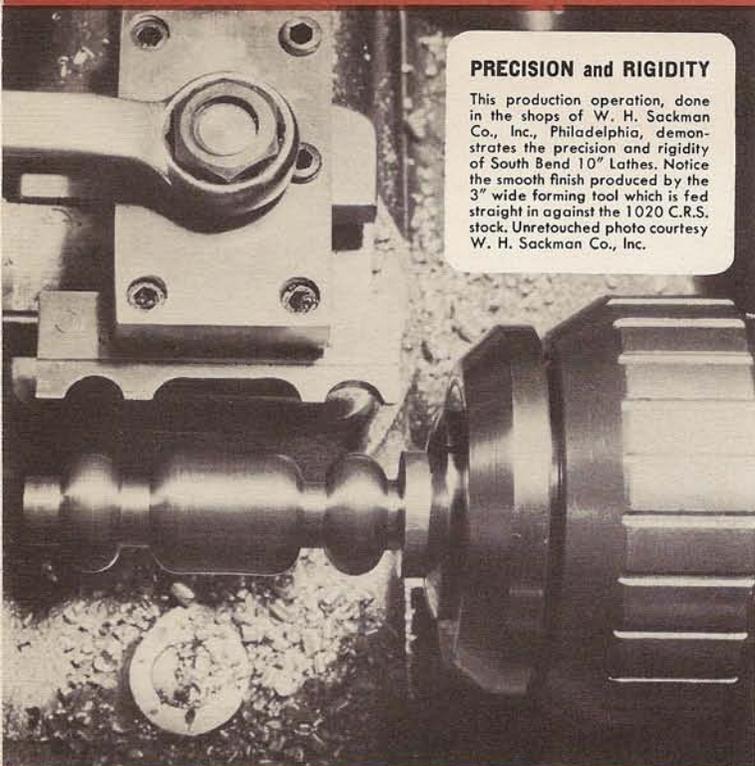
## PARTIAL LIST OF FEATURES

- Heat-treated alloy steel spindle with superfinished bearing surfaces.
- Replaceable bronze spindle bearings with capillary oiling system.
- Wrenchless bull gear lock for engaging back gears.
- Prismatic bed ways precision finished entire length.
- Felt wipers attached to both ends of carriage and tailstock to clean and lubricate the bed ways.
- Large diameter easy reading micrometer graduated collars on compound rest screw and cross-feed screw.
- Improved two-lever quick change gear mechanism.
- Rigid one-piece double wall apron construction provides support for both ends of gear shafts.
- Powerful multiple disc friction clutch in apron for engaging power longitudinal feeds and power cross-feeds.
- Large oil reservoir provided for lubricating power feed gearing and clutch mechanism in apron.
- Close-coupled half-nuts dovetailed into back wall of apron.
- Automatic safety interlock prevents accidental damage to lathe or work by engaging two opposing feeds simultaneously.
- Graduated tailstock spindle with self-ejecting center.

FOR THOSE WHO WANT THE BEST

## SOUTH BEND LATHE WORKS

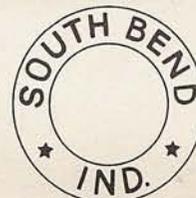
SOUTH BEND 22, INDIANA, U.S.A.



### PRECISION and RIGIDITY

This production operation, done in the shops of W. H. Sackman Co., Inc., Philadelphia, demonstrates the precision and rigidity of South Bend 10" Lathes. Notice the smooth finish produced by the 3" wide forming tool which is fed straight in against the 1020 C.R.S. stock. Unretouched photo courtesy W. H. Sackman Co., Inc.

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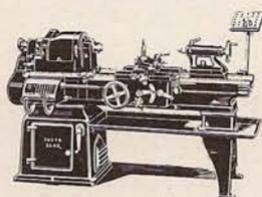
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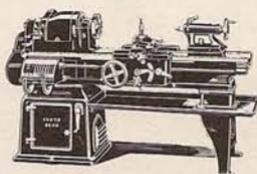
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# South Bend Lathe PRODUCTS



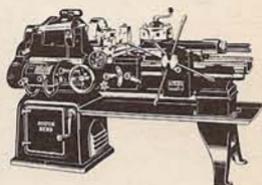
## TOOLROOM LATHES

Made in five sizes ranging from 9" swing to 16" swing, there is a South Bend Toolroom Lathe for almost every class of precision tool, die, gauge, and instrument work. Equipment includes precision lead screw, taper attachment, collet attachment, collet rack, thread dial, micrometer carriage stop, and chip pan. Complete line of attachments, chucks, and tools available.



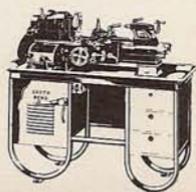
## QUICK CHANGE LATHES

Equipped with improved quick change gear mechanism, South Bend Quick Change Gear Lathes save time on manufacturing operations, general machine work, and maintenance. Wide range of threads and feeds instantly available reduces set-up time to a minimum. Made in six sizes, 9" to 16-24" swing, bed lengths to twelve feet. Complete line of attachments and tools available.



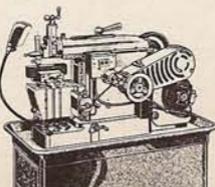
## TURRET LATHES

South Bend Turret Lathes are made in several sizes and types taking work up to 1" through collet, 1 3/8" through spindle, and 16" over bed ways. All have power carriage feeds, double tool cross slides, and either handlever operated or power feed hexagon bed turret. Can be equipped with pneumatic bar feed, coolant pump, square turret, and complete line of accessories.



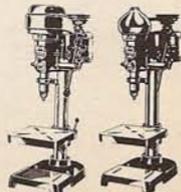
## BENCH LATHES

You can save time on small work by using South Bend Precision Bench Lathes. They are made in a variety of sizes and types, including Quick Change Gear and Toolroom models. Easier to operate and require less floor space and less power than larger, more expensive lathes. Maximum capacity 10" swing over bed, 1" through collet, 1 3/8" through spindle. Complete line of accessories available.



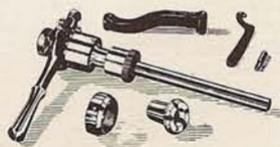
## SHAPERS

The South Bend 7" Precision Bench Shaper has been a hit from the time it was first introduced. Designed especially for efficient operation on small jobs, it will save time, floor space, and capital investment for those who have work within its capacity. Equipment includes vise, built-in work light, reversible motor feeds, and self-contained motor drive. Practical accessories and tools available.

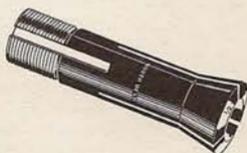


## DRILL PRESSES

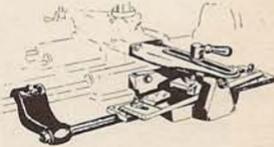
South Bend 14" Drill Presses are made in both bench and floor types. Precision models are available in one spindle, two spindle, three spindle, and four spindle designs. Ruggedly constructed with free-floating spindle, four precision ball bearings, built-in work light, and precision ground work surface; these drill presses represent outstanding values. Practical attachments and accessories available.



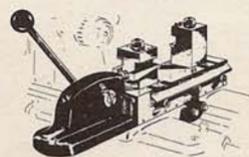
COLLET ATTACHMENT



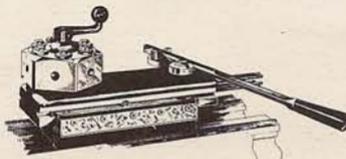
COLLETS



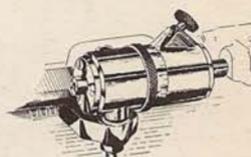
TAPER ATTACHMENT



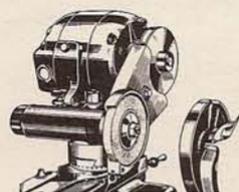
DOUBLE TOOL CROSS SLIDE



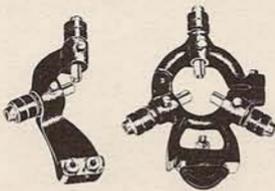
HANDLEVER BED TURRET



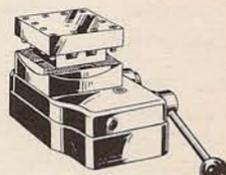
MICROMETER CARRIAGE STOP



GRINDING ATTACHMENT



STEADY REST  
and FOLLOWER REST



TURRET TOOL BLOCK